MSc Program
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# To What Extent Do Engineering Management Organisations Promote Mindfulness amongst Their Workforce?

A Master's Thesis submitted for the degree of
"Master of Science"

supervised by
Dr Lawrence Stapleton Ph.D., MA, B.Sc. (Hons), CPIM

Ayse Ece Özcan, BSc

11936032

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# Affidavit

I, **AYSE ECE ÖZCAN, BSC**, hereby declare

1. that I am the sole author of the present Master's Thesis, "TO WHAT EXTENT DO ENGINEERING MANAGEMENT ORGANISATIONS PROMOTE MINDFULNESS AMONGST THEIR WORKFORCE?", 123 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
2. that I have not prior to this date submitted the topic of this Master's Thesis or parts of it in any form for assessment as an examination paper, either in Austria or abroad.

Vienna, 30.03.2021

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Signature

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# Abstract

This paper represents an attempt to highlight the organisational mindfulness promotion of engineering management organisations amongst their workforce. Mindfulness is an effective tool for boosting employee well-being, task performance and improving interpersonal relationships in organisations. Companies that undergo a transformation through mindfulness can observe positive returns on each segment in the organisation, making the organisation more productive, resilient and sustainable. The number of mindful organisations can be increased only if companies are willing to learn and spread the whole concept throughout every company level. For this purpose, a survey research is conducted to examine the current situation of engineering management organisations. When previous doubts are examined, while some expected doubts are confirmed, others can be considered unnecessary. Results show that although employees state their doubts and fears about organisational mindfulness programs, they are willing to attend them and believe in innovation capacity of organisational mindfulness. Furthermore, those with prior experience state the influence of organisational mindfulness can be observed in daily work routines. Thus, the research provides implications for future academic theories and professional practices.

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# 1. INTRODUCTION

## 1.1 Background and Content

Mindfulness is widely defined as "paying attention in a particular way: on purpose, in the present moment, and non-judgmentally" (Kabat-Zinn, 1994). The definition includes three themes: intention, attention, and open attitude (Shapiro et al., 2006). It can also be defined as bringing intentionally sustained kind attention to the current moment, which enhances individuals' emotional intelligence, cognition, and interpersonal functioning and improves stress management efficacy (Carson & Langer, 2006; Sedlmeier et al., 2012). Extensive researches have been done on the subject of mindfulness. However, some issues need to be debated as there is still a lack of consensus about the concept's true nature.

In today's modern world, the controversy of the power of mindfulness at several levels has been increasing with each passing day. The reason is that individuals try to attain perfectness in all fields of their lives. As they hold themselves to unrealistic perfection standards, they start to judge when they cannot reach perfection. Dr Shauna Shapiro states that "What you practise grows stronger", which means in the statement is that if individual practice judgment, impatience, or frustration, in the end, instead of perfection (s)he only have negativity and fall behind the desired point (2017). Additively, when individuals feel shame, the learning and growth part of the brain shuts down automatically. Mindfulness intentionally brings kind attention to these moments and makes them more liveable. As human beings, it is possible to change, learn and grow, and mindfulness can enlighten the path by making them real. Mindfulness trains the brain to be kinder by transforming the way of thinking moment by moment. The mind is trained with attention by using ordinary senses and perceptions, and a more harmonious life can be obtained.

Contrary to popular opinion, mindfulness can be practised not only with meditations or yoga, which are formal practices but also can be practised informally. Individuals can be mindful of their five senses easily. For instance, mindful eating may change the horizon of eating familiar foods. In mindful eating, individuals pay attention to the food by recognising the texture, smell, colour, and weight. In this manner, individuals may be aware of eating precisely at that moment, without living in autopilot mode. Focusing on breathing is another straightforward exercise to experience the moment mindfully. With breathing exercise, individuals may learn to

train their minds and use these skills in challenging situations.

Contemporary understandings of mindfulness have been steadily gaining more in organisational science and psychological studies. There has been an increasing number of institutions gravitating towards mindfulness-based training programs. Mindfulness in organisations needs to be debated more these days as the phenomenon of mindfulness in organisations is still in the infancy phase. Even though some organisations are open to adopting mindfulness in harmony with company goals and culture, several problems may occur during the implementation. A standardised approach to its outcomes and processes have not been determined precisely yet. More importantly, the exact natures of individual and organisational mindfulness are still unclear and in practice. The human factor is another determinant of why the concept is not yet understood completely. Thanks to a few researchers, some attention has been brought to the idea of organisational mindfulness.

In a workplace, psychology is an essential tool for boosting employee well-being, task performance and improving interpersonal relationships. Many studies about industrial/organisational psychology focus on solutions to them. Being mindful is an effective way to obtain high employee performance, well-being, stress regulation, improved decision-making processes and relationships in companies; thus, it should be spread within organisations. Companies that undergo a transformation through mindfulness can observe positive returns both on individual and organisational levels. When mindfulness becomes a shared social practice in an organisation, it permeates routines, processes, and procedures between employees and teams. As a whole, the organisation becomes more productive, resilient and performs more sustainably (Weick, 2006). Even though some effects and outcomes of organisational mindfulness are still unpredictable, it is worth trying to see proven and expected results; thus, companies' support is essential for organisational mindfulness development.

## 1.2 Problem Statement

As many studies on organisational mindfulness have been recent and ambiguous, the effects are not wholly known. Additively, most companies are not even aware of mindfulness terms, or some companies focus on just a diverse set of objectives without understanding its philosophy. The number of mindful organisations can be increased only if companies are willing to learn and spread the whole concept

throughout every company level. It is significant how individuals are disposed to be a part of mindfulness. That's why the desire to learn mindfulness can be counted as a first step which refers to both the easiest and the most challenging part. After the number of mindful individual increases in an organisation, eventually, organisational revolutions will begin after a while. Such an approach illustrates how individual and organisational mindfulness influence each other. It should not be forgotten that the head of an organisation is also an individual, and spreading mindfulness is up to his/her decision.

Currently, some individual benefits of mindfulness have been valued, but organisational outcomes are under wrought. The main problem is that companies either do not have enough knowledge about mindful corporate settings or deny the proven outcomes. For many companies, it seems like an adventure that is uncertain, indeterminate and unprecedented. Even if it is known what needs to be performed, most companies are unwilling to change the organisation's current setting; that's how fear of change occurs at an organisational level. Consequently, organisations cannot promote the mindfulness perspective as it is desired. The purpose of the present study is to investigate to what extent engineering management organisations promote mindfulness amongst the workforce.

### 1.3 Motivation

As an industrial engineer and yoga instructor, I desire to have a deep knowledge of both backgrounds and connections. Today's engineering management organisations face many challenges: continuous change, globalisation, growing cultural differences, and a constant need for efficacy and efficiency. In other respects, when organisations prioritise employees' health and psychology, an efficient and peaceful workplace can be accomplished. Researches that work on mindfulness and industrial/organisational psychology introduce a healthy vision within organisations in future and claim that it is worth seeing the results

However, the setting of the organisational mindfulness structure is not as easy as it is written. The study is most significant for employees (especially engineers) who have worked in engineering management firms. Engineers can be the study group as they have curiosity in innovations and the capability to process diverse ideas and concepts, which makes the interaction with mindfulness more appealing. Besides, engineering management employees are sometimes forgotten in workplaces to recognise human well-being; thus, they can be good candidates for observing

organisational mindfulness.

As engineering and mindfulness have common intentions such as curiosity, promoting innovation, and developing diverse ideas, engineers' reaction in the face of mindfulness appeals to this topic. On the other hand, a couple of diversity exists, making the subject more fascinating and guiding this study. Being mindful saves individuals from linear thought patterns and encourage divergent thinking, openness. Although engineering and mindfulness have common and separate points, employees' reactions are still unclear, such as adapting to this concept and integrating it into their system. As a consequence of that, the study is more challenging and attention-grabbing. In the end, some answers can be given for possible enhanced working environments of employees in engineering management organisations.

## 1.4 Research Aims and Research Questions

The research may be used by organisations and employees who desire to spread organisational mindfulness or experience within their firm. The latest organisational enhancements associated with mindfulness are investigated using both literature review and theoretical assumptions.

Besides, how engineering management companies adapt mindfulness with ease and decision-makers promotes the company's concept needs to be addressed. It is known that there is no standardised approved implementation method for spreading mindfulness across all organisations. The company integrated into the system need to be examined in terms of optimality and consequences. For this reason, systematic measurements are a necessity to obtain accurate results.

Managers also confuse how they manage mindfulness while constructing the settings and elements for implementation. Those who have applied it before can be an example for other companies. While the benefits provide motivation, difficulties encountered can also provide a warning in advance. Hence, the current situation of the stage (in implementation or consideration) needs to be examined.

Briefly, the study tries to discover a diverse set of objectives.

*RQ1: How mindfulness should be measured in organisations?*

*RQ2: Why should organisations spread mindfulness within a company? What are the positive and negative outcomes of mindfulness after implementation in the workplace?*

*RQ3: At what stage (in implementation) are most companies currently?*

From a different perspective, each research question directly questions the state of engineering management organisations in promoting mindfulness among the workforces. Discussing and promoting the questions also opens up the space for considering alternative and more expansive organisational mindfulness views. The study consists of a comprehensive literature review and research.

The literature review is divided into three main chapters, and each chapter is also divided into itself to handle the details more efficiently. In the first section, the theoretical background on the concepts of individual and organisational mindfulness is reviewed. The relationship is discussed between individual and organisational mindfulness from two axes: whether organisational mindfulness in some particular way is connected to individual mindfulness and whether individual mindfulness in some specific way is connected to organisational mindfulness. Some attention has already been brought to this concept; the study tries to take a step further in a debate about whether individual mindfulness has a connection with organisational mindfulness or not. Afterwards, mindfulness practices in a work context are explained to give a broader view to the reader. Additively, current methods to measure mindfulness in organisations are analysed to obtain a scientific view.

In the second section, the focus on mindfulness is narrowed to engineering management firms. Theoretical reflections are addressed via summaries and definitions of the mindfulness concept from a corporate view. Empirical findings in organisational interventions are discussed to understand the impacts of mindfulness practices on the work context. Significant organisational mindfulness results illustrate why engineering management organisations need to promote mindfulness amongst the workforce. Fundamentally, the subject is studied in four different areas: Well-being in Engineering Organisations – Managing Risk, Well-being as a Route to Performance, Mindful Decision Making and Power of Resilience.

In the Challenges of Organizational Mindfulness section, misunderstood facts about both individual and organisational mindfulness are debated. Empirical studies and real-life examples in engineering management companies that hinder implementation mindfulness so far are included.

After the literature review sections, research about how engineering organisations

handle organisational mindfulness and are willing to attend mindfulness training is discussed with a research study. The content of the research, results and the discussion of results are explained in detail by dividing into sections.

Finally, in the last section, a summary is made about the whole study and future research opinions.

## 2. STATE OF ART

### 2.1 Mindfulness

The term mindfulness roots from the Pali language: 'sati' or "smrti" in the Sanskrit language, which infers to being full consciousness of presence (Bodhi, 2000; Nyaniponika, 1973). The concept comes from Buddhist traditions, and it shares a conceptual kinship with several ideas from a philosophical and psychological background, including ancient Greek philosophy and modern Western view. Although mindfulness views are diverse, each one seeks to answer the same problem: consciously living in the moment. As a common feature, awareness and attention build the mindfulness foundation to acquire consciousness. Apart from this general definition, different institutions and leaders have various thoughts on defining mindfulness characteristics. Only the most relevant definitions and remarkable debates are included in this paper. Both ancient and modern detailed definitions of mindfulness can be found in Appendix A. Mindfulness can also be defined as awareness of present events and experience receptively and attentively (Brown and Ryan, 2003). The simple definition is a basis for many traditional and scientific contexts.

It is beneficial to clarify several features of mindfulness to shed light on the nature of mindfulness. Mindfulness acts as a guardian in the face of attachment, pain, jealousy and reluctance. By doing this, mindfulness receives help from returning inside. Through mindfulness, individuals have a chance to examine their body, feeling, mind and also spirit. As it permits direct contact with events as they happen, it creates a sense of the world by seeing it from the heart, which brings kindness to individuals' behaviours and thoughts. It is essential to emphasise that mindful individuals prevent themselves from harming themselves and other individuals.

As mindfulness has a diversity of definitions through the number of depictions, several levels need to be examined. However, the study's core intention is to examine workplace events by considering mindfulness, which can be addressed with two directions: individual mindfulness and organisational mindfulness. The following sections of the study sought to examine the concept of mindfulness in organisations, primarily by drawing upon both individual and organisational beliefs, attitudes and expectations.

### 2.1.1 Individual Mindfulness

Interest in individual mindfulness and its beneficial effects has quietly exploded in recent years by lots of researchers. Defining individual mindfulness is not an easy task since each author offers a distinctive description. There is an ongoing argument between scientific and ancient traditional points of views, and at the same time, the debate also follows within these groups. This section is not given to resolve the discussion. As presented below, it is given an inclusive view to indicate the significant components and ideas of individual mindfulness to understand mindfulness in organisations.

In scientific researches, a basic definition of individual mindfulness is stated as not living in automatic pilot mode, in other words, "paying attention in a particular way: on purpose, in the present moment, and non-judgmentally" (Kabat-Zinn, 1994). All other modern definitions and conceptualisations are formed by taking inspiration from Kabat-Zinn's definition. The researches that emanate from mindfulness and mindlessness may guide us to understand the concept within mindfulness literature. According to Langer, mindless behaviours are similar to acting as a program in a single-minded rigid way regardless of conditions. On the other hand, mindful individuals are open to unexpected circumstances as they can live in the present with being sensitive to perspectives, behaviours and senses (1989). The state of individual mindfulness can be reached through physical or kinaesthetic senses, including five senses (taste, hearing, sight, smell and touch), emotions and cognitions. The primary aspects of mindfulness can be stated as five core skills: *observing, describing, acting with awareness, non-judging inner experience, and non-reactivity to inner experience*.

*Observing* refers to noticing the internal and external experiences, which enhance individuals' quality of awareness of the present moment (Baer et al., 2008; Brown et al., 2007). *Describing* serves features reflecting present awareness, along with identifying thoughts, feelings and other all perceptions. In this way, intentionally, individuals commit themselves to be in the present moment and begin consciously to act with awareness in their daily experiences, in other words, daily attitudes. It is noteworthy that mindful awareness can be defined with *non-reactivity to inner experience* as it helps not to be down with any feeling or thought. Practising mindfulness enables individuals to be more objective in their daily routine as they allow themselves to experience the actual reality (Shapiro et al., 2006). Individuals also begin to learn to assess reality when they exit autopilot mode. Baer and

colleagues define *non-judging inner experience* as having a conscious accepting attitude towards emotions and thoughts without evaluating (2008). Similarly, some researchers conceptualise individual mindfulness as a capacity and/or state related to adopting an open attitude by eliminating judgment from feelings and thoughts (Glomb et al., 2011; Sutcliffe et al., 2016).

Despite the various definitions of individual mindfulness, studies of mindfulness have shown many positive outcomes. For instance, stress reduction controls anxiety improves focus, attention and communication. As individual mindfulness enables a non-judgemental perception, it provides an immediate self-appraising system by looking at the bright side of situations, which reduces individual stress levels (Weick and Sutcliffe, 2006; Hülsheger et al., 2013). Treating stress and anxiety is one of the significant fields of mindfulness study, and there are proven results that mindfulness affects to reduce the individuals' stress. Being mindful is directly related to attention and awareness (Weick and Sutcliffe, 2006; Hales et al., 2016), which empower individuals in their daily activities such as productivity. Besides, Capurso propounds on the dramatic effects of neurocognitive and the psychological effect of mindfulness; being mindful impacts creativity as mindfulness has a significant influence on attention, perception and divergent thinking (2014).

From a more scientific perspective, mindfulness can influence individuals' brain cells such as Hippocampus, this brain component responsible for learning, short-term memory, long-term memory, introspection, emotional intelligence and self-awareness (Amaral et al., 2007). Various examinations are conducted during mindfulness programs, and according to MRI scans, the grey matter of the Hippocampus of participants is increased compared to the time before the mindfulness program. The results also demonstrate that the grey matter of the Amygdala is shrunk. Amygdala is the brain's fight-or-flight centre that has a role in stress and anxiety, and with mindfulness, the structure of brain cells change and reduce the ability to create stress. Besides, research states that mindfulness helps alleviate stress as individuals act less panicked and reactive (Hölzel et al., 2010).

Figure 1 explains how mindfulness impacts individuals' behaviours, thoughts, and emotions in a scientific approach with a process flow. Habits are related to comfort zones, and without a trigger, individuals do not tend to make an effort for any change. In the case of a trigger, individuals' inner and outer worlds are engaged.

Individuals first begin to recognise the surroundings and connect with the outside,

which can be defined as body awareness. Afterwards, they bring their attention to thoughts and sensations, which affects daily life. The preferences and behaviours of individuals are performed with mindfulness. Subsequently, direct contact with the present moment provides to cultivate thriving qualities of mind. Therewithal, advantageous effects can be observed on individuals, such as open awareness, proper understanding and skilful actions.
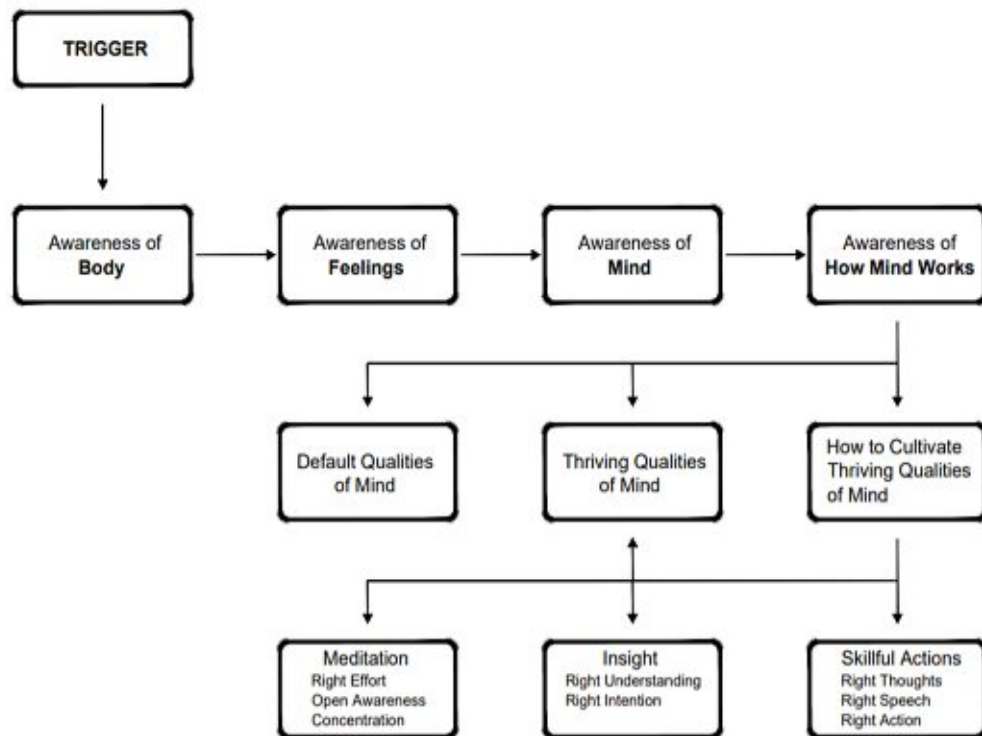


*Figure 1: Mindfulness impact process, adapted from: (Goldstein, 2016)*

Individual mindfulness has a significant role in building organisational mindfulness since collective mindfulness cannot actualise without individuals' adoption. As a result of various positive outcomes of individual mindfulness, the multi-level concept aroused interest by researchers. The above analysis conceptualises individual mindfulness as a state. Thereinafter, some light is shaded on the conceptualisation of organisational mindfulness and its outcomes.

### 2.1.2 Organisational Mindfulness

In this section, the conceptualisation and background of organisational mindfulness are clarified. Mindfulness in a workplace is a multi-level concept, and it can be defined as (Weick, 2001):

*"The combination of ongoing scrutiny of existing expectations, continuous refinement and differentiation of expectations based on newer experiences, willingness and capability to invent new expectations that make sense of unprecedented events, a more nuanced appreciation of context and ways to deal with it, and identification of new dimensions of context that improve foresight and current functioning."*

At an organisational level, employees' expectations need to be adaptive and innovative to cope with the workplace's changing environment when a bottleneck arises. Collective mindfulness offers new perspectives at every level of the organisation. In this way, the system can be manageable under instabilities and take some precautions for severe occurrences. The mindful concept is a cognitive process of labour and can be compatible, flexible and concentrate on the best advantages by considering strengths, weaknesses, opportunities, and threats of an organisation. Thus, being a mindful organisation handles the potentials and challenges in a resilient and constructive manner.

Weick and colleagues' study is the pioneer of the context of organisational mindfulness. They introduce the term collective mindfulness with five principles (1999), and thanks to these principles, organisations can appraise themselves by detecting threats and strengths and preventing undesired situations (Vogus and Sutcliffe, 2012). Moreover, these principles are grounded in explicative capabilities for work and represent the basics of organisational well-being and resilience.

*1) Preoccupation with Failure*

*2) Reluctance to Simplify Interpretations*

*3) Sensitivity to Operations*

*4) Commitment to Resilience*

*5) Deference to Expertise*

These five points assist firms to be a mindful organisation and provide an environment with compassion, empathy, awareness, and calm. *Preoccupation with failure* is the state of active consideration of errors and mistakes. From a certain point of view, failures need a system to cover sudden errors, uncertain items, risks, and deviations. According to Weick, this principle can be defined as 'is a pre-occupation with maintaining reliable performance, and reliable performance is a system issue' (2015). For this reason, employees need to monitor their tasks with

full awareness of even the most minor failures. Secondly, *reluctance to simplify* interpretations illustrates the complexity of organisation environment and task content which provides various interpretations by divergent understandings in an organisation. Simplifications of interpretations may cause undesired risks like losing diversity. Thirdly, *sensitivity to operations* relates to a feature of a mindful institution. The front line employees need to exhibit awareness and recognise the present moment state and develop a tendency to the position's future progress (Hopkins 2002). In mindful organisations, front line employees promote a system picture of the organisation, and their awareness due to present and future helps prevent some accidents and failures. In other words, the point of views is shared to obtain a big picture of the system notion of organisation and prevent failures. Fourthly, *commitment to resilience* explains that all desperate unexpected circumstances cannot be prevented. Specific errors may not be deactivated in mindful organisations, but employees need to be aware of them to minimise the effects. With this principle, an organisation can be prepared for potential risks by predicting before they happen (e.g. organising temporary problem-solving teams). Even if an organisation faces such dangerous situations, they can quickly and adequately stop the escalation of consequences. Lastly, *deference to expertise* allows experienced employees to decide an emergency state of the organisation. In those situations, the functions carry out the activity regardless of speciality or hierarchical positions.

Similarly to individual mindfulness, the basis of organisational mindfulness is performing awareness (according to *preoccupation principles with failure*, *reluctance to simplify* interpretations and *sensitivity to operations*). The principle of *preoccupation with failure* is directly connected with paying attention to any sudden circumstance. In other respects, principles of *reluctance to simplify* and *sensitivity to operations* underline the importance of sensitivity, encouraging employees to approach the tasks/operations in as much detail as necessary. Principles *commitment to resilience* and *deference to expertise* serve a purpose by developing a pearl of organisational wisdom and maintain features and necessities for organisational mindfulness (described in more detail in section 2.2.4).

Five principles are interdependent and cannot operate single-handedly. Additively, while they manage networks, they assist organisations with complex system points of view and maintain continual resilience within an organisation with a collective mindfulness notion. It is noteworthy that mindful organisation can be more sustainable and resilient with these five principles in managing unexpected

circumstances (Weick, 2006).

Being a mindful organisation can be achieved by considering both mindful organising and organisational mindfulness. Mindful organising is a dynamic social process of behaviours and intentions that need to be carried by an organisation's members. On the other hand, organisational mindfulness endures more organisational characteristic and have less ongoing actions. Organisational mindfulness needs to perceived both a state and an ability that can be motivated and maintained by leaders through particular social processes, such as recognising current or new employee perspectives or being prepared for future events (Sutcliffe et al., 2016).

One thing that needs to be highlighted is that mindfulness at the workgroup and department level may create a gap, and it may be fulfilled by only the acts of organising constituting mindfulness. It is claimed that mindful organising results from bottom-up processes enact the context for thinking and action on the front line, which needs to be continuously reconstituted (Vogus et al., 2007; Weick et al., 2007). Tim Vogus and Kathleen Sutcliffe introduce a model to explain how these principles generate a mindful organisation (2012). The model also clarifies how 'organisational mindfulness' can be developed by 'mindful organising'. A top administrator is fundamentally responsible for performing 'organisational mindfulness' for obtaining strategic consequences in the workplace. Employees who concentrate more on operational results at the front line level primarily undertake 'mindful organising'. A middle manager works as a bridge between these two organisational levels (top administrator and front line employees) and is responsible for interpreting, reinforcing, and enabling mindful actions. On behalf of organisational mindfulness, both strategic and operational activities are essential on all levels. Top administrators need to envision the conceptualisation, and then middle managers translate it for other levels, especially for front line employees. At this level, mindful actions need to be taken with enhanced functions and daily work routines by front line employees. Briefly, while top administrations lead and support these five principles for strategic organisational projection, middle managers interpret these principles for organisational operations. The explanation of how 'organisational mindfulness' can be developed by 'mindful organising' is also summarised in the figure below (Figure 2).
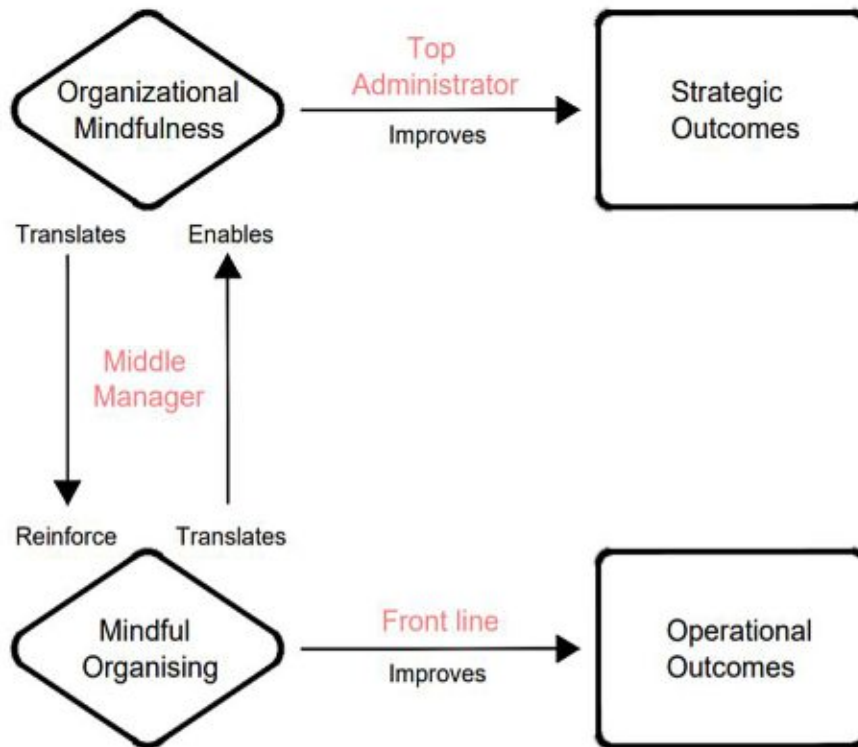
*Figure 2: Organisational mindfulness and mindful organising, adapted from: (Vogus T & Sutcliffe K 2012)*

Organisational mindfulness is performed in various ways according to the variability of the sectors. Sectors need to be seen as different systems as each has its dynamics and challenges due to its structure; thus, the needs and way of maintaining their processes may differ. The discourse of mindfulness in each sector needs to be debated according to the significant characteristics of sectors.

From a general point of view, organisational mindfulness provides employees improved focus, high productivity, enhanced creativity, better communication, reduced work-related stress and enhanced decision-making processes (Fiol & O" Connor, 2003; Riskin, 2004; Hopkins, 2002). In line with these results, interest in mindfulness in the workplace has increased, especially within eminent firms (e.g. Google, Apple, Intel, McKinsey and Company)

Adaptation of mindfulness is a challenging process for individuals and organisations during the implementation. Challenges faced by companies in this process are expounded comprehensively in the Challenges of Organizational Mindfulness section. Some communities (e.g. The Mindfulness Initiative) help the organisations adopt mindfulness by embedding their company culture approach. In the sections

that follow, how organisations accomplish mindfulness within the organisation and their methods are examined.

### 2.1.3 The Relationship between Individual and Organisational Mindfulness

Before explaining the link, the existence of this relationship needs to be questioned. Even though the concept of organisational mindfulness is rooted in the individual context, the relationship between organisational and individual mindfulness is still complex and unclear. The existence of the relationship can be proved with simple logic. It is known that individual behaviours and experiences in any event, whether acting individually or in a group, influence the organisational environment. Positive behaviours and experiences lead to enhancement in productivity, performance, and organisational communication, but otherwise, a few compelling individual experiences also disturb the organisation. Similarly, organisational attitude and behaviours can inspire individuals to be more efficient and satisfied while reducing turnover. This study attempts to shed light on individual and organisational mindfulness connection features from a theoretical perspective for understanding organisations' mindfulness situations better.

There has been minimal attention to examining the relationship between individual and organisational mindfulness. Even though the notion of organisational mindfulness takes inspiration from studies on individual mindfulness (Langer, 1989) and discusses that organisational mindfulness could rapidly influence individual mindfulness, the necessity of individual mindfulness to be organisationally mindful is still questioning. Hereunder, a single mindful person may induce organisational mindfulness in the workplace. Additively, it is sceptical whether there is always a need for a supportive leader, teacher to observe organisational mindfulness outcomes.

This section discusses the connection between individual and organisational mindfulness and the arguments arising from this relationship. First, how individual mindfulness activities influence organisational mindfulness and how organisational mindfulness activities influence individual mindfulness are questioned; afterwards, a theoretical framework is given to a more profound understanding of how the relationship serves in a workplace.

#### 2.1.3.1 The Impact of Individual Mindfulness on Organisational Mindfulness

Individual mindfulness is a set of internal psychological processes of individual

activities. In opposition to individual mindfulness, organisational mindfulness is more related to social practices and has relatively stable functions and processes (Ray et al., 2011; Vogus and Sutcliffe, 2012). Developing organisational mindfulness is not an easy task as organisations comprise procedures, functions and concepts.

One discussion remarks that failures or accidents are not entirely unexpected; they give organisations signs before   (Weick and Sutcliffe, 2006). Attention to possible accidents needs to be present continuously and integrated into employees' daily routines and procedures. This situation also builds a safe foundation for mindfulness within an organisation. In this way, organisations may react in a shorter time and act in a broader variety other than surprise and unsteadiness. In addition, rearranging the existing routines and practices lead employees to more extensive preferences, and in this manner, they can perform effectively (Levinthal and Rerup, 2006).

Individual mindfulness is based on employees' skills and progress based on their emotional intelligence, interest, and beliefs. In other respects, organisational mindfulness focuses on improving the organisation by eliminating undesired situations and seeking new opportunities. The existence of the relationship can be pleasant as organisational mindfulness is wholly dependent on employees' mindfulness. The term has no meaning within the organisation without individual participation. Besides, improving individual cognition and perception also means that development started to spread within an organisation.

By initiating top management and spreading to all other levels, mindfulness builds a state for organisations by remarking about expectations, support and rewards. Implementing organisational mindfulness can be achieved with daily management routines, human resources interference and employee teams. Individuals' perspectives can offer more optimised consequences. Moreover, the communication between leaders and employee teams is essential as it enhances operations and employee behaviours, especially in uncertainties (Hülsheger et al., 2013). It is proved that individual mindfulness influences individuals to be more aware of themselves and adapt others' perspectives in crisis moments.

According to Hülsheger and colleagues, individual mindfulness can make organisations more tolerant of heavy workloads. As employees may handle more work and desire to learn more, they become more ready for crises and may be satisfied more with their jobs. The argument is supported by research that discusses the correlation between mindfulness and the state of mind. The positive impact

leads employees to work enthusiastically, which is desired by every organisation. Additively, by individual mindfulness, turnover rates and sick days are reduced (Dane and Brummel, 2014).

Outcomes of individual mindfulness such as productivity, concentration and task performance give clues about the importance of employee mindfulness for organisational mindfulness. Weick and Sutcliffe confirm that mindfulness enhances individuals' attention and suggest that this also develops problem-solving abilities (2006).

By company aims, individual mindfulness needs to be supported to take benefits from this situation organisationally. Thanks to individual mindfulness, many employees in the organisation help to improve the organisation.

### 2.1.3.2 The Impact of Organizational Mindfulness on Individual Mindfulness

In the opposite direction, organisational mindfulness has the potential to affect individual mindfulness. According to Weick and colleagues, as mentioned in Section 2.1.2, organisational mindfulness can be defined along with five principles that help understand how organisational mindfulness influences individual mindfulness (2006).

*Preoccupation with failure* is the first principle that supports individual mindfulness by considering small things with paying attention. The perception of signals of small changes or sudden failures occurs without any judgement. Relatively, *the reluctance to simplify interpretations* requires the ability to recognise subtle details and inconsistencies between situations to judge whether they are sufficiently analogous to an original situation upon which particular practice or rule is based. As such, the principle requires a certain level of individual mindfulness to filter whatever needs to be noticed when it occurs. Similarly, *commitment to resilience* impresses on mistake recognition and concentration. Individual mindfulness aimed at staying in the present moment, recognising present moment mistakes, can guide the future. Lastly, *deference to expertise* provides a concentration by reassigning the power of decision-makers within authorities. It is debated that when employees pay attention to an error (or failure), do not simplify and concentrate on reliability, the individual mindfulness increases. Therefore, from the top-down, preparation should be made for mindful behaviours at all organisation levels (Vogus and Sutcliffe, 2012).

Additively, leadership in an organisation has a profound impact on employees'

mindfulness. Leaders may support their teams to develop new perceptions regardless of their success and failure scenarios. According to research, mindfulness-based practices provide improved cooperation within an organisation and individuals to recognise problems and potential enhancements (Madsen et al., 2006). The richness of skills in observation and describing is a demonstration of improved individual mindfulness. Strategies of middle management in organisations increase employee mindfulness and naturally alter individual behaviour (Vogus and Sutcliffe, 2012). Thus, this situation demonstrates that organisational mindfulness and mindful organising directly impact individual mindfulness and individual attitude.

### 2.1.3.3 Reflection of Relationships

Previous sections draw a background of individual mindfulness and organisational mindfulness concepts and give details about their relationship in both respects. During the section, the reflection of the relationship and its effect on organisations are analysed by considering Kelemen and colleagues' recent research (2020). It should not be forgotten that both individual and organisational mindfulness unveil the individual's capacities. It is essential to be aware of the relationship between them to maximise the impacts in organisations.

Although individual and organisational mindfulness have diverse necessities and processes, both concepts stemmed from awareness in several ways. Without concerning a goal, awareness becomes a perception in context and mindful. The state may not contain judgment but is related to taking one's perception in their context. In this manner, qualitative awareness can be achieved and separated from the usual awareness.

The relationship between individual and organisational mindfulness fundamentally indicates that organisational mindfulness brings along individual mindfulness. Regardless of the hierarchical level in an organisation, mindfulness on a high level means that at least one unit on a lower level practice mindfulness or be mindful. On the other hand, mindful lower level in an organisation may not cause mindfulness on higher levels. Briefly, the mindful lower level is insufficient to provide mindfulness on a higher level, but mindfulness at the lower level is necessary to a mindful higher level. This point of view is valid only for the top to bottom structures, not bottom to top in a firm (Figure 3).

The nature of mindfulness may build up the connection between individuals and the organisation. It should be stated that observing is not enough to implement

mindfulness (e.g. procedure, behaviour) in an organisation; a reference may guide the organisation before starting. The lower level can be used as an example or reference to manage the inputs and see higher-level results. At this point, it is necessary to emphasise the importance of leadership concerning mindfulness. Leaders have the authority for selecting these references and application processes. Furthermore, they have the opportunity to observe the effect by creating small systems. Thus, mindful insights such as using a department as a reference can be spread successfully according to an executive unit's decisions.

Besides, personal interest in mindfulness has beneficial effects on organisation mindfulness, and it assists in forming and maintaining new routines and regulations. Regardless of hierarchy, individual mindfulness may influence an organisation. There is no certainty in this sentence because it can affect organisational mindfulness when employee aim is under or identical with the organisation aims. Otherwise, no effect can be observed in organisational processes. To illustrate, mindfulness-based programs in an organisational context are sometimes designed for specific skills (e.g. attention training). According to their own volition, employees use these programs' knowledge or skills in their business life. This situation emphasises the importance of the influence of individual mindfulness on organisational mindfulness again.

Figure 3 illustrates three levels in an organisation (can be more) to show the relationship impacts. At the top level, organisational mindfulness is stated and connected to mindfulness of a lower level Y. It can be understood that organisational mindfulness may arise in the presence of mindfulness of Y. Respectively, to obtain mindfulness in Y, there has to be individual mindfulness. Nevertheless, mindfulness on lower levels gives no guarantee to provide mindfulness on higher levels, as in Y example's mindfulness. Thus, it is clear that to obtain mindfulness on a higher level, mindfulness on every level, which is below the higher level, is a requirement. In addition to that, additional indicators are needed for this mindfulness system notion. X and Z are used to demonstrate the additional indicators required for higher-level mindfulness. These additional factors serve functions and processes at the operational level, management level, and strategic level; their exact tasks are still unclear in an organisation but have significant influence and limitations on a higher level of mindfulness.
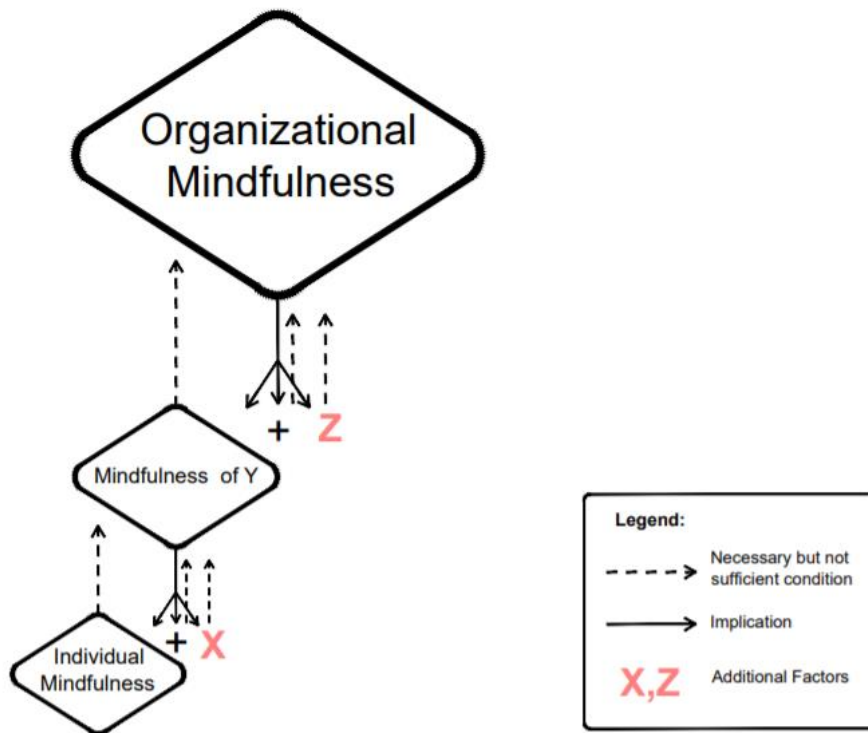
*Figure 3: Connection between individual and organisational mindfulness, adapted from (Kelemen, 2020)*

**2.1.4 Work-Related Mindfulness Practice**

This paper focused mainly on empirical researches, case studies of workplace implementations, surveys and experiments, and their un/foreseen outcomes. In this part of the study, how mindfulness is learned in a work context is discussed. Various thoughts about work-related mindfulness practice have given, and related researches are discussed in this section. Explanation of these mindfulness-based programs is essential for this study. It is questioned how these programs affect employees' daily working life and whether employees desire to participate in these programs in the future.

Most mindfulness programs have two kinds of roots: the traditional Buddhist approach and researched based secular approach (e.g. MBSR, MBCT, MI). Each of these two views has its characteristics and some different points with each other. For example, according to traditionalists, work-related programs may be too far from "mindfulness" as it does not require all traditional exercises. Another criticism is that mindfulness helps alleviate employees by teaching them to handle stress rather than handling a working environment in changeable and unhealthy working conditions.

Broadly four types of mindfulness organisational practices are examined in this

section: individual practice, university courses, MBSR programs and corporate programs. It should be indicated that there exist more than those four forms, but the most relevant ones are selected according to the study (Reb, 2015).

First of all, individual mindfulness practice needs to be readdressed in this section. Even though individualist topics should not appear under the organisational practice section, individual mindfulness program can be still evaluated as work-related since these practices affect individuals' work-related attitudes, thoughts, perceptions and emotions. Personal characteristics and abilities are the critical attributes in a system of organisation, and the power should not be underestimated. A harmful pattern in an organisation may cause delays and failures; thus, employees' traits need to be monitored during recruitment and working life. Individual mindfulness may be considered relevant as its effects can be spread throughout the workplace.

In some cases, individuals may consciously choose mindfulness for work-related purposes (e.g. working mindfully for increasing performance). On the other hand, the effects of individual mindfulness may unintentionally affect individuals' work-related mindfulness. For example, trying to be more mindful in coping with anger can also influence workplace relationships.

Second, mindfulness can be taught before individuals become employees or managers. As there is an increasing interest in mindfulness and the organisational proceeds, mindfulness engaged in educational settings is questionable. Although a few business schools (MBA and executive MBA) start to give place mindfulness in their curriculum, most institutions are unwilling to give these practices as a lesson (Bush, 2011). Many people still have prejudices about mindfulness, and business materials like production planning, logistics, or management seem more self-evident according to the long term consequences of mindfulness. They unconvinced the outcomes of mindfulness and related practices, so these institutions do not desire to change the current curriculum structure. The effects may not be observed directly in the school's success, and every profit-making institution considers the reflection on the investment made.

Moreover, institutions are sceptical of the students' and parents' reaction as some may perceive with misunderstanding (e.g. mindfulness as a practice of religion). This situation may lead them to question the scientific approach and quality of the institution. Notwithstanding, some courageous institutions try to adapt mindfulness for both during the education period and afterwards. Although most impacts on both

individuals and institution success can be observed in the long-term, they still invest in these programs to prove this debate (Ray et al., 2011; Vogus & Sutcliffe, 2012). Teaching mindfulness in schools is still far from the desired point; that's why integrating and implementing mindfulness into these schools' curriculum needs to be worked on in the future.

The third type of work-related mindfulness practice is MBSR (Mindfulness-Based Stress Reduction) courses. MBSR was formed by Jon Kabat-Zinn at the University of Massachusetts Medical Center and is an 8-week client-centred mindfulness program that comprises breathing practices, mediation techniques, basic yoga and some other activities. Participants in the MBSR program need to meet weekly session for new practices and feedbacks. Additionally, the program contains individual homework; participants need to practice the guided meditations, watch instructive videos and read some materials on their own time, which takes approximately 45-60 minutes per day, six days per week. In some extreme cases, such as financial limitations or logistical reasons, an online version of MBSR is also offered. Online MBSR classes also offer group interactions with live group support. Yet, for the most part, individuals attend an individual course, or managers invite lectures to the company for a group program.

During MBBSR courses, participants are trained to analyse their thought, cognition, behaviour, and emotion patterns through mindfulness exercises at the individual level. During the MBSR program, researchers who have given their lives on this concept are taught (e.g. Jon Kabat-Zinn, Shauna Shapiro, Kristin Neff, Lynn Rossy, Ann Weiser Cornell, Daron Larson). The curriculum includes basic beginner yoga flows, body awareness practices, breath-focused meditations and mindful meditations. Besides, participants are expected to keep a journal each day to bring mindful awareness to their routine activities. For example, during a boring meeting, this is an undesired situation for employees; individuals experience differently after MBSR courses. MBSR gives insight into being more accepting, kind, aware in defining situations, feelings, thoughts, and sensations. When individuals get used to this perception pattern, it will spread to all activities in their lives.

MBSR aims to enhance individuals' well-being instead of suffering stress, diseases, disorders, pain and exhaustion. Likewise, stress and burnout are the most known problems in organisations. On average, 13 million working days per year in the United Kingdom are lost because of employees' anxiety and burnout (Flaxman and Bond, 2006). Besides, individual stress can be contagious within a firm, where a

highly stressed out individual can negatively impact other employees, such as disrupting task performance and productivity (Maslach et al., 2001). As MBSR teach self-management by breaking the cycle of cognitive processes with mindfulness, individuals can focus on present non-judgementally, be more sensitive to their environment and have improved self-compassion, which alleviate stress and burnout.

The success of MBSR is related to the adaptation/acceptance of individuals for the mindfulness concept. For first time learners, the structure of MBSR may seem unusual and may take time to get used to it. For those familiar with this concept, there might be a chance to correct the misunderstanding (if any) and improve themselves in this area.

In addition to these, corporate mindfulness programs are the fourth mindfulness practice within an organisational context. There are currently two types of corporate mindfulness programs. Basic mindfulness practices are the first type and can be achieved by group yoga exercises, breathing techniques and body scanning. The second type is the practices targeted for the work context, such as a mindful conversation with colleagues, mindful breaks, mindful lunchtime, mindful meeting, mindful emailing or mindful project management. It can be said these two types are similar to formal and informal practices of mindfulness. Still, the difference is that all activities that incorporate mindfulness programs are formed by considering company structure. These exercises help employees be more mindful of their work routine and benefit the organisation (Hülsheger et al., 2013).

Under normal conditions in the organisational context, corporate mindfulness programs are invested by firms and the program setting is created according to organisational objectives and culture. In these programs, every aspect of mindfulness needs to be covered. Still, the points related to organisational goals are usually more emphasised, such as increasing task performance, loyalty to the firm, and reducing turnovers. However, other aims, like employees' well-being, are mostly covered at the end of the program as the firms put their low rank in priority. At this point, individual mindfulness practices may assist in the face of desired individual outcomes.

These mindfulness programs may be an effective way to enhance employees in both as an individual and employee. For example, through mindfulness practices, a person may gain insight into the work environment's ethical behaviours and confidently expresses the undesired and harmful implications (Ruedy and Schweitzer, 2010).

The example illustrates that the individual protects her employee rights and does not allow oneself to be harmed.

Nevertheless, there remains considerable debate from an economical viewpoint whether greater employee mindfulness overbalances the programs' investments. The decision is under the responsibility of decision-makers in the organisation and can change its current and/or future condition. Besides, some managers may focus on the enhancements that show their effect in a short time. However, the investment is also a long term interest in the company if they evaluate it effectively.

Because of the variety of approaches and programs, there is still no dominant mindfulness program in a work context. Even though most programs are similar to the MBSR program, mainly programs are formed by considering the workplace. Research on standardised mindfulness program is still in its infancy in the organisational context. As it is known that there is no one way, even individually, it is complicated and complex to prepare a standard program for every company. Moreover, each corporate environment may have different desired outcomes from mindfulness. If the aim is to reduce the stress level within an organisation, MBSR can be a good option as it developed for effective stress management.

On the other hand, if the aim is to enhance emotional intelligence, MBSR is not a good choice. A more specialised program like Inside Yourself mindfulness-based emotional intelligence program can help the company's needs. Not only between companies but also between organisation units may have different needs from mindfulness; thus, different types of mindfulness programs may be used in different company hierarchical levels (Chaskalson, 2011; Tan, 2012).

Additively, motivation raises a challenge for employees as they may not participate in their own volition. It can be troublesome for employees to adapt mindfulness if their managers force them to attend these programs. Arguably, the more common case may be that every employee has his/her own pace in the learning process, and the duration is questionable, whether it is accurate for everyone. Such lack of motivation causes decreasing performance and organisational behaviours. In many cases, when employees are forced to act as a group, they tend to lose the organisation's trust and motivation. In some mindfulness programs, there are both group and individual practices to reach general expectations more healthily.

As can be observed, mindfulness-based programs raise challenging and attractive questions for researchers to answer. Impacts need to be adequately measured for the continuity and development of programs. The following section explains how

mindfulness can be measured according to the mindfulness programs.

### 2.1.5 Measuring Mindfulness

Finding an accurate measurement of mindfulness is not an easy task, but it is essential to understand the whole concept and current programs. In this research, measuring mindfulness is given to have a broader view of implementing and monitoring mindfulness.

Several scale-based approaches, techniques, and measurements are mentioned to capture individual and organisational mindfulness concepts through the literature review. These scales, methodologies, and merits have been reconsidered with a recent study by Bergomi (2013). Figure 4 offers a framework for combined scales and perspectives as a summary of the section.
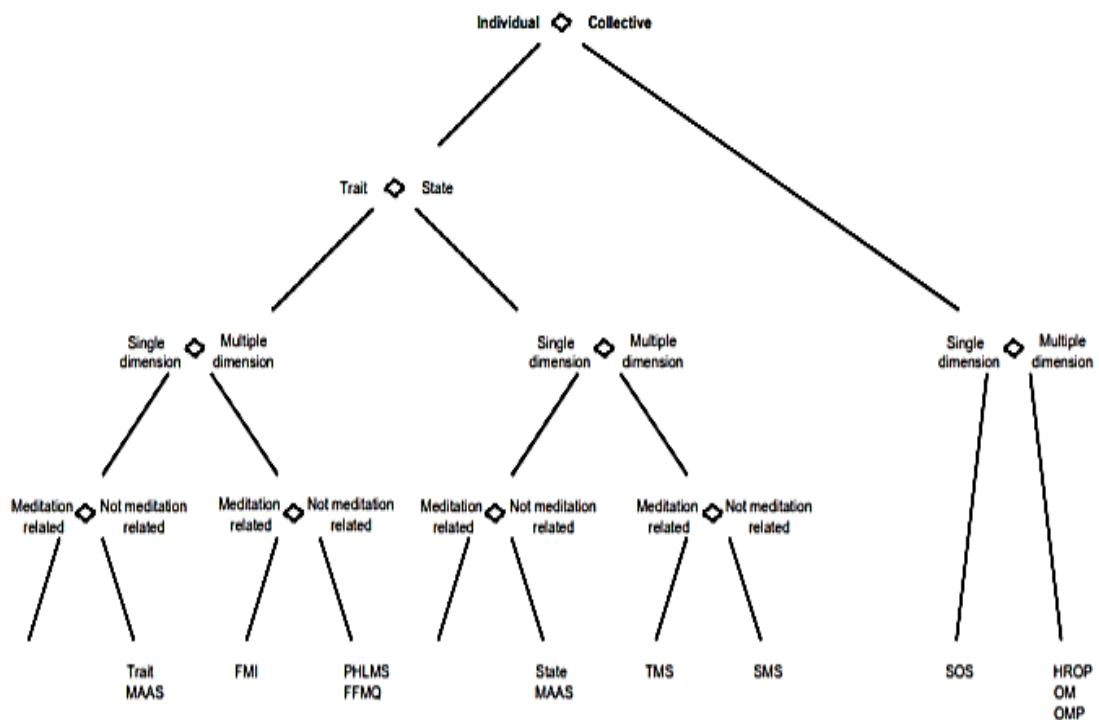


*Figure 4: Measures of the mindfulness decision tree, adapted from (Sutcliffe, 2016)*

Langer's examinations are accepted as pioneer studies for assessment mindfulness (Langer Mindfulness Scale) to other researchers and form the fundamental idea in all other researchers (1989a, b). At the individual level, mindfulness is measured by how respondents stay in the present moment. Toronto Mindfulness Scale and State Mindfulness Scale are the most common scales that researchers have developed to measure individual mindfulness, which conceptualises state level concepts. The experiential sampling method is used to assess state-level mindfulness by asking

individuals to report their feelings and decisions at random times. The purpose of these interviews is to analyse how they engage in the present moment by specifying mindfulness level during a task just completed or in meditation just attended. In a related manner, researchers examine whether an individual's mind is on the task in the present moment or not (Tanay and Bernstein 2013; Killingsworth and Gilbert 2010; Lau et al. 2006).

Besides state level, trait level correlational research is also used to assess and conceptualise mindfulness in health indicators, worker well-being and task/job performance. These studies mainly based on how individuals tend to be mindful of their organisations and their task context (Reb et al., 2015; Dane and Brummel, 2014).

Additionally, researchers' definitions of mindfulness need to be specified as definitions of individual and organisational mindfulness varied with different parameters. To exemplify, if mindfulness is considered as being in the present moment, MAAS (Mindful Attention Awareness Scale) can be used (Brown and Ryan, 2003); if the concern is the multifaceted perspective of mindfulness, then Five Facet Mindfulness Questionnaire (Baer et al., 2008) or the Freiburg Mindfulness Inventory (Buchheld et al. 2001), makes sense to use.

Researchers' perspectives form the design of the assessment. Concerning measurement of mindfulness, most of the researchers tend to use meditative exercises to develop mindfulness is another key to measure mindfulness as it is proved that meditation brings mindfulness and developing the concept among participants is an easy way to conduct in studies (Lau et al., 2006; Walach et al., 2006). On the other hand, the Philadelphia Mindfulness Scale and MAAS are studies that have no familiarity with a meditative training program. The idea behind this is that some studies accept that these practices may not be optimal to scale the concept (Cardaciotto et al., 2008; Brown and Ryan, 2003).

Specialised measurements used only to scale organisational mindfulness need to be addressed. A direct assessment technique to measure organisational mindfulness can be done in two ways: one-dimensional constructs such as the Safety Organizing Scale or a multi-factor measure such as considering every five principles in company mindfulness (e.g., *preoccupation with failure*) (Vogus et al., 2007; Sutcliffe, 2016).

Indeed, Ray and colleagues develop a measure related to Weick's five principles to

understand collective mindfulness better (2011). Earlier, Vogus and Sutcliffe also develop a measure according to five principles and validate that their single-factor measure examines mindful organising (2007). However, the measures do not demonstrate the ideal measurement version of organisational mindfulness but present significant details and points of organisational mindfulness, unique consequences and mindful organising. Ray and colleagues' work is more efficient in researching strategic outcomes such as market innovation and reputation. In detail, this measurement can be used in business schools for the early detection of stakeholders in terms of not only in ranking results (after attending mindfulness courses) of business schools but also on higher aims such as enhanced student well-being and improved creativity. This situation also argues that organisational mindfulness is not measured only in organisations as expected from the name. Teaching the concept in business schools shows a link between them and indicates the variety of areas that can be measured.

Existing measurements are beneficial in obtaining many mindfulness results, but research continues to evolve with additional methods to be created in the future. This section gives an overview of mindfulness measurements with main aspects that help the reader better comprehend in further sections.

## 2.2 Mindfulness in Engineering Management Firms

This section is formed to answer the second research question: why organisations spread mindfulness within the company and what outcomes are obtained after implementing mindfulness. From this point in the study, only engineering management organisations and how mindfulness serves in these companies are analysed. The following sections express various benefits of mindfulness in engineering companies from different points of views. The aim is to obtain an overview of how organisations adapt mindfulness in real-life cases with employees' experiences and opinions.

Developing mindfulness in an engineering management company can be achieved only if employees have an open attitude to adapt to new situations and settings. As workplaces' nature has lots of challenges and constant change and most employees know how to react to ever-changing situations, employees are thought to adapt if they are open. When employees, teams or organisation as a whole engage mindfully with each other, the notion becomes an organisational norm. Additively, routines and exercises of mindfulness programs structure the entire organisation

into a mindful workplace. According to Ray, when organisations refuse to be in autopilot mode and intentionally pay attention, the workplace environment provides a capacity for action (2011). While being a mindful engineering management company brings new challenges, these challenges are essential for evolving.

Even if the researches about organisational mindfulness in engineering management companies are still in the infant phase, there are some proven and potential outcomes of mindfulness in business life and need to be discussed. Consequences in engineering firms are distinguished between three aspects: Well-being and Managing Risk, Well-being as a Route to Performance and Mindful Decision Making.

### 2.2.1 Well-being in Organisations – Managing Risk

Well-being can be defined as a snapshot in the current time of how individuals feel. The modern world brings convenience as well as brings challenges such as well-being problems. It is known that the perception of life events is associated with having high or low well-being. Even though research studies on well-being are still rare, they occupy an important place among employees and leaders in terms of mental health.

In a social entity organisation, employee well-being is a crucial determinant in the organisational system's effectiveness. 'Organisational climate' is used to explain an organisation's morale level through overall conditions and directly related to employee well-being. Organisational climate may change according to every social and economic factor in the organisation: salary expectation, job satisfaction, company culture, stress level, turnover rate, and quality communication. Mindfulness may influence organisational climate and foster to create a more supportive and enhanced working environment.

As organisations' stress level increases day by day, managers are now more concerned with their employees as it is known that stress can give bodily, emotional, and behavioural damages. In the work context, this means that problems may occur in concentration, productivity and motivation. Recent research reveals that organisational mindfulness and worker well-being are positively correlated in a workplace as it impacts work-related stress (Schultz et al. 2014, Roche et al. 2014, Mitmansgruber et al. 2008). A health care organisation case proves that the MBSR program helps employees' stress in work-related risky situations. Risk management in the health care industry may be potentially more significant than in any other

sector as the main concern is human life, which can bring too much stress or chronic stress. After the program, participants reveal that they feel more self-compassion and relaxed as the persistent perceived stress is reduced.

By mindfulness, employees start not to react immediately to a situation anymore, which can be observable in their working routines. In a stressful risky moment, employees become more aware of their thoughts and emotions as they learned from the program. In this manner, they can effectively handle stress in risky moments and may turn risk into an opportunity (Bazarko et al., 2013; Chiesa, 2009). At the individual level, employees who practice self-reported mindfulness can perceive stress and its consequences quickly in their daily routines. Therefore, employees can cope with high-level stress and concentrate more on their task with improved self-awareness and emotion regulation. At the organisational level, task delegation, communication among unities and collective cohesion are enhanced. Additively, mindful team leaders who state more self-awareness become more open to feedback (Reb, 2015).

Secondly, uncertainty is another point that needs to be mentioned under the well-being and managing risk section. Some industries tend to have more uncertainties because of their sector characteristics. Logistics is one of the sectors that contain constant change, competitive, fast-paced and unpredictable tasks. The tasks need to be done under time pressure and considered various factors; the vast majority are not under employees' control. Consequently, employees may feel insecure in their work-life and not have enough incapability of skills and knowledge to supply the demand for their job, which constitutes work-related stress and anxiety. Although enhancements are performed within differing frameworks, still negative consequences cannot be prevented. Features and challenges of the logistics industry require being successful in risk management. Otherwise, employees' well-being is directly affected and the leading cause of disruption in an organisation's processes or failures.

Mindfulness-based practices are a mind-body intervention that exercises the mind to stay non-judgmentally and intentionally in the present moment. J.Montero-Marin and W.Kuyken made a mindfulness-related programme trial on a logistic company to examine the impact of adapting mindfulness on increasing workplace wellness (2020). By mindfulness practices, logistics employees work in the notion of staying in the present, which illustrates that they enhance their capacity to respond in uncertain situations. The state of mindfulness promotes a healthy point of view by

giving awareness to habitual activities. After mindfulness practices, individuals learn to prevent their mind before letting them spin out of control. Own thoughts, feelings and behaviours of employees begin to be seen as alterable, allowing them to experience their lives in a less threatening way. Low well-being activities such as fear, stress, and indecision prevent employees' capacity, but mindfulness emancipates the capacity from them. By this means employees may work efficiently under uncertainties with the help of mindfulness. As the research is performed only in one pilot private company, findings can serve as a template for other interventions in other logistics companies or maybe other sectors.

## 2.2.2 Well-being as a Route to Performance

Improved well-being encourages employees to work harder and in more intelligent ways, impacting problem solving, creativity and productivity. Employee and employer well-being need not be underestimated as it has the potential to affect the productivity and performance of the whole institution.

According to performance skills in engineering management organisations, employee well-being can be addressed with two variables: emotional situations (beliefs and feelings) and work setting. Employees' experience and personality are one of the notable effects of determining employee well-being and performance. Employees need to be supported to feel valued and productive. Otherwise, employees may lose their confidence, satisfaction, and interest to feel unvalued in the workplace. Employee response to these situations is changed according to employee characteristics because how employees cope with these depends on their emotional intelligence. Mindfulness exercises help to understand the way of these adverse situations by considering the underlying reason. By turning their inside, employees can try to solve minor problems themselves with gentle awareness. As mindfulness brings acceptance in the present experience without judging them, employees have new coping strategies and can feel more capable and enthusiastic. Moreover, mindfulness can also improve individuals' abilities and prevent automaticity by cognitive flexibility in emotional fluctuations. In this manner, employees may have higher morale and well-being in the workplace; employees' belief can affect daily performance by changing with a more positive working style.

Moreover, in a short period, as seen in results, employees start to present also voluntary performance (duties other than primary responsibilities). For example, they may voluntarily help other employees be more engaged in an organisation or

promote their working environment. As enhanced well-being means higher morale and motivation, voluntary performances can be observed more than before. In addition, sick days of employees have been noticeably reduced.

Apart from emotional situations, the work setting has a dramatic influence on employee performance through well-being. Factors that reduce performance, such as stress, are more likely to be occasioned by structural difficulties than by an employee/leader unfavourable experience. Mindfulness may help an organisation by enhancing leadership and reducing withdrawal behaviours, leading to improved performance. Thereby well-being provides high performance with improved productivity and more minor withdrawal behaviours such as turnover, burnout, stress, and dissatisfaction.

Besides, consciousness is one of the primary outcomes of mindfulness and essential for employee performance. Quality consciousness is a term to explain the desired skills of high performance. Employees' attitudes need to be good enough to serve high-quality work developed by attention, alignment and awareness (3A). Mindfulness may aid employees in terms of performing these 3A's. As employees gain the notion of being in the present moment, they can filter information with enhanced attention. By practising awareness, employees can be more aware of themselves and the working environment, not only other employees but also systems, processes and products. In this way, employees can focus on their work more effectively and accomplish the tasks more effortlessly productive (Borawski, 2006).

Mindful meditations in the corporate programs aim to train employees to longer span in attention skills. One research illustrates that regularly practising mindful meditations enable improved attention and accuracy during completing a duty with a more significant attention period. In this way, organisations can obtain more qualified task results, which demonstrate job performance. Mindfulness may put the brain patterns into reverse, which is related to worrying, wandering and inattention. Duration of meditations do not need to take so much time as even practising for short periods is enough to observe its benefits. According to research, ten to fifteen minutes of mindful meditation in a day improves memory capacity and concentration after eight weeks, which is a demonstration of the mindfulness impact on employee performance (Sood et al., 2013; Tsai et al., 2018)

Reb and colleagues studied how leaders' mindfulness influences employees' well-

being and job performance (2014). A web-based study is conducted to understand the importance of leader mindfulness at the workplace. It is examined by considering employee work-life balance, emotional exhaustion, job performance, commitment, task performance and job satisfaction. Self-report and ratings of supervisors are used to measure the correlation between mindfulness and employees' performance level. The results illustrate that leaders' mindfulness levels are positively linked with the well-being and performance of employees. Thanks to mindfulness, leaders have enhanced leadership skills, and they can use the skills to build better relations with their co-workers by supporting them, mindful communication and negotiation. As a consequence of that, a healthier working environment can be achieved. Interpersonal relationships may help both employees and leaders and other team leaders, enabling the spreading of mindfulness organisationally.

Moreover, awareness and observing without judgment enable to esteem employees' strengths, directly related to employee performance. If leaders are aware of how they should correctly approach their employees, employees can unlock their full potential. In the literature, such identification is called self-knowledge. Stanley and colleagues prove that collective self-knowledge within an organisation leads to more cooperative behaviour, effective task delegation, and team efficacy; thus, organisational mindfulness can be seen as a need in the firms (2011).

Another obstacle to reaching the highest performance is work-related stress function. To give a real-life example, the finance business world is known for its high-stress working style, considering long working hours, heavy workload and administrative pressure. Over time, employees' job performance weakens; employee health and well-being are also affected in a hazardous way. Research in the finance sector reveals that therapeutic yoga programs can improve individuals' sleep quality, mood, work productivity and stress management as it provides physical relaxation (Wolever et al., 2012). The mindfulness-based intervention needs to be analysed sociologically, according to physiological indicators and biological systems. In this case, physical exercises provide a relaxed body and mind, which lead to better physical and mental health. Sleep quality is related to the mental health of employees and also productivity in the organisations. Employees that get enough sleep tend to work with high performance and more suitable for working in harsh conditions. Various indicators prove that mindfulness can reduce employees' work-related stress and allow employees to express their performance

highest (Heckenberg et al., 2018).

### 2.2.3 Mindful Decision Making

Mindfulness is a valued tool for decision making in the business world. Decision making is the ability to make choices by assessing gathered data and knowledge according to individuals' belief or interest. It plays essential roles in organisations such as planning, management and leadership. Mindfulness may help improve decision-making processes in many areas, including recognition that a decision needs to be made, the formulation of options, confidence in one's ability to make a decision, and the ability to reflect realistically on a decision previously made (Raglan, 2014).

At the organisational level, some characteristics of mindful decision making need to be mentioned. Firstly, ambiguity is a prevalent circumstance in organisations and can put the organisation in a difficult position. Still, decisions need to be taken chiefly with ambiguous information, and the preferences also have ambiguity. Secondly, processes in systems are continuous, and individuals in organisations need to decide with an eye towards ongoing processes. These decisions made have the power to influence the whole system regardless of the organisation's level. Decisions are taken mainly by leaders because of the hierarchy, and employees have to adapt to the leader's decision. However, not all leaders make correct decisions under the stressful nature of the business world. Thirdly, incentives are an essential part of organisational decisions. The decisions of employees may be affected by incentives or punishments. Fourthly, repeated decisions differentiate the decision-making process of organisations from individualistic ones. Leaders may make repeated decisions without using their skills or taking managerial risks to follow the rules and procedures. Lastly, conflict is also a common challenge in decision-making processes in organisations. Authorities have power over decisions that are taken through an organisation. Mostly leader assessments and agenda specify decisions rather than accurate analysis (Shapira, 2002).

Mindfulness may turn these concepts above into new strengths. With high awareness, the structure of the decision-making process can be enhanced. Individuals may recognise that they start to prevent impetuous reactions and be more cognitive and aware of their sensations, behaviours, feelings and environment. According to Karelaia and colleagues, mindfulness in organisations positively influences employees' decision-making stages in identifying, developing,

implementing, and evaluating, mentioned in more detail below (2014).

Mindful decision-makers are able to identify the consequences earlier rather than others. Mindfulness train individual brains to see situations more clearly and less overwhelmed. Before taking any decision, mindfulness provides a pause to individuals to listen to their inner voice. In this way, they act according to their values and goals without giving an undesired reaction. Additively, mindfulness usually assists in identifying decisions, whether it is necessary. In an organisation, employees may take incorrect decisions because of social pressure as they lose the connection with their inner voice. In other respects, mindful employees can identify which decision is correct and necessary, which leads them more successful at work. Besides, mindfulness training such as acceptance commitment therapy or mindful meditation allows for ambiguity, increasing comfort with not knowing and allowing individuals to be better with the uncertainty of decision-making.

Another significant point is that mindfulness provides creative problem-solving skills in an organisation. The attention-based mindset leads employees in terms of open-monitoring and awareness. Research about this topic demonstrates that mindfulness-based exercises give beneficial creative problem-solving results (Walsh, 2013). Examining the habits in the present leads individuals to generate more creative decisions. Mindfulness is a set of processes that provides employees to evaluate new approaches to routine problems, analyze them from a different perspective, and then create solutions to them with creativity.

According to Ruedy, many unethical decisions are made because of a lack of awareness (2010). The study was made to illustrate the impact of mindfulness and self-awareness on ethical decision-making processes. As mindfulness takes individuals' attention to existing autopilot mode, individuals accept the ethical consequences of the decisions they face. According to MAAS measurement results, mindful employees handle their judgements, impatience and frustration easily and perform less in unethical behaviour (e.g. cheating). Moreover, mindful decision-maker employees are less blind than others, such as financial implications, according to ethical evaluations.

Unlike such debates, mindfulness gives another view of the company as a whole. As employees are the biggest group of rule followers, decision making under rules or norms needs to be discussed. Application of a rule or norm usually causes shortening the time duration of employees' decision-making as they unconsciously

solve the problems moderately. However, with mindfulness, the notion of "good enough solutions" may change to the best solutions, as desired. Rules can be a guide for employees as the power of rules brings emotions under control.

### 2.2.4 Power of Resilience

Resilience refers to the strength or capacity to overcome a complicated situation and directly related to individual well-being. As a comparison of well-being, building resilience assists individuals to recover from difficulties in a short time. Humankind can develop new skills but also have the power to bounce back. In other words, in favour of resilience, individuals have a chance to step back and reorganize the process.

Within an organisation, employees are faced with lots of challenges that interrupt daily work routine. Both individual problems, such as illness, traumas or private life problems and environmental complications such as low communication or poor leadership, may have occurred. It may be tough to work under these circumstances for employees, but the tasks must be completed on time and correctly for the processes' continuity. Based on this complexity, it can be said that a resilient system is a need in an organisation. Resilient employees can handle problems more positively and maintain their tasks. It does not mean that resilient employees never stuck in a problem or think in a negative manner, but they can cope with challenging situations sooner as they have the vision of which action serves them best in the long term. Since mindfulness teaches self-awareness, individuals also comprehend the features of resilience. On an organisational level, resilience provides significant benefits to the organization as it directly affects its productivity and performance.

Engineering management organisations need to enhance their employees with qualifications with the scope of resilience, enabling effective communication, high performance and decreased corporate problems like inattention, stress, or turnover. In other words, developing mindfulness in engineering management organisations needs to be addressed by resilience outcomes. It seems a strategic action in organisations as the intention is to minimize the hazardous effects before they transform a cost. Mindfulness may give a resilient culture within an organisation and help to survive during a time of crisis. In this manner, they may use the resources more sustainable way, communication skills may be enhanced, and reactions in the face of expectations may be developed. Interventions at the crisis moments may have a more significant impact than most improvements. It provides competitive

power compared to other companies affected by the same external factors and gives the chance to get ahead of other companies' competition.

Besides, leaders carry the stress of both their own lives and a group of employees that works under them. At the same time, they need to stay positive and supportive, even if the work is not on the rails. Mindfulness provides resilience to leaders concerning guiding employees calmly, clearly and with reliance. Through mindfulness practices, leaders may gain insight into developing the habits of employees. This notion provides a better understanding of their employees that works under them. Leaders can navigate the employees' reaction to an organisation's success if they understand the emotions and behaviours.

To understand better how mindfulness influence organisational mindfulness, it is helpful to examine organisational system management. To develop organisational mindfulness, strategic and operational resilience needs to be spread holistically at all company levels. As stated in Section 2.1.2, the organisational mindfulness concept has to be envisioned by a top administrator(s), reinforced and translated into process and procedures by a middle manager(s). In such a system, it is expected that the system can function even when there is an unexpected event. Klockner proposes a theory that explains how complex systems administer in the case of sudden fluctuations (2017). Daily small to big crises need specific management approaches to re-establish the whole system in the shortest time. As an outcome of mindfulness, resilience leads organisations to emerge or change into an enhanced version. The system conception is stated with a figure in Figure 5. For the change of system, strategic efforts according to mindful concepts should be integrated into all procedures, processes and routines. In this way, a long-term strategy can be achieved, and its effects can also be observed for long periods. In addition, resilience forms a consistency that decreases the gaps between performing daily tasks and responds to normal fluctuations and unexpected events.
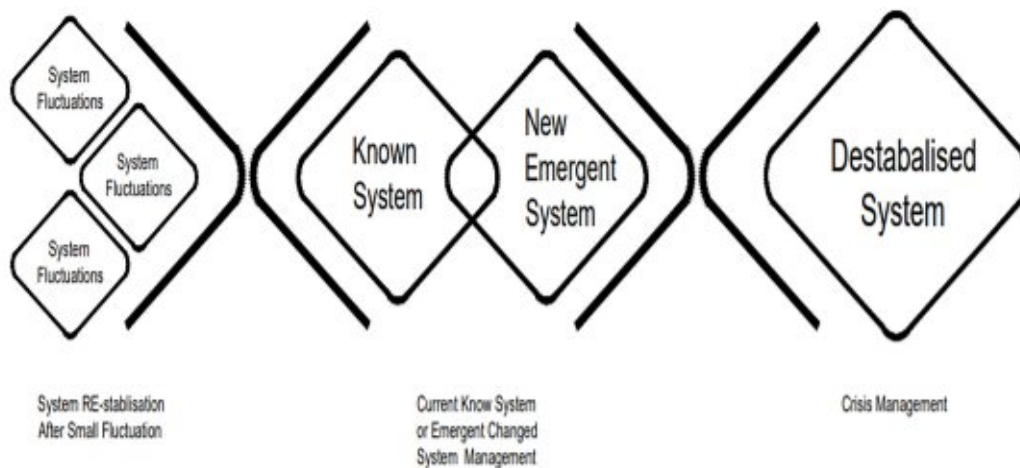
*Figure 5: Organisational System Management – Managing the Unexpected, adapted from (Klockner, 2017)*

Developing organisational resilience is also related to strategic leadership efforts in the face of modern system fluctuations. Leaders need to always follow five principles of organisational mindfulness throughout every level in an organisation to be resilient. Briefly referring to each principle in terms of resilience and organisational mindfulness, *preoccupation with failure* allows preventive action in a system with accurate reporting standards and processes. *Reluctance to simplify* can be succeeding when the organisation supports the system thinking perspective among employees. *Sensitivity to operations* depends on leaders' behaviours in sharing the extensive picture notes to front-line employees and noticing dynamic system fluctuations. *Commitment to resilience* can be achieved when employees are encouraged to work, state an opinion and behave without redundant control, which feeds a developing, learning and reporting culture in an organisation. During dynamic fluctuations, this adaptation has a significant role as employees may feel appreciated in the sense of their decisions and intuitions. According to their expertise, the principle of deference to expertise illustrates that leaders know, acknowledge and esteem their employees' teams. Thus, employees are supported to interact socially to handle failures and errors. Additively, employee respect collects in the organisation as more information (Schreiber and Carley 2007).

A real-life example may help to illustrate the effect of mindfulness in the organisation regarding resilience. Research is conducted to investigate whether a mindfulness-

related program (the Resilience@Work Mindfulness Program) is effective on the resilience of high-risk employees. It seems that the mindfulness program train individuals to be mentally healthier in their organisation, especially in developing and maintaining the long-term well-being of employees. During the program, employees from target sectors are tested with various work-related challenges similar to daily routine difficulties. The study is measured with the Connor-Davidson Resilience Scale (CD-RISC 10) to have reliable resilience results. Cognitive Fusion Questionnaire (CFQ) and the Acceptance and Action Questionnaire version 2 (AAQ-II) are used to determine the effects of employees' cognition. The pilot study scores demonstrate that employees have more significant resilience levels and more flexible psychologically after mindfulness programs (Joyce, 2019).

In short, developing a resilient culture in an organisation is crucial as it means recovering quickly from failure by enhancing and learning from challenges. Mindful mindset may give the notion of resilience as it serves mental flexibility, ability in crisis management. Under the leadership of the managers, mindful, resilient organisations can be achieved.

## 2.3 Challenges of Organizational Mindfulness

From an organizational point of view, challenges and myths need to be addressed to clarify the stage. These challenges are the main obstacles to spreading mindfulness within an organization, and if they are eliminated or reduced, implementing mindfulness within the organization can be applied with ease.

One of the significant challenges is common myths about mindfulness, which misrepresent the concept and detract from mindfulness's individual and organizational outcomes. Unfortunately, the rate of believers in these myths is considerable high. Because of that, misconceptions about this issue are corrected with some explanations in this section. According to interviews with employees and stakeholders, the most common myths are illustrated below (Table 1). The table of myths is prepared by taking an example by a report of The Mindfulness Initiative Community.  Defences against these myths are based on previous chapters.

| Myth 1 | **"Mindfulness is a religion."** |
|--------|-----------------------------------|
|        | The origins of mindfulness come from Buddhist and Hinduist roots thousands of years ago. However, mindfulness is an experience to be present precisely in the current moment. The practices of mindfulness can be seen as both religious and non-religious according to the point of view. These are body and mind practices: recognizing emotions, thoughts, and the environment around individuals, without judgment and manipulation, not direct relation with any religion. |
|        | Besides, mindfulness training can be easily perceived as a secular mental practice in the work context and no need to commit a religion or ancient tradition. The state of mindfulness helps remove bad traits to be more competent in an organisation, not fulfil religious requirements. |
| Myth 2 | **"Mindfulness and meditation are the same"** |
|        | They may seem similar in action, but their objectives and results are different. The difference is that mindfulness is a state, and it can be practised in several ways. One method to be mindful is meditation exercises. |
| Myth 3 | **"Mindfulness is about being able to empty your mind."** |
|        | Mindfulness does not mean to stop the thoughts or emotions, but it handles thoughts differently. The state of mindfulness brings an ability to monitor thoughts, emotions and behaviours without changing or judging. In this way, individuals can observe the true nature of their mind patterns in their thoughts, distractions, feelings and fears. The ability provides individuals strength to handle external factors and control the awareness into the desired task. |
| Myth 4 | **"Mindfulness aims to become relaxed and chilled out."** |
|        | At the organizational level, mindfulness aims to increase employee well-being, concentration, and performance by gaining self-awareness. Relaxation may be a result of mindfulness practice and helps to obtain organisation outcomes of mindfulness. However, lots |

| | |
|---|---|
| | of participants reveal how they feel uncomfortable during the learning process. As in every learning process, challenges are required to develop new skills, and participants' reflections show that the whole process is not linked to relaxation. In short, relaxation is not a significant aim, but it is an outcome of mindfulness. |
| **Myth 5** | **"Mindfulness is just about paying attention to the breath."** |
| | Most images to demonstrate mindfulness are about people in lotus seating positions with closed eyes, which create misunderstanding on the concept. There are several practices to work with breath, as these practices teach awareness. Conversely, some mindfulness practices use also other body parts and sensations (such as hearing, sight). |
| **Myth 6** | **"Mindfulness training is good for everyone and helps with everything."** |
| | Sarah W. Lazar proves in clinical applications that mindfulness training impacts individuals' well-being and cognitive functions such as memory and attention (Sevinc, 2019). At the same time, a study demonstrates that mindful individuals' thoughts and behaviours tend to be more ethical (Kalafatoğlu et al., 2017). However, some excessive interventions can damage more than positive effects like misjudging concepts and flight from reality. |
| | The structure of mindfulness programs and continuity also give another direction to this topic. There are some accelerated mindfulness programs in workplaces, which create questions about the effects. The outcomes may be short-term rather than a transformative in-depth retainable experience. |
| | The research on this topic continues, so nobody can state that mindfulness is beneficial for everyone in all conditions as it requires too much human factor. |
| **Myth 7** | **"Mindfulness is dangerous."** |
| | As mindfulness is an experience of the human mind, naturally, it has a dangerous capacity. Some methods may not be appropriate for |

| | |
|---|---|
| | everyone or in every period of individuals. In some rare cases, individuals face difficult experiences. Some practices may be too intensive for a group of people, as everyone has their own learning pace. Additively, people may have serious psychological problems or traumatic disorders. Such individuals may need more attention and pre-assessments before mindfulness training. It would be a more appropriate way to learn this concept only by trainers working on trauma. |
| **Myth 8** | **"Mindfulness breeds passive employees and doesn't lead to a change in toxic organizational cultures."**<br><br>Mindfulness is kind of waking up the mind from autopilot mode to state mode with developing awareness. In the organizational context, it is still debated whether organizational mindfulness influences toxic management cultures or not. Nevertheless, it is proved that organisational mindfulness impacts behaviours and cognition of leaders such as decision making, emotional intelligence, and communication. The myth cannot be accepted, but the possibilities according to this topic is still discussing. |
| **Myth 9** | **"Mindfulness is purely being exploited by businesses for capitalist ends."**<br><br>The primary concern of organizational mindfulness is creating high business welfare, leading to an ethical working environment and good business sense. As a nature of the human spirit, every power may be abused. Thus trainers and programs need to be accredited to prevent this situation and maintain quality. |
| **Myth 10** | **"Even if mindfulness affects industrial psychology, it also feeds capitalism."**<br><br>Researches that work on mindfulness and industrial psychology introduce a healthy vision in capitalism within several organisational benefits such as performance, productivity and creativity, which may seem to feed capitalism. However, mindfulness fundamentally creates a healthy environment in modern business world conditions to protect individuals. |

*Table 1: Mindfulness Myths, adapted from: (Adams et al., 2016)*

Apart from general misunderstandings, organisations face lots of challenges during/before spreading mindfulness within the organisation. Most of the managers' first reaction may be damaging as a meditative program's commitment is not customary. The first of the obstacles is that the confirmation of these programs is done accordingly to managers' decision. At this point, it is essential to underline how the leaders perceive the situation and whether they are open to this concept or not. It might not be easy to embrace a manager who has never practised before nor has no interest in the subject. They may not fully understand mindfulness practices' outcomes and may define them as a waste of time. According to job demands, time management is an essential part of work from an engineering management companies' perspective. With mindfulness programs, employees do not directly serve the demand for the job. Decision-makers may not choose to invest in these practices rather than financing a subject that directly shows its effect as profit quickly. An example of these managers may think suchlike "We are wasting 15-20 minutes each day, and that makes 5 cents of their working hours".

Another group of managers, who consider their employees' more well-being, believe that these programs benefit employees' psychology and task performance. However, significant time need to be allocated to the programs. Since managers concern about the continuity of the work, the time commitment is an issue for them. Naturally, managers allow these programs to be executed to have minimal impact on the workflow. For this reason, it is also vital to decide when the program should take place. According to the organisation's intensity of work and work field, a suitable time slot can be arranged.

If the company's head approves to spreading mindfulness within the company, a second major challenge of mindfulness programs is employee acceptance. Apart from managers, employees may be sceptical to this meditative training, and it can take some time to build trust in a new concept. Primarily, in the event that managers force employees to attend these programs without considering their intrinsic motivation, compliance, and motivation may be a problem during the mindfulness programs.

Even if leaders have no substantial scepticism to the content of these programs, employees may have. According to employees, there are various necessities for these programs to be successful. The program and trainer's quality is one of these

necessities as most participants are sceptical about whether the trainer is mindful enough. As the meetings are done weekly, the trainer has tremendous pressure to teach mindfulness, motivate and convince the participants during the program. Additionally, the trainer is responsible for breaking some taboos of individuals. For instance, some attendants may confuse the meaning of the concept because of religion and spirituality associations. Even though the roots of mindfulness are based on ancient religions, corporate programs are secular in principle with a scientific approach. The distinction should be described as mental training; thus, it may be accessible to more employees.

In the latter case, the balance of curriculum is crucial to motivate and attract participants' attention and interest. In MBSR programs, individuals face new practice each week. It seems possible that the program structure may be comparatively long, tedious or unusual for a group employee. While some participants join with curiosity, others may need some assistance or overcome his/her barriers.

According to interviews in an engineering firm, engineers who attend a corporate mindfulness program admit that their first stance is not favourable as these programs seem "a kind of hocus-pocus" to them. Still, after a while, they recognize the beneficial sides and look more positively to these programs. The results illustrate that 88% of the participants have increased in focused attention, 82% of them have decreased distraction, and 59% of them have enhanced ability to handle stress. Moreover, participants report that these programs bring new dynamics both in their personal and work life. It should not be forgotten that these benefits can be obtained only by the manager's decision and employees' attendance (Reb et al., 2014).

It is also revealed that employees perceive the program as a challenge in the introductory session, not mental support. Even if they are informed of the benefits, some employees find materials extensive and unexciting or do not believe that it can be possible to practice new practice each week. With the lack of motivation, the process becomes more difficult; leaders should also motivate their groups to be more open to willingness.

Moreover, one employee states that he could experience mindfulness during the practices individually, but he could not deploy in his work experience (Marin, 2020). Corporate mindfulness effects can sometimes be observed over the long term. Trainers may struggle with the confusion and compliance of employees. Since the success of the program requires continuity, compliance with the program may be an

obstacle. For example, in the MBSR program, it is expected that individuals attend various sessions in an 8-week mindfulness program. However, by the time the rate of participant's drops as the attendance is voluntary or decision of managers'. Over time, the attendance of employees is reduced as a result of compliance with the program. However, this situation may not just mean that they stop mindfulness training, as some reported they could continue their informal training way (e.g., mindful breaks, mindful meeting, mindful e-mailing).

Besides, the lengths of mindfulness programs are formed according to the average employees' learning pace, which differs individually. It may take time to cross this barrier of the sceptical thoughts of individuals. While one employee may be ahead of the program, the other one may be pretty far behind. Thus, the effective dose of mindfulness is still unknown and investigated.

Except those, employees may fear that they may have more workload after the program as their leader may anticipate better performance. Employees are aware of it is an investment and do not feel comfortable knowing that something will be expected of them in the end. They may need to prove themselves after the program. Every leader who believes in organizational mindfulness results expects them to be more productive and faster. As these create pressure on the employee, they cannot freely participate in the program and benefit from the possible results.

# 3. PROPOSITIONS

The study investigates how engineering management firms promote organisational mindfulness programs and currently discuss the implementation (or adaptation) level of engineering management companies. The literature review gives a comprehensive background about the main arguments on the topic. Nevertheless, the opinions and experiences of employees who have worked in engineering management firms need to be examined as they can give information about the current condition. For this reason, the study includes some arguments with considering the thoughts and experiences of employees and managers. To examine the study's aim, a research study has been done for deeper understanding and explained in the following sections.

As mentioned, both individual and organisational mindfulness can influence the mindfulness adaptation processes of an organisation. Moreover, Section 2.1.3 emphasizes that both have different ways of unleashing innovation capacity. However, organisational mindfulness outcomes cannot occur without individual mindfulness existence, which is examined broadly in Section 2.1.3.1. Besides, Section 2.1.3.3 states the critical points that individual mindfulness has many effects on the organisations but not enough to reach a mindful organisation. The consequences can be observed according to the organisation's attendance as a whole or the vast majority.

Attending a mindfulness program is faced with many challenges at the organisational level, as mentioned in Section 2.3. The challenges comprise various prejudgements and doubts of both employees and managers. General myths are the first obstacle that prevents mindfulness adaptation within the organisation. Employee scepticism is another challenge in the face of organisational mindfulness. Employees may have doubts according to trainer quality, program structure, compliance and fear of workload. In other respects, employees join these programs under success pressure as managers invest time and budget for corporate mindfulness program, which is a debatable topic for managers (is also expressed in Section 2.1.4). Satisfying the business demand under deadline pressure may be the most crucial goal of the organization; therefore, a mindfulness-related program may be considered time-consuming for managers. Additively, some results can be observed in the long-term, which is undesirable in managers' sight. Companies that are not aware of the importance of organisational mindfulness programs are easier

to postpone or reject according to these doubts.

Even if managers are aware of organisational mindfulness outcomes, some leaders force their teams to attend. In this way, employees may lose their interest in the subject because they do it out of necessity, given in Section 2.1.4. Therefore, it is significant to be aware of the concept as well as to spread it correctly.

In response to these challenges, Section 2.2.1, 2.2.2, 2.2.3 and 2.2.4 explain the beneficial side of corporate mindfulness programs and suggest desired mindful organisation skills. Mindfulness encourages employee well-being in terms of managing risk and performance (2.2.1 and 2.2.2). Moreover, organisational and individual mindfulness directly influence decision-making mechanisms, which are the basis of business life (2.2.3). Resilience also helps to guard against the difficulties and uncertainties that occur daily in organisations (2.2.4).

Despite all the benefits, organisations may still undervalue or concentrate on only one side of the benefits. As a result, they may lose lots of opportunities, for example, voluntary employee performances (Section 2.2.2). Trusting the power of mindfulness provides organisations impressive results in both the short and long term. Taken together, organisations concerned doubts about organisational mindfulness more than the beneficial side; thus, they are not aware of the concept's innovation capacity. Considering these arguments, the first hypothesis should be established as follows:

*H1: Engineering management firms are not aware of mindfulness-based practices as a way of improving innovation capacity.*

Section 2.3 underlines the prejudgements and doubts of individuals who are influenced chiefly by general myths or misunderstandings. However, decision-makers who have not a mindfulness experience are more likely to undervalue the proven benefits and organisational impacts. Besides, Section 2.2 illustrates that individuals who are not acquainted with mindfulness tend to focus on only one aspect of outcomes, not as a whole. This perspective can be goal-oriented or process-focused; the impact may not be permanent or not spread correctly. As a result, those low in mindfulness background are more inclined not to attend these programs.

Thus, the second hypothesis is stated below:

*H2: People who are not familiar with mindfulness tend not to attend an*

*organisational mindfulness program.*

As Section 2.1.3.3 indicates, the effects of individual mindfulness within an organisation can be observed by employees' choice. Those familiar with the mindfulness concept may have influenced their organisations and correct misunderstandings. In other respects, employee mindfulness can be traceable within the organisation when they share common aims with the organisation. Mindful employees who are acquainted with mindfulness can bring productivity and a healthy communication environment but are also afraid of ambiguity such as increased workload demand (Section 2.2.2). Thus it is expected that mindful employees or managers have still doubts about organisational mindfulness programs.

Thus, the third hypothesis is stated below:

*H3: Even if they know the proven benefits, both employees and managers have prejudgements and doubts about organisational mindfulness programs.*

The following section suggests survey research to examine these three hypotheses and try to answer them by analysing employees and managers' point of view.

# 4. RESEARCH DESIGN

The research study is done by considering the research questions and hypotheses mentioned in previous sections. Throughout the section, the structure of research, its measures and objectives are given to the reader. The research aims to investigate the latest organizational situation in engineering management organizations, and the perspectives of employees guide the research. Additively, determining the situation (in implementation or adaptation) of engineering management companies are analysed with the research design.

To examine the research questions and hypotheses, a survey study is accepted as a data collection tool. In this manner, relevant data can be collected quickly by short questions and measured participant opinions with numerical data. Focus group and interview methods are also suitable methods for the study by promising a deeper understanding. However, these methods are rejected because individuals may feel more comfortable with anonymous identities, and the situation can be achieved more easily with surveys. Employees and managers need to express themselves freely as their views on organizational mindfulness are the basis of the study.

Given that, more people can be reached with the questionnaire in comparison with interviews. Experiment and observation methods are also rejected because these methods' continuity is challenging to apply in the corona days. Moreover, survey research enables collecting numerical data that can be categorised or measured through statistical analysis. Thus, conducting a survey seems more helpful in gathering data to analyse previous sections and hypotheses.

## 4.1 Participants and Sample

The target audience for the survey includes employees that have worked in an engineering management organisation. Following identification of the target employee population, an e-mail is sent to possible participants inviting them to attend an online survey and the link of the survey is posted on social media. Thanks to online surveys, participants can find ample time and setting to answer survey questions freely. The research subject is limited to engineering management companies, and the survey research discusses the validity of findings and hypotheses in real life. The research sample consists of all employees who have worked in engineering management firms regardless of gender, age, disability, religion, nationality, the field of work or social background. Individuals who have organisational mindfulness experience have not explicitly been sampled because

others are also required to cover all previous topics. Gathering different views provides diversity for the survey, and the range of participant groups enables collecting representative data of the population.

Participants are invited to answer several questions, including multiple-choice, checkboxes, rating scales, and open-ended questions. The expected time to conclude all the sections is approximately five minutes. Additionally, the survey's participation is voluntary and free (there is no reward for participating in this study).

The collected data are grouped according to participant backgrounds, and each group is examined within itself (which is explained in detail in Section 4.3 Table 2). The reason is that different perspectives allow addressing each hypothesis in many ways, which strengthen the reliability of the survey.

## 4.2 Design

The study is designed as an online survey study to examine within-group differences in promoting mindfulness in engineering management companies. The survey design bases on gathering data of experience and expectations of participant groups in terms of organisational mindfulness. In this manner, the measures stated in detail following section (Table 3) can develop valid, generalizable results. Each measure is formed by considering literature review findings and has different effects within groups to provide more precise and stable results. By participant groups and various measures, the reflection of real-life cases can be obtained accurately.

The design of the survey questions does not permit ambiguity as they are direct and straightforward. Simple questions are offered firstly to build momentum for participants, and the questions deepen in the following sections. Some questions which have of secondary importance in the survey are optional to keep the maximum number of participants in the survey. Bias questions are avoided not to lead participants.

The survey consists of five sections, and for the sake of validity, not every participant group is expected to solve all sections. The function of sections is comprehensively explained in Section 4.4.

1- Demography Section

2- Mindfulness Background Section

3- Experience with Organisational Mindfulness Section

4- Opinion on Organisational Mindfulness Section

5- Myths of Mindfulness Section

Each section in the survey serves the purpose of research differently. Before starting the survey, the participant is introduced with a preface and informed of the study purpose. On behalf of GDPR (General Data Protection Regulation), all data keep anonymously, and the report of the findings is presented without identifying participants. As the survey includes lots of personal data, the handling of GDPR needs to be informed to participants.

In the first section of the survey, the demographic analysis identifies the participants' distinct characteristics by collecting background information. Additively, participants are asked to indicate their roles and field of work in engineering management organisations to examine the experience of sectors and hierarchical levels separately. In the event of a pattern regarding the industry, it can be obtained from this section.

The mindfulness background section (Section 2) begins with a basic definition of mindfulness for those who encounter the concept for the first time or need to re-evoke. Firstly, participants are asked whether they would like to learn mindfulness and practise mindfulness as a reason for benefits, to understand how much participant is open to the concept without considering the organisational level. If a participant has already practised mindfulness, may give information about personal habits by specifying the activities and exercise frequency. Otherwise, it means that both individual and organisational mindfulness concepts are new or unusual for them.

Experience with organisational mindfulness section (Section 3) explores the concept of organizational mindfulness in participant's company. Only participants who have experience with organizational mindfulness (e.g. attending a yoga class or learn breathing techniques at work) are expected to fill this section. If a participant indicates that (s)he has no experience with organisational mindfulness, the participant's answers given in this section will be considered invalid. This part of the survey aims to clarify the level of organization mindfulness implementation and explore employee or manager/leader experience in the organisation. Additively, it is questioned whether corporate mindfulness programs are encouraged or not, which give clues for the current and future implementations.

Opinion on Organisational Mindfulness Section (Section 4) discovers individuals' opinions and doubts according to organisational mindfulness. Even participants with no previous experience can express their opinions on organisational mindfulness in this section. On the other hand, participants who have undergone an organisational mindfulness program may give their future expectations by comparing their experiences.

Myths of the mindfulness section (Section 5) explore participants' general attitudes and experiences on mindfulness challenges and myths. Participants, who have no mindfulness background and knowledge, can hint about their openness to the concept. The rest may find the opportunity to explain their prejudices that they still have.

In the end, participants can remark their additional thoughts at an optional open field. In this way, they can express here their thoughts that they could not express in the survey.

### 4.3 Measures

In the survey, participants fill various types of questions, but one type needs to be explicitly mentioned as it helps collect most of the data. Participants' experiences and expectations are measured with individual Likert type questions (ordinal level). In this way, more profound insights into specific attributes can be achieved easily and quickly.

The research is conducted to examine three hypotheses. Each hypothesis needs to be investigated, considering all findings found in the literature review. The questionnaire can be solved in several ways, and all possible cases need to be specified. Participants' answers can be collected in four different groups concerning the research structure, which can be found below. Table 2 presents information about individual and organisational mindfulness experience, relates survey sections, and specifies the relevant hypotheses. In addition to Table 2, Figure 6 demonstrates the roadmap of each group using different colours.

| Group | Work in EM | IM Experience | OM Experience | Survey Section | Relevant Hypothesis |
|---|---|---|---|---|---|
| **Group 1** | No | - | - | - | - |
| **Group 2** | Yes | No | No | S1, S2, S4, S5 | H1, H2, H3 |
| **Group 3** | Yes | Yes | No | S1, S2, S4, S5 | H1, H3 |
| **Group 4** | Yes | Yes | Yes | S1, S2, S3, S4, S5 | H1, H3 |

*Table 2: Possible participant responses (EM: Engineering Management Company, IM: Individual Mindfulness, OM: Organisational Mindfulness, S: Section, H: Hypothesis)*

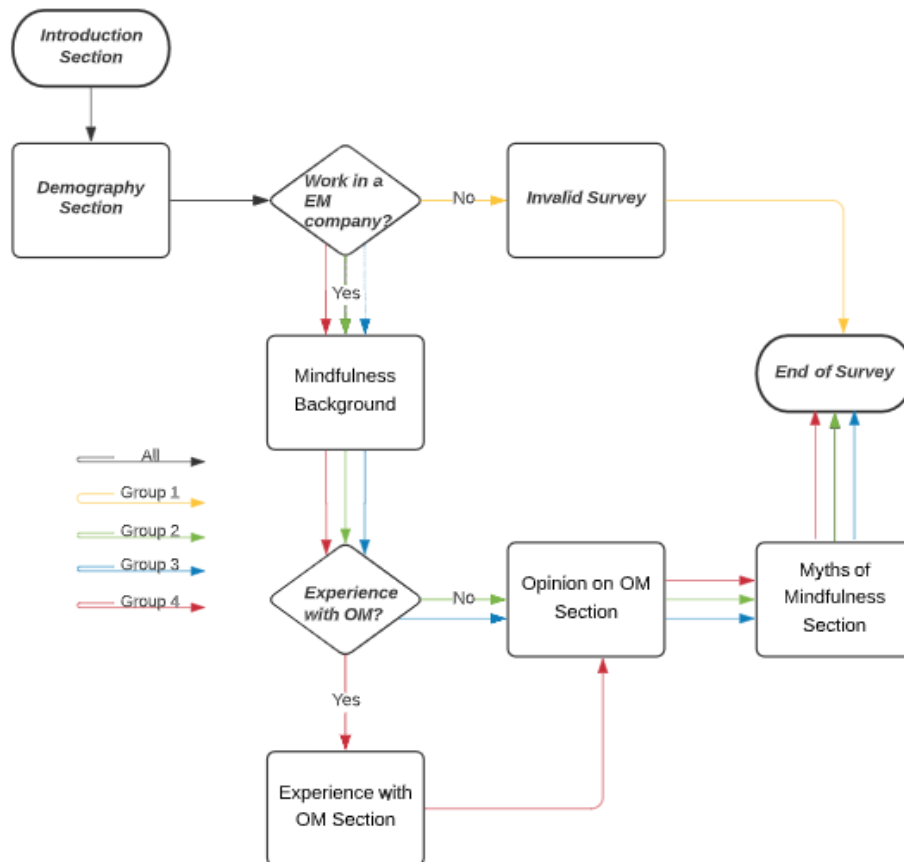The research design of possible roadmaps is illustrated with a flowchart:



*Figure 6: Flowchart of Survey Structure*

**Group 1** participants have no experience with working in engineering management organisations. Thus, this group needs to be eliminated from research as they do not contribute to the research.

**Group 2** participants have worked in an engineering management organisation but have no experience with mindfulness. These participants contribute to the research with their general opinions and doubts on mindfulness as they have no individual or organisational mindfulness background. Group 2 involves two participant sub-groups:

i. Participants are not open to mindfulness as a concept and are subject to the research because they may be unfamiliar with the concept. Their opinion (more importantly doubts) on organisational mindfulness may give information for future implementations.

ii. Participants meet mindfulness a short time ago as a concept. They do not describe themselves as to be familiar with mindfulness.

The contribution of Group 2 participants gives an idea of individuals' general attitude with Section 2, Section 4 and Section 5.

*Relation with the first hypothesis:* Employees, who are not familiar with the mindfulness concept, may not comprehend the significance of the organisational consequences. With Section 4 and Section 5, it can be understood how Group 2 participants are open or have prejudgements to organisational mindfulness. Even if they know proven benefits or meet mindfulness a short time ago, it is likely not to accept the power of outcomes.

*Relation with the second hypothesis:* As this group is mostly unfamiliar with the mindfulness concept, their willingness to attend an organisational mindfulness program can be questionable with the second hypothesis*.*

*Relation with the third hypothesis:* Even though the group is unfamiliar with mindfulness, they may know/believe proven benefits. Their attitude is significant to collect data for the third hypothesis.

**Group 3** participants have worked in an engineering management organisation and have experience with mindfulness but not in an organisational context yet.  Similar to Group 2, this group has the potential for collecting data about the opinions on organisational mindfulness. As they have already been aware of the mindfulness, their expectation from the organisational level guides the research with Section 4.

Moreover, their last section's attitude helps identify general doubts about organisational mindfulness (Section 5).

*Relation with the first hypothesis*: Collected data from Section 4 and Section 5 promote to obtain views about organisational mindfulness. They may not have undergone organisational mindfulness before, but if they are aware of the capacity for improvements, a step regarding this issue can be taken in the future.

*Relation with the third hypothesis:* Despite the benefits, if they have still doubted to attend a mindfulness-based program, this refers to some ideas for hypothesis 3. The reason is that they know the mindfulness concept and its outcomes, but the work-related connection has not yet established, which precisely the case is where the hypothesis is examined.

**Group 4** participants have worked in an engineering management organisation and have experience with organisational mindfulness. Their answers are significant for the whole study. These participants are the only group that can answer Section 3 to express their experience with organisational mindfulness. Like Group 3, the last two sections help to gather data about the first and third hypotheses.

*Relation with the first hypothesis:* The hypothesis claims that organisations underrate or do not understand the power of outcomes of organisational mindfulness. As this group participant has attended a mindfulness-based program(s), their consideration of this subject is notable. They may evaluate the corporate mindfulness programs have a great capacity, but organisations underutilise them or the reverse.

*Relation with the third hypothesis:* Participants in this group may still doubt attending the mindfulness-based programs in the future; this situation can be questioned with the third hypothesis. While these participants share their experience, gathered data may also reflect the participants' manager and colleagues' experiences and opinions.

To examine the hypotheses as described above, measures are formed. Research questions and hypotheses are enlightened through these measurements. Relevant sections of measurements in the literature and survey are stated in Table 3. The survey investigates participants' thoughts and experiences according to their background, input, output to the program, scepticisms (both employee and manager view) and four impacts related to organisational outcomes: the financial impact,

human impact, mental impact and social impact. Background and demographic information are essential to distinguish the participants and create the participant groups. Input and output data explores the efforts and responses of the organisation and employees. Four impacts measure are constituted according to outcomes that mentioned in Section 2.2. Each impact implies first hypotheses from a different perspective and checks whether participants believe/ aware of these impacts. Scepticisms can be determined as a barrier to spreading organisational mindfulness, and they are necessary to understand all hypotheses.

| Measured Properties | | Related Section (Question) | Quotes |
|---|---|---|---|
| Demography | General | S1 (Q1 - 3) | |
| | Role in the Organisation | S1 (Q4) | |
| | Industry | S1 (Q5) | |
| Openness to Mindfulness | | S2 (Q1, 2) S5 (Q1 - 13) | 2.3 |
| IM Background | | S2 (Q1 - 4) | 2.1.1 |
| OM Background | | S3 (Q1 – 33) | 2.1.2 2.2 |
| Input | | S3 (Q2, 3, 5, 6, 7) S4 (Q22, 27, 28) | |
| General Output | | S3 (Q4, 8, 33) S4 (Q25) | |
| Financial Impact | Productivity | S3 (Q9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 25) S4 (Q1, 2, 3, 5, 7, 9, 12, 13, 14, 16, 17, 23) | 2.1.1, 2.1.2, 2.1.3, 2.2.1, 2.2.2, 2.2.3, 2.2.4 |
| | Reduction in Sick Days | S3 (Q9, 13, 14) | 2.1.3.1, 2.2.2 |
| | Enhanced Performance | S3 (Q9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 22, 25) S4 (Q1, 2, 3, 5, 7, 9, 10, 11, 12, 13, 14, 16, 17, 23) | 2.1.2, 2.1.3, 2.1.4, 2.2.2, 2.2.3, 2.2.4 |
| | Shifting Priorities | S3 (Q22, 25) S4 (Q3, 14) | 2.1.4, 2.2.1 |
| | Motivation | S3 (Q10, 13, 14, 15, 16, 21, 22) S4 (Q5, 12, 16) | 2.1.2, 2.3 |
| | Working with Uncertainties | S3 (Q12, 13, 14,15,16, 17, 20) S4 (Q1, 2, 3, 5, 7) | 2.1.2, 2.2.1, 2.2.3, 2.2.4 |
| | Enhanced Decision-making | S3 (Q11, 12, 13, 14, 15, 16, 17, 18, 20) | 2.1.2, 2.1.3.2, 2.2.3 |

| | | S4 (Q1, 2, 3, 5, 7, 9, 10, 11, 12, 14, 16, 17, 23) | |
|---|---|---|---|
| Human Impact | Concentration | S3 (Q13, 14, 16, 17) S4 (Q1, 2, 3, 5, 7, 16, 17, 23) | 2.1.2, 2.1.3, 2.2.1, 2.2.2 |
| | Adaptation | S3 (Q13,14, 21) S4 (Q2, 10, 11) | 2.1.2, 2.2 |
| | Well-being | S3 (Q13, 14, 16, 17) S4 (Q5, 7) | 2.1.2, 2.1.4, 2.1.5, 2.2.1, 2.2.2, 2.2.4 |
| | Resilience | S3 (Q12, 13, 14,15,16,17, 20, 25) S4 (Q1, 2, 3, 9, 14) | 2.1.2, 2.1.3.3, 2.2.4 |
| | Reduced Stress | S3 (Q13, 14, 16, 17) S4 (Q3, 5, 7) | 2.1.2, 2.1.3, 2.1.4, 2.2.1, 2.2.2, 2.2.3, 2.2.4 |
| Mental Impact | Creativity | S3 (Q13, 18) | 2.1.1, 2.1.3.3, 2.2.2, 2.2.3 |
| | Perception | S3 (Q14, 16, 17) S4 (Q3, 4, 6) | 2.1.1, 2.1.2 |
| | Cognition | S3 (Q8, 14, 20, 33) S4 (Q 9) | 2.1.1, 2.1.2 |
| Social Impact | Responsibility | S3 (Q9, 16, 17, 22) | 2.2.2 |
| | Enhanced Communication | S3 (Q16, 17, 19, 21, 23) S4 (Q10) | 2.1.2, 2.1.3, 2.2.2, 2.2.4 |
| | Empathy to Others | S3 (Q14, 16, 17, 19, 21, 24) S4 (Q8, 11) | 2.1.2 |
| Employee Scepticism | Structure of the program | S3 (Q26, 27, 28, 29) S4 (Q19, 20, 24) | 2.1.4, 2.3 |
| | Time commitment | S3 (Q31) S4 (15, 16, 17, 23, 24, 31) | 2.1.4, 2.3 |
| | General Scepticism | S3 (Q7, 17, 30, 31) S4 (Q16, 18, 21) | 2.1.4, 2.3 |
| | Compliance | S4 (Q24, 25) | 2.3 |
| | Fear of workload | S4 (Q13) | 2.1.4, 2.3 |
| Manager Scepticism | Time commitment | S3 (Q31) S4 (15, 16, 17, 23, 24) | 2.1.4, 2.3 |
| | Investment | S3 (Q3) S4 (Q29) | 2.1.4, 2.3 |
| | General Scepticism | S3 (Q7, 17, 30, 31) S4 (Q 16, 21) | 2.1.4, 2.3 |
| Openness to Future Practices | | S3 (Q32) | 2.1.4, 2.3 |

*Table 3: Measure of the research study*

This section introduces a research study to examine literature review findings, research questions and hypotheses. The optimal research method is also discussed

to give more accurate results. Additively, the way the measures of research design serves the study is explained extensively. The following section analyses the findings and results of survey research according to these measures.

# 5. FINDINGS AND RESULTS

This section clears up the findings and results of the survey research. The results are obtained thanks to Excel VBA and SPSS software. Firstly, general results are given in the section to understand the role of participants in the survey; afterwards, more detailed result parts express each group's attitudes. To obtaining more practical information, each group's experiences and expectations are specified in this section.

With 86 participants, data of employees who have worked in an engineering management company are collected. Data is separated according to participant groups (as mentioned in section 4.3), which provides a healthier way to analyse the survey along with the hypotheses.

Even if mentioned in the introduction section, participants who have not worked in an engineering management company also attend the survey. However, their contribution is irrelevant to the study as the study's focus involves only engineering management employees and managers. Accordingly, 7 participants are labelled as Group 1 and eliminated from the research. Thus, 79 participants are finally included in the study (20 participants in Group 2, 35 participants in Group 3 and 24 participants in Group 4), and all results are prepared from these participants' data.

## 5.1 Demography

Employees have the highest percentage (57%) in the role distribution of participants. Coordinator/Supervisor is following after employee group, which provides an opportunity to analyse both employee and coordinator views. The survey appeals to most employees who work in IT (Information Technology), Software Industry (22.1%), and Defence Industry (19.8%) organisations; the remaining field of work percentage is divided into small pieces.

The age and gender of the participants are also collected. In this way, if there is a gender or age-related trend in a group, it can be observed. Slightly more than half of the participants (54.7%) are women, 43% are men, and 2.3% do not want to indicate gender. The majority of respondents are in the age range of 26-30 years and 31-35. It can be observed that there is no correlation between age and mindfulness knowledge; in other words, no trend has been caught according to age distribution. Similarly, gender distribution continues within each group; no distinctive attribute is observed in any group.

## 5.2 Openness to Mindfulness

The second section of the survey indicates that most participants (69%) already experience individual mindfulness, and 28% of them have also experience with organisational context. In the general senses, having an experience also indicates openness to individual/organisational mindfulness. On the other hand, 23% of participants have no individual or organisational mindfulness experience (Group 2). 35% of Group 2 participants would like to learn mindfulness and the rest indicates that they would like to learn later. There exist no Group 2-i participants in the survey as nobody rejects the mindfulness concept directly. This situation may occur because only interested individuals on the topic have attended the survey.

Mode of "Which of these proven benefits may be a reason to practice mindfulness?" question illustrates that individuals concern primarily "decreased stress" effect of mindfulness. "Improved focus" and "improved job performance" are also the closest answers to the mode. It is also observed that Group 2 participants believe that improving job performance benefit more by comparison with other groups. This situation may arise due to what they hear from their environment or expect from mindfulness. Interestingly almost all participants in Group 3 and 4 states that mindfulness is beneficial in stress management. As they have already observed the result in their individual practice, they may represent their knowledge of mindfulness and stress management.
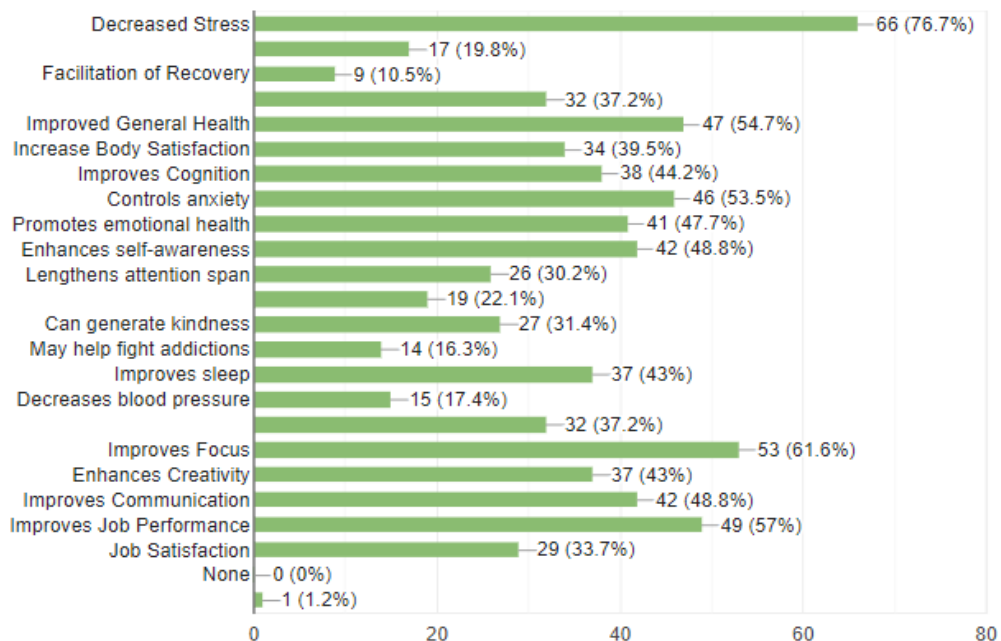
*Figure 7: Response of "Which of these proven benefits may be a reason to practise mindfulness?"*

Openness also refers to fears and doubts, which are also analysed comprehensively in Section 5.6. It is observed that individuals have both expectations and doubts; proportions of these two vary within groups.

## 5.3 Individual Mindfulness Background

In this section, individual mindfulness practices are examined. Although standard and well-known practices such as meditation, breathing techniques, and yoga are expected among responses, individuals also choose other practices to practice mindfulness. The great majority indicates that "walking meditation" is the preferred way of practising mindfulness (43%), "Take a music break" has also committed way (41.5%) for mindfulness practices. It is surprising that "Be Present with Your Family/Friends" also has a high percentage (32.6%). The pandemic situation that started in 2020 may have led the participants to mark this option. The concepts individuals valued rapidly changed as they are moved away from their social environment.

Moreover, participants who have already known the mindfulness concept integrate mindfulness into their lifestyles. 30.2% of Group 3 and Group 4 participants practice mindfulness every day, and the rest of the participants of Group 3 and Group 4 practice at different periods, which can be observed in Figure 9.
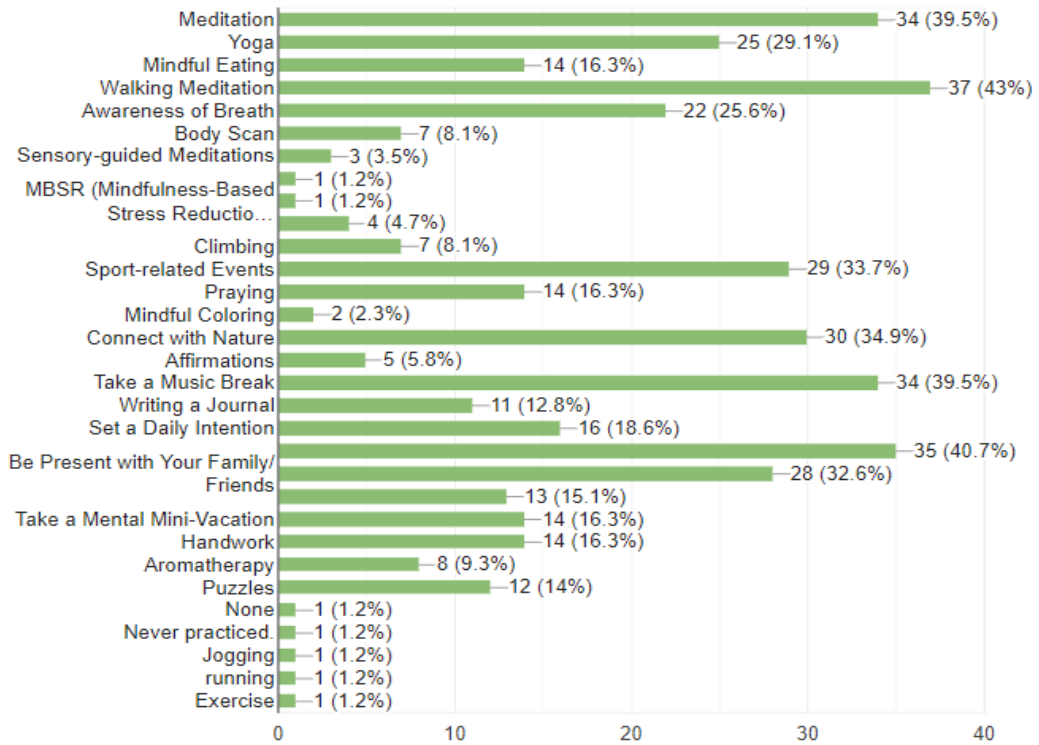
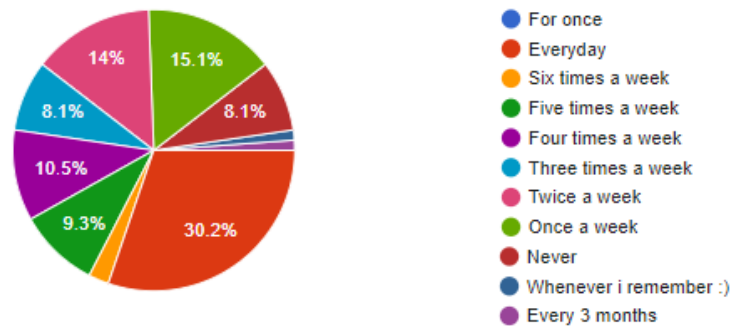*Figure 8: Response to "How do you practice mindfulness?"*



*Figure 9: Response Distribution of "How often do you practice mindfulness?"*

**5.4 Organisational Mindfulness Background**

20.9% of participants have mindfulness experience in the work context and attend a mindfulness practice/program in their organisations. Thus they are labelled as Group 4. The following two sections describe how organisations integrate mindfulness structure into their system; afterwards, the main outputs, according to these inputs, are described.

### 5.4.1 Input

The input of organisational mindfulness programs are fundamentally related to what the company gives for a mindfulness program. (e.g. number of hours given to program and employee attendance) It is observed that participants primarily practice mindfulness one hour a week at their organisations, and slightly more than half of the participants practice mindfulness with yoga classes.

Responses depict that organisational mindfulness programs are encouraged by managers (68.8%), but almost half of the participants attend the program with their own volition (51.9%). Managers may act deliberately to spread mindfulness within the organisation, or some employees may not want to attend due to prejudgements. The implementation is not widespread in organisations, as it is desired. On average, 23% of participants are trained with mindfulness in organisations; this rate may increase depending on the managerial incentive or decreasing scepticism in the future.

Participants can practice mindfulness individually or with a group, and the preference helps to understand how individuals react to organisational mindfulness. As stated before, most corporate mindfulness programs contain group exercises, and employees need to be open to such exercises to achieve organisational mindfulness. It is observed that a majority desires to practice both individually and with a group, which can be a good signal for the future.
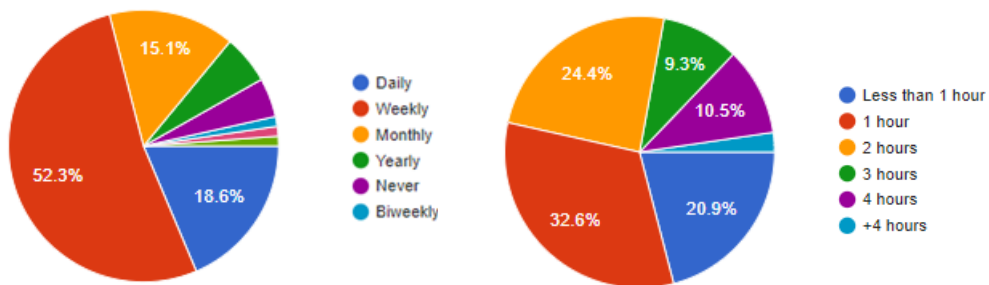


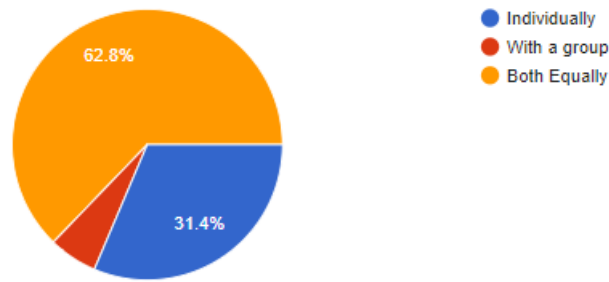*Figure 10: Practice Participation of Group 4*

*Figure 11: Response of "Do you prefer to practice mindfulness individually or with a group or both equally?"*

### 5.4.2 Output

In the survey, participants are asked whether they can observe a difference individually, in their department or the whole organisation; the responses are mentioned in Figure 12. The majority states the differences they feel remained at the individual level. Moreover, more than half of Group 4 participants recognizes the improvements in the daily work routine. As organisational mindfulness begins with individual mindfulness, it paints a promising picture.
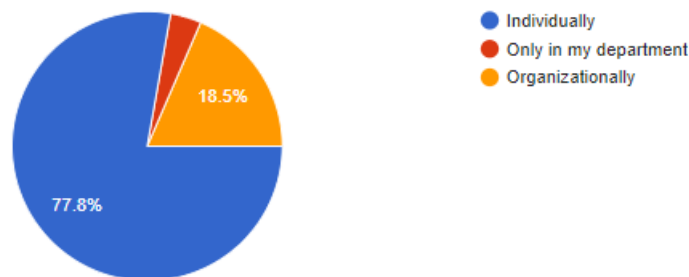


*Figure 12: Response of "After/During the program, I can observe the impacts."*

For further information about outputs, the following sections analyse four significant impacts that affect organisational mindfulness's consequences.

### 5.5 Experiences and Expectations

In this part of the study, experiences and expectations for organisational mindfulness programs are given to analyse the mindfulness impacts. As data is collected with Likert questions to get an overall attitude of individuals, descriptive statics are used to describe the correlations. Moreover, results are embodied in visual forms for easy understanding. Questions in the survey are grouped according

to their traits and four impacts (financial, human, mental and social).

### 5.5.1 Financial Impact

As each group has diverse backgrounds, the impacts are analysed concerning group dynamics. Financial impact expectations are measured in terms of productivity, enhanced performance, shifting priorities, motivation, working with uncertainties and enhanced decision-making. Expectations of participants according to financial impacts point out that organisational mindfulness may be beneficial to firms with mindfulness effects, especially in motivation, shifting priorities and working with uncertainties.

If examined in more detail, Group 2 participants' responses give clues to understand whether they are open to organizational mindfulness (Figure 13). As they have less knowledge about mindfulness than other groups, their expectations of organizational mindfulness are undetermined.

Group 3 and 4 seems more confident about the financial impacts of mindfulness compared to Group 2. The distribution of Group 2 responses tends to be more on average. Each group expect a more negligible effect in working with uncertainties.
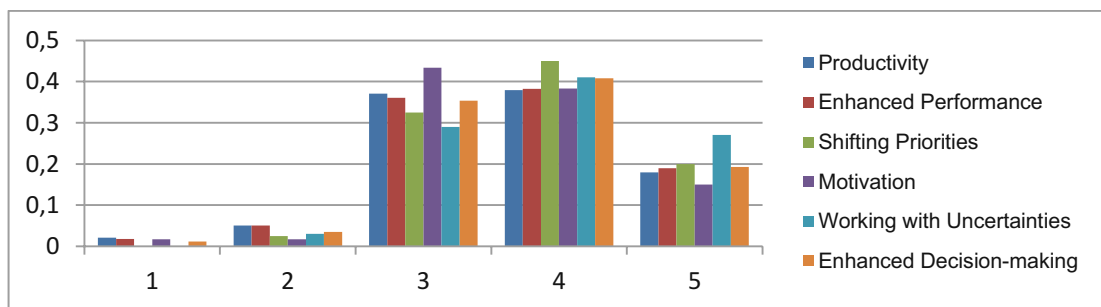


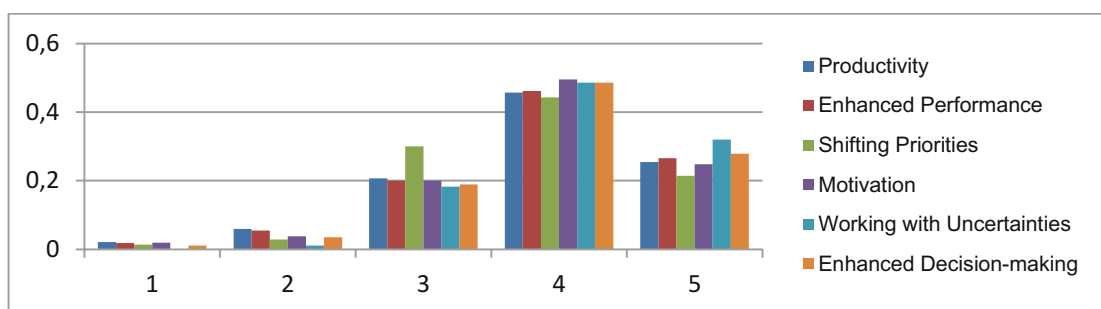*Figure 13: Group 2 Financial Impact Expectations*



*Figure 14: Group 3 Financial Impact Expectations*

Group 4 participants who have experience with organisational mindfulness contribute to having real-life data. Apart from other groups, their expectations are formed after (an) experience with organisational mindfulness. It seems that

organisational mindfulness has a distinctive effect on employees' motivation (Figure 16). Group 4 participants expect an improvement in working with uncertainties for future practices (Figure 15).
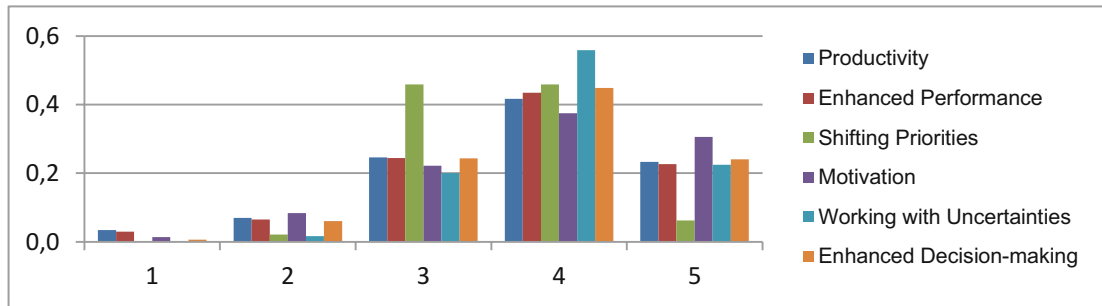


*Figure 15: Group 4 Financial Impact Expectations*
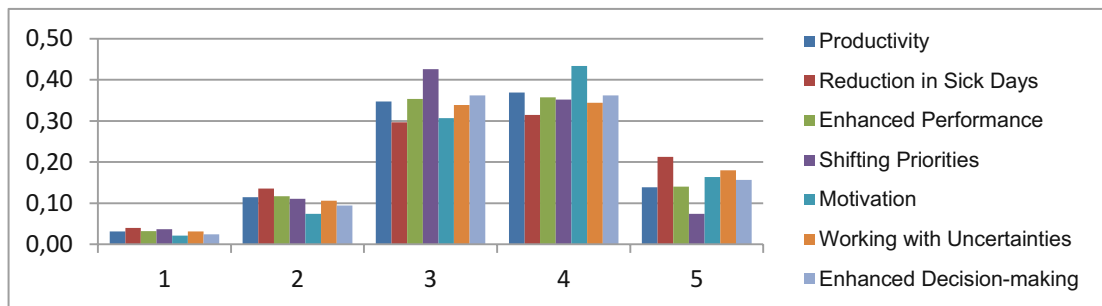


*Figure 16: Group 4 Experience according to Financial Impacts*

### 5.5.2 Human Impact

More than half of the participants indicate that organisational mindfulness may be beneficial with human impacts in terms of concentration, adaptation, well-being, resilience and reduced stress. Apart from the concentration effect, all participants are sure that organisational mindfulness brings beneficial human impacts in the work context. Moreover, compared to financial impacts, participants in each group expect more benefits from human impacts.
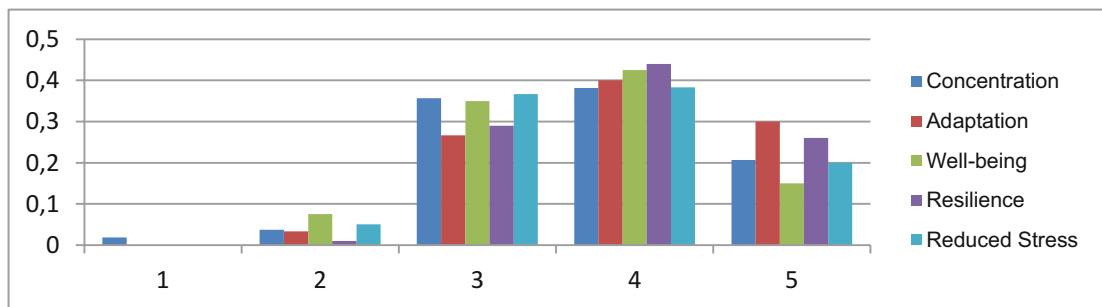


*Figure 17: Group 2 Human Impact Expectations*
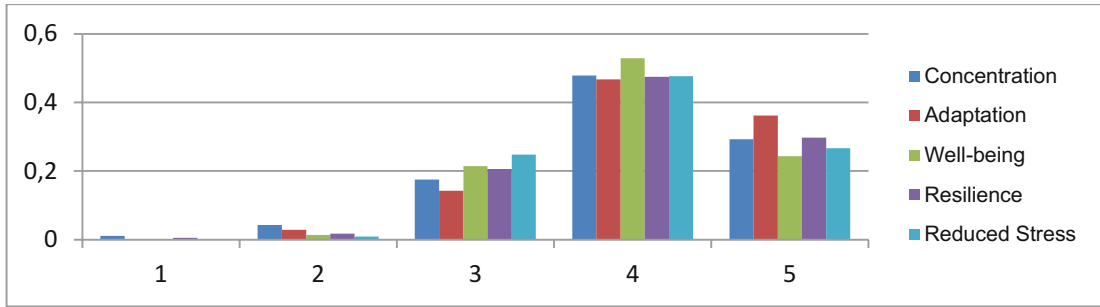
*Figure 18: Group 3 Human Impact Expectations*

Group 4 indicates that organisational mindfulness is effective in every measure of human impact (Figure 20). In the future, they desire to take more benefits from the impacts of reduced stress and well-being (Figure 19).
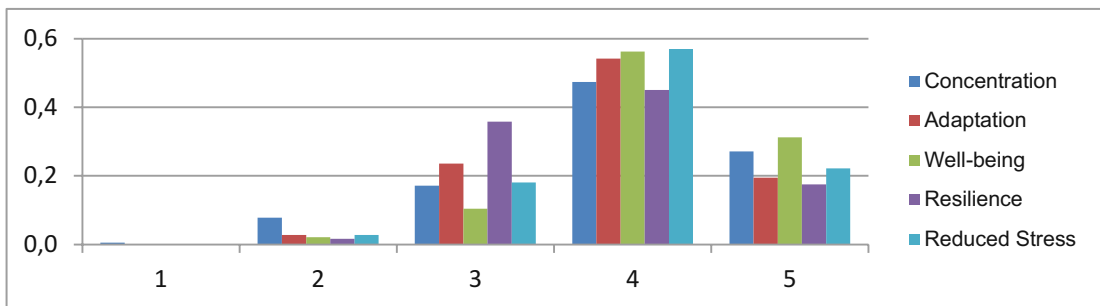


*Figure 19: Group 4 Human Impact Expectations*
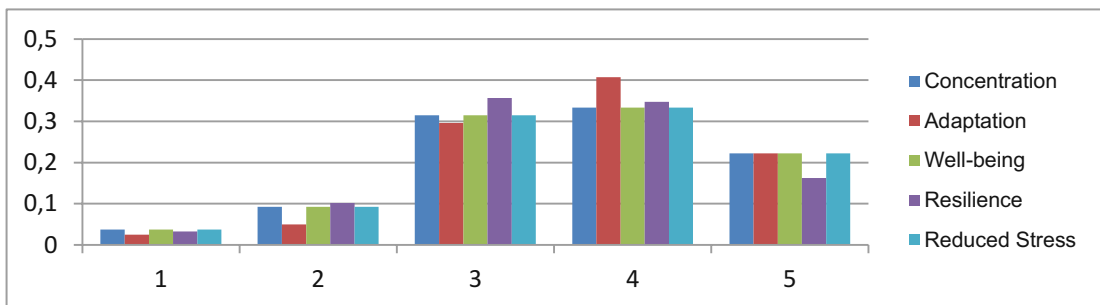


*Figure 20: Group 4 Experience according to Human Impacts*

### 5.5.3 Mental Impact

The majority of the participants consider that mindfulness develops mental performance, enhancing creativity, perception and cognition. Group 3 participants hope for more mental outcomes according to other groups (Figure 22). Their individual mindfulness practices may lead to this consideration, and they may expect the same enhancements in the work context. Besides, Group 4 demonstrate that participants are not as sure about mental impacts as human impacts. Since mental

effects can be observed over a more extended period, their experiences may not have been enough to realize these impacts.
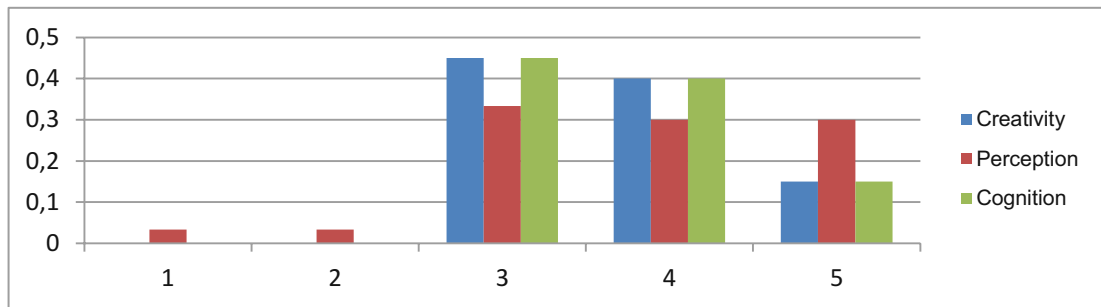


*Figure 21: Group 2 Mental Impact Expectations*
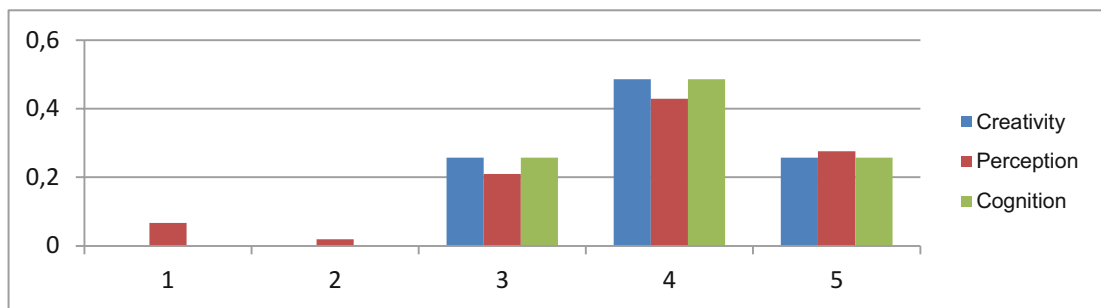


*Figure 22: Group 3 Mental Impact Expectations*

From the standpoint of cognition skills, Group 4 participants are surer about the impact of mindfulness. The corporate mindfulness experience may lead them to consider this way (Figure 24). Additively, it is observed that they expect more benefits in perception (Figure 23).
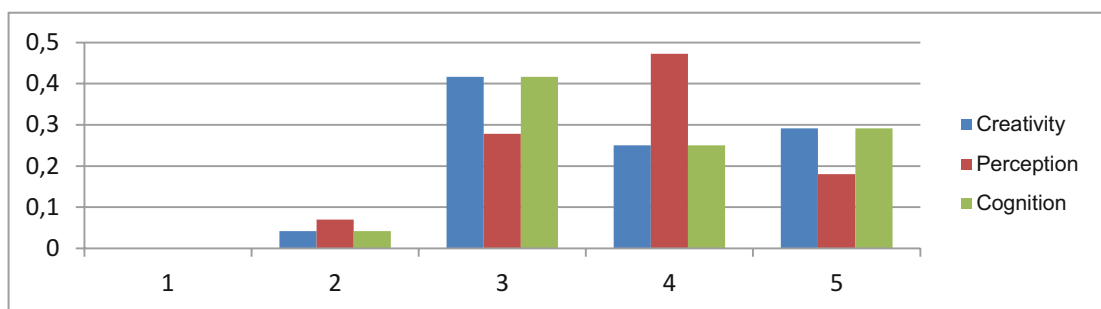


*Figure 23: Group 4 Mental Impact Expectations*
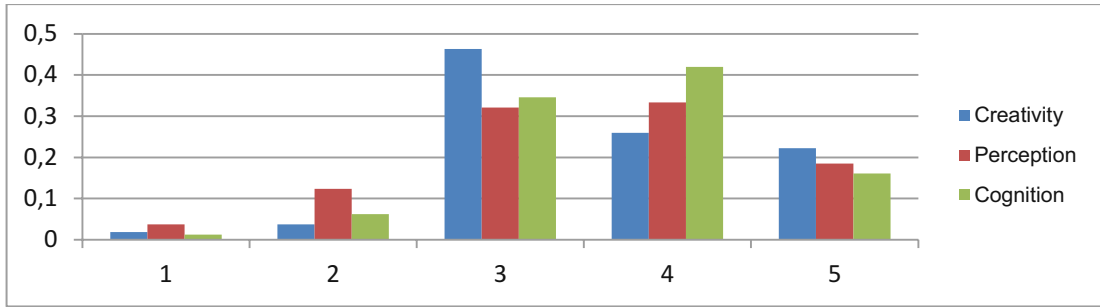
*Figure 24: Group 4 Experience according to Mental Impacts*

**5.5.4 Social Impact**

Participants' relationship between mindfulness and social impacts is questioned by participants regarding taking responsibility, enhanced communication, and empathy to other colleagues in the workplace. It is observed in each group trust the organisational mindfulness in the way of empathy skills. Moreover, Group 3 and 4 rely on more enhanced communication skills compared to Group 2. Their attempt at individual mindfulness gives a hope to see the same results in business life.
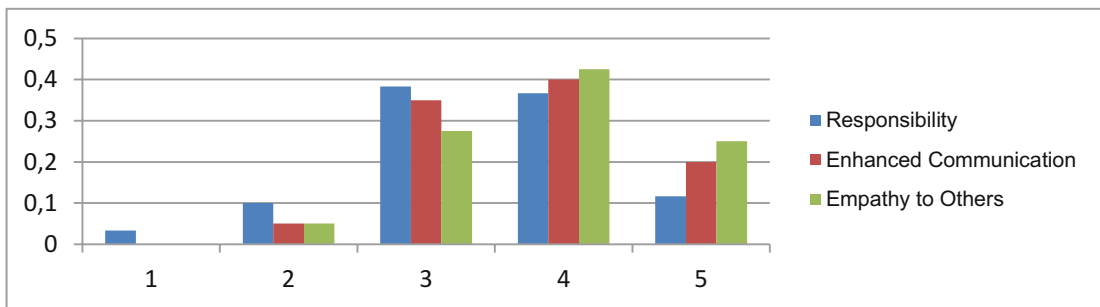


*Figure 25: Group 2 Social Impact Expectations*
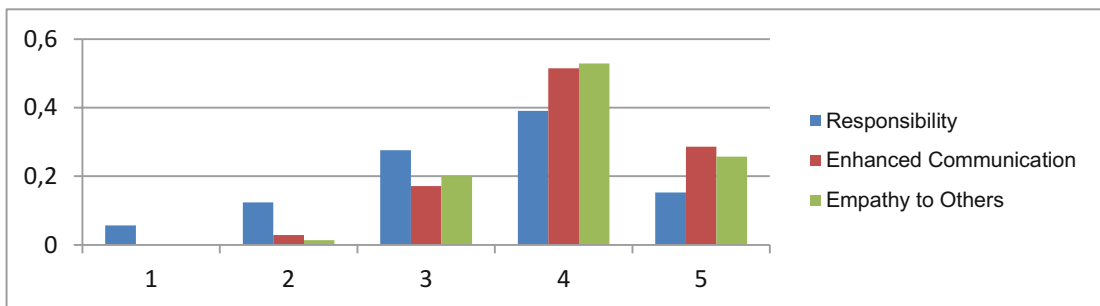


*Figure 26: Group 3 Social Impact Expectations*

The experience of Group 4 indicates that organisational mindfulness does not create impressive results for everyone (Figure 28). In this manner, they rely on more social impacts in the future.
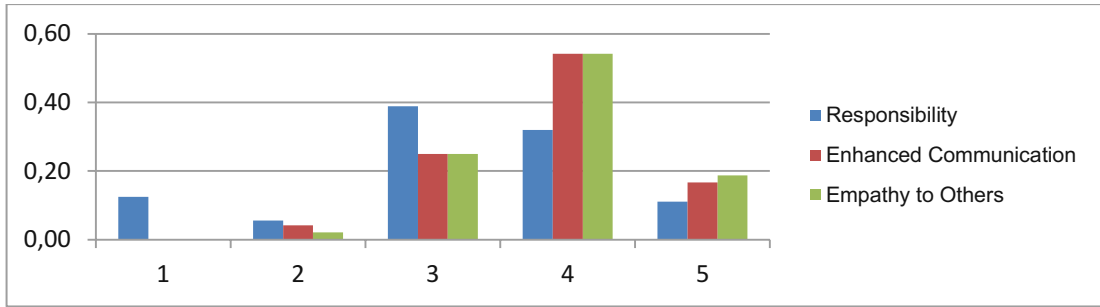
*Figure 27: Group 4 Social Impact Expectations*
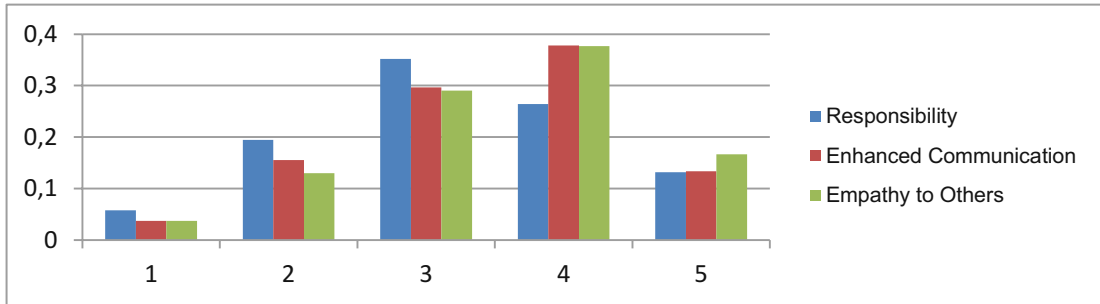


*Figure 28: Group 4 Experience according to Social Impacts*

### 5.6 Myths and Challenges

In the fifth section of the survey, individuals' scepticism is measured with general myths and common doubts, according to states mentioned in Section 2.3. A significant ratio of participants considers mindfulness not as a religion, verifying that participants have the basic cognition of the mindfulness concept. The results illustrate that they do not underestimate the influence, as the participants indicate that mindfulness is not a waste of time and enthusiasm. Nevertheless, individuals cannot differentiate mindfulness and meditation fully, and most of them perceive mindfulness as it is about being able to empty the mind. It seems that the majority of participants miss the goal of mindfulness. Furthermore, they regard another goal of mindfulness wrongly by defining mindfulness as becoming relaxed and chilled out.

On the other hand, the majority can notice some significant points about mindfulness. Even if most mindfulness exercises are related to breathing practice, mindfulness does not directly mean paying attention to the breath; which is approved by participants. Additively, participants accept that mindfulness is not dangerous, and these programs may not be beneficial for everyone in all cases, as also mentioned in Section 2.3.

At the organisational level, participants have doubts and fears. One point needs to

be mentioned that mindfulness breeds passive employees and doesn't lead to change in toxic organizational cultures; there is a lack of majority opinion. Some reject this thought as well as those who agree. Besides, it seems that there is a nearly uniform distribution in the question of "Mindfulness is purely being exploited by businesses for capitalist ends", which implies there is a lack of majority in this challenge too. Considering that the participants come from different backgrounds, collecting different ideas, in this case, can be considered normal.

Doubts of participants and challenges of organisational mindfulness are examined in more detail in the following sections; both employee and manager's point of views are included.

### 5.6.1 Employee Scepticism

Employee scepticism is argued in this part of the study, including general scepticism, program structure, time commitment, compliance, and workload fear. When examining these doubts, dividing them into two groups as participants (Group 4) and non-participant (Group 2 and Group 3) in organisational mindfulness programs help obtain more accurate results.

### 5.6.1.1 General Scepticism

As mentioned in Section 2.1.4 and 2.3, organisational mindfulness programs may not attract all employees' attention, and their leaders may force them to attend. However, the results suggest that Group 4 participants join the programs with their own volition, and no leader forces them to attend.

Another point is that employees may hesitate to start to judge themselves more after the mindfulness program. It is observed that there are supportive statements in the questionnaire for these statements; employees approve that they start to judge more. Emotional intelligence may lead to this situation; employees start to perceive themselves and their environment more, which also brings judgements.

It is likely that for some Group 4 participants, the programs affect employees' working time and can be considered a waste of time at first thought. However, a majority of Group 4 states that these programs are not a waste of time. As they declare that the program is so different from their first thought, they admit to having scepticism before starting the program, but they do not consider it a waste of time after the program.

There are still significant doubts that have not been resolved and need to be

addressed in the future. It is observed that all participants believe that generation Y or Z can adapt mindfulness more quickly, which may be a barrier in the future for other generations. Secondly, many participants choose to practice mindfulness in their private life as the most desired option. Additionally, an only group practice is not the desired option, but the mixture of individual and business groups is also acceptable for participants.

### 5.6.1.2 Structure of the Program

The structure of the corporate mindfulness program can be the most frightening feature to employees in organisational mindfulness. One concern is that the program's structure seems comparatively long, tedious, or unusual for Group 4 participants during their attendance. Only a few Group 4 participants reveal that they do not find materials unnecessarily extensive and unexciting during the program. As an unexpected benefit, participants also mark that the program's structure brings the participants closer together.

Contrary to expectations, Group 4 participants also think that attending the program with colleagues is comfortable for them. Furthermore, the opinions of Group 2 and Group 3 demonstrate that they can feel comfortable in these programs. Nonetheless, each group's participants avoid sharing their experience in front of colleagues or leaders; sharing personal thoughts at the workplace may seem unnecessary for them. It is observed that Group 2 and Group 3 participants are open to the MBSR program structure, which has a more comprehensive and intensive structure than other programs.

### 5.6.1.3 Time Commitment

The majority of Group 4 participants indicate that the program is not time-consuming during their program experience and does not affect the working time. Considering all participant responses, it is sceptical whether practising mindfulness in the working hours brings more beneficial outcomes or not. Even if they consider not an interruption in their work intensity, employees are not sure of practice time. As mindfulness can also be exercised individually, it is discussed whether it should be practised during working hours, which is also directly related to time commitment.

### 5.6.1.4 Compliance

The duration of the program influences the compliance of participants. It seems all participants are open to attend the programs in 1-2 hours. The intensity of the

program structure can also affect the attendance and compliance of employees. As mentioned above, participants are open to intensive and extensive program structures, which is a positive sign of compliance. Moreover, all participants, whether they have experience or not, state that they would like to participate in a corporate mindfulness practice/program in the future.

### 5.6.1.5 Fear of Workload

It is anticipated that employees may think they have more workload after the programs. According to survey results, there are those who either agree or disagree with this situation. It seems that Group 4 employees are confident that their leader will not demand more from them and give more workload. Experiences may have been guiding in generating the idea. On the other hand, Group 2 and Group 3 participants have doubts and fear that they will have more work after the mindfulness practices.

### 5.6.2 Manager Scepticism

In this part, manager scepticisms are discussed in terms of general scepticism, time commitment and investment.

### 5.6.2.1 General scepticism

Manager scepticism can guide the organisational mindfulness programs. As they are decision-makers, their thoughts need to be taken into consideration. Mindfulness may find a place in an organisational context if managers support the thought of practising mindfulness with a group. As mentioned in Section 2.1.4, mindfulness can also be practised individually; thus, managers may leave the programs in employees' private lives. About this topic, manager participants keep open-minded and state that both individually and practising with is suitable for them (especially Group 4 managers). Contrary to expectations, organisational mindfulness is not seen as a distraction in the work context by managers.

Managers with organisational mindfulness experience argue that the program progress is different from what they thought in many areas, which shows that first scepticisms might be incorrect. While leaders consider a waste of time in the literature review, the survey results show the opposite.

### 5.6.2.2 Time Commitment

The majority of Group 4 managers consider mindfulness not a time-consuming

event, affecting the working time negatively. Group 4 managers provide more real-life results due to their experiences. According to them, time commitment to organisational mindfulness programs brings beneficial outcomes. At the same time, the results can be observed in a short time and long time; for the sake of the results, the time commitment is acceptable for Group 4 managers.

Other groups point out that their expectations on organisational mindfulness regarding time commitments are also positive. Time commitment is related to the input of mindfulness in the organisational context. In addition to that, most managers wonder about the organisational mindfulness results and state that their organisations are ready to allocate time to experience the corporate mindfulness programs. They state clearly that organisational mindfulness is not a distraction in the work context. Even if their employees have a heavy workload, allocating time for mindfulness does not interrupt their work. The results demonstrate that managers are ready to devote an hour a week to these programs. Their teams can practice mindfulness both individually and with a group in the workplace, and devoting time to the program is considered natural.

Along with these responses, it should be noted that Group 2 and Group 3 managers consider only 1 hour per week suitable for the mindfulness programs. Group 4 managers think the programs deserve more (2 hours per week) favouring their experiences.

### 5.6.2.3 Investment

Investment is another big challenge in the face of organisational mindfulness. The reaction of managers is worthy of understanding the level of collective mindfulness in organisations. It is observed that a significant percentage of managers encourage mindfulness programs in their organisations; the data is collected from both employees and managers views. Since they are open and non-judgmental in organizational awareness, they are also expected to invest in this area. However, most Group 2 and Group 3 managers state that they do not intend to invest in corporate mindfulness programs even if they are aware of the beneficial results. The attitude demonstrates that the programs can reach a certain level for now.

On the other hand, almost half of Group 4 managers approve of the mindfulness programs' investments. The majority in investment subject cannot be achieved; thus, managers are still sceptical to organisational mindfulness as they are unwilling to allocate a budget to programs. Another reason may be that budget planning is not

suitable for these programs for now.

**5.7 Openness to Future Practices**

In the survey, Group 4 is asked to express their opinion about future programs or practices, which is an indicator of satisfaction of organisational mindfulness now and openness organisational mindfulness to the future. The results are reported that almost every participant accepts attending an organisational mindfulness program in the future.

This section represents the results of the survey for analysing the study. In the following section, the results are debated by considering research questions and hypotheses.

# 6. DISCUSSION

The results of the survey research assist the reader with the attitudes, knowledge and beliefs of participants. The sample of survey and response rates is sufficient to reflect that the results are generalizable. In this section, findings and results are analysed according to research questions and hypotheses. Each hypothesis is examined in 79 participants (20 participants in Group 2, 35 participants in Group 3 and 24 participants in Group 4). As it is done above, the examination is made regarding the participant groups.

*H1: Engineering management firms are not aware of mindfulness-based practices as a way of improving innovation capacity.*

According to the results, the influence of organisational mindfulness is observed in employees' daily work routine. As organisational mindfulness begins with individual mindfulness, the impacts of individual mindfulness give a promising picture. In the survey, participants are asked whether they can observe a difference individually, in their department or the whole organisation, and most participants perceive the impacts individually. It is observed that organisations are at the beginning level in the implementation (RQ3). However, the results seem hopeful. More than half of Group 4 recognizes the improvements in the daily work routine.

The innovation capacity of organisational mindfulness is explained in Section 5.5 in a detailed manner. In terms of four impacts (financial, human, mental and social), each group's experiences and expectations are examined to answer the first hypothesis. It is observed that each group has either behaved in a tentative or has high expectations from the organisational mindfulness program.

The doubts and prejudgements at the workplace stonewall the spreading the organisational mindfulness. The third hypothesis also examines the accuracy of doubts and prejudgements in detail. In short, while some points of doubts related to the literature review are observed in the survey response, others are denied. However, rather than the number of points, the points' value is vital as each point can have a distinct influence. If the point(s) is important enough to reject the program, it can be said that companies do not understand these effects.

In the survey, each group desire to attend an organisational mindfulness program in the future. In this way, Group 4 participants demonstrate their satisfaction with organisational mindfulness and openness to organisational mindfulness in the

future. Even if employees and managers doubt organisational mindfulness, individuals express their willingness to join these programs in the future. Thus, the impacts and expectations are considered more valuable than doubts, and the situation leads to rejecting the hypothesis.

The first hypothesis also directly refers to the second research question (RQ2). Although there are downsides, companies desire to monitor the benefits of organisational mindfulness.

*H2: People who are not familiar with mindfulness tend not to attend an organisational mindfulness program.*

The hypothesis should be examined from two sides of mindfulness background: individual and organisational. The individual side is examined with Group 2 participants who are not familiar with individual and organisational mindfulness. The organisational side is examined with Group 3 participants familiar with individual mindfulness but not organisational mindfulness.

Even if there are no Group 2-i participants, Group 2-ii participants are 23% (the whole Group 2). Their attitudes are significant in the study, especially to answer the individual side of the second hypothesis. Section 5.2 proves that each group is open to mindfulness with distinct activity choices and Group 2 participants are also curious about mindfulness at the organisational level. The fourth section of the survey indicates that they are not opposed to organisational outcomes; generally, they expect these benefits to be practical. Although they state their doubts and fears, they still desire to attend organisational mindfulness programs.

Data of Group 3 give a broader view to understand the organisational side of the second hypothesis. Dissimilarly with Group 2, this group know individual mindfulness and expect more from mindfulness at the organisational level (especially with social and mental impacts). The results represent that even if Group 3 participants lack organisational mindfulness knowledge, they desire to attend an organisational mindfulness program in the future.

The results of doubts and fears of Group 2 and Group 3 provide support to the second hypothesis. It is the challenging side of the study, and the presence of this situation empowers the study more. Although they have certain preconceived opinions, it is observed that both groups remark their willingness to join organisational mindfulness programs. Thus, the second hypothesis needs to be

rejected under participant responses.

*H3: Even if they know the proven benefits, both employees and managers have prejudgements and doubts about organisational mindfulness programs.*

Section 5.2 demonstrates that the majority of all participants expect lots of benefits from mindfulness. They trust proven benefits, and all groups' responses point out those participants is open to organisational mindfulness programs. However, in this process, the participants' claims should be addressed as well as their fears and doubts, so that more lasting results can be obtained for the future. Moreover, as mentioned above, it is believed that both employees and managers have prejudgements and doubts on organisational mindfulness programs; thus, the validity of the judgment needs to be discussed according to participant responses. In Section 5.6, both employee and manager doubts are examined, which is observed that while some expected doubts are confirmed, others can be considered now unnecessary.

According to employee scepticism, attendance with their volition is the first point that needs to be debated. Contrary to expectations, Group 4 employees approve that they join the programs with their own volition. Thus, it has been observed that this judgment is incorrect and counts as a rejecting point of hypothesis. Each employee group indicate that they hesitate to start judging themselves more after the program. As responses prove it, this point supports the hypothesis. In addition, it is observed that participants believe that generation Y or Z can adapt mindfulness more quickly, which may be a barrier in the future and is counted as a doubt to support the hypothesis.

Program structures are expected as a barrier to organisational mindfulness in a workplace, some points prove this, but others are contrary to expectations. Employee participants find the program comparatively long, dull or unusual for them during their program attendance. Thus, the structure can be counted as a doubt in the future for participants. While attending the program with colleagues does not bother the employees, it is uncomfortable to share thoughts in front of colleagues or leaders. Sharing personal thoughts at the workplace may be too much for employees, and it is expected that the contents of the programs bring doubts and prejudgements.

On the other hand, those who have never participated in the program seem more open to the structure, as Group 2 and Group 3 employees. According to others,

participants who have joined a program have more doubts about the program's structure. Less doubt on current programs' structure is better for organisational mindfulness, but available doubts lead to more optimised programs. Thus the structure of programs offers both accepting and rejecting points to the hypothesis.

According to results employee responses, it does not leave a question mark on doubts in time commitment because employees do not find the programs as time-consuming and interruption in their work intensity. There are enough data to reject the hypothesis concerning time commitment.

Fear of workload is another concern to develop prejudgements on organisational mindfulness. Although Group 4 employees do not expect more workload after the program, Group 2 and Group 3 employees are afraid that more work will be given to them. Therefore, the hypothesis cannot be concluded in this respect of fear of workload.

From the managers' perspective, most of them are open to mindfulness activities and consider the mindfulness programs appropriate in the workplace, even if it can be experienced in employees' private lives. Group 4 managers reveal that the programs turn out different from what they expected. It seems that general scepticisms of managers offer rejecting points to the hypothesis.

In terms of time commitment, it is obtained more beneficial results than doubts. Most managers are open to their employees to practice mindfulness individually and with a group in the work context. Even if their employees have a heavy workload, mindfulness does not seem an interruption for the leaders. Each group managers approves that time commitment is not a barrier in organisational mindfulness. Managers are ready to devote an hour (Group 4 managers approve 2 hours) a week to these programs, but they may not agree to extend its duration. Therefore, the time commitment can be counted as rejecting the hypothesis for now.

However, managers do not think in the same way about the investments to be made for the programs. Even if they desire to encourage the programs, they do not want to make investments. The empowerment of employees with mindfulness may be undervalued during budget planning. It may be thought that a budget should not be allocated as it is a competence that can also be gained individually. This situation leaves a big question mark in managers' minds; thus, investing in mindfulness can be counted as supporting the hypothesis.

Although there are scepticisms that support the third hypothesis, there are also topics that reject the hypothesis. For this reason, the validity of the hypothesis varies according to the subject content.

# 7. CONCLUSION AND FURTHER RESEARCH

Mindfulness is an effective tool for boosting employee well-being, task performance and improving interpersonal relationships in organisations. Companies that undergo a transformation through mindfulness can observe positive returns on each segment in the organisation, making the organisation more productive, resilient and sustainable. The number of mindful organisations can be increased only if companies are willing to learn and spread the whole concept throughout every company level.

As many of the studies on the topic are recent, the effects of mindfulness are not wholly known. Most companies are not aware of the mindfulness terms, or some companies focus on just a diverse set of objectives without understanding its philosophy. Additionally, most companies are not open to change the organisation setting. The major problem is that companies either do not have enough knowledge about mindful corporate settings or deny the proven outcomes. The study is limited to engineering management firms, and the research aims to examine the current mindfulness situation. In other words, the aim is to understand to what extent engineering management organisations promote mindfulness amongst their workforce.

For that matter, research questions are formed to allow a discussion over common definitions. The first research question (RQ1) emphasizes the necessity of systematic measurements to obtain accurate results on the level of organisational mindfulness. The positive outcomes that already discussed in previous researches are also readdressed with the study (RQ2). In this endeavour, an extensive literature review and theoretical assumptions can be made to provide a study framework. The research analyses organisations the implementation level with real-life examples; thus, the current situation of organisational mindfulness can be investigated (RQ3). In favour of the survey research and hypotheses, answers to research questions have found, and objectives have met.

During the research, lots of limitations show up and give new directions to the study. Although the topic is thought to be in everyone's interest, unfortunately, it does not attract everyone's attention. Therefore, most of the participants in the survey are individuals who are interested in this issue. As the thesis is written during the pandemic situation (Covid-19) that started in 2020, it is harder to connect applicants.

There are broad implications of work for academic theories and professional

practices. From the point of academic theories, many sources are summarized and analysed in this study; they may guide further researches. Some concepts have also been supported with real life examples. From the point of professional practices, the benefits of organisational mindfulness are highlighted one more. Moreover, employees are shown their willingness to join organisational mindfulness programs throughout the study. Decision-makers need to consider these and must address the issue to observe the effects in organisations.

Still, many points remain unclear and need to be clarified by future researches. Even if managers approve, that time commitment is necessary to observe the benefits of mindfulness, the duration of programs that need to be allocated still a matter of debate. In the case of time extension, the managers' approval in terms of time commitments is questionable. Additively, the practice should take place at what time of the day need to be discussed in the future. More researches about generations may lead to effective organisational mindfulness programs, as most employees believe that generation Y or Z can adapt mindfulness more quickly. In addition to these, managers still do not want to make investments, even if they desire to encourage the programs. More research should discuss this issue so that the doubts eliminate in the future. Besides, more solution researches need to be investigated to eliminate other prejudgments of employees and managers. In this way, organisations' implementation level can be upgraded, and more organisational outcomes can be obtained.

The study proves that engineering management organisations are aware of mindfulness-based practices to improve innovation capacity. Employees and managers demonstrate their willingness for organisational mindfulness programs even if they have doubts and fears. Moreover, the influence of organisational mindfulness can be observed in employees' daily work routine. Regardless of experience, employees are open to organisational mindfulness concept and setting. There are still doubts and fears about organisational mindfulness, but available doubts lead to more optimised programs and disappear in the future. To conclude, engineering management organisations promote organisational mindfulness positively and are waiting for more studies to widespread.

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# 9. APPENDICES

## List of Abbreviations

FFMQ: Five Facet Mindfulness Questionnaire:
FM: Freiburg Mindfulness Inventory
HROP: High-reliability organization perceptions
MAAS: Mindful attention awareness scale
MBSR: Mindfulness-Based Stress Reduction
MBCT: Mindfulness-Based Cognitive Therapy
MI/MBI: Mindfulness-Based Interventions
OM: Organizational mindfulness
OMP: Organizational mindfulness processes
PHLMS: Philadelphia Mindfulness Scale
SMS: State Mindfulness Scale
SOS: Safety Organizing Scale
TMS: Toronto Mindfulness Scale

## APPENDIX A: Definitions of Individual and Organizational Mindfulness

| Source | Definition of individual mindfulness |
|---|---|
| Baas et al. (2014) | A state of conscious awareness resulting from living in the moment (Brown & Ryan 2003, Kabat-Zinn 1994) |
| Carlson (2013, p. 175) | Attention to one's current experience and nonevaluative observation of that experience (Bishop et al. 2004) |
| Creswell & Lindsay (2014, p. 402) | Monitoring one's present-moment experience with acceptance |
| Dane (2011, p. 1000) | A state of consciousness in which attention is focused on present-moment phenomena occurring both externally and internally |
| Eisenbeiss & van Knippenberg (2015) | A meta-cognitive ability defined as "a state of being attentive to and aware of what is taking place in the present" (Brown & Ryan 2003, p. 822) and involves conscious perception and processing of external stimuli (in contrast to automatic tendencies) |
| Hülsheger et al. (2013, p. 310) | A state of nonjudgmental attentiveness to and awareness of moment-to-moment experiences (Bishop et al. 2004, Brown & Ryan 2003) |
| Hülsheger et al. (2014, p. 1114) | A state of consciousness in which individuals pay attention to the present moment with an accepting and nonjudgmental attitude (Brown et al. 2007, Kabat-Zinn 1994) |
| Langer (2014, p. 11) | An active state of mind characterized by novel distinction-drawing that results in being (*a*) situated in the present, (*b*) sensitive to context and perspective, and (*c*) guided (but not governed) by rules and routines |
| Leroy et al. (2013, p. 238) | A receptive attention to and awareness of external (e.g., sounds) and internal (e.g., emotions) present-moment states, events, and experiences (Brown & Ryan 2003, Dane 2011) |
| Niemiec et al. (2010, p. 345) | A receptive state of mind wherein attention, informed by awareness of present experience, simply observes what is taking place |
| Reb et al. (2014) | Present-moment awareness with an observing, nonjudging stance (e.g., Bishop et al. 2004, Brown et al. 2007, Mikulas 2011) |
| Ruedy & Schweitzer (2010, p. 73) | An individual's awareness, both internally (awareness of their own thoughts) and externally (awareness of what is happening in their environment) |
| Zhang et al. (2013, p. 433) | A present-focused awareness and attention (the presence factor) with an open attitude toward ongoing events and experiences (the acceptance factor) (Bishop et al. 2004) |
| Zhang & Wu (2014, p. 24) | A mental state with the characteristics of present-focused awareness and attention (Bishop et al. 2004, Brown et al. 2007, Langer 1989b) |

*Definition of Individual Mindfulness (Sutcliffe et al., 2016)*

| Source | Definition of collective mindfulness |
|---|---|
| Ausserhofer et al. (2013, p. 157) | To stay mindful, despite hazardous environments, frontline employees consider constantly five principles: tracking small failures, resisting oversimplification, remaining sensitive to operations, maintaining capabilities for resilience, and taking advantage of shifting locations of expertise |
| Barry & Meisiek (2010, p. 1505) | The capacity of groups and individuals to be acutely aware of significant details, to notice errors in the making, and to have the shared expertise and freedom to act on what they notice (from Weick et al. 2000, p. 34) |
| Carlo et al. (2012, pp. 1081–82) | A means to increase organizational reliability and mitigate the adverse potential of unexpected, so-called black swan events (Taleb 2007), and is characterized by five mindful behaviors, including continuous learning from failures and the willingness to consider alternative perspectives |
| Hales et al. (2012, p. 570) | When, in an organizational context, an individual maintains a level of alertness to the activities surrounding his/her job or task and awareness of how he/she contributes to an overall process that produces a good or service for a customer |
| Hargadon & Bechky (2006, p. 486) | Describes the amount of attention and effort that individuals allocate to a particular task or interaction, and, through mindful interpretation by group members of an ongoing experience and the mindful generation of appropriate actions, collective cognition connects individual ideas and experiences, both redefining and resolving the demands of emerging situations |
| Hoy et al. (2006, p. 241) | Preoccupation with mistakes, reluctance to simplify, sensitivity to day-to-day operations, resilience, and deference to expertise |
| Knox et al. (1999, p. 26) | Actively and continuously question assumptions; promote orderly challenge of operating routines and practices so successful lessons of the past do not become routine to the point of safety degradation; "outside view" actively solicited or created through active multidisciplinary review of the routine and debriefing of the unusual to prevent normalization of deviance |
| Mu & Butler (2009, p. 29) | An elevated state of awareness of expectations, a nuanced appreciation of the specific context, and an alertness to potentially significant changes in the face of new and unprecedented situations; takes into account the specific organizational situation rather than following bandwagon effects |
| Ndubisi (2012, p. 537) | Systems and processes to promote individual and collective mindfulness; a way of working marked by a focus on the present, attention to operational detail, willingness to consider alternative perspectives, and an interest in investigating and understanding failures |
| Ray et al. (2011, p. 188) | Referred to by some as organizational mindfulness, a construct developed initially to describe how high-reliability organizations avoid catastrophic errors (Weick & Sutcliffe 2001), but now increasingly used to characterize organizations that pay close attention to what is going on around them, refusing to function on "autopilot"; "mindful" organizations "induce a rich awareness of discriminatory detail and a capacity for action" (Weick et al. 1999, p. 88) |
| Valorinta (2009, p. 964) | Mindfulness refers to processes that keep organizations sensitive to their environment, open and curious to new information, and able to effectively contain and manage unexpected events in a prompt and flexible fashion |
| Wilson et al. (2011, p. 808) | The combination of ongoing scrutiny of existing expectations based on newer experiences, willingness, and capacity to invent new expectations based on newer experiences, willingness and capacity to invent new expectations that make sense of unprecedented events, a more nuanced appreciation of context and ways to deal with it, and identification of new dimensions of context to improve foresight and current functioning (from Weick & Sutcliffe 2001, p. 42) |
| Barrett et al. (2006), Vogus & Sutcliffe (2007a,b), Vogus & Welbourne (2003), Vogus et al. (2014a), Weick (2005), Weick & Sutcliffe (2003) | All use the categories of collective mindfulness and the definitions from Weick et al. (1999) and/or later adaptations by Weick & Sutcliffe (2001, 2007); other studies, such as LaPorte & Consolini (1991; preoccupation with failure, sensitivity to operations, commitment to resilience, and deference to expertise), Roberts et al. (1994; deference to expertise), and Schulman (1993; reluctance to simplify interpretations), constitute collective mindfulness |

*Definition of Organizational Mindfulness (Sutcliffe et al., 2016)*

**APPENDIX B: Online Survey**



## Organisational Mindfulness Survey

In case of confusion, my email address is:
eceozcan94@gmail.com

Supervisor: Dr. Larry Stapleton PhD, MA, BSc, CPIM
larrystapleton@knewfutures.com

Thank you very much for participating in this survey. My name is Ece Özcan and I am currently writing my master thesis in Engineering Management (MSc) at TU Wien. I am researching how engineering management organisations promote mindfulness amongst their work force. As an industrial engineer and yoga instructor, I wish to have a deeper understanding on these two areas and examine their possible relations. Aim of this study to investigate latest organisational enhancements in these organisations, how organisations can promote mindfulness with ease and at what stage (in implementation or consideration) engineering management companies are currently.

Your anonymity will be protected. The researchers are committed in maintaining the confidentiality of the personal data of participants. All information obtained might be published for scientific purposes, with data being presented grouped, without the identification of the individuals who participated of the study. All personal information will remain anonymous.

Thanks for being part of the research with answering this survey!

Next                                                      Page 1 of 8

*Online Survey Introduction Section*

# Organisational Mindfulness Survey

* Required

## Demography

**1- What gender do you identify as? ***

○ Female

○ Male

○ Prefer not to say

○ Other: _____

**2- What is your age? ***

○ 20 - 25 years old

○ 26 - 30 years old

○ 31 - 35 years old

○ 36 - 40 years old

○ 41 - 45 years old

○ 46 - 50 years old

○ 51 - 55 years old

○ 56 - 60 years old

○ 60+

*Online Survey First Section: Demography*

3- Have you worked at an engineering and/or management company? *

◯ Yes

◯ No

4- What is your role at an engineering and/or management company? *
If you are not currently working, but you used to work, please select your last role

◯ Intern/Trainee.

◯ Analyst

◯ Coordinator/Supervisor

◯ Manager/Head of Department

◯ Director

◯ CEO

◯ Company Owner

◯ Self-employed

◯ Employee

◯ Other: _____

*Online Survey First Section:  Demography*

5- Which is your field of work? *

○ Agriculture

○ Automobile Industry

○ Banking and Finance

○ Consulting Services

○ Consumer Durables

○ E-commerce & Internet

○ Education

○ FMCG (Fast-moving consumer goods)

○ Healthcare & Pharmaceuticals

○ Hospitality & Travel

○ Import Export

○ Infrastructure

○ IT (Information Technology) & Software

○ Legal Services

○ Manufacturing Industries

○ Media & Advetising Industry

○ NGO (Non-governmental organization)

○ Oil & Gas

○ Power & Energy

○ Real Estate

○ Retail

○ Logistics

○ Defense Industry

○ Other: _____

*Online Survey First Section: Demography*

# Organisational Mindfulness Survey

* Required

## Mindfulness is..

Mindfulness is the basic human ability to be fully present, aware of where we are and what we're doing, and not overly reactive or overwhelmed by what's going on around us. While mindfulness is something we all naturally possess, it's not something you have to conjure up, you just have to learn how to access it. When we practice mindfulness, we're practicing the art of creating space for ourselves—space to think, space to breathe, space between ourselves and our reactions.



four qualities of mindfulness

1- Would you like to learn mindfulness? *

◯ Yes

◯ No

◯ Maybe, not now

◯ I already know

◯ Other: _____

*Online Survey Second Section: Background Mindfulness*

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**2- Which of these proven benefits may be a reason to practice mindfulness?** *

- ☐ Decreased Stress
- ☐ Enhanced Ability to Deal with Illness
- ☐ Facilitation of Recovery
- ☐ Decreased Depressive Symptoms
- ☐ Improved General Health
- ☐ Increase Body Satisfaction
- ☐ Improves Cognition
- ☐ Controls anxiety
- ☐ Promotes emotional health
- ☐ Enhances self-awareness
- ☐ Lengthens attention span
- ☐ May reduce age-related memory loss
- ☐ Can generate kindness
- ☐ May help fight addictions
- ☐ Improves sleep
- ☐ Decreases blood pressure
- ☐ Increase problem-solving ability
- ☐ Improves Focus
- ☐ Enhances Creativity
- ☐ Improves Communication
- ☐ Improves Job Performance
- ☐ Job Satisfaction
- ☐ None
- ☐ Other: _____

*Online Survey Second Section: Background Mindfulness*

3- How do you practice mindfulness? *

- ☐ Meditation
- ☐ Yoga
- ☐ Mindful Eating
- ☐ Walking Meditation
- ☐ Awareness of Breath
- ☐ Body Scan
- ☐ Sensory-guided Meditations
- ☐ MBCT (Mindfulness-Based Cognitive Therapy)
- ☐ MBSR (Mindfulness-Based Stress Reduction)
- ☐ Tai Chi
- ☐ Climbing
- ☐ Sport-related Events
- ☐ Praying
- ☐ Mindful Coloring
- ☐ Connect with Nature
- ☐ Affirmations
- ☐ Take a Music Break
- ☐ Writing a Journal
- ☐ Set a Daily Intention
- ☐ Create a Tea or Coffee Ritual
- ☐ Be Present with Your Family/Friends
- ☐ Take a Digital Break
- ☐ Take a Mental Mini-Vacation
- ☐ Handwork
- ☐ Aromatherapy
- ☐ None
- ☐ Other:

*Online Survey Second Section: Background Mindfulness*

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*Online Survey Second Section: Background Mindfulness*



*Online Survey Description of "Organizational Mindfulness"*

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## Organisational Mindfulness

**1- Have you had any experience with mindfulness in your workplace?** *

○ Yes

○ No

---

If you HAVE an experience with organisational mindfulness (e.g. attending a yoga class or learn breathing techniques at work), please answer questions below. Otherwise, you can skip this section.

---

**2- Which mindfulness course/exercise/program have you attended at work?**

☐ Yoga Classes

☐ Meditation Classes

☐ MBSR (Mindfulness-Based Stress Reduction)

☐ Laughter Yoga

☐ Body Scan Exercises

☐ Mindfulness activities at a meeting

☐ Set a Daily Intention

☐ Be Present with Colleagues

☐ Take a Digital Break

☐ MBI (Mindfulness-Based Intervention)

☐ Other: _____

---

**3- Is/was the program encouraged by your employer(s)?**

○ Yes

○ No

*Online Survey Third Section: Organizational Mindfulness Experience*

4- How many people in the organisation are/were trained ? (Please give a percentage)

Your answer

5- How many hours have been given to this program in total?

Your answer

6- How often do/did you participate in program?

○ Daily

○ Weekly

○ Monthly

○ Yearly

○ Never

○ For once

○ Other: _____

7- I participate/d the program with my own volition.
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|                     | 1 | 2 | 3 | 4 | 5 |                  |
|---------------------|---|---|---|---|---|------------------|
| Strongly Disagree   | ○ | ○ | ○ | ○ | ○ | Strongly Agree   |

*Online Survey Third Section: Organizational Mindfulness Experience*

**8- After/During the program, I have recognized improvements in my daily work routine**

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Major negative experience | ○ | ○ | ○ | ○ | ○ | Major improvements |

**9- After/During the program, I have recognized that my sick days are reduced**

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Major negative experience | ○ | ○ | ○ | ○ | ○ | Major improvements |

**10- After/During the program, I feel more engaged and motivated to work**

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**11- After/During the program, my working efficiency has increased**

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

*Online Survey Third Section: Organizational Mindfulness Experience*

**12- After/During the program, I can work with uncertanities freely**

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**13- After/During the program, I fell less stress**

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**14- After/During the program, I have better mental and physical wellbeing**

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Major negative experience | ○ | ○ | ○ | ○ | ○ | Major improvements |

**15- After/During the program, I feel that I can make improved decisions with more confidence**

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

*Online Survey Third Section: Organizational Mindfulness Experience*

**16- After/during the program, my sense of being in the present is increased**
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**17- After/During the program, I started to judge myself more**
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**18- After/During the program, I generate more creative solutions.**
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**19- After/during the program, I am more open to others' perceptions and beliefs.**
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

*Online Survey Third Section: Organizational Mindfulness Experience*

20- After/during the program, I am able to process the information in a new and different way that is needed for a resolution.

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

21- After/During the program, we have more supportive and enhanced working environment.

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

22- After/During the program, I attend more voluntary works (duties other than my main responsibilities).

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

23- After/During the program, I have improved communication channels between colleagues and managers.

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

*Online Survey Third Section: Organizational Mindfulness Experience*

**24- After/during the program, I feel more empathy for others.**
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**25- After/during the program, I can manage shifting priorities**
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**26- During the program, I find materials unnecessarily extensive and unexciting**
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**27- During the program, the structure of program seems to be comparatively long, boring or unusual for me.**
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

*Online Survey Third Section: Organizational Mindfulness Experience*

**28- Attending the program with my colleagues is/was uncomfortable for me**
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**29- After/during the program, I feel/felt like someone was watching me**
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**30- The program was so different than I thought**
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**31- The program affected/ affects my working time, I think it is time consuming**
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**32- Would you like to participate more mindfulness program in future?**

○ Yes

○ No

**33- After/During program, I can observe the impacts**

○ Individually

○ Only in my department

○ Organizationally

*Online Survey Third Section: Organizational Mindfulness Experience*

## Organizational Mindfulness

Please state your opinions on organisational mindfulness on the scale below .

---

**1- Mindfulness may help to improve my concentration at work** *
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ◯ | ◯ | ◯ | ◯ | ◯ | Strongly Agree |

---

**2- Mindfulness may help to adapt new things quickly and efficiently at work** *
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ◯ | ◯ | ◯ | ◯ | ◯ | Strongly Agree |

---

**3- Working environment has lots of challenges in a constant change, employees already know how to react to ever-changing situations. Mindfulness may help the situation.** *
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ◯ | ◯ | ◯ | ◯ | ◯ | Strongly Agree |

---

**4- I'd not like to be aware of myself** *
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ◯ | ◯ | ◯ | ◯ | ◯ | Strongly Agree |

*Online Survey Fourth Section: Organizational Mindfulness Opinions*

**5- After the program, I will feel less stress** *

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**6- I will have the sense of being in the present moment** *

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**7- I will turn to mindfulness as an essential strategy to fight work-related stress.** *

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**8- I will open to adjusting others' perceptions and beliefs.** *

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

*Online Survey Fourth Section: Organizational Mindfulness Opinions*

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9- I will be able to process the information in a new and different way *
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

10- Mindfulness may help to have improved communication channels between peers and managers. *
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

11- Practicing mindfulness in the workplace enables us to feel empathy for others. *
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

12- If I attend the program, I will feel more engaged and motivated to work *
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

*Online Survey Fourth Section: Organizational Mindfulness Opinions*

**13- After the program, I think my leader will demand more from me and give me more work load** *
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**14- I will be able to manage shifting my priorities** *
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**15- I believe that mindfulness can be exercised by individually, I don't want to focus on these things at work.** *
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**16- Organisational mindfulness is a distraction in work context** *
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

*Online Survey Fourth Section: Organizational Mindfulness Opinions*

17- I don't want to interrupt myself with these kinds of practices in the intensity of work *

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

18- I believe that generation Y or Z can adapt mindfulness more quickly. *

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

19- I'd not like to participate these programs with my colleagues. I don't feel comfortable. *

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

20- If necessary, I'd not like to share my experience in front of my colleagues or leaders. *

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

*Online Survey Fourth Section: Organizational Mindfulness Opinions*

**21- I 'd like to practice mindfulness only in my private life ***

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**22- Do you prefer to practice mindfulness individually or with a group or both equally? ***

○ Individually

○ With a group

○ Both Equally

**23- I just want to deal with my duties at my workplace. I don't want to be involved in anything that is not related to work ***

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**24- If you want to learn mindfulness, do you think 8 weeks with 1 hour group sessions in every week and half hour every day for individual practice is too much? ***

○ Yes

○ No

*Online Survey Fourth Section: Organizational Mindfulness Opinions*

25- Please indicate that which practices are suitable/seem logical for you *

☐ Start your day with a contemplative morning practice such as meditation.

☐ Before entering the workplace, remind yourself of your organization's purpose and your commitment to your vocation.

☐ Throughout the day, pause to be fully present in the moment before undertaking the next critical task

☐ Review the day's events at the close of the day, to prevent work stresses from spilling into your home life

☐ Before going to bed, engage in some spiritual reading

☐ None

☐ Other: _____

26- How often would you wish to participate in mindfulness program? *

○ Daily

○ Weekly

○ Monthly

○ Yearly

○ Never

○ Other: _____

*Online Survey Fourth Section: Organizational Mindfulness Opinions*

27- How many hours a week, on average, would you wish to participate? *

○ Less than 1 hour

○ 1 hour

○ 2 hours

○ 3 hours

○ 4 hours

○ +4 hours

○ Other: _____

28- If you would like to practice organisational mindfulness when would you like to do them? *

☐ Mornings before work

☐ Lunchtime

☐ After work

☐ During working hours

☐ Weekends

☐ Other: _____

29- As an employer, I don't want to invest "mindfulness"?

○ Yes

○ No

○ Other: _____

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*Online Survey Fourth Section: Organizational Mindfulness Opinions*

## Comments on Mindfulness

Please state your comments on ideas of mindfulness on the scale below

### 1- Mindfulness is a religion
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

### 2- Mindfulness and meditation are the same
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

### 3- Mindfulness is about being able to empty your mind
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

### 4- The aim of mindfulness is to become relaxed and chilled out
(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

*Online Survey Fifth Section: Comments on Mindfulness*

**5- Mindfulness is just about paying attention to the breath**

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**6- Mindfulness training is good for everyone, and helps with everything**

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**7- Mindfulness can be dangerous**

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

**8- Mindfulness breeds passive employees and doesn't lead to change in toxic organizational cultures**

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

*Online Survey Fifth Section: Comments on Mindfulness*

9- Mindfulness is purely being exploited by businesses for capitalist ends

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

10- Mindfulness is a fad. It is not important and/or a waste of time.

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

11- Mindfulness can be just a trendy term, I think it is temporal

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

12- Even if mindfulness affects industrial/organisational psychology, it also feeds capitalism.

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

13- Mindfulness can be just a hobby, it has no relation with business.

(1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5:strongly agree)

|  | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|
| Strongly Disagree | ○ | ○ | ○ | ○ | ○ | Strongly Agree |

*Online Survey Fifth Section: Comments on Mindfulness*

*Online Survey Last Section*