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Rethinking the working week: How a four-day workweek shapes wellbeing and productivity

Employee perspectives on wellbeing and efficiency in a four-day workweek

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Abstract

The four-day workweek (4DWW) has gained increasing attention in recent years, attracting both advocates and critics. Proponents emphasize the model's potential to enhance employee well-being and improve the balance between work and personal life. In contrast, critics express concerns about possible negative effects on economic growth and employment. Nonetheless, several broader societal and organizational trends are placing pressure on traditional work structures. These include the growing demand for flexible work arrangements and the urgent need to support the wellbeing of the Finnish workforce. In this context, the 4DWW is being explored as a potential response to these emerging challenges.

This study focuses on individuals who have worked in a 4DWW organization for 0.5 to 5 years and explores their experiences of how this working model has influenced their ways of working, wellbeing and productivity. A qualitative approach was adopted, and data were collected through ten semi-structured interviews. The data were analysed using reflexive thematic analysis, and the key findings were interpreted through the theoretical framework of this thesis, which combines the Knowledge Worker Productivity (KWP) model by Óskarsdóttir et al. (2022) and the extended Job Demands–Resources model by Demerouti and Bakker (2023).

The findings of this study show that both organizational and individual actions play a key role in the successful implementation and sustainability of the 4DWW. The interviews revealed that 4DWW improved employee wellbeing, which in turn increased productivity and reduced perceived workload. These positive effects were reinforced by supportive actions at both the organizational and individual levels. As a result, employee productivity – and ultimately work outcomes – improved. Since there are no standardized models for implementing 4DWW, this study also identifies key prerequisites for making this model of working successful and offers practical recommendations for both organizations and employees. These prerequisites include a focus on core activities, streamlined processes, management support, and ensuring employees have the necessary skills, such as adaptation and prioritization, to manage their workload effectively.

Keywords 4-day workweek (4DWW), knowledge worker productivity (KWP), efficiency, employee wellbeing

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Työn nimi Työviikon uudistaminen: Nelipäiväisen työviikon vaikutukset hyvinvointiin ja tuottavuuteen

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Tiivistelmä

Nelipäiväinen työviikko on noussut viime vuosina yhä näkyvämmäksi ilmiöksi, herättäen sekä kannatusta että kritiikkiä. Mallin kannattajat korostavat työskentelymallin hyvinvointia ja työ- ja yksityiselämän tasapainoa tukevia vaikutuksia, kun taas vastustajat ovat huolissaan mahdollisista seurauksista talouskasvuun ja työllisyyteen. Työelämä on kuitenkin murroksessa ja painetta muuttaa työskentelymallejamme kasvattaa esimerkiksi lisääntynyt tarve joustaville työskentelyratkaisuille ja tarve parantaa työhyvinvoinnin tilaa Suomessa. Nelipäiväinen työviikko voisi tarjota keinon työelämän uudistamiseen ja sen nykyisten haasteiden helpottamiseen.

Tutkimuksen keskiössä ovat henkilöt, jotka ovat tehneet nelipäiväistä työviikkoa 0,5–5 vuotta, ja heidän kokemuksensa siitä, kuinka tämä malli on vaikuttanut heidän työskentelytapoihinsa, hyvinvointiinsa ja tehokkuuteensa. Tutkimus toteutettiin laadullisin menetelmin, minkä vuoksi aineisto koostuu kymmenestä puolistrukturoidusta haastattelusta. Haastatteluaineisto analysoitiin refleksiivisen temaattisen analyysin avulla. Analyysin jälkeen päälöydöksiä tarkasteltiin tutkielman teoreettisen viitekehyksen valossa, joka yhdistää Óskarsdóttirin ja kollegoiden (2022) tietotyöläisen tuottavuuden mallin sekä Demeroutin ja Bakkerin (2023) laajennetun työn vaatimusten ja resurssien mallin.

Tutkimuksen tulokset osoittavat, että sekä organisaation että yksilön toimet ovat keskeisiä nelipäiväisen työviikon onnistuneessa käyttöönotossa ja ylläpidossa. Haastattelut paljastivat nelipäiväisen työviikon parantaneen työntekijöiden hyvinvointia, ja tämä kasvu puolestaan lisäsi tehokkuutta. Nämä positiiviset vaikutukset vahvistuivat organisaation ja yksilöiden toimien avulla. Tämän prosessin seurauksena työntekijöiden produktiivisuus ja työn tulos paranivat. Koska nelipäiväisen työviikon toteuttamiselle ja ylläpidolle ei ole yleisiä ohjeita, tämä tutkimus tunnistaa myös keskeisimmät edellytykset nelipäiväisen työviikon onnistumiselle, ja tarjoaa toimintasuosituksia organisaatioille ja sen työntekijöille. Keskeisimpiin nelipäiväisen työviikon edellytyksiin lukeutuvat olennaisiin tehtäviin keskittyminen, prosessien virtaviivaistaminen, johdon tuki sekä huolehtiminen siitä, että työntekijöillä on tarvittavat taidot selviytyä työtaakastaan. Keskeisiä taitoja ovat muun muassa työtapojen sopeuttaminen ja priorisointikyky.

Avainsanat Nelipäiväinen työviikko, asiantuntijatyön produktiivisuus, tehokkuus, työntekijöiden hyvinvointi, työhyvinvointi

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Preface and acknowledgements

Firstly, I want to thank my thesis supervisor Professor Hertta Vuorenmaa for all the advice and guidance you provided during the thesis process. It has been wonderful to collaborate with you.

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Espoo, 25 April 2025
Olivia Krekula

Abbreviations

4DWW	4-day workweek
AI	artificial intelligence
FIOH	Finnish Institution of Occupational Health
KW	knowledge worker
KWP	knowledge worker productivity

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1 Introduction

The goal of this study is to explore of how the 4-day workweek (4DWW) influences the organization of work, employee wellbeing, and productivity within organizations that have adopted this model. The study responds to a growing need to reconsider our current approaches to work. Given the absence of universal guidelines for implementing and sustaining the 4DWW, this study also identifies the key actions required at both organizational and individual levels to ensure 4DWW's success.

On the organizational level, these actions include clarifying the core tasks, streamlining processes and adopting tools like artificial intelligence (AI) and automation to enhance efficiency. On the individual level, employees must adjust their working methods to fit the 4DWW model – this involves learning to prioritize tasks, manage time effectively, and adopt new tools and practices. The combination of these organizational and individual changes, along with the increased leisure time, was shown to increase the wellbeing and productivity of employees.

Assessing the organization's core tasks requires strong prioritization. These tasks also must be clearly communicated to the employees. Streamlining processes involves eliminating unnecessary work, evaluating workload distribution, and ensuring each employee's tasks align with strategic priorities. Moreover, organizations must support employees in developing the skills needed to work efficiently, for example, with digital tools, including AI and automation. However, without strong management support the changes required by the 4DWW are unlikely to succeed. Therefore, the support of the leadership is crucial in implementing and sustaining 4DWW.

At the individual level, when the employees adapt their ways of working to 4DWW, this can involve, for example, reserving focused time for core tasks, letting go of perfectionism, and becoming proficient with new technologies. Prioritization and time management emerged as two of the most critical skills for employees under this model. Employees must often decline less critical tasks to maintain focus on what matters most and allocate their time deliberately and efficiently. It is also important to note that shifting to a 4DWW can temporarily increase the perceived work burden among employees, as they adjust to a new work rhythm and unfamiliar tools. Therefore, it is essential that both organizations and employees prepare for this shift by ensuring sufficient support and training.

In summary, both the organizational and individual actions were shown to contribute to the successful implementation and long-term sustainability of 4DWW in the case organizations of this study. These actions combined with the increased free time improved employee wellbeing and productivity – leading to improved work outcomes.

The following chapters introduce the concept of the 4DWW, its historical background, and central concepts. The research questions and objectives are then presented, followed by an outline of the thesis structure.

1.1 Background to 4-day workweek

4DWW has been around for multiple decades with steadily increasing popularity between the 1970s and 2020s (Hamermesh & Biddle, 2023). In the earlier decades of the 4DWW, the model gained traction only gradually, as it was often perceived as too demanding to implement (Jahal et al., 2024). Another factor that may hinder the widespread adoption of this working model is the lack of managerial support. This was the case with Kellogg's in the 1940s as the company had a six-hour day program for a century but the program was shut down as it lost the business and management support (Hunnicutt, 1992).

The growing interest in the 4DWW has not emerged out of nowhere. Rather, there are various reasons for organizations to consider it, few of them being the wellbeing of employees and an improved balance between work and non-work life. As the work absences due to mental health issues are on the rise in Finland (Kela, 2024) this alternative working model could offer a possibility for employers to better accommodate the needs of their employees. Additionally, 4DWW has been shown to increase job satisfaction, morale, and cost reductions and to reduce employee turnover (Campbell, 2024). On the other hand, in some cases it has led to increased monitoring and performance measuring (Campbell, 2024). These implications indicate that not all the effects of shifting to a 4DWW may be positive, and organizations should pay attention to the possible negative effects and how to reduce them when transitioning to a 4DWW.

When examining the media coverage of the recent years, 4-day workweek has gained a lot of attention, with people advocating for more organizations to shift to this working model, but also people opposing the shift towards 4DWW for example on economic grounds. Despite the resistance, there have been multiple 4DWW experiments in the news during the recent years, with often positive results. These experiments will be discussed further in the chapter 2.1.4 "4DWW experiments". The interest in the 4DWW is not only growing in Finland, but also globally, as there is a greater need for flexible work arrangements which increases the interest in 4DWW (Jahal et al., 2024).

4DWW may mean different things in different contexts especially from the working hours and salary perspectives. For example, in some organizations 4DWW means working the full 5-day workweek (5DWW) hours in 4 days, meaning 10 hour days 4 times a week, and in others, 4DWW may mean 6 hour workdays for 5 days a week. However, this thesis focuses on

organizations that reduce their working hours by one whole workday and work only 4 days a week.

Additionally, the case organizations of this thesis have not cut their employees' salaries although they work less. In theory, having a 4DWW is already possible in Finland but this would most likely mean that the employee would have to accept a 20% salary cut. The case organizations of this thesis have not cut their employees' salaries, as they have been able to reach a sufficient level of efficiency and profitability, and the organizations and their management do not believe that working with that level efficiency for 5 days a week would be sustainable for the employees, and thus, sustainable for the business in the long run. This perspective of becoming more efficient through wellbeing is a central theme in this study which will be discussed throughout the thesis from various points of view.

What might not seem intuitive prior to trialling 4DWW is that the increased leisure time may increase the efficiency of employees, thus cancelling out some of the increase in the pressure to complete the 5 days' worth of work in 4 days. When the employees are well rested, they have energy to work efficiently during the workweek, thus meeting the productivity needs of the organization. The increased time off helped the participants of this study rest and recover more from work, thus making them more energized. The longer weekend and the increased distance from work also reduced stress levels of the interviewees.

Working fewer hours and keeping the business profitable raises the question of how employees can maintain a sufficient level of productivity while working less. Having a 4DWW by itself does not guarantee increased efficiency or wellbeing, instead, it requires certain actions from the organization and the individual to be functional. Meeting the same efficiency targets with less hours requires adaptation and changing the way one works. Some of strategies identified as important in coping with the workload with reduced working hours are organizing tasks in new ways, changing working hours, scheduling communication, and specifically allocating work and nonwork time (Moen & Chu, 2023). Most of these activities were also implemented in the case organizations of this study.

From the organizational perspective, 4DWW requires first and foremost the support of the management of the organization, but also a smart work design. This includes a supportive work culture and structure, and the assessment of the work processes and suitable workload. From the individual perspective, 4DWW requires good skills in prioritizing, self-leadership and communication to be successful. Only if the management and employees of the organization are committed and work together to make the 4DWW successful, will the 4DWW work. These organizational and individual tasks will be discussed more thoroughly in the upcoming chapters. All in all, the shift to a 4DWW is a holistic process of rethinking work which requires a lot of effort from the organization and its leadership and employees. It is understandable

why organizations may not be interested in transitioning to 4DWW as it may require increased effort at least in the beginning of the process. How much effort the process requires is also dependent on the current work culture of the organization: if the culture requires minor adjustments, the effort required from the organization is not as much as if the current work culture necessitates a large transformation to fit the needs of 4DWW.

1.2 Research questions and objectives of the study

The goal of this study is to discover how employees working a 4DWW have experienced the working model's effects on their work, wellbeing and productivity. 4DWW is often painted as an impossibility by the media, therefore, this thesis aims to increase our understanding of whether 4DWW is as challenging to execute and maintain as it is depicted and what are the necessary actions that need to be taken to make 4DWW successful. Part of these actions were anticipated to be related to increasing the employee productivity as there will be one workday less in the week, and another part to managing this workload in a tighter schedule.

Using the theoretical framework which combines the knowledge worker productivity model by Óskarsdóttir's and colleagues (2022) and the extended Job Demands and Resources model by Demerouti and Bakker (2022) we will examine how the actions that organizations and individuals take to make the 4DWW functional influence the wellbeing of employees, and their productivity and eventually the outcome of work. The research questions will be listed below.

Research question 1: How does 4DWW influence the organizing of work and what are the necessary actions organizations and their employees need to take to make 4DWW successful?

This research question aims to discover how 4DWW has influenced the work of the interviewees and what actions the interviewees find crucial in making the 4DWW functional. It is understandable that it may be challenging to draw the line between the actions that have been deliberately taken to adapt to 4DWW and what changes 4DWW has forced to be made in the work. These aspects seem to be the two sides of the same coin, but this thesis aims to clarify what are the prerequisites for a functional 4DWW and in that case it does not matter whether the 4DWW has created the change in the organization or if the organization has decided to make the changes – both perspectives can give valuable insights.

Research question 2: How 4DWW influences the wellbeing of employees?

As 4DWW gives the employees more time off from work it could be assumed that the increased free time will influence the wellbeing of employees. This research question aims to explore which parts of the interviewee's life and wellbeing are affected by the 4DWW and the quality of these effects. How the interviewees spend their additional leisure time is also a topic of interest.

Research question 3: How 4DWW influences the productivity of the employees?

If we assume that 4DWW influences the way one works, it is interesting to explore how these changes have affected the productivity of the interviewees. If the organization requires the employees to meet the same productivity in 4 days, this research question aims to discover if the interviewees have been able to meet these requirements and whether the change has increased the burden they feel at work.

1.3 Structure of the thesis

The thesis includes six chapters: introduction, literature review, methodology, findings, discussion, and conclusions. The introduction discusses the key concepts of the study and its context and explains the research questions and objectives. Next, we will move on to the literature review which is divided into four parts: 4-day workweek, knowledge worker productivity, wellbeing, and the theoretical framework of this thesis. The theoretical framework combines two frameworks – the KWP model by Óskarsdóttir's and colleagues (2022) and the extended JD-R model by Demerouti & Bakker (2022) – which will be explained in detail in the literature review. After the literature review the methodology of the thesis will be discussed. This chapter explains the research setting, scope and the methods that were used to collect the data for the interviews. The data analysis process will also be discussed.

In the fourth chapter, we will explore the findings of the interviews. This chapter is divided into four parts: organizational actions, individual actions, the wellbeing effects of 4DWW, and 4DWW and the efficiency of work. After the findings, we will move onto the discussion chapter where the findings will be discussed in relation to the literature and the theoretical framework of the thesis. The subsequent chapter, conclusions, summarizes the thesis and forms final conclusions about the connections between the findings and the literature, and provides practical implications and recommendations for organizations considering starting 4DWW. Finally, the limitations of the study are reflected on and suggestions for future research are given.

2 Literature review

The literature review will begin with an introduction to 4DWW, the reasoning behind it, its history and implementation processes. Although 4DWW has gained a lot of attention in the media in recent years, the definition of this working model can vary. The first chapters aim to deepen our understanding of the context we are focusing on in this thesis.

After framing the context, we will move on to discuss the concept of knowledge worker productivity (KWP). We will define the concept and explore the main developments of the literature on how to measure KWP. We will then move on to familiarizing ourselves with one of the theoretical frameworks used in this thesis: the holistic framework of KWP by Óskarsdóttir and colleagues (2022). As 4DWW often necessitates completing the workload of 5 workdays in 4 days, this change requires adjustments in the ways the work is organized in the company. To understand how 4DWW organizations reach the required productivity and profitability, we will investigate various strategies the literature recommends for organizations to implement to increase their efficiency.

From KWP we continue to discuss the implications of 4DWW on employee wellbeing. When the employees have more time for themselves, this time can be used on activities like resting, household chores or hobbies. These activities can support the employee in recovering from the workweek and improve the balance between work and non-work lives. In this chapter, we will also discuss the second theoretical model used in this thesis: Job Demands and Resources model (JD-R) by Schaufeli and Bakker (2004).

Lastly, we will explore the combination of the theoretical frameworks used in this thesis. Both the KWP model and the JD-R model describe processes that influence the employee productivity and outcomes of work, but they have different categorizations for the factors that influence the outcome. In this chapter we will discuss the similarities and differences between these models and look at a few examples of the connections between these models' characteristics. Finally, we will explore how these models could be integrated.

2.1 4-day workweek

In this chapter, we will investigate the motivations behind wanting to work less, the history of 4DWW, working hour reductions in Finland and the rest of the world, and the implementation of 4DWW. Lastly, some of the possible societal effects of 4DWW will be explored.

4DWW is not a recent innovation, as it has been implemented in various parts of the world for decades. However, media coverage on the topic appears

to have increased in recent years. As the world is changing, the needs of the employees have changed as well. Especially, the need for flexibility at work has increased, which in turn has increased the general interest in 4DWW (Jahal et al., 2024). Although many employees express a desire for a four-day workweek (4DWW), it is ultimately the organization that initiates its implementation. Ensuring the success of the 4DWW requires addressing a wide range of organizational tasks and considerations.

Essentially, 4-day workweek means working only 4 days a week instead of 5. However, the meaning of this working model can differ depending on the organization. Some companies apply 4DWW into their business by making the employees work full 40 hours of a normal 5DWW within 4 days (Ivancevich, 1974), meaning that employees work 10 hours per day for 4 days. In other companies, 4DWW means working 8 hours per day for 4 days (Mullens & Glorieux, 2023) or 6 hours per day for 5 days (Wergeland et al., 2003). This thesis focuses on organizations with 8-hour workdays, 4 workdays a week, as the objective is to discover this working model's effects on the organization, employee wellbeing and productivity.

The way companies approach salaries with 4DWW varies as well. Some companies do not cut salaries as the employees work the full ≈40 hours, whereas others might cut the salaries more or less proportionally. This thesis focuses on organizations that do not cut salaries although they reduce their employees' working hours, and on how these organizations approach their productivity.

Next, we will move on to discuss the reasoning behind choosing to implement a 4DWW and what influences this decision. The changing needs of individuals increase the pressure for enhanced flexibility with work, and 4DWW could be a feasible opportunity to respond to this pressure. And accordingly, the interviewees did experience an increase in their work-nonwork life balance.

2.1.1 History of 4DWW

The concept of working for less than 5 days a week is not a novel idea, although its popularity has varied throughout the years. According to Jahal et al. (2024), in the earlier decades of the 4DWW, the model struggled to gain traction, partly because employees perceived it as requiring additional resources for coordination. Nonetheless, between 1973 and 2018, the amount of workers having a 4DWW tripled in the United States, and similar growth has been observed in the Netherlands, Germany, and South Korea (Hamermesh & Biddle, 2023).

Moving from the number of national 4DWW workers to individual companies, we can identify certain companies that have adopted an alternative way of working even before the 1970s. One of those companies is Kellogg's:

the company used to have a six-hour day program for a century, but it ended in the 1940s partially due to a lack of business and management support (Hunnicutt, 1992). This highlights the importance of having the organization and its leadership on board with the working model, because at the end, they have the power to both initiate the model and end it.

Reflections on the future of work by past economic thinkers often emphasize the significance of technological advancements and their anticipated impact on how work would evolve. Spencer (2024) examined Marx' and Keynes' visions of the future of working time, and found that although their thoughts had many differences, they both believed that technology would provide a solution for reducing working hours and thus, create a better future. In accordance with this finding, the interviews of this thesis did reveal that an important part of increasing the efficiency at work came from utilizing different technologies related to AI and automation.

4DWW has gained popularity around the world, and the effects are also visible in Finland with companies experimenting with the working model. However, the reduction of working hours has elicited a range of reactions, with many expressing opposition to further reductions. These people often appeal to the fact that the number of working hours in Finland has already been reduced to a relatively low level compared to other countries, and how we should not risk the economic growth of Finland with this working model.

The aspect of Finnish working hours and their history merit closer consideration. There are three periods when the working time in Finland has seen great reductions: between 1917-1919, when the workday was shortened from 10 hours to 8 hours, between 1966-1970 when the weekly working hours were reduced to 40 hours, and between 1986-1990 when the yearly working time was reduced with 100 hours (Peltola, 1995). Table 1 summarizes these changes concisely. It is good to note that between 1966-1970 the 5-day workweek was implemented gradually (Peltola, 2021a). Thus, those who are afraid of the changes the 4DWW might cause in the society should remember that the change will probably not happen instantly but gradually and with time to adapt to the changes.

According to Peltola (1995) the economic effects of solely the working time reduction in 1966-1970 did not gain much attention at the time as there were simultaneously other factors such as economic fluctuations and sudden great devaluation affecting the economy. This is unfortunate, as understanding the societal effects of working time reductions at that time could have provided valuable insights. Such results might help justify broader implementation of the 4DWW beyond a limited number of companies, or if the outcomes had been negative, offer reasons to approach widespread adoption with caution.

Years	What changed?
1917-1919	Workday from 10h to 8h
1966-1970	Workweek: 5 days a week = 40h
1986-1990	Yearly working time: reduced with 100h

Table 1: The history of working hour reductions in Finland (Peltola, 1995)

When investigating the recent history of working hours and their reduction in Finland, one experiment draws attention. Between 1996-1999 shortened working days were tried out in Finland with a 6+6 model, in which working days consisted of two consecutive 6-hour shifts instead of 8-hour shifts (Peltola, 2021a). Anttila (2005) has researched the effects of this 6+6 model and summarizes that the effects on employment were contradictory and that the experiment was "technically clever but socially insensitive". By this Anttila means that when 6+6 model gave workers more time for social activities it also changed the tempo of working time which can lead to exhaustion and thus not only affect work but also the life outside of it (Anttila, 2005). An experiment which had the intention of improving the balance of work and free time might in fact cause unwanted effects to spill over to one's leisure time.

While discussing the reduction of working hours, one cannot dismiss its effects on productivity. Peltola (2021a) notes that in the 6+6 experiment, there was a clear decline in productivity during the final two hours of an 8-hour workday compared to the earlier hours. This decrease was attributed to fatigue, which leads to errors not only in industrial work but also in creative and service professions. From the 4DWW perspective, having more time off from work could help with the fatigue, making the employees more efficient. This was evident among the interviewees of this thesis.

As was mentioned, the discussion around reducing working hours in Finland is not neutral. According to Peltola (2021b) those who oppose this change have argued for two hundred centuries that the reduction would increase production costs so much that the profitability would be ruined, although research shows that this has not been the case as unit costs have lowered and competitiveness has improved. In accordance with this argument, the case organizations of this thesis did not experience negative productivity and profitability effects due to 4DWW.

Another common argument against the 4DWW concerns the current average working hours in Finland. On one hand, according to Kauhanen and Lehmus (2019) the average working hours in Finland are an hour below the EU average. On the other hand, Peltola (2021b) writes that it is not useful to compare the weekly working hours between different countries as the amount of part-time work and overtime varies greatly between the countries. Peltola (2021b) further argues that despite the inaccuracies in the data, it has continued to be used in economic policy discussions, possibly even serving the interests of those opposing reductions in working hours.

To change the current state of working hours, Peltola (2021b) calls for worker engagement in demanding a shorter workweek but also acknowledges that the fear of the reduction on employees' level of income and weakened position in society reduces the enthusiasm for advocating this issue. He continues by stating that "if trade union movement does not push for reducing working time, its members will instead receive an increase in their working time. This change was already demonstrated with the increase in working time implemented during Prime Minister Juha Sipilä's administration." Although Peltola adopts a clearly opinionated stance on the reduction of working hours, some of the arguments presented may hold relevance in understanding the societal dynamics surrounding the implementation of reduced working hours.

Peltola (2021b) argues that as the latest reduction on working hours in Finland was made in 1980s "one could think that the characteristics of work have changed that much in 40 years, that it would be relevant to assess the amount of weekly working hours again". In connection to this, Jahal and colleagues (2024) have identified changes in the characteristics of work and the needs of employees, leading to an increased interest in 4DWW. Additionally, now that it has been over 50 years since our shift to a 5-day workweek and new technologies such as various AI tools are changing the way we work, one could think that it could be a high time to assess the number of days we work in a week.

The topic of 4DWW continues to appear regularly in Finnish media, with Sanna Marin being one of its most prominent advocates. In 2019, when Marin – Finland's Prime Minister at the time – expressed their thoughts on the possibility of 4DWW in the Finnish context, this contribution received a lot of attention in the national and international media, and caused a social media controversy in Finland (Vatanen, 2020). Marin discussed the shortening of the workweek also in January 2025 (Palkoaho, 2025), however, this time the discussion did not appear to spark the same level of media attention as it did six years earlier. This may suggest a shift in public attitudes towards the 4DWW.

2.1.2 Reasoning behind 4DWW

From the individual's perspective, there are multiple reasons for wanting to spend less time at work. According to Jahal et al. (2024) there is a greater need for flexible work arrangements than before, and this change has increased the overall interest in the 4DWW. Similar needs have been identified in the EU, as according to Väisänen and Nätti (2002) dual-earning households in the European Union would like to reduce their weekly working hours by 12 hours per week.

Additionally, Balderson and their colleagues (2021) have found various "push" and "pull" factors that affect the motivations for spending less time at work: factors that "push" the employee away from working are, for example, unpleasant tasks and excessive workloads which can lead to mental exhaustion and stress, and factors that "pull" the employee towards leisure are, for example, a desire to develop skills that are not related to work and being aware of the significance of time due to traumatic experiences such as losing a loved one. The study's interviewees felt that "full-time work leads to a loss of autonomy, and a reduction in working hours is a route to greater freedom". Given the less-than-ideal state of employee wellbeing in Finland, it is reasonable to suggest that many of the 'push' and 'pull' factors affecting the workforce contribute to the growing need to alleviate work-related pressures, to which the 4DWW model could offer a potential solution in certain contexts. The wellbeing of Finnish workforce will be discussed more thoroughly later in this paper.

Many things affect a person's interest in reducing working hours. Firstly, according to Gerold and Nocker (2018) social norms influence working time preferences strongly. Interestingly however, according to Allen and Hawes (1979) demographic and job characteristics do not have much effect on a person's attitude towards the 4DWW. Instead, workers' attitude towards leisure and how many consecutive days off they get influences their interests in the 4DWW more. Gerold and Nocker (2018) have received similar results from their study: an individual's desire to work less is often influenced by whether they prioritize leisure and family time over financial security.

Interestingly, there is a discrepancy between how Finnish workers would like to change their working hours and what they believe the course of change will be in the future. In 2017, STTK, a Finnish central organization for educated professionals, investigated employees' perceptions regarding the future of Finnish working life and found out that 55% of the respondents believe that their weekly working hours will increase although at the same time 61% of the respondents would like to reduce their working hours to make work available for more people (Palola, 2017).

Based on these studies, individuals seem to have many reasons for wanting to reduce working hours with an emphasis on the need for improved balance between work and non-work lives. From the organizational perspective, the motivation to shift to a 4DWW is often connected to the efficiency and productivity effects, which will be discussed separately in the productivity chapter.

2.1.3 Implementation

Implementing a 4DWW involves numerous considerations, and its success depends on a range of influencing factors. Even before the 4DWW is in

operation, working towards it can have positive effects among the workers. The promise of a 4DWW can make employees give individualized effort to reach this goal due to them feeling valued and appreciated, and engaging employees in planning the execution of 4DWW can improve collaboration between teams (Delaney & Casey, 2022).

From the individual perspective, a Belgian organization with a 4DWW can provide an example on how to manage work with reduced hours. Employees of Femma Wereldvrouwen highlight the importance of focus when dealing with reduced working hours: key strategies were prioritizing, monotasking and planning (Mullens & Glorieux, 2023). Another example is from a small company producing customized products. The researchers found four timework strategies used to adapt to reduced working hours: organizing tasks in new ways, changing working hours, scheduling communication and allocating work and nonwork time specifically (Moen & Chu, 2023). Both studies emphasize the importance of changing the previous ways of working, which implicates that when an organization implements 4DWW it should make sure that the employees have the skills to manage with the changes that come from shifting to a 4DWW.

It is difficult to draw the line between which actions that support the success of 4DWW are caused by individual decisions and which are caused by the organization. For example, the act of changing working hours highlighted in Moen and Chu's (2023) study is most likely not possible to be executed without the support of the organization. Other aspects literature emphasizes for a successful implementation of a 4DWW are employee consultation, piloting, establishing success measures, market scan and design (Jahal et al., 2024). Allen and Hawes (1979) also remind us that it is important to consider the number of consecutive days off given to the employees because that is one of the key aspects affecting worker attitudes towards 4DWW. According to Bosch and Lehndorff (2001), based on the experiences of work time reductions in Western Europe, the positive effects of work time reduction on employment are best achieved if the hourly rates of the employees are increased, working time is reorganized to allow extension of operating hours, and employees are given the opportunity to influence when they work.

Since most 4DWW companies aim to maintain the same level of productivity in four days instead of five, the case company in Delaney and Casey's study (2022) in New Zealand intensified their performance measurement, monitoring and productivity, which led the employees to lose some of the freedom at work. According to Al Dwaikat and colleagues (2023) performance monitoring negatively affects employee knowledge management and knowledge worker productivity through stress. These findings suggest that the New Zealand company may have experienced a loss in productivity due to intensified performance measurement, highlighting the need for organizations to make thoughtful changes and compromises to ensure the functionality of the 4DWW.

The Belgian 4DWW organization introduced structural changes on organizational and team level to improve their efficiency: how much work is done daily, how often and how long should meetings be held and when employees should come to the office (Mullens & Glorieux, 2023). Although 4DWW improved the efficiency of the organization, the shift to a 4DWW did not come without complications. Challenges faced with the 4DWW at Femma Wereldvrouwen, were on the individual level, for example, the lack of 'slack time' and fun interactions with colleagues, and on the organizational level, the need for coaching from the management to get the self-managing teams to function (Mullens & Glorieux, 2023). These examples suggest that successful implementation of the 4DWW may require employees to be willing to give up certain aspects of their work to ensure the model's viability.

To improve the implementation, organizations should also consider the job satisfaction of employees. According to Hartman and Weaver (1977) changes in productivity and improved job satisfaction of the employees have significant influence on the successful implementation of the 4DWW. Therefore, it would be advisable to ensure that all the actions taken in the implementation process of the 4DWW would strive to improve both productivity and job satisfaction.

The actions required to successfully implement a 4DWW are unlikely to occur unless the company's management supports the change. An interesting example of this is Kellogg's and how they got rid of their reduced working hours model – which was clearly ahead of its time. Kellogg's used to have a six-hour day program for a century, but it ended in the 1940s partially due to a lack of business and management support (Hunnicutt, 1992). This further underscores the importance of leadership and organizational support in the implementation and maintenance of the 4DWW.

If there was a law which forced management to implement 4DWW, it could make the implementation process faster. However, getting the management's approval for 4DWW by appealing to the current Finnish laws might prove to be difficult. According to the Finnish Working Hours Act (WHA) section 15 "if an employee wishes, for other social or health reasons, to work less than the regular working hours, the employer must seek to arrange work so that the employee can work part-time (WHA, 15 §, 8.7.2022/674). Nevertheless, this does not require the employer to arrange reduced working hours for the employee – only to "seek to arrange" the hours. This means that it is not guaranteed that an employee can work 4 days a week if they want to. If the employer does not want to trouble themselves by arranging reduced working hours, it is easy to see how this could lead to them replying to the request in the negative and claiming that 4DWW is an impracticable model. However, if the employer refuses to arrange part-time work, they must give reasons for the refusal (WHA, 15 §, 8.7.2022/674). So essentially, an individual employee could try to arrange themselves a 4DWW, but there is no guarantee that they will receive it, let alone all of the

employees, and if they do, it would probably mean that their pay is cut proportionately.

The support from the management will not be the only obstacle to overcome in the 4DWW process. Burchell et al. (2024) name higher inflation and cost-of-living crisis as factors that might hinder us from moving towards reduced working hours in the near future. In addition to this, Peltola (2021b) has also identified the fear of lower income among employees as a hindrance for them to start demanding a shorter workweek. It is reasonable to suggest that the impact of the cost-of-living crisis on the 4DWW attitudes of the employees could be reduced by not cutting salaries proportionally with the working hours.

Burchell et al. (2024) continue by stating that in the long run, collective action from the individual, organizational and governmental level is needed if we want to reduce the weekly working time: "The way forward is likely to involve a period of organizational experimentation and legal evolution in which new norms are established through a combination of worker resistance, legal pressure and transnational efforts at standard setting, just as it was a century ago when the 'normal' working week was being established in law and practice." As Peltola (2021b) also calls for trade union and worker engagement in pushing the change towards the 4DWW, it can be interpreted that placing the responsibility for shifting to a 4DWW solely on company management is unlikely to generate sufficient pressure for organizations to pursue the change.

2.1.4 4DWW experiments

Despite the challenges, obstacles and suspicions of 4DWW's success, there are many examples of organizations experimenting with 4DWW, and continuing to work a 4DWW after a trial due to positive experiences. There are both scientific and unscientific experiments on 4DWW which have produced data on 4DWW's effects on productivity and employee wellbeing. For example, Microsoft Japan's 4DWW trial increased productivity by 40%, and reduced the time spent in meetings by 50%, employee absenteeism by 25,4%, and electricity costs by 23,1% (Gatlin-Keener & Lundsford). One of the practices the company implemented during the trial was setting a time limit of 30 minutes for meetings and encouraging employees to discuss issues online instead of meeting face-to-face.

On the same side of the world, a large company has trialled 4DWW in the fast-moving consumer goods business. In 2020, Unilever piloted 4DWW with full pay in New Zealand for 18 months and the results were reported as positive: "Over two-thirds (67%) of employees reported a better work–life balance. Individual wellbeing also improved, with stress dropping 33%. Meanwhile, feelings of strength and vigour at work increased by 15%." Due

to the experiment being successful in New Zealand, Unilever has decided to expand the trial to Australia in 2023 (Unilever, 2022).

When looking at countries closer to Finland, we can see that there have been multiple experiments during the recent years. Iceland piloted 4DWW between 2015-2019 with over 2500 employees, and the results show that during the experiment employee wellbeing increased significantly, and productivity remained the same or even improved in some companies. Many companies adopted the 4DWW after the experiment (Kansanen, 2024). In France, over 400 companies tried a 32-hour workweek in 2021 (Latva, 2021): "Trade unions saw this as an opportunity to divide work more equally, whereas company executives have noticed that the change has improved productivity." In 2024, 45 companies in Germany participated in a 6-month 4DWW trial. During this period, employees reported a weekly reduction in stress by 89 minutes, an increase in sleep duration by 38 minutes, and an average rise of 1848 steps walked per day. Additionally, workplace wellbeing improved significantly. The revenue and profits of the companies increased as well, and many companies reported reduced rates of employee turnover (Valkama, 2024).

61 companies in the UK took part in a 6-month 4DWW pilot in 2022. In this trial, employees' wages were not reduced, and most participating companies reported maintained productivity. As a result, 92% of the companies chose to continue with the 4DWW after the trial concluded (Lewis et al., 2023): "When compared to a similar period from previous years, organisations reported revenue increases of 35% on average – which indicates healthy growth during this period of working time reduction." This pilot produced multiple health benefits such as lower levels of burnout among 71% of the employees, decreased levels of anxiety, fatigue and sleep issues, and improved levels of work-life balance, and mental and physical health. These findings may partly explain the substantial 57% decrease in the likelihood of employees quitting and the 65% reduction in the number of sick days reported (Lewis et al., 2023).

There are also ongoing 4DWW trials, for example, in Spain. The government of Spain has agreed to launch a national level 4DWW trial, which is suggested to last for 3 years with compensation to the participating companies to support the shift (Kassam, 2021). Although the results of this trial are yet to be published, findings from previous trials consistently highlight improved employee wellbeing without significant declines in productivity. These types of results were also present in the responses of the interviewees of this thesis. Therefore, it may be reasonable to suggest that other companies could experience similar results if they chose to trial 4DWW.

2.1.5 Societal effects of 4DWW

According to Burchell et al. (2024) in the long run, collective action from the individual, organizational and governmental level are needed if we want to reduce working time. Peltola (2021b) also highlights worker engagement and trade union movement in creating pressure to reduce working time. Thus, it seems that it will take a while to make the 4DWW a larger phenomenon.

There are numerous barriers preventing the widespread adoption of the 4DWW in our society. One of the arguments used in the discussion of 4DWW is its effects on the employment. However, the effects are inconclusive. According to Kallis et al. (2013) shifting to a 4DWW might cause mild reductions in unemployment, whereas Kauhanen and Lehmus (2019) write that empirical evidence shows that reducing working time reduces employment due to increased labour costs to the employer. When Portugal shifted from working 44 hours a week to 40 hours, this indeed increased the labour costs in the form of increased hourly wages of the workers, but also reduced the amount of resignations (Raposo & van Ours, 2010). This means that the implications of 4DWW were not only negative but also positive for the employer.

Kauhanen and Lehmus (2019) also write about the effects of increasing working time in Finland: The Competitiveness Pact, which increased working time in Finland, increased employment, but this impact was also caused by reductions in social security contributions and taxation. The increase of working time raises questions about the wellbeing of the Finnish workforce: employees' wellbeing at work is burdened by the increasing uncertainty of the future of work, and one in every ten employees is likely experiencing burnout symptoms according to a report made by the Finnish Institute of Occupational Health (FIOH) (2024). One could argue that if we only look at the statistics of working hours and employment, it may be easy to dismiss the ethical implications of increasing working hours.

Additionally, Peltola (2021b) writes that those who oppose reducing weekly working hours have argued for two hundred centuries that the reduction would increase production costs so much that the profitability of the production would become unprofitable but according to research, this has not been the case as unit costs have lowered and competitiveness has improved. These varying results leave the impact of 4DWW on employment unclear.

In this thesis, we will not be discussing 4DWW as a way to increase employment as there are many aspects to consider when, for example, measuring these labour costs that may increase according to Kauhanen and Lehmus (2019): a few of them being whether the wages of the employees are cut proportionately with the reduced hours, and how productivity is affected by the change.

The impacts of 4DWW do not end at the organizations, its employees and the society around them. Environmental effects of 4DWW have also been researched, although the results and conclusions are not consistent. According

to Campbell (2024) it is not clear what kinds of environmental effects 4DWW has when implemented. Schor (2005) argues that in the global North, a reduction in working hours will be an important part of sustainable living because this will help in stabilizing consumption. Schor finds that technological advances will not be enough to achieve sustainable consumption. Instead, in order for us to reduce our consumption, it is inevitable that we trade income for time (Schor, 2005). From the environmental perspective it seems that it could be better to implement the 4DWW with reduced pay, but the link between increased free time and spending habits is not straightforward.

Reducing working hours could have an impact on our carbon footprint but whether it will lower or increase it depends on the reason why the worker has decided to cut their working hours. According to a study by Hanbury et al. (2019) lower carbon lifestyle with reduced working hours was achieved if the freed-up time was spent on activities that required commitment like parenting or further education. However, if the worker wanted to reduce their working hours to have more leisure time, this increased the risk of having more carbon intensive leisure activities.

However, the environmental impact of 4DWW does not solely rely on the individual's motivations. Kallis et al. (2013) write that reducing working hours to a 4DWW might have strong benefits for life quality, but the environmental benefits are uncertain as they would require policies that would ensure that the free time would not be spent on resource-intensive activities. The researchers highlight that although the consequences of reducing working hours are uncertain, "this might be a risk worth taking". To avoid the increase of carbon intensive leisure activities mentioned by Hanbury et al. (2019), the creation of policies and social conditions suggested by Kallis et al. (2013) is something that could be considered.

2.2 Knowledge worker productivity

When working hours are reduced, it also means that there is less time to produce value for the organization. For the organization to function, it needs to achieve a certain level of productivity, otherwise it would not be viable for it to do business. The necessary level of productivity can mean achieving a certain amount of profit or getting the necessary tasks done. In this chapter we will discuss how the productivity of knowledge workers is measured and what influences knowledge worker productivity (KWP). After this, we will explore what actions organizations can take to reach the required productivity and enable 4DWW.

Currently, measuring KWP is perceived as difficult, as there are many criteria that can be used to assess the productivity. We will study the development of these criteria and examine a holistic approach to KWP developed by Óskarsdóttir and colleagues (2022). After this, we will explore some of the

actions organizations can take to reach a higher productivity and enable 4DWW.

2.2.1 Measuring knowledge worker productivity

As knowledge work is not as tangible as, for example, work in a factory, this causes challenges in measuring the productivity of a knowledge worker. The change from workforce doing mostly manual labour to more knowledge work requires a change in how productivity among workers is measured (Ramirez & Nembhard, 2004). Bortoluzzi and their colleagues (2018) summarize that "currently, no consensus exists on a single KPI suitable for measuring workplace productivity in an office environment, although qualitative questionnaires are more widely adopted than quantitative tools". However, according to Ramirez and Nembhard's (2004) review of 60 years of KWP literature, quantity was by far the most used method to assess KW productivity, and only 21% of the methodologies used quality while it is considered a key productivity dimension also in the majority of the KWP literature.

Tapasco-Alzate et al. (2022) also identified a discrepancy between practice and what the literature recommends: a common practice is to measure the absenteeism of employees, although literature suggests that organizations should focus more on the empowerment of employees and on the results rather than what happens at the office. Measuring autonomy, human capital, training, teamwork and knowledge management are recommended practices in the literature, but they are not often used in practice (Tapasco-Alzate et al., 2022).

Many academic articles provide suggestions on how the measurement of KWP could be developed. As there are many KPIs used to measure knowledge worker productivity, Bortoluzzi et al. (2018) call for a multidimensional approach to measure it. Takala et al. (2006) show that using a multi-dimensional measurement process to measure white-collar workers' performance helps to align strategies and measurement together, and gain acceptance by managers and their subordinates. There are many multidimensional tools developed for measuring KWP with different metrics, and next, we will discuss a few examples of them. Thereafter, we will deepen our understanding of KWP by concentrating on a model developed by Óskarsdóttir and colleagues (2022).

The dimensions used in KWP literature vary. Ramirez and Nembhard's (2004) summary of 60 years of KWP literature identifies various dimensions to be used to assess KW productivity: quantity, costs and/or productivity, timeliness, autonomy, efficiency, quality, effectiveness, customer satisfaction, innovation/creativity, project success, responsibility/importance of work, KW's perception of productivity, and absenteeism.

Along similar characteristics, Fernandes and colleagues (2019) have developed a multidimensional tool for benchmarking knowledge worker

productivity, and the factors used to evaluate productivity in this tool are absenteeism, presenteeism, engagement, self-assessed (individual) productivity, and objective (office-wide) productivity. This model combines both quality and quantity dimensions listed in Ramirez and Nembhard's (2004) summary. The following section introduces a more recent KWP model proposed by Óskarsdóttir and colleagues (2022).

2.2.2 Knowledge worker productivity model by Óskarsdóttir and colleagues

It is reasonable to suggest that to measure KWP effectively, it is wise to first understand what affects it. A holistic approach to KWP is evident in the conceptual framework by Óskarsdóttir and colleagues (2022). This framework consists of three parts that contribute to the KWP: the state of the individual knowledge worker, work done, and outcome.

Before looking deeper into the first factor of the model, we will explore how Óskarsdóttir defines the concept of KWP. Óskarsdóttir and Oddsson (2017) divide the fundamentals of KWP into two parts: organizational and individual. The actions that the organization needs to take to improve KWP are clarifying and communicating what they see as value, and establishing a work environment where collaboration and knowledge sharing is easy, and the KWs are motivated and their needs are fulfilled (Óskarsdóttir & Oddsson, 2017). The individual's and organization's understanding of valuable actions must be aligned to facilitate effective value creation: "The KW interprets what is valuable to the organization from the organizational culture, environment, and leadership" (Óskarsdóttir et al., 2021).

Knowledge sharing between KWs is important as it improves the organizational knowledge base and KWs access to information (Óskarsdóttir et al., 2021). To facilitate knowledge sharing, organizations should create a supportive and trusting work climate where employees experience belongingness (Óskarsdóttir et al., 2021). Knowledge acquisition, generation, and combination capabilities can enhance the perceived KWP, with knowledge acquisition capability having the strongest influence on KWP (Khaksar et al., 2023). Interestingly, Kianto and colleagues (2019) found that "knowledge sharing does not have a statistically significant impact on knowledge worker productivity". Instead, knowledge creation and utilization have been shown to have a positive impact on KWP (Kianto et al., 2019). However, Ahmed and colleagues (2021) found that knowledge creation, sharing and utilization processes positively affect the KWP. Overall, engaging individuals in knowledge management has a positive impact on KWP (Firdaus et al., 2024).

To fulfil the needs of the KW, as recommended by Óskarsdóttir and Oddsson (2017), organizations should design goal-oriented actions in a way that simultaneously supports the fulfilment of the KW's needs. Tasks that

align with these needs and contribute to wellbeing are naturally more engaging and appealing to knowledge workers (Óskarsdóttir et al., 2021). Additionally, organizational context can be modified to influence KW's thought processes. According to Ebert and Freibichler (2017), creating an organizational context that encourages fast thinking and nudges employees' behaviour is suggested as a way to enhance KWP by improving efficiency, effectiveness, and motivation. Although nudges are said to be easily scalable and not very intrusive to the normal ways of working, Ebert and Freibichler (2017) acknowledge the difficulties in measuring the effectiveness of the nudges and therefore suggest continuously collecting and analysing data about the nudges to better personalize the nudges according to each worker.

From the individual perspective of KWP, the management of the KW's personal resources and KW being effective and efficient are key aspects to consider when wanting to improve KWP (Óskarsdóttir & Oddsson, 2017). Not wasting energy and time on tasks that do not advance the goals of the organization were also emphasized in improving KWP (Óskarsdóttir & Oddsson, 2017).

Having now examined the dimensions of KWP from both organizational and individual perspectives, we return to the conceptual model introduced at the beginning of this chapter. In the first factor of the model, the state of the individual knowledge worker, Óskarsdóttir et al. (2022) continue highlighting the importance of aligning the individual's and organization's needs, and understanding what creates value, but they now add that this alignment can be done by influencing the state of the KW through external factors. However, the interviews of this thesis showed that the organization's decision to have a 4DWW influences also the internal factors of the employee, and therefore, it could be interpreted that the organization can indirectly influence the state of the KW through internal factors as well.

According to Óskarsdóttir et al. (2022) the state of the KW is made up of eight levels: wellbeing, personal resources, engagement, motivation, absorptive capacity, willingness, job commitment, and job satisfaction. The 8 levels forming the state of the KW are influenced by internal and external factors (Óskarsdóttir et al., 2022). The internal factors are psychological capital, heuristics, identity, individual factors, motives and motivators, interests and needs, and expectancy. The external factors are relationships, situational factors, organizational culture, organizational climate, and organizational hygiene. Figure 1 outlines the levels that create the state of the KW, along with the internal and external factors that influence them.

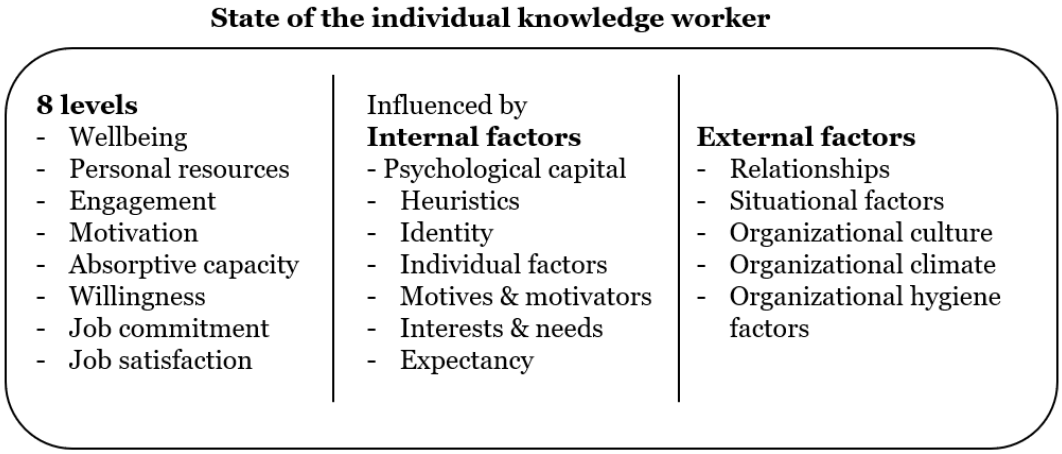

Figure 1: The 8 levels of the state of the KW and the internal and external factors influencing them

The second factor of the conceptual model is the completion of work. Figure 2 lists the factors influencing this part of the KWP model. Óskarsdóttir's et al. (2022) write that there are six internal factors affecting the completion of work: personal knowledge management, absorptive capacity, time management skills, evaluation of personal gain and awareness. From the external side, there are three factors: job design, relationships and networks, and communication. One could argue that the external factor of job design is also related to the internal factor of time management: according to Óskarsdóttir et al. (2021) "Organizations need to give KWs the autonomy to manage the timing and sequencing of their own work. KWs need to strategically sequence and time their sources of restoration to offset their sources of depletion for high performance."

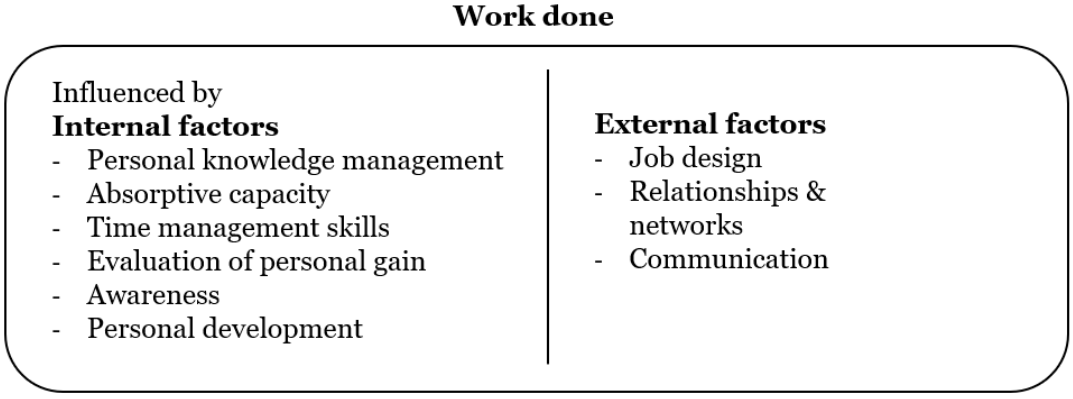

Figure 2: The internal and external factors influencing the completion of work

The third factor in the model is the outcome of work, which encompasses the value generated for the organization, the individual, and the broader

social system. Figure 3 illustrates the simplified model of KWP. The internal and external factors influence the state of the individual KW, and the state of the KW influences work done and the outcome. Other internal and external factors influence the work done, and work done influences the outcome of work together with the state of the KW (Óskarsdóttir et al., 2022).

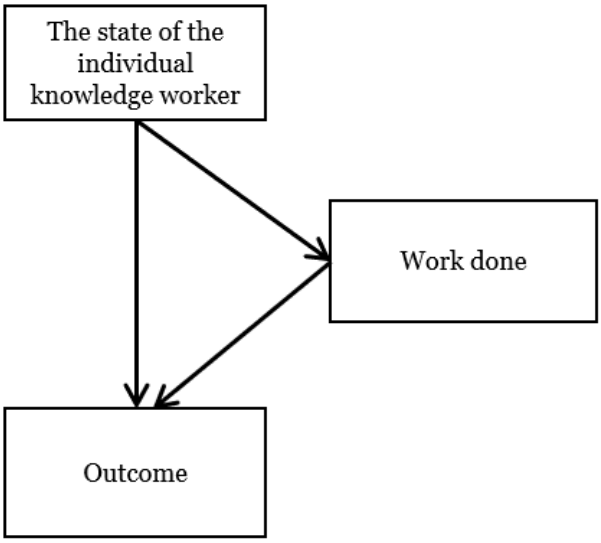

Figure 3: The KWP model (amended from Óskarsdóttir et al. 2022)

While Óskarsdóttir and colleagues' (2022) model of KWP is among the most recent, it is not the only one of its kind. Adrianessen and colleagues (2016) also developed a conceptual model of KWP, in which the key factors influencing KWP are focus on the primary task, result orientation, innovation orientation, recognition for knowledge sharing, self-management, and continuous learning. This model has similarities with the Óskarsdóttir and colleagues' (2022) holistic conceptual framework as both models emphasize focusing on what is important and what creates most value for the organization, sharing knowledge in the organization, and giving employees autonomy over their work.

When going even further back in time, we can see that these models, for example, by Óskarsdóttir and colleagues (2022) or Fernandes and colleagues (2019) have listed similar factors influencing KWP as Drucker did in 1999. He names six factors that affect KWP: knowing the task, autonomy and responsibility for one's tasks, innovation, continuous learning, quality of the work, treating the worker as an asset rather than a cost (Drucker, 1999).

When wanting to improve KWP, interestingly, Óskarsdóttir and colleagues (2021) do not recommend focusing too much on efficiency improvements as this might lead to choosing actions that require less effort and provide short-term value, instead of self-development actions that require more effort but could create more value in the long-term. It is easy to see that with

aspirations to be more effective, the management might intensify evaluating performance, but this might not be sensible as according to Al Dwaikat and colleagues (2023) performance monitoring negatively influences employee knowledge management and KWP through stress. Óskarsdóttir and colleagues (2021) highlight the importance of taking innovative actions to improve KWP, as although being risky, they are essential in ensuring the continuity of business in the long run. Next, we will explore what actions organizations can take to make their work more efficient and enable 4DWW.

2.2.3 Organizations enabling 4DWW

In chapter 2.1.3, the key activities involved in the implementation of the 4DWW were discussed. This section will now focus on the actions that, according to the literature, contribute to the long-term sustainability of 4DWW and how KWP can be elevated and maintained at the required level. Many of these actions pertain to work organization, organizational culture, and managerial practices.

As a lot of work is completed in teams, organizations need to pay attention to what kind of practices they have for organizing the work. Many teams may not work together at the same office or in the same department, and this has its own implications for KWP. Knowledge worker productivity in distributed teams is affected by team structure, tasks and processes, organizational context, and the workspaces which can be physical, virtual and social (Bosch-Sijtsema et al., 2009). Hakanen and colleagues (2024) write that giving autonomy to a team can increase the engagement of an employee more than giving individual decision authority, and therefore, it is good to acknowledge this when reorganizing work when shifting to a 4DWW.

The work might also be fully or partially remote and this has its own effects on employee wellbeing. According to Finnish Institution of Occupational Health (FIOH) “remote work is associated with greater loneliness and boredom at work but also with decreased chronic fatigue”. Reduced chronic fatigue should be considered when creating the policies for remote work as chronic fatigue is one of the core symptoms of burnout in addition to cynicism, cognitive disorders and emotional control disorders (FIOH, 2024).

The work culture and organizational practices that support collaboration while ensuring a calm and focused work environment also play a crucial role in enhancing KWP. On a daily level, KWP can be influenced by things such as interruptions, rest, and how the teamwork is organized. Interruptions which contain irrelevant information for employees’ primary activities hinder performance, whereas interruptions containing relevant information have a positive effect, although the workload increases (Addas & Pinsonneault, 2018). Email handling policies are recommended to tackle the negative effects of email interruptions.

It is reasonable to suggest that scheduling breaks can also increase KWP. According to Blasche et al. (2018), unstructured rest breaks during mentally demanding tasks increased vigour compared to not taking a break. Furthermore, breaks that included exercise boosted vigour even more, while relaxation during the break was found to reduce fatigue 20 minutes afterward. In addition to scheduling regular breaks, attention should also be paid to the overall length of the working day. If the organization considers increasing the length of the workday to 10 hours, and the workweek being 4 days long, this shift may not produce the productivity effects that are intended. Collewet and Sauermann (2017) found that call centre agents become less productive due to fatigue as the number of working hours increases. Of course, it is good to acknowledge that not all knowledge work has similar characteristics as these call centre agents.

Creating a culture where skill discretion, job feedback and team empowerment can occur is important, as these three characteristics are the most influential factors affecting current and future work engagement across different types of jobs (Hakanen et al., 2024): "Having opportunities to learn new things, be creative at work, and knowing the results of one's work activities and the meaning and purpose of one's job in larger context are highly engaging qualities at work." If the employees are not engaged in their work, it is hard to imagine them wanting to work more efficiently to maintain the 4DWW. Taking care of the engagement of young adults is especially important, as their work engagement and ability to work have decreased in the recent years (FIOH, 2024).

A supervisor or a manager can also have a tremendous impact on KWP. According to Ahmed and colleagues (2021) verbally or non-verbally abusive supervision behaviour negatively affects knowledge worker productivity. Managers might use three types of techniques to control their knowledge worker subordinates: by imposing demands, such as setting deadlines and requesting extra work, by monitoring employees, and by behaving in a way they want the employees to behave (Perlow, 1998). Khaksar and colleagues (2023) recommend that managers show appreciation for the efforts of knowledge workers, as this can enhance their sense of making meaningful contributions to important decisions, thereby further boosting their productivity.

The factors influencing KWP have been discussed widely so far, but it is also relevant to consider the effects of 4DWW on the KWP. According to Campbell's (2024) research on 31 academic articles examining 4DWW, it is not clear how productivity is impacted by 4DWW. Kim and colleagues (2023) found that the effects of reducing working hours vary between industries: the reduction improved efficiency in labour-intensive industries and reduced efficiency in knowledge-intensive industries. However, based on the interviews conducted for this thesis, the case organizations reported an increase in productivity following the shift to a 4DWW, as they were able to complete the

same amount of work in four days instead of five, with some even experiencing an increase in cash flow.

2.3 Wellbeing

Having more time off from work allows individuals to dedicate more time to life outside of work, thereby shifting and potentially improving the balance between work and non-work life. This change can influence the wellbeing of the individual tremendously. This chapter discusses the existing literature on reduced working hours and their impact on employee wellbeing, and explores the Job Demands and Resources (JD-R) model by Bakker and Demerouti (2017).

There are many ways in which individuals can choose to channel the resources freed up by the 4DWW. These activities can support better stress reduction and recovery from work compared to the traditional 5-day workweek. 4DWW alleviates the pressure on leisure time and non-work responsibilities, as individuals have more time to manage tasks that would otherwise be confined to the 2-day weekend. From the organizational perspective, setting the right workload for each employee and not cutting wages proportionally are some of the actions the organization can take to increase the wellbeing of their employees.

2.3.1 Reducing working hours influences wellbeing

According to Kauhanen and Lehmus (2019) the average working hours in Finland are already an hour below the EU average. This statistic prompts the question of whether there is a justified need to further reduce the working hours. One important perspective to consider is the impact of the 4DWW on employee wellbeing. The 4DWW experiments presented in chapter 2.1.4 demonstrated clear benefits for employee wellbeing when working hours were reduced. Additionally, plenty of research has been done on working hours and their effect on wellbeing.

Furthermore, the wellbeing of the Finnish workforce has significant room for improvement. According to the Finnish Institute of Occupational Health (FIOH) (2024), one in ten employees in Finland is at risk of burnout, with the incidence of burnout among young adults having doubled since the COVID-19 pandemic. Work engagement and ability to work have decreased among young adults, whereas burnout symptoms and boredom at work have increased compared to the year before (FIOH, 2024). FIOH (2024) also writes that employees' wellbeing at work is burdened by the increasing uncertainty of the future of work.

Continuing with further examples of the effects of reducing working hours on wellbeing, it becomes clear that such a reduction can have both positive and negative impacts. When the workweeks were shortened in Portugal and France, the workers' subjective wellbeing increased (Lepinteur, 2019). However, if we only look at the connection between subjective wellbeing and reduced working hours, we do not get a very comprehensive picture of the effects, as the impacts of 4DWW can also be negative. 4DWW increased the stress levels of an agile software development team, but also increased the members' job satisfaction (Topp et al., 2022).

In South Korea, reducing working hours increased the amount of weekly exercise, and decreased the likelihood of smoking (Ahn, 2016). The likelihood of drinking participation also increased substantially but did not lead to an increase in the likelihood of frequent or daily drinking of alcohol. These results indicate that it is good to be prepared for the negative impacts of 4DWW when planning the shift to it and when implementing it.

A critical consideration in implementing 4DWW and caring for the wellbeing of employees is how organizations can define an appropriate workload that is enough from the profitability perspective but also supports employee wellbeing. If we start by looking at a person who has been previously unemployed or economically inactive, significant mental health and wellbeing benefits are achieved through working even just 1-8 hours per week (Kamerāde et al., 2019). However, it is likely that working only as few as 8 hours per week on a large scale would not be viable in our current economic system.

On the other side of the working hour spectrum, working beyond 40 hours per week raises questions about its impact on wellbeing. A study by Angrave and Charlwood (2015) suggests that long working hours – specifically working 50 hours a week or more – do not directly impact workers' subjective wellbeing. However, wellbeing levels can be enhanced through governmental and organizational policies aimed at reducing long working hours. Nonetheless, being over-employed or under-employed was associated with lower levels of subjective wellbeing in short term, whereas being over-employed for over two years was associated with wellbeing levels remaining low. Interestingly, Kamerāde and their colleagues (2019) write that they found no evidence that working 36–40 hours a week would be the optimal amount of work for mental health and wellbeing.

Given that the current average workweek is 40 hours, the effects of reducing it by eight hours warrant further examination. As has been said, 4DWW can mean different things in different organizations. In some companies, employees have the option to reduce their working hours to 80%, but this also results in a proportional reduction in salary. Persson and colleagues (2022) studied the pros and cons of working less when salary is also cut proportionally: reducing working hours improved the quality of life in both higher and lower-income groups, but simultaneously made work more intense, and salary cuts caused concerns among those with lower salaries.

An important issue to explore is how reducing working hours without a salary reduction affects various dimensions of wellbeing, such as stress levels and work-life balance. Reduced working hours with full pay have been shown to decrease the work-related burden on the employees (Jansen-Preilowski et al., 2020). According to a systematic review of published studies by Voglino et al. (2022), reduced working hours with 100% pay increased working life quality, improved sleep, and reduced stress. However, there are no universal recommendations for implementing the reduction in practice. Jansen-Preilowski and colleagues (2020) suggest that successful implementation requires careful planning in advance and identifying opportunities to streamline work processes. These results indicate that from the wellbeing perspective, organizations should consider refraining from cutting the wages simultaneously with the working hours.

The extra day off could offer a way to alleviate the pressures in life outside of work and allow more time to, for example, connect with family or take care of household chores. Johanna Lammi-Taskula has researched the wellbeing of families with children in Finland over the last two decades, and they summarize that the key challenges with wellbeing in these families are related to coping with everyday life and having enough time for the family, but also making ends meet (Rajakangas, 2017). It is reasonable to suggest that by maintaining full salaries despite the shortened workweek, the 4DWW would not undermine the financial stability of these families and could help them manage both their work and non-work responsibilities more effectively.

The extra free time an employee receives with the 4DWW may not always be used strictly for recovering from work, but for household chores. During the experiment at Femma Wzv, employees had high wishes for more personal time but the hours freed up by reduced working hours were mostly used on household work, care and personal care (Mullens et al., 2021). On the other hand, when the household chores get done during this extra free day, one could argue that the employee could now have 2 whole days for recovering from the week. Positive effects of the experiment at Femma Wzv were for example employees' reduced household stress and leisure time pressure, and improved work-private life balance (Mullens et al., 2021).

4DWW could also change the way we perceive time, but it will require the organization to give more autonomy for the employee. Reducing time pressure at work, allowing the employees to organize their working day more autonomously, and balancing work and private life better can improve the subjects experience of their time wealth, meaning they experience they have more time to do certain things compared to the measured objective time use (Gerold et al., 2024). Working less and sleeping more also increased time wealth during COVID-19 lockdown.

4DWW seems to influence the organizations and its employees from many perspectives, for example, from the productivity, profitability and wellbeing perspectives. According to 31 academic articles focused on 4DWW, this

working arrangement has been shown to increase job satisfaction, morale, and cost reductions, and to reduce employee turnover (Campbell, 2024). On the other hand, 4DWW has been shown to possibly lead to the intensification of monitoring and measuring employee performance. Campbell (2024) also warns that based on the results of the study, the benefits of 4DWW might fade over time. As has been mentioned, employee performance measurement can lead to a reduction in KWP through increased stress (Al Dwaikat et al., 2023). Organizations considering the implementation of the 4DWW should carefully weigh these disadvantages and strive to find a balance between work intensification and employee wellbeing.

2.3.2 Job Demands and Resources model

Both the KWP model by Óskarsdóttir and colleagues (2022) and the JD-R model by Bakker and Demerouti (2017) discuss the influence of internal and external factors on the outcome of work, but where the KWP model has more of a productivity approach, the JD-R model focuses on how the wellbeing of the employee contributes to their work performance.

According to Schaufeli and Bakker's (2004) earlier version of the Job Demands-Resources (JD-R) model, job demands and job resources influence the feeling of burnout and engagement. Job demands are "the things that have to be done" and job resources are aspects that reduce job demands, help achieving work goals or assist in personal growth, learning and development. Both job demands and job resources can be physical, psychological, social or organizational.

Hakanen and Kaltiainen (2020) explain these different levels in an informative way. On the physical level, a job resource can be for example a good workspace and tools, and a job demand can be a lack or low quality of work equipment. On the psychological level, a job resource can be skill discretion, and a job demand can be emotionally demanding customer interactions. From the social perspective, a job resource can be the support of colleagues, and a job demand can be conflicts. From the organizational perspective, a job resource can be psychological safety at the workplace, and a job demand can be organizational changes (Hakanen & Kaltiainen, 2020).

As burnout is part of the JD-R model, it is relevant to understand what is meant by the concept and what are the symptoms of it. Bakker and colleagues (2023) describe burnout as "a work-related state of exhaustion and a sense of cynicism". According to FIOH (2024) burnout has four core symptoms: chronic fatigue, cynicism, cognitive disorders and emotional control disorders. Schaufeli and Bakker (2004) write that "burnout is mainly predicted by job demands but also by lack of job resources, whereas engagement is exclusively predicted by available job resources". As for work engagement, Bakker

and colleagues (2023) describe it as “a positive motivational state of vigour, dedication, and absorption”.

This initial version of the JD-R model functions through two processes: job demands increasing health problems and turnover intention due to increased burnout, and job resources reducing turnover intention through increased engagement (Schaufeli & Bakker, 2004). This model has been developed further with adding the home and personal resources and the regulative effects of various factors to the equation of work performance. These developments will be discussed further in the next chapter where the theoretical framework of this thesis will be further examined.

2.4 The theoretical framework of the thesis

In the JD-R model by Bakker and Demerouti (2017) personal and job resources increase motivation, and job demands increase exhaustion, and together the motivation and exhaustion influence job performance. The resources can also reduce the impact of job demands on exhaustion. Simultaneously, job demands can increase or reduce resources’ influence on motivation.

As the COVID-19 pandemic forced employees to work in an altered work context, Demerouti and Bakker (2022) developed the JD-R model further and extended the model so that the demands of the model are influenced by the interplay between different demands from work and non-work areas of life, such as demands from the organizational, job, home and personal dimensions. In a similar way these dimensions influence the resources of the individual. Together the demands and resources influence the energy/health and motivation of the individual and thus, the outcomes of work. The energy/health entity includes things like exhaustion, job-related anxiety and health complaints, and the motivation entity includes factors like work engagement, commitment and flourishing (Bakker & Demerouti, 2017).

The work and non-work dimensions being one of the additions to the model, another addition is the regulation. The regulatory strategies of the individual, family, leader, and organization can change the way demands and resources influence the outcomes. Figure 4 describes the extended JD-R model. In this thesis, we will focus on the extended version of JD-R combined with the KWP model. However, sometimes the terms ‘job demands and job resources’ from the initial JD-R model will be used and sometimes only “demands and resources” are used to indicate that also the non-work dimensions are considered.

In comparison, according to Óskarsdóttir and colleagues (2022) KWP is influenced by the state of the individual knowledge worker, work done, and outcome. The state of the KW influences work done and outcome. The work done influences the outcome of the work. Figure 3 in chapter 2.2.2 describes

the process through which KWP is created. When examining the model further, we can see that there are internal and external factors influencing the state of the KW and work done. These factors will be discussed in relation to the theoretical framework of this thesis soon.

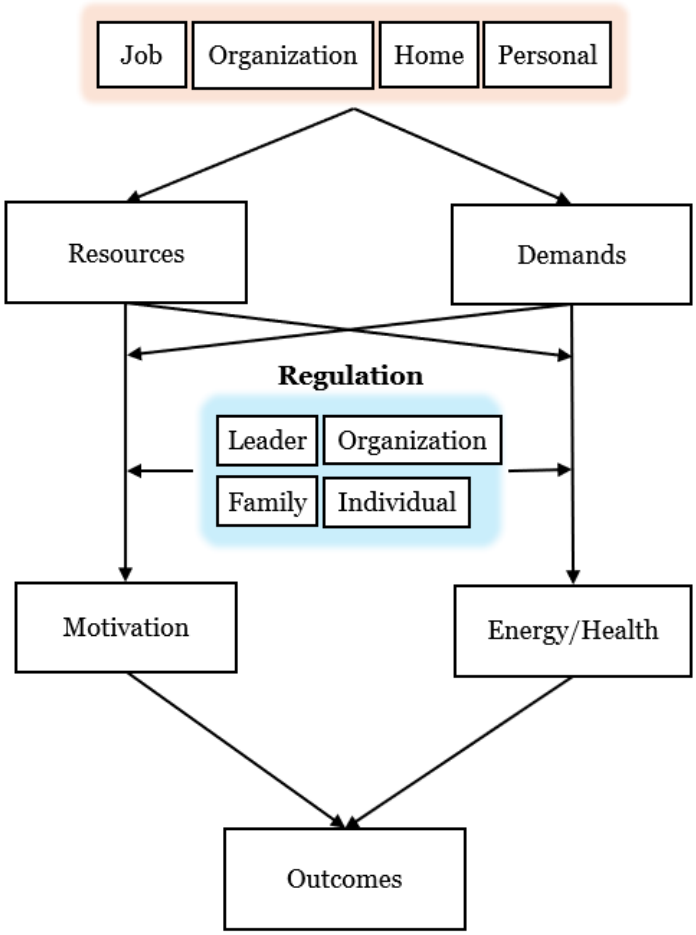

Figure 4: Extended demands-resources model (amended from Demerouti & Bakker, 2022)

Both the KWP model and JD-R model describe a process which in the end influences the outcome of work. The JD-R model describes the process more from the wellbeing perspective of the employee: resources and demands influence the motivation and energy of the employee and these factors influence the outcome. Whereas Óskarsdóttir and colleagues' (2022) model of KWP has most of the elements of the JD-R model, but this model has divided those elements in a different way and named more factors that influence the KWP. The first part of the model, the state of individual KW, is influenced by internal and external factors, and these factors could be thought to represent the resources and demands of the JD-R model. In a similar way, the KWP model's 'work done' sector is influenced by internal and external factors, and

there as well we can identify factors resembling resources and demands from the JD-R model.

Figure 5 illustrates the theoretical framework of this thesis which combines the JD-R model and the KWP model. The JD-R model shares several clear points of connection with the KWP model and when combined, they create a theoretical framework that fits the research objectives of this thesis. To summarize, the job and organizational demands and resources from JD-R resemble the external factors influencing the state of the individual KW and work done, and similarly, the home and personal resources and demands from JD-R resemble the internal factors influencing the state of the KW and work done. The following sections will examine these connections more thoroughly.

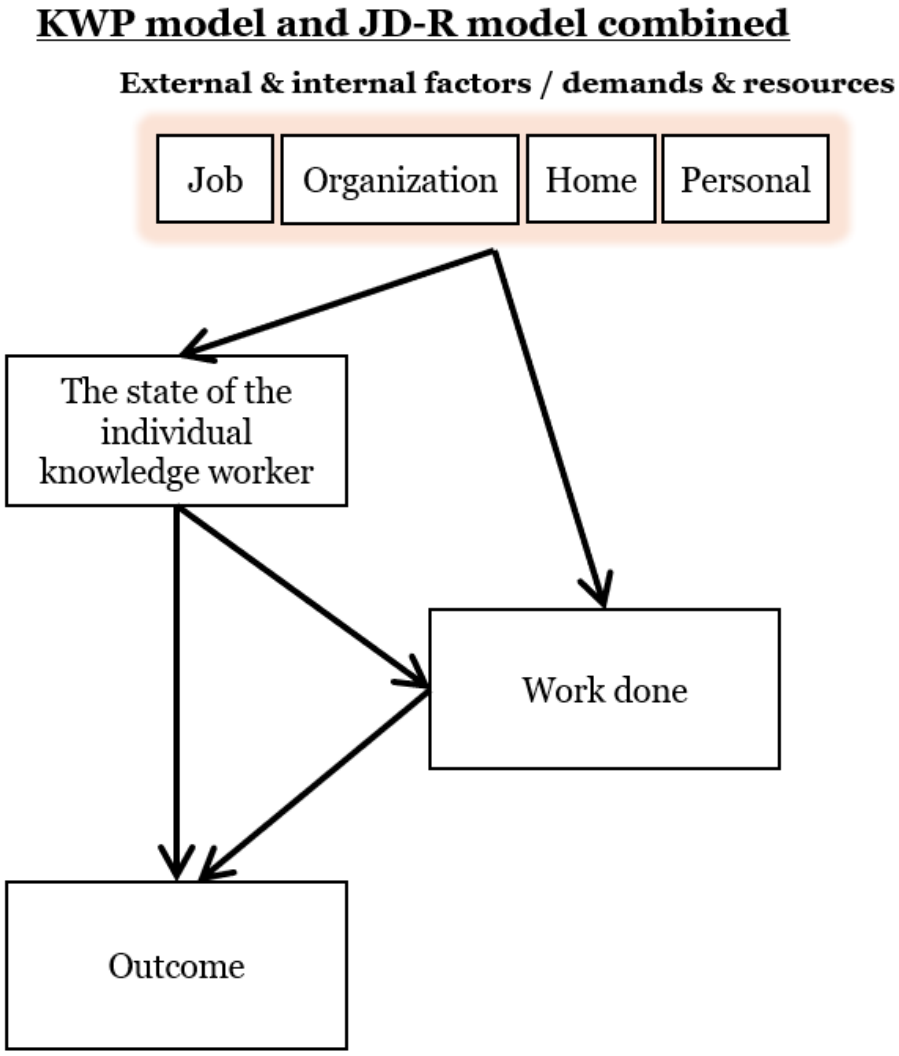

Figure 5: The KWP model and the JD-R model combined

To recapitulate, the state of the KW consists of eight levels: wellbeing, personal resources, engagement, motivation, absorptive capacity, willingness, job commitment, and job satisfaction. Here we can identify a connection between the theories. The concepts of engagement, motivation, and commitment are also present in the JD-R model by Bakker and Demerouti (2017) in the motivation sector. This means that both theories claim that engagement, motivation and commitment influence job performance.

The 8 levels forming the state of the KW are influenced by internal and external factors. The internal factors are psychological capital, heuristics, identity, individual factors, motives and motivators, interests and needs, and expectancy. The external factors are relationships, situational factors, organizational culture, organizational climate, and organizational hygiene. Figure 1 in chapter 2.2.2 lists the levels and the internal and external factors.

Both internal and external factors may comprise multiple components or sub-elements but a few of the external factors listed above draw attention with their similarity to JD-R model's physical, psychological, social and organizational demands and resources. These factors are relationships, organizational climate and organizational hygiene factors. Óskarsdóttir et al. (2022) write, for example, that organizational climate consists of the physical environment and psychological safety, and organizational hygiene factors are for example, salary, reward systems, job design, and support. In Figure 6, we can see some of the external factors and their sub-elements listed on the left-hand side, whereas on the right-hand side the connection to the JD-R model's job demands and resources is listed.

The job resources and demands from JD-R model shown in Figure 6 are not the only ones connected to the external factors of the KWP model, but the next sections will go through a couple of examples. It is also important to mention that the internal factors of the KWP model are connected to the home and personal resources and demands of the extended JD-R model mentioned earlier, and we will cover this topic more in the discussion section of this thesis with illustrative examples from the collected data.

If we look at the organizational climate section in Figure 6, we can see that it consists of elements like the physical environment and psychological safety. The JD-R model also identifies physical environment as a possible job demand or resource, depending on whether there is a lack of good work equipment or if the workspace is pleasant to work in. This means that organizations should pay attention to the physical work environment they provide their employees, and whether it increases their resources or depletes them.

In the JD-R model, psychological safety is named as an organizational job resource, and thus, if the organization reaches this state, psychological safety can improve the state of the individual KW and thus lead to improved work outcomes. On the other hand, one can imagine how the lack of psychological safety could lead increased organizational job demands, thus increasing the strain on employees. Paying attention to the organizational climate appears

to be an important action for organizations carry out, if they want to maximize the organizational resources of their employees.

External factors influencing the state of the KW

KWP model	**JD-R model**
Organizational climate	

- Physical environment	- Physical job demand
	  - Lack of equipment
	- Physical job resource
	  - Good workspace

- Psychological safety	- Organizational job resource
Organizational hygiene factors	

- Job design	- Psychological job resource
	  - Skill discretion
	- Organizational job demand
	  - Organizational changes

- Support	- Social job resource - Support from colleagues

Relationships	- Social job demand
	  - Conflicts
	- Psychological job demand
	  - Emotionally demanding customer interactions

Figure 6: Comparison between the external factors influencing the state of the individual knowledge worker and job demands and resources

In the KWP model, organizational hygiene factors are, for example, job design and support. In the JD-R model, skill discretion is named as a psychological job resource and this relates to job design, because if the work is designed so that the employees get to use the skills they have and have control over their work, this structure can increase the motivation at work. On the other hand, organizational changes can be an organizational job demand, and when for example, implementing changes in the job design due to 4DWW, it is good to remember that the changes can cause more strain on the employees. The strain could be reduced by increasing another resource of the employee. For example, support is part of the organizational hygiene factors in the KWP model, and the JD-R model identifies support from colleagues as a social job resource. Therefore, creating a supportive environment in the organization can support the motivation of the employees.

Relationships influence the state of the KW as well. The connection between relationships from the KWP model and the JD-R model is visible, for example, in social and psychological demands. In JD-R, conflicts are named as a possible social demand, and it is very likely that an employee has conflicts at some point of their career because work is usually done with some amount of collaboration with other employees. Some positions might also have more client meetings than others, and in the JD-R model, emotionally demanding customer interactions are named as a psychological job demand. Based on this demand, organizations should pay attention to the number of demanding customer interactions one employee has, and how well they can cope with this number of meetings and the demands they create.

As was mentioned earlier, the second part of the KWP model, work done, also has connections to the job demands and resources from the JD-R model. According to the KWP model, there are six internal factors affecting the completion of work: personal knowledge management, absorptive capacity, time management skills, evaluation of personal gain and awareness. From the external side, there are three factors: job design, relationships, and networks, and communication. Interestingly, job design and relationships are both part of the external factors for state of the KW and work done. When investigating the external factors of work done in KWP model, we can see that they have clear connections to the JD-R model.

For example, job design is connected to the same job resources and demands mentioned in the earlier section: skill discretion as a psychological job resource and organizational changes as an organizational job demand. Relationships and networks, and communication are connected to the JD-R model, for example, through the social and psychological job demands created by conflicts and demanding customer interactions.

Organizations considering implementing 4DWW could benefit from assessing the number of demands and resources directed at their employees, how the internal and external factors influence the outcome of work, and how can the organization support and improve the state of the individual KW and work done. Organizations should also evaluate how the employees can complete their work faster than before, as moving to a 4DWW increases the pressures to do so.

3 Methodology

3.1 Methodology and Method

The purpose of this thesis is to increase our understanding of the effects of 4DWW on the organizing of work, employee wellbeing and efficiency. Media discussions around the 4DWW reveal mixed reactions, with some strongly supporting the model and others firmly opposing it. Those who oppose the change often express concerns about its impact on productivity, while those who view the 4DWW more positively tend to emphasize its benefits for employee wellbeing. This thesis aims to contribute to the existing understanding of how the 4DWW affects both employee wellbeing and productivity. With ten semi-structured interviews, this thesis aims to discover employees' perceptions on 4DWW's influence on their organizing of work, wellbeing and efficiency.

The aim of this study is not only to examine employees' experiences of wellbeing and productivity, but also to explore how the 4DWW has transformed their ways of working, enabling them to achieve these outcomes. The interviews aim to discover what activities, processes and skills do the participants find as crucial in making the 4DWW successful. It is expected that some of the listed aspects cannot be clearly divided as the responsibility of the organization or the individual, as they emerge from the collaboration of the organization, its management and the employees.

A qualitative approach was chosen for this thesis to gain in-depth insight into how employees working under the 4DWW perceive the organization of their work, their wellbeing, and their efficiency. Qualitative approaches are well-suited for exploring and interpreting topics where the aim is to understand data through a process of interpretation, viewing reality as a socially constructed phenomenon (Eriksson & Kovalainen, 2011). Explaining, testing a hypothesis or doing statistical analysis – which are more often linked to quantitative than qualitative approaches (Eriksson & Kovalainen, 2011) – would not allow the researcher to understand the thoughts of the employees of the case organizations in a similar way that doing interviews allows.

This study is an interview study that does not follow a specific qualitative tradition. Additionally, this is a multiple-case study where the cases are the 4DWW organizations. Saaranen-Kauppinen and Puusniekka (2009) argue that the case study method is suitable in a situation where one "wants to understand the case deeply and acknowledge its context". This study aims to understand employee's experiences in managing their work within the context of a 4DWW organization.

Yin (2003) recommends using a multiple-case study over a single-case one as multiple cases offer better generalizability of the findings and possibility to discover more about the case, but he also reminds that in a multiple-

case study "every case should serve a specific purpose within the overall scope of inquiry". In this study, each organization serves a specific purpose by having a different experience with the 4DWW as all the organizations operate in different industries. Based on Yin's (2003) division of case study designs, this study falls into the category of embedded multiple-case design because there are the three contexts of the three organizations, which all have the case of 4DWW and the employees in the organization are the embedded units of analysis.

Data was collected through ten semi-structured interviews, and this data is primary data as it was collected by the researcher. Semi-structured interviews were conducted to allow participants to discuss their thoughts more freely than in a structured interview and to allow the interviewer to ask further questions on topics that arise during the discussion (Ruslin et al., 2022). The researcher used an interview guide containing questions related to the employee's perceptions on the 4DWW from different perspectives. The interview guides can be found in the appendices, Appendices A and B.

The interviews were conducted online through Microsoft Teams as some of the interviewees were not located in Finland. The interview duration was between 30-60 minutes depending on the participant's schedule. On average, the interview duration was 45 minutes and all the most critical interview questions were answered during the interviews.

The collected data was analysed with reflexive thematic analysis (Braun & Clarke, 2019) with a more detailed discussion of this method provided later. When the analysis was done, the interview findings were compared to the findings of the literature review and assessed through the theoretical framework of this thesis which combines the knowledge worker productivity framework by Óskarsdóttir's et al. (2022) and Job Demands-Resources model by Schaufeli and Bakker (2004) and Bakker and Demerouti (2017).

3.2 Research setting

In this thesis, the focus is on Finnish organizations that have 80% working time (30h per week) but 100% pay. Interview participants need to work or have worked in a 4DWW organization to qualify for this study. Without this condition, the interviews would not produce information related to the research questions. Eleven Finnish organizations that had adopted or experimented with the 4-day work week were identified and contacted via email. Of these, three expressed interest in participating in the study. To protect the anonymity of the participants and their employer, the organizations are called organization A, B, and C in this paper.

Organization A has had the 4DWW from the establishment of the company, operates within the technology sector, and has currently around 20 employees. The company offers various solutions to their customers, and

their business model is based on selling working hours, not projects. The employees of this organization are for example consultants, data scientists, or developers.

Organization B has had the 4DWW since 2023, operates within the HR sector, and has 4 employees. Their business model aims for continuous collaboration with their customers instead of isolated projects. The four employees in this organization are, for example, talent acquisition specialists or employer branding specialists.

Organization C differs significantly from organizations A and B, as it operates in the public sector context – specifically, as a student union. Organization C has four employees and it trialled the 4DWW for six months during 2024. The goal of the organization is to look after the interests of the students through various activities such as constructing appeals and lobbying.

In addition to their business models, a significant difference between the organizations lies in their locations. Organizations A and B do not have offices, and work completely remotely. In addition to this, some of the organization A and B's employees work from other countries than Finland, for example, from Indonesia. Only organization C has an office where the employees meet regularly. However, the employees of organization C have the freedom to work remotely when they want to, but the culture of the organization encourages employees to come to the office multiple times a week. All the case organizations demonstrated great interest in promoting the 4DWW working model through participating in this thesis process.

3.3 Interview participants and ethical considerations

The interviews were divided between the organizations based on the gained access to the interviewees, resulting in 5 employees from organization A, 3 employees from organization B, and 2 employees from organization C being interviewed. Considering the time restrictions of a master's thesis the number of interviews was limited to 10. The interviews with organizations B and C covered 50% or more of their employees, however, as organization A is a larger company, special attention was paid to interviewing employees from different positions in the organization: employees with an emphasis on business knowledge and those with an emphasis on technical skills were both interviewed.

The first step taken to protect the anonymity of the interviewees was changing the names of participants to pseudonyms. These pseudonyms are presented in Table 2. As the interviews were conducted in small organizations, ensuring the anonymity of participants is highlighted. In large organizations there could be multiple employees sharing similar characteristics, making the identification of the participants more difficult. Therefore,

special attention was paid to processing the interviews in a way that could increase the anonymity.

All interviews from organizations B and C, as well as some from organization A, were conducted in Finnish, with the coding and quotes from these interviews translated into English. It is easy to see how the formulation of sentences can change in this translation process, and this change could help to reduce the risk of work colleagues identifying participants based on their speaking mannerisms and specific structures used in sentences, as those may not be the same when translated to another language. However, if participants discuss their involvement in the study with each other, it may be easier for colleagues to identify which pseudonym corresponds to a particular individual, even though the responses have been processed to minimize the risk of revealing personal information. In fact, some of the interviewees did reveal that some participants had been talking to each other about joining the study which means these participants know some of the people who are participating in the study. Therefore, the study may not be completely anonymous, but this is due to the participants choosing to share their participation to others.

The contact persons of the case organizations were asked to promote the study in internal communication platforms to allow employees to have time to consider participating, and to allow them to make the decision anonymously and voluntarily, instead of the contact persons directly asking the employees to join the study. This strategy was chosen as a message being sent to a general forum has less social presence – the feeling that another person is physically present – than for example a video call (Calefato & Lanubile, 2010). It is hoped that receiving the message was perceived as less pressuring than a video call.

The participants were informed on how their data will be processed in the privacy notice sent to them prior to the interview. Privacy notice also stated how GDPR is followed. The participation consent form with the researcher's contact information was sent together with the privacy notice. Participants were asked to confirm that they had read the documents and agreed to participate in the study, either by providing written electronic consent or verbally at the start of the interview recording.

In addition to the participant's anonymity and data privacy considerations, there are other ethical considerations related to the thesis process. The researcher acknowledges the potential influence of their positive attitude towards the topic on the research process. This may have manifested in various ways, such as unintentionally focusing more on literature highlighting the positive effects of 4DWW, encouraging interviewees to discuss their favourable experiences, and identifying codes that collectively present a more positive view of employee perceptions of 4DWW than might emerge from a more neutral stance. To minimize this bias, the researcher remained conscious of its potential impact and carefully considered their choices throughout the research process. Additionally, the thesis supervisor has reviewed the text

multiple times, providing an external perspective on how different aspects of the topic are represented.

Name	Organization
Caitlin	A: Tech consulting
Lisa	A: Tech consulting
Jessica	A: Tech consulting
Sam	A: Tech consulting
Zac	A: Tech consulting
Anna	B: Recruiting
Vic	B: Recruiting
Izzy	B: Recruiting
Josh	C: Student union
Brennan	C: Student union

Table 2: List of the interview participants and their organizations

3.4 Data analysis

The data was analysed with the reflexive thematic analysis process by Braun and Clarke (2019). Braun and Clarke (2006) divide the thematic analysis process into six phases: (1) familiarizing oneself with the data, (2) coding the data, (3) identifying themes, (4) reviewing the themes, (5) defining and naming the themes, and (6) writing the analysis. Figure 7 illustrates this process. In this thesis, the familiarization process began by watching the interview recordings and transcribing the interviews. The transcription produced by Microsoft Teams was read and corrected in cases of misinterpretations. Initial ideas related to the data were written on a column reserved for comments in the transcription documents.

In phase 2 of the analysis process, the data was coded with the in vivo method as this way the codes represent what the interviewees have precisely said, and this method is recommended for beginner qualitative researchers (Saldaña, 2013). Descriptive coding was also used. The codes were written in the column reserved for codes in the transcription document.

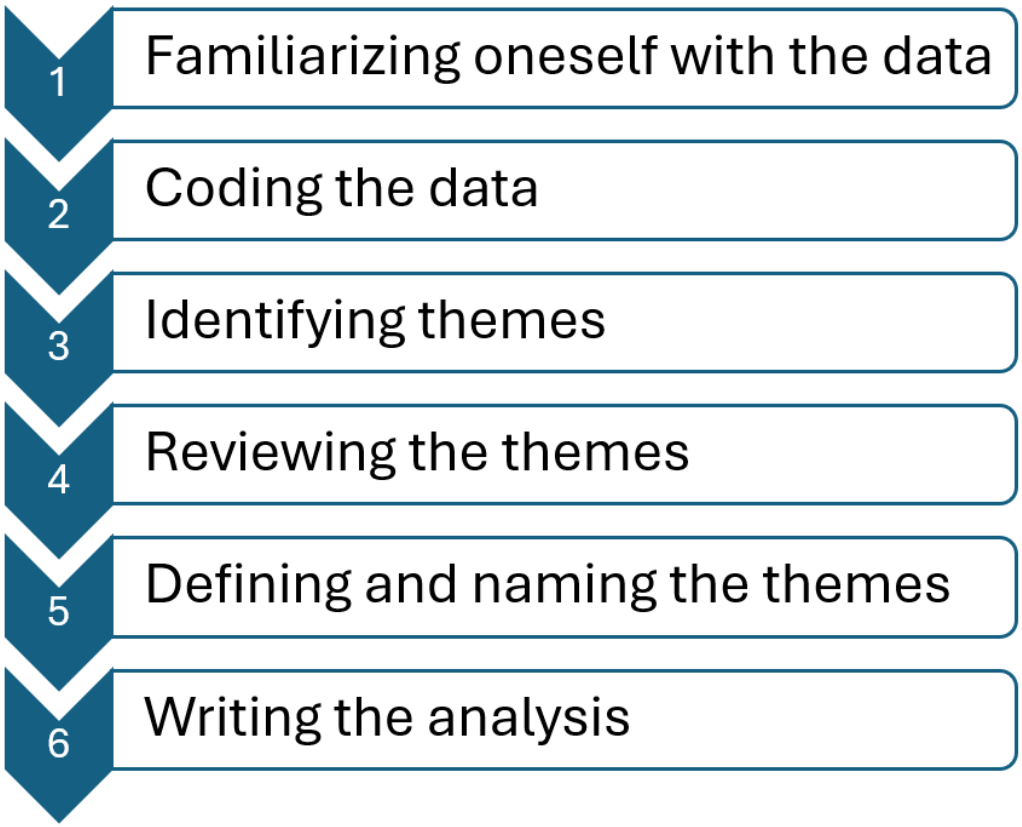

Figure 7: Reflexive thematic analysis process (amended from Braun and Clarke, 2006)

Next, the codes were copied to an excel document and grouped based on the question they were related to. Following Braun and Clarke's (2006) process steps 3 and 4, the codes were then categorized by identifying similar topics from the codes related to each interview question. The categorization was based on the shared characteristics of the codes, as these categories help identifying the themes (Saldaña, 2013).

When all the codes from each interview question were categorized and an overarching theme for the codes in each category were identified, these themes were collected and reorganized to identify the key concepts rising from the data, thus completing the step 5 of the analysis process. After creating a comprehensive understanding of the data and the themes it contains, the analysis was written in the form of findings. After findings, the analysis was deepened by reflecting the findings in relation to the literature review and the theoretical framework of this thesis. Finally, conclusions were drawn from the entire thesis data.

4 Findings

The findings of this study indicate that the successful implementation and sustainability of the four-day workweek (4DWW) depends on a combination of essential organizational and individual actions – such as identifying and prioritizing core tasks and adjusting work processes to support focused work. When these actions are effectively executed, they enhance work efficiency and make the 4DWW viable, which in turn provides employees with increased leisure time. This additional free time was found to significantly improve employee wellbeing. The improved wellbeing, when combined with the supportive organizational and individual actions, contributes to higher levels of productivity and ultimately enhances work outcomes. This dynamic is illustrated in Figure 8, which also highlights the interplay between organizational and individual actions. It is important to note that the distinction between organizational and individual efforts is not always clear-cut, as these dimensions often influence each other in practice.

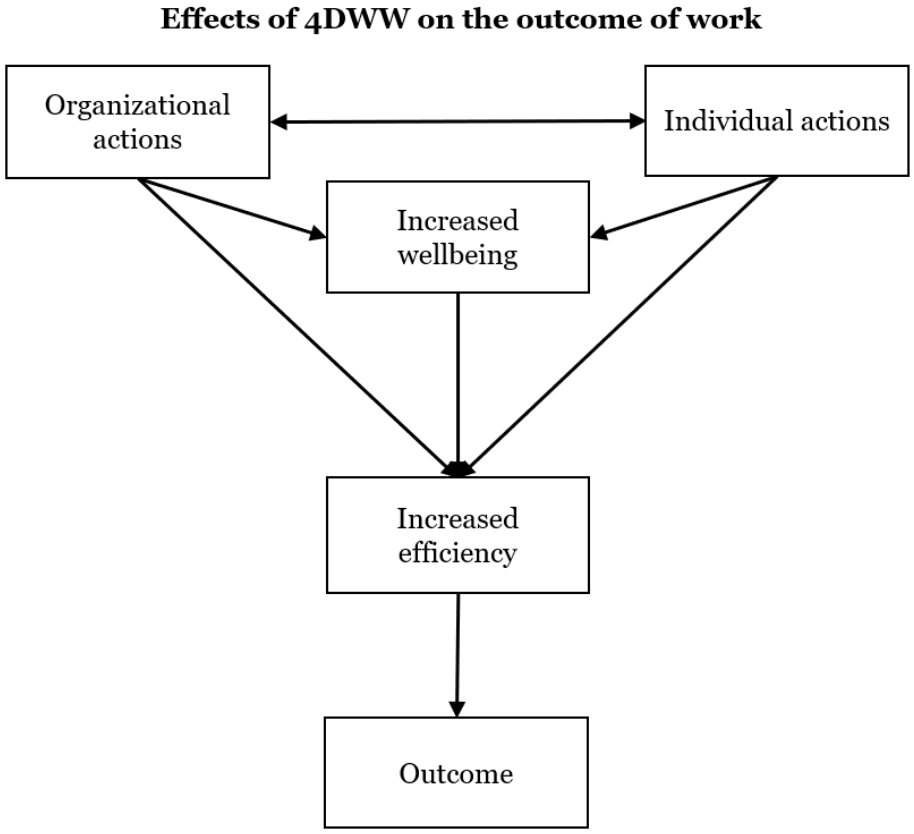

Figure 8: The effects of 4DWW on the outcome of work

The interviews revealed that the essential organizational actions for making the 4DWW successful are clarifying the core tasks, streamlining processes, and adopting tools like AI and automation to make work more

efficient. In practice, these activities mean, for example, eliminating unnecessary tasks and meetings, improving the work allocation and evaluating the workload distribution. The organization must also support employees in developing the necessary skills to able to manage with the workload. The support of management is crucial as these changes often require that the management leads by example and implements the necessary changes.

At the individual level, the necessary actions include adapting working methods to fit the 4DWW and prioritizing and managing one's time effectively. In practice, this can involve reserving focused time for the core tasks, not aiming for perfection with each task, and adopting efficiency increasing tools. Employees need to learn when to decline less critical tasks so that their focus stays on their core tasks and that they have enough time for them.

The organizational and individual actions taken to enable 4DWW, combined with the additional day off, were found to significantly enhance employee wellbeing. Interviewees reported feeling more rested and better able to recover from work. They also experienced increased time for leisure activities and improved ability to psychologically detach from work, which contributed to reducing their stress levels. Furthermore, both work and non-work lives were perceived as more meaningful, largely due to the improved balance between professional and personal life.

As interviewees experienced greater rest and recovery, their energy levels increased, which, alongside organizational and individual actions, enhanced their efficiency at work. Simultaneously, the increase in employee wellbeing reduced the perceived workload for some participants. As a result, employee productivity improved, which appeared to contribute to better overall work outcomes.

4.1 Organizational actions

Organizational actions play a key role in the successful implementation and maintenance of 4DWW. Firstly, the most essential actions include identifying the core tasks and clarifying them to the employees and adjusting the work processes so that the employees can truly focus on these tasks. Secondly, for these organizational changes to be implemented, managerial support is crucial.

Effectively assessing work processes requires strong prioritization and recognizing that it is not feasible to focus on everything simultaneously. This assessment is linked to workload management, as it involves evaluating each employee's workload and carefully considering the allocation of tasks. A key component of managing workload is the strategic use of tools such as AI and automation. Organizations should ensure that employees not only have access to appropriate tools but also possess the necessary skills to use them effectively. Additionally, granting employees autonomy and flexibility, as well

as fostering clear and open communication, can significantly enhance their efficiency.

The actions taken by the case organizations to adapt to the 4DWW are closely tied to developing a work culture and organizational structure that support this model. However, a key prerequisite for these actions is the commitment of the leadership. Management must actively support the 4DWW and lead by example, initiating necessary changes while demonstrating a willingness to address potential challenges – such as customer concerns or complexities in payroll calculation. Conducting a trial period of the 4DWW can be a strategic step toward understanding the practical requirements and identifying possible obstacles. If the organization then chooses to adopt the model permanently, it is likely to be better equipped for the transition. Ultimately, when the leadership is genuinely committed, a supportive culture and structure for 4DWW can be effectively established.

4.1.1 Adjusting the work processes

A large part of the responses to the question "What do you find to be the crucial things that the organization needs to do in order for the 4DWW to be functional?" discussed the ways in which the organization creates and maintains a good work culture and structure for work. These measures are, for example, assessing the number and length of meetings, being flexible, giving autonomy and freedom to the employees, giving tools to manage one's work, and teaching employees the skills that support them working a 4DWW. Additionally, when implementing 4DWW, a trial period may be a good idea, so that the effects and requirements of the working model can be understood.

Both organization B and C had a trial period before continuing the 4DWW. Izzy talked about the process of prioritizing and critically assessing their ways of working and frailties of the 4DWW model. Organization B also adopted a lot of automatizations into their business to reach the efficiency 4DWW requires. Izzy's response displays an iterative way of working and assessing how well the executed changes work.

> *"What we did was we started prioritizing strongly. … We questioned should all our meetings last an hour. Could they be 40 minutes, or 35? Can they be 20 minutes long? Who should be in which meeting? … We mapped out what recurring meetings we have and how much time they take. … We investigated where we can steal time for something else important." – Izzy*

> *"The idea of piloting 4dww was that we critically assess what are the challenges in it and why we should not continue it. This requires open communication and honesty." – Izzy*

"Another big thing we have done from the beginning is trying to automatize everything we can from our jobs, maybe even in a boldly courageous way, and then see what works and what doesn't." – Izzy

In organization C, one of the first things they did was analysing and evaluating their tasks, their importance and who should be responsible for which task. Josh and Brennan discussed how they started to analyse what the key functions of the organization were and how they could focus on these tasks better. Josh also noticed that they started to approach the yearly operating plan more from the prioritization perspective, instead of always adding new things to the task list.

"We really started to think about why do we exist and what are the things we really should do. When the executive manager talked with the employees, they might have heard for example about an event which takes a lot of time from the employee and then there are only 3 students attending it. It makes no sense to do something like that. Like OK those 3 students are probably very satisfied, but this takes 10 hours or more to prepare so it makes no sense to do that anymore." – Josh

"Do we attend everything, or could we prioritize more of our own work instead of trivial functions?" – Brennan

"It is a challenge that every year when we make a new operating plan, we often just add things, but very rarely we think what should we weed out. So now we have started to think about what the relevant things in our operations really are." – Josh

Assessing the length and number of meetings was raised in many of the interviews as a crucial step in improving the structure of the work. Many organizations assessed whether they needed as many meetings as they had and how long the remaining meetings should last. A carefully considered number of meetings and the protection of flow were emphasized in Caitlin's responses. Caitlin also talked about structuring the work with focused time as a method to get work done effectively, and how the organization's culture of respecting those times supports this way of working.

"The second prerequisite for 4DWW to work is not organizing loads of unnecessary meetings. If we have weekly meetings, there is no mandatory attendance if you have work to do, or in any case – it's not so serious with us." – Caitlin

"Related to the sticking to 4DWW – we try to protect the peaceful working conditions for everyone. This means not calling during focus time and not reserving meetings during those times" – Caitlin

"If you have a work thing going on, we do not want to disrupt the flow, especially with the developers as they might be so deep in the project at that moment that it might be very disturbing for the work process to be interrupted." – Caitlin

The interviewees discussed the impact workload management a lot in relation to successful 4DWW implementation. Caitlin emphasized the responsibility of the organization and leaders in ensuring an appropriate workload for the employees, without forgetting the responsibility of the employees in being vocal about their workload and whether they have too much or too little work to do. The project managers must also be aware of the current and future projects' resource needs and acknowledge the different needs of employees regarding how many projects they can do simultaneously. Caitlin's responses display a culture of trust and being allowed to ask for help in organization A.

"Resource allocation is very important: from which projects can we take resources to another, because in some project some phase might end and then there is a person available for another project. The executive team and team leaders need to be aware of this and also be able to discuss with the team members about how would they feel if they jumped to another project." – Caitlin

"Many of us do many projects at the same time but for example software developers might only have one ongoing project as they need to think about so many things related to it and it might take even half a day to change the context of their work." – Caitlin

"We have resource allocation meetings with the executive team about what is the workload of the employees. This relates to communicating as well. We trust that people can also say that 'Hey I'm too busy right now to take care of something, could someone else do it' or that they cannot take on any extra work as they are working in their maximum capacity already."- Caitlin

Some of the case organizations have adopted various tools to manage their workload, and to make their work more efficient, thus helping them meet their productivity goals. These tools can be for example skills, a well thought out workflow, different apps, AI, or automation software. Anna raised suitable job design and teaching the needed skills such as prioritization, as crucial. Vic added that AI, automation, and other systems help tremendously in reaching the efficiency goals. These tools help employees spend less time on manual work and focus on complex tasks instead, while also increasing the efficiency of work.

"The want of the organization to build ways of thinking and structures that support 4DWW [is important]. For example, teaching people to prioritize strongly, and understanding that not everyone needs to be in every project and meeting." - Anna

"We can compensate the fact that we work a day less than the competitors by using AI for manual work or using other automations or systems, so that we can focus on work that requires a human, like decision making or communication. These are things that have helped us work more efficiently and save time. Tools and systems can influence the workload and efficiency. – Vic

Part of the work culture of the case organizations was that they offered high levels of freedom and flexibility to the employees. This freedom was described to be improving employee productivity, but requiring employees to acknowledge their responsibilities. Lisa highlighted the importance of balance between the organization and the individual being flexible and gives an example of working through accumulated backlog. Lisa emphasized how this kind of flexibility in the relationship between the organization and the individual is only formed in teams who show that they care about their colleagues and take responsibility for their own work. Sam's work is not completely independent, which is why sometimes they need to compromise and be flexible with the working hours.

"4DWW requires flexibility both ways. We give you a four day workweek. We give you all this freedom to go to appointments. But sometimes we do need a little bit back." – Lisa

"Last week I had this 40-hour workweek which was horrible, but I did it because I'm like it was my turn to give back. I feel like this kind of a give and take relationship is only formed together with people who are truly a team who truly care, who truly take responsibility for their own work." – Lisa

"It's because we work from home you get a lot of autonomy. You also learn to work more autonomously, and it doesn't mean you do everything alone. There's a lot of stuff I need to do with colleagues, but then I adjust to their schedule when they have stuff of course, which is typically more during the day than I wish." – Sam

Although different time zones can cause challenges in organizing work, Sam appreciates the freedom and trust the company gives its employees and not having someone micromanaging or pressuring them during the workdays. Sam also enjoys the flexibility of their work which allows them to take care of their kids. The benefits of the flexibility are increased by the fact that

Sam can work during non-office hours which suits some of Sam's tasks well from the focus and coding perspectives.

> *"A big thing to me is a complete freedom of my own schedule. In traditional work you have to come to the office and managers are always behind you like 'Are you done with this yet?' Like, look, if you stress people, they don't work any faster. Also, we are grownups here, it would be nice, you know, let me do my thing." – Sam*

> *"In addition to the 4DWW, we have flexibility in the schedule. So, I get to organize my work how I want. … So the combination of these two means I can bring and get my kids back from school. I can bring them to sports the same way and organize my work around that. … But one of the good benefits is I can also sometimes work after office hours. Because in my line of work, sometimes you need to deploy your code into the customer's servers and this cannot be happening during the day when everybody's working, because then the system goes down for a while. This is not optimal, but this allows me to work after hours while still being on my schedule and as additional benefit, the kids are sleeping so I get complete silence." – Sam*

Being able to take breaks when necessary and not having to work when there is no mental capacity left are also part of the supportive work culture at organization A. Zac appreciates this flexibility and questioned the number of hours an employee can be productive. They noticed a discrepancy between the reality of how much knowledge work can be done daily and how much is generally demanded from an employee.

> *"There is a huge change compared to traditional working model, where two things combine. One of the most important differences compared to a 40h workweek is the feeling of needing to accomplish something after working the whole day and giving your everything. Your brain is saturated, and work memory is so strained that you cannot start new tasks or go back to the previous ones. I remember from my previous job me sitting hours daily just waiting by the computer, trying to stay sane. Then there were also a lot of distractions at an open-plan office. – Zac*

> *"But then also, knowledge work is highly stressing and 8 hours of it in a row is impossible, if you think about effective working time, which for a developer would be coding. According to my knowledge only a few people can code even for 4 hours in a row per day." – Zac*

4DWW may also cause changes in the internal communication of the organization. This change was often linked together with remote work. Caitlin discussed how reduced working hours necessitate better communication and prioritization skills compared to when working full hours. When employees actively communicate about their work progress and issues, the project managers can better keep up with the status of the project and assess if resource allocation should be adjusted. Vic also highlighted the fact that good internal communication is important when working remotely, and how both the remote work and having a 4DWW have contributed to organization B's communication techniques.

> *"As we work remotely and we have less working hours, the importance of communication and prioritization are highlighted. Communication includes communicating if one has too much work or would have time for a side project. This also helps the executive team and project leaders to organize work better. It's the team members' responsibility to communicate about their time use, but team leaders must also be aware of the current resource allocation of the project and assess if they need extra pairs of hands." – Caitlin*

> *"Comparing a 4dww and a 5dww organization's communication is difficult as my current organization is so different compared to my old one as we are working 100% remotely. As we do not have an office things like good internal communication are highlighted because we see each other so little physically. Also, as we do not often have many meetings together and the workweek is shorter and we try to be quite efficient, this can be seen in our internal communication. I believe our good internal communication is surely due to the 4DWW but partially also due to us working fully remotely." – Vic*

As has been mentioned earlier, all case organizations have optimized the number and length of their meetings. In remotely working organizations this might mean that the employees see each other quite rarely which could lead to employees feeling more alone. However, some of the interviews talked about having understood the meaning of having shared time together and thus, they have adjusted their schedules to include this type of social time. Izzy talked about the importance of having an unofficial coffee break and how talking with team members can help them in problem solving. Josh has also recognized chatting with other employees as an important part of the organization's culture.

> *"We have an unofficial coffee break which is important. We have two moments a week when I at least meet my team. It's been important. It's been about finding a balance between how much should we be in touch with each other." -Izzy*

"We need shared time with the whole team. Meeting people, especially when you are doing this kind of expert work that challenges the brain. When you talk through your thoughts it can help you in solving problems faster than just working on them alone." -Izzy

"Our meetings have been compressed so that not so much time is spent on irrelevant things, or not like irrelevant but chatting or storytelling. We have not erased this chatting completely, as it is an important part of work culture for us." – Josh

4.1.2 Organizational commitment

If the organization and its leadership want to shift to a 4DWW, they need to be committed to work towards making the model successful. Without the support of the management the necessary changes in the organization will most likely not occur and the positive impacts of 4DWW will not be attained. Some the case organizations explained that the reason they had pushed for the change towards 4DWW was related to the management's urge to improve employee wellbeing and their belief on how the work can be compressed into four workdays.

The commitment of the organization was raised as a key variable in the success of 4DWW. Anna highlighted the meaning of leading by example: founders also have the day off on Fridays and employees will not receive messages from them then. Lisa sees a common day off as an important way of ensuring that this way of working remains fair for everyone working in the company.

"We have led by example. Usually what the leader does, the others will follow. In order for the 4DWW to work, even the founders do not work on Fridays. They do not look at Slack messages or go through emails, and the fact that the founders do not send messages on Fridays sends the message of Friday truly being a day off." – Anna

"If we don't have this company wide day off, ... it's going to possibly muddy the waters later on. If everybody has this or that or any day off, then it starts to be more difficult to hold onto your rights. Right now, you always have the right to say no to any kind of meeting on a Friday. That for me is supporting. It's the organization supporting you. It's the culture of being able to say no" – Lisa

Caitlin talked about the important task of the organization not requesting people to work on Fridays. Along similar lines, Vic finds reminding employees about not working on Fridays as a good organizational way to support employees in having a 4DWW.

"First prerequisite for 4DWW is sticking to it and not asking people to work on Fridays."– Caitlin

"The organization always reminded employees that we really are off on Fridays, and founders showed example of being off on Fridays. You were also not expected to work on Fridays even if you had work to do that week. Then we are like 'we will look at that next week' and not seeing Fridays as back up days that can be used for work if you do not manage to do all your work in 4 days. I believe this has been enough support from the organization's side." – Vic

Continuing from the actions of the management, a large part of having the organization commit to 4DWW comes from the support of the founders and managers of the organization. The interviews stressed how this support can lead to the processes being thought through from the 4DWW perspective, leading to a trickle-down effect through the whole organization. The support from the top management influences things like the business model, the structure of the work and how much workload is given to the individual employees. Vic put great emphasis on the support of the management team when discussing the prerequisites of a functional 4DWW.

"A prerequisite for 4dww is that it stems from the firm and the executive level. They need to consider the amount of work can be given to one employee. I find that 4dww only works if the whole firm (or as many employees as possible) has it." – Vic

What the leaders need when shifting to and maintaining a 4DWW is courage, as the organizations and people outside of the company might not always understand why the company is having a 4DWW and how it might influence them as customers. Zac discussed the courage the 4DWW organization and its managers must have, as sometimes the organization's ways of working are questioned, and in those moments one needs to be ready to justify this working model. Zac also discussed how their business model might cause initial doubts among the customers but in the end, having this business model and a 4DWW have not caused issues with the customers as they have been satisfied with the results.

"[The organization needs to] be brave. Schedules, deadlines, and delivery promises are something that are continuously discussed in our field, and our processes are sometimes questioned: are you spending your time wisely? We have been in these types of situations a few times, but according to my experience, we have always delivered either more or better quality of work than what the customer has expected." – Zac

"One clear thing is that we sell work hours and not fixed-price projects. We are quite an agile and competent firm and we do not sell repetitive solutions like opening the same web shop for 100 times for different customers, but instead almost everything that we do, no one has done it before. This means that it's hard to give promises on what will be delivered and how fast." – Zac

The leadership must also have will and courage to overcome the challenges that come with the 4DWW. The interviewees discussed worries related to the cash flow, stakeholders' and shareholders' responses, legislation, and workload management. However, all organizations were able to overcome these challenges either naturally or by adjusting their approach. The only concern that arose with the organization A was the Finnish legislation and how it does not acknowledge 4DWW organizations. This rigidity causes difficulties in things such as payroll and vacation calculation. Lisa explained how they have overcome this challenge with creativity and a company-wide day off.

"The Finnish legislation is not used to the four-day workweek... we just have to get really creative when we take holidays to count those correctly." – Lisa

"A common day off helps with how to calculate payroll... it's actually really important for the administration to be able to see exactly what are the days that everybody is working." – Lisa

Organization B identified profitability as their main concern when planning to pilot the 4DWW. But these concerns proved to be unfounded as the cash flow did not suffer from 4DWW. The customers who contributed to the cash flow did not mind organization B having a 4DWW as it caused no issues to them. However, some people were sceptical about the business not being harmed by the new working model. The business did not remain profitable by chance, as the organization did change their ways of working when implementing 4DWW. These actions were discussed in the previous chapter. Anna discussed the implications of 4DWW for the business and how customers reacted to the reduced amount of days organization B was available.

"Before the transition to 4DWW we were wondering what happens to the numbers of the firm: do we achieve the same cash flow in 4 days and will it start to dramatically decrease during the trial. But the opposite happened with us and the cash flow started to increase." – Anna

"The trial went well with the customers. We told them openly about testing a 4DWW and how it might possibly affect them. But then on the other hand, many customers have said that they have not noticed

a difference between us working 4 or 5 days a week, and that they have been able to reach us at a similar level as usual." – Anna

Lisa also shed light on how the customers have reacted to the organization A having a 4DWW.

"So far so good. Really, we have been getting positive reactions. We were a little bit worried about it in the beginning, but we have been getting positive reactions from the clients as well, and I think this is also important for the team because they know that our clients are not booking them in for meetings or getting upset if they don't answer to their Teams messages on Fridays. So this is another kind of work demand issue that we're helping with our employees as well not to be overcrowded with work on Fridays." – Lisa

As organization C did not initially have the management backing up the shift to a 4DWW, Josh and the other employees had to convince the board to allow them to try out 4DWW. Josh talked about the dynamics between the board and the organization causing them stress, as it was not sure if the 4DWW would be continued after the trial. The board had concerns related to the availability of the employees, but in the end the board's need to reach the employees during the Fridays did not increase or become an insurmountable challenge.

"First challenge was that we needed to get the approval from the board to execute the trial. " – Josh

"The board felt that we are not as well available as before, which I understand. … But for example, Slack's data shows that on Fridays there are significantly less messages sent than on an average day. And this hasn't changed much. … The Slack stayed pretty quiet also during the trial." – Josh

Another concern Josh raised was the accumulation of overtime hours, which at the end only occurred with the executive manager of the organization due to a longer sick leave. Thus, it seems that organization C was able to manage the workload quite well even during the 4DWW.

"It was one concern, that if we do not get our work done we will be doing a lot of overtime hours, but amazingly, only the executive manager's overtime hours started to accumulate. But that is due to them being on a sick leave for a longer period of time, which was an unforeseen thing. But other than that our working hours stayed under control very well." – Josh

"The manager's workload increased as they had to supervise the 4DWW process. A little extra stress was also caused by the uncertainty of the continuity of the 4DWW after the trial, as this is a decision made by the board. It also evoked some reflection on do I want to continue in this organization, if we go back to a 5DWW, when we have gotten used to 4DWW working very well." – Josh

4.2 Individual actions

Individual actions also play a crucial role in ensuring the successful implementation of 4DWW. Among the most essential activities identified by the interviewees were prioritization and adaptation. In this context, prioritization involves practices such as setting aside uninterrupted time for core tasks and declining non-essential meetings or assignments. Adaptation, on the other hand, refers to changes in individual work habits – such as managing time more deliberately, letting go of perfectionism, and learning to use tools that enhance work efficiency.

4.2.1 Prioritization and time management: the backbone 4DWW

A key skill an employee in a 4DWW organization should have is prioritization. This ability was emphasized in most of the interviews. Having a 4DWW requires employees to be able to complete their work in a shorter amount of time, which then increases the importance of knowing what to focus on and prioritizing those tasks. Managing one's time even better than before is also important. Anna emphasizes the meaning of preparing for and anticipating the future. 4DWW necessitates organizations to plan their work ahead even more than in 5DWW organizations, because with a 4DWW employees have less time to complete their tasks.

"4DWW in recruitment business requires planning. If the recruitment process is in the decision-making phase, you have to schedule your meetings ahead with the customer, so that we don't have meetings on the Thursday afternoon, but we have them on Tuesday already, so that I can do the necessary things during Wednesday and Thursday. But this is also just about learning to do it and not really something negative [related to 4DWW]." – Anna

Brennan noticed that they started to plan their upcoming weeks more in advance during the 4DWW trial. They also were able to identify unnecessary meetings that could be handled with messages, thus saving time for other important tasks.

”Your own planning of how you spend your week increased: what do you really spend your time on and how do you coordinate things for the longer term.” – Brennan

“Scheduling is highlighted. You are more in advance in contact with the necessary people and reserve enough time for that. You plan your week ahead and improve the efficiency of meetings. You can maybe realize that we can go through a thing in 30 minutes. A colleague noted that previously you might have attended a 2 hour meeting with the school, but now you could more easily say that couldn’t this just be an email. … For some things we don’t actually need a meeting and they can be solved with a message.” – Brennan

Izzy highlights the importance of knowing what to focus on and what not to focus on. For them, the key task is ensuring the satisfaction of customers and thus ensuring the continuity of the collaboration and business in the future. Anna shares a similar sentiment and emphasizes spending less time on unimportant things, and how the benefit of having an extra day off gives the motivation to do things more efficiently. Anna once again raises the topic of utilizing various tools in making the work efficient enough to be able to have the Fridays off.

”[4DWW] requires strong self-leadership skills and challenging the norms. You have to understand what you can give up and what do you need to focus on. Every job has a crown jewel, which is like the one thing that needs to be in good shape. As a consultant, the jewel in my work is that the end product is good, and my customers are happy. But then the way I do other things, like how do I communicate or what do I do, with these things I can loosen my grip.” – Izzy

“We compress and prioritize what needs to be done and have time spent on. The not so important things, we don’t spend so much time on. To be able to wake up on Fridays without an alarm, is such a big motivator that you compress the week into a more compact package.” – Anna

“Prioritization. Saying no to many things so that your focus stays on the work. And all these AI tools and automatization tools are absolutely necessary. If we would have to do everything manually, there would come nothing out of it. We would totally not meet our invoicing targets with the 30 working hours. Our targets are based on 5 days at the moment, and it has worked really well, because with all the technology, we’ve been able to improve our efficiency.” – Anna

Being able to manage one's calendar is a crucial skill for a 4DWW employee. Managing one's time better than before means, for example, being aware of how one spends one's working time, declining certain tasks or events, and understanding how much time or other resources tasks require. Vic talked about choosing carefully what tasks and meetings to put into their calendar and ensuring that the time is spent on actions that advance the goals of the organization. Organizing the work in a way that allows Vic to focus on the key tasks intensively is important, as the work otherwise consists of a lot of meetings, which do not create the right state of mind for those other tasks. Scheduling breaks helps Vic to remember to rest also during the workdays.

> *"Prioritizing your time and work is highlighted [in a 4DWW organization]. How the prioritization is visible is for example through your calendar management. … I need to be more attentive to what do I take into my calendar and how well these things serve my responsibilities at work." – Vic*

> *"I look at the upcoming week and how does my calendar look and I aim to put similar tasks to same dates. … My work includes a lot of meetings, and if my day has a lot of those, it's hard to get into the focused mode required for challenging tasks." – Vic*

> *"You have to think about your calendar a lot and also arrange time for breaks. … It helps tremendously when you are more organized also with your breaks." – Vic*

Putting things down on one's calendar helps with understanding how much work will there be during the next weeks and if one has resources for more work or if the workload is in danger of becoming too much. To save time, Izzy reminds us to ask help from colleagues especially in situations where one knows that the colleague is much more efficient with a certain topic.

> *"I know exactly how my calendar looks like for at least the next two weeks, so that I can say no to certain tasks, or say if I have space in my calendar for some tasks. I can reserve time for it that here I have focused time. Scheduling, leading and managing your own time are the number one critical things in order for this to work." – Izzy*

> *"I am really good at organizing things. I am well aware of how long does it take for me to do each task. … I've learned to receive and ask for help without hesitation. Especially in 5DWW and in the beginning of my career I had this need to show that I'll manage by myself and I don't need help from anyone. But now I've realized that it's*

important to play with the strengths you have in the team. For example, a team member with us is really good at discovering automatization stuff, and I am not the number one person for that. So, instead of spending half an hour trying to solve a thing, if the other person does it in 5 minutes, I can just directly ask for help." – Izzy

Lisa uses tasks in her calendar and sometimes turns them into meetings to protect her time and prevent meetings from being booked when she needs to get certain tasks completed urgently, and to communicate to others that she is very busy at that moment.

"Prioritization, definitely. That's really important. I've always been really good at making a work list for myself of tasks, so I don't need a boss above me to tell me what to do. ... I put tasks in my calendar and that works for me because it always reminds me by the date because a lot of my tasks are deadline bound. ... But the problem with that sometimes is that it's not visible to other people. ... When I start to get to that point and start to feel overwhelmed, I turn those tasks into meetings in my calendar. So, I actually block the time. That's my way of starting to counter all of these new tasks coming in from outside, by making it visible to everybody else." – Lisa

"I'm also very vocal in the team meetings, so today, if you'll ask anybody am I busy or not, they will all tell you 'Yeah, she's busy'." – Lisa

4.2.2 Adapting working methods to support the success of 4DWW

When starting to work a 4DWW, many interviewees noticed that they adjusted their ways of working to be able to complete their work in the required timeframe. These changes have occurred for example in the way the interviewees organized their work and their attitude towards their tasks.

In organization A, reserving focus time on one's calendar not only is a way for the employee to plan their work, but it also signals to colleagues when one might not be available. Caitlin talked about how it is a good practice of the work community to respect the focused hours. This way the flow state of the employees is more protected, and others can anticipate and plan their work better when they know the times when a colleague might not respond to their messages. What enables better focus during the days is also being very mindful of the meetings one reserves. Protecting employees' peaceful working conditions by being mindful of the ways one works is a key prerequisite for a functioning 4DWW according to Caitlin.

"We use focus hours, you can block focus time in your calendar and then people know that you might not answer. And that time is respected at us really well. Of course, it is also your responsibility to turn off notifications from Slack if you need to focus. Another thing is prioritization. I always try to take care of the most urgent things first, so that they are not obstacles for other people's work.

And lastly, communication. That you can communicate if you don't have enough time to complete something, or before you need something, you are able to communicate it and acknowledge that it might take a while before you can get it. You are able to see your future roadblocks and also other's roadblocks, and thus you can coordinate the things you need for yourself." – Caitlin

"The ways of working. Not too many meetings. This is a team effort. … I don't book unnecessary or too long meetings. You take other people's peaceful working conditions into consideration. – Caitlin

Even if one uses the focused hours method, they have the responsibility to protect themselves from disruptions, like messages. Sam turns off notifications from apps when they need to focus, although disruptions are rare in general. Jessica also turns notifications off from Slack but struggles with the urge to be available to their colleagues.

"Maybe it's because it's not a big company, so I don't get too many interruptions, and when you do, it's through the chat, so you can just put notifications off until you're ready to get there again." – Sam

"With our communication channel Slack, I already have this snooze button so that by 9 PM I won't get any notifications anymore. But then I still check from time to time. I always wanna try to, I want to answer. I want to accommodate everyone, but yeah, as time goes by, I learned that you're not expected to do that because they understand that we're all in different time zones. So yeah, I snooze my Slack." – Jessica

4DWW may also necessitate a change in one's mentality towards work, and how conscientiously each task is carried out. Izzy explained how they have different levels of effort they give to their tasks. They highlighted how there must be room for extra effort during the times that are busier. Anna emphasized focusing on creating the value for the customer and caring less about how refined the presentation materials used along the way are.

"My mentality in work life is that some things are done really well, some things are done ok, and some things a little bad. And that is the

division. That's it. You cannot choose only one style; you have to use all of them." – Izzy

"The underlying thing that I always try to come back to is not doing everything with your 100% effort, that the baseline would be more like 70% so that when you need to press the accelerator, if I'm pressing it already, there is nothing to get the extra resources from." – Izzy

"For example, in our context, we think it's better done than perfect, which is a wonderful way of thinking. Not everything has to be refined to perfection. I, for example, often go to meetings with customers which are growing startups with unfinished materials and say 'Hey let's work on this together, we are iterative and work on this together'. In previous workplaces I might have refined and refined some materials, and in the worst case the customers might not even look at that material after it [the meeting]." – Anna

Josh noticed the need for a shift in their attitude towards planning the workdays as well. As the organization allowed fewer overtime hours, this also forced the employees to plan their work more meticulously. 4DWW forced the organization C and its employees to develop and become more efficient, which seems to have worked well.

"When you have 4 days [for work] you are almost automatically more efficient. But also you have to approach the work like 'OK now the schedule is tighter' and you have to be more careful in planning your day, and work in a faster pace. That's the biggest change that had to be done." – Josh

"We tracked working hours more closely. We reduced the number of hours you can have in the working time bank. … This more precise amount of hours you can do overtime forced you to plan you work and also plan … when do you keep the overtime hours [as time off]. … When you've had to change things, we have gotten to develop things because the work needs to fit these new hours. Change out of necessity." – Josh

In organization B, adopting new technologies was emphasized as a crucial part of work in a 4DWW organization. Employees must be open to learning these technologies because they enable them to compress the work and complete it faster. Anna gave a concrete example of a task which now takes much less time thanks to technologies like AI and automation. Vic identified the usefulness of these tools in the way they free up time for the more challenging tasks.

"We have started to use AI a lot, and automatizing things, increasing the effectivity. The old way I worked, was that I personally wrote all the materials from the beginning to the end, and this took triple the amount of time, this used to take 1,5 hours but now it takes half an hour. Because I use AI tools and automatization, it eases my work and enables the compression the workweek." – Anna

"We can compensate the fact that we work a day less than the competitors by using AI for manual work or using other automations or systems, so that we can focus on work that requires a human, like decision making or communication. These are things that have helped us work more efficiently and save time. Tools and systems can influence the workload and efficiency. – Vic

4.3 The wellbeing effects of 4DWW

The implementation of a 4DWW has had a significant positive impact on the wellbeing of the interviewees. Firstly, the additional day off has increased opportunities for rest and recovery. Secondly, the extended weekend has made it easier for individuals to mentally detach from work, contributing to reduced stress levels. Thirdly, the increased free time has enabled participants to engage in personally meaningful activities, thereby enhancing their overall sense of life satisfaction and supporting psychological recovery from work.

The main effect of 4DWW is the additional day off from work. Although it is only 20% of the workweek its impact on the wellbeing of the interviewees has been substantial. The additional leisure time has increased the rest and recovery of the interviewees and made them more resilient to unexpected changes at work. Many also noticed a change in their mood on Sundays, as they were no longer dreading for Monday and the upcoming workweek.

All the case organizations had the Friday off, meaning that the employees had a 3-day weekend. This longer time off from work was found to help the employees distance themselves from work, which reduced their stress and supported their recovery from work. Many interviewees had also noticed how the increased distance affected their creativity: solutions to work related issues came up during leisure time without actively thinking about the problems.

Additionally, leisure time activities were also found to support psychological recovery from work as the interviewees now had more time, energy and mental capacity to pursue meaningful activities during their free time. Being able to pursue these activities increased the meaningfulness of life as the balance between work and non-work lives improved.

4.3.1 Increased rest and recovery improve wellbeing

The additional day off that 4DWW enables was often associated with increased rest and recovery. 4DWW was described to support the life outside of work by allowing interviewees to recover more, have more hobbies, meet friends and family, and take care of various chores. Sam described 4DWW to be allowing them to have enough time to recover on the weekends even though their kids might cause more activities to attend to during that time. 4DWW offers flexibility in combining work and non-work life. This effect was also described by Izzy.

> *"I don't think I never noticed how tired I was on the normal week because the weekend is only two days. And if you have some event going on or something, you come to work on Monday, you're not rested. And I suppose most people have some kind of life happening on the weekend, especially with kids. So, chances are you won't be well rested, but with 3 days I have a fair amount of chance to rest at some point. I have not been dreading Mondays for all the time I've been working here. So that's a huge improvement." – Sam*

> *"The effects of the 4DWW have made my daily life more balanced. … I have one day of the week completely for me, so that I can recover before the society around me starts their weekend. I can use that day to recover and give space for my brain." – Izzy*

For Lisa, the extra time off from work supports her long-term wellbeing at work and off work. She has enjoyed 4DWW and noticed how the longer weekends lead to her taking care of her mental health better. While being an ambitious and diligent worker during the week, having more time to recover from work during the weekend helps being productive at work the next week. 4DWW seems to support a sustainable way of working in the long run.

> *"Supporting my life outside of work. I think that's the main thing that I've gotten out of this. … I don't know if I could ever go back to 5DWW after this, seeing how much better it makes me feel personally, how much more time I have outside of work to really regroup. Because I am very, very passionate about my career. I have always been someone who works hard, so it's not that I don't want to work hard, it's just that I have to take care of my mental health as well in between. Working hard and not taking care of yourself – you know it's going to hit you at one point. So this is helping me kind of keep up that 120% pace while I'm at work. But then giving me the opportunity to truly rest in between." – Lisa*

Some of the interviewees emphasized how 4DWW supports their resilience at work. Having more non-work time allows for more rest but also protection against the stress caused by unexpected events. Sam talked about how the increased rest and reduced stress makes it easier for them to get through sudden changes. Collaboration with team members is more efficient as the colleagues also enjoy the wellbeing effects of 4DWW.

> *"Not being too tired or stressed also means that you have more tolerance for unexpected stuff to happen, and there will always be some. … So, you just take accidents for what they are and you just power through and it's all good. And the fact that your colleagues are also on the same [4DWW] schedule means that they won't bring their stress over to a conversation. It makes everything look a lot more efficient." – Sam*

Anna also sees that the 4DWW allows them to adjust to changes better. Having the Friday off does not mean that one is not allowed to work during that day. It allows more flexibility during the week if something unexpected happens that hinders the progress of work. The Friday can be used to cover for the hours or tasks that were not completed during the week due to unforeseen events.

> *"[4DWW] has given also some buffer to the workweek. If I have a rougher week mentally, due to periods or something, and I'm feeling down, I can do a shorter day and do the rest of the hours on a Friday, and not use the weekend to work on those things, if they need to be done by Monday. It gives flexibility for your wellbeing. Our guideline is that we don't work on Fridays, but it's not forbidden." – Anna*

Many of the interviewees noted how 4DWW has influenced the state of their minds on Sundays. The disappearance or decrease of the dread of Mondays was raised often in the discussions. Having enough time for oneself during the weekend supports the employee in being prepared for the upcoming week. Caitlin feels more energized as they have had more time to rest, and ready for Mondays, because they have had enough time to do things they wanted to do during the weekend. Lisa has also felt that the 3-day weekend gives one enough time to recover to be ready for the next week.

> *"I do not have this Sunday blues at all. I do not feel at all like 'Oh I wish I had one more day off' because at that point I have been able to get so bored that I wouldn't even know what to do if I had one more day off." – Caitlin*

"Also having a 3-day weekend. What we usually do, most of us almost all the time, we have Fridays off. So, we have a 3-day weekend so that gives a much better basis for coming back from a hard week. When you have a 5DWW, and you have a really hard week, and you have two days to relax in between, it feels a lot less than the three days. So, sometimes I'm thinking on Sunday, 'OK, well, I'm kind of done, like I'm kind of ready to get back to Monday already'. It's really a huge difference for me." – Lisa

Sam also discussed a similar experience. They feel less irritated when starting to work on Mondays and require less time and caffeine to get started with their tasks efficiently in the beginning of their workweek. In the same sentence Sam continued to describe the efficiency effects of 4DWW and notes how they are getting the same amount of work done as in their previous job positions although there is one day less in the workweek.

"Being able to have a longer weekend to rest has been absolutely amazing. I can come back on Monday. I don't feel annoyed like I typically do on Monday morning. No, you're fresh to start working. You're efficient right away. You don't need to wonder or take 5 litres of coffee before you start doing anything. Not that I don't like coffee. But no, it has been mostly only positive. I have also noticed that I accomplished basically the same volume of work that I used to do in five days. So, I've not seen any negative [effects] so far." – Sam

Jessica and Brennan shared a similar sentiment as Sam. Jessica feels that the additional day off improves their wellbeing and reduces the risk of feeling burned out, and having more time off brings more excitement towards work. The work feels more inviting after the 3-day weekend for both Jessica and Brennan.

"There's an improvement with the rest and recovery. The extra day, the Friday, it's very important. It provides space to recharge, so for example, it is very seldom that I feel burned out very, very, very seldom. But that Friday, the extra day that they give to rest it feels like whenever I go to work on a Monday it doesn't feel like I have to drag myself out of bed. It's not like that. Sometimes I feel excited that I'm going to. I think it has something to do with more time for recovery or recharge for energy." – Jessica

"I felt much more rested. And you got the feeling that you want to come to work, and have a certain type of readiness on Sunday, that at the beginning of the week you want to come to work. And that tells a lot." – Brennan

Josh compared their feelings during and after the 4DWW trial and identified a clear difference in their mood on Sundays between 4DWW and 5DWW. Despite their overall satisfaction with work, the transition back to a 5DWW has negatively affected how they feel about work on Sundays. Whereas, during the 4DWW they felt that they have had enough time to recover from the week to be ready and excited for the next one.

> *"An interesting observation during the trial was that pretty much everyone agreed that on Sundays they started to have the feeling of 'OK I'm ready to go back to work'. Because we all like what we do. This is not like anyone would do this because of the money, but more because we like what we get to do. … Now that the trial has ended, the feeling goes more towards 'No, tomorrow I have to go back to work already, I didn't really get to do anything'." – Josh*

4.3.2 Increased distance from work reduces stress and increases creativity

Many interviewees discussed their levels of stress in relation to 4DWW. An important effect of the 4DWW was the improved ability to distance oneself from work with the longer weekend. Being able to distance oneself mentally from work was said to help with recovering from the workweek. When feeling recovered from the workweek, the employees had more energy to complete their work efficiently the next week.

Josh realized how 4DWW accidentally forces them to take care of their wellbeing and recovery, which in turn reduces their stress. Josh also reflected on how this a beneficial thing from the perspective of the structure of the organization. As a manager, Josh can take actions to improve the wellbeing of their subordinates, but as Josh's manager is an elected student who might not have experience on how to be a manager, Josh's wellbeing might be overlooked. This experience could implicate that having a 4DWW could support not only the wellbeing of employees but also managers, possibly making 4DWW more lucrative to managers and increasing their interest in implementing it.

> *"I didn't realize it until the employees pointed out that 4DWW is good in that sense that I also get to recover in this stressful work, there comes like a forced recovery. As the manager of the employees, I can influence their wellbeing, but my supervisor is the chair of the board who is a student who possibly has no training or knowledge on how to be my manager. So basically, my wellbeing is not much looked after, but the 4DWW has enabled the fact that I kind of have to take*

care of me. And that in a way cancels out the challenge that has come with it [the 4DWW].” – Josh

Anna described how although 4DWW has not reduced their stress levels, the longer time off from work helps with coping with the stress. However, Anna would be interested in even longer weekends as they have grown accustomed to the 3-day weekend. Being proud of being able to have Fridays off boosts Anna to work more effectively to maintain this benefit.

“I think it’s mostly about the wellbeing and the amount of uninterrupted break from work. [4DWW] hasn’t taken the stress anywhere. You can stress about anything always. But maybe this longer time off from work helps with distancing yourself from work and gives time for other important things, like exercising and seeing friends. I take great pride in being able to be in such a position where when others are still working on Fridays, I can have the weekend already.” – Anna

“In the beginning the longer weekend felt really long. Sadly I’ve grown accustomed to it and started to dream about a 3-day workweek.” – Anna

In organization A, the work has been organized in a way that allows the employees to distance themselves from work not only during weekends but also daily. This helps Zac with problem-solving and recovering from the work. An important part of being able to do this is not feeling inadequate when pausing the work or ending the workday. Taking breaks during the day and allowing the mind to wonder has shown to be a highly effective way for Zac to overcome work-related problems.

“I feel that I can distance myself from work daily. Which is an important experience because the entities we deal with are so large that the mind is stressed too much if you cannot let go, and if you continuously feel like you are not doing enough work. This way the burden becomes multiplied without a real reason. There is just this bar that has been set so high it is not possible to clear it.” – Zac

“If I hit a wall after 3 hours of work … I stop working and I might do something completely different for 3-4 hours. Then often during the afternoon or evening I might think like ‘wait, I could approach the problem this way’ and then I try the new idea for a couple of hours in the evening. Do the other half of the day with fresh brains. And this has been the biggest concrete advantage I’ve experienced. That you can rest for many hours during the day. Then suddenly you feel

like you've had a night's sleep and suddenly everything is easy again." – Zac

With the breaks Zac can refresh their brain and get new ideas on how to approach the problem. Having a longer break during the day can in fact make Zac much more efficient compared to them just sitting that same amount of time at the computer, because during the break Zac might get an idea that is worth multiple hours of work, but only took them a couple hours of break to come up with. Zac identifies how it is challenging to measure these kinds of working hours, as the work does not always happen while sitting at one's computer.

"I feel that a part of my work in those moments when I have assessed the options and feel at that moment that I can't move to any direction, is to switch my focus to somewhere completely else when I hit a wall. Because then I think something happens in my working memory. … This is just guessing, but there are some assumptions in the working memory which may not be correct, and they blur the drawing of conclusions. When you take a break and think of something else, these assumptions drop, and when you come back to the original problem you don't have these flawed assumptions. After that you can investigate the possible paths to take to solve the problem." – Zac

"It has been a super-efficient thing for my work to be able to let go of work for a couple of hours, which is actually sometimes passive work. Of course, we cannot mark this as actual work but when I'm having a break and notice that I've been thinking about a problem and suddenly get an idea at the end of my run, it's easy for me to sit down at the computer and write a code for half an hour. … These 15 minutes of very optimized moments, if you can turn them into code, they are much more valuable than tens of hours sat at the office looking for that mental state. … Meaningful working time is really, really hard to measure. Sometimes those efficient 15 minutes come to you in the evening or at an inconvenient moment that is not during working hours. If you can turn them into this boosted working time and spend 15 minutes in that uncomfortable moment to write down your idea, it might be 100 times more valuable working time." – Zac

Others have also noticed the extra time off affecting their creativity. Anna talked about how work stays on one's mind unintentionally or subconsciously even after the workday has ended. Anna identifies the importance of empty time and time to think in knowledge work, and how these contribute to creativity, and notices a difference in their ideation processes between the

current 4DWW job and the previous 5DWW jobs. Having more time off from work has increased Anna's creativity, and being more creative, in turn, has increased Anna's efficiency at work.

> *"Uninterrupted leisure time has helped by giving more time, and distance to work. That time in knowledge work is also creative time. KW is in that sense a bit funny, as the thinking does not end when you shut down the computer, but the thoughts might come up in the shower or somewhere else. It's said that when you are solving problems like we do in knowledge work, it requires time and space also for this empty time, so that the creative ideas can come up. I've noticed that I get a lot more ideas now than in my previous jobs, because I have more break and space for empty thoughts and for creativity." – Anna*

> *"Creativity has increased efficiency. You get thoughts and ideas easier for difficult cases, difficult strategic situations where you don't have ready-made answers. … The fact that you get more distance from work makes it easier for me to solve difficult situations." – Anna*

Izzy finds that 4DWW has not made the thought work easier or given more time for it, but just like Anna noted that the thought processes related to work will not stop once one closes their computer, Izzy has identified this as well. Izzy has noticed that the longer weekend and distance from work has caused new work related solutions to come up effortlessly during the weekend .

> *"I've gotten more resources into my life absolutely. And time to think. In knowledge work, it's common that you don't have time to think. Well, you don't have that in 4DWW either, but at the same time, knowledge work does not end when I decide not to think about work. When I have the 3 days to recover, my brain rests and a solution related to work might come to me during my free time, even though I didn't actively think about it. That's probably because we don't try to force the thought out. I feel that this maybe even improves the efficiency of work." – Izzy*

4.3.3 Leisure-time activities support recovery from work and increase meaningfulness of life

Having more time to oneself offers more opportunities to spend time on things the individual truly wants to pursue. The interviewees have noticed that they have more time for hobbies and that they exercise more due to increased free time. Some of the free time was also allocated for household

chores and getting ready for the weekend, so that the weekend can be spent on rest and recovery.

Caitlin discussed how seeing the effects of 4DWW in their actual life prompted them to reflect deeper on the things they want to spend their time on outside of work. They have also spent the Fridays to run errands that need to be done during the regular week, which then reduces the pressure from the workweek as one has less things to worry about outside of work. The reduced pressure makes the work also less exhausting which enables Caitlin to have energy to do the things they like and want to do when not working. Caitlin's responses emit a balance between work and non-work lives, as they feel that the increase in leisure time allows them to do the things they want.

> *"When the organization told me that they have a 4DWW, and it started to really show in my daily life, that on Thursdays when the computer is shut down you have the next 3 days off, I started to think that I need to start getting some hobbies. What do I really want to do when I am not working? … On Fridays you can run some errands that cannot be done during weekends, and especially that you get to complete more annoying asks on Fridays when you still have a little energy left from the week." – Caitlin*

> *"I have been able to do my hobbies, meet my friends, prepare food, watch tv, knit, read, run, go to the gym, so I would say that the 3-day weekend is enough. … You can see your friends and family more." – Caitlin*

Vic has also noticed how 4DWW and the freed-up time allow them to have energy to do things they would normally only do during holidays. Vic appreciates the company's approach to non-work life and how the organization wants its employees to have time and energy for things that in a traditional 5DWW would not be so approachable or accessible.

> *"For me, my free time and non-work life are important. It is wonderful to be working in a company where it is highlighted that you can do things in your daily life that having time off from Friday to Sunday enables you to, for example, do trips inside Finland. It has been really fun. It's emphasized how you have more free time and for me it has meant more time do things I enjoy like exercising more, having energy to do it, and spend time with your closest ones." – Vic*

In organization C, the Friday was spent on preparing for the weekend by taking care of household chores. Although this additional day off was not used for recovering and resting, the preparation work allowed the weekend to be

the time for deeper rest as there were less chores to complete during that time.

> *"Now that we had 3 days off, the Fridays were usually spent on, well not leisure time, but like people have cleaned their homes, done grocery shopping and gotten ready for the weekend, so that the actual weekend is for resting and recovering. … This really gave more time for recovery." – Josh*

Social life was also influenced by 4DWW. Izzy has spent more time with their grandparents than they believe they would if they would have a 5DWW. Izzy also discussed how their colleagues have been able to do side projects with the freed up time. Brennan mentioned how 4DWW has made seeing friends easier as one has more energy. This increased energy level supports life at home because as Brennan's partner has a 5DWW, this means that Brennan can contribute more to the chores at home.

> *"I have grandparents still alive. I can see them on Fridays, and this would not be the case if I worked 5 days a week. … I also know that everyone but me has some kind of a side hustle in addition to this job." – Izzy*

> *"Socially it has also been easier, because you've had energy to see your friends. And also in my relationship, it was noticeable that when the other one of us works in social welfare and healthcare 5 days a week and I work 4 days, this means that I can put more effort into taking care of the household chores." – Brennan*

Leisure-time can also be added to workdays in non-conventional ways. Zac discussed how the work design in organization A allows them to take breaks from work during the day which supports recovery and problem solving and allows them to shift their focus to something different, like exercising. This flexibility from the organization's side contributes to the wellbeing of employees, which means that combining 4DWW and flexibility of working hours can increase the wellbeing impacts on employees. Allowing the employees to take responsibility for their work and the hours when they complete it can support the organization in getting more projects completed in the long run due to increased problem-solving capacity and thus increased efficiency. If one looks at the way most companies do not allow this kind of flexibility and autonomy for their employees, it is understandable how this flexible type of management may seem unintuitive.

> *"I feel that now I have time for a lot of other things [than work]. If I come across a dead end, it's easy for me to let go of the work tasks*

and start for example to exercise. What I do quite often is I work out or go for a jog. I leave the problem be, because I know that if I find the mental capacity, I can come back to it in the evening. It's not an issue for others if I send them a message between 20:00 and 00:00, because others are used to work being done during various hours and there is no stigma related to it compared to when working from 8 to 4 at the office. This leads me to exercise a lot more during the week. I do probably every day a 15-to-30-minute workout in the middle of the workday. This has led to improved physical wellbeing and it also influences the energy levels a lot." – Zac

As the interviewees have more time to do things they value outside of work, they have experienced an increase in the meaningfulness of life and work. It appears that the gains of having one extra day off can be much greater than just having 24 hours more to oneself. When the hours are spent on things people enjoy, having a 4DWW can make employees more content with their lives. Extending from contentment, being able to do things one likes can also give employees more meaning in life. Caitlin appreciates the things they get to do during the weekend and how 4DWW improves the balance of work and non-work life. Caitlin feels that they are better at work when the ratio of free time and working time is improved thanks to 4DWW.

"3-day weekend brings a lot more content to my life and balance in that I have more to give at work as I do not have to be working all the time. I can think that 'now I am at work and after that I go to my next things' and then I can come back to work feeling rested. But it also gives life meaning, that you are working for something." – Caitlin

"Work feels more meaningful because you have your own life that you go to work for. I feel that when many people have to be at work all the time, they are burned out during their vacations and then everything becomes performing like traveling, and that you'd have to almost only lay horizontally and recover. When can you have fun if you only have to recover when you are not working?" – Caitlin

Lisa provides an interesting depiction of the impact of having one extra day off weekly. The gains from that one day off are much greater than what one would expect. The increased freedom and flexibility to arrange one's life is something that increases the impact of the additional day off over its nominal value of providing extra hours to the individual.

"For me, it's only one day a week. So, what is that? 20% of the time. But in terms of my life and my enjoyment and how I feel like I'm able to arrange my free time, how I'm able to manage things like, doing

my laundry and having the energy to cook a nice dinner and all of those things – I say it's much more than 20%. It feels like 50%. It makes a really huge difference." – Lisa

4.4 Increasing efficiency and reshaping work strain

The findings of this study indicate that the 4DWW has enhanced the efficiency of the interviewees. This improvement is attributed to better work design, revised working methods, and increased rest. While the work has become more intensive due to organizational and individual adjustments, the overall experience of work strain among the interviewees has not increased.

The key organizational actions in increasing efficiency have been clarifying the core tasks, streamlining work processes, and adopting efficiency increasing technologies. The key individual actions in increasing efficiency have been the adaptation of working methods and increased prioritization. However, the interviewees highlighted how increased rest has also increased their efficiency, so not all the efficiency increase comes from changing one's working methods.

As the employees are more energized, they are more focused and able to complete their work faster. The wellbeing and efficiency effects create a positive circle: being able to have more time off from work and rest increases the motivation of the employees to keep up a higher working pace as they want to maintain 4DWW and continue enjoying its benefits.

Although the efficiency increases, it is not accompanied by a rise in work strain. The additional recovery time provided by the 4DWW helps employees manage their workload more effectively. While the components of work burden remain largely the same as in a traditional 5DWW, the transition to a 4DWW may initially lead to a temporary increase in burden as employees adjust to the new work rhythm and adapt to any new systems introduced alongside the model.

4.4.1 Improving work design increases efficiency

Actions taken to reach the sufficient efficiency level were, for example, identifying and focusing on the key tasks of the organization, compressing work, and completing the work faster with the help of various tools. The meaning of efficiency in the case organizations will be explored alongside the efficiency increasing actions to showcase the different outlooks on the definition. Caitlin described efficiency as an uninterrupted flow of work. The efficiency in their organization comes from focusing only on the key tasks.

"Efficient work is uninterrupted. Peaceful working conditions, where you can work uninterrupted." – Caitlin

"We examine what we actually do, and don't pretend that we are efficient and busy, which is something that is apparently done elsewhere." – Caitlin

Along similar lines, efficient work according to Anna means focusing on what is important. This entails understanding the strategy of the company and aligning one's work with it, utilizing tools to complete the tasks faster and reducing the time spent on less valuable tasks. An example of making work more efficient in organization B is the reduction of the number of meetings with the help of technology.

"Working efficiently means … that you know what to focus on, and those things are aligned with the company's strategy. You know what to focus on based on the firm's targets. You know how to use technology for your benefit. … You are able to do the billable work of 5 days in 4 days. You recognize what makes customers happy and makes them want to continue collaborating. You don't spend time on things that don't produce value for the customer. Because I've often spent a lot of time refining some presentation decks, and then they don't really have any meaning." – Anna

"Reducing the number of meetings. … We use a tool with which you can share your screen and record things. I do that a lot for our partners if I have to explain something … I take a video where I explain the thing. … It takes 5 minutes when normally we would probably have had a 30 minute meeting." – Anna

Vic has also identified the importance of spending one's working hours on the most significant tasks. Being more conscious of one's time use and prioritizing the most valuable tasks is what creates the required efficiency level. Utilizing AI and automation tools support in reaching this level.

"Working efficiently means using your working hours wisely. Spending it on things that advance the goals of the firm. This is highlighted in a 4DWW organization because as we have that one day less, that is where the efficiency is visible." – Vic

"I've done this same job in my previous workplace … I have the same tasks as in the previous job … I use a lot more different tools like AI and automation." – Vic

In organization C, the changes made for the 4DWW were also focused on clarifying the key tasks of the organization and reducing the number of tasks that did not produce high value for the organization and its stakeholders.

> *”We weeded out some of the not so important or productive things. We tried to cut the length of the meetings and intensify them. … We also started to think about how a lot of our working time is spent on different meetings where we should not necessarily be in.” – Josh*

Many interviewees discussed how important it is to focus on the tasks that matter the most, but Zac added that deciding who does what is also very important. The organization A has various tools for tracking the progress of projects and for communicating effectively. Together these tools contribute to the overall effectiveness of work.

> *“Clear division of work. Not doing work that overlaps, but also not having to wait for each other’s work. Instead, we are able to track the progress of each other’s work precisely. … I can see the changes someone has made to a code, and I know what the other person is doing.” – Zac*

> *“Utilizing tools is something that enables a lot of things. Like not having unnecessary discussions. … Keeping the discussions related to one thing at one place. This way we minimize additional work and this stems from cherishing the completeness of information. So that we don’t need to combine messages from 5 different [communication] channels. The tools make it easier to discern the data.” – Zac*

Izzy emphasized how 4DWW requires adjusting the company processes in a way that enables employees to have an extra day off. One of the ways to increase efficiency is to document processes as accurately as possible, so that the same processes can be repeated faster the next time they come up. The efficiency effects of having these standardized processes can be enhanced by choosing a business model where the same processes are repeated.

> *”Working efficiently means that that the work is done in a smart way. From the beginning, we have built various processes. We have a process for almost anything and we try to document things very precisely so that the next time the thing comes up, you don’t have to spend time on figuring out how the thing is done, but instead, there is a clear model for it. … It frees up a tremendous amount of time, and enables for us to have that 1 [extra] day off. Building processes has been at the centre of our business and the automation related to them.” – Izzy*

"Our business model is a continuous model, and it forces you to have processes that are repeated monthly. This goes hand in hand with the 4DWW model, like how do we do this as efficiently as possible and so that we can focus on the relevant things." – Izzy

4.4.2 Increased rest improves efficiency

How much work is completed during a workday is influenced by the employee's state of mind, mental capacity and energy levels. Many interviewees identified a change in their mental capacity at work after getting more rest due to 4DWW. Izzy summarized the effects of the 4DWW with one sentence:

"It doesn't feel like the work takes your soul." – Izzy

Especially organization A has taken the effects of rest on the employees' efficiency seriously. Caitlin described how the organization puts the wellbeing of employees first, as they know that a healthy employee does better work than an employee who is stressed and has no possibilities to take care of their needs. As an employee, knowing this attitude of the organization takes some of the pressure off from work as one knows that the organization wants the employees to feel well. Caitlin connects being more rested and less stressed to increased joy and motivation which creates more efficiency.

"Most of our focus is on ensuring that the employees are rested, excited, motivated, and feel well. The work is always secondary. People know that if something is wrong or they have some kind of a situation, they can take care of these things first. … There is the climate of 'of course you first take care of yourself and then work'." – Caitlin

"What is most important is being relaxed, and motivated. Through these we get the best results. Also new ideas, for example, solutions which help you move forward from a problem you've been struggling with for several weeks. I believe that through rest, joy, and motivation, we achieve the best results." – Caitlin

Allowing employees to rest more supports them in making the work more sustainable for them in the long-term. Having more time off from work and time to rest has increased Zac's ability to process complex entities, which has increased their efficiency at work. The efficiency increase is noticeable both in long-term and short-term work. Brennan also became quicker at completing their work.

"[4DWW] has increased my efficiency at work tremendously. On the weekly level but also, I find that this long-term development has multiplied compared to my previous situation. This is because the brain has the capability and resources to think about other things than just those at hand. There also comes the concept of passive work. If you obtain new ideas and entities, you don't have to analyse them in a rush, but instead, you can process them slowly with time, and sleep well." – Zac

"We have been able to achieve 5 days' worth of work in 4 days. There hasn't been anything like 'we really do not have time to complete this task' situations. The preparations and the preparation time has gotten more efficient on my worktable." – Brennan

Although the amount of trust that the organization A puts on its employees is very high, it has not had negative efficiency effects. Lisa talked about how the organization does not punish employees for working fast with good output, but instead is happy for the employee. Here again, the organization A's philosophy of how rested employees are productive is visible. Even when the employee could do more work as they complete their tasks quickly, the organization does not increase their workload. For them, the important thing in addition to the wellbeing of employees, is that the work visible for the customer progresses. Caitlin has noticed the effects of this approach on their work.

"Your work speaks for itself really. We've been talking about this since the beginning with the founding team as well that honestly, we're not even here to track hours at all. Let's say your output is incredible. We can see every week you're pushing out new features and we find out you're working 20 hours a week instead of 30 hours a week. Well, good for you. You're doing a great job. For us efficiency, it's really in things that that show in client work. It's very easy to measure because in client work we have a meeting every single week with the client where we show all the work that has been done. … Every week we can see exactly what everybody has done. It's super easy to measure." – Lisa

"I'm much more efficient because I know that the people here care about me personally and it is clear that I do not have to do things I don't want to. I don't have to work if I'm super tired or I have a lot of anxiety going on. I know that if I told the managers here that I feel terrible and can't work, they would say that of course you will rest. This gives me motivation that 'Okay I feel good and these people care about me and they know that when I feel good, my work is better,

and when I'm doing tasks that I want to do, I do them better." – Caitlin

Organization C has a similar approach to wellbeing and productivity as organization A. Josh finds that when the employees of the organization C are feeling well, they can do their work better and thus possibly increase the organization's financial stability.

"We need to get new members as they are the most important stream of income. But I also find it important that the staff is feeling well. Because I don't feel that we can represent the interests of the students at the expense of our employees' wellbeing." – Josh

Sam has noticed that an increase in their efficiency comes from the reduced number of mistakes. Being rested supports the focus when working, which results in fewer errors to correct later. The flexibility to choose when one works and what to work on increases the efficiency, as Sam can decide to work on the things they feel efficient with without the fear of a supervisor judging their actions.

"The freedom, the flexibility. The level of stress is different now and the fatigue … is different. This in my opinion has made the biggest impact on my work because I don't have to redo things twice that I can do once properly. … The level of tiredness and stress means that I don't have to do things typically twice. It's very rare I have to fix my own code." – Sam

"By not being able to be 100% all the time, means that you can only do so much. But when you're in control of your own schedule, you can arrange your life around it. … You can decide to work on what you're efficient with. Simply not having someone behind your back [supervising] that you are checking your emails or something means that you are at ease and you will get faster into your work." – Sam

Some interviewees felt that having the 4DWW has increased their motivation at work as they want to maintain this way of working. Jessica identified how the motivation to spend more time with their family made them want to work more efficiently. The reduced stress and increased focus support reaching this goal. Brennan was also motivated to work with a higher pace as too many overtime hours could have negatively impacted the continuation of 4DWW.

"There is a higher motivation ... to do better. ... I try to compress everything ... so that I have more time to spend with my kids on a Friday, Saturday, Sunday." – Jessica

"[4DWW] increased my efficiency at work. ... I noticed that I got more efficient in the preparation tasks, sometimes I feel like I need a whole day for them but now it feels like in 2-3 hours I can get the things done. It really in a way forced to be more efficient at work, because if I would have worked a lot of overtime hours it would have had a negative effect on the discussion of whether or not we would continue having the 4DWW." – Brennan

In organization B, Anna and Izzy also raised the topic of being motivated to work harder to keep the 4DWW. Anna discussed also how 4DWW would probably not suit a person who primarily wants to just work. Izzy explained how all the employees appreciate the 4DWW together out loud, which in turn increases motivation.

"You make it a priority. You have the motivation for wanting more leisure time. If you are a person who wants to work a lot, grind a lot and has workaholic characteristics, in those cases saying that we have a 4DWW does not work. It requires that everyone is like 'Damn, I will do these tasks already on Thursday so that tomorrow I don't need to work'." – Anna

"We are every week like 'Yay! This really works and now let's do this thing so that we can keep the 4DWW'. We remind ourselves that 'Damn this is cool and this really works' and although people have doubted if this can really work, well yes it does! It boosts morale and motivation." – Izzy

4.4.3 How the 4DWW shapes work strain

No matter the job, there will always be work burden caused by the demands of the job. Next, we will discuss the components of work burden so that we can understand what might hinder the employees in completing their work. Some of the interviewees felt that the only job demands come from the customers and from managing their expectations, and some felt that the pressure at work only comes from themselves. After the components, we will explore the impact of 4DWW on the perceived work strain.

In organization A, employees talked mostly about the customers and how the work demands are created by them. Lisa detects a challenge with new customers being suspicious about the organization having a 4DWW. She

provided an extensive explanation on how they tackle challenges with customers questioning organization A having a 4DWW. They do this by explaining how the quality of the work will not suffer from them working less, and on top of that, the customer saves money as these fewer working hours translate to smaller invoices.

> *"My main demands and a lot of our workers' main demands are coming from the client work. So, it is the clients who are demanding this feature and that feature and so forth. So, that side of the demand of course for us as a company is something that we have to be careful with in the beginning as a very small company to go in and tell them 'Hey, here we are. You are paying us every month, but we actually only work four days a week.' So that was an interesting one that we had to balance." – Lisa*

> *"How we've done that is explaining to the clients that just like our time spent working is less, also, they can compare our billing to our competitors, which is also less. This 20% saving is not going only into our pockets. It's also going into their pockets." – Lisa*

> *"We also argue the fact that even though let's say they are paying this 20% less, we are spending 20% less time. We do argue that because of this, because of our workers and how senior and good they are in their job, how happy and how we are supporting their well-being and everything, actually what they're not losing is 20% of efficiency. We're actually arguing that we are just as 100% efficient as people who work five days a week." – Lisa*

Sam also confirms this experience in organization A. Sam finds that the only challenges with the 4DWW are the customer expectations. But once the customers see that organization A provides them outcomes that are good quality and follows the schedules, the doubts of being able to work with a 4DWW company usually fade.

> *"Only with the customers' expectations of your schedule when you first start to work with them. They are a bit cautious of will we be able to deliver, the set of work, obviously. But after a few weeks have passed and they realized that, yes, the stuff is coming up. But we are certainly working hard. We are pretty efficient. They stop worrying about the quantity or the quality of the work. But then only comes the problem of 'hey, can you get online on a Friday? We'd like to have a meeting'. OK that can be arranged, but can we postpone it on the Monday or make it on Thursday instead? That's perhaps the only real thing. Changing the expectations of our schedule." – Sam*

Izzy discussed a similar experience in organization B and highlighted that the customer will receive the exact same amount of value as they would if the organization would work a 5DWW. The organization is not taking on more work than they can complete in 4 days. Organizations facing challenges in gaining the trust of new customers may benefit from a 'show, don't tell' approach, building credibility through consistently delivering high-quality work. However, this approach requires an initial degree of trust from the customer.

> *"When you try to find new customers, or start working with new customers, we often have the discussion with them saying 'But you're having 4DWW, what if I need something from you on a Friday'. But often the discussions can be concluded, because the point is not that we take 5 days' amount of work for 4 days. We get our work done, and the point is to create the value for the customer regardless of whether it takes 3 hours or an hour. The value created is the same because the outcome of my work is standard. … It's about changing people's conceptions." – Izzy*

Vic has also noticed how the discrepancy between 4DWW organizations' and the outside world's ways of working can create tensions. Vic has navigated the emotional challenges associated with reduced availability to customers on Fridays. The solution for this has been clear and consistent communication and showing that the work gets done. However, Vic highlighted that although this tension is not comfortable, it is not a major challenge in their business.

> *"I don't feel that there's been any big challenges. Of course, it's sometimes challenging when the outside world does 5DWW and they work on Fridays and you want to be available for your stakeholders. It has been, not a challenge, but like a fear of how will the stakeholders react to this. But everything starts with communication, and how well do you manage your tasks so that you meet your goals. … You show the stakeholders what tasks are your responsibility and that they can trust that you take care of this project." – Vic*

Inside organization A, Zac raised the challenge of organizing work between different working hours of the employees. However, this issue is not a major one either, as it only comes up occasionally and, in those cases, the problems requiring team members' support have been solved in an adequate amount of time.

"As we do not have an office and we have a 4DWW … it leads to people working during various hours. … Sometimes it's hard to coordinate something during the same day. But on the other hand, if I think about the last few months, if there has been a 'fire', I've never had to wait many hours to get the problem solved with a colleague. … The worst scenarios might run through my head, like what if I can't reach anybody, but these scenarios almost never materialize." – Zac

"The other side of the coin is that sometimes you can reach people during strange hours. If I send a message and expect to receive a response by lunch the next day, that response might arrive at midnight." – Zac

Jessica feels that the pressure they experience at work stems from themselves and that they need this pressure or otherwise they are not completing enough work. Jessica connects this feeling with their previous work experiences in different work cultures.

"The pressure is the one I'm giving myself. … I'm so used to work stress, so when I don't feel the stress, I feel like I am underperforming. I have that kind of mentality, but it's not supposed to be that way. Whenever I for example, get a 'good job' for this, I'm not used to that – to be able to have that appreciation. It's like my body needs to feel that I am under pressure." – Jessica

Further exploration of the influence of 4DWW on work burden is required. Among the interviewees, some reported an increased work burden due to the 4DWW, while others did not perceive any change in their workload. A few participants noted that although the work initially felt more intense when transitioning to the 4DWW, the burden stabilized as they adjusted to the new rhythm of work.

As the executive director, Josh had a bigger workload due to 4DWW as they were responsible for arranging the experiment. This increased Josh's stress. Additionally, in organization C in particular, an extra burden related to 4DWW was the uncertainty of the arrangement's continuation. As the trial had gone very well and the executive director had the data to validate this result, the fear of losing 4DWW cast a shadow on the employees' mood.

"In my case, [4DWW] caused extra stress, because although I get to enjoy the benefits that come with it, the management of it caused extra responsibilities. … So, in that sense it caused extra stress." – Josh

"The doubts of the board related to the success of the experiment, created some juxtaposition. I had all the facts that this is going well, but

there was a bit of some kind of message like 'work needs to be done 5 days a week' ideology detectable coming from the board. … When hearing that from some of the people of the board, it created us employees also a bit of tension related to like 'OK this has gone really well with us, but it's the board that makes the final decision about continuing it.' So, if the decision is based more on the ideology, than on the facts, it created a lot of uncertainty and that stressed me. And also caused me to reflect if I want to continue in the organization if we go back to 5DWW." – Josh

Vic and Brennan noticed an increase in their work burden when they started having a 4DWW, but both got used to the new rhythm quite quickly by adjusting their working styles. Brennan adjusted their approach to their tasks and tried to emphasize that the tasks will be continued next week and that the importance of tasks completed on Friday is not as high as one would think because other people most often react to them only on Monday. Utilizing various tools helped Vic in adjusting to the new way of working and the tools also made meeting the efficiency requirements easier.

"In the beginning I had to say to myself more strictly that I have to stop working. … Getting used to the new normal required adjusting, and it was a little stressful. Like now my workday is ending on a Thursday, I can only come back to this next Monday. You had to think stronger that rarely anything is getting done on a Friday, for example, things that I send on Fridays will be looked at only the next Monday anyway." – Brennan

"When I started, the first months were rough due to many reasons. One of the reasons was getting used to the 4DWW and the workload. … I don't feel that I do 5 days' work in 4 days, because I feel that we have developed our processes so that the work does not strain you so much. … We utilize systems like automatization and AI to speed up the processes, and so that we can truly prioritize the existing work time." – Vic

Finding support from various tools to make work more efficient has influenced the organizing of work, but Anna finds that this change has not increased their burden at work, only to a small degree in the beginning when adopting the new systems and processes.

"If I'd work in the old way, how I worked before, it would have been very stressful. But now that we have a new attitude towards technology and possibilities, I haven't felt that the 4DWW would have increased the burden. But in the beginning, of course, learning how to

use the technologies and getting used to the new way of thinking was heavy. But now that we have gotten into the rhythm of it, we are definitely much more efficient than the average workplace." – Anna

In comparison, Caitlin and Izzy felt that 4DWW has not influenced their burden at work. Izzy discussed how 4DWW has shaped the work into a new form, but this has not increased the work burden. They acknowledge the benefits of working a 5DWW for the growth of the company, but also how their organization wants to do things differently, more sustainably, which means working less. Anna highlighted how working efficiently has not increased the burden but perhaps decreased it as they have more time for fun activities.

"[4DWW] has not increased the burden felt at work. It has arranged work into a new shape. It has not decreased stress, but it also hasn't increased it. We do realize that we would grow a lot faster at least for a while, if we would work 5 days a week. … We think that it's not sustainable. We are trying to build a sustainable way of working. So no, it [4DWW] hasn't increased the workload, just rearranged it." – Izzy

"I've gotten into the efficient rhythm, and I personally have not felt that this efficiency would be a burden for me, but quite the opposite, the efficiency gives me more time do fun things that I really enjoy." – Anna

One person even mentioned that 4DWW has reduced their burden at work. Vic emphasized the link between increased rest and how it influences coping with work strain and motivation at work.

"You have more time for recovery. That has influenced many things positively. I feel that the burden at work feels different now. In a way it has reduced, because you can spend time on recovering and life outside of work. This increases motivation and excitement." – Vic

5 Discussion

The key findings of this study are that the essential organizational and individual actions taken to enable 4DWW, such as improving job design and prioritizing core tasks, enhance employee wellbeing by increasing rest and recovery, boosting life satisfaction, and reducing stress. Together, these three elements, the organizational and individual actions and improved wellbeing, contribute to higher employee productivity and, ultimately, better work outcomes. To fully realize the benefits of a 4DWW, rethinking and redesigning work is required at all levels of the organization: from leadership to individual employees.

The essential organizational actions for making the 4DWW successful include identifying the most important and strategically valuable tasks, and adjusting work processes to allow employees to focus on them. Implementing these changes requires strong support from the management team to ensure effective execution. On a more practical level, productivity can be enhanced by reducing the number of meetings, eliminating or automating non-essential tasks, and reallocating work more efficiently. The organization and its individuals should also ensure that the employees have the right skills to manage the workload.

On the individual level, the employees should have strong skills in adaptation, prioritization, and time management. They should be able to adapt their ways of working, for example, by changing their working methods, protecting their focus more, letting go of perfectionistic tendencies and by learning how to use efficiency increasing tools.

The organizational and individual actions taken to enable 4DWW improved employee wellbeing. The interviewees were able to rest and recover more from work, were more energized, had more time for leisure-time activities, and were able to distance themselves better from work, which reduced their stress levels. The increased free time improved the balance between work and non-work lives, which in turn increased the meaningfulness of work and the life outside of it.

As the increased rest and recovery made the employees more energized, they also became more efficient at work. Although 4DWW changed the rhythm of work in many organizations, the perceived work burden did not increase, except for some of the employees who did experience a temporary increase in the beginning of working a 4DWW. In addition to the increased wellbeing, the organizational and individual actions taken to adapt to the 4DWW contributed to the increase in employee efficiency. As a result, the work outcomes improved as well.

Óskarsdóttir's et al. (2022) emphasize the importance of clarifying which tasks create the most value, and aligning the needs of the organization and its employees in improving KWP. The case organizations have been able to successfully align the needs of the organization and its employees, and

simultaneously create a positive cycle of productivity: the case organizations reach sufficient productivity and profitability while also allowing employees to have more time off and rest. As a result, the employees become more energized and more efficient during the workweek.

These findings align with the theoretical framework of this thesis. In the Knowledge Worker Productivity (KWP) model by Óskarsdóttir and colleagues (2022), work outcomes are shaped by the state of the knowledge worker and work done, both of which are influenced by internal and external factors. The extended Job Demands–Resources (JD-R) model complements this view by identifying these influencing factors as demands and resources arising from personal, home, job, and organizational domains. For example, when work demands decrease due to a shorter workweek, the freed-up time enhances personal resources by allowing more rest and recovery. As employees become more energized, the state of the KW improves, personal resources are strengthened, and productivity at work increases.

The state of the individual KW consists of eight levels, and nearly all of these were reflected in the interviews. Participants described how the 4DWW had enhanced their wellbeing, personal resources, engagement, motivation, absorptive capacity, job commitment, and job satisfaction. These levels are shaped by both internal and external factors, which will be examined in the following chapters. First, the focus will be on the external (organizational) factors that influence the state of the KW and the work done factors of the KWP model. Then, attention will shift to the internal (individual) factors. Finally, the discussion will explore how both organizational and individual elements have contributed to improved employee efficiency.

5.1 4DWW's influence on the organization

According to the findings of this study, the essential organizational actions taken to adapt to 4DWW were connected to facilitating a work culture and structure which supports working within this model and making work more efficient. Employees need to understand which tasks are the most important and advance the company's strategy the most. Therefore, the management must clarify what these tasks are. The work processes must also be adjusted so that employees can focus on these tasks and that time is not wasted on unimportant assignments. The workload of each employee must be assessed, and the task allocation must be optimized. The management of the company must ensure that the necessary changes are implemented.

These actions are clearly linked to the KWP model as they improve the organizational culture, organizational climate and organizational hygiene, leading to improved state of the KW. The organizational actions also improved the job design and communication, thus improving the work done factor of the KWP model. From the JD-R perspective, job and organizational

resources were improved which lead to increased productivity. When the work is arranged more effectively and employees know what to focus on, the work requires less resources from them, leading to increased productivity.

The findings also align with other literature. According to Jansen-Preilowski and colleagues (2020) there are no general recommendations on how to implement a reduction in working hours, but they recommend comprehensive planning of the change and identifying unnecessary tasks and processes that could be streamlined. Piloting and establishing success measures are also listed as important parts of successful 4DWW implementation by Jahal and colleagues (2024).

Cultivating a work culture and structure that supports 4DWW requires first and foremost organizational commitment to the 4DWW. The management should lead the processes of clarifying the essential tasks, adjusting the business model and work processes to fit 4DWW, and overcoming the challenges 4DWW might create. The interviewees highlighted the importance of prioritizing, cutting the length and number of meetings, and erasing unnecessary tasks so that one can focus on the important tasks. These actions resemble the actions taken by a 4DWW organization studied by Mullens and Glorieux (2023) which assessed their daily workload, length and number meetings and number of office working days. The interviews also revealed that the needs for skill discretion and team empowerment are fulfilled in the case organizations quite well which can increase the employee engagement immensely (Hakanen et al., 2024). By implementing these changes, the organization can reduce the work demands directed at employees through smoother work processes, and increase employees' mental capacity and focus, as the use of time becomes more structured.

An important prerequisite for maintaining a 4DWW is managing the workload. Many interviewees discussed how the workload for each employee and the work allocation are well thought out in their organizations and how this supports them in completing their work in 4 days. If the workloads were excessive, it could increase the employees want to work less due to their mental exhaustion and stress increasing (Balderson et al., 2021). The organization could also provide employees with tools like AI and automation to manage their workloads better. These activities improve the job design thus increasing the productivity of the employees.

As employees have less time to work, some of the interviewees highlighted how communication must become more effective with the reduced working hours. Two of the organizations were working completely remotely, and their employees felt that this increased the importance of effective communication. But on the other hand, remote work meant less distractions as a colleagues cannot just visit each other and ask questions in the middle of one's focused working time. Therefore, working remotely does not seem to decrease the productivity of employees, given that the work culture and structure support 4DWW.

Finally, it is important to address the fact that implementing and maintaining 4DWW can create many challenges that the organization needs to overcome. Before trying the 4DWW, Organization B had concerns about the cash flow of the company, which is why they decided to first have a 4DWW trial, before committing to it fulltime. The concerns were shown to be unnecessary as the company's cash flow increased. Many organizations were also worried about how their clients and stakeholders would react to the organization having a 4DWW. These concerns were also shown to be unfounded, as the clients and stakeholders saw that this working model does not cause issues. These results indicate that if the 4DWW is executed well and the necessary actions are taken, the business can thrive. However, getting the approval of the management can be challenging as social norms influence working time preferences strongly (Gerold & Nocker, 2018).

5.2 4DWW's influence on the employee

4DWW had many effects on the state of the interviewees. The increased rest and recovery were named as key factors in increasing the interviewees' wellbeing. When the employees had more time to rest, they had more energy both during and after work. This meant that they were able to do their work more efficiently and have enough energy to do fun activities outside of work, which would not be the case if they worked a 5DWW. Additionally, the increased free time made taking care of kids and household chores easier, thus reducing the demands from home. Fridays were often used for household chores, but by taking care of these tasks before the weekend, employees were able to spend their actual weekend resting and recovering. The 4DWW experiment in a Belgian organization brought out similar results as the employees often spent the new free time on household work, care for others and personal care, resulting in reduced household stress and improved work-private life balance (Mullens et al., 2021). These effects indicate a clear improvement in the state of the KW and the employee's personal resources due to 4DWW.

In general, the interviewees said that 4DWW has improved their mental health due to reduced stress and fatigue. In practice, this meant for example that they had more mental capacity, were faster in problem solving and completing their work, and more resilient towards unexpected changes at work. The 3-day weekend was described to force employees to distance themselves from work better and take care of their mental health. Increased time off from work reduced the interviewees stress, meaning that the personal resources increased. These results align with a systematic review by Voglino and colleagues (2002) where they identified that reduced working hours while retaining a full salary increased working life quality, improved sleep, and reduced stress.

The 4DWW was described as increasing motivation at work, as both work and life outside of it became more meaningful. Individuals were more energized, more focused, completed their work faster and learned new things better than before thanks to increased rest. From the non-work perspective of life, the increased energy levels meant that interviewees had enough time and energy to do things that were meaningful for them, for example taking up hobbies, exercising, or seeing family and friends more. The increase in free time allowed the interviewees to follow their interests, engage in activities they truly enjoy and want to do, and take care of their needs better, which increased the interviewees' motivation and the meaningfulness of life. Additionally, social life was easier to maintain because of increased energy levels and free time, indicating the broad implications of 4DWW on the individual's personal resources.

To summarize, the improvement in the state of the KW and increase in personal resources from the internal perspective has largely occurred due to increased rest and recovery, which has led to reduced stress levels, improved energy levels and mental health, and to increased efficiency at work and meaningfulness of life. The effects are aligned with Cambell's (2024) study concluding that 4DWW can increase job satisfaction and morale. The possible downsides mentioned in Cambell's study – the intensification of monitoring and measuring employee performance – did not seem to materialize in the case organizations of this study. In some cases, the work pace was intensified, but employees got used to this rhythm and shifting to 4DWW did not seem to impede their long-term ability to work.

The work done component of the KWP model was also influenced by the changes in the internal factors. The key changes occurred in the personal knowledge management, absorptive capacity, and time management skills of the employees. The most essential skills that a 4DWW employee needs to master are adaptation, prioritizing, time management, and self-leadership skills. The interviewees emphasized the importance of prioritizing and managing one's time well as there is less time to work. They also noticed that they were becoming more efficient in completing their tasks and that the number of mistakes made has reduced tremendously indicating an improvement in their personal knowledge management. These skills align with skills identified in a study by Mullens and Glorieux (2023) where the employees of a Belgian 4DWW organization highlighted the importance of focus, prioritizing, monotasking and planning in making the 4DWW successful.

The changes in time management were visible in the way the interviewees approached their working time and the effort they give to each task. Some interviewees adapted to 4DWW by changing their behaviour so that they began to use focus hours and plan their weeks more in advance. Restricting the number of interruptions seems wise, as according to Addas and Pinsonneault (2018) interruptions that contain irrelevant information reduce productivity. Some interviewees changed their approach to the effort they give to each task.

For example, not aiming for perfection or not working with a 100% effort constantly were listed as good practices. The interviewees felt that having strong skills in prioritization, time-management, and self-leadership, helped them a lot in managing their workload in 4 days instead of 5.

5.3 4DWW's influence on employee efficiency and perceived work strain

To be able to work efficiently, the organisation and its employees need to fill certain requirements. On the organizational side, clarifying core tasks, streamlining processes and supporting 4DWW are critical activities. On the individual side, adapting working methods to fit the 4DWW, prioritizing the core tasks and managing one's time carefully are essential activities to reach a sufficient level of productivity. Having more time to rest also supports managing the work-related stress and strain, leading to increased efficiency at work.

On the organizational side, the interviewees highlighted examining what the organization and its employees really do – weeding out unimportant and unproductive tasks and processes is crucial, so that time is freed up for the significant tasks. Focusing on the tasks that advance the goals of the company and not wasting energy on other things are also key actions listed by Óskarsdóttir and Oddsson (2017). The tasks that are most significant must be aligned with the company's strategy, and therefore, the employees must also understand how their actions influence the progress of the strategy. The work allocation needs to be well thought out, and processes should be documented to increase the efficiency in the long run. Compressing the work and completing it faster may require the adoption of new technologies. These tools help employees reach the required level of efficiency in 4 days instead of 5. The decrease in the number of meetings supports faster completion of tasks as well.

If the organization implements all these changes in the organization, it is likely that the employee efficiency increases, because these activities align with the actions Óskarsdóttir and Oddsson (2017) have listed as important in improving the KWP: clarifying and communicating to the employees what the organization sees valuable, establishing a work environment where collaboration and knowledge sharing is easy, and KWs are motivated, and their needs are fulfilled. However, knowledge sharing in the case organizations might not be as frequent as it could be because the meetings have been shortened and their number reduced, and there is less down time in the workdays. Knowledge sharing between KWs is important as it improves the organizational knowledge base and KWs access to information (Óskarsdóttir et al., 2021).

4DWW might lead to the intensification of performance measurement and monitoring, causing employees losing some of their freedom at work (Delaney & Casey, 2022). A couple of interviewees felt that some of the freedom at work was lost due to the intensification of work, which reduced the possibilities of having long lunches and chatting with colleagues. Similar experiences were identified at Femma Wzv, studied by Mullens and Glorieux (2023): the employees missed "slack time" and fun interactions with colleagues. This shows how 4DWW may necessitate that some aspects of work are given up to make the model functional. However, it is advisable to ensure that when implementing the 4DWW, time for free interactions between colleagues is arranged.

4DWW changed the way the interviewees completed their work and thus influenced the internal factors influencing the work done component of the KWP model. The interviewees started to prioritize and manage their time more strictly and adapted their ways of working by adopting new habits. Many interviewees started to use focus hours and protect themselves from distractions more than before, leading to a deeper focus at work. What also allows the employees to focus more on the valuable tasks is restricting the number of meetings they book with each other and being more mindful of when to book them. Some interviewees also mentioned that learning to use tools such as AI and automation was a new experience for them. Moen and Chu (2023) have identified similar strategies in their study on how to adapt to reduced working hours: reorganizing tasks, changing the hours one works, scheduling communication and allocating work and nonwork time specifically.

Some interviewees applied clear principles and philosophies for work which supported them in completing enough work. Some interviewees emphasized alternating the amount of effort one gives to each task and how everything does not have to be perfect – it is better to do the most important tasks well and reduce the effort on other tasks. Some highlighted completing the work first and then improving it later. One interviewee also discussed how one cannot work with 100% effort all the time. Instead, the baseline should be 70% effort so that when a larger wave of work hits, one has the capacity to get through it.

In addition to the organizational and individual actions, the interviewees felt that a large part of the efficiency increase stems from the increase in free time and rest. Efficiency comes through rest, because rested employees have more energy to complete their tasks and capacity to process complex entities. They also make less mistakes in tasks like coding. The increased time off from work was also identified to increase creativity in work related problems, as solutions to these problems often came to the interviewees during their time off from work.

Additionally, having the 4DWW increased the motivation to keep up with a higher working pace. The motivation to have more free time encouraged

employees to be more efficient. This result aligns with Delaney and Casey's (2022) study where they identified that even the promise of 4DWW can make individuals work harder to reach this goal. This was visible for example in organization C, where Brennan explained how they worked harder and planned their work more to prevent overtime working hours from accumulating and thus possibly jeopardizing the extension of 4DWW after the trial.

In addition to the employee efficiency, 4DWW influenced the perceived work burden. The components of work burden were said to be mostly coming from customers and from managing their expectations of the project schedules. The work-related strain caused by customers was not new or specific to the 4DWW. However, the introduction of the 4DWW occasionally led to some doubts among customers. The customers might have had doubts about what the organization can deliver or whether the collaboration will be challenging due to 4DWW. It is important that the management supports its employees in explaining this model of working to the customer, and emphasizes how the customer will receive the same value despite the 4DWW.

The interviewees' experiences on whether 4DWW influenced their work burden were inconsistent. According to Jansen-Preilowski and colleagues (2020) reducing working hours while maintaining full salary reduces the work burden of employees. However, in this study some of the interviewees felt that the burden increased, some felt it did not increase, and some felt that the work burden decreased due to 4DWW. One of the reasons behind the increase in work burden was said to be the beginning of working with this model. But when the interviewees got used to the new rhythm of work, the increase in work burden diminished. At first, learning to use the tools that help managing the workload in the long run might feel stressful, before gaining the efficiency effects of the tools.

Those who felt that the 4DWW did not increase their work burden described it more as a reorganization of work rather than an increase in work burden. Some even reported a reduced work burden, attributing this to having more time for enjoyable activities. Participants who experienced a decrease in work burden emphasized the role of increased rest, which supported their ability to cope with work, as well as heightened motivation.

The findings of this study show that 4DWW has improved the state of the KW and work done, which in turn have increased the employee efficiency and ultimately improved the work outcomes. The pace of getting work done has intensified, because the state of the individual KW has improved: employees have more energy and mental capacity, and have learned to complete their tasks faster thanks to new skills, tools and approaches to work. The internal and external factors have improved the state of the KW and work done, and the relationship between the demands and resources in life has gotten more balanced.

6 Conclusions

6.1 Summary of the study

The four key organizational actions when adopting 4DWW are clarifying the key tasks that advance the strategy of the organization, adjusting the work processes so that employees can focus on these tasks, assessing the workload of each employee, and supporting the employees in managing with the workload. To implement these changes, the management of the organization has to support 4DWW. The key individual actions are prioritizing the most important tasks and managing one's time more strictly, and adapting to the new rhythm and workload by adopting new ways of working.

According to the literature, the most critical factors during the implementation of the 4DWW are securing managerial support and adapting work practices to meet the model's requirements. Employees need to learn how to prioritize and plan their work (Mullens & Glorieux, 2023), and the organization should consult employees, pilot the 4DWW, establish success measures, design the work so that it suits 4DWW (Jahal et al., 2024) and assess the workload, the length and number of meetings, and the office days (Mullens & Glorieux, 2023). These activities are closely aligned with the changes implemented in the case organizations of this study.

In the literature, the actions that help maintain 4DWW are often related to the work culture and organizational practices. Establishing a culture where there is skill discretion, job feedback and team empowerment helps employees stay engaged in their work (Hakanen et al., 2024). Hakanen and colleagues (2024) also highlight giving autonomy to teams as a way to increase employee engagement. Bosch-Sijtsema and colleagues (2009) list various aspects the organization should consider when creating work practices as these influence the KWP: team structure, tasks and processes, organizational context, and the physical, virtual and social workspaces. Although meetings were often shortened in 4DWW organizations of this study, casual meetings with colleagues especially in remotely working organizations should not be erased completely, as remote work is associated with higher levels of loneliness (FIOH, 2024). The case organizations demonstrated a high level of employee autonomy and carefully designed work processes, indicating that the taken actions are aligned with the recommendations presented in the literature.

The combination of the 4DWW and supportive organizational and individual actions has enhanced employee wellbeing in several ways in the case organizations, beginning with improved rest and recovery. As the employees have an additional day to themselves, they have been able to rest and recover from work better than before, making them more efficient and resilient to unexpected changes. The 3-day weekend has also reduced the interviewees' stress as they have been better able to distance themselves from work. This

distance has also had an impact on the creativity of the employees as they might have come up with solutions to work-related problems during their free time without actively thinking about them. As the employees have had more time for themselves, they have been able to pursue meaningful activities more, which has increased the meaningfulness of the interviewees' work and non-work lives.

These wellbeing-related findings align with the literature, as according to research, reducing working hours can increase the wellbeing of employees. In some cases, working hour reductions can increase stress but also increase job satisfaction (Topp et al., 2022), and in others, it has been shown to increase the subjective wellbeing (Lepinteur, 2019). When implementing the 4DWW, refraining from cutting the salaries of the employees is also a good way for the organization to support the wellbeing of its employees, as reduced working hours with a full salary have been shown to increase working life quality, improve sleep and reduce stress (Voglino et al., 2022) and reduce the work burden of employees (Jansen-Preilowski et al., 2020).

The burden the interviewees felt at work came mostly from customers as they bring with them a set of requirements and demands that the employee should respond to. Sometimes these demands do not align with the 4DWW and here the organization's support in explaining and justifying 4DWW to the customer is crucial. Managing the attitudes and schedule expectations of the customers were named as the main challenges and sources of work burden in the interviews. 4DWW did not appear to increase the overall work strain in most of the cases, but if it did, it was often due to having to adapt to the new way of working or due to having to organize and supervise the 4DWW's functioning.

As the employees have been more rested, focused and efficient at work, known which tasks to focus on and prioritize, and have been able to organize their work so that they can complete their work on time, the overall efficiency of the organization has improved. As the state of the KW, work done, and the efficiency of the KW have all improved, the work outcomes have improved as well.

Based on the study's findings and discussion, transitioning to a 4DWW has improved both the state of the KW and the work done factors in the case organizations. As a result, employee efficiency and work outcomes have improved. These positive changes were driven by organizational and individual actions taken to adapt to the 4DWW. Additionally, these actions have contributed to enhanced employee wellbeing. Together, the organizational and individual efforts, along with the improved wellbeing, have led to increased employee efficiency and better work outcomes.

6.2 Practical implications

To respond to the increasing need for flexibility at work and for better balance between work and non-work lives, organizations could consider implementing the 4DWW. Key activities in successful implementation and maintenance of the 4DWW are ensuring that the business model and work culture and structure support the functioning of 4DWW, and that the leadership is on board with the change. The organization should clarify what they see as value, and communicate that to the employees, create a work environment where efficient work is possible, and work towards ensuring that the needs of the employees are fulfilled, and that they are motivated.

The organizations which implement 4DWW are not the only ones who should make changes – effort from the employees is required as well. The employees should learn how to prioritize, manage their time, and adapt their working methods to fit the needs of the 4DWW. However, learning these skills should not be left only on the shoulders of the employees, but the organization needs to support them in gaining these skills. The organization should, for example, ensure that the employees get enough education on the new systems or tools so that they can use them properly and leverage the efficiency gains these tools can bring.

It is understandable that organizations and their management may have concerns about the profitability of the company when shifting to a 4DWW, but the results of this study suggest that the profitability does not necessarily have to suffer and may even increase if the organization performs the right activities when implementing and maintaining this model of working. By focusing on what is important, streamlining processes, and adopting modern technologies, the organizations can support the employees in reaching the 5DWW efficiency in 4 days. If the organization undertakes the recommended activities, they may not only increase their efficiency but also reduce the job and organizational pressures that are put on the employees, thus improving the employee's wellbeing. If the organization wants to try improve the wellbeing of its employees more than by giving them an additional day off and an improved job design, it should consider maintaining the wages at 100% although the working hours will be reduced to 80%. This is because reducing the working hours while receiving full pay has been shown to increase working life quality, improve sleep and reduce stress (Voglino et al., 2022).

The personal and home demands from the individual perspective may also decrease thanks to the increased time for rest, recovery and leisure time activities. Choosing to implement 4DWW and giving employees more free time could improve employees' focus and efficiency at work, as they are more energized at work when they have more time to recover from work, and as a 3-day weekend reduces their stress levels through increased distance from work. It is understandable that some organizations might be afraid of employees not being able to complete enough work in 4 days, but 4DWW may be worth trying, as giving more time off from work made the employees of the case organizations of this study more efficient. The improved efficiency

through increased rest could even out the effects of not working on the 5th workday of the week.

6.3 Limitations and suggestions for future research

There are multiple limitations to this study, starting with the scope. There were only 10 interviewees as there is a limited amount of time that should be allocated for completing the master's thesis. This is approximately 6 months of full-time work based on the 30 credits that one receives when the thesis is completed.

As the study covered only three organizations, and them only partially, a more in-depth analysis of the effects of 4DWW is necessary. Although the results of this study speak in favour of generalization of the 4DWW, the size of the study does not guarantee that these results will occur in other organizations. For example, there were only two interviewees from organization C which is more of a public sector entity than a fully private company, whereas the two other companies were focused on consulting as private businesses, and this imbalance between the case organizations may have caused the results to be skewed towards some direction more than they would have if the size and scope of the study were bigger. Therefore, future research should examine the changes brought about by the 4DWW in organizations, particularly its effects on employee wellbeing and productivity, across different sectors and over a longer period of time.

One common argument found in both academic literature and media discussions is that 4DWW trials and studies have typically observed organizations only for relatively short periods, ranging from six months to a few years, raising the question of whether the 4DWW remains successful over the long term. Studying the 4DWW organizations over the course of multiple years would most likely provide information on how these organizations manage, for example, crises in the economy or in their specific businesses. One of the case organizations of this study did manage to work through the COVID-19 pandemic and stay in business, but their success does not mean that other companies would automatically be successful during crises only by being an 4DWW organization. Comparing the rate of bankruptcy of 4DWW organizations and 5DWW organizations during crises could also be interesting, but this would require that there were many 4DWW organizations existing. All things considered, the long-term implications of adopting 4DWW warrants further examination.

More research should also be done on how the size of the organization and working remotely influence the success of 4DWW and the actions that the organizations should take to support this success. In this thesis, it seemed that the remotely working organizations A and B had an easier time with the 4DWW, but they also had more experience with working a 4DWW than

organization C. Additionally, the interviews did not produce much information on what the organizations and individuals should not do when implementing and maintaining 4DWW. Therefore, researching larger organizations with different working models could provide interesting insight on how the implementation and maintenance of 4DWW may differ depending on the organization.

Lastly, as productivity is an important part of 4DWW, improving KWP measurement and developing a universal multi-dimensional KWP measurement tool could support organizations in reaching the necessary level of productivity. Tapasco-Alzate and colleagues (2022) have identified that measuring autonomy, human capital, training, teamwork and knowledge management are often recommended in the KWP literature but do not take place in practice. Therefore, more research should also be done on how organizations could measure their productivity better in practice.

Use of AI	MARK X WHEN APPLICABLE
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7 Appendices

7.1 Appendix A: Interview guide for organization A

Interview guide for organization A

1. Could you introduce yourself, please.

Change in the ways of working

2. How has 4-day work week (4DWW) felt so far?
    a. Have there been any unexpected effects or learnings so far?
3. Before this organization, have you worked in a 5-day workweek organization?
4. Could you tell me about the impact of 4DWW on your ways of working and organizing of work?
    a. How have you possibly adapted your ways of working when starting 4DWW?
    b. How has the organization supported you in organizing your work?
    c. How do you perceive the organization's internal communication and collaboration compared to a 5DWW organization?
5. Which of your ways of working do you find crucial in making the 4DWW functional for you and your organization, and that you get enough work done?
6. Could you describe what do you find as the necessary things to be done from the organization's side to make 4DWW functional?

JD-R model

7. How have you experienced 4DWW from job resources perspective? Has 4DWW given you more of some kinds of resources in your life or at work?
    a. Follow-ups: On the physical level
    b. Psychological level
    c. Social level
    d. Organizational level
    e. Has any of the resources become more important or less important due to 4DWW?
8. Can you discuss the impact of 4DWW on your job demands?
    a. Follow-ups: On the physical level
    b. Psychological level
    c. Social level
    d. Organizational level
9. Has the possible change in the job demands changed your ways of working or your coping strategies? If so, how?

10. Has the 4DWW caused other challenges? If so, could you tell me about them?

Efficiency

11. Could you tell me about how efficiency is perceived in your organization? What does efficient work mean in your organization?
    a. Has the definition of efficiency changed due to 4DWW? If so, how?
12. How do you perceive the effects of 4DWW on your efficiency at work?
13. What concrete efficiency effects has 4DWW had in your organization?
14. Are there any specific processes or projects in which the effects have been visible?

7.2 Appendix B: Interview guide for organizations B and C

Interview guide for organizations B and C

1. Could you introduce yourself, please.

Change in the ways of working

2. How has 4-day work week (4DWW) felt so far?
    a. Have there been any unexpected effects or learnings so far?
3. How was the organization prepared for the switch from 5-day workweek to 4DWW?
    a. Was support offered for the change? If so, what kind?
4. How do you perceive the organization's internal communication and collaboration since starting the 4DWW? Have there been any changes?
5. How has the switch from 5DWW to 4DWW influenced your working and especially the organization of your work?
    a. How have you changed your ways of working when switching to 4DWW?
6. Could you tell me about the possible changes in your ways of working that you find crucial for the 4DWW to function, and that you can get enough work done?
    a. How about in general? If great changes in the ways of working were not needed, which of your ways of working do you find crucial in making the 4DWW functional?
7. Could you talk about the possible changes needed to be made in the organization's operations for the 4DWW to be functional?

JD-R model

8. How have you experienced the switch to 4DWW from job resources perspective? Has the switch given you some kinds of resources in your life or at work?

    a. Follow-ups: On the physical level
    b. Psychological level
    c. Social level
    d. Organizational level
    e. Has any of the resources become more important or less important due to 4DWW?
9. Can you discuss the impact of 4DWW on your job demands?
    a. Follow-ups: On the physical level
    b. Psychological level
    c. Social level
    d. Organizational level
10. Has the possible change in the job demands changed your ways of working or your demand coping strategies? If so, how?
11. Has the 4DWW caused other challenges? If yes, could you tell me about them?

Efficiency

12. Could you tell me about how efficiency is perceived in your organization? What does efficient work mean in your organization?
    a. Has the definition of efficiency changed due to 4DWW? If so, how?
13. How do you perceive the effects of 4DWW on your efficiency at work?
14. What concrete efficiency effects has 4DWW had in your organization?
    a. Are there any specific processes or projects in which the effects have been visible?