SUSTAINABILITY MANAGEMENT IMPLEMENTATION IN A FINNISH SME

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ABSTRACT

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Abstract:

Rising environmental problems impact organisations' economic stability and challenge the prevailing management methods. A growing need for sustainability management has risen, but its implementation is found lacking despite numerous tools, methods, and frameworks. Thus, a gap between sustainability management planning and implementation has been acknowledged.

The current study aims to examine the conditions of sustainability management implementation by examining, identifying, and categorising the factors that impact its implementation and to provide knowledge for filling the presented gap. The current case study examines the factors that impact the sustainability management implementation of a Finnish SME from an environmental perspective as the target organisation urged a basis for environmental management. This qualitative study examined sustainability management through a critical incident technique interview and used data triangulation to connect environmental- and sustainability management perspectives.

The study's findings revealed 30 factors that impact the target organisation's sustainability management implementation and, with content analysis, divided them into seven categories. The found categories were the role of top management, organisational structure, co-operation with the affiliated company, the role of employees, image benefit, organisational culture, and national factors. Simultaneously, the results revealed the target organisation's environmental impacts that were utilised in an environmental management system implementation model based on which the environmental management can be developed.

Key words: sustainability management implementation, environmental management, SME, triple bottom line, sustainability management model

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Tiivistelmä:

Globaalit ympäristöongelmat vaikuttavat organisaatioiden taloudelliseen vakauteen sekä haastavat nykyiset johtamismenetelmät. Kestävän kehityksen johtamismenetelmille nähdään kasvavaa tarvetta, mutta lukuisista työkaluista ja menetelmistä huolimatta niiden käyttöönotto on rajallista. Onkin todettu, että kestävän kehityksen johtamisen suunnittelun ja käyttöönoton välisistä rajoitteista on tutkimuspuutteita.

Tämän tutkimuksen tavoitteena oli selvittää kestävän kehityksen johtamisen käyttöönoton edellytyksiä tutkimalla, tunnistamalla ja luokittelemalla siihen vaikuttavia tekijöitä. Samalla se pyrki tuomaan uutta tietoa edellä esitettyihin tutkimuspuutteisiin. Tapaustutkimus tarkastelee suomalaisen pk-yrityksen kestävän kehityksen johtamisen toteutukseen vaikuttavia tekijöitä ympäristönäkökulmaa painottaen, koska kohdeorganisaatio tarvitsi perustan ympäristöjohtamiselle. Tutkielma tarkasteli kestävän kehityksen johtamista kriittisten tapausten tekniikan avulla, ja yhdisti ympäristö- sekä kestävän kehityksen johtamisen näkökulmat datan triangulaation avulla.

Tutkimustulokset toivat esille 30 tekijää, jotka vaikuttivat kohdeorganisaation kestävän kehityksen johtamisen käyttöönottoon. Tunnistetut tekijät jaettiin seitsemään kategoriaan sisällönanalyysin perusteella. Muodostetut kategoriat olivat johdon rooli, organisaatiorakenne, yhteistyö sidosyhtiön kanssa, työntekijöiden rooli, imagohyöty, organisaatiokulttuuri ja kansalliset tekijät. Tuloksista kävi ilmi myös kohdeorganisaation ympäristövaikutukset, joita hyödynnettiin ympäristöjärjestelmän toteuttamismallin luomisessa. Luodun mallin pohjalta kohdeorganisaatio voi kehittää ympäristöjohtamista.

Asiasanat: Kestävän kehityksen johtamismenetelmät, ympäristöjohtaminen, pk-yritykset, kolmoistilinpäätös, kestävän kehityksen johtamismalli

Säilytyspaikka
Jyväskylän yliopiston kirjasto

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1 INTRODUCTION

The anthropogenic emissions impact the globe's climate, and thus, the sustainability concerns are placing pressure on global organisations (Mustapha et al., 2017). As one, the European Union has implemented voluntary and mandatory strategies driving sustainable production in pursuance of providing possible solutions for rising environmental problems. (Pérez-Torres et al., 2019). In addition, to harming the planet's living conditions, the rising environmental problems by Hörisch et al. (2015) impact the economic stability of organisations and challenge their current management methods. Due to the solid scientific causality of anthropogenic emissions causing environmental problems and creating pressure on organisations, the debate of why to develop sustainability measures can be seen as irrelevant. (Golicic & Smith, 2013; Hörisch et al., 2015; Nawaz & Koç, 2018). Instead, the question of how to bring organisations up to date with sustainable practices has been acknowledged and claimed to require more in-depth research (Ahmed et al., 2021; Baumgartner, 2014; Engert & Baumgartner, 2016; Engert et al., 2016).

To become more sustainable, organisations need to understand the concept of sustainable development, which roots back in 1987. The definition by World Commission on Environment and Development (WCED) defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (1987, p. 24). Later in 1994, the definition was strengthened by John Elkington's *triple bottom line* (TBL) framework, guiding organisations to focus on economic, environmental and social aspects of their practices (Engert & Baumgartner, 2016; Hernita et al., 2021). Even though TBL was introduced during the 90s, Goh et al. (2020) present growing awareness and interest in the framework and underline the importance of balancing the three dimensions throughout an organisation's actions.

A growing need for an organisation's sustainable management can be found in an extensive part of the academic literature. However, developing a sustainability strategy does not guarantee to overtake the sustainability issues as implementation is also required (Figge & Hahn, 2004; Hahn & Scheermesser, 2006 cited in Hörisch et al., 2015). Despite the numerous sustainability frameworks, tools and methods, Jiménez and Pérez-Foguet (2010) bring the lack of implementation forwards. Authors ponder if the reason behind the low percentage implementation rate overambitious policies or organisations' reluctance to implement them. Another opinion of the remote implementation is a confusion of selection caused by the numerous methods aimed at specific isolated needs (Nawaz & Koç, 2018). Golicic and Smith (2013) also recognised the slow adaptation of sustainability practices, believing that scepticism of the outcomes acts as a barrier to implementing sustainability. In their study, the inconsistencies of research results are found to exasperate the organisational scepticism towards sustainability. As the sustainability field is reinforced by multiple methods such as triple bottom line, environmental impact assessment and life cycle analysis, it is clear that there

is no single robust option for an organisation's sustainability management. Because of the variety of management methods, Zutshi et al. (2016, p. 853) state that "Reinventing the wheel is an inefficient and ineffective method to pilot new systems" and encourage *small and medium-sized enterprises* (SMEs) to learn from already existing systems. Their viewpoint is fortified by Mustapha et al. (2017), who explain the need for an integrating approach to ensure the efficient achievement of an organisation's sustainability goals.

While the number of studies linking sustainability practices to organisation performance is rising due to the growing organisational interest in their implementation (Golicic & Smith, 2013). The failure between sustainability planning and its implementation can be said to stand out from the academic literature. Additionally, literature revealed that multiple tools for sustainability management had been developed, but their implementation is lacking. Silvestre and Ţîrcă (2019) bring forth the slow pace of implementing sustainability actions causing an urgent need for resolving the pressing sustainability challenges and the authors call for initiatives from educational institutions, organisations and governments. Scholars have only recently highlighted the gap between planning and successfully implementing sustainability management (Ahmed et al., 2021; Engert & Baumgartner, 2016). For example, Engert et al. (2016) state that studies regarding sustainability implementation and its execution in practice cannot be found. Thus, the authors urge empirical research to examine sustainability implementation and confront its growing need.

To answer the call examining sustainability management implementation can be seen as a relevant and required topic for a study. According to the examined literature, it appeared that there are no previous studies aggregating the drivers and barriers affecting the sustainability management implementation from different scientific publications, as the focus has been on solving isolated needs of the new and developing topic. The closest existing publication of this kind was executed by Johnson and Schaltegger (2016), examining the developed sustainability management tools and their applicability for SMEs. Thus, the current study focuses on examining, identifying, and categorising the factors impacting sustainability management, so a new perspective towards sustainability management implementation can be provided and the previously presented gap fulfilled.

Moreover, Hillary (2004) explains that SMEs have insufficient information on the benefits gained by implementing sustainability management (cited in Talbot et al., 2020). The gap in sustainability management implementation requires in-depth examination, and one recommended option by Engert et al. (2016) is to focus on SMEs in a single region or industry to reveal their impacts on organisational structure. The authors particularly suggest focusing on organisations in which sustainability strategies are absent. The importance of the gap between policies and their implementation in SMEs is also brought forward by Ahmed et al. (2021). The importance of SMEs is also highlighted by Johnson and Schaltegger (2016), who described them as producing almost 70 per cent of global emissions.

The current study is executed as a case study in a Finnish SME, as in the view of many scholars, an in-depth examination of an SME appears necessary and of great value. The target organisation in which the case study is executed does not have incorporated sustainability management or identified its environmental impacts. Even though sustainability management is built around the TBL, the environmental aspect is emphasised in the current study, as the target organisation desired a basis for environmental management. Besides, Sinakou et al. (2018) view environmental issues as being underrepresented, as sustainability literature prioritises economic and social issues. Also, Bastianonia et al. (2019) recognised economic and social dimensions being prioritised over the environmental ones. It may indicate that when sustainability actions are delineated, the environmental dimension remains in the background even though it is the foundation of human life. Apart from the target organisation's needs prioritising the environmental dimension in a sustainability management study will diversify the academic field from an underrepresented scope.

1.1 The aim of the thesis

Academic literature brings forth that sustainability management implementation is a relevant topic to study, especially from the perspective of SMEs. Additionally, a situation in which an SME does not have a sustainability management system in place is seen as necessary. The study is executed in cooperation with a Finnish SME to provide needed and meaningful information to the previously described gap. The organisation expressed a need to find their environmental impacts and develop environmental management to decrease them, which endorses its suitability for the research. Hence, the target organisation forms a basis for a productive study, which can add value to the academic sustainability literature. To fulfil the academic gap and to provide value for the sustainability literature, the following main research question was developed:

1. What are the factors impacting sustainability management implementation in the target organisation?

By answering the main research question, the current study can identify the factors impacting the target organisation's sustainability management implementation. To reach its aim and to meet the needs of the target organisation, the study is required to answer two sub research questions:

2. What are the main aspects of sustainability management?
3. How to develop an environmental management basis for the target organisation?

The study aims to examine the conditions of sustainability management implementation by answering the presented research questions. It also provides valuable in-depth information for filling the academic gap between sustainability management planning and its implementation. To conclude, the time limitation of the study forces it to limit its scope only to develop conditions for sustainability management implementation. The responsibility of actual mobilisation and monitoring will remain on the target organisation.

1.2 The structure of the thesis

The thesis consists of five main chapters with more specific sub-chapters, all listed in the table of contents. The first introduction chapter describes the premises of the thesis and explains the academic and the target organisation's needs for it. Based on the presented needs, the aim of the thesis is explained and summarised within the three research questions.

The second chapter introduces the literature framework. It describes the development of sustainability management and its central concepts, creating the basis for sustainability management implementation. In addition, environmental management is covered, so the target organisation's needs can be covered. The concluding chapter brings the theoretical findings together and presents the sustainability management model. The model aims to provide an understandable and visual summary on which the empirical part of the work can be built. Thus, after the literature framework, the thesis continues to the methods section.

Methods, being the third main chapter, describes the data gathering structure and aims to justify the chosen methods transparently. The chosen methods are aimed to suit the needs of the study and make answering the research question possible. The target organisation is partially presented, but all the identifiers are concealed to respect its privacy protection and the agreed anonymity. To conclude, the data analysis method is described.

After the methods section, the results are presented. The fourth section presents the study's findings and is divided into two chapters. The first chapter covers the target organisation's needs, and the second focuses on the sustainability management findings. Finally, the results are combined and summarised in the sustainability management model 2.

The final discussions and conclusions chapter will reflect the found results towards the theoretical framework and provide an answer to the research questions. It examines the study's execution, creditability, and limitations and provides propositions for future research. The conclusion part will summarise the study and its academic contributions.

2 LITERATURE FRAMEWORK

The literature framework is a broad overview of the sustainability management literature's history and its development. The following chapter explains the common definitions and factors of sustainability management by reflecting on previous studies and academic literature. It introduces corporate sustainability, sustainable development, and a triple bottom line, so the study's theoretical background is well defined and easily understood.

After Sustainability management is presented, sustainability management implementation and environmental management topics are examined. These topics require a theoretical examination to fulfil the target organisation's need to develop a basis for environmental management and fill the academic gap in sustainability management implementation. However, this study does not seek to explain every dimension of sustainability, as it focuses on sustainability management implementation in an SME.

2.1 Sustainability management

The existing literature introduces *sustainability management* through various management systems, and the term itself is complex to define. Johnstone (2019) approaches sustainability management by focusing on management accounting and control systems. In addition to economic achievements, the provided approach includes social and environmental measures in organisational decision making. Burke and Gaughran (2007) demonstrate sustainability management as a necessary part of an organisation's management, as the increasing amounts of sustainability issues and legislation pressure organisations towards sustainable development that has become a global goal. Therefore, SMEs are claimed to need a framework by which economic, environmental and social impacts can be identified and measured. The authors describe this framework as illustrating the ongoing development and management of sustainability as sustainability management. It is claimed that sustainability management strives for long-term objectives to increase the organisation's economic, environmental and social performance. Thus, sustainability management includes similar features to ISO 14001, and it is found as a suitable base for developing sustainability management (Burke and Gaughran, 2007).

Based on their literature review, Windolph et al. (2014) find sustainability management a new and developing topic. The authors illustrate it through the organisation's internal development and its actions that support society's and economy's sustainable development. An essential aspect of sustainability management is motivation which defines the significance of these supporting actions. The aspects influencing an organisation's motivation to implement sustainability

management are an internal improvement, market success, and legitimacy (Windolph et al., 2014). Due to the rising amount of stakeholder pressure and sustainable development laws, organisations are found pursuing legitimacy, also known as socially acceptable status.

In their study, Nawaz and Koç (2017) bring forth that there is no single way of managing sustainability. Therefore, sustainability management consists of various techniques designed by organisations to identify their critical but isolated sustainability issues. By the authors, these isolated issues are the fundamental problems that organisations face time after time. Another aspect highlighted by the research is people's way of resisting change and striving back to an earlier known course of action. It enforces the need for a new approach that can equally acknowledge the different aspects of sustainable development. Their literature review reveals a loose definition and lack of a comprehensive framework to hinder sustainability management implementation even though organisations managements recognise its importance (Nawaz & Koç, 2017, p. 1271). To overcome the barrier of loose definition and comprehensively examine the barriers and drivers of sustainability management implementation in a Finnish SME, the relevant and related concepts are broadly examined and presented.

2.1.1 Corporate sustainability

In the present world sustainability has gained a trend status and the word is linked from daily products, to multisectoral services and even the ways of life. Despite the increased publicity around sustainability the idea of the thesis is not to gain momentary value at the expense of the trend status and fortify its stand and purpose by defining sustainability from an academic perspective. Even though sustainability has been researched for decades it does not have a specific definition. John and Narayanamurthy (2015, p. 206) found multiple terminologies for sustainability from the academic literature and their study defined it as "the complete plan of ethical action for an organization which is attempting to transform itself into sustainable", which is based on the study by Zhu and Sarkis (2006). For answering the presented research questions and contributing to the sustainability literature the thesis focuses its scope to *corporate sustainability* which can be seen suitable, as studying sustainability management implementation in a Finnish SME.

The lifespan of organisations has been found shrinking and sustainability actions seen as an indispensable key for their longevity (Dhanda & Shrotryia, 2021). Therefore, Dhanda and Shrotryia (2021) emphasise on the emerging agreement to instil sustainability in the operations and strategies of organisations. The systematic literature review conducted by Meuer et al. (2020) argues that the lack of clear definition is limiting the literature of effectively contributing on managerial practice. Their results identified 33 different definitions of corporate sustainability and pointed out Van Marrewijk (2003), Figge and Hahn (2004), and Steurer et al. (2005), as the three most cited studies in the field of corporate sustainability.

The results of Van Marrewijk (2003) explain that the idea of an all-embracing definition of corporate sustainability should be dropped and instead the specific definitions compatible with the organisations development, ambition and awareness should be adopted. Nevertheless, the author described corporate sustainability to include organisations economic, environmental, and social responsibilities. The second most cited study by Figge and Hahn (2004) focuses on the definition of *sustainable development* and explain its central concept being increasing long-term utility without depriving the same possibility from the future generations (Hicks, 1946, as cited in Figge and Hahn, 2004, p. 174). Despite the differing focus the authors evaluate organisations sustainability through "its economic, environmental and social performance", which aligns with the Van Marrewijk's (2003) description of corporate sustainability (Figge and Hahn, 2004, p. 174). The thirdly most cited study takes a golden mean of the previous two and provides a theoretical exploration combining sustainable development with corporate sustainability (Steurer et al., 2005). In their study sustainable development aligns with World Commission on Environment and Development (WCED, 1987) definition "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (p. 24). Steurer et al. (2005, p. 274) propose corporate sustainability as "corporate guiding model" being composed of the organisations economic, environmental and social performance.

According to the three previous research the definition of corporate sustainability is highly linked with the sustainable development and economic, environmental and social aspects of organisations. Focus on the organisations economic, environmental and social aspects is also known as the *triple bottom line* (TBL) framework presented by John Elkington in 1997 (Engert & Baumgartner, 2016). The connection between corporate sustainability, sustainable development, and TBL is widely recognised amongst other scholars, and thus a brief examination of the two will serve the purpose of defining sustainability management (see, e.g., Baumgartner & Rauter, 2017; Gianni et al., 2017; Kantabutra & Ketprapakorn, 2020; Landrum & Ohsowski, 2018; Pranugrahaning et al., 2021; Tsalis et al., 2020).

2.1.2 Sustainable development

According to Birnbacher and Schicha (1996, as cited in Steurer et al., 2005, p. 264), the concept of sustainable development appeared in the 17th century in the legal constraints of German forestry. The tree cutting rate was limited to match the forests renewability rate back then. The history of sustainable development includes several notable milestones (see, e.g., Mensah, 2019; Tsalis et al., 2020), but the Brundtland report 1987, also known as "Our Common Future", is seen as the pioneering work (Agbedahin, 2019; Dalampira & Nastis, 2020; Streuer et al., 2005). The WCED's (1987, p. 24) definition "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" is by Streur et al. (2005) the most cited and by Agbedahin (2019) widely accepted definition of sustainable development. The present-day sustainable de-

velopment has evolved into a commonly known guiding model aiming to integrate economic, environmental, and social issues into organisational short- and long-term goals.

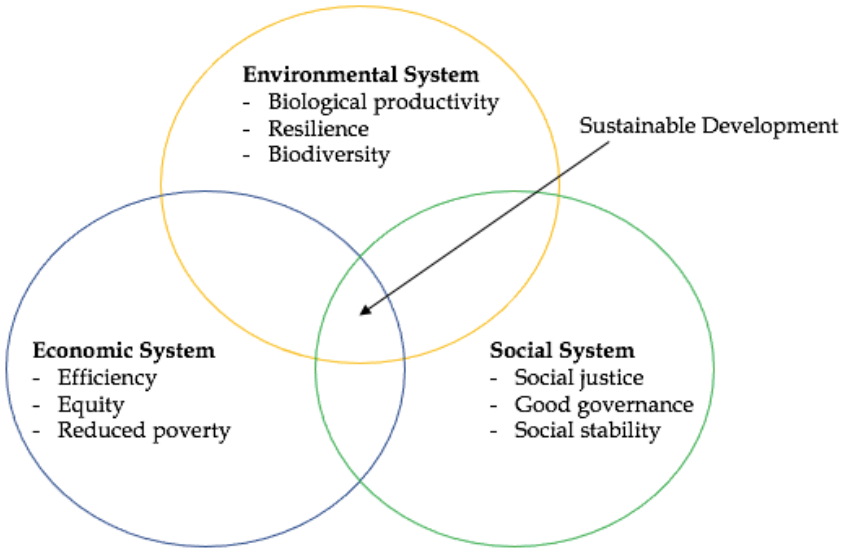
Despite the increased awareness, Baumgartner and Rauter (2017) argue that the organisational progress of adopting sustainable development is slow, referring to the need for more concrete guiding models. This perspective is seconded by Bolis et al. (2017), pointing out that the current economic model will not produce efficient solutions for solving the global problems at hand. Sinakou et al. (2018) seconds the lack of concreteness by revealing a mandatory need of precise description when examining sustainable development. Same issue is highlighted by Broman and Robèrt (2017, p. 19) by claiming common definition as an essential part for "avoiding creating new problems for each problem solved". To avoid the pitfall of vagueness and for providing a concrete and well-defined framework, this study will focus on the most cited definition of sustainable development provided by WCED (1987, p. 24). According to the literature, the most cited version of sustainable development is built upon the TBL framework, and as previously noted, it is highly linked with corporate sustainability; hence the following chapter will provide an introduction of the TBL framework.

2.1.3 Triple bottom line (TBL)

In 1987 a study by Brown et al. was published identifying three sustainability related perspectives. Their literature review highlighted the social-, ecological-, and economic perspectives of sustainability. Thus, it can be presented that perspectives are notably similar with Elkington's TBL framework. Another similar study by Barbier was published during the same year. In the more recent study Barbier and Burgess (2017) claim Barbier's (1987) study as the identifier of the systems approach of sustainable development. The authors illustrated the three systems by placing sustainable development at their junction and presented it in a Venn diagram (Figure 1).

Figure 1

The Systems Approach to Sustainability



Note. Adopted from Barbier and Burgess (2017).

Despite the incoherent origins a large number of scholars agree that the term TBL can be traced back to mid-1990s to John Elkington's work called Cannibals with Forks: The Triple Bottom Line of 21st Century Business (Martens, & Carvalho, 2017; Matthews et al., 2019; Nicoletti Junior et al., 2018; Tseng et al., 2020). There is evidence to suggest that TBL framework is composed of two descriptions economic, environmental, and social (Gimenezn et al., 2012; Isil & Hernke, 2017; Purvis et al., 2019; Savitz & Weber, 2006) and planet, people, and profits (Goh et al., 2020; Martens, & Carvalho, 2017; Tseng et al., 2020) with synonymous meaning. Sinakou et al. (2018) and Broman and Robèrt (2017) emphasised the importance of consistent and precise description, and thus the present study focuses to consider the economic, environmental and social aspects.

The aim of TBL by Savitz and Weber (2006, p. 7), is to measure organisations success through broader scope of impacts than the "traditional bottom line of financial performance". Based on Nicoletti Junior et al. (2018) the three dimensions of the TBL framework were defined as following: firstly, the economic dimension "represents the profit and earnings per share as part of the company's accounting" (p. 85). Secondly the environmental dimension "indicates the environmental agenda that the executives of the enterprises have defined to meet the market expectations", and thirdly the social dimension "comprises the social, political and ethics issues" (Nicoletti Junior et al., 2018, p. 85). The three-dimensional approach is said to capture the core of sustainability with its ability to measure the impacts which organisational activities cause to the globe (Savitz & Weber, 2006). According the authors a positive TBL refers to increased organisational value in environmental, human, and social capital as well as shareholder

value and economic profitability. Thus, the question arises, can a modern study still adapt TBL framework as one of its cornerstones?

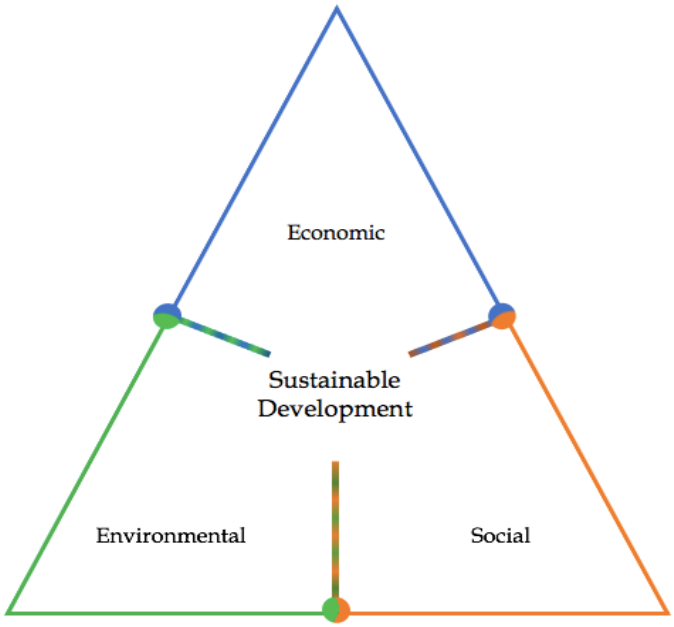
The study released in 2018 by Ukko et al., suggests that each individual factor included in the three TBL dimensions drive organisations towards sustainability. The results of Goh et al. (2020) bring forth the growing awareness and research interest towards the TBL framework. The authors found that both developing and developed countries have increased interest on TBL research for over two decades. Another finding was the significant potential of TBL, but its successful implementation required balancing all three dimensions of the framework.

On the other hand, critics such as Hahn et al. (2015) question the ability of TBL framework to address the relationship between the three dimensions. Instead, they suggest an integrative view in which organisations seek for different sustainability goals within the economic, environmental, and social dimensions, despite of being contractionary. Also, the lack of evidence on practical and effective corporate usage of TBL is highlighted by Purvis et al. (2019). Norman and Macdonald (2004) question the meaning of bottom line in TBL. Their study brings forth the impossibility to define a social bottom line and hence, claims TBL jargon as "inherently misleading" (Norman & Macdonald, 2004, p. 254). Previous authors have expressed doubts about TBL on the grounds that the framework cannot address the relationship between the three dimensions, presents a lack of effective corporate usage, and cannot define specific bottom lines. Other scholars have also presented shortages of TBL, for example Despeisse et al. (2012, as cited in Matthews et al., 2019) revealed the lack of information of the mechanisms through which the environmental goals are reached. The study by Tseng et al., (2020) also explored the shortcomings of TBL, but instead of shooting it down they emphasised the need of hybrid data and methods for reinforcing its theoretical basis. Nicoletti Junior et al. (2018) described TBL as the dominant idea of modern sustainability reporting. In addition, the findings of Isil and Hernke (2017) suggest that notwithstanding the emergent studies the TBL holds its place as popular framework used in sustainability-related research.

According to this preliminary study TBL has its shortcomings, but there seem to be high agreement among researches that it is still a valuable and functional framework. As mentioned by Savitz and Weber (2006) even successful and good intentioned organisations can fall if sustainability principles are ignored. They described that "The best-run companies see this and are turning these trends to their advantage. The Triple Bottom Line will help you apply the same advanced thinking to your own business" (Savitz & Weber, 2006, p. 16). Hence, this study adapts the TBL framework in the core of the sustainability management implementation. In addition, it aligns with the view of many scholars and accepts that sustainable development can be built on the basis of TBL framework. To summarise the combination of sustainable development and TBL as the core of the sustainability management the following conceptual figure was created.

Figure 2

The Core of Sustainability Management Model



2.2 Sustainability management implementation

The importance of a clear and specific definition of the sustainability terms has been brought up during this study. Based on the above literature and for enforcing the academic sustainability literature, this study defines sustainability management as follows. *Sustainability management is a long-term management style striving equally for sustainable development objectives by incorporating them into the organisation's activities in an effective and suitable manner.*

The existing literature reveal that sustainability management's research focus is built on adopting, integrating, and developing sustainability policies and frameworks along with implementing sustainability tools and management. In this study, these research focuses are divided into two main categories. The first sustainability management development category contains adopting, integrating, and developing sustainability policies and frameworks, and the second sustainability management implementation category is composed of implementing sustainability tools and management. While dividing the published sustainability management studies, their limited amount was noticed, which might indicate the topics developing stage mentioned by Windolph et al. (2014).

This study examined the existing sustainability management literature, searching for factors impacting its implementation to build a coherent sustainability management implementation plan. The found impacting factors were gathered in a summarising table (Table 6). Next, the study examined characteristics of the impacting factors and categorised the factors with similar characteristics

together. Categorising the similar factors revealed the following six impact categories external pressuring factors, organisational structure, organisational culture and awareness, the role of management, the role of employees, and corporate transparency. The impact categories and their defined impacting factors are presented in the six impact categories table (Table 7).

This study acknowledges that the emerged impacting factors can be connected with multiple different impact categories, but for developing a clear sustainability management implementation, the intersecting connections have been limited outside of its scope. The impact categories and their connection to sustainability management development and implementation are introduced more thoroughly in the two following chapters.

2.2.1 Developing sustainability management

When focusing on sustainability management development, the existing literature highlighted three of the six impact categories. Most scholars emphasised organisational structure, organisational culture and awareness, and the role of management. Therefore, it is assumed that an organisation striving for successful sustainability management development should focus on these three. In addition to the most highlighted impact categories, external pressuring factors were mentioned three times, and the role of an employee and corporate transparency twice.

Neri et al.'s (2021) findings of organisational size, industry, geographic location, and economic resources were directed under the organisational structure. In addition, the authors emphasised pillars such as certifications and sustainability manager, on which organisations sustainability is defined. Also, Ahmed et al. (2021) found factors related to organisational structure, such as organisational barriers and normative references. According to their study, it is crucial to identify the organisational barriers as they stand for disadvantages and challenge sustainability integration (Ahmed et al., 2021, p. 10352). They bring forth the importance of normative references through the commitment to maintaining industry-related sustainability matters. With the help of normative references, an organisation can aim for high-quality services and products and thus, it cannot be ignored. Nawaz and Koç (2017) found voluntariness an essential part of organisational structure. They claim that organisations cannot be compelled to develop sustainability management, although intensive persuasion is experienced acceptable. Since developing voluntary sustainability management require envision from every stakeholder, the role of top management is also highlighted (Nawaz & Koç, 2017, p. 1269). Engert et al. (2016) also highlighted organisational structure. In addition to the organisation's size and structure, cost reduction, economic performance, complexity, and investments were found as related impacting factors. For example, sustainability management was connected with long-run cost reduction, but the actual cost effects depended on sustainability management's form and its strategical implementation (Engert et al., 2016, p. 2839).

During sustainability management development, the organisational culture and awareness were found in four studies. The motivation and reasoning examined by Burke and Gaughran (2007) were linked with organisational culture

and awareness, as an organisation's negative or positive reception defines the long-term stability of sustainability management. The organisational culture by Engert et al. (2016) reflected the thoughts and beliefs of employees and their impact on sustainability and everyday activities. Organisational learning and knowledge management were seen as the driver behind changing employees' presumptions, and through it, new routines and long-lasting cultural changes were able to be achieved. Social and environmental responsibility was an internal driver reflecting the organisation's commitment to environmental and social responsibilities. Thus, the impacting factors presented in their study are highly related to organisational culture and developing sustainability management. Nawaz and Koç (2017) and Neri et al. (2021) also found organisational culture representing the role of possible driver or barrier behind sustainability management development. Nawaz and Koç (2017) specifically highlighted sustainability vision by claiming clear scope to be easily forwarded in meaningful sustainability management principles and long-term goals.

The third impact category is the role of management. Especially Burke and Gaughran (2007) underline the role of top management during the developing phase of sustainability management. They describe a committed top management as the key requirement for long-term sustainability management, but for reaching it, the current "convert culture" has to be overcome, and managers need to be convinced by its benefits (Burke & Gaughran, 2007, p. 701). The presence of committed and dedicated management was also found necessary for overcoming possible barriers and enforcing the drivers of sustainability management (Neri et al., 2021). Instead of the role and behaviour of top management, Engert et al. (2016) and Nawaz and Koç (2017) underlined their actions. For one, Nawaz and Koç (2017) claim top-managements need to recognise the relevancy of sustainability management and the ability to execute dynamic and pragmatic decision making. Hence, the authors claim a need for "a new breed of managers" (Nawaz & Koç, 2017, p. 1270). More specifically, the mentioned actions are preparation and organisation, implementation, monitoring and analysing, reviewing and continuous improvement, and risk assessment. Furthermore, on top of manager attitude and behaviour, Engert et al. (2016) describe risk management, management control, and quality management as essential for developing sustainability management. For example, management control relates to treating complex high-level information through systems like ISO 14001 or ISO 9001, and risk management commonly refers towards risk reduction that needs to be integrated within an organisation's overall strategy (Engert et al., 2016 pp. 2840-2841).

External pressuring factors were most often mentioned out of the remaining three impact categories (Ahmed et al., 2021; Engert et al., 2016; Neri et al., 2021). The category is formed of external impacting factors that pressure organisations towards developing and implementing sustainability management. Legal compliance can pressure organisations towards sustainability management through numerous environmental and social laws, and overviewing all of them can be a challenging task (Engert et al., 2016). Neri et al. (2021) found external pressure as one of the major drivers for sustainability, whereas Ahmed et al.

(2021) raised the role of public sector institutions and government externally impacting sustainability management development. From the last two impact categories, the role of employees was built around involving every employee (Burke & Gaughran, 2007) and employee behaviour (Neri et al., 2021), and corporate transparency on stakeholder roles and engagement (Ahmed et al., 2021; Engert et al., 2016) as well as corporate reputation, and transparency and communication (Engert et al., 2016).

2.2.2 Implementing sustainability management

The impact categories occurred more evenly when turning the scope towards sustainability management implementation. The categories of organisational culture and awareness and the role of management came up four times and the remaining categories three times.

While implementing sustainability management, the role of the management category contained similar impacting factors as during the development. The importance of executed tasks and activities by top- and midlevel management were identified by Chofreh and Goni (2017), and Talbot et al. (2020) confirmed previous findings of the relationship between SME managers' sustainability awareness and taken actions. Also, managements behaviour and leadership style were found as drivers by Engert and Baumgartner (2016), whereas management's lack of knowledge was found as a critical barrier by Johnson and Schaltegger (2016). Engert and Baumgartner (2016) stressed managers motivated by sustainability as indispensable role models for the organisation's employees. Johnson and Schaltegger (2016) strongly believed SME managers who lack sustainability knowledge end up dealing with social and environmental issues ineffectively.

Amongst other organisational deficiencies, Engert and Baumgartner (2016) described organisational culture and awareness as a barrier to implementation if not adequately addressed. However, it can be turned into an implementation success factor when properly harnessed and managed. Other possible culture-related deficiencies found by Johnson and Schaltegger (2016) were a lack of awareness and perceived benefits. The authors identified smaller organisations not perceiving the possible benefits gained by engaging environmental and social issues. Not perceiving the benefits can be enforced by the lack of awareness, as SMEs might be unaware of the sustainability impacts caused by their actions (Johnson & Schaltegger, 2016, p. 493). Talbot et al. (2020, p. 78) made a similar finding by emphasising the sustainability awareness that managers need to possess for understanding the meaning of sustainable development and its implementation.

Windolph et al. (2014) found external pressures driving organisations towards legitimacy and market success, which were found as the two main motivations for implementing sustainability. More specifically, societal and governmental regulations were the drivers of legitimacy, while market success was driven by the sustainability orientated behaviour of investors, competitors, and

customers. Other scholars found external pressures also necessary in sustainability management implementation. The results of Talbot et al. (2020) brought forward a positive relationship between perceived external pressure and sustainability implementation. Johnson and Schaltegger (2016) discussed insufficient external drivers coupled with a lack of economic benefits and support programs limiting sustainability management implementation.

The third and final motivation driving towards sustainability implementation by Windolph et al. (2014) was an internal improvement, and hence linked to organisational structure. Internal improvement can simultaneously decrease resource usage and increase process improvements (Windolph et al., 2014). A possible barrier to decrease internal improvement was the complexity of sustainability management making it incompatible for SME usage (Johnson & Schaltegger, 2016). Thus, sustainability management's design should be "company tailored" for suiting the organisation's circumstances (Johnson & Schaltegger, 2016, p. 495). The authors also highlighted the lack of financial and human resources and time constraints affecting sustainability management implementation and based on existing literature, described practicality and simplicity increasing implementation rates. Engert and Baumgartner (2016) aligned with the previous scholars and fortified the importance of organisational structure by claiming it as one of the six implementation success factors. The fit between sustainability strategies and organisational structure was considered essential, and sustainability should be integrated with the organisation's core strategy.

The second latest impact category, the role of employees, included the factors of employee motivation and qualifications (Engert & Baumgartner, 2016), labour market (Windolph et al., 2014), and supervisory level activities (Chofreh & Goni (2017). The role of employee motivation and qualifications was a factor without which a successful sustainability management implementation and integration with the entire organisation was found impossible (Engert & Baumgartner, 2016). To improve internal communication and enhance employee motivation, authors suggested workshops and regular meetings with the strategic management department, reward systems, and internal competitions. Binding every level of organisation to sustainability management implementation was also a key criterion of Chofreh and Goni's (2017) study, and they illustrated it by highlighting the daily tasks and decisions of the supervisory level. Additionally, to the previously mentioned top- and midlevel management activities, the supervisory level, also described as the operational level, is crucial, as successful sustainability management implementation requires integration of all three levels. These supervisory level tasks are less risky operational decisions, such as collecting and analysing feedback and monitoring reports. Windolph et al. (2014) believe that sustainability management improves an organisation's position in the labour market. By implementing it, the motivation of employees was predicted to rise, enhancing productivity and further on organisations attractiveness in the labour market.

The final impact category, corporate transparency centred around internal and external communication, the role of media and society, stakeholder consultation, and sustainability reporting. Compared to previous studies, the results of

Engert and Baumgartner's (2016) case study introduced internal and external communication as a new impacting factor for sustainability management implementation. This factor was found as highly challenging but essential for a successful implementation process. Windolph et al. (2014) observed media and society influencing corporate transparency. Stakeholders increased role in monitoring organisation's activities was noted, and sustainability reports and more transparent communication were seen as activities assisting organisations to maintain their operations. Combing organisational and societal benefits for diminishing self-serving image and communicating it openly and transparently was seen as necessary for securing the organisation's resources. Such resources included staff and upkeeping customer interest in buying organisations products or services. Talbot et al. (2020, p. 78) pointed out that despite the current minor focus on stakeholder consulting in sustainability management implementation, it holds a pivotal role in positively impacting the awareness and knowledge of SME managers. The authors also found a positive connection between sustainability reporting and stakeholder consultation. Their study defined sustainability reporting as an information-sharing process that serves sustainability implementation and communicates it with the organisation's essential stakeholders. Based on the findings of these studies, these factors were found to highly relate to corporate transparency and how it is communicated with stakeholders.

2.3 Environmental management

Kallio (2001) describes defining *environmental management* as a complex task as its origins are not known, leading towards a concept without an established definition. Due to its interdisciplinary usage, the author presents environmental management as an umbrella concept combining economic and social sciences with environmental sciences. Later on, Ketola (2004) presents environmental management analogously with other managerial concepts such as strategic management or human resource management. Thus, environmental management aims to gather and utilise knowledge of the organisation's environmental aspects for supporting its strategy formulation. Wang and Wu (2013, as cited in Oglanis & Loizidou, 2017) add that the domains of products, technologies, processes, strategies, activities and management are targeted and included within the complex concept of environmental management.

Despite the unknown origins and proper definition Pohjola (2003) has defined environmental management as an activity that combines environmental aspects as a part of organisational management and decision-making system (p.37). Kallio (2001) provides a similar point of view by summarising different environmental management definitions to include the aspects of optimism towards environmentally beneficial impacts, a strategic charge of environmental management, and combining environmental aspects with organisational activities. The author emphasises that the main importance of environmental management is to

achieve organisational interests instead of environmental protection, even though it usually diminishes an organisation's environmental impacts.

Another emphasised point is segregating the concept of environmental management from sustainable development (Kallio, 2001). The aim of environmental management can be to pursue sustainable development, but sustainable development cannot be reached solely through environmental management. Within the book, Kallio (2001) brings forward a concept of modern environmental management. Modern environmental management reflects a discipline that originated from the 1980s, and it is defined to take into account environmental aspects at the operational, strategic, and institutional level, aiming for competitive advantage and social legitimacy together with minimising organisation's environmental impacts with the goal of constant development (Kallio, 2001, p. 22). This definition specifies Pohjola's (2003) definition of environmental management being part of an organisation's decision-making system by introducing the three levels, operational, strategic and institutional of environmental management. Hence the following chapter describes the three levels of environmental management for providing a more thorough picture.

2.3.1 The three levels of environmental management

Based on Pohjola (2003), functional environmental management requires merging environmental aspects within the organisation's strategy and vision. Strategy is a continuous process impacted by an organisation's external and internal changes, and it provides a framework for the organisation's long-term goals. Visio presents these long-term goals, and thus Pohjola (2003) emphasises merging environmental aspects within them. Both strategy and vision are based on the company's mission that drives forward the organisational actions. As for the mission, it is impacted by organisational values. If the values do not support the development of environmental aspects, they are not forwarded to the organisational actions and hence, lack from the mission. As a result, they are not seen in the organisation's strategy or vision. While implementing environmental management, the role of top management is highlighted (see, e.g., Ikram et al., 2019; Johnstone, 2021), but in order to successfully instil the development of environmental aspects into the organisation's core values, the role of employees is not to be underestimated (Pohjola, 2003). The author states that providing employees with environmental knowledge and abilities is required for achieving an organisation with environmentally committed values. Hence, creating functional and effective environmental management requires its implementation throughout the organisational levels.

Pohjola (2003) finds creating an environmental strategy necessary if an organisation experiences environmental aspect as a significant part of its actions. Nevertheless, the author reminds that environmental strategy has to be aligned with a business strategy and merged as a part of the organisation's management systems. Merging environmental aspects with an organisation's strategy is called strategic environmental management, and Kallio (2001) describes it as one of the

three environmental management levels. The main task of strategic environmental management is to create a competitive advantage and control the markets. The chosen environmental management strategies are usually based on the different organisational competitive factors (Kallio, 2001). Striving for strategic environmental management manifests a commitment towards sustainable development.

Both Kallio (2001) and Pohjola (2003) agree that strategic environmental management or merging environmental aspects as part of strategy spread environmental commitment at the operational level. The authors present the operational level as the one executing the concrete actions of environmental management and outline the high environmental commitment of operational level employees as a significant factor of successful environmental management. Kallio (2001) describes the operational level as the second of the three environmental management levels. Operational level executes it through different *environmental management systems* (EMS) and environmental management tools (Kallio, 2001).

Kallio (2001) illustrates the third environmental management level, institutional, examining organisational actions from the society's point of view. The institutional environmental management is explained to be highly dependent on the characteristics of organisational action, location and period of time. In addition to directives and laws, the author considers social aspects such as the organisation's stance towards environmental issues and their actions in developing countries to belong under examination. It is also claimed that an organisation has to face its social responsibilities in order to upkeep and develop its operational conditions.

2.3.2 Environmental management systems (EMS)

The global urge for organisations to manage their environmental impacts that threaten the ecosystem is continuously increasing. One of the major environmental impacts is the ongoing climate change commonly caused by increased greenhouse gas emissions. Rosa et al. (2019) describe climate change's effects as melting of glaciers, loss of biodiversity, drought, flooding, and other ecological and physical changes. The authors explain these increased environmental issues as drivers behind adopting EMS for planning, developing, implementing, coordinating and monitoring the impacts caused by organisational activities. Thus, EMS is presented as a tool to merge environmental aspects with the organisation's decision-making and strategy.

Nishitani et al. (2012) find EMS's voluntary nature as a key factor in diminishing environmental impacts. Rosa et al. (2019) support this perspective by mentioning the organisation's environmental responsibilities and continuous development being ensured through these voluntary goals. In addition, the increased strategic gains, such as increased accountability in the eyes of stakeholders, diminishing emission levels, and adaptation of environmental policies, support EMS and its voluntary role (Rosa et al., 2019). Arimura et al. (2008, as cited in Nishitani et al., 2012) found policymakers supporting the voluntary approach,

as when compared to direct regulations, EMS is more efficient, less costly and more flexible.

To execute successful EMS, an organisation must implement management processes by identifying, measuring, and controlling their environmental activities (Nishitani et al., 2012). Rosa et al. (2019) propose two phases when implementing EMS. During the first phase, the organisation pinpoints its environmental impacts and develops actions to reduce them while increasing productivity and reducing costs. It is followed by the second phase, in which environmental activities are coordinated towards improved organisational effectiveness and efficiency. As the two-phased EMS implementation requires consideration of various factors, the executing managers must incorporate environmental issues within the organisation's values and culture. It should result in initiative employees who emphasise interest in environmental protection and environmental management (Rose et al., 2019). Another study by Johnstone (2021) examined the implementation of EMS in the case of SMEs. Even though the study did not focus on two-phased implementation, the findings emphasised the importance of interplay between the strategic and operational levels. It was claimed that these two levels could not be separated when implementing EMS for an SME. The author justifies her claim by the double role of team members and managers. Thus, Johnstone (2021) highlights the top-down design in the case of SME's.

2.3.3 Barriers and drivers of EMS

Yang and Zhang (2017) found the arising interest towards EMS bringing forth new issues regarding its implementation. Their literature review describes industrial and organisational barriers as the two main groups. The first group includes capital casts, competitive pressure, and technical information. The second organisational barrier group is formed of poor communication, incompetent leadership and employee perspectives and attitudes. However, the literature has centred around the gained advantages instead of the encountered barriers regarding EMS implementation. For that reason, the authors examined the barriers in-depth and developed a "multilevel hierarchy model", which helped them identify and visualise the relationships of the 13 most notable barriers (Yang and Zhang, 2017, p. 1327). The found barriers were then divided into four different levels, out of which the first, surface-level included barriers with least importance and the fourth, bottom level the dominant barriers. The surface level contained barriers such as lack of EMS training, organisation resistance and interdepartmental cooperation. At the same time, the root problem of EMS implementation was found from the bottom level, which contained the "insufficient information about customers' green demand" barrier (Yang and Zhang, 2017, p. 1330).

Furthermore, Ojo et al. (2021) examined the barriers of EMS implementation. They executed a factor analysis and divided the found barriers into three themes. The found themes were called "Knowledge barrier, process barrier, and culture and management barrier" (Ojo et al., 2021, pp. 154-156). Firstly, the knowledge barrier contained six aspects, out of which the lack of awareness of

EMS was found as the most severe one. The two most severe aspects of the second theme, the process barrier, were the complexity of EMS documentation and the organisational infrastructure. The third, culture and management barrier, contained three aspects, and poor management culture stands out as significant. Based on their finding, the authors recommended future studies focusing on increasing EMS related training and education to carry out the implementation process without problems.

While studying the EMS implementation barriers, Oladinrin and Ojo (2021) noticed a shortage of EMS implementation driver's studies. Thus, the authors decided to contribute to the academic literature by examining the drivers through factor analysis. Based on their study, 12 drivers were found and divided under the following themes "Intellectual enhancement strategies, Documentation and cultural strategies, and Motivation and tracking strategies" (Oladinrin & Ojo, 2021, Discussion section, para. 2-8). Out of the above themes, the two most significant driver's EMS education and training and the ease of availability of EMS implementation guiding documents were highlighted. In addition to these two, the authors emphasised observing the EMS implementation procedures and supporting the drivers related to motivation. To support the above drivers, the authors suggested emphasising training, increasing management commitment, and following the EMS documentation and review process.

2.3.4 EMS and ISO 14001

EMS is described as one the most efficient tools by which organisations can remodel activities for achieving environmental objectives and develop or improve the monitoring of environmental impact management (Olganis & Lozidou, 2017). Due to its efficiency, EMS has been globally recognised. Olganis and Lozidou (2017) found ISO 14001 and Eco-Management and Audit Scheme (EMAS) as globally the most used standards on which the EMS is built. Both standards illustrate highly similar qualities and neither substitute laws nor national regulations. Despite these similarities, several scholars have highlighted ISO 14001 standard as globally most used (see, e.g., Johnstone, 2021; Oliveira et al., 2016; Salim et al., 2018), and hence its examination for this study is found justified.

Olganis and Lozidou (2017) identified ISO 14001 permitting environmental aspects to be examined through a holistic approach, and due to this, these aspects can be incorporated and integrated with the organisation's daily tasks and decision making. *Plan, do, check, and act* (PDCA) cycle (Figure 3), represent the four stages on which the ISO 14001 is based (Olganis and Lozidou, 2017, p. 104). It provides instructions and guidance so organisations can monitor, evaluate, communicate and update their EMS. Therefore, organisations can also focus on preventive measures and identify and control future environmental issues that could increase environmental impacts.

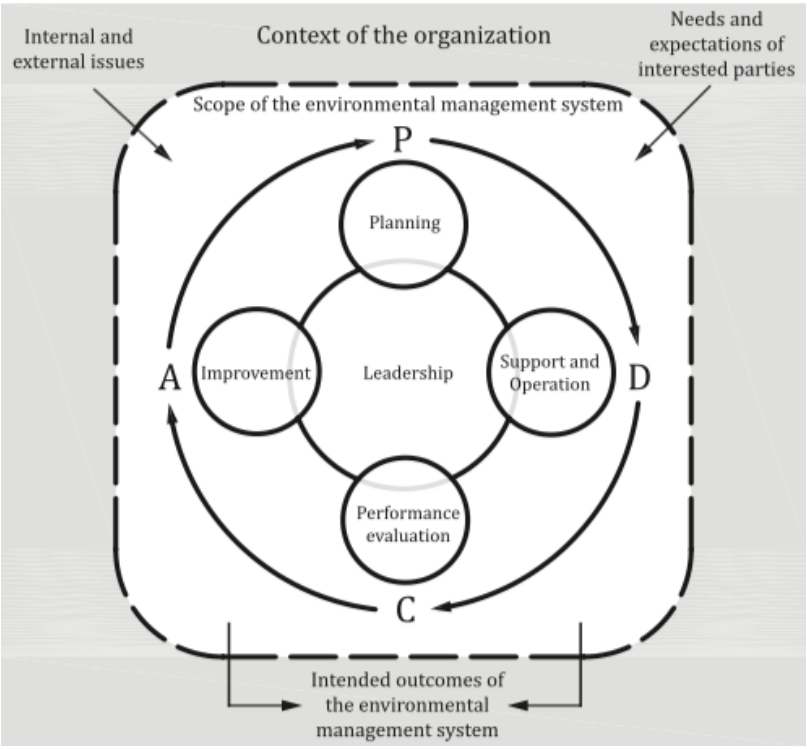
In the first plan stage, organisations create environmental objectives and define the processes for achieving them (ISO 14001, 2015). ISO 14001 (2015) explains the following do stage to execute, monitor and measure the processes defined in the planning stage. During the check stage, the ongoing processes are

measured and reflected on the defined environmental objectives. These third-stage actions enable the organisation to follow how its environmental policy is carried out in practice. In addition, the role of reporting strengthens, but for being successful, it requires internal and external reporting. In the final act stage, the organisation focuses on improving its processes based on the data gained during the previous stages. These improvements are seen in fixing the shortcomings of previous processes or defining new environmental objectives (ISO 14001, 2015).

ISO 14001 (2015) defines the standard as very customisable, so its details can be formed for organisational needs. Standard's central aspects are the organisation's business environment and its obligations together with the nature of organisational activities, including environmental impacts and issues. Customisation can be seen through its implementation, as the stages can be implemented sector by sector. Sector by sector implementation was proposed as a viable option for the organisations planning for creating a new EMS (ISO 14001, 2015). Olganis and Loizidou (2017) noted that an EMS should be developed for fulfilling the organisation's needs. The authors saw it possible through ISO 14001 as the standard does not define specific criteria for developing and implementing an EMS.

Figure 3

Plan, Do, Check, Act (PDCA) Cycle



Note. Adopted from ISO 14001 (2015, p. 48).

2.3.5 Governing body federation

The industry in which the target organisation operates has a so-called *governing body federation*, and for securing the organisation's and industry's anonymity, coding was a necessary step. The governing body federation has established a voluntary program providing environmental recognition for organisations that successfully implement the required steps. The environmental program is explained to raise awareness of environmental issues and report environmental performance to stakeholders. It also increases organisational competitiveness and decreases operational costs. The governing body federation also describe its environmental program and recognition as a great path towards other environmental standards such as EMAS or ISO.

Governing body federation's environmental recognition has three levels. For reaching a level, an organisation has to pass the level-specific requirements. The requirement standards increase alongside each level. The path towards reaching a level and gaining environmental recognition comprises six phases. During the first three steps, an organisation has to examine its key environmental issues, create environmental policies, and provide information on which out of the three recognition levels it will pursue. Aspects such as clearly defined environmental objectives, establishing internal and external environmental training and communication, and identifying environmental indicators are required. The remaining three steps focus on evaluating the ongoing process, performing an audit within the organisation, and suggesting improvement if the level-specific requirements are not met.

The governing body federation's environmental recognition presents ten key impact areas, out of which an organisation is required to address the relevant ones. Once the relevant impact areas are chosen, they are presented and discussed with the federation's environmental assessor. If both parties find them relevant, they are agreed on, and the organisation can start the pursuit towards environmental recognition.

2.4 Summary of the literature framework

The literature framework provides a broad overview of the existing sustainability management literature and introduces the main concepts of corporate sustainability, sustainable development, and the TBL. Despite its shortcomings, the value and functionality of the TBL framework were highly recognised amongst scholars, and hence, it was found as a suitable basis for sustainability management (e.g., Isil & Hernke, 2017; Nicoletti Junior et al., 2018; Savitz & Weber, 2006; Tseng et al., 2020). A conceptual figure was created to provide a clear understanding and defined picture of the TBL as a basis for sustainability management (Figure 2).

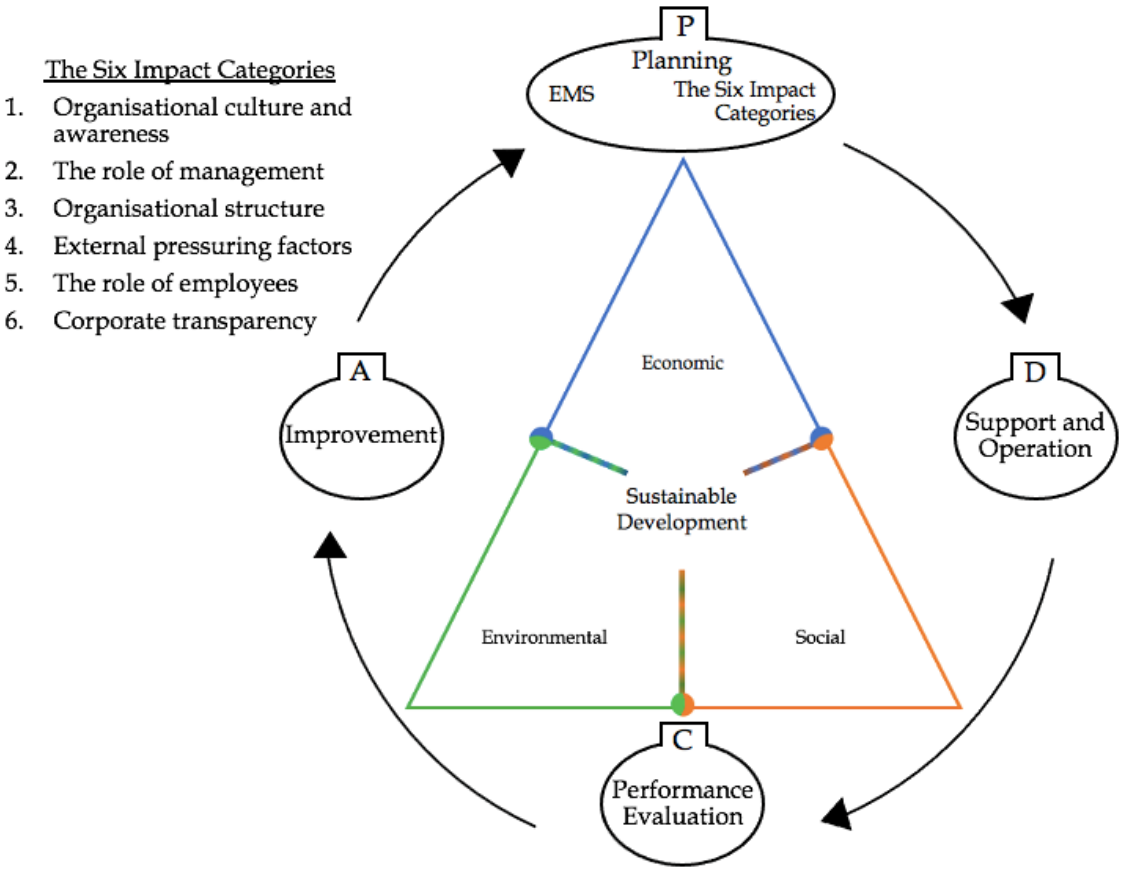
After introducing and defining sustainability management, sustainability management implementation and environmental management were examined.

The literature framework reveals the diverse and puzzling nature of developing and implementing sustainability management. Generally, sustainability management was found to identify and measure an organisation's economic, environmental and social impacts (Burke & Gaughran, 2007; Johnstone, 2019). Burke and Gaughran (2007) also highlighted the similarities between sustainability management and ISO 14001, and Windolph et al. (2014) claimed sustainability management implementation to support organisation's internal together with society's and economy's sustainable development. On top of the puzzling nature of sustainability management, the field of sustainability is commonly found to suffer from loose definitions. This study decided to enforce the academic sustainability literature by defining sustainability management as *a long-term management style striving equally for sustainable development objectives by incorporating them into the organisation's activities in an effective and suitable manner*.

Based on the existing literature, it can be seen that the gap between developing sustainability management and implementing it is not a causal connection between one specific factor, as six impact categories were formed out of the found impacting factors (Table 7). To visualise the presented impact categories and to describe their relationship with sustainability management, a sustainability management model was created (Figure 4).

Figure 4

Sustainability Management Model



The sustainability management model describes the process of sustainability management implementation by combining it with the PDCA cycle. Olganis and Lozidou (2017) described the characteristic of the PDCA cycle as monitoring, evaluating, communicating and updating organisational actions while simultaneously focusing on preventive measures and thus, integrating it into sustainability management model was seen to serve the purpose of sustainability management. The first planning stage was included with the six impact categories to fulfil the study's aim and develop conditions for sustainability management implementation. The found six impact categories are external pressuring factors, organisational structure, organisational culture and awareness, the role of management, the role of employees, and corporate transparency. By identifying the ones having the strongest impact on the target organisation and reflecting the data towards the literature framework, the conditions for sustainability management implementation are aimed to developed.

To conclude, examining the theoretical background of environmental management was necessary for answering the sub-research question three and fulfilling the target organisation's need of developing environmental management. Constant development was described by Kallio (2001) as the goal of

environmental management, and it could be reached by minimising environmental impacts while simultaneously improving social legitimacy and competitive advantage. One of the most used options for developing and improving an organisation's environmental activities was an EMS (Johnstone, 2021; Olganis & Lozidou, 2017). Successful execution of an EMS requires identifying, measuring and controlling organisations environmental activities (Nishitani et al., 2012; Rosa et al., 2019) and due to the highly customisable characteristics of the PDCA cycle (Figure 3), it was found to suit needs of multiple organisations (ISO 14001, 2015; Olganis & Loizidou, 2017).

For avoiding ending in a pitfall, the barriers and drivers of EMS were also examined. The rising interest in EMS implementation has brought up barriers such as lack of awareness of customers' sustainability demands, complex EMS documentation, organisations infrastructure, and poor management culture (Ojo et al., 2021; Yang and Zhang, 2017). The drivers behind EMS were the availability of guiding EMS documentation along with EMS education and training (Oladinrin & Ojo, 2021). As the scholars have highlighted (Ojo et al., 2021; Oladinrin & Ojo, 2021; Yang and Zhang, 2017), increasing EMS training, education, and management commitment together with the EMS documentation review process creates a probable circumstance for developing and implementing EMS. In conclusion, the environmental recognition program of the industry's governing body federation was introduced. The federation presented ten key impact areas related to the industry in which the target organisation operates and thus seen as an essential part of developing EMS suitable for the organisation's needs.

3 METHODS

3.1 Qualitative research method

The current study chose a qualitative research framework for understanding the organisational factors behind sustainability management implementation. Qualitative research is commonly built on existing studies and theories, empiric data and observations made by the researcher (Hirsijärvi et al., 2004). Graebner et al. (2012, p.10) highlight qualitative research to contain three essential characteristics "open-ended, concrete and vivid, and rich and nuanced". Firstly, open-ended refers to the researcher's freedom to gather qualitative data without predetermined measures and constructs. Secondly, concrete and vivid relates to the drivers behind a cognitive process that promotes communication and idea development. And thirdly, as qualitative data is commonly known as rich and nuanced, it can capture mechanisms and details that might otherwise be overlooked. Hirsijärvi et al. (2004) summarise qualitative research as the most suitable when the emerging factors have simultaneous impacts, and the examined phenomenon cannot be divided into sections.

The study examines sustainability management implementation, and as Engert et al. (2016) found, it requires in-depth examination. For fulfilling its aim and providing valuable academic information, the present study highly aligns with the essential characteristics of the qualitative research framework. Furthermore, Windolph et al. (2014) found sustainability management as a developing topic, and Nawaz and Koç (2017) pointed out the lack of a comprehensive model and precise definition that makes measuring it through a closed-ended quantitative framework highly complicated. Another advantage of qualitative research is capturing the interpretations and experiences of the organisation's employees (Gaebner et al., 2012, p. 279). It is an essential feature as the existing literature has emphasised the importance of an organisation's subjective experiences during the sustainability management implementation process.

Despite the presented justification for qualitative research, the option for quantitative research has to be acknowledged. Previously, scholars have examined sustainability management through quantitative research methods such as surveys (e.g., Talbot et al., 2020; Windolph et al., 2014). Notwithstanding, sustainability management implementation is examined through a case study executed within the target organisation, and qualitative research is appropriate for capturing sustainability management -related details as comprehensively as possible. Besides a case study, the study gathered data through an environmental aspect identification and current state analysis, critical incident technique, and data triangulation. Their suitableness is explored in the data gathering methods chapter.

3.1.1 Case study

Case studies are found popular and desirable in qualitative studies that pursue to explain and describe a phenomenon (Hyett et al., 2014; Lindgreen et al., 2021). It is seen especially useful if the examined questions are in "why" or "how" form. One definition for using a case study by Yin (1994, p. 13 cited in Hughes & McDonagh, 2017, p. 134) is "A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident". Hughes and McDonagh (2017) found case studies to function with diverse research aims such as testing or developing a theory and especially advantageous in exploratory research. With the help of a case study, the researcher can achieve a holistic view of a complex social process rich in detail (Lindgreen et al., 2021). As a method, Hyett et al. (2014) illustrate a case study to offer a high level of flexibility that other qualitative methods, such as phenomenology or grounded theory, cannot offer. Thus, as the above scholars have highlighted, a case study is a suitable method for a study that aim to describe, explain and understand the factors impacting a phenomenon.

A case study can be designed in different ways. Hughes and McDonagh (2017) describe two fundamental options, single and multiple case approaches, and the key consideration is which one to choose. In the single case approach, the explicit focus is on one case, whereas the examined cases are incorporated within one study in the multiple case approach. When a single case is examined, it allows rich data to be obtained, whereas in a multiple case approach, the richness may diminish. Instead, the multiple case approach can increase the generalisability of the findings. One of the main limitations that the case study faces is the single study design and the capability to generalise its finding (Hughes & McDonagh, 2017; Lindgreen et al., 2021; Tsang, 2013). If research aims to test an existing or build a new theory and overcome the fundamental limitation, Tsang (2013) suggests drawing data from the existing theories and utilising it to conduct the case study. Another limitation noted by Hyett et al. (2014) is the lack of details regarding case study design. Authors refer to the published case studies that do not sufficiently describe the rationality of their design and hence, do not provide a clear understanding for the reader. It can lower the credibility and quality of the presented findings.

The research setting of the current study is a Finnish SME primarily due to the organisation's request for developing a basis for environmental management. The setting is also suitable for sustainability management implementation study as Engert et al. (2016) emphasised the need to find the factors impacting organisational structure within an SME operating in a single industry or region. Moreover, Engert and Baumgartner (2016) proposed focusing on SMEs without existing sustainability strategies for revealing potential strategical differences that may impact sustainability management implementation. Thus, the theoretical contributions emerging from this research setting have the opportunity to advance academic understanding of sustainability management implementation.

The design follows the single case approach, focusing on one specific organisation. Based on previously presented literature, a single case design allows a study to obtain rich and nuanced data, aligning with the qualitative research framework. Scholars have found the lack of sustainability management implementation within SMEs, despite the offered support programs and tools (Johnson & Schaltegger, 2016). Hence, by focusing on a single case, it is possible to examine the factors that impact sustainability management implementation in-depth. Rule and John (2015) brought up the importance of small-scale case studies and argued that they had generated various well-established theories despite the limitations.

3.1.2 Target organisation

The study in hand is executed under a high-level anonymity agreement, and to respect the target organisation's privacy protection, it is only partially presented. As mentioned above, the study is executed as a case study in a Finnish SME. The target organisation has closer to 200 employees divided into almost ten departments. It functions in an international industry and has over 250 suppliers around the globe. The organisation's products and services reach over 11 countries, and through research and innovation, it aims to develop the industry. Originally it was founded over a decade ago, but it has undergone structural reconstitution in recent years. Due to the reconstitution, its management procedures are partially shared with a European affiliated company. The recent changes have impacted the organisation's structure, employees and business activities and have created new challenges and opportunities. The impacts have also affected its internal courses of action and organisational culture.

The target organisation does not have an environmental management program in place, nor has it previously examined its environmental impacts or sustainability aspects. The European affiliated company has an ISO 14001 in place, but it will not cover the Finnish organisation, at least according to the latest information. Thus, the interest in environmental performance comes from the target organisation.

3.2 Data gathering methods

3.2.1 Environmental aspect identification and current state analysis

Constant development was the goal of environmental management, and it can be reached by minimising the organisation's environmental impacts (Kallio, 2001). Developing an EMS is an efficient option for improving environmental activities (Johnstone, 2021; Olganis & Lozidou, 2017) and merging them with the organisation's decision making (Risa et al., 2019). Thus, it was chosen as a starting point for the target organisation's environmental management.

The most crucial phase of developing an EMS is planning (Pérez-Torres et al., 2019). Successful planning includes identifying and evaluating an organisation's environmental aspects, and based on the gathered data, the form of an EMS can be determined. ISO 14001 (2015, p. 57) presented one requirement for building EMS "the organisation shall determine the environmental aspects of its activities, products and services that it can control and those that it can influence, and their associated environmental impacts, considering a life cycle perspective". Nevertheless, the process how identifying and evaluating the required environmental aspects is not defined. The freedom for finding the most suitable method for the identification and evaluation process is emphasised by Pérez-Torres et al. (2019).

As expressed in the ISO 14001 (2015), an organisation is expected to determine its internal and external environmental aspects that are essentially related to business activities. Furthermore, the organisation should determine the products and services environmental aspects that can be managed and influenced. Besides ISO 14001 (2015), Olganis and Loizidou's (2017) findings recommended developing an EMS based on the organisation's needs. Based on the recommendations, the governing body federation's environmental program's requirements were examined, and a list of key environmental aspects was found. The presented key aspect list, out of which the most relevant ones were recommended as a starting point, included air quality, noise, biodiversity, transport, supply chain, groundwater pollution, waste management, water consumption, and energy use. They were discussed with the business development leader to determine the aspects that are essentially related to the target organisation's activities and can be managed by the organisation. Based on the discussion, seven environmental aspects were found as most essential and the ones that the organisation can influence, and hence, chosen under examination. The chosen environmental aspects were supply chain and purchasing, product and service, staff air and rail travelling, waste and recycling, office electricity and heating. After the relevant factors were identified, it was agreed that the governing body federation's environmental program requirements were chosen as a reference point for the current state analysis.

The current state analysis was qualitative research by interviewing employees and department managers. For developing a coherent entity, departments such as top management, finance, travel, warehouse, purchasing, engineering, waste management and property maintenance were interviewed during the data gathering. Nevertheless, the study could not include every organisation's decision-making body, and thus, the gathered data may include biases. In the current state analysis organisation's main activities and their environmental impacts were examined. Interview data was written down during the interviews, and additional data was received in a written form as in emails, contracts or datasheets. The interviews were mainly held in person and took place within the organisation's premises or through email if it was compulsory. The interview framework was open-ended and framed according to the environmental aspect

at hand. Information was retrieved from external sources such as industry-specific websites, stakeholders, and academic literature to support the organisation's internal data.

After identifying the organisational environmental aspects, Pérez-Torres et al. (2019) proposed quantifying or assessing them based on their significance. One efficient tool for quantifying the significance is calculating a carbon footprint (Pandey et al., 2011). Carbon footprint is commonly reported in CO2 emissions, and by quantifying the emission levels, the importance of the sources can be prioritised. Due to the different calculation methods and global warming capacities of greenhouse gases the carbon footprint calculations are globally presented in carbon dioxide equivalent (CO2-e), referring to the "mass based on 100 years global warming potential" (Pandey et al., 2011, p. 138). Carbon footprint reporting is needed to improve corporate social responsibility, respond to legislative demands, or improve the organisation's brand.

Carbon footprint calculations were executed through different tools. For example, The Finnish Environmental Institute has developed a free-to-use Y-Hiilari carbon footprint calculator for organisational usage, and the office emissions were calculated by it. EPA's (2016) "volume-to-weight conversion factors" guide was another measurement tool used in the waste and recycling CO2-e calculations. While calculating the carbon footprint of transportation, an emission database and calculation system were used. The emission database is commonly used in Finnish freight and passenger transport and is maintained by the Technical Research Centre of Finland Ltd. (VTT, 2017). The calculation system was chosen based on its suitableness to the examined environmental aspect for achieving a valid result. The relationship between an environmental aspect and a calculation system is explained more specifically in the results section 4.1.1.

Pérez-Torres et al. (2019) highlight finding the significant aspects, as evaluating the aspects is a critical part of EMS planning. For cross-checking, the found aspects were reflected with the governing body federation’s environmental program's requirements and presented to the business development leader, after which the relevant aspect of product and service transportation was found missing and added. For answering the third sub-research question, the knowledge gained from the literature framework was combined with current state analysis data, and their suitableness for the target organisation's needs was analysed. By analysing the content of ISO 14001 (2015), PDCA cycle, the governing body federation’s environmental recognition, and current state analysis, a model for implementing an EMS were created.

Based on the identified environmental aspects and the EMS implementation model, an interview to develop the practical basis of environmental management was held. The EMS implementation model was presented to the business development leader to find purposive interview participants. Based on the discussion, seven participants who were relevant or represented the departments with the most significant environmental impacts were identified. The aim was to cross-check the practicality of the found factors, find possible shortages, and gather data, so the designed EMS implementation model could be filled. The interview outcome is presented in the results section 4.1.

3.2.2 Critical incident technique (CIT)

A combination of *critical incident technique* (CIT) and in-depth interviews were chosen for in-depth data gathering and understanding of the possible relationship between environmental- and sustainability management and answering the the main research question. Tuomi and Sarajärvi (2018) presented the benefits of an interview: flexibility and the possibility to choose and observe the interviewees while simultaneously making notes. Moreover, the authors presented gaining as much knowledge as possible of the examined phenomenon as the most crucial aspect of an interview. An interview structure suits the purpose of this study as the flexibility to choose the participants with the most knowledge of the organisation's sustainability aspects may provide the greatest amount of knowledge regarding sustainability management implementation.

An in-depth interview, or customer-oriented interview, is an unstructured type of interview, and its purpose is to examine and reveal the deepest essence of the studied phenomenon under study (Tuomi & Sarajärvi, 2018). Regardless of the unstructured type, the discussions and interview questions are related to the research purpose, posing the research problem, or the research questions. Thus, the examined phenomenon is defined within the centre of the discussion despite the open-ended questions. Tuomi and Sarajärvi (2018) commonly approve of interviewing only a few or even one participant in an in-depth interview. Revealing the deepest essence of sustainability management implementation can be found valuable, as the topic is only recently found, and scholars urge empirical research on its implementation (Ahmed et al., 2021; Engert & Baumgartner, 2016; Engert et al., 2016).

An in-depth interview was found more suitable than a formed and theme or semi-structured interview. Tuomi and Sarajärvi (2018) state that a formed interview represents data gathering in quantitative research, and a predesigned questionnaire or interview may bias the results by being too grounded on the researcher's assumptions about the topic. Even though the theme or semi-structured interview is closely related to the in-depth interview, the fundamental difference emphasises choosing the latter. In the semi-structured interview, it is assumed that the interviewee's understanding of the presented topic or theme aligns with the researcher's understanding. Without this presumption, it cannot be assumed that the received answers will be related to the examined topic or theme (Tuomi & Sarajärvi, 2018, p. 154). As for the in-depth interview, the interviewees describe the examined phenomenon through observations based on their knowledge. It was experienced essential for finding the organisational factors impacting sustainability management implementation and being capable of fulfilling the aim of the study. Moreover, the presumption of the target organisation's employees to interpret the recently highlighted sustainability management implementation topic similar to the researcher cannot be ensured.

The critical incident technique is used to support the in-depth interview. Critical incidents are described as eminently satisfying or dissatisfying interactions, and with CIT, essential facts and events leading to success or failure in specific situations can be gathered (Huang & Kuo, 2020). Viergever (2019) found CIT

best suited for a study examining a need to understand the factors hindering or helping an activity or experience. Viergever proposed to formulate the main research question in the form of "what helps or hinders <fill in the experience or activity under study>?" to confirm the suitability of the CIT (2019, p. 1066). In order to validate the suitability of CIT, the main research question is presented as what are the factors that help or hinder sustainability management implementation in the target organisation? Thus, CIT is suited for examining the organisational factors impacting sustainability management implementation and helping to answer the study's research questions.

CIT is a well-established research tool widely used in qualitative research (Bott & Tourish, 2016; Butterfield et al., 2005; Fitzgerald et al., 2008) but neglected in international business (Durand, 2016). It was initially developed by Flanagan (1954) to collect data on human behaviour through a set of procedures. The author's original purpose was to develop basic psychological concepts and solve practical issues. The gathered data was related to a specific event and to the extremely positive or negative experiences it produces. Afterwards, Gremler (2004) emphasised three beneficial situations for using CIT. First, if the research topic is only sparingly researched or documented. Secondly, when knowledge of an uncharted phenomenon is to be increased. Thirdly, when a comprehensive understanding is required for describing the examined phenomenon. For example, Durand (2016) used a CIT for examining conceptions related to cross-cultural interaction and work changes emerging from a merger in a cross-cultural workgroup. A CIT assessed managers' stress, conceptions, and emotions in a post-merger situation, and 22 critical incidents were developed.

CIT has also faced criticism despite its widely recognised flexibility and benefits (Butterfield et al., 2005; Bott & Tourish, 2016). Bott and Tourish (2016, p. 282-283) highlighted CIT relying on the interviewee's recollection of the critical incidents, which has been noted as an inherent flaw raising criticism regarding the approach's validity or reliability. The authors found that scholars recommend informing the interviewees beforehand to recall topic-related critical incidents, which eases the recalling process. Butterfield et al. (2005) found its greatest strength, flexibility, to be its greatest weakness. Due to the flexibility, various scholars have adapted it to their needs and developed inconsistent terminology (see, e.g., Butterfield et al., 2005, p. 476; Bott & Tourish, 2016, p. 280). The inconsistencies have entailed criticisms of the technique's credibility. However, in the original study Flanagan (1954, p. 335) emphasises that the CIT "does not consist of a single rigid set of rules governing such data collection. Rather it should be thought of as a flexible set of principles which must be modified and adapted to meet the specific situation at hand". To conclude, Gremler's (2004) findings claimed CIT to be a sound technique that has faced a minimal number of changes since it was introduced in 1954.

In the original work, Flanagan (1954, p. 354-355) described the CIT to be constructed of the following five phases "a) determination of the general aim of the activity, b) development of plans and specifications for collecting factual incidents regarding activity, c) collection of data, d) analysis of data, e) Interpreta-

tion and reporting of the statement". The five phases are found necessary for justifying the usage of CIT in a study (Gremler, 2004), and they are utilised in the recent studies that use the technique (see, e.g., Camioto & Rebelatto, 2015; Fitzgerald et al., 2008; Gremler, 2004; Viergever, 2019). Thus, for validating and justifying the usage of the CIT, this study aligns with its five main phases.

Creating a supportive relationship with interviewees is imperative when a CIT interview is developed (Schluter et al., 2008). As positive and negative critical incidents are examined, the interviewees need to be supported. The authors proposed essential questions for guiding the interview and eliciting critical incidents. Bott and Tourish (2016) used similar questions in their research and described them as probes. Probes aim to minimise the interview structure and ensure that the interviewee finds the interview process necessary and describes critical events close to their experiences. Also, Chell (2004) emphasised using probes in CIT and help to seek clarification, control the interview flow and keep it from turning into an interviewee's monologue. A monologue is not a purpose of CIT as it might tilt the interview off-topic. The guiding questions or probes are presented in the following summary table (Table 1) to provide a comprehensive understanding.

Table 1

CIT Probe questions

	Bott & Tourish (2016, p. 281)	Chell (2004, p. 5)	Schluter et al. (2008, p. 110)
Guiding questions or probes	What happened next? Who was involved? What did the board do? What was the outcome? How did that make you feel? How would you describe his/her behaviour in handling this situation? How would you describe your behaviour in handling this situation? Who was driving this decision? What could have made the action more effective?	What happened next? Why did it happen? How did it happen? With whom did it happen? What did the parties concerned feel? What were the consequences – immediately and longer term? How did the respondent cope? What tactics were used?	What preceded and contributed to the incident? What did the person or people do or not do that had an effect? What was the outcome or result? What made this action effective or ineffective? What could have made the action more effective?

Note. Adapted from Bott and Tourish (2016); Chell (2004); Schluter et al. (2008).

When the interview questions are designed, CIT's essential guiding questions or probes are included in creating a rapport atmosphere and providing support for

the interviewees. CIT can be seen as valuable for examining sustainability management implementation as it provides the possibility to form a theory from a case study as it is grounded on practical critical incidents (Chell, 2004). Bott and Tourish (2016) second its capability to form theories and highlight that a well-structured CIT can reveal rich details of the examined incident and its background. The presented academic literature indicates that the combination of in-depth interviews and CIT is well suited for examining the organisational factors affecting sustainability management implementation. By focusing on the critical incidents, the competence of sustainability management model can be verified or disproved, and the main research question answered.

3.2.3 Focus group

The original plan to execute CIT interviews as individual in-depth interviews had to be changed, as the target organisation experienced scheduling the face-to-face interviews as challenging. Also, the willingness to attend a voluntary interview increased once the interview method was changed to a focus group. By a focus group, the study refers to an interview type that Hair et al. (2015) describe as an informal discussion with eight to twelve participants. A Focus group is "perhaps the best-known semi structured interview approach" (Hair et al., 2015, p. 201). Although Hair et al. (2015) described a focus group to consist of eight to twelve participants, the focus group of the current study was formed out of seven interviewees, as described in more detail in the following chapter. Then again, Eriksson and Kovalainen (2008) found a focus group to consist of two to ten participants. Depending on the reflected theory, the sample of seven participants can be found sufficient or insufficient.

Eriksson and Kovalainen (2008) point out that focus groups can be used to empower interviewees and gather empirical data on how they understand or experience the examined phenomenon. The described characteristic aligns with the purpose of the CIT interview, and a focus group can be found suitable for executing a CIT interview (see, e.g., Butterfield et al., 2005; Schluter et al., 2008; Viergever, 2019). Another purpose of the focus group by Hair et al. (2015) is to encourage participants to elaborate and answer in their own words. It can be seen as crucial as the aim is to reveal rich, in-depth knowledge by finding extremely positive or negative incidents the participants have experienced.

A Focus group may not provide as in-depth knowledge as in-depth interviews, especially examining sensitive issues or personal problems is ineffective (Hair et al., 2015). The authors also noted that developing decisions based on a focus group is challenging and recommended to be tested by another confirmatory method. The sample that forms the focus group is purposively selected, which by Eriksson and Kovalainen (2008) is an essential factor. It is assumed to provide transparent results that can be extensively examined. Nevertheless, the emerging limitations of a focus group CIT interview are acknowledged and considered while analysing and reporting the current study's results.

3.2.4 Sample

A decision faces by every study, whether it is quantitative or qualitative, is selecting a sample (Richie et al., 2003). Tuomi and Sarajärvi (2018) found that deciding a study's sample size is one of the most common questions during data gathering. So, how can one be sure that the chosen sample produces scientifically comprehensive results? Tuomi and Sarajärvi (2018) have no academic guidelines written in stone, but research resources, such as time and money, often play a crucial role in sample selection. When defining the sample selection, Richie et al. (2003) encourage to decide between two options, the probability or non-probability sample. The probability sample is described as the most thorough approach because "elements in the population are chosen at random and have a known probability of selection" (Richie et al., 2003, p. 78). Probability sampling is an integral approach when the aim is to develop statistical estimates that can reflect a broader population or test hypotheses empirically. The current study is executed as a qualitative study, and as Tuomi and Sarajärvi (2018) noted, qualitative studies do not aim to produce statistical generalisation. Hence, the probability sample does not suit this study's aim. Richie et al. (2003) also emphasised using a non-probability sample in qualitative studies and claimed probability sampling was an inappropriate option.

A qualitative study pursues to describe a phenomenon while providing in-depth understanding and theoretical interpretation. Thus, the chosen sample should have relevant experience or knowledge of the examined phenomenon (Tuomi & Sarajärvi, 2018). In non-probability sampling by Richie et al. (2003), purposefully chosen participants reflect specific features related to the examined phenomenon. The authors emphasise that "The sample is not intended to be statistically representative: the chances of selection for each element are unknown but, instead, the characteristics of the population are used as the basis of selection" (2003, p. 78). Due to this, it is explained to suit in-depth qualitative studies even on a smaller scale. These features can justify the usage of a non-probability sample in this study. A smaller, purposefully selected sample can produce more valuable and in-depth data related to sustainability management implementation instead of randomly selecting as large a sample as possible.

However, Tuomi and Sarajärvi (2018) noted that the selection criterion should be presented in the study so it is clear how it fits the purpose of the study. Based on Richie et al. (2003) and Tuomi and Sarajärvi (2018), four common approaches for choosing a non-probability sample are found and presented below in a summarising table (Table 2). By evaluating the purposes of these approaches, the most suitable for the meeting the aim of this study is chosen.

Table 2

Non-Probability Sample Approaches

Title	Description	Purpose

Snowball sampling (Tuomi and Sarajärvi, 2018)	A sample starts with one key person who identifies other vital persons for the researcher.	To gather data by proceeding from one presented person to another.
Purposive sampling (Richie et al., 2003)	Sample units have characteristics or features that enable in-depth examination of the studied phenomenon.	To avoid biased selection and provide a transparent and objective sample that produces results that stand up to an extensive examination.
Theoretical sampling (Richie et al., 2003)	First, an initial sample is chosen and analysed. Secondly, a further sample is selected for refining the developed theory. Theoretical purpose and relevancy are key criteria for defining the sample selection.	To find a saturation point after which new samples will not provide a complementary value.
Convenience sampling (Richie et al., 2003)	Convenience sampling does not include any clear strategy, and the sample is chosen based on ease of access. Some scholars have found it most used in qualitative sampling.	To assemble an easily reachable sample and justify it with convenient access.

Note. Adapted from Tuomi and Sarajärvi (2018) and Richie et al. (2003).

Based on the presented summarising table, purposive sampling appears to be the most suitable approach to achieve the aim of this study. The interview participants were selected by executing an interview with the target organisation's business development leader while the EMS implementation model was introduced. With the business development leader's help, seven participants with relevant knowledge were identified and chosen for the interviews.

Purposive sampling aims to develop an unbiased and objective sample, and thus participants from different departments were chosen. Participants from the departments that create the most significant environmental impacts were included, as they are presumed to possess practical and valuable knowledge related to the topic. The seven chosen departments were supply chain and purchasing, designing, logistics and travel, business development, warehouse, finance, and workshop. Choosing participants from relevant positions is seen justified as Richie et al. (2003, p. 78) emphasised selecting participants that "have particular features or characteristics which will enable detailed exploration and understanding of the central themes and puzzles which the researcher wishes to study". All the participants were in managing roles, which was highly important as the study examined a management implementation phenomenon. In addition, choosing participants with relevant knowledge is a factor that was emphasised by Tuomi and Sarajärvi (2018), and it fortifies the selected sample.

The chosen sample was contacted in advance to find suitable interview dates. As Bott and Tourish (2016) mentioned before, CIT relies on the interviewee's ability to recall critical incidents. Hence, the CIT questions were shared a week before the interviews to ease the recall process. Finding as many critical incidents as possible was experienced to enable the in-depth examination of the sustainability management implementation. It was also assumed to increase the quality of the results and increase the capability to sustain extensive examination.

3.2.5 Data triangulation

In triangulation, multiple approaches are used to answer a research question and enhance the reliability of the emerging results (Lewis-Beck et al., 2003). Their study found triangulation originating from 1966 when Webb et al. proposed measurement process triangulation to reduce uncertainty and provide the most convincing results. In 1970 Denzin expanded triangulation to consist of the four forms of data, investigator, theory, and methodological triangulation (Dewasiri & Abeysekera, 2020; Lewis-Beck et al., 2003; Mathison, 1988). Mathison (1988) explains the first form, data triangulation, to use various data sources instead of relying on one. Investor triangulation refers to a study involving multiple investigators, and methodological triangulation includes using different methods within a study. Mathison (1988, p. 14) views the theoretical triangulation critically and claims it to be "problematic at best, and likely impossible in reality".

Triangulation creates an opportunity for achieving a broader and higher quality understanding of the examined phenomenon, and when carefully executed, it can strengthen the study and make it more complete (Jentoft & Olsen, 2019). Barnes and Vidgen (2006) examined triangulation from the credibility perspective and described its capability to cross-check qualitative and quantitative data. By cross-checking, a researcher can validate the gained findings and reflect them with reality. It provides a more thorough picture for the observer and increases the credibility of the findings. In addition, Jentoft and Olsen (2019) note that triangulation can be used to interpret one dataset with the assistance of another, making it possible to gain a closer connection with the examined phenomenon. Especially Wray et al. (2007) emphasise triangulation by stating that a well-grounded qualitative study requires multiple methods and broad fieldwork to reach data saturation.

Ghinoi et al. (2021) identified data triangulation to have a key role when organisational or human behaviours are examined from multiple perspectives and strengthen the usage of quantitative and qualitative methods within one research. Their study analysed primary and secondary data through data triangulation and reported more nuanced results than the previous stakeholder relationship and governance issue studies. Hence, the authors recommended data triangulation as a promising method. Dewasiri and Abeysekera (2020) used data triangulation to examine survey and market data regarding the connection between corporate social responsibility and dividend policy. Their study seemed to be the first to utilise data triangulation in the field of corporate social responsibility and

dividend policy, and the approach was mentioned to provide "greater understanding while increasing the validity, completeness, confirmation, and generalizability over the findings" (Dewasiri & Abeysekera, 2020, p. 10). Also, in Jentoft and Olsen's (2019) study, data triangulation was used for analysing different data sources from various actors, and it was explored to strengthen the internal validity of their study.

The previewed studies indicate that triangulation is suitable for qualitative research and can strengthen the validity of a study. In the current study, the interview results are used as primary data sources and are reflected in the secondary data. The current study reflects multiple data sources, so the chosen triangulation method is data triangulation, as described by Mathison (1988). The importance of data triangulation appeared to rise as the interview method changed from individual in-depth interviews to a focus group. Even though the discussion did not affect the sample size, it was noted not as lucrative as individual interviews (Hair et al., 2015). Data triangulation allows a broader examination of the phenomenon, which results in a higher understanding (Jentoft & Olsen, 2019) and can fortify the current study's results. It seems that data analysis collaborates with the CIT technique, as Ghinoi et al. (2021) identified it to function when human behaviours or organisational actions are studied from various perspectives.

Data triangulation appears to be a crucial part of meeting the organisation's needs for producing a functional and suitable basis for environmental management. Barnes and Vidgen (2006) highlighted the possibility of cross-checking between data sources, and it was utilised multiple times during the design phase of the EMS. The advantage of cross-checking appears to be seconded by Pérez-Torres et al. (2019), who emphasised planning as the crucial phase of an EMS implementation. Thus, data triangulation was seen to create a more thorough picture strengthening the development of an EMS.

Data triangulation brings limitations alongside the possible benefits. For one, Mathison (1988) described the limitation of data triangulation as requiring time to examine a phenomenon's conditions successfully. In the current study, this limitation is aimed to be covered by collecting a wide-ranging reserve of secondary data during the first four months of the study. Jentoft and Olsen (2019) maintain the time-consuming perspective and consider two more limitations. Firstly, data triangulation is explained as costly and secondly, repeating or executing comparative studies is noted to be complicated. Jentoft and Olsen's (2019) limitations are also identified in the current study and found partly out of its reach. The study does not have funding that could create cost limitations. Secondly, the difficulty of repeatability is noted and aimed to be covered by thoroughly describing all of the study phases. The study has tended to focus on transparent phases rather than repeatability, as it was a necessary approach for successfully using a CIT (Gremler, 2004).

The following background data table (Table 3) was developed to provide a transparent picture of the used data. The collected environmental management data interval was nine months (01.01.2021 - 31.09.2021). The period ended in September, as the study started by analysing the data on the environmental impacts.

Examining academic literature on environmental- and sustainability management was continued while the organisation's environmental impacts were analysed.

Table 3

Background Data

Secondary data	Primary data
1. Academic literature 2. DHL air cargo datasheet 3. Staff air travel datasheet 4. VR travel datasheet 5. Waste disposal and recycling invoices 6. Product and service transportation datasheet 7. Office electricity consumption datasheet 8. Office heating data email 9. Product and service datasheet 10. Governing body federation's environmental program 11. Solar panel contract 12. LED lighting contract	1. Interview of target organisations needs with business development leader (09/21) 2. Product and service emissions interview with business development leader and systems development leader (11/21) 3. Interview for cross-checking environmental aspects with business development leader (11/21) 4. Presentation of EMS implementation model with business development leader (04/22) 5. EMS presentation notes 6. Focus group interview regarding environmental impacts of EMS implementation model (04/22) 7. EMS implementation model focus group notes 8. EMS implementation model focus group recording 9. CIT focus group interview regarding sustainability management implementation (04/22) 10. CIT focus group notes 11. CIT focus group recording

The two focus group interviews were planned to include seven relevant employees. Even though the participants were contacted in advance to find a suitable time slot, two participants could not attend the interview. The first unavailable participant was on vacation, and the second faced organisational barriers just before the interview. Due to the absence of two participants, the interview included five interviewees. In addition to the missing ones, two of the attending participants had to join from a distance. The five interviewees represented the leading positions in purchasing, logistics and travel, warehouse, finance, and business development departments. The following coded interview participants table (Table 4) is presented to provide a transparent picture of the interviewees. The table is experienced to ease comparing the study's results and thus, make interpreting them more convenient for the reader. The coding process is explained in the following chapter.

Table 4

Interview Participants

Coded interview participants		
Present (P)	Distance (D)	Unattainable (U)
IP1	ID3	IU6
IP2	ID4	IU7
IP5		

3.3 Coding and data analysis

3.3.1 Coding

Hair et al. (2015) explain coding in qualitative research as simplifying the gathered data and enabling the researcher to focus on its vital characteristics. It allows forming of undifferentiated text into representative and relevant groups and limits unnecessary data. Tuomi and Sarajärvi (2018) described that coding does not have specific guidelines or policies, and any coding method that suits a study's needs can be chosen. Saldaña (2013) specify by founding each qualitative study different and unique, which is the reason behind the commonly taken study-based coding approach. In this study, coding is also used to ensure the target organisation's anonymity and present sensitive data safe but informative manner.

The process starts by choosing the *coding units*, such as "words, phrases, sentences, paragraphs, images, graphics, and photographs" (Hair et al., 2015, p. 302). Saldaña (2013) found *attribute coding* as an appropriate approach for qualitative studies, especially in studies that manage various data forms and several participants. In addition, interviewee information and received data can be served in an essential style suitable for content analysis. The study utilises data triangulation to examine sustainability and environmental management implementation from primary and secondary data sources and by Saldaña (2013), attribute coding suits this need. The author presents the approach as "a coding grammar" intended to cover the components of a study in a descriptive way. The study also recommends combining it with a case study method (Saldaña, 2013, p. 72), which can be seen to increase its suitability for the current study.

The present study finds coding the only option to provide interview participants with the freedom to answer interview questions truthfully and subjectively. The coding is executed by descriptively describing the interviewee's attributes, as suggested by Saldaña (2013). It allows the study to manage and refer to the data provided by the interviews securely and descriptively. The primary letter of the related word is used as the descriptive code. For example, I present

the coded version of the interviewees, as I is the primary letter. In addition, the numbers 1 – 7 are used to describe the number of participants. To ease data management and to clear presentation, three subcategories are formed. The categories describe the modes of attendance as present (P), distance (D), and unattainable (U). The comprehensive list of participants and their coding can be found in the result section.

3.3.2 Data analysis

Qualitative research aims to understand the perspectives of those experiencing the examined phenomenon (Vaismoradi et al., 2013). Therefore, the data analysis method should be determined to answer the presented research questions. Their study presents content and thematic analysis as suitable for an emerging researcher, as their structures are transparent and include "a defined sequence of analytical stages" (Vaismoradi et al., 2013, p. 403). In addition, both Vaismoradi et al. (2013) and Tuomi and Sarajärvi (2018) found thematic and content analysis to proceed in similar phases. According to the above scholars, thematic and content analyses are suitable for a thesis, and thus, one of them will be chosen for the present study.

The main difference by Tuomi and Sarajärvi (2018) is tied to the logic behind the two methods. Content analysis dismantles the gathered data in pieces such as simple phrases and aims to examine the phenomenon by reconstructing the data in the form of a concept or theory. Thematic analysis for one pursues to identify core ideas, build themes, and develop the concept or theory around the found themes. The thematic analysis utilises mind maps, whereas content analysis describes the process in the tables. Vaismoradi et al. (2013) found content analysis purposeful when data characteristics are examined by determining patterns, relationships, and structures of used words. The authors propose using content analysis to examine common issues as it produces simple reports, whereas thematic analysis provides detailed, nuanced, rich results and is recommended for in-depth exploratory research for more uncharted phenomena.

Lindgren et al. (2020) noted the criticism towards content analysis and found it to be considered to produce simple and superficial results lacking scientific evidence and depth. Nevertheless, their study found that content analysis can produce interpretative and descriptive results and reveal in-depth meaning from the data. The quality of the results depends on two main factors. The first is the researcher's skills and experience, and the second is the quality of research data. Tuomi and Sarajärvi (2018) share the above perspective and emphasise quality results being related to the researcher's skills instead of the chosen analysis methods. It was also revealed that most data analysis methods used in qualitative research are, to some extent, based on content analysis.

It seems that content analysis is suitable for examining environmental- and sustainability management implementation data. The study gathers various types of data from primary and secondary sources, and content analysis is by Lindgren et al. (2020) an efficient option for analysing this kind of data. The study at hand focuses on the characteristics of the gathered data by dismantling and

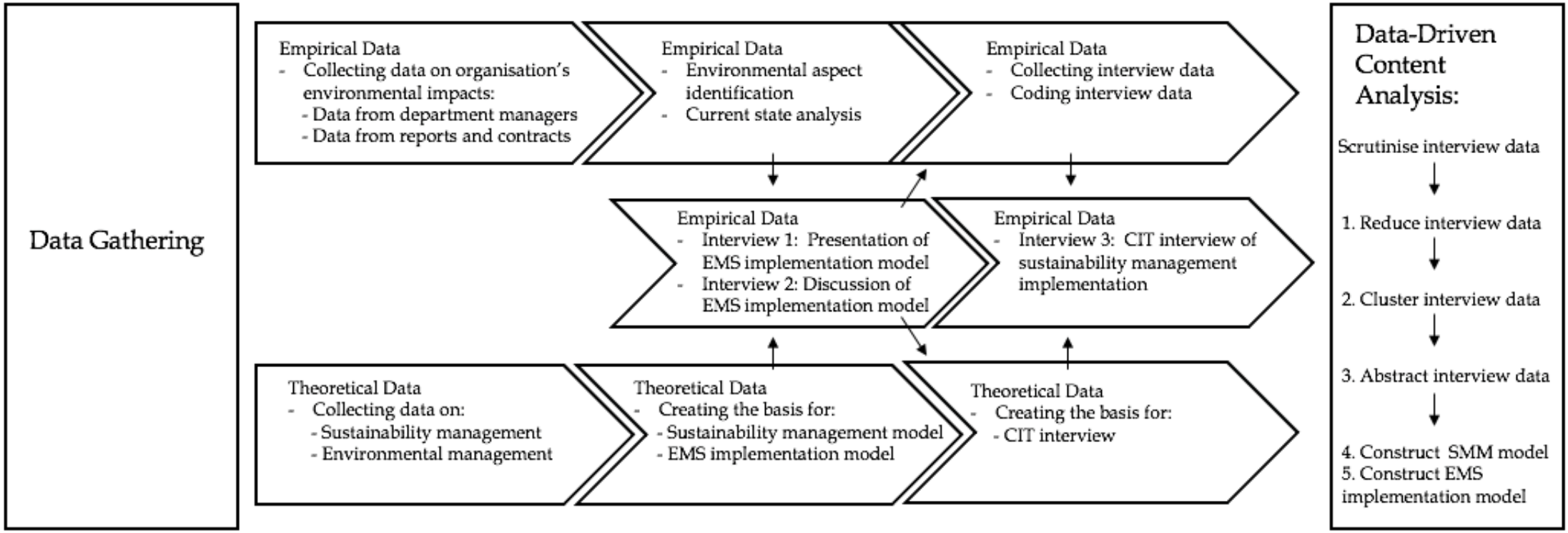
reconstructing it in the form of a conceptual model. In addition, the data is presented in the form of tables throughout the study, which was described as a typical presentation style in content analysis (Tuomi & Sarajärvi, 2018). Some studies indicated that content analysis is not as suitable as thematic analysis for examining the uncharted phenomenon and creating scientifically rich and detailed results. Despite the criticism, the study aligns with content analysis as its characteristics are found more suitable for reaching the aim of the study.

More specifically, the study uses data-driven content analysis, and Tuomi and Sarajärvi (2018) form it out of three main steps. First, the data is *reduced*, after which it is *clustered* according to relevant coding units. The first step was executed by relistening the interviews multiple times while writing down information that was missed during the actual interviews. The first phase was retaken until no more additional information was not found and a saturation point was reached. Secondly, the written phrases were clustered by their attributes and inserted into a table based on similarities. By analysing and reforming the tableted data, it was possible to develop categories of the factors impacting the sustainability- and environmental management implementation in the target organisation. The third step is *an abstraction* in which the clustered data is reformed into theoretical concepts or models (Tuomi and Sarajärvi, 2018). In environmental management implementation, the categorised data was merged with the EMS implementation model. While in sustainability management implementation, the developed categories were merged with the sustainability management model to create a sustainability management model 2. It presents the most significant categories that impact the target organisation's sustainability management implementation. After creating the sustainability management model 2, the impact categories are reflected in the literature framework one at a time to fulfil the study's aim.

Even though data analysis is described to process in steps, Hair et al. (2015) found it to concur with data gathering. A feature of data analysis in qualitative research is initiating complementary data gathering, which causes more data analysis. Thus, the process appears to be multileveled and intertwined. The multileveled nature occurred during the present study, and it is presented in a data-gathering model (Figure 5) to provide a clear and transparent picture. Ultimately, the reader will determine the suitability of the chosen data-driven content analysis, as the transparent structure of the process provides the circumstances for it.

Figure 5

Data Management Model



4 RESULTS

The result section presents of the practically emphasised environmental management findings and the theoretically emphasised sustainability management findings. The results are divided into two chapters to provide a clear distinction between the findings. The first chapter covers the target organisation's needs to develop a basis for environmental management by establishing a plan to implement an environmental management system. The implementation plan was built on the gathered secondary data and supplemented with the first eight primary data points, as shown in the background data table (Table 3). The first chapter presents the results of environmental aspect identification and the current state analysis on which the EMS implementation model was developed. Followed by interviews 1 and 2 results on which the EMS implementation model's plan phase was formed (Table 8). The interview participants and their coding are described in the method chapters 3.2.5 and 3.3.1.

The second chapter focuses on the results of the CIT interview and sustainability management. The process is based on the academic literature and the last three points of primary data (Table 3). The interview data is analysed, and the categories that impact the target organisation's sustainability management implementation are presented in the impact table (Table 5). The seven impact categories reveal the barriers and drivers of sustainability management implementation, and to highlight their importance, the sustainability management model 2 is presented.

4.1 Environmental management program

4.1.1 Current state analysis

In the beginning, the target organisation's needs and the aim of the study were discussed with the business development leader. It was noticed that the organisation does not execute goal-orientated environmental management or have EMS in place. The design of the environmental management program started with environmental aspect identification, by which the eight main environmental impacts were identified as described in the methods chapter 3.2.1. The second phase was the current state analysis executed by collecting empirical data on the organisation's environmental impacts. Theoretical data on environmental management were gathered alongside the empirical data, and by combining them with the organisation's needs, the current state analysis was executed. The theoretical data revealed that CO2-e is a commonly used method for comparing the environmental impacts, and thus, the summarising chart was created (Figure 6). The CO2-e calculations executed in the current state analysis revealed the extent of the eight main environmental impacts, out of which supply chain and purchasing,

staff air travel, staff rail travel, waste and recycling, product and service transportation, office electricity and office heating were included in the chart. The final environmental impact of product and service was measured in concentration (kg/m3) and could not be converted into a form of CO2-e kg.

The first environmental impact is supply chain and purchasing. The target organisation functions in an international industry and has over 250 suppliers. Due to the limited extent of the current study, the whole supply chain could not be covered, and the calculation included only in- and outgoing purchases. Organisation's purchasing leader was contacted to collect the required data. The data revealed that purchases come through air cargo and are operated by DHL. During the nine months, the organisation executed 33 shipments. DHL (2021) has a carbon calculator that was utilised for calculating the amount of produced CO2-e. The calculation required origin, destination, type of transport and weight of cargo, and the data was found from the collected data sheets. Based on the calculations, the environmental impact of supply chain and purchasing was 16 891 kilograms of CO2-e.

The collected data were compared to the data of 2020, which revealed a massive decrease in purchasing. During the previous year, the organisation had 650 shipments, and the reason behind the 94,9% decrease was the focus on new product and service development. The focus on new development resulted in a stock clearance and led to a significant drop in shipments. Hence, the found 16 891 kilograms of CO2-e is presumably highly underestimated.

The second identified environmental impact is staff air travel. The researcher got the required data sheets by contacting the travel team leader. The data revealed the number of flights, flight mileage, CO2 kilograms counted by US-EPA factor, and CO2-e kilograms counted by DEFRA factor. All of the received data was summarised in a table, and it revealed the total number of 1353 flights. The most significant share of the flights, 89.2%, were European flights, followed by 7,4% of international and 3,4% of domestic flights. The table also revealed the total amount of 126 247 kilograms of CO2-e. The staff air travel was followed by staff rail travel, and the required data was also received from the travel team leader. Rail travelling was solely composed of domestic travelling, and the national organisation VR was the operator. Once again, the data revealed origin, destination, train type, number of travels and rail kilometres. The CO2-e calculations were based on the work of Baumeister (2019, p. 264), which revealed the CO2-e emissions per person kilometres for a Pendolino train being 18.59 (g/pkm), and for Intercity train 9.13 (g/pkm). The calculations resulted in 1261 kilograms of CO2-e.

The following environmental impact is waste and recycling. The calculations started by contacting the warehouse leader and identifying all the 13 sources of waste produced by the organisation. After the sources of waste were identified, the warehouse leader recommended approaching the finance team to collect the waste management invoices. The invoices revealed two organisations responsible for waste disposal, and based on the invoices, the total amount of waste was calculated. The calculations assumed waste containers to be full when emptied, which may shift the results upwards, as the actual degree of filling was

not on record. The calculation was executed with a free-to-use Y-Hiilari carbon footprint calculator developed for organisational use by the Finnish Environmental Institute. The calculation took into account the different types and the amount of waste, the distance from the waste management or recycling centre and provided the result of 20 738 kilograms of CO2-e. In addition to the CO2-e emissions target organisation's recycling rate was calculated. The calculation method was found in European Commission (2011) article 3, and it guided to dividing the amount of recycled waste by the total amount of produced waste. The calculation produced a recycling rate of 38%.

The fifth environmental impact was product and service transportation. The target organisation's product and service reach over 11 countries, and the fifth impact relates to its transportation by land. During the nine months, the land transportation reached the amount of 270 649 kilometres. The information for the emission calculation was collected from the emission database administered by the Technical Research Centre of Finland Ltd. (VTT, 2017). It was found that, on average, a diesel-consuming vehicle produces 0,962 kilograms of CO2-e per kilometre, so in total, the land transportation produced 260 364 kilograms of CO2-e.

Second to last the results for office electricity and office heating are presented. The amount of used electricity was found by contacting the property manager. The overall consumption was 452-megawatt hours (MWh) produced by wind energy. For calculating the CO2-e emissions, the study once again utilised the Y-Hiilari calculator and got the result of 4969 kilograms of CO2-e. The calculations of office heating were also calculated with Y-Hiilari. The required data was received again from the property manager. From the data, it was found that the organisation is heated by district heat and consumed 1423 megajoules during the nine months. From Y-Hiilari, it was calculated that heating the office produced 61 kilograms of CO2-e emissions.

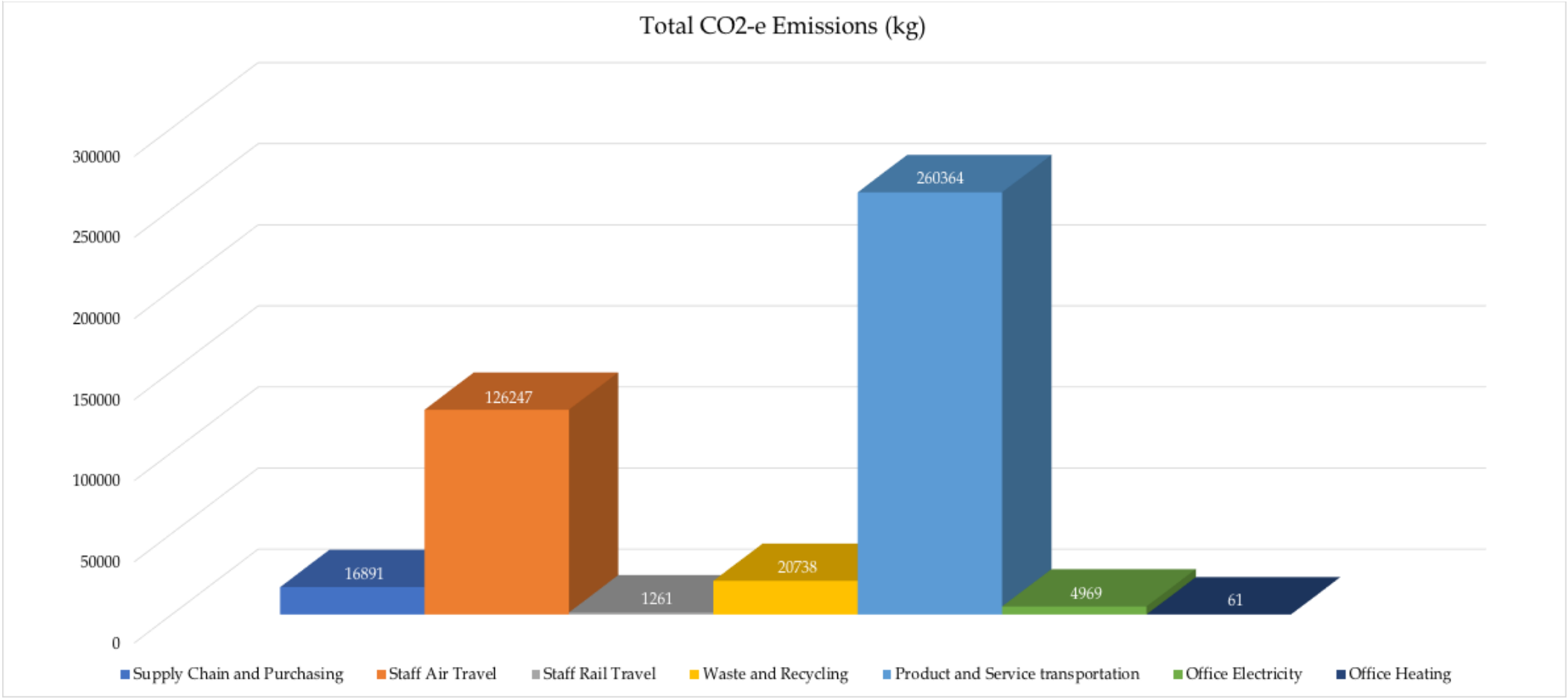
Finally, the impact of product and service that could not be included in the summarising chart is presented. The first functions of the product and service were identified with the guidance of the design department and afterwards analysed in a meeting that included the business development leader and systems development leader. The averages of the produced emissions were written down in the form of *parts per million* (ppm). After the meeting, the exact ppm numbers were calculated and converted into *a milligram per cubic meter* (mg/m3). Boguski (2006) explained that chemical conversions commonly assume the atmosphere's temperature to be 25 degrees Celsius and the pressure of 1. In the following conditions, the conversion formula was found to be "0,0409 x concentration (ppm) x molecular weight" (Boguski, 2006, p. 2). It is commonly known that the molecular weight of CO2 has formed from one carbon and two oxygens, resulting in 44 grams. With the help of the formula, it was calculated that the product and service produced 62 358 019 mg/m3, and for a more straightforward presentation, it was converted into 62,63 kg/m3.

With the help of the summarising chart (Figure 6), the three most significant environmental impacts were identified as product and service transportation (260 364 kg of CO2-e), staff air travel (126 247 kg of CO2-e), and waste and

recycling (20 738 kg of CO2-e). The concentration of the product and service was found to be 62,36 kg/m3 of CO2-e and included in the main environmental impacts. After identifying the major environmental impacts, an EMS implementation model was developed, so the plan for decreasing them can be made, and the basis for the organisation's environmental management created.

Figure 6

CO2-e Summarising Chart



4.1.2 EMS implementation model and focus group interview

Developing the base for the target organisation's environmental management was executed through two interviews. In the first interview, the EMS implementation model was presented to the business development leader, and the planning phase in four out of five topics was discussed and fulfilled. The first interview provided the business development leader's perspective on developing the EMS implementation, but for fulfilling the fifth, key environmental impact factors topic, the perspectives of relevant employees were found necessary.

During the first interview, the target organisation's activities were reflected in the developed EMS implementation model (Table 8), and multiple areas of development were identified. The organisation does not have an environmental policy that would guide its actions and provide general goals, but the affiliated company has an ISO 14001. Currently, there are no intentions of expanding the ISO 14001 to cover the business activities of the target organisation. Notwithstanding, as the standard is already in place, it creates a feasible situation for expanding it to cover the Finnish SME's business activities.

The interview also revealed that despite the internal interest to examine the current impacts and identify the greatest ones, the decision to measure and monitor their development is depended on the target organisation's and the affiliated company's management. In addition to the lack of environmental policy, the absence of previously identified environmental aspects results in a lack of targeted resources and identification of possible environmental risks and opportunities. The current study is expected to tackle the issue by identifying the most significant environmental impacts and raising the target organisation's environmental awareness.

In the focus group interview the participants provided perspectives and insight on how the organisation should decrease its environmental impacts. The development of decreasing actions started from the product and service. The produced emissions are divided into categories A and B. The B category produces 88% of the overall emissions. The new design aims to lower the B category emissions, and by monitoring its development, future actions can be developed. Additionally, participants IP2 and IP5 pondered product and service's operational environment, but as external stakeholders design it, the target organisation has a minor possibility to influence it. The Next impact under examination was the product and service transportation by land, which resulted in 61% of the overall CO2-e emissions. The organisation has started to optimise the land transportation routes and closed its Estonian branch office, which will decrease transportation significantly by IP1 and ID4. Closing the Estonian office also decreases the staff's air travelling, and the diminishing factor is endorsed by selecting flight routes that do not require intermediate landings. Another beneficial factor mentioned by IP5 is the remote working that the global COVID-19 pandemic has increased.

Workplace diversity was found to be a factor impacting waste and recycling. Raising the awareness and understanding of the organisation's recycling and waste management was found by IP1 and IP2 as an efficient starting ground. Mixed waste represented 45,2% of the produced waste, and training appeared to be a feasible option for diminishing it. In addition, practical implications such as increasing the recycle bins and decreasing the use of disposable tableware came up from multiple participants. After the waste and recycling, the interview continued to supply chain and purchasing. In the beginning, an essential factor came up as both ID3, and ID4 noticed that the supply chain and purchasing data do not include the shipments of Global Forwarding. The shipments of Global Forwarding are not managed by the purchasing leader from whom the data was collected and thus, not included in the current study results. The missing data biases the reported CO2-e emissions produced by the supply chain and purchasing, and the actual number should be higher. To decrease its impact, a functional logistic system should be developed, as ID3 found it to allow shipping in greater volumes which will significantly decrease the amount of transportation. Additionally, it would benefit other parts of the organisation by lowering the burden on different departments and providing a possibility to improve the existing contracts.

The three smallest environmental impacts staff rail travel, office heating and office electricity did not produce greater discussion as the levels were experienced satisfactory. ID4 brought up that the national air travelling has been converted into rail travelling in recent years. The electricity consumption has been examined, and the possibilities of replacing the current strip lights with led lights and installing solar panels on the roof were mentioned by IP2. Participants were satisfied with the district heating, and there were no plans to change it.

4.2 Sustainability management

4.2.1 Impact categories of the target organisation

The categories that impact sustainability management in the target organisation were examined through a CIT interview. The CIT interview included the same participants as the environmental management interview and is described more precisely at the end of chapter 3.2.5 (Table 4). The gathered empirical data was analysed, and the main impact categories were formed (Table 5). The categorisation resulted in the formation of seven impact categories. The results of the CIT interview are presented and specifically described to provide a transparent and detailed picture of the seven categories.

The first impact category is the role of top management. The category was found to include both barriers and drivers of SM implementation. The passion of top management was identified as a driver that has a crucial impact on SM implementation. For example, ID3 had experienced that "Once a new subject has received an explicit support from the top management, executing it is more

straightforward and less complicated and will not face as much resistance". Multiple participants found leading by example as an efficient driver, and ID4 stated, "Top management's exemplary behaviour and leadership is a positive and efficient manner to dismount sustainability management". In addition, it was found simultaneously to highlight the visibility of sustainability aspects. Another required measure was precise and purposeful goals that IP2 found highly linked with clear communication. IP2 noted that "Without communicating the purposeful goals throughout the organisation, sustainability management implementation would not become permanent." Participants had faced inconsistent communication from the top management that created confusion about the appointed objectives, resulting in questioning their purpose. Thus, clear communication and the lack of clear and purposeful sustainability management goals were experienced as barriers to sustainability management implementation. Also, IP5 mentioned that adding sustainability aspects to the organisation's bonus system would positively impact its implementation and act as a driver, which IP1 and ID3 agreed on.

The second category is formed around the factors that are adhered to the cooperation with the affiliated company. Different operation models were experienced as one of the greatest barriers to implementation. For one, IP5 found fitting the different types of organisational procedures together complicated, time-consuming and lowering efficiency. A practical example that IP5 provided was that "The different procedures hinder the transactions with some of the external stakeholders". Secondly, ID3 noted that "Allocating resources for implementing new operations requires acceptance from the affiliated company", and that "Its ingrained formal operation models negatively impact the ease of implementation". Moreover, the developing stage of the two companies and the ongoing search for mutual understanding were identified as a current barrier but, in the future, as a possible driver by multiple participants. The differentiating levels of technological knowledge may impact the possible implementation, and it was practically seen through the usage of "older technology" and "technological solutions that are not as up-to-date as ours", as mentioned by IP5 and IP2. In conclusion, the participants experienced a lack of clear consistency between the divided management of the two organisations to impact organisational activities, and it was identified as a current barrier.

The organisational structure represents the third impact category. One driver is the flexibility of a growing SME, and IP2 explained that "the organisation is reasonably flexible and thus, we have a good opportunity for sustainability management implementation and raising it to the next level". The organisation's flexibility was also noted from another perspective as participants found the cooperation of the departments positive. Based on the experiences of ID4 and IP5, different departments were easy to approach for problem-solving, which ID4 demonstrated by describing, "The sphere of responsibility reaches over the outlines of one specific department". The positive cooperation of the departments and pursuit for problem-solving was found as a driver for sustainability management implementation. Another positive factor and a identified driver was the pursuit of cost-efficiency, which was IP2 found embedded in the organisation's

structure. Organisational success emerged from the responses, and for one, IP2 had experienced that "The departments do not pursue to optimise the matter in hand from their departmental perspective. Instead, departments discuss and aim to find the best solution in terms of the whole." Other participants concurred, and noted that instead of pursuing departmental success, an organisational benefit was found as the main aim. Organisational success and co-operating departments were found partly aligned as ID4 and IP5 mentioned the departments to focus on a broader field that drives towards organisational success and it was experienced to drive sustainability management. Finally, the driver of high technological knowledge was put under the organisational structure. For example, ID3 stated that "Continuous product development creates a framework for implementing new solutions that can be put into practice". Another example by ID4 was "Transformation to remote work that COVID-19 initiated was adopted quickly and is still in practice".

Over a decade long history was found to form a strong organisational culture, which every participant noted. The strong organisational culture was seen as a driver and barrier to sustainability management implementation. The role of culture was especially highlighted after the cooperation with the affiliated company was started, and IP2 saw it "through the interpretation of guidance". IP5 concurred with IP2 and gave the following example "One case was discussed with a lawyer to clarify its significance. The new perspective towards it was not previously considered as it was experienced axiomatic". Thus, the original strong culture was seen to ease sustainability management implementation. However, it was also perceived as a barrier due to the differences between the two organisational cultures. The small size of the organisation and the previously mentioned pursuit for success also played a role in culture. IP5 experienced that "a result-orientated atmosphere is combined with the culture", and ID4 found "result-orientation driving the actions of different departments".

National factors formed the fifth category. Executing business activities in different countries have exposed target organisation to different legislations that form drivers and barriers for sustainability management implementation. Finnish legislation was found to support the target organisation's actions, whereas legislation discrepancies were experienced as a hindering factor. For example, IP2 found the legislation of the affiliated company's origin country to complicate some of the procedures, and it was perceived as a barrier for implementing sustainability management. A more concrete example was mentioned by IP2, who found that "The Finnish legislation is updated and suits better the needs of a modern-day organisation". Policies placed by state institutions were also identified to hinder some procedures, but the focus was more on international than organisational activities. Nevertheless, the different policies were experienced to complicate the implementation process and seen more as a barrier than driver. Lastly, the Finnish culture was brought up by the participants. The Finnish voluntariness and independence as a part of Finnish character appeared as drivers and positive factors. Especially ID4 recognised that "The independent characteristics of Finns can be seen in the form of natural and profitable work performance

that benefits the organisation". In comparison, authoritarian leadership was witnessed to decrease motivation and the quality of the results. The term "common sense" was found by IP5 as "A valuable characteristic that is embedded in the Finnish culture, and it positively impacts employees' actions".

Second to last is the role of employees. A continuum from the national factors is the self-directionality of employees, which raised trust from the organisational side and was found as a positive factor, and a driver. The trust was seen as a free hand to operate and solve problems. It is linked to the sense of responsibility, and ID4 identified, "The sense of responsibility originates from the organisational culture that is formed during the years of operating". Also, a suitable role according to an employee's competence came up during the interview. IP5 experienced that "The organisation has placed employees within suitable positions and utilising one's full competence facilitates from it" and found the successful placement of employees as a positive factor. High motivation among the employees was also emphasised as a driver. The motivation was generally experienced as enthusiastic employees, and for example, IP2 saw it as "employees working efficiently and productively". How to generally discuss the sustainability and environmental impacts of the organisation was also raised. It appeared that the organisation had not provided any general guidelines on how to argue or discuss its impacts, and thus, the employees did not have knowledge of the topic. For example, IP2 pointed out that "the sustainability perspectives do not come up during the general discussion", and the lack of knowledge or interest may hinder sustainability management implementation. The hindering characteristics formed the lack of knowledge factor to be considered as a barrier. On the other hand, other participants, such as IP5, mentioned that "environmentally sound friends had tackled with these issues", and knowledge of the topic would be appreciated.

The seventh and final category is called image benefit. Image benefit appeared to drive sustainability management implementation. ID3 found that "The current topic is highly important and sustainability management would provide a required image benefit". The image benefit was found to be a positive factor that will ease sustainability management implementation and its acceptance by the top management. IP2 added that "The industry itself is generally seen as a hindering factor of sustainability, as it produces emissions that some experience unnecessary". The increased number of examinations and knowledge of the industry's impacts showed interest in the topic and was experienced to increase its transparency. ID3 underlined the importance of transparency and noted that "Even though we know the industry itself is not the herald of sustainability, it is important not to stand still in acceptance, but to pursue the means of development". Hence, improving the industry's transparency was considered a driver for sustainability management implementation, which by IP2 can be seen "Through designing more sustainable products and services". Also, IP5 found image benefits of high importance and pondered that "It should be processed to explore the different benefits it provides". The general discussion outside the workplace and external pressure were mentioned to challenge the perspectives towards the industry. The change was noticed and held in high value by multiple

participants and experienced to shift the industry's acceptance of pursuing improvements.

Table 5

Target Organisation's Impact Categories

The role of top management	Cooperation with the affiliated company	Organisational structure	Organisational culture	National factors	Role of employees	Image benefit
Clear and purposeful goals	Different operation models and organisational procedures	The flexibility of a growing SME	Strong organisational culture	Different legislation	Motivated and enthusiastic employees	Facilitates sustainability management implementation
The passion of top management	Developing stage and searching for mutual understanding	Co-operating departments	Differentiating cultures with an affiliated company	Policies created by state institutions	Self-direction / Trust toward employees	Transparency
Lead by example	Lack of clear consistency in management	Pursue cost-efficiency	Interpretation of organisational guidance	Finnish culture, voluntariness and independence	Suitable position and competence	Development of business activities and the industry
Support lowers resistance	Limitations emerging from different technologies	Organisational success			Lack of knowledge	External pressure
Clear communication		High technological knowledge				
Visibility of the sustainability aspects						
Boost motivation						

4.2.2 Sustainability management implementation

The seven impact categories based on the interview participants' negative and positive incidents reveal the possible barriers and drivers of sustainability management implementation. The target organisation's impact categories table (Table 5) allows merging the categories with the original sustainability management model (Figure 4), highlighting the categories that need to be considered when implementing sustainability management within the target organisation. The sustainability management model 2 (Figure 7) is formed to present the first sustainability management model with the merged impact categories.

Based on the number of negative and positive incidents, the role of top management was found as the most significant category by representing seven impact factors. Clear communication and the lack of purposeful sustainability management goals were identified as the most significant barriers out of the seven factors in the first category. Previously, due to inconsistent communication, the purpose of appointed objectives was questioned. Also, sustainability management was found not to reach a permanent role in the target organisation without clear communication. If managed properly, the remaining five categories were experienced as drivers, especially top management's passion, and leading by example were highlighted as crucial ones. Nevertheless, if neglected, the factors appeared to form barriers resulting in a short-term sustainability management implementation. Top management is followed by the organisational structure with five impacting factors. The found factors were experienced overall as positive drivers for implementing sustainability management. Especially the flexibility of an SME was emphasised.

The categories of co-operation with the affiliated company, the role of employees, and image benefit all shared four impacting factors. The first out of the three, co-operation with the affiliated company, included factors that principally hinder sustainability management implementation. Different operation models appeared as one of the main barriers. Notwithstanding, the roles of the remaining three factors cannot be underrated as the global nature of the target organisation's business activities create a strong link between them. Secondly, the role of employees included three drivers and one barrier. Employees' lack of sustainability knowledge appeared to hinder sustainability management implementation, whereas the overall work efficiency and productiveness ease it. Finally, the image benefit was found to ease sustainability management implementation. The target organisation operates in an industry that is not the herald of sustainability, but instead of falling into despair, the possible gains of development appeared to facilitate sustainability management implementation.

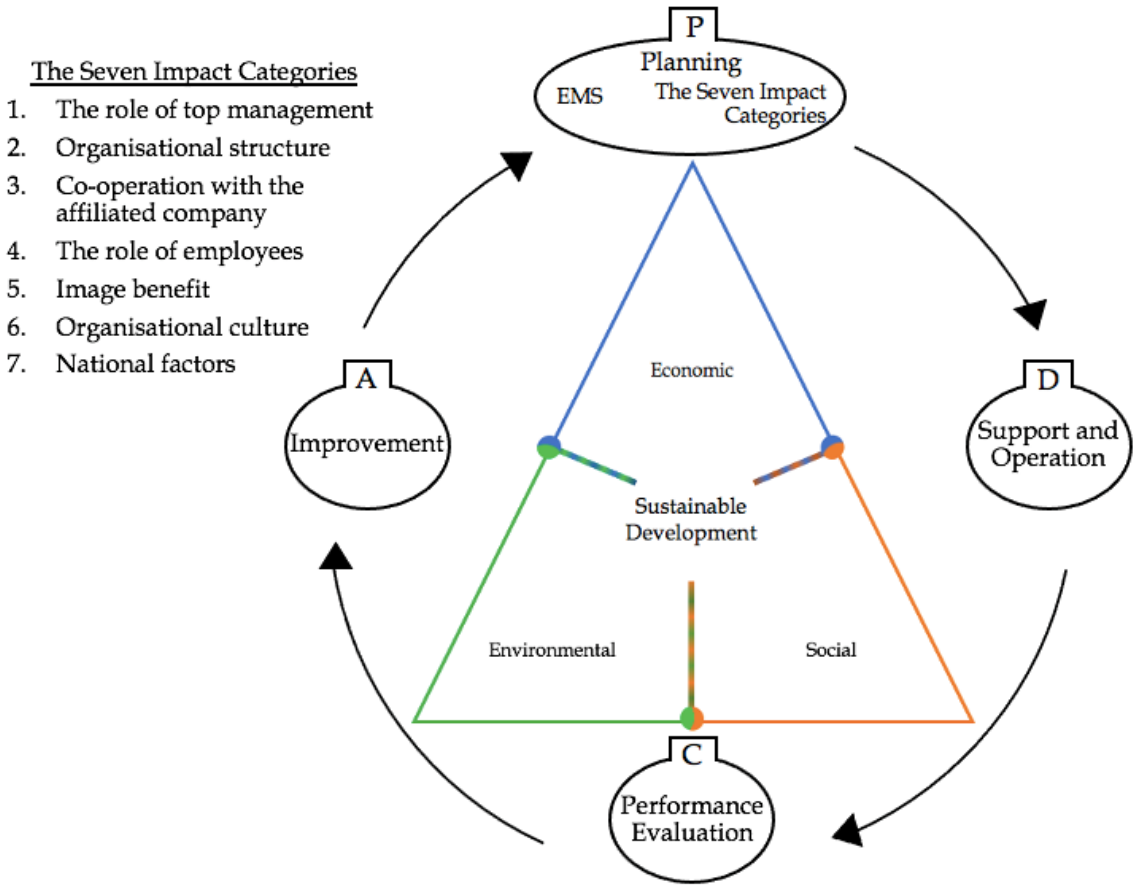
The two categories with three impacting factors were organisational culture and national factors. The factors of organisational culture cannot be divided into drivers and barriers, as the impact depends on how they are harnessed. A strong culture can ease sustainability management implementation and, on the other hand, hinder it, as explained in the previous chapter. Once the scope is turned towards national factors, the segmentation is clearer. The discrepancies in

national legislation and policies were found as barriers for sustainability management. The voluntariness and independence of Finnish culture were found to counterbalance by driving sustainability management implementation.

With the help of sustainability management model 2, the current study aims to clearly present the seven categories impacting the target organisation's sustainability management implementation. To emphasise the importance of the categories, they are presented in decreasing order. The role of top management included most of the impacting factors and is presented first as a number 1.

Figure 7

Sustainability Management Model 2



5 DISCUSSION AND CONCLUSIONS

The last chapter ponders the execution, results, creditability, limitations, possibilities for future research, and the conclusions of the study. In the discussion chapter the study's findings are reflected to the literature framework and the research questions answered. The research questions are answered in reverse order as they complement the process of comprehensively answering the main research question. In addition, the reversed structure improves legibility of the presented results. Discussion chapter is followed by the limitations and future research chapter that examines the study's creditability and ponders the possibilities for future research. Finally, the conclusion chapter summarises the study.

5.1 Discussion

In the light of the literature framework, sustainability management appears to suffer from loose definitions and diverse and puzzling nature (e.g., Nawaz & Koç, 2017; Windolph et al., 2014). This study aimed to enforce the sustainability management literature by defining sustainability management as a *long-term management style striving equally for sustainable development objectives by incorporating them into the organisation's activities in an effective and suitable manner*. Defining sustainability management was found necessary to reduce the confusion around the concept and provide starting grounds for sustainability management implementation. Academic literature revealed a gap between planning and implementing sustainability management. By examining the scholarly work, it seemed that no previous studies are gathering and analysing the drivers and barriers that impact sustainability management implementation from different scientific publications. The current study aimed to examine this gap and develop conditions for sustainability management implementation. In addition, the study appears to add valuable knowledge to the field, as it examined the existing sustainability management literature and searched for drivers and barriers that impact its implementation.

The current study focused on sustainability management implementation in a Finnish SME and was executed as a case study. A Finnish SME seemed suitable for the study, as the importance of SMEs that lack sustainability- or environmental management was highlighted in the academic literature (e.g., Engert et al., 2016; Johnson & Schaltegger, 2016; Talbot et al., 2020). The study examined the main aspects of the target organisation's sustainability management through a CIT interview. Based on the interview, 30 impacting factors were identified and, by content analysis, divided into seven categories (Table 5). The developed seven categories: the role of top management, organisational structure, co-operation with the affiliated company, the role of employees, image benefit, organisational

culture, and national factors were merged with the sustainability management model resulting in sustainability management model 2 (Figure 7).

In this study, the scope of sustainability management was environmentally weighted as the target organisation urged a basis for environmental management. Besides Bastianonia et al. (2019) and Sinakou et al. (2018) believe that the environmental aspect of sustainability is underrepresented compared to the economic and social ones. Thus, to diversify and examine sustainability management from an underrepresented point of view and to answer the target organisation's needs, the environmental scope was incorporated into the study through the following sub research question.

5.1.1 How to develop an environmental management basis for the target organisation?

The empirical work of the study supports the theoretical perspective of Pohjola (2003) and Kallio (2001), that suggested combining the organisational management and decision-making system with environmental aspects. The current study utilised the PDCA cycle to develop a framework for environmental management. Based on the empiric data, the PDCA cycle appeared to be flexible and capable of transforming the target organisation's needs into a practical form that resulted in creating the EMS implementation model (Table 8).

The study executed an environmental aspect identification to fulfil the EMS implementation model. The environmental aspect identification revealed eight main environmental impacts examined through a current state analysis. A common factor was required to quantify and assess the significance of the main impacts, and the current state analysis supports the findings of Pérez-Torres et al. (2019) to use carbon footprint (CO2-e kg) for presenting the significance of the found environmental impacts, as it appeared to provide a comprehensible entity for the target organisation to adopt. For example, after the EMS implementation model was presented and the planning section filled in with the target organisation, participant ID3 commented, "The EMS implementation model's aim and structure are clear and informative". Considering that the organisation does not have environmental policies, it may indicate that a CO2-e is a generally accepted and understood form of environmental impact.

On the other hand, calculating the carbon footprint and presenting it in the form of CO2-e required various calculators and conversion factors. Despite the aim of transparently reporting all the used methods utilising multiple different calculators and the various conversion, phases might bias the presented results and lower repeatability. Hence, the complexity of documenting was experienced as one of the main barriers to EMS implementation, and the study emphasises the importance of Ojo et al.'s (2021) second process barrier theme. It was especially confronted while calculating the environmental impact of the product and service. Its environmental impact was measured in concentration (kg/m3) and hence, could not be converted into a form of CO2-e kg or presented in the final summarising chart (Figure 6). Analysing the impacts through one tool could

ease the development of environmental management and decrease the complexity of documentation.

Oladinrin and Ojo (2021) emphasised EMS education and training, and the ease of availability of EMS implementation guiding documents as the two most significant drivers of implementation. This study suggests co-operational support as the third significant driver based on the empirical results. Due to globalisation, SMEs are becoming multinational, and thus, the co-operational support was found to as a required driver. It was identified that despite the target organisation's internal interest in environmental management, the implementation and monitoring of its development required support from the affiliated company. The current study's findings align with the theoretical perspective of Olganis and Loizidou (2017), suggesting developing environmental management through implementing a customised EMS that is developed on the grounds of PDCA. It appeared to allow the pursuit of constant development by minimising environmental impacts while simultaneously improving the organisation's cost-efficiency and competitive advantage. Due to the flexibility and highly customisable characteristics of the PDCA, it was also experienced as a suitable framework for sustainability management. To fulfil the aim of the current study and to examine the factors impacting sustainability management implementation, the aspects that form sustainability management were experienced in high importance. Thus, the second sub research question was formed.

5.1.2 What are the main aspects of sustainability management?

The sustainability management model 2 (Figure 7) was developed to present the main aspects of sustainability management. The purpose of the model is to present sustainability management in an approachable form developed based on the TBL framework. The current study acknowledges that each of the three environmental, economic, and social dimensions is required to reach sustainable development, but the environmental aspect was emphasised due to the target organisation's needs. Based on this study's results, including environmental management and developing an EMS during the planning phase of sustainability management, illustrated a practical approach to introducing an organisation to sustainability management.

Despite the environmental emphasis, the CIT interview results revealed the seven categories to impact different dimensions of the TBL framework. When the seven impact categories are reflected in the literature framework, it reveals that the following four categories, the role of top management, the role of employees, organisational culture, and national factors, can be placed in the social dimension that by Nicoletti Junior et al. (2018) consist political, social, and ethical issues. The category of image benefit is most similar to the economic dimension representing the organisation's profits and accounting (Nicoletti Junior et al., 2018). At the same time, the organisational structure and co-operation with the affiliated company seem to fit between the economic and social dimensions. The CIT interview results assumedly underrepresented the environmental dimension

as it was already examined in a previous environmental management interview with the same participants.

Based on the empirical results, it appears that all three dimensions of TBL are present when sustainability management implementation is examined in the target organisation. The current findings differ from Hahn et al.'s (2015) perspective claiming that the relationships between the three dimensions cannot be addressed based on the TBL framework. The empirical findings can also be seen to fortify the practicality of the developed sustainability management model 2 and add insight into practical corporate usage of TBL. By including the TBL framework within the PDCA cycle, the study explored the possibility of effectively incorporating it practically, which was questioned in Purvis et al.'s (2019) findings.

To identify the main aspects of sustainability management, the similarities and differences between the target organisation's seven impact categories are reflected in the categories found in the literature. The following four categories of the role of top management, organisational structure, the role of employees, and the organisational culture were identified from both the empirical- and the theoretical data. In addition, the target organisation's categories of national factors and image benefit were formed from similar factors as the theoretical categories of external pressuring factors and corporate transparency. The category co-operation with the affiliated company was found only from the empiric data.

Based on the theoretical framework, it was presumed that organisational culture and awareness, the role of management and organisational structure categories should be the ones with the greatest impact, as they were emphasised by scholars. The results of the current study partly differ from the previous studies as the role of top management, organisational structure, and co-operation with the affiliated company categories were found to have the greatest impacts. The differentiating results might arise as the current study was a case study, and the importance of a category was determined by the number of impacting factors instead of the number of times a category emerged from the data. Correspondingly, if the importance of the theoretical impact categories (Table 7) were determined by a number of factors, it reveals that the role of top management would represent the highest importance, followed by organisational structure and organisational culture and awareness. In the latter case, the role of top management would represent the highest- and the organisational structure the second highest importance in both theoretical and empirical findings.

A more in-depth examination was required so the conditions for sustainability management implementation can be identified and the gap that hinders sustainability implementation from its planning fulfilled. On this grounding, the main research question is presented and answered.

5.1.3 What are the factors impacting sustainability management implementation in the target organisation?

It can be seen that the role of top management is highlighted throughout the sustainability management process and includes the most significant number of impacting factors in both the current and the previously published studies. Leading

by example and top management's passion were found to be crucial factors and drivers for successful sustainability management implementation aligning with the findings of Engert and Baumgartner (2016) and Neri et al. (2021). In addition, the importance of top management's support for reducing the resistance to implementing sustainability management was revealed. It can be seen to support the findings of Chofreh and Goni (2017) and Talbot et al. (2020), who underlined the managerial actions as drivers of sustainability management.

Besides perceiving managerial actions as drivers, the empiric data revealed that such managerial actions as unclear communication or lack of clear and purposeful goals form crucial barriers hindering sustainability management implementation. It appeared that clear communication and purposeful goals were required for making sustainability management a permanent part of the organisation. Johnson and Schaltegger (2016) experienced management that lack sustainability knowledge to lead environmental and social issues ineffectively. The results suggest implementing environmental management alongside sustainability management's planning phase in these cases. It appeared to raise the knowledge of sustainability aspects and is hypothesised to improve the successful implementation of sustainability management.

The current study results highlighted organisational structure as the second most important impact category. The current results found the organisational structure of high importance during sustainability implementation and on this part differs from the literature. Previously scholars had emphasised it during the development phase, but the role of organisational culture and awareness was experienced in higher importance during implementation. The interview data especially highlighted the flexibility of an SME and thus, underlines Neri et al.'s (2021) finding that organisation's size is a crucial impact factor. Also, the co-operation of departments and organisational success emerged from the empiric data, and it appears to complement Windolph et al.'s (2014) motivation theory, which found internal improvement driving toward sustainability implementation. Overall, the empiric findings highlighted the factors within the organisational structure as drivers for sustainability management implementation. Contrary to the empiric findings, the theoretical scope identified organisational structure to form barriers to sustainability management implementation. For example, Johnson and Schaltegger (2016) noted the complexity of sustainability management to hinder its implementation, which did not come up in this study. Hence, the results of this study propose that tailoring the design of sustainability management will act as a driver and decrease the complexity of implementation.

The third impact category, co-operation with the affiliated company, was found only from the interview results. Its impacting factors have similar features to the factors from different theoretical impact categories and illustrate some of the greatest implementation barriers. This finding raises an intriguing question: Why is the connection between an organisation and its affiliated companies not brought forward in the academic literature? Even though globalisation is commonly acknowledged, sustainability issues are identified as a global problem, and the need for organisations to update their sustainability practices is highlighted (e.g., Ahmed et al., 2021; Baumgartner, 2014; Burke & Gaughran, 2007).

It is possible that the limited amount of background literature might be the reason why the emphasised impact of co-operation did not emerge from the literature. Furthermore, limiting the intersecting connections between the impact categories outside of the study's scope may be another reason, as scholars might have placed the impacting factors under different categories. For example, the barrier of different operating models and organisational procedures includes similar features as the unsuitability of formal management tools that Johnson and Schaltegger (2016) found but placed under external pressure factors in the current study. Similarly, the developing stage and searching for mutual understanding and lack of clear consistency in management can be compared with Ahmed et al.'s (2021) role of stakeholders that was placed under the corporate transparency category. However, the co-operation with the affiliated company also impacted environmental management implementation. Based on the empiric data, the connection between co-operating organisations cannot be disregarded and presented as one impact category in the future. Also, its impact on sustainability management implementation is proposed to be examined further.

The role of employees was also raised from the data. The category included three drivers and one barrier, and the factors were highly similar to the literature. The three drivers, motivated and enthusiastic employees, self-direction and trust towards employees, and suitable position based on competence seem to go hand in hand with Engert and Baumgartner's (2016) and Chofreh and Goni's (2017) findings. Appointing employees to suitable positions appears to be linked with Chofreh and Goni's (2017) supervisory level activities, whereas the motivation and trust towards employees align with Engert and Baumgartner's (2016) employee motivation and qualification findings. The empiric results situated the role of employees on the mid-ground of impact categories, as did the theoretical perspective.

The only barrier, lack of knowledge, was found to affect general discussions, in which the sustainability aspects do not come up. This barrier was found to hinder sustainability management implementation and can be reflected in internal communication, which was also mentioned by Engert and Baumgartner (2016). The authors suggested workshops and internal competitions enhance it. During the first impact category adding sustainability aspects to the bonus system was brought up, and if transformed into an internal competition, it could lower the knowledge barrier and ease sustainability management implementation.

Image benefit was also found to impact sustainability management implementation and appeared as corporate transparency from the theoretical perspective. This study found sustainability management to enhance the organisation's external image, which would increase top management's motivation to implement it. The internal motivation launched by image benefit differs from the theoretical findings that generally highlight external pressuring factors (e.g., Windolph et al., 2014). The other drivers of transparency and developing business activities and the industry were generally acknowledged in the existing literature. In contrast to the original presumption, the importance of organisational culture was found considerably lower. The results show that the target organisation had

developed a strong organisational culture that was noted as a driver of sustainability management. Experiencing the impact category as a driver differs from the theoretical perspective in which the results of Engert and Baumgartner (2016), Johnson and Schaltegger (2016), and Talbot et al. (2020) primarily described it as a barrier, if not addressed correctly. On the other hand, the empiric data pointed out that different cultures between the two organisations can form a barrier. Thus, it might imply that in SMEs, organisational culture is primarily experienced as a driver, but alongside organisational growth, it may transform into a barrier, for example, through misinterpretation of the guidance. In order to confirm the presented hypothesis, more SME focused sustainability management studies should be executed, and on this basis, the current findings align with the literature (e.g., Engert et al., 2016).

The final impact category found from the empiric data was national factors, which partly aligns with the external pressuring factors category that emerged from the literature. From the empirical perspective, the differences in national legislation and policies appeared as barriers hindering sustainability management implementation, whereas Windolph et al. (2014) found governmental regulations driving the implementation. The difference between the findings might arise as the target organisation had operations in different countries and faced differentiating regulations that were seen to complicate sustainability management. Instead, if the operations are centred within one nation, the results might be closer to Windolph et al. (2014). The Finnish voluntariness and independence were identified to drive sustainability management implementation. Comparing and studying the operations of Finnish organisations with their affiliated companies might clarify the above-mentioned divergent findings. It also fortifies the need for a more in-depth examination of the connection between global co-operating organisations, especially SMEs.

5.2 Limitations and future research

Academic literature commonly acknowledges its limitations, and the current study is not an exception. To begin with, the environmentally weighted approach was necessary to answer the target organisation's needs and was additionally emphasised by Bastianonia et al. (2019) and Sinakou et al. (2018). However, examining sustainability management implementation from the environmental scope by combining it with the environmental management process complicated the structure of the study. The study pursued to thoroughly describe and justify its methods for providing rational connection and merging the environmental- and sustainability management into an entirety. Notwithstanding, combining the practically and theoretically emphasised parts may confuse the readers and thus, future studies are suggested to more clearly limit their scope around the main aspects of sustainability management.

One of the main cornerstones of the study was to examine different scientific publications and collect, identify, and analyse the drivers and barriers to sustainability management implementation. Based on the examined academic literature, such studies did not emerge, and hence, the study results offered valuable information on the required conditions for sustainability management implementation. At the same time, it is comprehended that the study was not a full-scale literature review, and the limited amount of examined literature can distort the presented perception. If similarly executed studies were overlooked, it could lower the validity of the results offered by the study at hand. An in-depth literature review is found necessary and proposed for future research to fill the presented gap of studies examining drivers and barriers of different scientific publications. In addition, if the lack of driver and barrier studies is confirmed, more empirical research examining the topic is highly recommended.

The repeatability of the current study seems to be complicated, and it limits the generalisation of the results. The sustainability management model 2 was developed from the critical incidents experienced by the sample and highlighted the target organisation's impact factors. The study selected a purposive sample, but some participants could not attend due to external hindrances, resulting in a relatively small sample size. The planned individual in-depth interviews were also changed to a focus group, as scheduling individual interviews was found challenging. Also, the interview participants were native Finnish language speakers, so the interviews were executed in Finnish. Providing participants to answer in their native language was experienced to enhance the quality of the answers and serve the purpose of in-depth examination. Regardless of concentratedly examining the interview results and recordings various times, the translation process might bias the results. For example, the in-depth meaning of the message could be missed during the translation process. Triangulation was used to support the empiric data and more broadly examine sustainability management data, which also complicates repeating the current study. On the other hand, qualitative research was chosen as the aim was an in-depth examination of the phenomenon and to provide valuable academic information. Thus, evaluating the credibility of the results from the generalisation point of view is open to question.

The study examined sustainability management implementation, and one of the main limitations is that the actual implementation and monitoring remain on the target organisation's responsibility. Due to the limited timeframe, the study was only able to develop conditions for sustainability management implementation and follow-up research that examines the sustainability management model in practice is seen as crucial. Future research is also suggested to re-examine the found drivers and barriers and report possible changes. For example, observation-based research could provide empirical insight into the model's functionality. The intersecting impacts could be brought forward by observing the intersecting categories as they were limited outside of the current study's scope.

In the current study, the third category, co-operation with the affiliated company, emerged only from the empirical data and included the main barriers

to sustainability management implementation. Examining SMEs was highlighted in the academic literature, and based on the current findings, more research is required. The markets are globalising, and the driving force of SMEs' flexible structure appears to be hindered. Hence future researchers could examine the limitations of the current study and, on this basis, execute more sustainability management studies focusing on its implementation in SMEs.

5.3 Conclusions

The current study aimed to examine the required conditions for sustainability management implementation. Simultaneously it pursued to provide valuable and in-depth knowledge for filling the gap between planning and implementing sustainability management that previous academic literature has brought up (e.g., Ahmed et al., 2021; Engert & Baumgartner, 2016). Previous publications revealed the limited number of studies that examine sustainability management in SMEs (Engert et al., 2016; Talbot et al., 2020) and that there is an urgent need for more research (Mustapha et al., 2017; Silvestre & Ţîrcă, 2019). To enrich the previously limited field of studies, this study was executed as a case study in a Finnish SME. Furthermore, sustainability management implementation was approached from the environmental perspective as the target organisation urged a basis for environmental management. Besides the target organisation's practical needs, Sinakou et al. (2018) and Bastianonia et al. (2019) found the environmental dimension underrepresented compared to the economic and social dimensions of sustainability. Three research questions were formed to combine the target organisation's needs with the academic needs highlighted by scholars.

The practically emphasised scope of the study focused on the third sub-research question that examined developing environmental management for the target organisation. The study results propose developing environmental management through an EMS implementation based on the PDCA cycle supporting earlier scholarly work's findings (e.g., Johnstone, 2021; Nishitani et al., 2012; Rosa et al., 2019). The PDCA cycle emerged as a flexible and customisable framework that enabled the development of an EMS implementation model to meet the target organisation's needs. Based on the theoretical and empirical findings and the PDCA cycle's customisable characteristics, it was also utilised in the sustainability management implementation. An environmental aspect identification was executed to fulfil the EMS implementation model, and the results were examined through a current state analysis. Based on the identification and analysis, eight main environmental impacts were revealed and quantified by their significance. The presented process to develop environmental management appeared to align with Olganis and Loizidou's (2017) publication and guide the organisation towards constant development by minimising environmental impacts, improving cost-efficiency and competitive advantage.

The theoretically emphasised side of the study focused on examining sustainability management and approaching the topic from the environmental dimension. As a developing topic, sustainability management implementation appeared to require in-depth examination and the essential characteristics of qualitative research were identified to serve this purpose most adequately. The required conditions for sustainability management implementation were examined by identifying its main aspects and revealing the factors that impact its implementation in the target organisation. The empiric data was collected through a CIT interview that is commonly recognised as a well-established research tool in qualitative research but is underrepresented in international business. Furthermore, data triangulation was found efficient in strengthening the validity of qualitative research findings. It was utilised for combining the environmentally weighted secondary data with the primary data.

Based on the literature framework and to combine the environmental perspective with sustainability management's main aspects, a sustainability management model (Figure 4) was created. The model is based on the TBL framework, complemented with the PDCA cycle, and designed to concretise the second sub-research question. Moreover, by examining previous publications, six impact categories of organisational culture and awareness, the role of management, organisational structure, external pressuring factors, the role of employees, and corporate transparency were found. Previously scholars had highlighted organisational culture and awareness, the role of management and organisational structure categories and hence, hypothesised to have the greatest impact on sustainability management implementation.

The CIT interview results were content analysed and categorised to answer the main research question. The results revealed seven categories that impact sustainability management in the target organisation the role of top management, co-operation with the affiliated company, organisational structure, organisational culture, national factors, the role of the employees, and image benefit. A sustainability management model 2 (Figure 7) was formed to present the found impact categories. This study partly differs from the presented hypothesis as the role of top management represents the greatest- and the organisational structure the second greatest impact categories in both the theoretical and empirical findings, but the third category co-operation with the affiliated company, emerged only from the findings of the current study. Despite limiting the intersecting connections of the categories outside of the study's scope, they were seen to emerge. Thus, it is suggested to emphasise the three main impact categories for creating conditions for sustainability management implementation in the target organisation, as it is proposed to have an improving impact on the intersecting impact categories.

Out of the seven categories, the role of top management included the greatest number of factors and presented to have the greatest impact on sustainability management implementation. The category's crucial factors were identified to represent barriers and drivers of implementation, depending on how they are managed. The found factors are highly consistent with scholarly work and can be seen to fortify their results. Thus, the category should be top prioritised

when sustainability management implementation is executed. The second most important impact category was the organisational structure formed out of factors that drive sustainability management implementation. The current study found the second category to include driving factors which contrasts the scholarly work that presented it to include mainly barriers. Also, results highlighted the category's importance during the implementation, whereas previous publications linked it with the sustainability management development phase. It is proposed to use the flexible structure of SMEs to its advantage, as it was found to be a crucial driver for sustainability management implementation. The two categories were followed by the co-operation with the affiliated company category that contained the greatest barriers to implementation. The category also hindered the target organisation's environmental management implementation. Thus, the third category is especially seen to provide new and valuable knowledge to fill the academic gap between planning and implementing sustainability management, as it includes the most crucial implementation barriers.

To conclude, the study results partly align and underline the findings of earlier scholarly work. This study tailored older and newer literature to develop conditions for the target organisation to implement sustainability management. This approach is suggested based on the results instead of complementing the field by developing new tools. It also appeared to provide new valuable insight to the academic field by collecting and examining the drivers and barriers of previously published sustainability management studies. According to this preliminary study, this approach was not found in previous sustainability management publications.

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APPENDICES

Appendix 1. Sustainability management's theoretical impact factors

Table 6

A Summary of Factors Impacting Sustainability Management

Authors	Research focus	Impacting factors
Engert & Baumgartner (2016)	Corporate sustainability strategy implementation	1) Organisational structure 2) Organisational culture 3) Leadership 4) Management Control 5) Employee motivation and qualifications 6) Communication (internal and external)
Talbot et al. (2020)	Sustainability management tool implementation	1) Perceived external pressure 2) Sustainability awareness 3) Stakeholder consultation 4) Sustainable development policy 5) Sustainability reporting
Burke & Gaughran (2007)	Develop sustainability management framework	1) Support and commitment from top management 2) Involvement of all employees 3) Motivation and reasoning behind implementation

Johnson & Schaltegger (2016)	Sustainability management tool implementation	Internal shortcomings 1) The lack of awareness 2) Absence of perceived benefits 3) The lack of knowledge 4) Lack of human and financial resources	External deficiencies 5) Insufficient external drivers and incentives 6) The unsuitability of formal management tools 7) The complexity of sustainability management standards and tools
Chofreh & Goni (2017)	Sustainability implementation	Strategic level 1) Activities and tasks of top management Tactical level 2) Activities and tasks of midlevel management	Operational level 3) Activities and tasks of supervisory level
Windolph et al. (2014)	Sustainability implementation	Legitimacy 1) Governmental regulation 2) Private and self-regulation 3) Media and society Market Success 4) Market for products and services 5) Labour market 6) Capital market	Internal improvement 7) Process improvements 8) Resource use 9) Eco-efficiency 10) Socio-efficiency
Engert al. (2016)	Integration of corporate sustainability	Internal and External Drivers 1) Legal compliance 2) Competitive advantage 3) Cost reduction 4) Economic performance 5) Social and environmental responsibility 6) Risk management	Supporting and Hindering Facotrs 9) Management control 10) Stakeholder engagement 11) Organizational learning and knowledge management 12) Transparency and communication 13) Manager attitude and behvior 14) Organizational culture

		7) Corporate reputation 8) Quality management	15) Complexity 16) Investments
Ahmed et al. (2021)	Factors affecting corporate sustainability policy	1) Role of government or public sector institutions 2) Organisational barriers 3) Role of stakeholders 4) Normative references 5) Self-regulation or subsidiarity or reflexive laws	
Neri et al. (2021)	Barriers and drivers of adopting industrial sustainability measures	Main Barriers 1) Organisational structure and culture 2) Economic 3) Regulatory 4) Workers behaviour 5) Management behaviour	Main Drivers 6) Organisational structure and culture 7) External pressures 8) Regulatory
Nawaz & Koc (2017)	Developing a systematic sustainability management framework	1) Organisation and decisionmaker 2) Vision, scope and principles 3) Criteria, risk assessment and objectives 4) Sustainability initiatives for risk reduction 5) Preparation and organisation 6) Implement, monitor and analyse 7) Review and continuous improvement	

Appendix 2. The six impact categories

Table 7

The Six Impact Categories

Author	External Pressuring Factors	Organisational Structure	Organisational Culture and Awareness	The Role of Management	The Role of Employees	Corporate Transparency
			Developing or integrating sustainability management framework			
Ahmed et al. (2021)	Role of goverment or public sector institutions Self-regulation or subsidiarity or reflexive laws	Organisational barriers Normative references				Role of stakeholders
Burke & Gaughran (2007)			Motivation and reasoning behind implementation	Support and commitmend from top management	Involvement of all employees	
Engert et al. (2016)	Legal compliance Competitive advantage	Cost reduction Economic performance Complexity Investments	Social and environmental responsibility Organizational learning and knowledge management Organizational culture	Risk management Manager attitude and behvior Management control Quality management		Transparency and communication Stakeholder engagement Corporate reputation
Nawaz & Koc (2017)		Organisation and decision maker	Sustainability initiatives for risk reduction Vision, scope and principles	Criteria, risk assesment and objectives Preparation and organisation Implement, monitor and analyse Review and continuous improvement		

Neri et al. (2021)	Regulatory External pressures	Organisational structure Economic	Organisational culture	Management behavior	Workers behavior	
			Implementing sustainability management			
Chofreh & Goni (2017)				Activities and tasks of top management Activities and tasks of midlevel management	Activities and tasks of supervisory level	
Engert & Baumgartner (2016)		Organisational structure	Organisational culture	Leadership Management Control	Employee motivation and qualifications	Communication (internal and external)
Johnson & Schaltegger (2016)	Insufficient external drivers and incentives The unsuitability of formal management tools	Lack of human and financial resources The complexity of sustainability management	The lack of awareness Absence of perceived benefits	The lack of knowledge		
Talbot et al. (2020)	Perceived external pressure		Sustainability awareness	Sustainable development policy		Stakeholder consultation Sustainability reporting
Windolph et al. (2014)	Govermental regulation Market for products and services Capital market	Process improvements Resource use Private and self-regulation	Eco-efficiency Socio-efficiency		Labour market	Media and society

Appendix 3. EMS implementation model

Table 8

EMS Implementation Model

Topic	Plan: Establish	Do: Implement	Check: Monitor and measure	Act: Continually improve
Organisation and management				
Environmental policy	The Finnish organisation does not have an environmental policy. The European affiliated company has ISO 14001, but it is not aimed to be extended to cover the Finnish organisation based on the latest information.			
Financial and labour resources	Resources for environmental management systems are not in place. Addressing the issue requires negotiations with the affiliated company.			
Environmental management system	The organisation does not have an EMS, but the current study provides a basis for its implementation.			
Relevant stakeholders	The affiliated company and the governing body federation are identified as the primary stakeholders that may pressure towards implementing an EMS. There are no environmental requirements when product suppliers are chosen.			

Environmental manager	The organisation does not have an environmental manager, but the affiliated company has a person in charge of ISO 14001.
Managerial commitment	The governing body federation has pressured partners to take environmental actions. The aim is to find current impacts and get a basis for an EMS. Further development of environmental actions requires negotiations with the affiliated company.
Environmental objectives and targets	
Environmental objectives for improving performance	The objective is to identify current impacts so the greatest ones can be considered. The aim is to decide whether they will be measured and whether any targets for development will be chosen.
Environmental risks and opportunities	There are no identified environmental risks or opportunities. The possibility of developing environmental actions is understood but requires resources.
Relevant environmental legislation	Responsibility to monitor legislation related to business operations, but management has not come across any specific environmental legislation.
Supporting activities	
Awareness and involvement of staff	The current study results are the first type of environmental awareness emerging from the organisation's side. The results are hoped to have a positive influence and raise environmental awareness.

Internal and external environmental feedback	There is no internal feedback system. The human resource department plans to develop a feedback system, and environmental aspects could be combined into it. The affiliated company has an ISO 14001 that includes an external audition every three years.
Environmental performance	
Relevant environmental impact factors identified	Relevant environmental impact factors are identified in the current study. The information is based on the data of 2021.
Address improvements in internal discussion	The results of the study are presented and examined with the staff. It provides a basis for environmental actions, but the organisation's project manager decides if further measures are taken.
Documentation of environmental impacts	This study provides data on the current situation and creates a starting point. There are no decisions related to future documentation.
Key environmental impact factors	
Product and service	The product and service-based emissions can be divided into sectors A and B. Sector B produces 88% of the emissions, which is aimed to be reduced by the new product design. After data from the new product is received, the results can be reflected, and further actions can be taken.

Product and service transportation by land	Discussion of optimising the land transportation routes have been started, and substitutive options have been examined. The global supply problems, item shortage, and the prevailing pandemic complicate transportation. The organisation closed its Estonian branch office in 2021 and concentrated traffic in Finland. It decreased the amount of transportation.
Staff air travel	Closing the brand office decreases staff air travel. Another step is decreasing the number of flights by planning the routes without intermediate landings. Also, the possibility of remote work is identified to decrease air travelling.
Waste and recycling	Employees understanding of the recycling process should be increased. Waste and recycling training should be conducted to diminish mixed waste. Recycle bins have been provided in some departments during the study but not comprehensively throughout the office.
Supply chain and purchasing	Developing a functional logistics system would diminish the supply chain's environmental impacts. The transported freight can be shipped in bigger volumes by designing procurement logistics. It will diminish the number of flights, provide a possibility for negotiating better contracts, and reduce the burden faced by different departments. The development area is identified and emphasised, but implementation requires resources.
Staff rail travel	National air travelling is being sifted to rail travel. The possibility of replacing part of the product and service's land transportation with rail transportation was identified, but concrete plans have not been examined.

Office electricity	The office is powered by wind energy, and plans for installing solar panels and replacing strip lights with led lights are examined.
Office heating	The office is heated with district heat. The heating system is not planned to be changed.

Appendix 4. CIT interview questions in English

In-depth interview by using the critical Incident technique. Critical incident is an extremely satisfying or dissatisfying interaction related to the examined phenomenon.

Interview questions:

1) Based on your experience, what can significantly support or prevent sustainability implementation within the organisation? Take a moment to recall
    a) Please describe the chosen significant situation/factor
    b) What triggered you to choose this specific situation/factor?
2) Why do you find it to support or prevent sustainability implementation?
3) Why was this situation/factor effective or ineffective?
4) What are the outcomes of the situation/factor?

Appendix 5. Kriittisen tapahtuman tekniikan haastattelu kysymykset suomeksi

Kyseessä on syvähaastattelu käyttäen kriittisen tapahtuman tekniikkaa. Haastattelu pyrkii keräämään tietoa merkittävistä, eli erittäin positiivisiksi tai negatiivisiksi koetuista tapahtumista liittyen tutkittavaan ilmiöön.

Kysymykset:

1) Mikä voisi merkittävästi tukea tai ehkäistä kestävän kehityksen käyttöönottoa organisaatiossa? Käytä hetki aikaa miettiäksesi mahdollista tapahtumaa.
    a) Ole hyvä ja kerro valitsemastasi tilanteesta/vaikuttavasta tekijästä
    b) Mikä sai sinut valitsemaan juuri kyseisen tilanteen/tekijän?
2) Miksi koet sen tukevan tai estävän kestävän kehityksen käyttöönottoa?
3) Miksi tämän tilanteen/tekijän vaikutus oli mielestäsi tehokas tai tehoton?
4) Mitkä olivat tilanteen seuraukset tai lopputulos?