

# Preventing burnout through starting a discussion

Sander Kalmus

IxD Interaction Design

Estonian Academy of Arts

Mentor: Annika Bengts

Supervisors: Nesli Hazal Akbulut, Tanel Kärp

2021

# Acknowledgements

I want to thank my mentor Annika Bengts for all the help, time and enjoyable meetings.

This work would have not been possible without Kaari, who was always ready to discuss, bounce ideas and listen to my semi-structured arguments. I appreciate you and your being.

A long journey is always more enjoyable with a good companion. Thank you Mikk for all the chats, links, articles and ideas.

Tanel Kärp and Nesli Hazal Akbulut, you have been the support I wanted and needed.

I would also like to thank all the people that participated in the interviews, ideation sessions, experiments, tested the solution and gave feedback.

This work is dedicated to my mamma Linda. I miss you.

# Abstract

The number of people burning out is increasingly growing. The phenomenon associated with the burnout is lack of understanding and knowledge. As the symptoms of burnout are difficult to detect, preventing burnout requires collaborative and interactive actions. This study focuses on the identification of burnout, aiming to create a solution to prevent it and make the issues visible for both, the employer and employee.

A constructive research methodology with Double Diamond approach is used. Several data collection methods are implemented which support the Discover and Development phases. In Discover phase 10 users and 4 experts were interviewed using theoretical sampling. First, in Development phase, a probe experiment with 5 employees and 1 manager was conducted. Second, an experiment with 2 teams was held to validate and get further insights for the design phase.

Through the research I found out that burnout is an occupational phenomenon and the best way to prevent it, was to intervene on organizational level. I discovered that one way to prevent burnout was to make work related stress more visible for the manager.

The outcome of this master's project is a solution that offers a way to start a discussion within teams by creating a dedicated space for employees to express their struggles, issues, and ideas. This provides the manager an overview on the state of stress in the team. The responsibility of the manager is to choose focus for the discussion whereas the responsibility of the employee is to be an active participator. The responsibilities of the solution cover the facilitation of onboarding the manager, setting up a dedicated channel, providing good questions and offering takeaways from the discussion. The presented solution offers means to achieve better understanding of the state of the team. Further research on the impact of the solution in the longer run is needed in the future.

# Kokkuvõte

Inimeste arv, kes kogevad läbipõlemist, on üha kasvamas. Läbipõlemist kui fenomeni iseloomustab mõistetamatus ning teadmatus. Kuna läbipõlemise sümptomite tuvastamine on keeruline, nõuab selle ennetus erinevate osapoolte koostööd ning ühist pingutust. Antud uurimustöö proovib mõista, mis täpsemalt on läbipõlemine, kuidas seda ennetada ning püüab probleeme nähtavaks teha nii töötaja kui ka tööandja jaoks.

Kasutatud on konstruktivistlikku lähenemist koos topelt teemantiga. Erinevaid andmekogumise meetode on kasutatud nii avastamise kui ka arendamise faasis. Avastamise faasis intervjueriti 10 kasutajat ning 4 eksperti. Arendamise faasis viidi alustuseks läbi uuring 5 töötaja ning ühe juhiga. Lisaks viidi läbi eksperiment 2 erineva meeskonnaga, et valideerida ning edasi arendada loodud lahendust.

Uurimuse põhjal leidsin, et läbipõlemine on tööalane fenomen ning parim viis selle ennetamiseks on sekkuda organisatsiooni tasemel. Ühe lahendusena pakkusin välja, et läbipõlemist oleks võimalik ennetada tehes tööalane stress nähtavaks juhile.

Antud projekti tulemusena sündis lahendus, mis pakub viisi, kuidas alustada meeskonnas arutelu luues selleks eraldatud kanal, kus töötajad saavad väljendada oma probleeme, muresid ja ideid. See võimaldab juhil mõista, milline on stressitase meeskonnas. Selle lahenduse raames on juhi kohustuseks valida fookus aruteludele ning töötaja roll on olla aktiivne osaleja. Loodud lahendus aitab juhil lahendusse alustuseks sisse elada, luua eraldi kanal, pakub head küsimused, millega arutelu käima tõmmata ning annab hiljem ülevaate peamistest teemadest. Antud lahendus loob võimaluse saada parem ülevaade meeskonna hetkeolukorrast. Edasise uuringu abil oleks võimalik uurida, milline on loodud lahenduse mõju pikema aja jooksul.

<b>INTRODUCTION</b>	<b>6</b>	<b>PERSONA</b>	<b>46</b>
<b>BACKGROUND</b>	<b>6</b>	<b>DESIGN PRINCIPLES</b>	<b>48</b>
<b>PERSONAL MOTIVATIONS</b>	<b>6</b>	<b>INDIVIDUAL IDEATION</b>	<b>49</b>
<b>AIMS AND OBJECTIVES</b>	<b>7</b>	<b>THE GOOD TEAM</b>	<b>51</b>
<b>DESIGN METHODS</b>	<b>8</b>	<b>PROTOTYPING</b>	<b>52</b>
<b>DISCOVER</b>	<b>11</b>	<b>DELIVER</b>	<b>64</b>
<b>DESKTOP RESEARCH</b>	<b>11</b>	<b>REFLECTION</b>	<b>70</b>
<b>TALKING TO PEOPLE</b>	<b>25</b>	<b>EVALUATION OF THE PROCESS</b>	<b>70</b>
<b>DEFINE</b>	<b>33</b>	<b>FUTURE DEVELOPMENTS</b>	<b>71</b>
<b>SOCIO-ECOLOGICAL MODEL</b>	<b>33</b>	<b>REFERENCES</b>	<b>72</b>
<b>THE ICEBERG METHOD</b>	<b>35</b>		
<b>DESIGN CHALLENGE</b>	<b>37</b>		
<b>DEVELOP</b>	<b>39</b>		
<b>DESIGN PROBE</b>	<b>39</b>		
<b>THE MISMATCH</b>	<b>43</b>		
<b>IDEATION WORKSHOP</b>	<b>44</b>		

# Introduction

## Background

Well-being, taking care of yourself, working out, doing yoga and meditating is a popular theme in today's world. The importance of people's health is gaining more attention today. The focus is on both physical and mental health. But the rates of mental health related issues are still on the rise.

Mental health problems are the second most common reason why people are limited in their ability to work. The estimated loss caused by mental health issues amount to 2.8% of the Estonian GDP or 572 million euros per year [1].

The same applies for the mental health issues at work. For example, a 2019 study by Gallup showed that 55% of Americans reported feeling stress during a workday [2]. According to a study from Estonian Ministry of Social affairs, 53% of workers feel their jobs are stressful. Another study from Estonian Labor Inspectorate showed that 23% of workers suffer from work stress [3].

The result of constant stress is burnout that has become a widespread problem. The pressure to address job burnout has become so intense that World Health Organisation (WHO) declared burnout an occupational phenomenon in its global standard for diagnostic health information [4].

## Focus and scope

The aim of this project was not to offer a cure or a way to recover from burnout. I wanted to find ways to prevent burnout. In simple terms, it means finding ways to make people not burn out in the first place. For that I had to find out what are some reasons burnout happens. Through that I had an opportunity to intervene and offer a way to improve the situation.

## Personal motivations

Much of the inspiration for this study came from my own life. When I heard a few years ago that a friend of mine had to quit her job due to burnout, I was very confused. It felt strange because she did not

seem to have any problems at work or was not physically ill. I did not understand what had happened to her.

I work as an interaction designer in a digital agency and in 2020 I had the opportunity to participate in a project where we developed a burnout app. The app tracked stress and offered a way to measure employee burnout levels. During the project, I learned a lot about the topic and understood that burnout was a much bigger problem than it first seemed.

After the project was completed, I started noticing more articles about burnout and mental health problems in the media. Shortly after, I was on the verge of burning out myself. In a short time, I took on a lot of responsibilities at work and school. I did not realise how it was affecting my mental and physical health, nor the people around me. Luckily, I was able to shift down a gear at the right time.

All of this happened in the last few years and have had a strong impact on me. Therefore, I decided to focus my thesis project on exploring the burnout and possible ways of preventing it. I realise this is a complex topic with many variables, but it seems that a designer's approach could offer a new perspective on the field. User centred design and systems thinking provide tools to both see different actors point of view and understand how they related to

each other in the bigger picture. The task at hand seems difficult and even taunting, but I think it is worth the effort.

## Aims and objectives

The aim of this project was to find ways to prevent burnout. I formulated the following questions that kickstarted the whole journey:

### **Research question 1**

What is burnout?

### **Research question 2**

How to prevent burnout?

With the help of research, I expected to build understanding on what is burnout. This gave me an opportunity to have an idea how to approach the problem from new angle than others have before.

Based on the newly found approach, I wanted to see where I could intervene to prevent burnout.

# Design methods

The following chapter will cover the various design and research methods used in this project.

## General approach

The project follows a common design thinking framework (Figure 1) called “Double Diamond.” It is a framework that provides a way to start with an abstract problem and end with a human centred solution [5].

The double diamond consists of two diamonds that represent a process of broadly exploring the problem (divergent thinking) and then narrowing the focus (convergent thinking). The whole process consists of 4 phases [5]:

**Discover:** The goal of this phase is to understand what the problem is. For that I conducted a secondary research to gain a theoretical perspective [6]. In addition, I talked with experts and users using semi-structured interview format.

**Define:** This phase is about gathering all the information from the discovery phase, narrowing the scope, and defining the design

challenge [5]. For that I created a socio-ecological model to find the focus. Based on that, I used the iceberg method that is a tool for systems thinking. This helped me understand the root cause of the issue. After finding the main problems, I used user need statements to create an actionable problem statement. To have a clearly defined design challenge, I came up with a how might we question that would help me in the ideation process.

**Develop:** In the first part of the second diamond tried to get inspired through co-designing with others [5]. I organised a week-long design probe where I asked 6 people from one team to fill the diary about the stress they experienced at work. In addition, I held an ideation workshop with managers to come up with different ways of understanding the work stress. Using all the information and ideas, I did an independent ideation to come up with the preliminary design concepts. To validate the ideas, I prototyped some of the ideas. To get better understanding if my ideas would work in real life, I conducted a validation experiment. Based on all the feedback, I created a clickable high-fidelity prototype.

**Deliver:** The final phase of the entire process involved developing and testing different solutions to solve the original problem [5]. As I already had a clickable high-fidelity prototype, I decided to do more user testing to fine-tune the final solution.

## **Iterative process**

The project is based on iterative design process. This means going through the design process in cycles (Figure 1). After defining a problem, building a prototype and testing, it is encouraged to go back and for example refine the problem statement and redo the prototype. The cycle of going back and forth by tweaking the prototype is usually repeated until reaching the final solution [7].

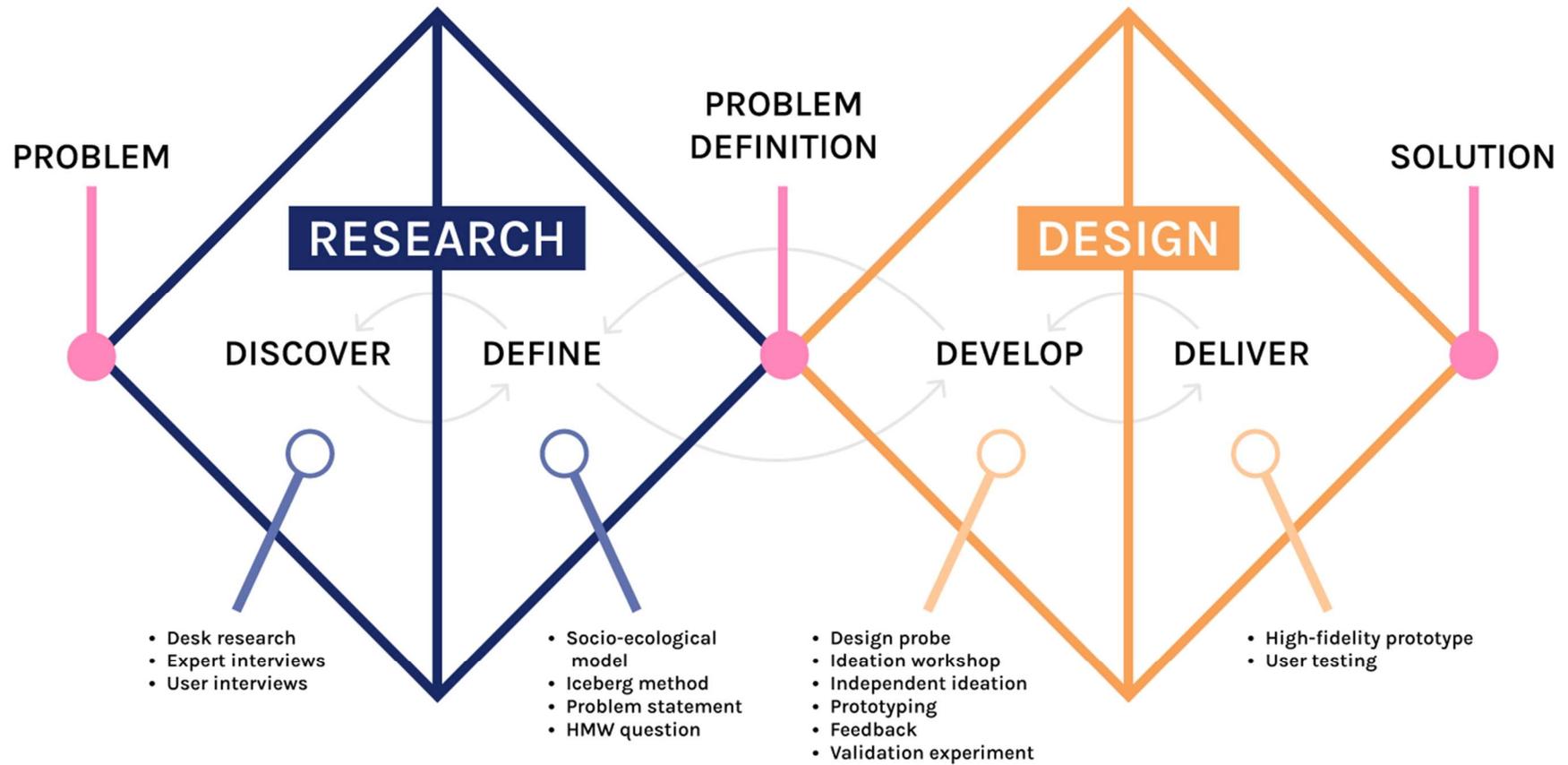


Figure 1: Double Diamond and planned activities

# Discover

Discovery phase is the first part of the whole design thinking process. In this phase, I tried to go as wide as possible and through gathering information, create understanding what was the context of the issue. For that I did a thorough desktop research and conducted interviews. In the end I wanted to have a clear understanding what is burnout and what are the common themes.

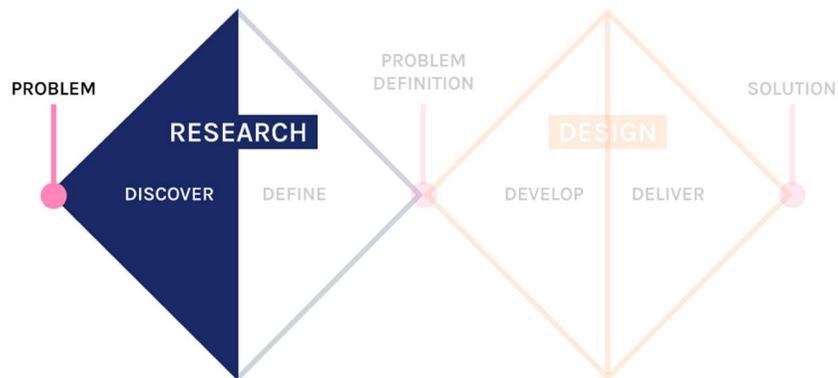


Figure 2: Discover phase highlighted on the Double Diamond.

## Desktop research

The goal of this chapter was to get a clear picture of what exactly burnout is and to put that understanding into context. To achieve this, I started from the initial definition of burnout in the academic literature. I also tried to understand what the causes and consequences of burnout were. To gain some insight into how this all fits into the real world, I looked at what work stress is and how it is viewed in the eyes of the state.

For this I used several databases and searched for all kinds of relevant academic papers and books. The main logic was to get a brief overview of various sources and materials, which was evaluated by reading the abstracts. Based on the abstract, I decided whether the information was relevant to the project or not. All relevant materials were read and analysed. All the sources used in this project are cited according to the thesis requirements.

## Definition of burnout

Herbert Freudenberger was a German-born American psychologist who studied chronic fatigue and stress. He first introduced the

term "burnout" in his 1974 article "Staff burn-out". The term was used to describe the gradual physical and emotional exhaustion and reduced productivity among volunteers [8]. According to Freudenberger, the first sign of burnout is when an employee works harder and harder, but the accomplishments look less and less [9].

Around the same time, Christine Maslach and her colleagues studied the cognitive strategies used by service workers. They found that exhausted workers developed a gloomy attitude toward their work. Based on this finding, they defined burnout as:

*"a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur in individuals who work with people in any capacity [10]."*

Initially, the definition addressed only human service workers such as nurses or other health care workers. After numerous studies, it has become clear that the phenomenon of burnout extends to other areas of work (telecommunications, IT, business, or sports) [11].

In 2019, the World Health Organization (WHO) included burnout as an occupational phenomenon in the latest revision of the International Classification of Diseases (ICD-11). It defines burnout as:

*"Burnout is a syndrome conceptualized as the result of chronic stress at work that has not been successfully managed. It is characterized by three dimensions:*

- *Feelings of energy depletion or exhaustion.*
- *Increased mental disengagement from one's work or feelings of negativism or cynicism about one's work.*
- *Decreased job effectiveness."*

*The definition refers to burnout as a phenomenon that takes place specifically in a professional context. It should not be applied to describe experiences in other areas of life [12].*

**Summary:** Over the years, the definition of burnout has evolved significantly. What we now know is that burnout is unmanaged stress described by exhaustion, depersonalization, and decreased productivity. It seems important to understand that the latest definitions do not extend beyond work life.

## Causes and consequences of burnout

Burnout is usually caused by situational and individual factors. The situational factors are any situations related to the workplace, such as too much work or negative relationships with colleagues. The individual factors derive from individuals' personal traits like neuroticism or demographic characteristics such as age. The general view is that burnout is mainly associated with situational factors rather than individual factors. Nonetheless, both factors need to be examined within the organizational setting and preferably simultaneously [8].

### Causes of burnout

#### Situational factors

According to the existing literature, work-related situational factors are divided into six key areas: workload, control, reward, community, fairness and values [8].

**Workload** is a commonly discussed source of burnout, where people have to do too much in too little time with too few resources [14]. Both qualitative and quantitative work overload contribute to burnout. The critical point occurs when the person cannot recover

from the exhaustion caused by work overload and it becomes a chronic event [13].

**Control** or autonomy at work involves the perceived ability of employees to influence decisions affecting their work and to access resources needed to work effectively [8]. Studies have shown that role conflict and ambiguity are strongly and positively associated with greater fatigue. Various intervention programs have been developed to prevent burnout by increasing employees' control over their work [14].

**Reward** is about the extent to which rewards are consistent with employee expectations. Studies have shown that inadequate rewards - monetary, social, intrinsic - contribute to susceptibility to burnout [14].

**Community** reflects the quality of personal and team interactions [8]. Studies have shown that negative quality of social situations within the community leads to burnout. Even the smallest negative interactions in the workplace can affect employee well-being [14].

**Fairness** indicates whether the employee perceives workplace decisions as fair and justified. Unfair and disrespectful decisions can lead to alienation. Unfairness has a stronger relationship with

exhaustion and cynicism than with the efficacy aspects of burnout [14].

**Values** are the individual's aspirations, motivation, and ideals in his or her job [8]. Conflict between individual and organizational values creates an imbalance that is particularly relevant to employees' experience of burnout [14].

Based on burnout research, these six factors cover the full range of situations that can occur in organizations. Despite being closely related, all factors provide a different perspective on how people interact in the workplace [14]. On the one hand, any mismatch between the employee and the six situational factors increases the possibility of burnout. On the other hand, a higher fit between the person and the six domains decreases the possibility of burnout and increases the possibility of engagement [8].

### **Personal factors**

As mentioned earlier, numerous studies have found that situational work factors have a much greater impact on burnout than personal factors. This suggests that burnout is more of a social problem than an individual problem [15]. However, personality traits may act as coping mechanisms or play a

significant role as amplifiers of the burnout dimension. For example, neurotic people are more prone to burnout or people who score high on hardiness are more resistant to burnout [8].

There are numerous studies on the relationship between demographic variables and burnout, but they do not show consistent results. Age is one of the most consistent variables reporting higher levels of burnout in younger people. Older people, those in their 40s and 50s, report lower levels of burnout, as this has been associated with more work experience. Very few studies have found a strong correlation between burnout and ethnicity or gender [15].

**Summary:** The main finding from this part is that the causes of burnout are more associated with work-related situational factors and less to individual factors. Therefore, it can be said that burnout is a social problem that occurs in the workplace.

### **Consequences of burnout**

Some studies have concluded burnout as an end-state for long-term stress that has been left untreated. The more common

assumption is that burnout plays a role as a mediator of other important outcomes. The person experiencing burnout is likely to show decline in work and health outcomes. Therefore, it was important to understand what the consequences of unmanaged long-term stress were. Outcomes can be divided into 2 groups: Work outcomes and health outcomes [15].

### **Work outcomes**

Studies have shown that all three burnout dimensions (exhaustion, depersonalization, low productivity) are strongly linked with people's intention to leave their jobs. In addition to predicting turnover, burnout has been associated with negative impact to the job and organisational commitment outcomes. Another serious consequence is poor job performance. One study showed that burned-out police officers used more violence against civilians and nurses reported higher patient mortality [15].

Employees who suffer from burnout can also have a strong impact on the people they work with. Maslach and Leitner found that all dimensions of burnout have a contagion effect by causing conflict on a personal level and disrupting work tasks [16]. This shows that burnout can have a broader social impact than just on an individual.

### **Health outcomes**

Burnout has been associated with influences on physical and mental health but can also affect the personality. Exhaustion is usually associated with symptoms of stress such as headaches, persistent fatigue, or sleep disturbances. In some cases, burnout can even lead to death.

In terms of mental health, many studies have found strong links between burnout and mental illnesses such as depression or anxiety. One study found that 41% of participants who had high levels of burnout also reported high levels of depression [8]. Another study in Finland found that a one unit increase in burnout score equals to a 1.4-unit increased possibility of hospitalisation for mental health problems [15].

The previous organisational research has treated personality traits as stable and unaffected by organisational influences. But a recent study shows how chronic work stress affects the body's neurochemical process to alter employee personality, potentially affecting organisational outcomes. The study states that short-term stress is good for people because it leads to reactions in different parts of the brain that cause a temporary change in personality and helps achieve the goal. The long-term stress can

alter our epigenome which causes changes in our body but also has lasting effects on personality traits [17].

**Summary:** The consequences of burnout show us that both organisations and individuals suffer because of the negative impact. It is important to understand the expansive nature of stress. A few occasions of working too much and too long, may develop into chronic exhaustion and low work productivity. This can easily lead to different mental issues and even death. Because of the strong interrelation between work and health outcomes, it is difficult to focus more on one or another. Therefore, it seems reasonable to try and intervene as soon as possible to prevent any permanent consequences. In addition, it is again possible to see the social aspect of the burnout as the consequences have a contagion effect. This adds additional angle to the social problem at the workplace mentioned earlier by giving it an interactive dimension.

## Intervention and prevention of burnout

The negative effects of burnout have created a need for intervention programs. The goal of interventions is to improve the quality of life of employees, but also to prevent organizational losses. Interventions at the individual level seek to improve the individual's ability to cope with stress. Interventions at the organizational level attempt to address the organisational mismatch and stressors [8].

### Individual

The goal of interventions at the individual level is to improve employees' ability to cope with stress at work [14]. Interventions are usually cognitive-behavioural interventions that attempt to improve employees' personal or social skills. In addition, changing job patterns such as working less or taking more breaks are used [8]. To manage and prevent workplace stress, companies offer gym memberships, yoga classes, or free massages as wellness packages. Organizational wellness programs have come under a lot of criticism lately because they tend to target people who are already healthy [18]. It is much easier to organize a weekly yoga class or walk 10,000 steps a week than it is to go to hours of

expensive therapy. Current wellness programs have a negative effect by alienating people who already suffer from physical or mental health problems [19].

## **Organizational**

Organisational level interventions seek to change how the work in the organisation is done. For example, giving the employee a much more control over the workplace, organising team building events or changing the workplace environment [14].

Much of the academic research focuses on individual-level interventions. A basic assumption for this is that it is easier to change individuals than organizations [8]. Using the "Causes of Burnout" section, we can see that work-related situational factors play a much larger role than individual factors. While it may be more difficult to change organizations and processes within them, it can have a much greater impact. Numerous studies have found that organizational interventions have a strong impact on reducing signs of burnout. For example, a 2018 study looked at changes in primary care staff. The study showed that workload interventions had a reducing effect in the emotional and depersonalizing dimensions [8].

**Summary:** Intervention programs play a central role in reducing workplace stress. To achieve results that have a strong impact and help people, it is important to intervene at the organizational level. Otherwise, intervention acts like a band-aid on an open wound. Therefore, it seems reasonable to focus the project on interventions at the organizational level.

## **Measuring burnout**

The leading measure of burnout is Maslach Burnout Inventory (MBI). It has been researched extensively in the 35+ years since it was first published. The MBI has 5 different survey types aimed at different audiences [8]. The most popular one, general Survey (MBI-GS), is designed for groups other than medical personnel and educators. It can be used for people working in occupations such as customer service, maintenance, production, management, and others. The survey addresses three components of burnout syndrome: emotional exhaustion, depersonalization, and

diminished personal accomplishment. It consists of 22 items phrased in the form of statements [20]. For example:

*I feel burned out from my work.*

*I do not care what happens to some recipients.*

The statements are answered on a 7-point scale ranging from 0 to 6. The outcome includes a score for each three components of burnout separately. Scores are not summed to give an overall score [20].

The MBI is an instrument used to measure the level of burnout. A study mentioned in the previous section that examined the effects of a work stress intervention used the MBI. The success of the study can be seen in the comparison of MBI scores before and after the intervention [8].

**Summary:** The MBI is a useful tool that could show the effectiveness of an intervention. It could be used to evaluate the success of a design concept or integrated into the solution.

## Occupational safety laws and regulations

To understand the mechanisms that directly or indirectly may impact the workplace stress, studying written rules was essential. I conducted desktop research to learn how the law regulates occupational stress and what other measures the state has taken.

### The law on the protection of the worker

Occupational safety in general is regulated in the Estonian Constitution by the Occupational Health and the Safety Act. The Act provides occupational health and safety requirements, rights and obligations for employees and employers. The aim is to create and ensure a safe and healthy working environment [21].

The general requirements prohibit physical, chemical, biological, physiological and psychosocial factors that endanger the life or health of a worker or other person in the work environment [22]. This means that the Act places workplace stress on the same level as other occupational hazards such as noise and working with chemicals or explosives.

The Act addresses occupational stress and more specifically psychosocial hazards\* in several paragraphs.

It is important to note that the Occupational Health and Safety Act was modernized in 2019. Among other changes, the state has clarified the definition of psychosocial hazards [23].

The latest version of the Act, psychosocial hazards are defined as follows:

*Psychosocial hazards are work involving a risk of an accident or violence, unequal treatment, bullying and harassment at work, work not corresponding to the abilities of an employee, working alone for an extended period and monotonous work and other factors related to management, organisation of work and working environment that may affect the mental or physical health of an employee, including cause work stress [24].*

The Occupational Health and Safety Act requires employers to take preventive measures when psychosocial hazards arise. The recommended measures range from adapting the organization of

---

\* The terms "work-related situational factors" mentioned in the earlier sections and "psychosocial hazards" mentioned in the Occupational Health and Safety Act are the same terms with different names.

work, to optimizing the workload of employees, to allowing breaks or improving the psychosocial work environment in the company. The law requires the employer to carry out a risk analysis and a prevention strategy but leaves the form of this strategy open [25]. This means that the employer can have the analysis on an A4 paper or a 100page digital audit. At the end of the day, the goal is to have something that the employer can present if needed [26].

Breaches of the requirements are punishable by a fine of up to 300 monetary units if committed by an employer or a director of the employer. If the same violation is committed by a legal person, the fine is up to 32 000 euros [27].

**Summary:** Occupational Health and Safety Act regulates stress in the workplace and even provides a definition for psychosocial hazards. What it does not provide is a clear specification of how to conduct a risk analysis and create a prevention strategy.

## **"Analysis of mental health in work environment"**

The Ministry of Social Affairs has produced several different analysis documents over the last 10 years. The most recent mental health analysis document is "Green Book of Mental Health", that focuses on Estonia's mental health in Estonia in general [28]. "Analysis of mental health in the work environment" is the most recent work-related analysis by the state, published in 2019. The analysis, prepared by the Ministry of Social Affairs, aims to take steps to help employers reduce or prevent mental health problems in the work environment. The document brings up various factors that affect the mental health of employees and explains the approach to mental health in legal acts, various studies and different countries in European Union [1].

Based on the document, it is possible to highlight 5 different actors that have a part to play in creating a healthy work environment: Workers, Employers, Occupational Physicians, Labour Inspectorate, and the Ministry of Social Affairs (the State) [1].

### **Role of the employee**

First, the employee plays a major role and must take responsibility for his or her health. The employee must participate in creating a safe working environment for himself and others. This means that he participates in all training, follows the rules for rest and working hours, and passes the health examination [1].

According to a study conducted in 2015, almost 20% of all workers in Estonia have experienced psychosocial stress [29]. Another study conducted in 2015 assesses the quality of managers, such as giving feedback, creating collaboration, or encouraging employee development. The results show that the quality of managers in Estonia (67.85) is lower than the average in European Union (72.55) [30]. Therefore, it is very important that employees are involved in the assessment and reduction of risks, as they best understand all possible stressors.

### **Role of the employer**

In Estonia, 76-86% of companies have carried out risk assessment. The same indicator in Europe is between 86-88%. Incomplete or missing risk assessment is the main violation found by Labour Inspectorate during the inspection visits [1].

In Europe, 33.8% of companies have a strategy to prevent stress at work, while in Estonia the figure is only 8.7%. The most important stress prevention measures are disseminating information, reorganising work, or offering employee counselling with the help of coaches or psychologists [1].

The analysis reveals that assessing risks is a major challenge for many employers and therefore the necessary measures are not taken. Employers say that they lack the knowledge and the necessary skills. Assessing the risks is particularly difficult because stress is a very subjective issue and people perceive it differently. For small companies, assessing the risks requires too many resources; in larger companies, employees change too often. Finally, employers say that it is difficult to assess the risks if the employee does not give enough information about the stressors [1].

### **Role of the occupational physician**

Occupational health physicians assess the health of employees as part of the regular health examination. Employees must have a health cheque in the first month of employment and at least once every three years. The doctor assesses the employees' psychosocial risks during the health cheque or by using the questionnaire sent in advance [1].

The assessment of psychosocial risks is a rather formal activity as the focus of the interview is on physical health. In addition, the employee may be reluctant to talk about their mental health or the negative behaviour of the employer that is causing the stress [1].

### **Role of the labour inspectorate**

The labour inspectorate advises and monitors compliance with safety requirements in organisations. During the planned monitoring, it checks whether the company has prepared a risk assessment and a prevention strategy. If problems are found, the Labour Inspectorate can issue an order to a company. This will include a plan to address the problem and may be accompanied by a fine. The fine only must be paid if the business fails to follow the plan or deliberately underestimates the dangers to avoid meeting the additional obligations.

In 2019, the regulator focused on drivers (bus drivers, truck drivers, etc.). Both employers and employees (drivers) filled in a questionnaire that mainly addressed the psychosocial aspects. The results show that employers discussed psychosocial issues such as working hours or problems with customers, but no further action was taken within management or the organisation.

In recent years, Labour Inspectorate has focused more on psychosocial hazards in the work environment. From 2014 to 2015, they organised a campaign "Healthy Work - Less Stress" which tried to encourage employees and employers to work together to reduce stress in the work environment (Figure 3). The



Figure 3: A poster from "Healthy Work, Less Stress" campaign

Inspectorate organised seminars and film nights, spread information and awarded "Good Practise" ("Hea tava") awards to companies that try to reduce stress with the help of employees. In addition, the Labour Inspectorate has developed a web-based software [www.stressivastu.ee](http://www.stressivastu.ee) (against stress). The software is free and allows companies to record sources of occupational stress. At the moment the website is offline and therefore not accessible [1].

### Role of the Ministry Social Affairs

The state provides tax relief for expenses related to making the work environment safer or reducing occupational stress and

mental health hazards. In addition, the state has created various services that provide support and counselling for those in need. For example, [www.eluliin.ee](http://www.eluliin.ee) and [www.usaldus.ee](http://www.usaldus.ee) are both hotlines where professionals listen to people's problems. [www.lahendus.ee](http://www.lahendus.ee) is a web-based service where psychology students provide information and advice. [www.tööelu.ee](http://www.tööelu.ee) is a portal that provides information about the work environment.

Töökik ([www.töökik.ee](http://www.töökik.ee)) is a web-based software that helps companies manage work environment information. It is intended for managers and specialists whose task is to carry out a risk assessment and create a prevention strategy. Töökik is a tool in which the manager can enter all the information about employees, activities, spaces, tools, and occupations [1].

Based on the ministry Social Affairs Töökik will be closed soon. Instead, the Labour Inspectorate has improved its self-service portal (Figure 4). Right now, it allows employers to upload a digital risk assessment where an employee or supervisor can view it without contacting or asking permission. In the future, the portal will offer a tool to create the risk assessment in the self-service portal [26].

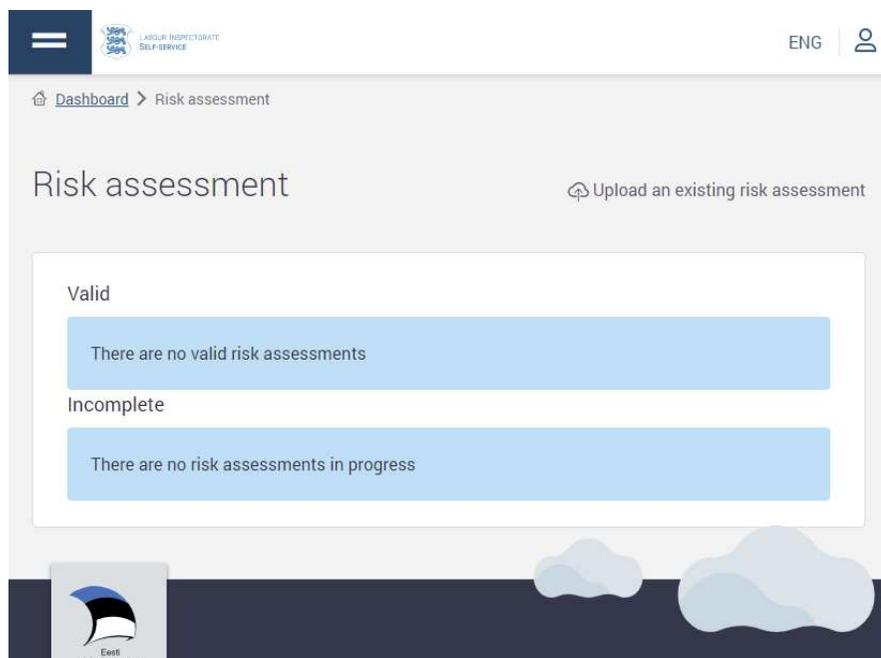


Figure 4: Screenshot of Labour Inspectorates self-service portal

Although there seems to be no shortage of information and services, employers do not find the solutions helpful. In a 2015 survey, employers criticised the lack of support, advice and personal service in managing and reducing risks in the work environment. There is also a lack of systematic information on intervention and prevention measures [1].

**Summary:** The Ministry of Social Affairs has produced a valuable analysis document that identifies the pain points in the system. The law puts a lot of responsibility on the shoulders of employers. But studies and surveys show that employers are not able to meet the responsibility. Employers seem to fail at risk assessment and only few of them have a prevention strategy. For this project, it is important to focus on organisations' pain points, such as not having enough knowledge and time, or not having enough input from employees. The state is trying to solve some of the pain points in various ways, but it is still met with criticism from employers.

## Finding the focus

According to the literature, it can be said that burnout is unmanaged stress in the workplace. The law puts most of the responsibility on the shoulders of employers to manage stress in the workplace. Based on the analysis conducted by the Ministry of Social Affairs employers lack skills to provide safety through risk

assessment and prevention strategy. Although there are number of helpful tools available, statistics show that only 8.7% of companies in Estonia have a stress prevention strategy. Different actors play a role in reducing stress in the working environment, but the main problem seems to be between the employer and the employee, as they are the ones who know what the real stressors are. The project will focus on the workplace aspect. This means focusing on work related situational factors rather than individual factors. In addition, the project seeks to intervene at the organizational level rather than the individual level. Because of the strong interrelationship between work and health outcomes, it is difficult to focus more on one or the other. Therefore, intervening as early as possible to prevent any permanent consequences is necessary. The main pain point that needs to be addressed is employees lacking knowledge and not having enough input from employees when managing and preventing stress in the workplace. This could be the focus for further research.

# Talking to people

To better understand burnout, I turned to real people to hear real stories. The second part of the discovery phase was carried out using semi-structured interviews. This meant that interviews were conducted with both experts in the field and people who have experienced burnout. I conducted 4 expert interviews and 10 user interviews. The interviews were recorded, transcribed, and then analysed. For the analysis, I used affinity mapping, which helped me structure and organise all the input gathered during the interviews. Once I had structured the data, I began to cluster all the similar information. This helped me understand what the patterns and common themes were [31].

## Expert interviews

The purpose of these interviews was to gain a better understanding of how experts view people and organisations experiencing burnout. I conducted 4 expert interviews with different specialists in the field: a psychologist, a psychology researcher in academia, a coach, and an employee experience designer (Table 1). All

interviews were conducted in a semi-structured interview format that allowed a free flow of discussion and exploration of new directions. Interviews were organised in advance and took place through virtual meetings. All interviews were recorded, transcribed, and analysed using affinity mapping.

Interviewee	Nationality	Role	Domain
1	Estonian	Psychologist	Management psychology
2	Estonian	PhD student	Psychology
3	Estonian	Coach	Technology
4	Estonian	Employee experience designer	FinTech

Table 1: Table of expert interview participants

Three overarching themes emerged from the results of these interviews:

- The purpose of an organisation
- The role of the manager
- Measuring employees

## **The purpose of an organisation**

In very simplistic terms, every organisation has at least one purpose that they want to achieve. To do this, they have some sort of process. The purpose of the process is to complete tasks that in turn help the organisation achieve its goal. Within the process, there are employees who complete the tasks.

*"When you focus on the numbers, you forget about the people."*

As mentioned earlier, organisations are very goal oriented and if you focus on the accomplishments, you may forget about the people. A situation where the deadline for a project is very close requires extra effort from both the manager and the employees. In these situations, the well-being and values of the organisation are often forgotten.

## **The role of the manager**

Managers are the ones who manage processes. Often, they do not manage people. And this is where the problems start. Managers are the ones responsible for creating a safe environment for employees. They need to understand people to change the way they lead and build trust. But understanding and learning about people

takes time and skills that quite a few managers lack. When you are focused on numbers, you need to make decisions based on facts, not gut feelings. That is why it is difficult to understand employees if you cannot convert their concerns into numerical values.

*"The manager makes decisions based on facts, not gut feelings."*

Very often, managers have 1:1 conversation with employees, but many do not tell the truth when asked "How are you doing?" In some cases, organisations have hired outside resources (such as a coach) to talk to employees. In this case, employees are much more open because there is much more trust and less tension thanks to the coach's skills. It is a difficult situation for managers to deal with, but it is important as many employees leave because of the manager and not because of the job or the organisation.

## **Measuring employees**

Measuring or understanding how employees are doing is very important. If you do not have this understanding, you basically have no control over your processes within the organisation. Measuring leads to a lot of micromanagement and it is difficult to reach all employees in a meaningful way. As mentioned earlier,

some organisations hire outside resources to talk to and understand employees. Other organisations conduct a survey using a questionnaire. But it is important to reach everyone and sending out a questionnaire once a year is clearly not enough. It will not help managers identify whether someone is about to burn out or is already burnt out and needs specialist help.

*"It's important to reach everyone, and a questionnaire once a year is not enough."*

Once the person is burned out, the question becomes - what is next? Knowing why someone is burned out depends a lot on the understanding of the employee. If the employee burns out, leaves the organisation and the reason never reaches the manager, the organisation has lost.

First, the organisation loses the social and intellectual capacity that was built during the time the employee worked there.

Second, the organisation fails to use the employee's full potential because of reduced productivity and lowered commitment to the organisation.

Third, the organisation must spend money and time to find a new employee and provide appropriate training.

Fourth, if the organisation never finds out why the employee burned out and left the organisation, the same pattern can easily repeat itself.

The loss to the company may not seem large at first glance, but when you add up all the little details, the impact is significant. Especially if the pattern repeats itself. Burnout has a sneaky nature within the organisation. People are constantly being replaced with new ones and that is nothing special. But when the main source of turnover is work processes and the stress caused by that, alarms should start ringing in the executive suite. The reason the alarm is not ringing is because managers do not understand what is going on in their employees' heads and therefore cannot suspect anything. Therefore, measuring employees is so important. When this is lacking, understanding about the organisation is scattered.

*"Burnout is a problem within an organisation."*

**Summary:** The interviews with the experts gave a good understanding of how the organisation, its processes, the manager, and the employees are interrelated. What seems to stand out is the responsibility of the manager. The manager is the one who must handle the processes to get results, and for that he must lead the employees. But the lack of time and skills creates a gap in the relationship between manager and employee. This leads to employees burning out and leaving the company. The problem is that lack of communication between manager and employee causes a loss to the company that could always happen again in the future.

## User Interviews

For this study, it was important to empathise with people experiencing burnout. Therefore, I conducted user interviews with employees and managers to collect real stories from real people. The main goal was to understand people's own experiences with burnout.

The user in this case is a manager or employee who has an experience of burnout. I used semi-structured interviews, starting the interview with a very open-ended question to direct it to the person's own story. For many people it was difficult to point out where the problems started. Therefore, it was not possible to direct people to the beginning or end of the problem. The aim was to let people start where they found it most appropriate.

All 10 interviews were conducted through virtual meetings and were organised in advance. All participants were selected on the premise of having experience with burnout - having suffered it themselves or having helped others. First, I conducted the interviews with the people I knew who had experienced burnout. In addition, I tried to find participants through my friends and colleagues contacts. Finding people to interview was rather difficult as burnout is still a very delicate topic for most of the people and only few are willing to be open about their issues. The participants fell into 2 broad categories: They worked in technology companies or educational institutions. 40% of the participants were male, 60% of the participants were female. All participants were Estonian (Table 2).

All interviews were recorded, transcribed, and analysed using affinity mapping.

Interviewee	Gender	Nationality	Role	Domain	Relation to burnout
1	Male	Estonian	Manager	Digital agency	Burned out/ Managed burned out employees
2	Female	Estonian	Employee	University	Burned out
3	Female	Estonian	Employee	Start-up	Burned out (twice)
4	Female	Estonian	Employee	Start-up	Burned out during the interview
5	Female	Estonian	Employee	Fintech	Burned out
6	Female	Estonian	Employee	High school	Burned out
7	Male	Estonian	Employee	High school	Burned out
8	Female	Estonian	Manager	Fintech	Burned out/ Managed burned out employees
9	Male	Estonian	Manager	High school	Managed burned out employees
10	Male	Estonian	Manager	Digital agency	Managed burned out employees

Table 2: Table of user interview participants

Based on the analysis, I highlighted the following themes with supporting quotes from the interviews:

### **Achieving results is the top priority**

Similar to the experts, people in the user interviews also said that the main driver of burnout is being very goal oriented.

*"We've been working non-stop for the pas year, everyone is tired"*

*"The managers only asked about the results"*

### **Stress is part of the job. There is nothing you can do about it**

From a manager's point of view, stress is as natural as the sunset and the sunrise. Managers must achieve goals through other people and that can cause problems. Some people leave because of it, others stay, but organisations rarely change.

*"The job of managers is to get results through others"*

*"If you don't like something, leave"*

*"You are just a tool"*

*"An organisation will not change because of one person's problems"*

*"Stress comes with the work".*

### **Effort comes at the expense of employee well-being**

Going the extra mile means working longer hours or being under more stress. When this happens regularly, the impact on mental or physical health is easy to anticipate.

*"Working 14-hour days is perfectly normal"*

*"I've been going home every night and crying"*

*"My hands shake even when I'm not working"*

### **Lack of empathy**

Managers admit that they think it is not their job to be the one who is there to listen to problems. Still, every once in a while, a problem comes up and an interaction needs to take place. When this happens, the employee too often suffers from the manager's lack of communication skills and emotional intelligence.

*"I'm not the person who would ask "how are you doing" and I hope everyone knows that"*

*"The relationship with my manager was always like walking a tightrope"*

*"She compared me to a dog that gets angry if you pull too hard on the leash"*

*"You can't have a real conversation with a person who has the emotional intelligence of a meatball."*

### **Frightened employees**

When the manager's response is not what you would expect, the employee gets scared. This has a huge impact on communication as the employee starts to overthink everything you say or do.

*"I generated reasons why I should continue"*

*"I was even afraid to send the resignation letter"*

*"It's a big risk to tell your boss that something is wrong. The boss can say and do anything"*

*"I was really scared of what would happen if I took a break"*

*"I asked for time off but then they told me they weren't sure if they wanted to keep working with me."*

### **Employees hide their burnout**

Being afraid leads to hiding the stress, suffering and eventually burnout. People are afraid to admit that something is wrong. If an

employee does not find a safe environment, they may leave without ever telling anyone about their burnout.

*"No one asked how I was doing, and I continued to put on a brave face".*

*"There was no way I could tell my supervisor about my burnout"*

*"I never told my bosses that I was burned out."*

### **You don't know what to do or how to behave**

When it comes to managing the effects of stressful work, both employees and employers lack knowledge. Throwing a bowling party may seem like a solution at first glance, but it has virtually no effect on employee well-being. Not knowing what to do often leads to inaction, which in turn leaves no other option to get out with a bang.

*"How long does it take you to recover from burnout?"*

*"The whole team is burned out. What are we going to do? Where do we start?"*

*"They threw us a bowling party when the whole team was exhausted, and people were quitting after every two weeks because of burnout"*

*"You rationalise all the stress until you are at the stage where the only way to solve anything is with a bang!"*

*"I was passive because I did not know what to do. If I were in the same situation again, I would immediately pull the plug or see a doctor without thinking."*

**Summary:** Based on the user interviews, we can see that stress comes with the job. Whether employees suffer from stress or employers admit that it is a part of the job. Dealing with the stressful situation depends heavily on communication, which seems to be lacking. This has a strong impact on the physical and mental health of employees. The relationship with the work and the manager also changes. Both employees and employers show a lack of understanding about what to do and how to resolve the situation.

# Define

The main aim for the second step in double diamond was to synthesise all the information gathered during the discovery phase (Figure 5). Based on that it was possible to define what could be the issue that was worth solving.

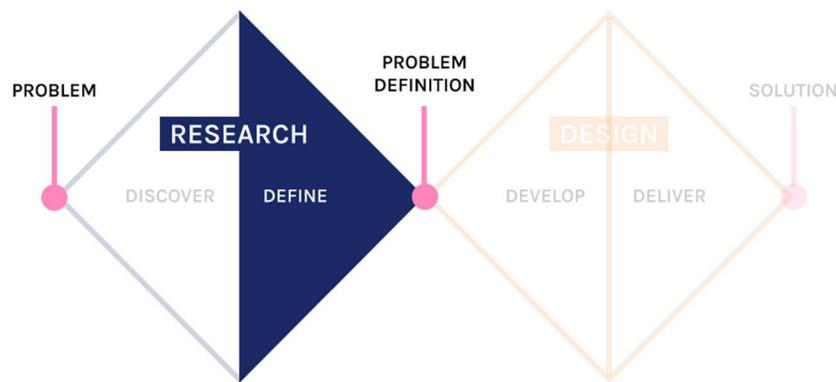


Figure 5: Define phase highlighted on the Double Diamond.

# Socio-ecological model

First I needed to understand where do I need to put my focus when defining the problem. For that, I used a widely adopted socio-ecological model to create an understanding of the environment of burnout [32]

A socio-ecological model allows me to understand how several factors at different levels influence each other [33]. Based on the research it is possible to draw a map visualising a socio-ecological model of burnout (Figure 6). The model consists of 4 levels: individual, interpersonal, organisational, and socio-political.

In line with the previous research the focus of this project was on intervention at the organisational level. Therefore, the project focused on understanding what the systematic problems were in organisations and their mental models to narrow the scope of the project.

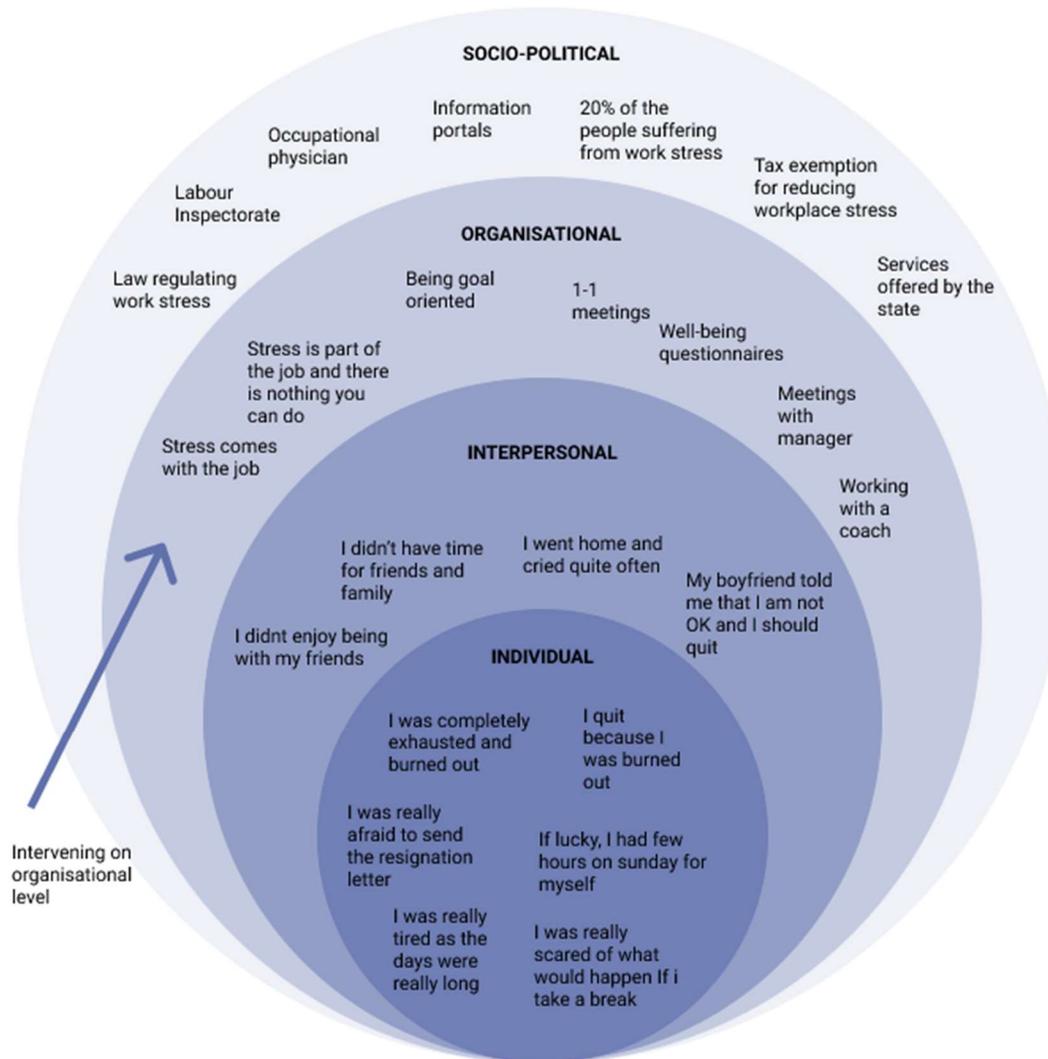


Figure 6: A socio-ecological model created based on all the previous research.

## The iceberg method

With the help of socio ecological model, I set my focus on the organisational level. To get to the bottom of the issue, I used the iceberg method, that is a tool for systems thinking. It shows how different elements in a system relate to each other. Rather than just looking at the individual response, systems thinking looks at how other activities can have an impact that was not initially obvious [34].

The iceberg consists of 4 levels:

**Events** are the observable situations happening daily.

**Patterns** reveal how similar events have happened repeatedly over time.

**Underlying structures** answers the question “What is causing the pattern we are observing?”

**Mental models** portray peoples’ different beliefs, assumptions or values that allow structures to continue functioning as they are [35].

But how does one determine "what the problem is"? Events are only the visible part of the iceberg and the whole system in hand. 90%

of the iceberg is hidden below the surface, but they are responsible for creating the behaviour that can be seen above the surface [36].

Therefore, it was necessary to understand the lower parts of the iceberg to reach the root causes of the problem.

### Event

With the help of the iceberg (Figure 7) it was possible to find reasons that cause burnout in organisations. To start the analysis, it was necessary to start from the visible event. The main event in this degree project was a person burning out. This can have different forms: a person leaving the company or taking a sick leave. Based on the user interviews, the person could also be very passive towards the stress and continue to struggle without acting.

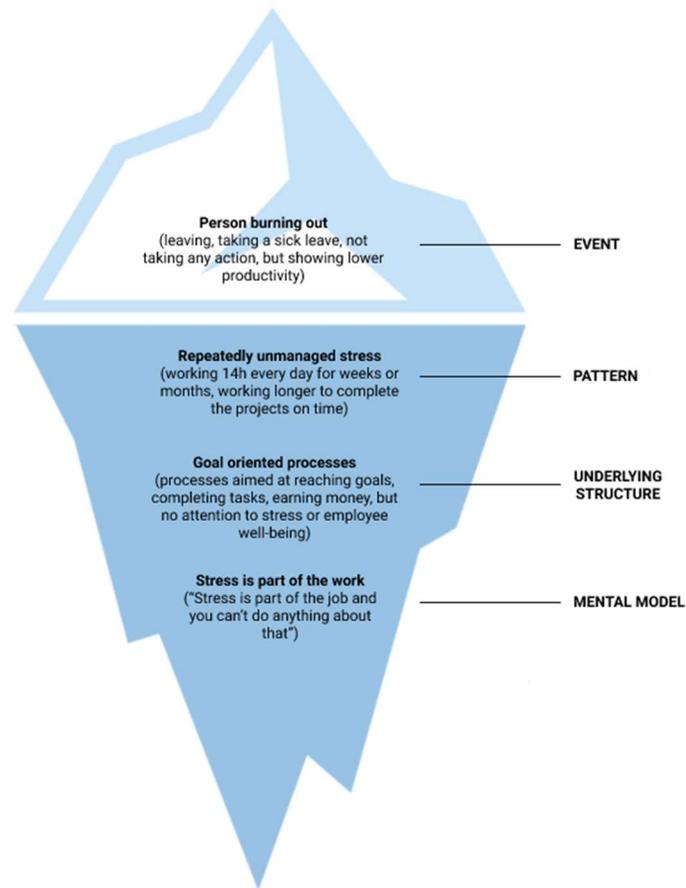


Figure 7: An iceberg model created based on all the previous research.

## Pattern

The theory is that burnout is a result of unmanaged stress over a long period of time. This means that the stress has repeatedly gone unnoticed. Working too much for once or twice does not seem to be the problem but working too much for too long causes stress that should be noticed by managers and requires further action. During the user interviews, it was possible to see a similar pattern whether the source of stress was a result out of employees control or having a toxic workplace environment. In both cases no solutions followed. From the Ministry's analysis document, we can read how the monitoring of Labour Inspectorates shows that even if people discussed the psychosocial stressor, no further actions were taken. From the user interviews there was one instance where a person tried to reason with the manager about the tension and long working days. Instead of getting some days off, she was met with a comparison to a dog on too tight leash and questions if she even fits the team. This creates a pattern where the stressor may go unnoticed, but more importantly - it goes untreated and in turn can lead to burnout.

## **Underlying structures**

To understand why stress goes unmanaged, it was necessary to ask what causes such patterns and how they are related? Based on the expert interviews, there is a good understanding of how organisations operate. The operation of an organization is based on results at its various levels. Without results, there is no business. The employee is accountable to his/her supervisor, who in return, remains accountable to the management and the board of directors. Sometimes the voice of an individual employee is not well heard. This is where the problem arises on light of this project. Organisations focus a lot on the processes that generate money. But the processes that take care of the employees do not deserve attention because it is not understood how their well-being can affect the success or profit of the organisation.

## **Mental models**

During the user interviews it came up many times, that stress is part of the work and there is nothing to do about that. This seems to be a reason why organisations do not turn attention to employee's well-being. On the one hand, the belief that stress is

part of the job, shows that managers know and understand the existence of stress and its integral part at the workplace. On the other hand, managers have an assumption that it is not possible to reduce the workplace stress. First, lacking understanding how to manage stress, could influence such assumptions. Second, not having a clear overview and understanding how stress is being expressed at the workplace limits managers outlook on stress. Last, but not the least, the lack of understanding how managing stress impacts the success of the organisation, may reduce the motivation to even start with approaching the workplace stress.

## **Design challenge**

Based on the analysis using the iceberg model, it is possible to see that, even though knowing that stress is part of the work, it does not have a place in work processes. This may be caused by 3 problems in organisations that in turn can cause burnout in employees:

- Managers do not know how to manage workplace stress.

- Managers lack an understandable overview on the state of the stress in the team.
- Managers do not understand how workplace stress influences organisations success and profits.

To define the problem, I used User Need Statements, which are also often referred to as Problem Statements or Point-of-View Statements. User Need Statements consist of 3 components: a user, a need, and a goal. The 3 components are then combined into a pattern: [A user] needs [need] to achieve [goal] [37].

I turned the previously defined problems into actionable problem statement and created the following user need statement:

**As a manager and a person who is responsible for the results, I need to have an understandable way to get an overview on the state of the stress in the organisation to manage stress or measure the impact of the stress management.**

To finalise the define phase of the process I created a How Might We question, that will be used in the following ideation phase [38]:

**How might we make workplace stress visible and understandable for the manager?**

# Develop

During the development phase, wider approach is needed to find possible solutions for the previously defined problem (Figure 8).

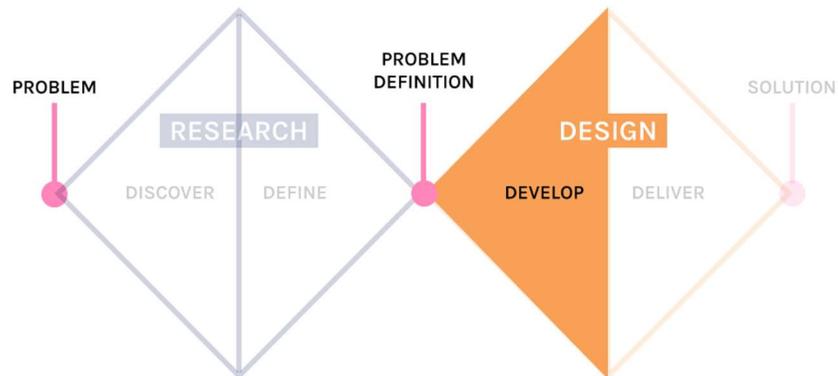


Figure 8: Develop phase highlighted on the Double Diamond.

To achieve that, I started with a design probe experiment with a team and an ideation workshop with managers. The outcomes of the probe and workshop worked as an input for the individual ideation. During the individual ideation I tried to come up with as many possible ideas as possible and then started developing the

better ones. To understand if I am moving in a right direction, I tried to prototype some of the ideas and asked for feedback from different people. In addition, I organised another experiment that was necessary to test the mechanism of the idea. The final goal of the development phase was to have an idea that could be formed into a final design proposal.

## Design Probe

First, I used a design probe that tried to make people think about their life and then document it with the help of a diary. On the one hand it makes a person reflect on the topic through the given task. On the other hand, it allows me, the designer, to have access to people's subjective experiences that is usually not possible [39].

The aim of the design challenge was to make work stress more visible for the manager. To move towards the solution and start the development phase, I used a design probe to create a better understanding about the communication between the team and the manager. I wanted to understand what some of the variables in communication could be the teams are already using, that I might use in my own solution.

## What did I plan to do?

For one week, 6 members of a team in an international software development company (5 programmers and a team lead) were asked to fill a diary. All the employees were asked to observe and record anything that constitutes as work stress for them. The manager also had to observe and record all the stress that he noticed in his employees. All the participants had their own Google Sheet document (Figure 9), that consisted of a short description of the task and a table that they could use as a diary. I added several columns to the table that would help the participants describe the stress or the situation. All the participants were encouraged to add as many necessary columns as needed. After the week, I had a small discussion where the participants could reflect on the process of filling out the probe.

In addition to gathering input for my ideation session, I wanted to control an assumption I built during the research phase. The main idea of the assumption was that different people in different roles in an organisation sense the level of stress differently. Therefore, there is a huge mismatch between employers and employees about the understanding of how stressful the work is. In a super

naive way, I was hoping to see if the employees and the manager were able to mark down at least one similar stressor in the diary.

## Testing the probe

Before kicking off the real design probe, I conducted a test probe for one week. For that, I asked a programmer and a teacher to fill the diary for a week. They were given the same instructions and the table that I was going to use during the real probe experiment.

Based on that I did one change. At first, I encouraged the test participants to fill in all the columns to make them think outside of the box. For example, I asked them to find a visual representation of the situation. This turned out to be a total blocker as the participants did not have time and ideas to fill the cell. This was true for a lot of other cells. Therefore, I did a small change and did not require participants to fill in all the cells but fill only the ones that seemed necessary. The test probe gave me confidence that everything is working, and I was ready to start off the real probe experiment.

## Stress at my workplace

Stress is a normal thing in our daily life. It is so normal that we don't even notice when, where and how it influences us. There are 2 types of work related health risks - the ones that impact our physical health and the ones that impact our mental health. Mental health is impacted by psychosocial risks through stress reactions.

Based on Occupational Health and Safety Act in Estonian constitution, psychosocial hazards are work involving a risk of an accident or violence, unequal treatment, bullying and harassment at work, work not corresponding to the abilities of an employee, working alone for an extended period of time and monotonous work and other factors related to management, organisation of work and working environment that may affect the mental or physical health of an employee, including cause work stress.

To sum up all the psychosocial hazards - these are all the problems that are caused by the work organization, management or other social factors in work environment, that is more or less based on the interaction between humans.

The aim of the following study is for you to monitor yourself during a workday and try to mark down all the situations where you feel stressed. There are no right or wrong answers. Feel free to add a column when it helps you to describe the situation the best. This is for you and me, the study is private as no data is sent to the employer.

Time	Place	Description of the situation	Visual description (picture, meme, video)	Duration	Repetitive?	Source of the stress	Related people	Physical impact	Mental impact	Possible solutions

Figure 9: A screenshot of the Google Sheet I prepared for all the participants.

## How did it go?

During the first few days I tried to keep in touch with all the participants by asking them how it was going and answered some of their questions. In the second part of the week, I took a bit more passive approach in order not to manipulate the results.

After one week of filling the diary, 4 out of 6 people managed to write something to the table. On the average a participant recorded 4.2 entries. The most interesting fact is that the manager never found time to fill in the table.

## The take-aways

Based on the diaries and discussions I got a few take-aways:

- One of the key talking point before the probe was privacy and keeping everything related to the stress hidden from other colleagues. When asked if the participant would be willing to make the table public, the answer was mostly “yes.” The main reasoning was that, if it makes a difference then there is no reason to hide anything.
- A big part of the participants mentioned that they forgot to fill the table on some days as it required them to open a tool that was not part of their usual workflow.
- The main field to describe the stress was the “what happened” field. The assumption that other alternatives like time, visual representation, people involved or impact on health would be necessary or even popular was rejected. If people want to talk about the stress, they talk about the situation. Asking them to think further or wider seems unreasonable.
- The assumption that there was a mismatch between employees and managers was not proven or rejected. As the manager did not fill the table, there is no way to compare the results.
- The manager is busy, and it is difficult for him to find time to participate in such activities.

## The mismatch

During the same week when I was analysing the design probe outcomes, Microsoft published their latest study about trends in work life. The study that also took the Covid impact into consideration, found that the managers are disconnected from their employees (Figure 10).

A global survey that polled 30 000 people all around the world found that most workers feel that they are struggling or just trying to survive in the pandemic work conditions. People are burned out as 54% of the workers said they are overworked and 39% said exhausted. Additionally, 41% of the people said that they are planning to leave their current job during the next 12 months. Meanwhile, a large proportion (61%) of the business leaders said that they are “thriving”.

This shows a huge mismatch between leaders and workers and their experience of work today. While the average worker is miserable and burned out, the manager is saying “everything is great!” [40].



Technology

## Bosses Are Clueless That Workers Are Miserable and Looking to Leave

A Microsoft study finds 41% of workers may quit this year, while business leaders are “out of touch.”

Figure 10: A screenshot of the article that mentioned the study [40].

## Ideation workshop

To come up with a practical solution, I organised an ideation workshop with 4 managers. The centre of the workshop was their own understanding of workplace stress. Based on that I tried to make them think how they would approach bringing the stress management into the daily work processes.

The main aim of the workshop was a bit similar to the probe: I wanted to understand what could be the different ways of communicating when we talk about work stress.

### How did it go?

I invited 4 different managers from 4 different companies (Table 3). This already guaranteed very different perspectives on the stress. To create some chemistry between the group, I did a few warm-up exercises that gave everybody an opportunity to share their experience with stress and how they had handled it. Before going to the final ideation session, we had a discussion on how we all perceived the ideation question. As a result, I felt that not everybody understood the ideation question and therefore we did

another round of discussion to make sure everybody understood what the question was and what needed to be done.

In the last part of the workshop, the focus was on ideation and generating solutions for the problem. For that, we used a crazy-8 method, where all the participants had 8 minutes to come up with 8 ideas [41]. After the time had passed, all the participants shared 3 of their best ideas. Then everyone took somebody else's 3 ideas and tried to come up with reasons why these ideas did not work. After another round of sharing the ideas, everyone switched again and took over somebody else's work. This time the goal was to turn around the reasons why the ideas did not work and think how the ideas could work again (Figure 11).

Participant	Nationality	Role	Domain
1	Estonian	Team lead	Digital agency
2	Estonian	Team lead	Technology start-up
3	Estonian	Team lead	Software company
4	Estonian	Department manager	FinTech

Table 3: Table of the ideation workshop participants

## The take-aways

Based on the ideation workshop I got some takeaways and a lot of inspirational thoughts for the following individual ideation session:

- All the participants preferred some type of 1:1 meeting with the employee to ask questions and hear real stories.
- No such thing as “using a KPI” exists as none of the managers were able to offer any kind of realistic or unrealistic example of a performance index. An answer to the question if the person is using any kind of KPI, the answer was always “No.” This rejected the assumption that managers are the ones who only look at the numbers and KPIs.
- A lot of the ideas were related to looking at different sources. An example could be that before the 1:1 meeting, the manager asks feedback from the different colleagues. This means the manager has 3 different sources for evaluating the situation: his own knowledge and understanding, colleagues' feedback and the employees input from the 1:1 meeting.

In addition to these insights, I got 5 bigger topics that were turned into actionable insights based on the participants ideas:

Talk (1:1) » **Observe the reality.**

Write » **Write descriptions.**

Measure » **Put € on it.**

Use many sources » **Triangulating.**

External » **Make it social.**

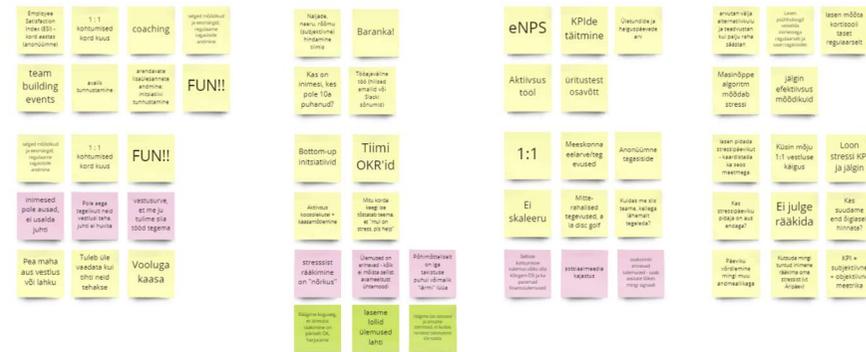


Figure 11: A screenshot of the ideation board from the ideation session with managers

# Persona

User-centred design is based on the idea that we must design around the people, rather than teaching people how to use the product. To do that it was necessary to understand people and their behaviours, attitudes, goals, and needs. For that I created personas that are fictional but provide a realistic description of typical target users [42].

## Henry (Manager)



**Age:** 38

**Work:** Team lead in a mid-sized start-up

**Family:** Married, no kids

**Traits:** Result oriented, overachiever, can-do attitude

## Bio

Henry was good a programmer and at one point got a promotion to become the team lead. He has always been very result-oriented, and this probably got him the promotion. He now leads a team of 14 and his main goal is to get some critical projects ready. But people seem to be uninterested, tired and some have recently left.

Overall, the team is doing good as they have delivered a lot more than expected. He has tried to tell the people that they just need to finish this project and it will be easier after that. But people have heard it a couple of times already. "I am not a psychologist, and it is difficult for me to understand what is wrong. We hired these people to work but it seems not to work out for any of us anymore."

## Goals

- Finish the project on time.
- Meet the quarterly and yearly goals.
- Get these endless small things off the table.

## Frustrations

- People in his team cannot meet the deadlines.
- Out of ideas how to improve the results and efficiency.
- People are leaving and it is difficult to find new and as good replacements.

## Martin (Employee)



"I am just exhausted"

**Age:** 28

**Work:** Programmer

**Family:** Girlfriend

**Traits:** Quick learner, talented programmer, positive attitude, team player

### Bio

Martin never graduated his university studies in computer science as he already had number of work opportunities during the second semester. Right now, he is working in a mid-sized start-up.

The product they are developing is cool, but the work is very stressful. Constant pressure from the CTO and the team lead creates a lot of tension. He has been working more and more in the evenings to meet the deadlines, but he is exhausted.

Martin understands that all the new ideas and features must be built, but he is not sure if he can handle it anymore.

He tried to talk with the manager but got the response that right now is not the time to rest. Martin is not happy with the situation. There are number of job offers by other companies, but he is too tired to think about it.

### Goals

- Wants to learn and develop.
- Meet the deadlines set by the team lead.
- Learn how to balance work and life.

### Frustrations

- Do not understand how it is possible to do all the tasks with the limited time.
- He is exhausted and cannot concentrate anymore.
- Feels like his problems are not taken seriously.

## Design principles

Before moving to the independent ideation phase, I created design principles that would help me narrow down the scope and hold focus. The principles are the result of all the previous research, persona, design probe and an ideation workshop with managers.

### **1. Make it part of the regular workflow.**

The main issue based on the research was that managing stress did not have a place in managers workflows. The aim was to create an understandable form for stress and find a place for it in the work processes. From the probe I also understood that the same applies for the employees who mentioned that using another tool makes it less probable that the solution will be used.

### **2. Do not expect too much(time) from the manager.**

From the user interviews I learned that the managers do not want to deal with stress related issues for different reasons. One of the main reasons is that they are always in a hurry. In simple terms it just means they do not have time to deal with the issues. Also, the

probe proved that shortage of time seems to be a big issue. Therefore, it does not seem reasonable to expect a lot from the managers.

### **3. Use real stories as communication.**

There is no better way to communicate the issues than using real stories. Based on the probe it was possible to say that employees seem to prefer talking about the situation. The same goes for the managers who would always prefer hearing stories and asking questions instead of using an incomprehensible KPI.

## Individual ideation

The outputs of both probe and ideation workshop were used as an input for the following ideation session. The aim of the individual ideation was to reserve myself some space in the design process. The whole journey had been quite long and during that time I had collected a lot of new information. This was the time to take all the information and try to figure out how to connect them into a solution.

Before starting the ideation, it was a good place to remind what was Henry's problem and the HMW question:

### **A problem statement:**

As a manager and a person who is responsible for the results, I need to have an understandable way to get an overview on the state of the stress in the organisation to manage stress or measure the impact of the stress management.

### **A question I was trying to answer:**

How might we make workplace stress visible and understandable for the manager?

## What did I do?

I started with 10x10 ideation where I took all the input from the probe, ideation workshop and recently created design principles [43]. In 10 minutes, I came up with several good ideas. But what is a good idea without the bad ones? Some of the ideas were interesting, but not worthy of further development (Figure 12).

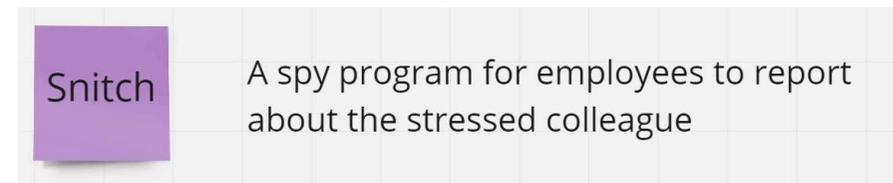


Figure 12: An example of an interesting idea

After a few ideation sessions I picked a few of the favourite ideas and tried to develop them using the same 10x10 method. The ideas that I kept developing were:

### **A social (team) network, where you have 220 words for a rant:**

An idea based on the growth of my recent Twitter usage. It seems so easy, quick, and personal way to express yourself. Maybe there is something useful that could be implemented in this project? The idea was put together with another interesting platform called

FML ([www.fmylife.com](http://www.fmylife.com)) where people can share situations that are not very enjoyable (Figure 13).

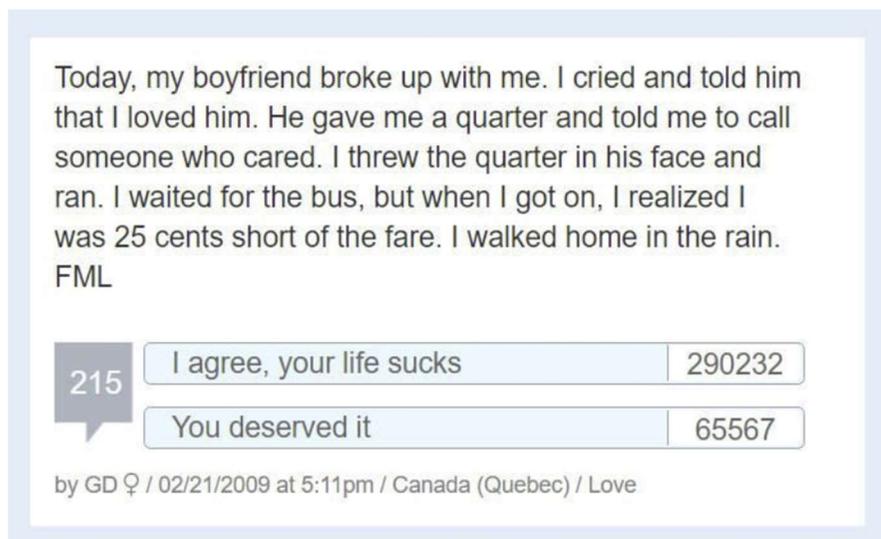


Figure 13: An example of fmylife.com content.

### **Work-heatmaps: a map that shows what are people doing during work:**

A straight-forward idea that tries to provide very tangible proof what the employee is doing at work. The inspiration came from HotJar ([www.hotjar.com](http://www.hotjar.com)) that can be used to create heatmaps about user's behaviour on the webpage. The reason it clicked during the ideation, was that HotJar could be used to prove

something intangible like users incline to click big buttons. The heatmaps in HotJar offer a way to show how big percentage of all the clicks are made on this big button. Maybe there could be a similar approach used with intangible characteristics like cynicism or low productivity?

### **An online water machine:**

A lot of information in the office moves between people when they are drinking coffee or eating together. A more traditional example of it is water machine, where people meet during their office-work. Is there a way to simulate a similar situation and turn it into usable input for the manager?

## **Feedback**

The plan during the development phase was to test early and fast. In many cases it means building a super low-fidelity prototype that you can show to people. I decided that all my ideas were a bit too raw to show to people. It meant that I had trouble understanding the ideas myself. Therefore, I decided to try to explain the ideas to different people. The main aim was to understand the idea through

explaining it to people I had contacted during the user interviews and ideation session.

Based on the feedback, I decided to move on with the social (team) network for ranting. First, this was the direction that got the most recommendations on how to make it better. Second, the other ideas failed to show any promise at all. The heatmap that follows people during the work got only the “obvious big brother solution” comments. An online water machine seemed like a fun idea, but never connected with the burnout topic in hand.

## The good team

The idea for the (team) network for ranting came partly from Twitter and FML. But the reason why the idea finally clicked, was because of a study made by Google. They wanted to understand why some teams are good and provide results, while other teams struggle.

In the beginning of the study, the main assumption was that a good team consist of the best and most talented employees. It

seemed logical that smart people make smart decisions, less mistakes and therefore come up with good results.

During the study they found out that the best teams do not have the most talented workers and they do not make the least mistakes. The study focused on “group norms” and eventually concluded that what distinguished the “good” teams from the dysfunctional groups was how teammates treated one another.

The right group norms would raise a group’s collective intelligence, whereas the wrong norms could hinder teams’ results, even if, individually, all the members were exceptionally bright.

One of the findings was that good teams have very open communication. Additionally, members spoke in roughly the same proportion, a phenomenon the researchers referred to as “equality in distribution of conversational turn-taking.” If everyone got a chance to talk, the team did well. If only one person spoke all the time, the collective intelligence of the team declined.

Googles study is a good example how big companies try to crunch the big data in hand and optimize everything. But sometimes the success is often built on experiences like emotional interactions and complicated conversations and discussions that cannot be optimized with numbers [44].

# Prototyping

In simple terms, a prototype is an experimental model that helps test and validate ideas quickly. It is basically a communication tool between the designer and user [45]. To narrow down the scope, I decided to move on with only one bigger idea. I used Figma to prototype the idea in much higher quality than in the previous phase. The aim was to develop the idea further and make it work.

## Version 1

The first solution I created was called “Rantable.” In short, it was a dedicated channel where people can rant about stressful situations they face. During the research phase I learned that on the one hand managers do not know how to manage and prevent stress. On the other had employees do not provide enough input about their struggles. Rantable offers a way to create a common space to address both issues, by making employees stress visible.

In addition, I learned that in a good team, people have an equal opportunity to speak. Rantable provides a way to speak about topics that are usually not discussed, or it is done in private.

The solution used Slack as the communication tool, as my target group was regularly using this or a similar application (Figure 14).

In the channel, all the people can post about their issues and stressful situations. Other people can support their colleagues with monetary and time related reactions. Everyone has a limited budget for time and monetary reactions. In the end of the week or month, it is possible to see what the most supported posts were. This offers a way for the manager to see what are the problems that need the most attention.

## Feedback

After creating the first prototype (Figure 14), I moved on to the testing phase. At first, I tested the prototype on my colleague to filter out the biggest errors. Based on that, I made some changes and contacted with 2 managers I interviewed during the research phase.

As I had only two views in the prototype, testing the flows was not possible. Therefore, I gave the participant some context and asked to describe what he can see, what does he think he could do here and what happens when he clicks on specific buttons.

Although the prototype and the testing sessions were very limited, all the participants understood what is “Rantable” and how it would work.

The feedback was rather negative, but also gave me a lot to think about. Here are some of the quotes from the feedback sessions:

- “The chat is full of negativity. I cannot imagine anybody enjoying it.”
- “It is just a chat for bad things. Why should anybody want to participate there?”
- “I just cannot wrap my head around this money and time system, sorry.”
- “What about the manager?”

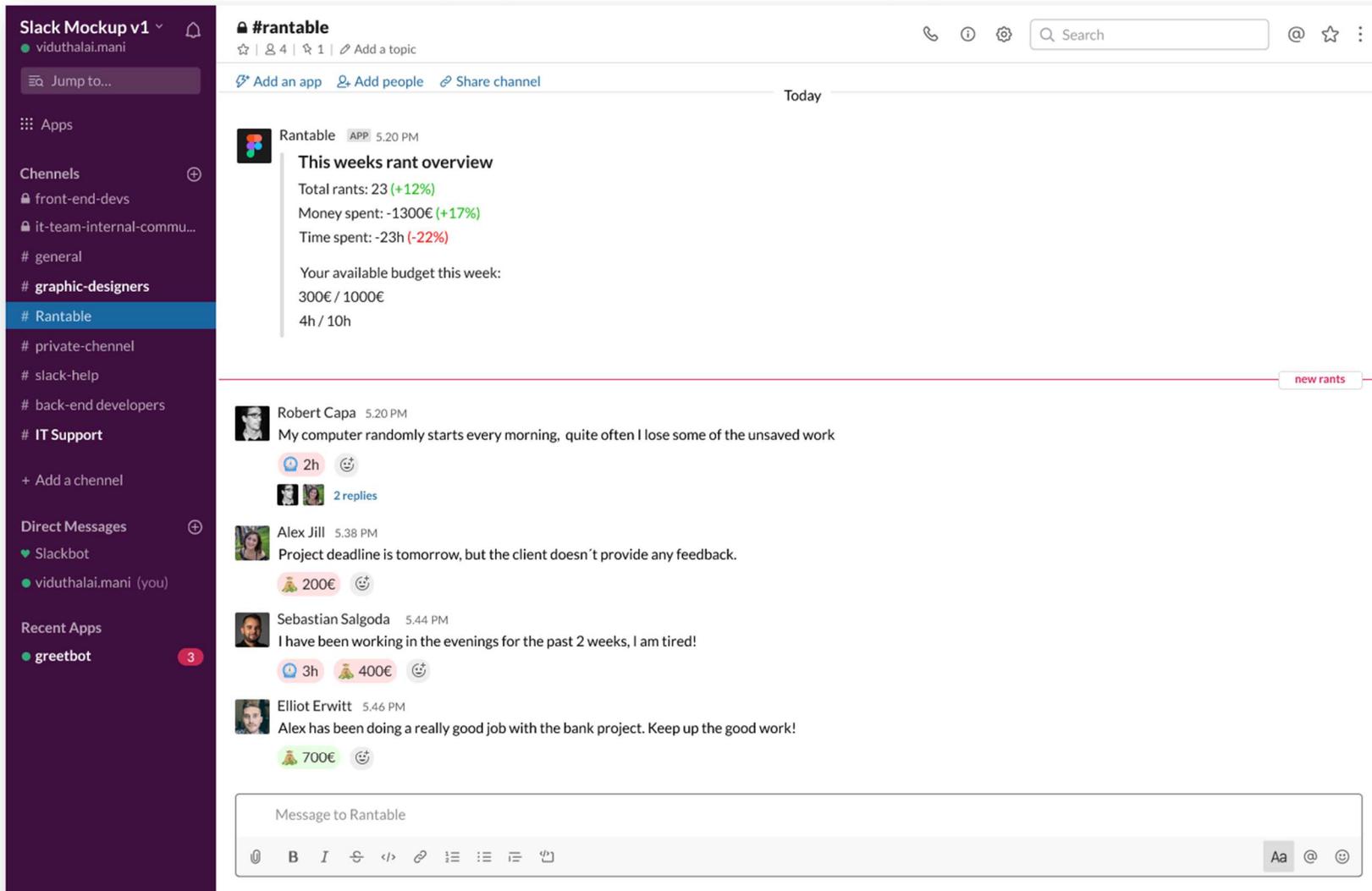


Figure 14: First version of Rantable.

## Version 2

For the second version of the Rantable, I created several improvements:

- First, I removed the time and money reactions and replaced it with alternative ways to react to posts. In the prototype I added “Lets fix it” and “Call the manager” reactions to mark the seriousness of the rant (Figure 15).
- Second, I played around with different ways of communicating the rant. In the prototype I added a rant that is using the style of a motivational quote. This was my way to make it a bit less negative (Figure 15).
- For the managers side, I added automated messages to notify about the activity in the chat.

## Feedback

The second prototype was already clickable, and this allowed me to conduct a much more detailed testing. I followed the previously used pattern, by testing the prototype first on my colleague, to

understand the bigger flaws in the prototype. This time I arranged one testing with a manager and another one with an employee. I asked them to describe everything they are seeing and doing when going through the prototype. The main aim was to see if they understand what the main functionalities in the prototype were. After testing the prototype, we had a brief discussion on how they perceived the idea of ranting.

This time, the feedback was even more negative than the previous time. The prototype was working, and everyone understood the process of ranting, but they did not like the idea behind the solution. The main takeaways from the sessions were:

- “Why should I post anything here? I just don’t understand it.”
- “How is that different from the regular channel you can have in Slack?”

Based on that, I felt that the fundamental mechanism was missing. The idea was totally fine, but I failed to put one and two together, to create something that really clicked for me and the users.

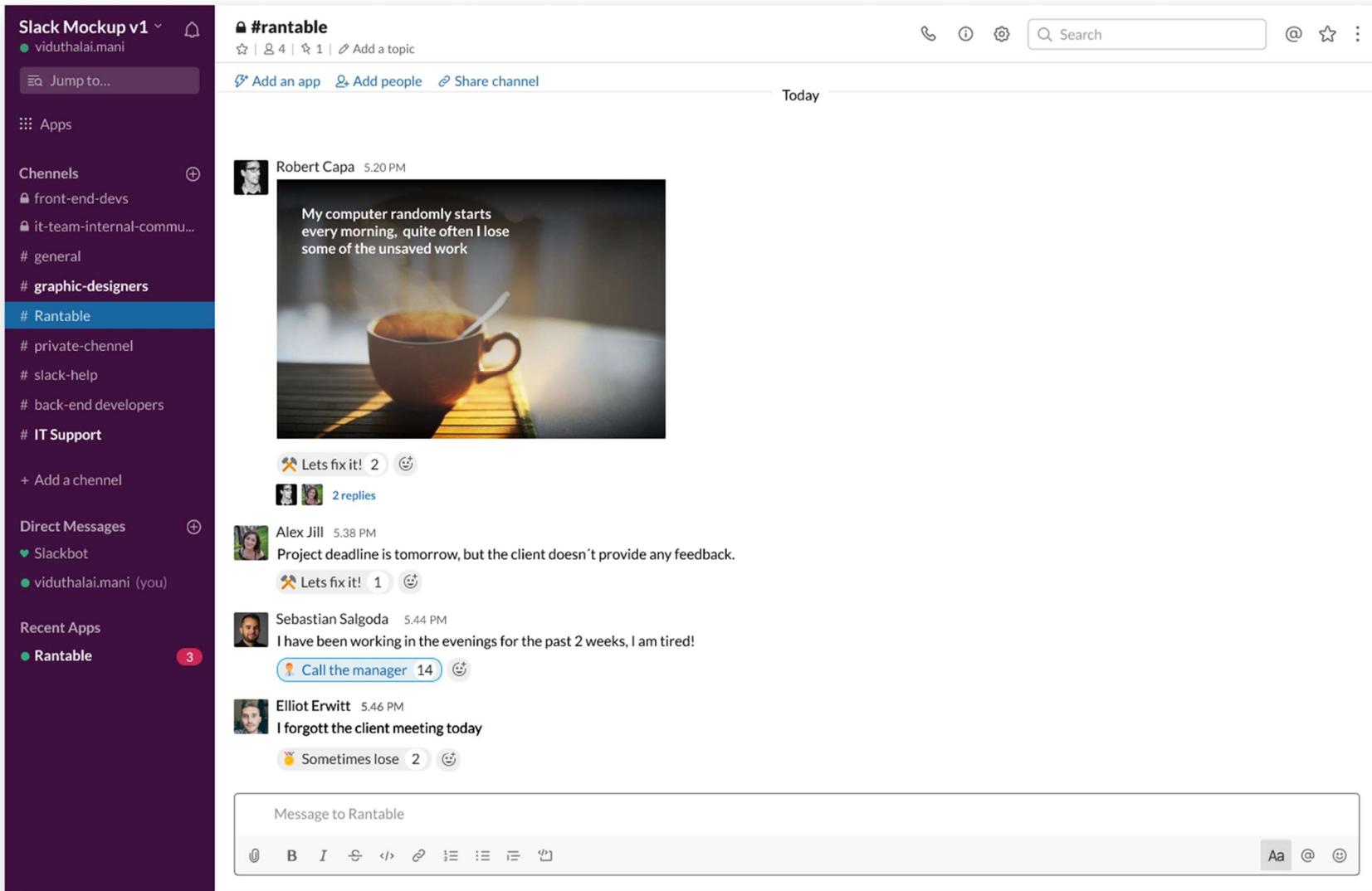


Figure 15: Second version of Rantable.

## Version 3

For the third version I tried to add features that would make the whole interaction a bit more sophisticated. At the same time, I was really trying to find that one specific breakthrough, that would make the concept work.

- First, I created an incentive to solve the rants. This was done by offering the “Solved” button for the author. It would make the rant disappear when the issue was fixed. This was a way to reduce some of the negativity and add a bit of hope for the person who comes there with a problem. In addition, the problems that are unsolved, would be still there in public (Figure 16).
- In addition, the solved issues would appear in “Solved” tab. It would not include the original rant, but a solution statement (Figure 16).
- I also improved the managers automated messages by making them more actionable.

## Feedback

For the testing, I contacted with 2 employees and 1 manager from the user research phase. I tried to see where they would like to click and if the flow works. The feedback was not too bad, but it seemed that I had added maybe too many features. Now the main flow for the chat was too difficult to understand. Some of the main takeaways were:

- “I like the reactions. They seem really logical.”
- “Where do the posts go? I would expect them to disappear!”
- “The automated messages are nice. Then I don’t have to be too involved but can be notified at the right time.”

As I was already doing the third iteration, I started wondering if asking feedback for the prototype was the best way to improve the idea? People gave me good feedback, but it was not leading me towards the big breakthrough.

I decided that I had to change something in my development process. The prototype was very limiting, and it was time to use something more real and tangible. I decided to conduct a validation experiment to get more realistic feedback.

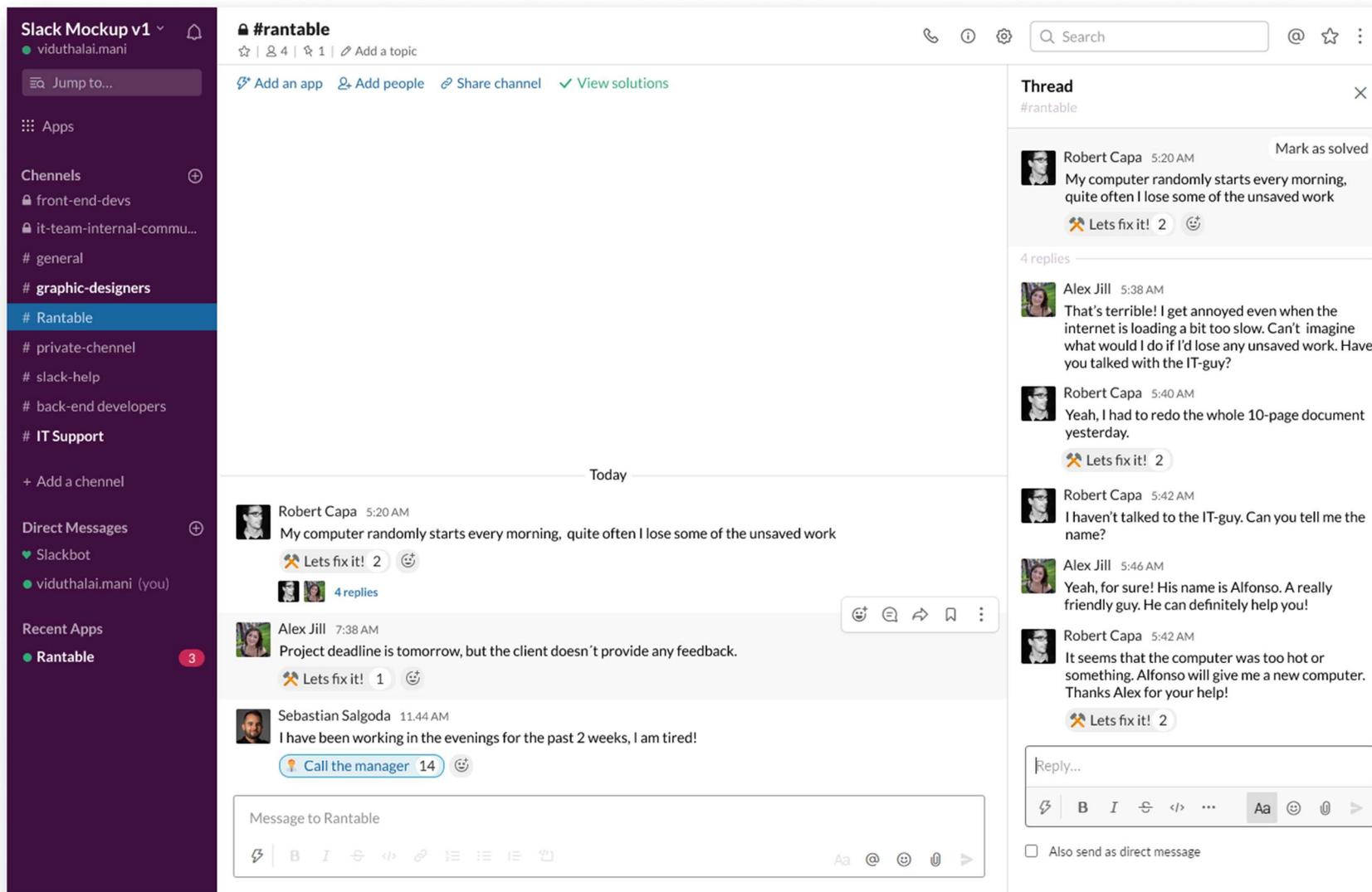


Figure 16: Third version of Rantable.

## Validation experiment

I decided to get a bit more user-centric and organized a validation experiment. A week-long experiment was necessary as I needed better feedback than what I got from only showing the prototype to users. The experiment offered a way to test the channel where people can actually participate. The main aim was to see users' attitude towards the Rantable chat. I wanted to get answers to these questions:

- Do people see Rantable as something very negative?
- Are people willing to write anything to the chat?
- How would other people react to the posts?
- Is there any benefit to the managers?

## What did I do?

I conducted an experiment with 2 very different teams:

- A team of 9 designers working in a digital agency (8 designers and 1 team lead).
- A group of people studying together in the same course in the same university (15 students and 2 managers).

I asked the managers to create a Rantable channel in their internal communication tool. One team used Slack and the other used Microsoft Teams. The managers invited the whole team to the channel and gave instructions to post about anything that created stress for them. It was an invitation to rant!

## How did it go?

The experiment lasted for a week. Before it started, I was a bit worried that there might not be any activity and expected around 4 to 6 post during the experiment. The result was very different as both teams posted a lot of rants. Many of them got replies. In total one team posted about 10 times and replied around 30 times. The second team posted more than 300 times as the chat was very active throughout the week.

After the experiment I had a brief discussion with both managers and participants.

## The take-aways

- People are ready to rant publicly.
- There was more activity than expected.
- The rants were very unfocused as some of the posts were about work, some were about personal life.
- Ranting affects people differently.
- The channel creates a lot of discussion and may provide solutions.
- There is a lot of activity when somebody rants about something very relevant.
- The channel works as a discussion starter.
- “It should exist all the time, I really like it.”
- “I don’t expect anything from it. Just posting is already good enough.”
- “It is just a way to show that there are some problems that may need more attention from managers.”
- “It is a good input, I knew about a lot of these issues, but not in such detail.”
- “It gave me a to-do list feeling.”
- “The discussion was maybe a bit too vague and unfocused to make any strong assumptions. But I definitely got some ideas and learned a lot.”

Based on these take-aways I created 2 bigger insights:

**First, the employees are willing to participate in the chat and find it beneficial. Just posting is already enough, if any further actions follow, it would be perfect.**

**Second, the managers see the “Rantable” as a good input to learn about the issues. To make it even better, the chat needs to be more focused and offer something actionable.**

## Version 4

Based on the previous prototypes, feedback, and the experiment, I made a lot of changes to the Rantable chat (Figure 17).

- First, I changed the name from Rantable to Wired. The name symbolises the connection between the manager and the team.
- I created a chatbot logic on managers side, that helps setting up the discussion. From the validation experiment, I learned that the discussion seemed unfocused for both employees and managers. In addition, the managers felt that they did not have enough control. Therefore, I turned my attention more towards managers by letting them choose the topics and questions for the discussion. This offers more control and provides focused discussions.
- Based on 6 work-related situational factors, it offers different discussion topics. The manager can select the suitable topic from the selection or create a custom topic. This way the manager can direct the discussion and have more control. Also, the discussions will be more focused and can provide more meaningful insight for the manager.
- The bot then starts the chat by introducing the topic to the channel.
- One discussion topic will last for 1 week.
- For the employees, the chat is very simplistic as I removed all the additional features. They can just see the new discussion topic and respond to it.
- When the discussion is not active, the bot provides additional topics and questions to liven up chat.
- Additionally, to the managers side, I created a way to process the chat with the TL;DR (too long, didn't read) function. It offers a way to help process the long text and turn it into a few key take-aways for the manager.
- The manager can then decide what to do with the take-aways by choosing between different functions like "Write to the person", "See the more", "Respond" or "Dismiss."
- The bot helps to maintain the balance as it makes sure all the 6 work-related situational factors are evenly covered and discussed.
- The core of the idea is that the bot offers a suitable discussion topic that would be open and inviting for the employees. This offers a manager a way to be connected to the team and get the invaluable insights. At the same time, it does not require too much time and attention. Creating a new discussion should not take more than few minutes.

I put together a clickable high-fidelity prototype and moved on to the final round of testing.

## Feedback

In the final feedback round, I tested the high-fidelity prototype on 3 managers. All of them worked in a technology related companies.

The clickable prototype covered the whole journey of Wired. This meant setting up Wired, choosing the topic and the question, preparing the channel, and getting the results. Therefore, I had an opportunity to test the whole flow of the solution.

In the first part of the testing, I asked the participants go through the whole process of setting up the discussion and then seeing the results. After the testing, we had a brief discussion about different ways of implementing the solution to their everyday workflow.

The feedback was mostly positive. All the participants were able to go through the prototype without any help from me. Here are some of the quotes from the feedback sessions:

- “I think it is the stupid simple solution. In general, it is just a slack integration that is based on a chatbot logic. As I understand, the core of the solution is about providing just a question and offering a dedicated space for employees to

answer it. I guess it took about 1 minute to set up the discussion. It saved me hours of preparation and even more time on processing the results. Like I said, the solution is simple, but it works.”

- “The only question for me, is that how does it chooses the recommended questions? I felt that I just made a blind decision from 3 options.”
- “It is nothing difficult, but it does the job. I feel that there could be ways to implement it on a wider scale. Decentralizing is very popular today, maybe think about adding voting and similar participatory governance elements?”

Based on that feedback I made one last change. I added descriptions to recommended questions that would provide a way to make the decision for the manager.

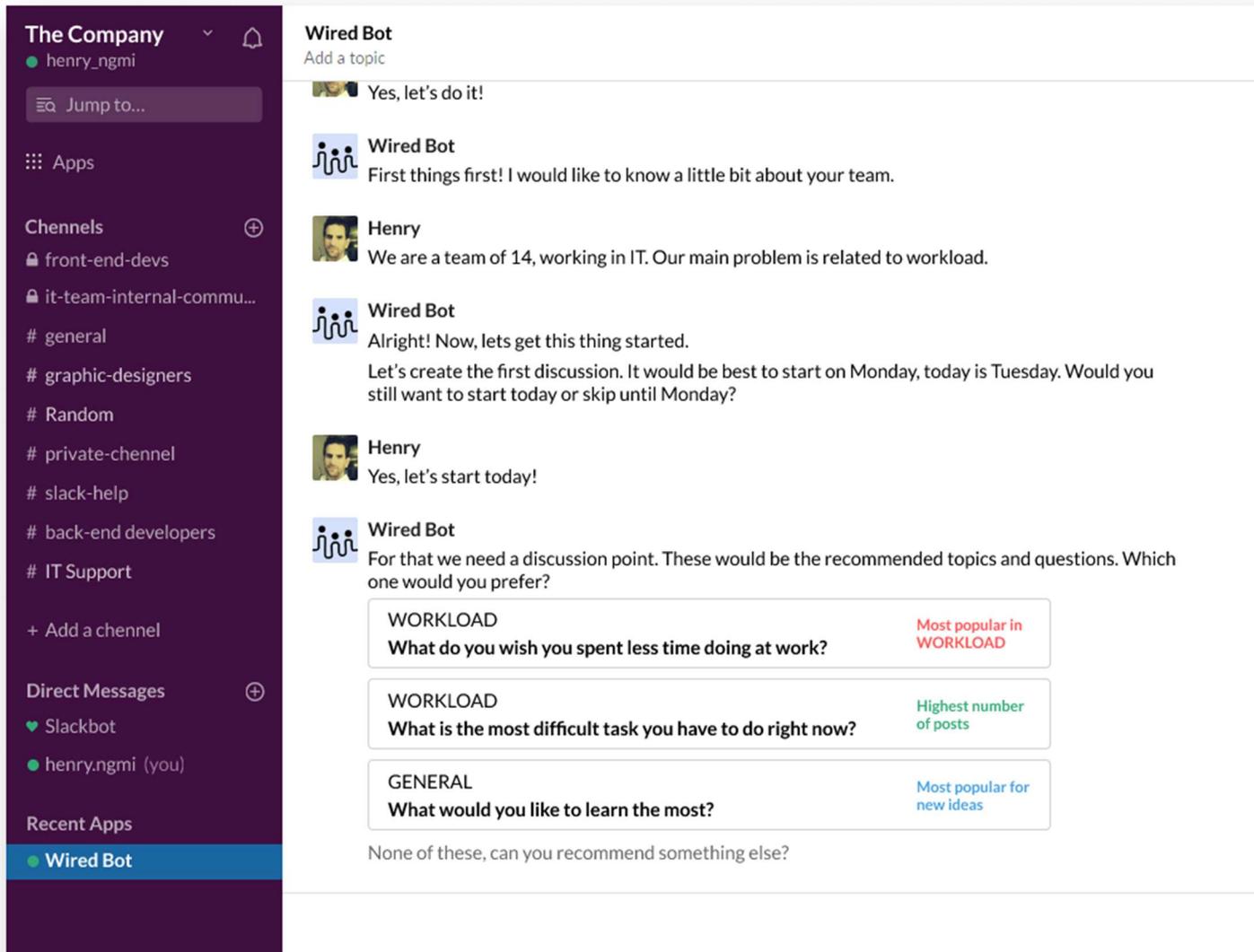


Figure 17: Fourth version of prototype.

# Deliver

In the last part of the design process, the task was to take the previously developed idea and turn it into the final design proposal.

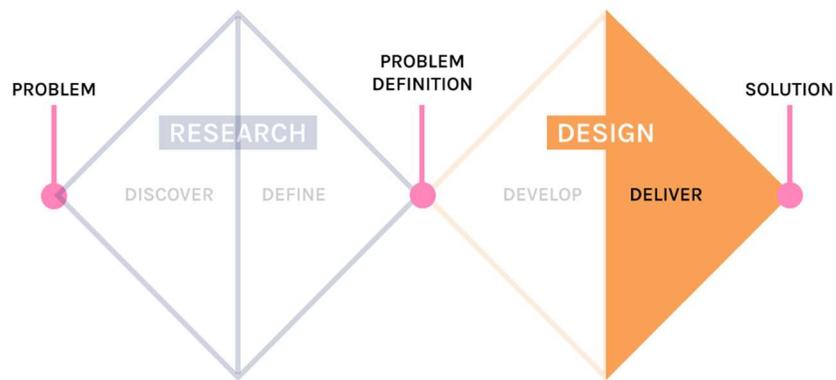


Figure 16: Deliver phase highlighted on the Double Diamond.

## Link to the prototype

<https://bit.ly/3wmPI5V>

## What is Wired?

Wired is a tool that helps managers connect to employees. The root of it stands in creating a discussion by asking good questions. As the user research showed, managers believe that they are not psychologist and different experiences from employees showed how bad impact it could have. Creating a dedicated space for employees to express themselves offers a way to let the manager know what is going on in their employee's mind.

During the research phase, I found out that burnout is unmanaged stress in longer period. This means that managers have not solved the issues, or the employee has not mentioned the problems. In addition, I found out that the lack of knowledge and communication causes big part of the problems.

First, Wired offers managers a way to be connected to employees and do it on a weekly or monthly basis. Second, it provides a dedicated space for employees to talk about the issues. By connecting two main parts of the problem, the stress that was previously unmanaged or invisible, has now a place in the everyday work processes and through that can be made visible.

The managers lack knowledge about stress, and they claim not to be psychologist. Wired helps managers, by offering suitable topics

and questions for discussion. This relieves managers pain of not knowing how to approach employees and not getting the valuable information.

## How does it work?

Wired is a plugin that can be used in different communication tools like Slack, Microsoft Teams etc. Therefore, the whole thing is part of the everyday workflows that is used by both managers and employees.

The core of the whole idea is that the manager can set up a discussion in a dedicated channel. Employees only have to post their answers or reply to others.

The aim is to have an open discussion and through that make employees struggles, stress, worries, but also ideas visible to the manager.

Like mentioned above, the core of the idea is based on the channel where people can answer questions. The solution has 2 sides: the managers and employee's side.

## Manager

Wired helps manager set up the channel, pick the topic and question and start the discussion. On the managers side, the solution is using chatbot logic where the bot asks questions and offers different answers. The manager just has to make small number of decisions.

When setting up Wired, the bot first asks a couple of introductory questions like how big the team is or what seems to be the main issue in the team. Based on the information, the bot can offer suitable topics and questions. When the team is big, the bot can offer topics to unite people. For the small team, the discussions could focus on more personal topics (Figure 19).

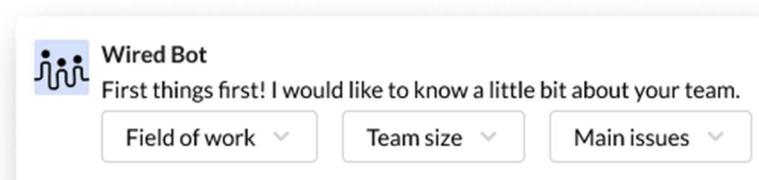


Figure 19: Onboarding in Wired

The bot then helps the manager to set up the channel. The manager only needs to add the people who should be part of the channel.

To create the discussion, the manager needs to pick a topic and a question (Figure 20).

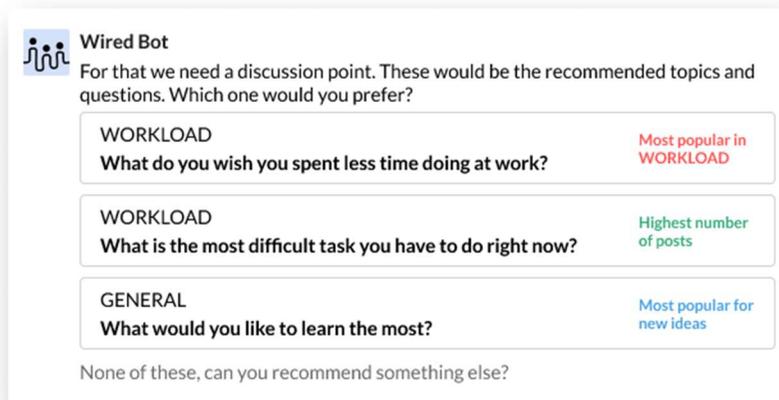


Figure 20: Recommended topics and questions in Wired.

The topics and questions offered are based on the previously gathered information. Also, every option has an additional tag provided such as "Most popular" or "Popular for new ideas." This would help the manager to make the decision.

After the manager has picked the question, the bot creates the first post that would work as an introduction for the discussion (Figure 21).

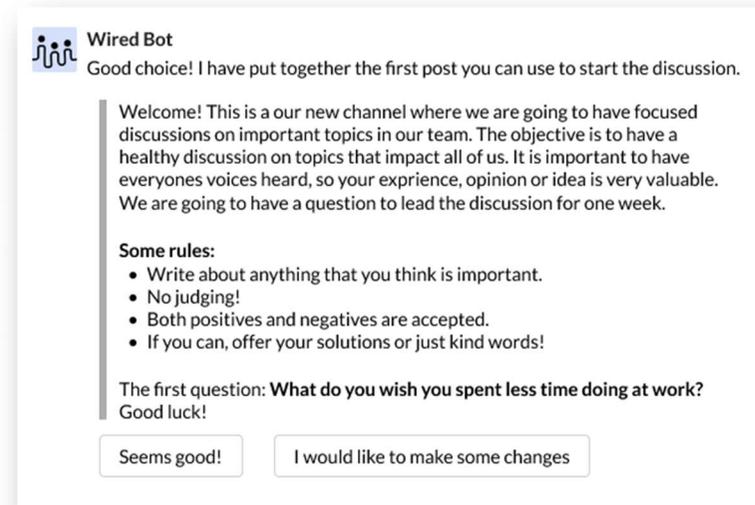


Figure 21: A prepared post for the discussion.

This is the end of setting up the discussion. When the discussion is active, the manager can request an overview about the activity in the chat from the bot. The manager can ask to see the statistics or change settings of the chat (Figure 22).

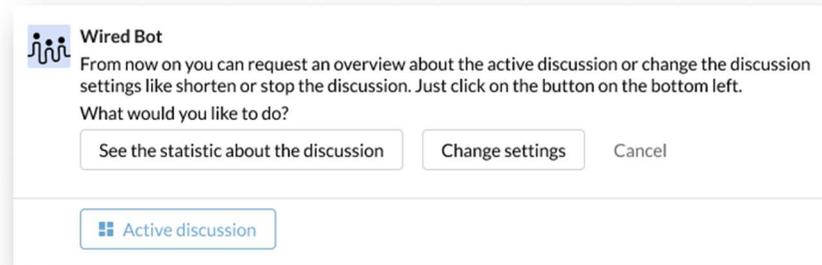


Figure 22: Different activities that the manager can do during the active discussion.

The bot notifies the manager when the week has passed, and the discussion has ended. The bot then offers statistics about the activity and provides some take-aways from the discussion (Figure 23).

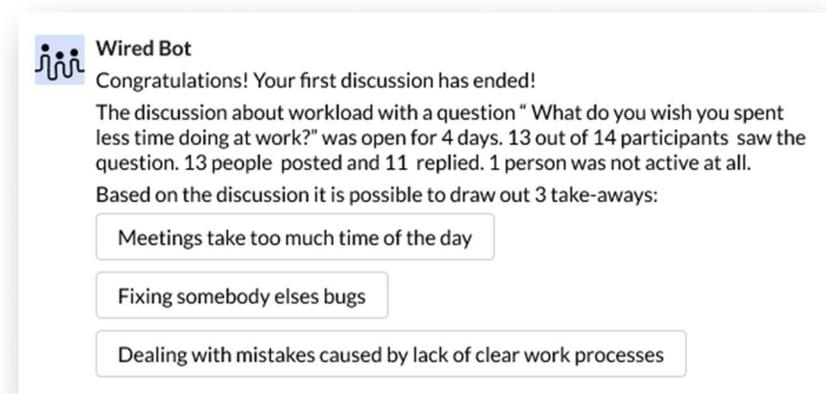


Figure 23: The take-aways created based on the discussion.

The manager can choose which take-away he wants to see further. He can choose between actions like “See the posts” or “See who think like that.”

After the first discussion has ended, the manager can start seeing the information about the previous discussion or start a new one (Figure 24).

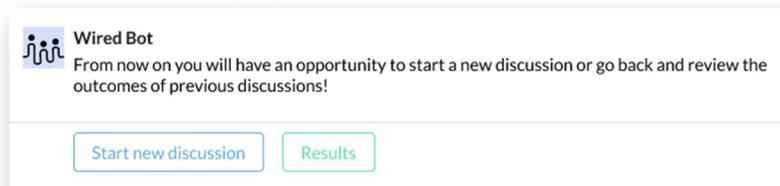


Figure 24: The manager can start a new discussion or see the previous results in Wired.

## Employee

On the employees' side, Wired uses an ordinary chat logic without any additional features. The bot helps manager set up the channel, post the question and then the employees can answer the questions. When the new discussion appears, the old question and answers disappear (Figure 25).

**The Company** ▼ 🔔  
 ● henry\_ngmi

🔍 Jump to...

☰ Apps

Channels ⊕

- 🔒 front-end-devs
- 🔒 it-team-internal-commu...
- # general
- # graphic-designers
- # wired**
- # private-chennel
- # slack-help
- # back-end developers
- # IT Support
- + Add a chennel

Direct Messages ⊕

- ♥ Slackbot
- henry.ngmi (you)

Recent Apps

- **Wired Bot** 1

---

**#wired** ☆  
 Add a topic

all of us. It is important to have everyones voices heard, so your exprience, opinion or idea is very valuable.  
 We are going to have a question to lead the discussion for one week.

**Some rules:**

- Write about anything that you think is important.
- No judging!
- Both positives and negatives are accepted.
- If you can, offer your solutions or just kind words!

The first question: **What do you wish you spent less time doing at work?**  
 Good luck!

 **Robert**  
 Meetings, meetings and meetings. Sure, some meetings are really important, but most of them are total waste of time. I literally lose at least 2 hours per day because of some meetings that could have been just an email!

 **Alex**  
 Who likes to fix somebody elses bugs??+ Not me! Everybody needs to be responsible for their own code.  
[5 replies](#)

 **Pablo**  
 Do you remember when we all collectively forgot the deployment on Monday or when one version update went live without the bug fixes? It seems that we don't have a really good understanding of our processes. Its like trying to reinvent the wheel everyday, but nobody knows how to build anything. I am really tired of these random mistakes. Less randomness and more deliberate stuff guys.

Message #wired

🔗 **B** *I* 🔒 </> 🔗 ☰ ☰ ☰ 📎 Aa @ 😊 📎 ➤

Figure 25: The discussion in Wired.

# Reflection

The main contribution to the current state of art is the fact that Wired tries to intervene on organisational level. Wired is a simple solution and could work as a pioneering idea for integrating tools for taking care of employees' mental health within the everyday work processes.

## Evaluation of the process

I think the whole project has been a big learning opportunity for me. There were different expectations for the final project, but the outcome was a lot different.

Firstly, before starting the project, I had some experience with burnout. But I consciously started the whole project from the blank slate. As one main research question, I decided to have, was "What is burnout?" and I think this was a really good choice. It made me go deep and learn all the fundamentals of the topic. Through that I formed my own point of view and got to approach the issue from a new angle. I had some assumptions in my mind, but I was never

able to expect that the issue with burnout my lay on the organisational level and the solution could be related to managers.

Second, I learned a lot about different design methods and tools. For example, I conducted 2 different experiments that I had never done before. Learning and then using the tools in the design process is a very valuable skill that I am hoping to improve in the future.

Third, I can see how the whole project could have benefitted from narrower scope. Burnout is a very complex topic, and it is difficult to point to the one main problem. But that is why it is even more important to choose a direction and stick with it. I think this is where I somewhat failed. I could have defined the scope better and do it earlier. This way I could have come up with something more refined.

Fourth, I am happy that I went through the whole process. No matter how stressful or difficult different parts were, I still made it! One thing is that I have a result or an end-product, but I think that even more valuable is that now I can go through the whole process again and learn what could I have done differently. It is an important opportunity to learn about the design process and myself and apply the learnings in the future projects.

## Future developments

The final concept of Wired was built through 4 iterations. The last round of feedback was already quite good, but I think there is a lot more to improve. The main logic may already be good enough, but small interactions and functionalities like settings need more attention. Additional prototyping and testing would help a lot but building the real the Slack plugin would be perfect.

A direction for further research could be to study the real effect of Wired. As mentioned earlier, the validation experiment gave me a lot more insight than the prototype. Building the Slack plugin and testing it within number of teams for a longer period would probably provide more insight that would help develop the concept further. On the one hand it could be studied how Wired can help managers. On the other hand, even more interesting would be observing the effects on the whole team.

Based on the communication with all the experts, users, and people I tested the prototype with, I can say that the direction of the project is good. This means bridging the gap of open communication and honest feedback within the teams seems to be an issue worthy of attention. To be more precise, it seems

necessary to offer both managers and employees new and better ways to communicate.

Recent developments related to pandemic have raised a question how to manage a remote team that consists of people who you have never seen. Removing all the physical interactions leaves a big gap in communication. The bigger challenge arises when the team faces problems like burnout. Relying only on virtual interactions is not a new thing, but it has never been used by as big part of the population as today.

# References

1. 'Töökeskonna vaimse tervise analüüs | Sotsiaalministeerium'. Accessed 19 March 2021. [https://www.sm.ee/sites/default/files/tookeskkonna\\_vaimse\\_tervise\\_analuus\\_2019.pdf](https://www.sm.ee/sites/default/files/tookeskkonna_vaimse_tervise_analuus_2019.pdf)
2. Gallup. 'Gallup's Perspective on Employee Burnout: Causes and Cures'. (2020).
3. 'Psühhosotsiaalsed ohutegurid | Tööportaal'. Accessed 19 March 2021. <https://www.tooelu.ee/et/tooandjale/tookeskkond/tookeskkonna-ohutegurid/psyhholoogilised-ohutegurid>
4. 'Burn-out an "Occupational Phenomenon": International Classification of Diseases'. Accessed 29 March 2021. <https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon-international-classification-of-diseases>.
5. 'What Is the Framework for Innovation? Design Council's Evolved Double Diamond | Design Council'. Accessed 27 March 2021. <https://www.designcouncil.org.uk/news-opinion/what-framework-innovation-design-councils-evolved-double-diamond>.
6. 'Design Kit'. Accessed 27 March 2021. <https://www.designkit.org/methods/secondary-research>.
7. 'Design Iteration Brings Powerful Results. So, Do It Again Designer! | Interaction Design Foundation (IxDF)'. Accessed 16 May 2021. <https://www.interaction-design.org/literature/article/design-iteration-brings-powerful-results-so-do-it-again-designer>.
8. Lubbadah, Tareq. 'JOB BURNOUT: A GENERAL LITERATURE REVIEW'. *International Review of Management and Marketing* 10, no. 3 (1 May 2020): 7-15. <https://doi.org/10.32479/irmm.9398>.
9. Freudenberger, Herbert. 'Speaking from experience'. *Training and Development Journal* 31, no. 7 (1977): 26-28.

10. Maslach, Christina. 'Understanding burnout: Definitional issues in analysing a complex phenomenon'. *Job Stress and Burnout* (1982): 29-44  
[https://www.researchgate.net/publication/240370761\\_Understanding\\_burnout\\_Definitional\\_issues\\_in\\_analyzing\\_a\\_complex\\_phenomenon](https://www.researchgate.net/publication/240370761_Understanding_burnout_Definitional_issues_in_analyzing_a_complex_phenomenon)
11. Maslach, Christina; Schaufeli, Wilmar. 'Historical and conceptual development of burnout'. *Professional Burnout: Recent Developments in Theory and Research* (1993): 1-16.
12. 'Burn-out an "Occupational Phenomenon": International Classification of Diseases'. Accessed 29 March 2021.  
<https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon-international-classification-of-diseases>.
13. Maslach, Christina; Leiter, Michael. 'Understanding Burnout: New Models'. *The Handbook of Health and Stress* (2017): 36-57. Accessed 24 February 2021.  
<https://onlinelibrary.wiley.com/doi/10.1002/9781118993811.ch3>
14. Maslach, Christina; Schaufeli, Wilmar; Leiter, Michael. 'Job Burnout'. *Annual Review of Psychology* (2001): 397-422. Accessed 11 February 2021.  
[https://www.researchgate.net/publication/228079161\\_Job\\_Burnout](https://www.researchgate.net/publication/228079161_Job_Burnout)
15. Maslach, Christina; Leiter, Michael. 'Understanding Burnout: New Models'. *The Handbook of Health and Stress* (2017): 36-57. Accessed 24 February 2021.  
<https://onlinelibrary.wiley.com/doi/10.1002/9781118993811.ch3>
16. Maslach, Christina; Leiter, Michael. 'Understanding the Burnout Experience: Recent Research and Its Implications for Psychiatry'. *World Psychiatry* 15, no. 2 (June 2016): 103 -111.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4911781/pdf/WPS-15-103.pdf>
17. 'Chronic Work Stress Can Change Our Personalities - The Academic Times'. Accessed 25 April 2021.  
<https://academictimes.com/chronic-work-stress-can-change-our-personalities/>.

18. Leber, Jessica. *Fast Company* (15 March 2016). Accessed 29 March 2021.  
<https://www.fastcompany.com/3057303/fixing-mental-health-in-the-workplace-requires-a-lot-more-than-a-yoga-room>.
19. Lieberman, Charlotte. 'What Wellness Programs Don't Do for Workers'. *Harvard Business Review*. (14 August 2019). Accessed 22 March 2021. <https://hbr.org/2019/08/what-wellness-programs-dont-do-for-workers>.
20. Maslach, Christina; Jackson, Susan; Leiter, Michael. 'The Maslach Burnout Inventory Manual'. *Evaluating Stress: A Book of Resources* (January 1997). Accessed 29 March 2021.  
[https://www.researchgate.net/profile/Christina-Maslach/publication/277816643\\_The\\_Maslach\\_Burnout\\_Inventory\\_Manual/links/5574dbd708aeb6d8c01946d7/The-Maslach-Burnout-Inventory-Manual.pdf](https://www.researchgate.net/profile/Christina-Maslach/publication/277816643_The_Maslach_Burnout_Inventory_Manual/links/5574dbd708aeb6d8c01946d7/The-Maslach-Burnout-Inventory-Manual.pdf)
21. Occupational Health and Safety Act (ACT) § 1 (1). Accessed 29 March 2021.  
<https://www.riigiteataja.ee/en/eli/522022021001/consolide>
22. Occupational Health and Safety Act (ACT) § 3 (2). Accessed 29 March 2021.  
<https://www.riigiteataja.ee/en/eli/522022021001/consolide>
23. 'Töötervishoiu Ja Tööohutuse Seaduse Kaasajastamine | Sotsiaalministeerium'. Accessed 19 May 2021.  
<https://www.sm.ee/et/tootervishoiu-ja-tooohutuse-seaduse-kaasajastamine>.
24. Occupational Health and Safety Act (ACT) § 9<sup>1</sup> (1). Accessed 29 March 2021.  
<https://www.riigiteataja.ee/en/eli/522022021001/consolide>
25. Occupational Health and Safety Act (ACT) § 9<sup>1</sup> (2). Accessed 29 March 2021.  
<https://www.riigiteataja.ee/en/eli/522022021001/consolide>
26. Põldis, Eva, personal communication, 9 March, 2021.

27. Occupational Health and Safety Act (ACT) § 27<sup>3</sup>. Accessed 29 March 2021.  
<https://www.riigiteataja.ee/en/eli/522022021001/consolidate>
28. 'Vaimse tervise roheline raamat | Sotsiaalministeerium'. Accessed 19 May 2021.  
[https://www.sm.ee/sites/default/files/news-related-files/vaimse\\_tervise\\_roheline\\_raamat\\_0.pdf](https://www.sm.ee/sites/default/files/news-related-files/vaimse_tervise_roheline_raamat_0.pdf)
29. 'Vaimse tervise häirega inimesed tööturul | Sotsiaalministeerium'. Accessed 19 May 2021.  
[https://www.sm.ee/sites/default/files/content-editors/Ministeerium\\_kontaktid/Uuringu\\_ja\\_analuusid/Toovaldkond/tp\\_f-too\\_loppraport\\_praxis\\_v\\_1505.pdf](https://www.sm.ee/sites/default/files/content-editors/Ministeerium_kontaktid/Uuringu_ja_analuusid/Toovaldkond/tp_f-too_loppraport_praxis_v_1505.pdf)
30. 'Sixth European Working Conditions Survey: 2015 | Eurofound'. Accessed 19 April 2021.  
<https://www.eurofound.europa.eu/surveys/european-working-conditions-surveys/sixth-european-working-conditions-survey-2015>.
31. 'Affinity Diagramming: Collaboratively Sort UX Findings & Design Ideas'. Accessed 79 March 2021.  
<https://www.nngroup.com/articles/affinity-diagram/>.
32. 'Social Ecological Model | Ecology of Health and Medicine'. Accessed 29 March 2021.  
<https://blogs.uw.edu/somehm/2017/08/12/social-ecological-model/>.
33. 'The Social-Ecological Model: A Framework for Prevention'. Accessed 29 March 2021.  
<https://www.cdc.gov/violenceprevention/about/social-ecologicalmodel.html>
34. 'The Systems Thinker - Connecting Systems Thinking and Action - The Systems Thinker'. Accessed 27 March 2021.  
<https://thesystemsthinker.com/connecting-systems-thinking-and-action/>.
35. 'Iceberg Model - Ecochallenge.Org'. Accessed 27 March 2021. <https://ecochallenge.org/iceberg-model/>.

36. 'The Iceberg Model for Problem-Solving - BigThinking.io'. Accessed 27 March 2021. <https://bigthinking.io/the-iceberg-model-for-problem-solving/>.
37. 'User Need Statements'. Accessed 27 March 2021. <https://www.nngroup.com/articles/user-need-statements/>.
38. 'Using "How Might We" Questions to Ideate on the Right Problems'. Accessed 29 March 2021. <https://www.nngroup.com/articles/how-might-we-questions/>.
39. 'DESIGN PROBES – Service Design Lab'. Accessed 17 April 2021. <https://www.servicedesignlab.net/design-probes>.
40. 'The Next Great Disruption Is Hybrid Work—Are We Ready?' Accessed 25 April 2021. <https://www.microsoft.com/en-us/worklab/work-trend-index/managers-keep-teams-connected>
41. 'How to Run a Crazy Eights Workshop. | by Hana Stevenson | Prototypr'. Accessed 17 April 2021. <https://blog.prototypr.io/how-to-run-a-crazy-eights-workshop-60d0a67b29a?gi=f2e8a3123ca4>.
42. 'Personas Make Users Memorable for Product Team Members'. Accessed 8 May 2021. <https://www.nngroup.com/articles/persona/>.
43. '10x10s - Board of Innovation'. Accessed 17 April 2021. <https://www.boardofinnovation.com/tools/10x10s/>.
44. 'What Google Learned From Its Quest to Build the Perfect Team - The New York Times'. Accessed 8 May 2021. <https://www.nytimes.com/2016/02/28/magazine/what-google-learned-from-its-quest-to-build-the-perfect-team.html>.
45. 'Design Thinking: Get Started with Prototyping | Interaction Design Foundation (IxDF)'. Accessed 17 April 2021. <https://www.interaction-design.org/literature/article/design-thinking-get-started-with-prototyping>.

# Copyright Declaration

I hereby declare that:

1. the present Master's thesis is the result of my personal contribution and it has not been submitted (for defence) earlier by anyone else;
2. all works and important viewpoints by other authors as well as any other data from other sources used in the compilation of the Master's thesis are duly acknowledged in the references;
3. I give consent to the Estonian Academy of Arts to publish my Master's thesis in the repository thus making it available for the general public by means of the Internet.

Pursuant to the above, I state that:

- I as the author of the thesis am the sole owner of the individual copyright of the present Master's thesis and the works included and/or described within the thesis and the disposal of the proprietary rights related with the Master's thesis is subject to the procedures in force at the Estonian Academy of Arts;
- as the Master's thesis published in the repository may be accessed by an unlimited number of persons, I presume that the readers of the thesis comply with laws and other legal acts and good practices in good faith, in a fair manner and with respect to and consideration of the rights of other people.

The copying, plagiarising or any use of the present Master's thesis and the works included and/or described within the thesis that infringes the copyright is prohibited.

19.05.2021

**Sander Kalmus**

*Signed digitally*

*(the name and signature of the author of the Master's thesis)*

The thesis complies with the Master's thesis requirements:

-----

*(date)*

-----

*(the signature of the Master's thesis supervisor, academic or research degree)*