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Implementation of the VSME Standard in SME Sustainability Reporting: A Constructive Case Study

Laskentatoimen ja rahoituksen
Kandidaatintutkielma

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The importance of sustainability reporting in small and medium-sized enterprises has increased in recent years due to growing stakeholder demands for ESG information and tightening regulatory requirements. In response to this development, the European Commission has introduced the Voluntary Sustainability Reporting Standard for SMEs (VSME). The aim of this study is to examine how the adoption of the VSME standard affects SMEs' ESG governance practices and stakeholder relationships, to identify key organisational and resource-related challenges associated with its implementation, and to develop a practical and scalable reporting model for the case company.

The study was conducted using a constructive research approach, combining qualitative content analysis and gap analysis with the development of a practical solution. The empirical data consist of company documentation, sustainability data, and a semi-structured thematic interview. The gap analysis was used to assess the alignment between the company's current practices and the requirements of the VSME Basic Module. Based on this analysis, a prototype sustainability report in accordance with the VSME standard and an Excel-based data collection tool were developed to support reporting.

The findings indicate that the adoption of the VSME standard requires the systematisation of ESG governance practices and enhances the transparency of reporting. Although the company already possesses a significant amount of sustainability-related data, it remains partly fragmented and not fully aligned with the standard. The VSME reporting model helps structure existing practices into a more coherent framework and improves the company's ability to respond to increasing ESG information demands from stakeholders. At the same time, the study identifies challenges typical to SMEs, including limited resources, informal processes, and the lack of data standardisation.

The study indicates that, in the case of this particular company, reporting in accordance with the VSME standard can be implemented without significant structural changes by utilising existing data and integrating reporting into operational processes. However, it should be noted that this finding may not be generalisable to all SMEs, as the initial conditions, availability of data, and maturity of processes can vary considerably between companies. The Excel-based tool developed in this study enables the automatic transformation of data into a format compliant with the standard and reduces the need for manual work. In summary, the VSME standard provides SMEs with a realistic framework for developing ESG management; however, its effective implementation requires the systematisation of data and reporting processes.

Key words: VSME standard, sustainability reporting, SMEs, ESG, data management, constructive research, gap analysis, reporting model, stakeholders

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Vastuullisuusraportoinnin merkitys pk-yrityksissä on kasvanut viime vuosina sidosryhmien lisääntyneiden ESG-tiedon vaatimusten sekä kiristyvän sääntelyn myötä. Vastauksena tähän kehitykseen Euroopan komissio on julkaissut pk-yrityksille suunnatun vapaaehtoisen VSME-raportointistandardin. Tämän tutkimuksen tavoitteena on tarkastella, miten VSME-standardin käyttöönotto vaikuttaa pk-yrityksen ESG-hallintakäytäntöihin ja sidosryhmäsuhteisiin, tunnistaa keskeiset implementointiin liittyvät organisatoriset ja resurssiperusteiset haasteet sekä kehittää case-yritykselle käytännöllinen ja skaalautuva raportointimalli.

Tutkimus toteutettiin konstruktiivisella tutkimusotteella, jossa yhdistettiin laadullinen sisällönanalyysi ja kuiluanalyysi käytännön ratkaisun kehittämiseen. Empiirinen aineisto koostui case-yrityksen dokumentaatiosta, vastuullisuusdatasta sekä puolistrukturoidusta teemahaastattelusta. Kuiluanalyysin avulla arvioitiin yrityksen nykyisten käytäntöjen ja VSME perusmoduulin vaatimusten välistä yhteensopivuutta. Analyysin pohjalta kehitettiin VSME-standardin mukainen vastuullisuusraportin prototyyppi sekä Excel-pohjainen datankeruumalli raportoinnin tueksi.

Tulokset osoittavat, että VSME-standardin käyttöönotto edellyttää ESG-hallintakäytäntöjen systematisointia ja lisää raportoinnin läpinäkyvyyttä. Vaikka yrityksellä on jo olemassa merkittävä määrä vastuullisuusdataa, se on osittain hajanaista eikä täysin standardin mukaista. VSME-raportointimalli auttaa jäsentämään olemassa olevat käytännöt yhtenäisemmäksi kokonaisuudeksi ja parantaa yrityksen kykyä vastata sidosryhmien kasvaviin ESG-tiedon vaatimuksiin. Samalla tutkimus tunnistaa pk-yrityksille tyypillisiä haasteita, kuten rajalliset resurssit, epämuodolliset prosessit ja datan standardoinnin puutteet.

Tutkimus osoittaa, että tämän case-yrityksen kohdalla VSME-standardin mukainen raportointi on toteutettavissa ilman merkittäviä rakenteellisia muutoksia hyödyntämällä olemassa olevaa dataa ja integroimalla raportointi osaksi operatiivisia prosesseja. On kuitenkin huomioitava, että tämä havainto ei välttämättä ole yleistettävissä kaikkiin pk-yrityksiin, sillä lähtötilanne, datan saatavuus ja prosessien kypsyystaso voivat vaihdella merkittävästi yritysten välillä. Kehitetty Excel-pohjainen työkalu mahdollistaa datan automaattisen muuntamisen standardin mukaiseen muotoon ja vähentää manuaalisen työn tarvetta. Yhteenvetona voidaan todeta, että VSME-standardi tarjoaa pk-yrityksille realistisen viitekehyksen ESG-hallinnan kehittämiseen, mutta sen tehokas implementointi edellyttää datan ja raportointiprosessien systematisointia.

Avainsanat: VSME-standardi, vastuullisuusraportointi, pk-yritykset, ESG, datanhallinta, konstruktiivinen tutkimus, gap-analyysi, raportointimalli, sidosryhmät

TABLE OF CONTENTS

FIGURES

TABLES

1 Introduction

1.1 Background and relevance of the study

Corporate sustainability reporting can be viewed as a means of maintaining and strengthening a company's legitimacy in relation to its stakeholders and society at large. Social and environmental reporting functions as a communication tool through which companies respond to increasing sustainability-related expectations and manage their societal acceptance (Deegan 2002). Over the past two decades, corporate sustainability reporting frameworks have been continuously developed in order to raise awareness of sustainability-related issues among various stakeholder groups (Kücükgül et al. 2022, 1). At the same time, EU legislation has increased reporting obligations for certain large companies regarding their sustainability practices (Gurvitš-Suits & Sidorova 2022). Although these obligations do not legally apply to small and medium-sized enterprises (SMEs), companies outside the scope of mandatory reporting are experiencing growing pressure to disclose sustainability-related information (Alho & Ranta 2025, 8).

Within the European Union, there are approximately 23 million SMEs, representing 99 percent of all enterprises and accounting for an estimated 64 percent of Europe's industrial pollution. However, SMEs face greater difficulties than large corporations in complying with environmental legislation (Scagnelli et al. 2013, 79). Alho and Ranta (2025) examined sustainability reporting practices among Finnish companies, as well as the challenges and expectations associated with sustainability reporting. Their findings indicate that many Finnish SMEs encounter significant difficulties in implementing sustainability reporting. The most commonly identified challenges related to CSRD reporting include the complexity of the ESRS requirements and the systematic collection and management of the data required for reporting purposes. Insufficient data availability and limited resources were also identified as recurring challenges (Alho & Ranta 2025).

According to survey results, the most useful form of support for SMEs in sustainability reporting would be the availability of ready-to-use and user-friendly reporting templates, which would simplify the reporting process and reduce the amount of manual work involved (Alho & Ranta 2025). The VSME standard developed by the European Financial Reporting Advisory Group (EFRAG) and published on 17 December 2024 has been designed to address these identified needs of SMEs. The VSME standard is expected to harmonise the numerous ESG data requests directed at SMEs, which currently generate significant preparation costs for non-listed SMEs. Such harmonisation is

anticipated to reduce the number of uncoordinated data requests and to support improved access for SMEs to lenders, investors and customers (EFRAG 2024).

1.2 Research problem, objectives and research questions

This study addresses the following overarching research problem: How does the adoption of the VSME standard influence SMEs' ESG governance and stakeholder relationships, and how can a practical, scalable, and resource-efficient VSME reporting model be developed?

The research problem encompasses two complementary perspectives: an academic perspective and a business perspective. From an academic standpoint, the objective is to examine whether the implementation of a voluntary and proportionate reporting standard leads to changes in SMEs' ESG governance structures, data management practices, and stakeholder engagement processes. From a business perspective, the aim is to analyse how a case company's existing data and current practices can be aligned and scaled to comply with the VSME reporting standard, and how a VSME-compliant model can be designed in a manner that is operationally feasible while considering the resource constraints characteristic of SMEs.

The study seeks to answer the following research questions:

- How does the adoption of the VSME standard affect SMEs' ESG governance practices and stakeholder relationships?
- What are the key organisational and resource-based challenges associated with the implementation of the VSME standard?
- How can a practical, scalable, and resource-efficient VSME reporting model be developed for SMEs?

These research questions guide the analysis from both theoretical and practical perspectives. They aim to develop a comprehensive understanding of the effects of adopting the VSME standard on SMEs' ESG governance practices and stakeholder relationships. The research questions also support the identification of key challenges associated with implementation and serve as a foundation for the constructive component of the study, which seeks to develop a practical and scalable reporting model while taking into account the resource constraints and operational realities characteristic of SMEs.

1.3 Scope of the study and presentation of the case company

This study focuses on examining the readiness of the case company to implement the VSME reporting standard as part of its sustainability reporting. The aim of the study is to analyse the compatibility of the company's existing sustainability data and reporting processes with the requirements of the VSME standard, as well as to identify key development areas and potential risks. The analysis is supported by relevant literature related to the topic. The study focuses specifically on the Basic Module of the VSME standard and its implementation within the company's reporting practices.

The case company is a Finnish SME specialising in the development and production of plant extracts derived from natural raw materials. The company's official industry classification is food manufacturing not elsewhere classified. Its products are used in food supplements, food products, cosmetics, and pharmaceutical applications. In addition, the company operates as a manufacturer and distributor of food supplements and health products. The company's production activities are located in Tornio, Finland, where its factory and production facility are situated. The company also operates in international markets.

Sustainability has been an integral part of the company's operations since the 1990s. Although the company does not have a statutory sustainability reporting obligation, it voluntarily prepared a sustainability report in 2023 in collaboration with a sustainability consultant. The company's sustainability efforts focus particularly on the sustainable use of natural resources, the utilisation of industrial side streams, and the energy efficiency of production processes. Within the natural health products industry, the preparation of voluntary sustainability reports is not common among other operators. According to a mapping conducted by the sustainability consultant, only one other company in the sector reports on its sustainability practices in addition to the case company.

The external consultant has been engaged to prepare the company's sustainability report for 2025, following a similar approach to that used for the 2023 report. However, the 2025 reporting process will be conducted in a more streamlined manner, primarily by building on the existing 2023 report, updating key figures, and making minor adjustments to the layout and narrative content. The VSME standard will not yet be incorporated into the 2025 report; instead, its implementation is explored and tested within the scope of this study.

1.4 Research approach and methodological framework

The study is conducted as a constructive case study commissioned by the case company. The constructive research approach refers to solving practical problems by developing constructs such as models, diagrams, plans, organisational arrangements, or other solutions (Kasanen et al. 1993, 245). The study is structured in accordance with the key elements of the constructive research approach presented by Kasanen et al. (1993): practical relevance, practical functioning, theory connection, and theoretical contribution. Based on these elements, the study seeks to identify the practical gap between the reporting requirements of the VSME standard and the company's current sustainability practices, and to develop a solution that is both practically feasible and theoretically grounded.

The reliability of the study is supported through data triangulation by utilising multiple empirical data sources. These sources include the company's ESG data, production-related environmental data, a semi-structured interview, and participant observation in a company meeting concerning sustainability reporting. The data collection process is described in more detail in Section 3.1.

The analysis is conducted using qualitative content analysis, which is applied to examine the company's current sustainability reporting practices and ESG data. Gap analysis is used as an analytical tool to assess the alignment between the company's existing practices and the reporting requirements of the VSME standard. The analytical methods and their theoretical foundations are presented in more detail in Section 3.2.

As a result of the study, a theory-driven gap analysis, a prototype of the VSME sustainability report, and a model for the collection and reporting of sustainability data in accordance with the VSME standard are developed for the company. The gap analysis is grounded in academic literature and provides a structured approach for assessing the current state and can therefore serve as a useful tool for similar evaluations in the future. Furthermore, the gap analysis may be applicable more broadly in the SME context when organisations assess the compatibility of their existing practices and data with the VSME standard.

The VSME report prototype demonstrates how the company's existing data can be structured and presented in accordance with the standard. It serves as a concrete example of the report's structure, content, and presentation, thereby supporting the practical development of the reporting process. The Excel-based data collection tool supports the systematic collection, management, and transformation of sustainability data into a format compliant with the VSME standard. The tool consolidates

fragmented ESG data, automates key calculations, and reduces the need for manual work, thereby enhancing the efficiency and consistency of reporting.

2 Theoretical framework of sustainability reporting

2.1 The significance and value creation of sustainability reporting

In the context of global sustainability trends, sustainability reporting has become indispensable for all organisations. Sustainability reporting focuses on environmental, social and governance dimensions, that is, the areas to which investors, shareholders and other stakeholders are paying increasing attention. The publication of high-quality sustainability reports demonstrates an organisation's capabilities and relative superiority in comparison with other firms. Through the quality of sustainability reporting, organisations can signal their commitment to responsible practices to stakeholders and thereby enhance firm value (Van et al. 2025).

The following sections examine sustainability reporting as part of both internal organisational processes and external relationships and communication. The analysis considers the factors that create external pressure on firms to engage in sustainability reporting, as well as the actions through which organisations can generate added value and achieve competitive advantage.

2.1.1 Organisational legitimacy, stakeholder expectations and ESG risk management

Sustainability reporting plays a central role in the construction and maintenance of corporate legitimacy, understood as societal acceptance. According to legitimacy theory, an implicit social contract exists between corporations and society, whereby companies are granted the right to operate and generate profits only insofar as their activities align with prevailing societal values, norms and expectations. When corporate behaviour deviates from these expectations, legitimacy may be undermined, which can manifest in the form of increased regulatory scrutiny, reputational damage, or a loss of stakeholder trust. Sustainability reporting therefore constitutes not merely a mechanism for information disclosure, but a form of strategic communication. Companies may use reporting to explain negative events or to demonstrate their commitment to issues perceived as socially significant (Deegan 2002).

Legitimacy theory is closely linked to stakeholder theory (Deegan 2002). Stakeholder theory complements the institutional perspective by focusing on to whom companies report and why. Firms are required to respond to the expectations of multiple stakeholder groups, including investors, customers, employees, regulators and non-governmental organisations. Sustainability reporting thus functions as a key communication channel between the organisation and its stakeholders (Herold 2018). Stakeholders expect companies to report their ESG practices in a truthful and comprehensive

manner, covering both positive and negative events. Reporting that emphasises only favourable aspects while neglecting, for example, environmental problems does not meet stakeholder expectations. In particular, stakeholders expect detailed and transparent disclosure when corporate activities have caused harm, regulatory breaches or official sanctions, especially in environmental contexts. Moreover, stakeholders do not expect merely a description of problems, but also information on how the company has responded to these issues, what remedial actions have been undertaken, and how similar situations will be prevented in the future (Deegan & Rankin 1996).

According to Bhimani et al. (2016), sustainability reporting should not be viewed solely as an external communication tool aimed at stakeholders, but rather as an integral component of a firm's internal management control and decision-making systems. Voluntary Corporate Social Responsibility (CSR) reporting can function as a strategic instrument through which organisations identify and manage sustainability-related risks and opportunities. When a company engages in voluntary sustainability reporting, it simultaneously develops metrics, processes and monitoring systems that support improved managerial decision-making. Integrating sustainability-related information into management accounting systems enables the consideration of ESG aspects in strategic planning, resource allocation and performance evaluation. Consequently, CSR reporting should not be regarded merely as a reactive response to external pressures, but as a mechanism that supports proactive risk management. Bhimani et al. (2016) further emphasise that voluntary sustainability reporting helps organisations prepare for future regulatory requirements. Companies that have already established sustainability metrics and reporting practices are better positioned to adapt efficiently to new reporting obligations than firms whose reporting is limited to minimum mandatory requirements.

2.1.2 Sustainability reporting as a driver of competitiveness, access to finance and supply chain integration

According to the research of Porter and van der Linde (1995), evidence has existed since the 1990s that the consideration of sustainability factors and related reporting can enhance corporate competitiveness. The most competitive firms are no longer those with the lowest input costs or the largest scale, but rather those that possess the capability for continuous improvement and innovation. As stakeholder demand for responsible business practices continues to increase, firms that are able to develop and innovate in the field of sustainability are more likely to achieve a competitive advantage.

Sustainability-related pressures have led in particular to the evolution of Supply Chain Management (SCM) into Sustainable Supply Chain Management (SSCM). SSCM is regarded as a new operating model through which companies can respond to stakeholder requirements while simultaneously

improving profitability and competitiveness, as well as enhancing ecological efficiency and social responsibility throughout their supply chains. SSCM can be examined from the perspectives of both intra-organisational and inter-organisational practices. Internal practices include environmental management systems, certifications, eco-design and life-cycle analysis, all of which aim to reduce a firm's direct environmental and social impacts. Through the adoption of such practices, companies can improve their sustainability performance and gain competitive advantage. External practices, in turn, consist of mechanisms implemented at both corporate and operational levels to assess and improve the environmental and social performance of the supplier network. These include codes of conduct, environmental requirements and collaboration with suppliers to anticipate and resolve environmental and social issues. Such measures are often required of firms operating within larger supply chains (Gualandris et al. 2014, 260).

Sustainability reporting also has a significant impact from a financial and financing perspective. Friede et al. (2015) demonstrate a positive relationship between ESG factors, ESG reporting and corporate financial performance. The business case for ESG investing is empirically very strong, and orientation towards responsible investment has become increasingly important for investors. Dhaliwal et al. (2011) examine the effects of voluntary CSR reporting on firms' cost of equity capital and find that, for firms with high CSR performance, CSR reporting leads to a reduction in the cost of equity. Such firms are also more likely to attract committed institutional investors and increased analyst coverage. In addition, firms that initiate CSR reporting are more likely to conduct Seasoned Equity Offerings (SEOs) and raise significantly greater amounts of capital in these offerings compared to firms that do not engage in CSR reporting. More extensive disclosure reduces information asymmetry, which in turn increases investor willingness to invest, particularly among socially conscious investors.

2.2 Regulatory context of sustainability reporting in the European union (CSRD and ESRS)

The Corporate Sustainability Reporting Directive (CSRD) (EU 2022/2464) is a directive adopted by the European Union that replaces the previous Non-Financial Reporting Directive (NFRD) and expands and clarifies companies' obligations to disclose sustainability-related information. The CSRD forms part of the EU's Green Deal agenda and aims to support a sustainable economy, enhance transparency, and channel capital towards sustainable activities. Its key objectives include improving the quality, comparability and reliability of sustainability information, responding to the growing demand for ESG-related data among stakeholders, preventing greenwashing, and supporting the EU's

climate and sustainable development goals. The directive emphasises that sustainability information is as essential as financial information in the assessment of corporate performance (EUR-Lex 2022).

The CSRD applies to all large undertakings that meet at least two of the following criteria: more than 250 employees, turnover exceeding EUR 40 million, or a balance sheet total exceeding EUR 20 million. The directive also applies to all companies listed within the EU, including listed small and medium-sized enterprises (from 2027 onwards, covering the 2026 financial year), as well as to non-EU companies with significant operations within the EU. The CSRD makes double materiality assessment mandatory, requiring companies to report on both impact materiality: how the company's activities affect the environment and society, and financial materiality: how sustainability factors affect the company's financial position, performance and future prospects. This approach extends the traditional financial perspective and strengthens stakeholder-oriented reporting. In addition, sustainability information must be subject to external assurance in accordance with the directive (EUR-Lex 2022).

The CSRD requires companies to report their sustainability information in accordance with the European Sustainability Reporting Standards (ESRS) (EUR-Lex 2022). There are total of twelve topical standards (Figure 1), which provide specific guidance and disclosure requirements relating to environmental, social and governance issues.

Cross-cutting standards	Environment	Social	Governance
ESRS 1 Climate Change	ESRS E1 Climate Change	ESRS S1 Own workforce	ESRS G1 Business conduct
ESRS 2 General Disclosures	ESRS E2 Pollution	ESRS S2 Workers in the value chain	
	ESRS E3 Water & marine resources	ESRS S3 Affected communities	
	ESRS E4 Biodiversity & ecosystems	ESRS S4 Consumers and end-users	
	ESRS E5 Resource use & circular economy		

Figure 1 ESRS framework (Finanssivalvonta 2023)

The ESRS are divided into different components. ESRS 1 and ESRS 2 are general standards applicable to all reporting entities. ESRS 1 sets out overarching reporting requirements, including definitions, the determination of reporting periods, information quality criteria and materiality principles, but it does not contain specific disclosure requirements. By contrast, ESRS 2 defines the information that companies must disclose in their sustainability reports, including information on the company's activities, strategy, sustainability-related risks and impacts, and governance arrangements related to sustainability matters (Alho & Ranta 2025).

2.3 The VSME standard as a voluntary reporting framework for SMEs

The VSME Standard (Voluntary Sustainability Reporting Standard for non-listed SMEs) is a voluntary sustainability reporting framework developed by EFRAG and published on 17 December 2024 for non-listed small and medium-sized enterprises. The VSME Standard forms part of the European Commission's SME Relief Package (September 2023), under which EFRAG was mandated to develop a simple and standardised framework for ESG reporting for SMEs, thereby improving access to green finance and facilitating the transition towards a sustainable economy. Based on market acceptance, the VSME Standard is expected to harmonise the numerous existing ESG data requests that currently impose significant preparatory costs on non-listed SMEs by reducing the number of uncoordinated requests. This, in turn, is expected to support SMEs in gaining improved access to lenders, investors and clients (EFRAG 2024).

The VSME Standard is aligned with the CSRD and the European Sustainability Reporting Standards (ESRS), while remaining substantially lighter and proportionate to the resources of SMEs. Unlike the CSRD, it does not require a double materiality assessment or external assurance. The VSME Standard consists of two modular components: the Basic Module and the Comprehensive Module, which are discussed in more detail in the following subsections (EFRAG 2024).

2.3.1 Basic module

When preparing a VSME report, an undertaking may choose whether to report solely in accordance with the Basic Module or to supplement the Basic Module disclosures with the additional requirements of the Comprehensive Module. The Basic Module constitutes the core of the VSME Standard and is intended for all SMEs, particularly those with no prior experience in sustainability reporting. The objectives of the Basic Module are to provide a minimum level of ESG reporting, to focus on essential and readily available information, and to minimise the administrative burden associated with reporting (EFRAG 2024).

When applying the VSME Standard, undertakings are required to report on environmental, social and business conduct matters in accordance with disclosures B1–B11 (Figure 2) (EFRAG 2024).

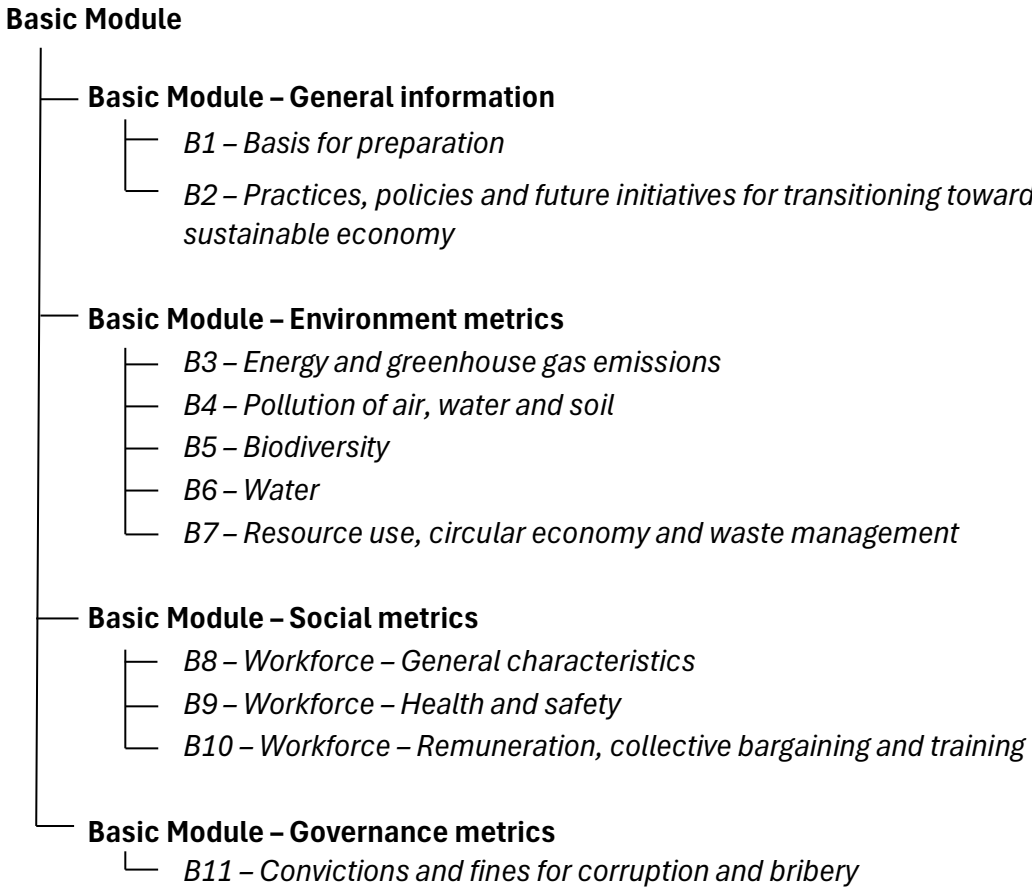


Figure 2 VSME Basic Module disclosures B1-B11 (EFRAG 2024)

The themes addressed in the framework correspond substantively to those defined in the ESRS. However, they are adapted to reflect the more limited resources and operating environments of SMEs. The applicability of the reporting requirements is partly sector-dependent, meaning that not all disclosure requirements within the framework are relevant to every undertaking.

2.3.2 Comprehensive Module

The Comprehensive Module constitutes the extended component of the VSME Standard and complements the Basic Module. It is intended particularly for undertakings that already possess experience in ESG reporting and that are subject to more extensive ESG information demands from banks, investors, financial market participants and large corporations through supply chain relationships. The content of the module reflects these stakeholders' own regulatory obligations, which is why the Comprehensive Module places particular emphasis on the assessment of

sustainability risks, climate-related risks, value chain impacts, as well as targets and performance metrics. The use of the module is voluntary and applicable in situations where an undertaking has the resources to provide more in-depth disclosures or where such information is required by stakeholders (EFRAG 2024).

The Comprehensive Module consists of disclosures C1–C9 (Figure 3), which expand upon the disclosures included in the Basic Module. Reporting in accordance with the Comprehensive disclosures places greater emphasis on measurable indicators and targets, thereby enabling a more in-depth analysis of ESG dimensions compared with the more descriptive nature of the Basic Module (EFRAG 2014).

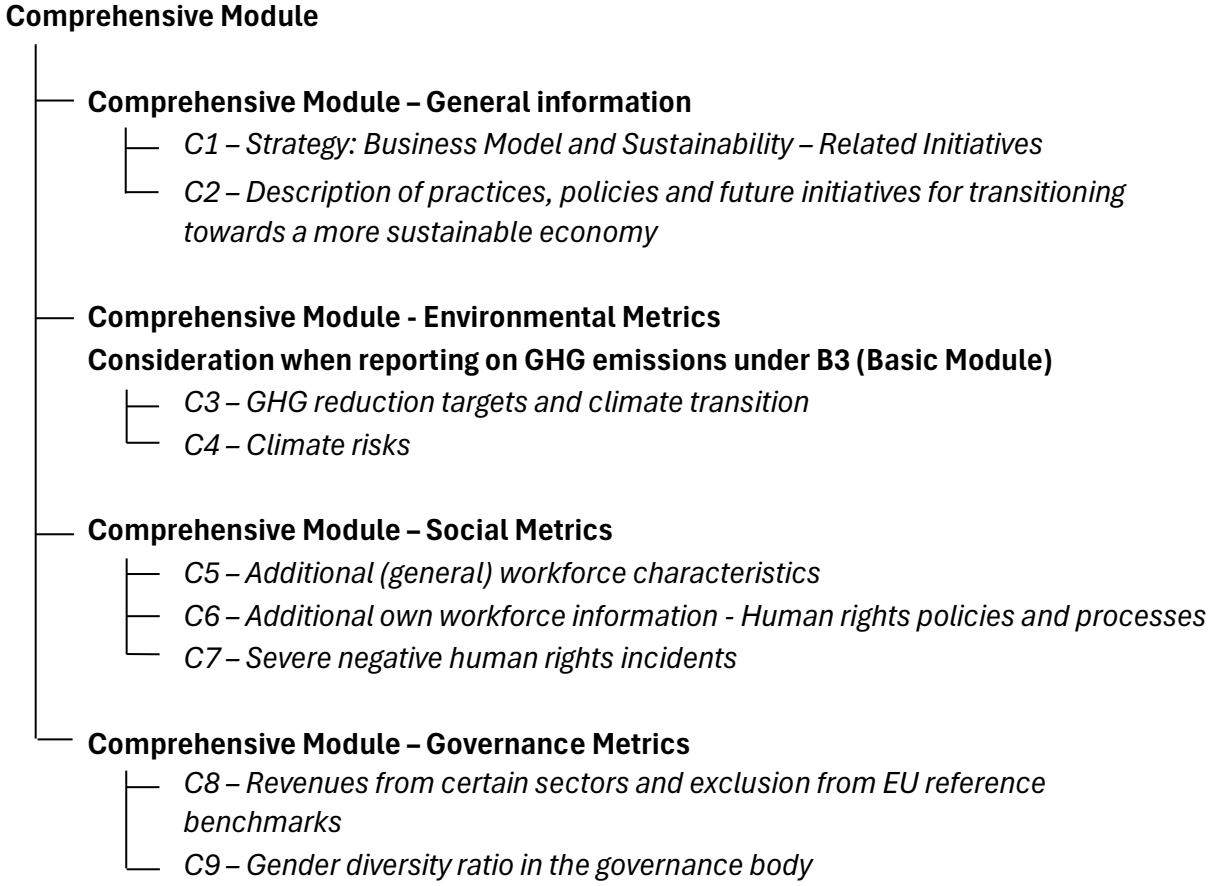


Figure 3 VSME Comprehensive Module disclosures C1–C9 (EFRAG 2024)

The figure structures the reporting content of the Comprehensive Module into a coherent framework and highlights its emphasis in relation to more extensive ESG data production. The requirements place particular emphasis on quantitative information, target-setting, as well as the assessment of risks and impacts, thereby enabling a more detailed and comparable analysis of different sustainability dimensions. Accordingly, the module provides a framework for more in-depth reporting in situations

where stakeholder information needs require a more detailed and systematic approach (EFRAG 2024).

2.3.3 Differences between the VSME standard and CSRD and ESRS

The VSME standard differs from the Corporate Sustainability Reporting Directive (CSRD) and the European Sustainability Reporting Standards (ESRS) particularly in terms of its mandatory nature, target group, and scope of requirements. VSME is a voluntary reporting framework designed for non-listed SMEs, whereas the CSRD is a legislative directive and the ESRS constitute mandatory reporting standards for large undertakings. The VSME standard covers the same core sustainability dimensions (environmental, social, and governance) as the ESRS developed for large companies. However, its requirements are simplified and proportionate, taking into account the more limited resources and reporting capabilities of SMEs (EFRAG 2024).

A key distinction also lies in the structure of the standards. The VSME consists of two modules, Basic and Comprehensive, where the Basic module represents the minimum reporting level and the Comprehensive module provides a more extensive reporting option. This modular approach offers flexibility and enables companies to develop their reporting practices progressively. In contrast, the ESRS do not provide a similarly simplified approach, but instead require extensive, detailed, and often resource-intensive reporting. Nevertheless, the VSME standard has been designed to be consistent with the ESRS, thereby facilitating a potential transition to more comprehensive reporting requirements in the future and supporting the comparability of information across companies (EFRAG 2024).

2.4 Implementing sustainability reporting in SMEs

Corporate social responsibility in SMEs differs structurally from the sustainability practices of large corporations. The CSR literature has largely focused on large firms, despite the fact that SMEs constitute the majority of businesses and play a central role particularly in local economies and supply chains. Consequently, SMEs should not be regarded as passive or lagging actors in the field of sustainability; rather, in many cases they can be seen as active and committed pioneers of responsible business practices, even though their sustainability activities are not governed by formal requirements or standards (Jenkins 2006).

As is the case for large corporations, sustainability reporting can serve as a significant source of competitive advantage for SMEs. Similar benefits include an enhanced corporate image, stronger

customer relationships, increased employee satisfaction and improved risk management. However, SMEs often face substantial challenges in sustainability reporting due to limited resources, difficulties related to measurement and verification, and a lack of specialised expertise (Jenkins 2006).

2.4.1 Change management and the integration of sustainability into business strategy

An increasing number of organisations are elevating sustainability to the level of a strategic priority; however, the challenges associated with the practical implementation of such initiatives have simultaneously intensified. Firms face a growing need to understand how sustainability can be operationalised in practice (Sroufe 2017, 315). In order to integrate sustainability into corporate strategy and day-to-day operations, broad and far-reaching organisational change is required.

In this context, the integration of sustainability extends beyond strategic-level objectives and requires corresponding changes in organisational structures and management systems. In order to realise the benefits associated with sustainability performance, organisations must appropriately design and adapt these changes. The ability of firms to respond to increasing environmental and social pressures depends not only on technical optimisation, but also on their capacity to mobilise and manage human and physical resources through structural transformation (Ha, 2014, 91). Nevertheless, the majority of change initiatives fail, largely because the change process is not managed systematically or pursued with sufficient determination (Kotter 1995).

According to Kotter's theory, organisational change is not a discrete project but rather a systematic and cultural process requiring structured progression and strong leadership. Kotter's model of change management is founded upon eight stages:

1. Establishing a Sence of Urgency
2. Forming a powerful Guiding Coalition
3. Creating a Vision
4. Communicating the Vision
5. Empowering Others to Act on the Vision
6. Planning for and Creating Short-Term Wins
7. Consolidating Improvements and Producing Still More Change
8. Institutionalizing New Approaches

These eight stages are equally pertinent to the integration of sustainability within an organisation. The first stage is particularly salient in the sustainability context: change begins with the recognition

that the current state is no longer sustainable. In this context, a sense of urgency is driven by climate change and increasing stakeholder demands. The second stage underscores that integrating sustainability cannot be the sole responsibility of a sustainability manager; rather, it necessitates cross-functional collaboration. Sustainability must be defined as a clear strategic direction, supported by consistent communication, concrete examples, and the alignment of key performance indicators (KPIs) with sustainability objectives. Successful integration may require the revision of performance metrics and the redesign of organisational processes, including modifications to incentive systems. The sixth stage reinforces credibility in the process by highlighting visible short-term results, such as cost savings, risk reduction, and enhanced competitive advantage. In the final stages of the model, changes to processes and systems are consolidated and embedded within organisational culture, such that sustainability becomes reflected in organisational decision-making (Kotter 1995).

Kotter's framework compellingly illustrates how the integration of sustainability constitutes not only a strategic transformation but also a cultural and structural one, involving changes in measurement systems and decision-making logic. Sustainability therefore requires organisational change management that extends beyond improvements in technical efficiency. It must encompass organisational systems more broadly, including leadership, vision, employees, and policies (Sroufe, 2017 317).

2.4.2 ESG data collection and management in the SME context

One of the most common challenges faced by SMEs in sustainability reporting concerns the collection and management of data. The gathering of ESG-related information across the entire value chain poses particular difficulties for smaller firms, especially due to their limited organisational and financial resources (Alho & Ranta 2025). Awareness constitutes another significant determinant of both the extent and the quality of ESG data collection practices. Accordingly, limited data collection may stem less from unwillingness and more from deficiencies in knowledge, capabilities, and familiarity with relevant reporting tools (Johnson 2015).

Despite these challenges, many SMEs engage in sustainability-related practices but without formalising them into systematic reporting structures. Such activities are frequently operational in nature rather than strategically documented or integrated into formal governance processes. The absence of structured ESG measurement frameworks complicates sustainability reporting, as effective reporting presupposes systematic data collection and coherent data management procedures. Although increasing regulatory pressures and cost-saving opportunities influence SMEs'

sustainability activities, these drivers do not automatically translate into the development of formalised ESG data management systems (Revell et al. 2010).

Digital technologies, such as IoT sensors, big data analytics, and artificial intelligence, offer SMEs substantial opportunities to enhance their capacity to generate and analyse ESG-related data. The degree of firm digitalisation has been found to be positively associated with sustainable innovation performance. An advanced digital infrastructure may therefore serve as an enabling mechanism for systematic ESG data collection and reporting. However, digital maturity alone does not resolve SMEs' data collection challenges, nor does it guarantee effective ESG data management in the absence of clear strategic commitment and organisational alignment (Ardito 2023).

3 Current state analysis of the case company

3.1 Data collection

This study draws multiple sources of empirical data in order to develop a comprehensive understanding of the case company's current sustainability reporting practices and their alignment with the VSME standard. An overview of the empirical data used in the study is presented in table 1 below.

Table 1 Empirical data sources

Data sorce	Type of data	Description	Role in analysis
Internal sustainability data Excel	Internal quantitative data	Company spreadsheet containing ESG-related indicators and sustainability metrics collected for internal monitoring and reporting purposes.	Used to assess currently available sustainability data and evaluate alignment with VSME disclosure requirements.
Production environmental data Excel	Internal quantitative data	Production-level data including environmental indicators such as energy consumption, water use and waste generation collected by the production unit.	Used to analyse environmental performance data and identify gaps in environmental reporting practices.
Sustainability report (2023) prepared by external consultant	Public document	Company sustainability report published on the company website and prepared with the support of a sustainability consultant.	Used for qualitative content analysis and to evaluate alignment with VSME disclosure requirements.
Participation in internal meeting on the preparation of the 2025 sustainability report	Observational data / meeting notes	Participation in a planning meeting involving the sustainability consultant, the company's sustainability responsible (Head of Market Development) and the CEO.	Provided insights into current reporting practices, organisational responsibilities and the development of future sustainability reporting
Semi-structured group interview on the current state of sustainability management	Primary qualitative data	A group interview conducted on the 12th of March with the Head of Market Development (responsible for sustainability matters) and the Production/Factory Manager. Duration of the interview was 22 minutes.	Used to identify sustainability practices, data management processes, resource allocation and stakeholder requirements related to ESG reporting.

The group interview was conducted as a semi-structured thematic interview, in which the discussion was guided by a predefined interview guide (see Appendix 1), while also allowing the interviewees to speak freely about the company's sustainability processes and issues they considered relevant to the study. The study was conducted in accordance with good scientific practice, and the handling of the data followed the guidelines of the Finnish National Board on Research Integrity (TENK 2023). The rights of the interview participants were respected by ensuring voluntary participation, informed consent, and the confidential handling of the data.

The purpose of the group interview was to complement the document analysis and to provide a deeper understanding of the practices related to sustainability reporting as well as the processes involved in the collection of sustainability-related data. The interviewees were selected based on their roles, as they are involved in the company's sustainability reporting or in the production of related data. The interview was conducted remotely and subsequently transcribed for analysis, after which the material was analysed using qualitative content analysis. Given that the interview was conducted in Finnish, the semi-structured interview guide and the direct quotations have been translated into English for the purposes of this thesis, while aiming to preserve the original meaning as closely as possible.

3.2 Data analysis

3.2.1 Qualitative content analysis

Qualitative content analysis is based on a close reading of textual material, the reorganisation of its relevant parts into analytical categories, and the development of interpretations and scholarly narratives that relate to the meanings and uses of the analysed text (Krippendorff 2019, 27). In this study, the empirical material is analysed using qualitative content analysis through a deductive approach. Deductive category application is based on predefined analytical perspectives derived from theory, which are systematically connected to the analysed text (Mayring 2000). In this study, the analytical framework is formed by the VSME disclosures, against which the empirical material is compared. For this reason, the analysis follows a deductive approach.

Qualitative content analysis is conducted as a systematic analytical process in which the material is examined in a manner guided by the research questions. The analysis is applied to both documentary data and material collected through semi-structured group interview and meeting observations. The interview complements the document analysis by providing a deeper understanding of the company's reporting practices and the processes related to the production of sustainability information.

3.2.2 Gap analysis

The VSME disclosures and the company's current state and practices have been analysed through the application of a gap analysis. In this analysis, the level of alignment between existing practices and the standard is classified into three categories: not aligned, partially aligned, and fully aligned. This categorisation is grounded in research suggesting that compliance with standards is not a binary condition but rather a process shaped by interpretation and practical operationalisation (Vigneau et al. 2015).

The categorisation is further supported by Johnson (2015), who conceptualises the adoption of sustainability management tools as a staged innovation process influenced by factors such as organisational awareness, firm size, and top management commitment. In line with this perspective, the identified gaps are not interpreted merely as technical deficiencies; rather, they are understood as reflections of the adoption dynamics characteristic of SMEs.

In the analysis, the identified gaps are classified into five categories, drawing on the adoption barriers identified by Johnson (2015): data gap, process gap, structuring gap, responsibility gap, and documentation gap. A data gap may be explained by a low level of awareness, whereby requirements are not fully recognised, and the relevant data are therefore not collected. A process gap is linked to the research finding that perceived relative advantage is positively associated with adoption. Where the benefits are not perceived as sufficiently clear, systematic data collection processes are unlikely to be established. For instance, prior to the introduction of the VSME model, the company had not considered it necessary to develop equally systematic processes for all data collection activities.

A structuring gap may arise from fragmented data and the absence of a unified structure; that is, data may exist but not in a format consistent with VSME requirements. A responsibility gap is associated with managerial commitment and the formal allocation of responsibilities. The fifth category, the documentation gap, is grounded in Johnson's observation of a positive relationship between organisational size and adoption. In smaller firms, a lower degree of formalisation may prevail, resulting in limited documentation and more informal practices. The results of the gap analysis are presented in Section 4.1.

3.3 The current level of sustainability management in the company

The company's sustainability efforts are based on resource-efficient production technologies, the sourcing of raw materials in accordance with circular economy principles, and plant-based products. The sustainability work particularly focuses on the environmental impacts of production processes, the health-promoting characteristics of the company's products, and responsible cooperation with supply chains and personnel. These themes also guide the company's sustainability reporting (Sustainability Report 2023, internal documents).

Within the company, the management of sustainability largely relies on existing operational processes and systems from which the necessary data for sustainability reporting are collected. Sustainability data are not gathered through a dedicated sustainability management system or an automated process. Instead, the required information is compiled and combined from various systems and sources according to reporting needs. Some sustainability-related data are obtained from the company's enterprise resource planning system and from production reports. However, the information generated by these systems does not transfer directly into sustainability reporting; rather, the figures are retrieved manually from the systems (interview, 12 March 2026).

3.3.1 Existing ESG practices and performance indicators

The company collects a variety of sustainability-related indicators that are used in corporate responsibility reporting. The basis of these metrics and the reporting framework was originally developed with the assistance of an external consultant as a sustainability reporting model suitable for small and medium-sized enterprises. However, the reporting model does not follow any specific reporting framework.

Sustainability performance indicators are monitored particularly in relation to environmental impacts, resource efficiency, and employee well-being. The company has also defined its own sustainability objectives, the monitoring of which involves collecting specific figures from different systems.

The company's sustainability activities are supported by certified management systems, including the ISO 9001 quality management system, the ISO 14001 environmental management system, and the ISO 13485 certification for medical devices. Sustainability-related matters are also reviewed as part of the annual management review required by the ISO 9001 quality management system. In this context, practices and development areas related to environmental issues, personnel, and sustainability are evaluated. The corporate responsibility report is published approximately every two

years and presents the key sustainability indicators and practices of the company (interview, 12 March 2026).

3.3.2 Resources and processes for ESG data collection

The collection of sustainability data is not centralised to a separate sustainability team or department; instead, responsibility for producing the data is distributed among different individuals according to their respective areas of responsibility. Each person responsible for a particular process or function is also responsible for producing the related sustainability information, which is a common practice in small and medium-sized enterprises.

> *We do not have a separate person or department responsible for sustainability, which in a company of this size would not necessarily be appropriate. In my view, what is actually essential for embedding sustainability issues into the business is that the people who work within the different processes are also responsible for the sustainability aspects related to them. In this way, sustainability becomes part of everyday activities rather than a separate function handled by a specific department (Head of market development responsible for the sustainability reporting).*

Data collection takes place in a decentralised manner across different organisational units, after which the information is compiled for reporting purposes into a sustainability data Excel file. Although the company does not have a detailed process description for sustainability reporting, the reporting process is coordinated by a designated person in cooperation with an external consultant. This person is responsible for initiating the reporting process, compiling the required data, and assembling and finalising the content of the report.

Data processing also involves manual work. Raw data are collected from several different sources and converted through calculation into indicators and units suitable for reporting.

> *Often it is still the result of calculations: first raw data are collected, and then the indicator is essentially squeezed into the required form. There is often quite a mess of different Excel files, from which the data are collected, divided, multiplied and added together until the desired unit is reached. In many cases there can be quite a lot of manual work involved (Production manager).*

3.3.3 ESG requirements from customers and financial stakeholders

External requirements related to the company's sustainability reporting originate primarily from customers. Customers regularly submit sustainability-related questionnaires in which they request information about the company's practices and sustainability policies. The company has joined the external EcoVadis assessment system at the request of its customers, particularly due to the

requirements of clients operating in the cosmetics industry. In addition, many customers require their suppliers to commit to sustainability-related codes of conduct as part of the supply chain. Customer requirements regarding sustainability also concern the origin of raw materials and the responsibility of supply chains.

> *As far as I understand, no one has ever specifically asked us for a corporate responsibility report. We have mainly prepared it proactively so that we would have something to present about our operations. In contrast, joining EcoVadis has come from customers, particularly from the cosmetics side, so we have joined it at the request, or even to some extent the requirement, of our customers (Head of market development, responsible for the sustainability reporting).*

To date, no specific requirements related to sustainability reporting have been imposed by financial stakeholders. However, the company is subject to certain statutory reporting obligations, such as reporting related to the extended producer responsibility for packaging materials.

3.4 Evaluation of VSME information requirements in the context of current practices

Based on the interview and other data sources, the company has already established several practices for collecting sustainability-related information. However, reporting is largely based on decentralised data collection and manual data processing. This suggests that while some of the information required by the VSME standard is likely available within the company's existing systems, additional effort is required to compile and structure the data into a reporting format.

The company's current practices particularly support those VSME requirements that rely on existing operational data. These include, for example, energy consumption, emissions, waste recycling rates, employee-related indicators, and supply chain responsibility practices. However, incorporating this information into a structured report requires further processing, including calculations and unit conversions, in order to align with the formats specified by the VSME standard.

Furthermore, the company already collects data more extensively in certain areas than required by the Basic Module. For instance, the company gathers data on its carbon dioxide emissions across scopes 1, 2, and 3, even though scope 3 emissions are only required under the Comprehensive Module (EFRAG 2024).

4 Development of a VSME sustainability reporting model

4.1 Assessment of VSME modules (B1–B11) in relation to current practices

The following table presents a gap analysis of the alignment between the requirements of the VSME Basic Module (B1–B11) and the current practices of the case company. The purpose of the analysis is to assess the extent to which the company's existing sustainability data and processes correspond to the requirements of the standard, as well as to identify key gaps and areas for development. In addition, the analysis categorises the identified deviations according to their nature and underlying causes and outlines the necessary changes to systems and processes required to achieve alignment with the VSME standard.

Table 2 Gap analysis

VSME Basic Module	Disclosure requirement	Current practice	Alignment level	Gap classifica-tion	Root cause	Required system/process change
B1	Basis for preparation	Some required data are in the sustainability data Excel (part sourced from a company information service, part verified with company employees).	Partially aligned	Process gap	Sustainability data collection is not aligned with VSME, as the reporting parameters were originally defined by an external consultant based on the company's internal needs.	Add a "General" worksheet to report B1 disclosure data; many B1 data points are stable and easy to maintain.
B2	Practices, polices and future initiatives	Practices are reported in the 2023 sustainability report (on the company website), but not consolidated in the sustainability data Excel.	Partially aligned	Process gap	Sustainability actions exist, but reporting is fragmented.	Add B2 requirements to the "General" worksheet in the sustainability data Excel to facilitate tracking of progress and support annual VSME reporting.

B3	Energy and greenhouse gas emissions	Energy consumption is reported in different formats across data files: no energy data in the sustainability Excel; production Excel includes electricity and heat separately; fuel use is reported only as CO_2 emissions; total energy consumption (MWh) is not directly reported. GHG emissions are clearly reported (Scopes 1, 2 and 3 separately).	Partially aligned	Structuring gap	ESG data are currently collected across several operational files and are not standardised in line with the VSME reporting structure.	Establish a centralised environmental reporting structure in the sustainability data Excel, including energy consumption brakedown (electricity, heat, self-generated electricity and fuels) aligned with VSME requirements and a formula to calculate total energy consumption.
B4	Pollution of air, water and soil	No local reporting obligations to authorities related to environmental impacts or pollution; only noise emissions monitoring under an environmental permit during the initial operational phase.	Fully aligned	-	-	Disclosure B4 is not applicable to the comnpany.
B5	Biodiversity	The company has one factory located in Tornio, Finland.	Fully aligned	-	-	The factory is not located in a biodiversity-sensitive area.
B6	Water	Total water consumption is reported in litres (sustainability data Excel) and cubic metres (production data, VSME unit). No reference to water stress areas; the only factory is in Tornio, not a high water stress area.	Fully aligned	-	-	No gaps identified in water reporting compared to the VSME standard.

B7	Resource use, circular economy and waste management	Total waste, recycled/reused waste, mixed waste and hazardous waste are reported (in the sustainability data Excel and production data). Raw material volumes, use, reuse and origin are reported consistently.	Partially aligned	Structuring gap	Waste volumes are reported, but not in accordance with EU List of Waste (LoW) codes (as required by the VSME standard).	Report waste according to LoW classifications and clearly define the company's circular economy principles in the sustainability data Excel to enable direct alignment with the VSME template.
B8	Workforce – General characteris-tics	Number of employees and gender distribution (male/female) are reported. Type of employment contract (permanent/fixed-term) and number of leavers are reported (in the sustainability data Excel).	Partially aligned	Structuring gap	Workforce general characteristics are reported fairly well, with minor deviations from the VSME standard.	Align with the VSME standard: change gender distribution to male/female/other and report number of employees at the beginning and end of the financial year (VSME uses these to calculate turnover rate).
B9	Workforce – Health and safety	Number of work-related accidents is reported (sustainability data Excel). Fatalities resulting from work-related injuries or illnesses are not reported separately.	Partially aligned	Data gap	Largely aligned with the VSME standard, with one exception.	Maintain current health and safety reporting, but add to the "Social" worksheet in the sustainability data Excel the B9 disclosure: "number of fatalities…", even if the figure is 0.
B10	Workforce – Remuneration, collective bargaining and training	Annual training hours are reported for senior salaried employees in the sustainability data Excel.	Partially aligned	Data gap & Structuring gap	Reported data are not fully aligned with VSME requirements and some data are missing.	Add to the "Social" worksheet in the sustainability data Excel: applicable collective agreements, gender pay gap (if any), and training hours for the entire workforce, disaggregated by gender.
B11	Convictions and fines for corruption and bribery	Disclosure B11 is not reported separately; however, there is nothing to report.	Fully aligned	-	-	The number of convictions and fines can be recorded as zero or left unreported, in which case the value is assumed to be zero.

Based on the gap analysis, it can be concluded that the case company's current sustainability practices are largely aligned with the requirements of the VSME standard. Several disclosure requirements are already fully met, while others still require further development. The key gaps relate to the fragmented nature of the data and the lack of standardisation in the reporting process. ESG data are collected without a unified structure aligned with the VSME standard, and some of the data do not meet the required level of accuracy.

However, the identified development needs are primarily operational in nature and relate to the systematisation of existing data. The developed gap analysis provides a structured approach for assessing the current state in relation to the VSME standard. It may also be applicable to other SMEs in similar situations when evaluating the alignment of their existing practices and data with the requirements of the standard.

4.2 Interpretation of gaps in relation to VSME requirements

Burritt and Schaltegger (2010) identify three key approaches to the collection and management of sustainability information: the inside-out approach, the outside-in approach, and the twin-track approach. In the inside-out approach, the collection of sustainability data is primarily based on the company's own strategy and its implementation. In this model, corporate strategy is translated into performance indicators and information systems that are utilised in reporting.

In contrast, the outside-in approach is driven by stakeholder expectations and societal pressures. In this approach, corporate sustainability reporting is typically guided by a reporting framework or standard (in the context of this study, for example the GRI), which aims to respond to stakeholders' information needs and to enhance the organisation's legitimacy and reputation. The third approach, the twin-track approach, combines these two perspectives, whereby sustainability processes simultaneously support internal decision-making while also generating information for external reporting.

The results of the gap analysis conducted in this study indicate that a key development need relates particularly to linking the structure and collection of sustainability data more directly to the requirements of the VSME standard. Although most of the information required by the VSME standard was available within the company, the data were not fully aligned with the reporting structure defined by VSME. The framework proposed by Burritt and Schaltegger (2010) provides a useful lens for interpreting this finding. The company's current approach to the collection and management of

sustainability data is partly driven by internal organisational needs, but also by the information requirements of key stakeholders, such as customers. However, the data collection processes were not originally designed in accordance with the structure of any specific reporting standard. This partly explains why the reporting structure required by the VSME standard could not in all respects be directly constructed from the existing data.

4.3 Design principles for the VSME reporting model

The design of the reporting model was based on the gaps identified in the gap analysis and in Section 4.2 in relation to the requirements of the VSME Basic Module. The objective was to develop a model that enables compliant reporting while making use of the company's existing data sources and operational practices to the greatest extent possible.

One of the key challenges faced by SMEs in sustainability reporting relates to data collection and management processes, as well as the limited resources available for these activities (Alho & Ranta 2025). For this reason, the reporting model was designed in a way that does not significantly increase workload or require additional dedicated resources. Burritt and Schaltegger (2010) similarly emphasise that sustainability reporting in SMEs is often built upon existing operational information flows. Accordingly, the aim was to integrate the VSME reporting process into the company's current practices by leveraging already collected data and established processes.

In practice, this implies that the existing Excel-based sustainability data tool is extended to include the disclosures required by the VSME standard, and that the data is aligned with the standard's requirements. As a result, VSME reporting would not substantially increase workload or resource requirements alongside the company's current sustainability reporting but would instead rely largely on the harmonisation of existing data.

Although the reporting model is primarily designed to meet the requirements of the VSME Basic Module, consideration is also given to the potential future expansion towards the Comprehensive Module. For this reason, the model may incorporate selected disclosures from the Comprehensive Module in cases where the company already collects the relevant data, such as Scope 3 greenhouse gas emissions. This forward-looking approach supports the gradual development of reporting practices and facilitates a smoother transition to a more comprehensive reporting framework in the future.

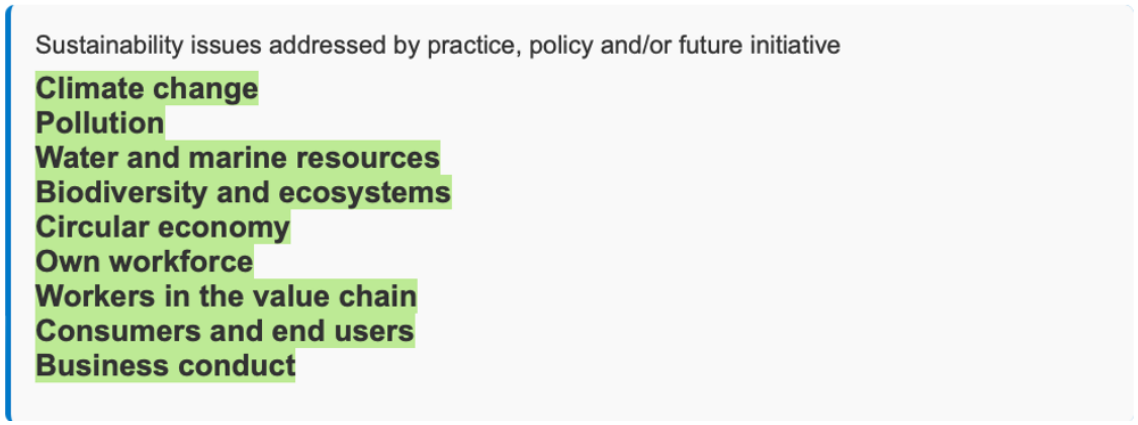
5 Implementation and findings

5.1 VSME sustainability report prototype (Basic module)

The VSME report was developed using the VSME Digital Template prepared by EFRAG, and its structure follows the disclosures defined in the Basic Module (B1–B11). The Digital Template is an Excel-based file, which was converted into a human- and machine-readable XBRL format using a conversion tool provided by EFRAG. The XBRL output was subsequently transformed into a PDF-format report to enhance readability and accessibility.

The report was prepared using the company's existing sustainability and production data as primary data sources, supplemented in certain sections with clarifying information obtained through additional inquiries with company personnel. Structurally, the report consists of four main sections: general information, environmental metrics, social metrics, and governance-related information. The report follows the logic of the VSME standard, progressing from general company information towards more detailed sustainability metrics. The disclosures are categorised as "Always to be reported" and "If applicable", allowing metrics that are not relevant to the company or its operations to be omitted.

The first section of the report (B1–B2) includes general information on the basis of preparation as well as a description of the company's sustainability practices, policies, and future initiatives. The purpose of this section is to provide context for the reported data and to describe the company's overall approach to sustainability. An example extract is presented from section B2 – Practices, policies and future initiatives for transitioning towards a more sustainable economy.


Sustainability issues addressed by practice, policy and/or future initiative

Climate change
Pollution
Water and marine resources
Biodiversity and ecosystems
Circular economy
Own workforce
Workers in the value chain
Consumers and end users
Business conduct

Figure 4 VSME Report prototype B2: Practices, policies and future initiatives for transitioning towards a more sustainable economy

The environmental section (B3–B7) covers key metrics related to environmental impacts, including energy consumption, greenhouse gas emissions, water use, and material and waste management. These data are presented both in aggregate form and disaggregated into relevant categories, such as renewable and non-renewable energy consumption. The disclosures B4 – Pollution of air, water and soil and B5 – Biodiversity were assessed as not applicable to the company's operations and, as they fall under the "If applicable" category, were therefore left unreported. Examples of environmental metrics include B3 – Energy and greenhouse gas emissions: Breakdown of energy consumption and B7 – Resource use, circular economy and waste management: Breakdown of waste by type, which clearly illustrate the distinction between renewable and non-renewable energy as well as between recycled and non-sorted waste.

	2023-01-01 – 2023-12-31		
	MWh		
	Total renewable and non-renewable energy	Renewable energy	Non-renewable energy
Energy consumption from electricity	330.05	330.05	0.00
Energy consumption from self-generated electricity	0.00	0.00	0.00
Energy consumption from fuels	0.96	0.00	0.96

Figure 5 VSME Report prototype B3: Breakdown of energy consumption

Type of waste	2023-01-01 – 2023-12-31					
	Waste diverted to recycle or reuse (volume)	Waste diverted to recycle or reuse (mass)	Waste directed to disposal (volume)	Waste directed to disposal (mass)	Total waste recycled, reused and directed to disposal (volume)	Total waste recycled, reused and directed to disposal (mass)
02 03 99 - Non-Hazardous - Wastes not otherwise specified		175.00 t		10.10 t		185.10 t
16 05 06 - Hazardous - Laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals		0.00 kg		304.00 kg		304.00 kg

Figure 6 VSME Report prototype B7: Breakdown of waste by type

The social section (B8–B10) focuses on workforce-related information, including employee composition, occupational health and safety, as well as training and remuneration. The aim is to reflect the company's social responsibility, particularly from the perspective of employees. As an example, the metrics under disclosure B9 – Workforce: Health and safety is presented. The metrics include rate of recordable work-related accidents which is calculated per 100 employees, assuming that each full-time employee works 2,000 hours per year.

Figure 7 VSME Report prototype B9: Workforce – Health and safety

In addition, the report includes narrative sections that can be freely completed to provide supplementary information supporting the quantitative disclosures.

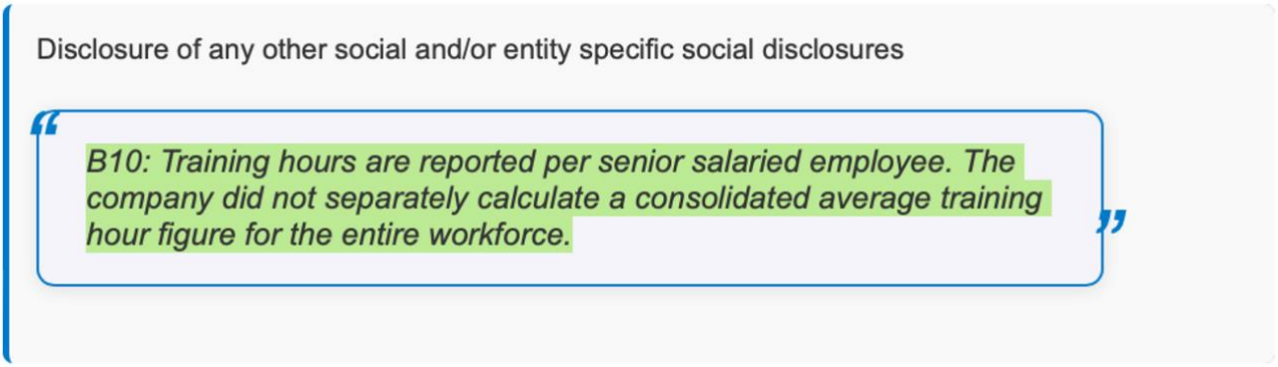


Figure 8 VSME Report prototype B10: Additional supporting information

The final section of the report (B11), relating to governance, addresses convictions and fines related to corruption and bribery within the Basic Module. In the case of the company under study, no such convictions or fines were identified, and the section was therefore left unreported.

5.2 Sustainability metrics and key performance indicators (KPIs)

The VSME report highlights several key metrics and performance indicators (KPIs) that are essential for the company's sustainability management. These metrics can be utilised to monitor the company's sustainability objectives and to support both operational and strategic decision-making. From a managerial perspective, sustainability-related data becomes meaningful only when it is transformed into measurable performance indicators that support decision-making (Burritt & Schaltegger 2010).

The metrics defined by the VSME standard are highly relevant for the case company, as key sustainability issues are already reviewed annually as part of the management review process within the ISO 9001 quality management system (interview, 12 March 2026). Consequently, sustainability metrics can be integrated into the case company's existing management and monitoring practices without significant changes.

The metrics presented in the VSME report are simple and practical, making them particularly suitable for an SME context. The report presents key indicators in a clear and comparable format, which is also accessible to stakeholders such as customers. Key environmental metrics include, for example, energy consumption, greenhouse gas emissions, waste generation and recycling rates, as well as material use. Presenting metrics side by side, such as renewable and non-renewable energy consumption and recycled versus non-sorted waste, enables the company to systematically monitor its environmental performance and assess developments across reporting periods.

In addition to environmental metrics, the VSME report includes key social performance indicators related to workforce and working conditions. These include, for example, the number of employees and gender distribution, type of employment, employee turnover rate, occupational health and safety, as well as training hours and coverage of collective agreements. These metrics enable the monitoring of workforce-related risks and development trends and support human resource management and the organisation's long-term sustainability. For instance, employee turnover rate and training hours can serve as indicators of job satisfaction, skills development, and the company's long-term performance.

Overall, the KPIs presented in the VSME report form a structured framework through which the company's sustainability performance can be systematically measured. These metrics support both internal management and external reporting and facilitate the integration of sustainability into continuous organisational development and decision-making.

5.3 Implementation findings and key observations

This section presents the key findings that emerged during the implementation of the VSME standard into the company's sustainability reporting. The implementation was based on utilising the company's existing data and assessing how well it aligns with the requirements of the VSME Basic Module.

The company already collected a substantial amount of sustainability-related data, much of which is also required by the VSME standard. In particular, data gathered for the company's 2023 sustainability report could largely be utilised for the VSME Basic Module. Environmental data was widely available; however, not all required data was found in the central sustainability data Excel file, and some had to be retrieved from production-level data sources.

In terms of environmental disclosures, energy consumption, waste generation, and material use were identified as areas requiring more detailed reporting compared to previous practices. For energy consumption, the VSME standard requires a breakdown of renewable and non-renewable electricity, as well as self-generated energy on an annual basis. Electricity consumption data was not available in the sustainability data file and had to be extracted from production records. Fuel consumption had been reported in terms of carbon dioxide emissions rather than as physical quantities, and the types of fuels had not been specified. Consequently, fuel types and volumes were clarified in collaboration with company personnel. Reporting fuel consumption in litres was identified as a practical approach, as the VSME template includes a built-in conversion tool that automatically converts litres into MWh and allocates the data to the appropriate fields.

Minor inconsistencies were also identified in waste reporting. Differences were observed between the sustainability data file and production data, particularly regarding hazardous and mixed waste, which had been reported as zero in the sustainability file despite evidence of their generation in production records. In the VSME model, waste must be classified into hazardous and non-hazardous categories and further categorised using the List of Waste (LoW) classification, which was not currently applied by the company.

In relation to social disclosures, several areas requiring further specification were identified. While relevant data existed, it did not fully align with the VSME requirements. For example, gender distribution data included only "male" and "female" categories, whereas the standard also includes "other" and "not reported" categories. The number of employees was available, but it was not specified whether the figures referred to the beginning or end of the reporting period, which is

required for calculating turnover rates. Additionally, information on applicable collective agreements was not included in the sustainability dataset, and training hours were reported only for upper-level employees, without gender breakdowns or calculation of average training hours per employee.

Overall, the findings indicate that a significant portion of the data required by the VSME standard is already available within the company, and the existing data collection processes are largely functional. Responsibilities related to sustainability data collection and reporting were also found to be relatively clear. The implementation primarily required the harmonisation of existing data in terms of format, units, and level of detail to meet the standard's requirements. Furthermore, consolidating all relevant data into a central sustainability data file was identified as an important step in improving the efficiency and consistency of the reporting process.

5.4 Theoretical and practical contributions

This study provides both theoretical and practical contributions through a constructive research approach. It reinforces prior findings on the challenges of sustainability reporting in SMEs, particularly those related to limited resources, the lack of data standardisation, and the prevalence of informal processes. At the same time, the study demonstrates that, despite these challenges, sustainability reporting in accordance with the VSME framework is feasible without significant structural changes, provided that some level of sustainability data is already being collected within the organisation.

In addition, the study contributes a theoretically grounded gap analysis, developed based on existing academic literature. This analytical approach offers a structured means of assessing the alignment between current organisational practices and the requirements of the VSME standard. As such, the gap analysis may be transferable to other SMEs seeking to evaluate the compatibility of their existing data and practices with the standard and to identify key areas for development.

As a concrete contribution, the VSME standard was implemented within the company's existing sustainability practices. By leveraging the company's existing data, a prototype report based on the VSME Basic Module was developed, enabling the identification of key development areas between current data practices and the requirements of the VSME standard. Based on the identified challenges and development needs, a customised Excel-based reporting tool was developed for the company to support the production of VSME-compliant reports while aligning with its existing practices.

The Excel tool was designed based on the structure of the company's pre-existing sustainability data spreadsheet, with the aim of minimising additional workload associated with VSME reporting. In

practice, the model operates such that the company continues to collect sustainability data according to its established procedures, while a separate VSME-aligned worksheet automatically compiles the required information into the correct format using formulas and cell references. Some modifications were nevertheless introduced to the original data collection model to ensure that all information required by the standard can be systematically captured.

The developed model enables the automatic transformation of data into the format required by the VSME standard, eliminating the need for separate data processing or manual conversion. As a result, the reporting tool allows the company to integrate the VSME standard into its sustainability reporting practices without significant changes to existing data collection and reporting processes.

Figures 9 and 10 provide illustrative examples of the model in the context of energy consumption. The first figure presents the company's original environmental data worksheet, where sustainability data is compiled based on production records. The figure is presented in Finnish, as it directly illustrates the company's data collection excel tool, which is maintained in Finnish. This worksheet was extended to include a more detailed breakdown of energy consumption into electricity, district heating, and fuel consumption. These additions do not impose additional workload on the company, as the required data are already available in production records. Furthermore, dropdown menus were introduced to classify energy sources as renewable or non-renewable, as well as to specify fuel types. Based on the selected fuel type, embedded formulas automatically convert fuel consumption from litres into megawatt-hours (MWh), using fuel density and calorific values.

Energian kulutus	Sähkö	330,05	MWh	Uusiutuva
	Itsetuotettu sähkö	0	MWh	-
	Kaukolämpö	606	MWh	Uusiutumaton
	Polttoaine	105	l	Uusiutumaton
	Polttoaine MWh	0,95613	MWh	Bensiini

Figure 9 Sustainability data excel – Energy consumption

The second figure presents the VSME worksheet, which automatically extracts and structures the required data based on the information entered by the company. The selected categories in the dropdown menus are used by the formulas to allocate energy consumption to the appropriate categories, after which total energy consumption is calculated. Through this approach, the company can directly transfer the required data from the VSME worksheet when preparing the report, without the need for additional data collection or transformation.

ENVIRONMENTAL		
B3		
Total energy consumption (MWh)	**937,00613**	
Breakdown of energy	Renewable	Non-renewable
Sähkö (MWh)	330,05	0
Itsetuotettu sähkö (MWh)	0	0
Kaukolämpö (MWh)	0	606
Polttoaine (l)	0	105

Figure 10 VSME Reporting model (excel reporting tool) – Energy consumption

5.5 Risks, challenges and areas for development

The most significant challenges in implementing the VSME standard were related to the fragmentation and lack of standardisation of data. Data collection is conducted more on an ad hoc basis rather than through a standardised process. This is, however, typical in an SME context, where practices tend to be more informal and occur at the operational level rather than through clearly structured processes (Revell et al. 2010). The establishment of formal sustainability processes in SMEs is also challenging due to more limited resources (Alho & Ranta 2025).

When reporting does not follow a specific standard, it may undermine the comparability and reliability of information from a stakeholder perspective. Insufficient sustainability reporting can weaken a company's transparency and competitiveness, particularly in situations where customers or other stakeholders increasingly require comprehensive ESG information. Incomplete and inconsistent data may also give rise to operational risks. These challenges can lead to misinterpretations and reduce the quality of decision-making. Manual data collection and management processes increase the risk of errors and may reduce operational efficiency. Consequently, inadequate sustainability reporting may generate operational, reporting-related, and strategic risks for the company. If current practices are not developed, the company may be unable to meet the requirements of the VSME standard particularly as the standard evolves and reporting requirements expand nor respond effectively to the growing information demands of stakeholders (Eccles et al. 2014).

The company should therefore develop its sustainability data collection practices to ensure systematic coverage of the information required by the VSME standard. This requires the definition of key performance indicators as well as the harmonisation of data, enabling its effective use in reporting and decision-making. However, the development of data collection practices should be implemented in a manner that does not significantly increase resource requirements or workload. In other words,

data collection and management should continue to take place at the operational level across different units, while being standardised in accordance with the formats and units required by the VSME standard. This would facilitate the integration of sustainability and the VSME standard into the company's overall operations (interview, 12 March 2026). Furthermore, the standardisation of data collection processes enhances the comparability of information and enables the more effective integration of sustainability data into the company's management systems. The effective implementation of the VSME Basic Module also increases the company's ability to expand its reporting in the future towards the Comprehensive Module.

5.6 Reflection on the constructive research process

The constructive research process is evaluated in accordance with the criteria proposed by Kasanen et al. (1993). The four key elements of the construction are:

1. Practical relevance
2. Practical functioning
3. Theory connection
4. Theoretical contribution

The construction examined in this study is a prototype sustainability report developed in accordance with the VSME standard.

The practical relevance of the construction is grounded in the increasing need for SMEs to respond to stakeholders' ESG information requirements and to prepare for emerging reporting obligations. In the case company, this need is particularly reflected in sustainability-related requirements imposed by customers, as well as in the company's intention to develop its reporting practices in a more standardised direction. The developed reporting model addresses this need by providing a concrete tool for reporting in line with the VSME standard.

The practical functioning of the construction can be assessed based on the fact that the report prototype was successfully developed using the company's existing data. This demonstrates that reporting in accordance with the VSME standard can be implemented without substantial changes to current practices. At the same time, the process revealed several challenges related to data fragmentation and gaps in relation to the VSME requirements, indicating that the full utilisation of the construction requires further development of reporting processes.

The developed construction is strongly grounded in existing theory and reporting frameworks. The VSME standard serves as the central framework for the construction, complemented by sustainability accounting literature, particularly with regard to the role of data in supporting decision-making. In addition, prior research on the challenges of sustainability reporting in SMEs has been utilised in the development process, thereby strengthening the theoretical foundation of the construction.

The theoretical contribution of the study lies primarily in the operationalisation of the VSME standard within an SME context. The study demonstrates how the requirements of the standard can be translated into a practical reporting model by leveraging existing data. Furthermore, the study provides insights into the challenges faced by SMEs in developing sustainability reporting, particularly from the perspectives of data management and process development.

The constructive research process is also subject to certain limitations, which should be considered when evaluating the results. The study is based on a single case company, which limits the generalisability of the findings. The evaluation of the construction indicates that, although the solution fulfils the key criteria of constructive research, its full implementation requires further development, particularly with regard to data standardisation. Moreover, the development of the construction was constrained by time limitations, and not all potential avenues for further development could be explored.

From the perspective of the case company, as expressed by the employee responsible for the sustainability reporting process, the thesis proved to be both practical and timely, as it supported the structuring of sustainability efforts in a resource-efficient manner. A key strength of the study was its ability to leverage existing data and processes without requiring the introduction of substantial new structures. The conducted gap analysis indicated that the primary development needs relate to the systematisation of data rather than the creation of entirely new practices. Furthermore, the Excel-based reporting model aligns well with the everyday realities of an SME, as it is flexible, user-friendly, and scalable. The process also enhanced the company’s understanding of how the VSME standard can function as a supportive framework and facilitate responses to increasing stakeholder requirements.

6 Conclusions and recommendations

6.1 Summary of key findings

The aim of this study was to examine the effects of adopting the VSME standard on SMEs' sustainability practices and stakeholder relationships, to identify the key organisational and resource-related challenges associated with its implementation, and to develop a practical and scalable reporting model. The study combined a gap analysis with a constructive research approach, through which the case company's existing sustainability data and practices were analysed. Based on this analysis, a prototype sustainability report in accordance with the VSME Basic Module was developed.

The findings indicate that the adoption of the VSME standard requires the systematisation of ESG governance practices and enhances the transparency of reporting. Although the case company already demonstrated a relatively advanced level of sustainability practices within an SME context, part of the data remained fragmented. Reporting in accordance with the VSME standard facilitates the structuring of these practices into a more coherent framework, thereby strengthening the company's ability to respond to increasing ESG information demands from stakeholders, particularly customers. Furthermore, the VSME standard is expected to standardise ESG data requests from stakeholders and reduce the number of uncoordinated requests (EFRAGt 2024).

In the case company, the identified challenges were typical for SMEs, including the partial lack of standardisation and the informal nature of data collection and reporting practices, largely driven by limited resources and the absence of formalised processes. However, the analysis demonstrates that a resource-efficient and practical VSME reporting model can be developed by leveraging the company's existing data and practices. The developed report prototype showed that reporting in accordance with the VSME standard is feasible without significant structural changes, although it requires the harmonisation of data in line with the standard. The scalability of the model is based on the possibility of gradually expanding reporting from the Basic Module towards the Comprehensive Module.

In conclusion, the implementation of the VSME standard can significantly support the development of ESG governance in SMEs and strengthen stakeholder relationships. At the same time, it requires the systematisation of data and processes to ensure that reporting becomes reliable, comparable, and decision useful.

6.2 Research reliability and ethical considerations

This study has been conducted using a systematic and transparent research design, which supports its reliability. The research adopts a constructive research approach, combining qualitative content analysis, gap analysis, and the development of a practical solution based on these analyses, thereby enabling both analytical and applied insights. The reliability of the findings is strengthened through data triangulation, as multiple data sources have been utilised, including company documentation, sustainability data, and a semi-structured thematic interview. Furthermore, the research process is described in a structured manner, allowing the reader to trace how the conclusions have been derived from the empirical material.

However, certain limitations related to reliability are acknowledged. The generalisability of the findings is limited due to the case study approach. Part of the data used in the analysis is based on internally generated company information, which may include inconsistencies or gaps. In addition, the developed solution has not been tested over a longer period of time, and therefore its long-term applicability requires further examination.

Ethical considerations have been taken into account throughout the research process. The study has been conducted in agreement with the case company, and all company data have been used appropriately. Potentially confidential or sensitive information has been handled with care and presented in a manner that does not compromise the company's interests. The researcher has aimed to maintain objectivity throughout the analysis, despite the close collaboration with the case company. Overall, the study can be considered reliable, although it is subject to the limitations discussed above.

References

Alho, Eeva – Ranta, Riia (2025) Kestävyysraportoinnin haasteet ja tukitarpeet suomalaisyrityksissä. *Ympäristöministeriö.* <https://julkaisut.valtioneuvosto.fi/server/api/core/bitstreams/54186d53-d1e2-4f9c-bc7d-8268eccc8105/content>, haettu 29.1.2026

Ardito, Lorenzo (2023) The influence of firm digitalization on sustainable innovation performance and the moderating role of corporate sustainability practices: An empirical investigation. *Business strategy and the environment, 2023-12, Vol.32 (8), p.5252-5272*.

Bhimani, Alnoor – Silvola, Hanna – Sivabalan, Prabhu (2016) Voluntary Corporate Social Responsibility Reporting: A Study of Early and Late Reporter Motivations and Outcomes. *Journal of management accounting research, 2016-06, Vol.28 (2), p.77-101.*

Burritt, Roger L – Schaltegger, Stefan (2010) Sustainability accounting and reporting: fad or trend? *Accounting, auditing & accountability journal, 2010-09, Vol.23 (7), p.829-846*.

Deegan, Craig (2002). Introduction: The legitimising effect of social and environmental disclosures. *Accounting, Auditing & Accountability Journal, 15(3), 282–311*.

Deegan, Craig – Rankin, Michaela (1996) Do Australian companies report environmental news objectively? An analysis of environmental disclosures by firms prosecuted successfully by the Environmental Protection Authority. *Accounting, auditing & accountability journal, 1996-03, Vol.9 (2), p.50.*

Dhaliwal, Dan S. – Li, Oliver Zhen – Tsang, Albert – Yang, Yong George (2011) Voluntary Nonfinancial Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting. *The Accounting review, 2011-01, Vol.86 (1), p.59-100.*

Eccles, Robert G. – Ioannou, Ioannis – Serafeim, George (2014) The Impact of Corporate Sustainability on Organizational Processes and Performance. *Management science, 2014-11, Vol.60 (11), p.2835-2857.*

EFRAG (2024) Voluntary sustainability Reporting Standard for non-listed SMEs (VSME). <https://www.efrag.org/sites/default/files/sites/webpublishing/SiteAssets/VSME%20Standard.pdf>, haettu, 29.1.1026

EUR-Lex: CSRD (2022). <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022L2464>, haettu 5.2.2026

Finanssivalvonta (2023). <https://www.finanssivalvonta.fi/tiedotteet-ja-julkaisut/markkinat-tiedotteet/markkinat-tiedote-42023/5.-uuden-kestavyysraportoinnin-viitekehys/>, haettu 9.2.2026

Friede, Gunnar – Busch, Timo – Bassen, Alexander (2015) ESG and financial performance: aggregated evidence from more than 2000 empirical studies. *Journal of sustainable finance & investment, 2015-10, Vol.5 (4), p.210-233.*

Gualandris, Jury – Golini, Ruggero – Kalchschmidt, Matteo (2014) Do supply management and global sourcing matter for firm sustainability performance?: An international study. *Supply chain management, 2014-01, Vol.19 (3), p.258-274.*

Gurvitš-Suits, Natalie Aleksandra – Sidorova, Inna (2022) Decade of Sustainability Reporting in EU: Main Changes and Trends. Case of Companies Listed on NASDAQ OMX Baltic Main List. *European integration studies (Kaunas University of Technology), 2022-09 (16), p.78-86.*

Ha, Huong (2014) Change management for sustainability. *Business Expert Press.*

Herold, David Martin (2018) Demystifying the link between institutional theory and stakeholder theory in sustainability reporting. *Economics, management and sustainability, 2018-11, Vol.3 (2), p.6-19.*

Jenkins, Heledd (2006) Small Business Champions for Corporate Social Responsibility. *Journal of business ethics, 2006-10, Vol.67 (3), p.241-256.*

Johnson, Matthew P. (2015) Sustainability Management and Small and Medium-Sized Enterprises: Managers' Awareness and Implementation of Innovative Tools. *Corporate social-responsibility and environmental management, 2015-09, Vol.22 (5), p.271-285.*

Kasanen, Eero – Lukka, Kari – Siitonen, Arto (1993) The Constructive Approach in Management. Accounting Research. *Journal of Management Accounting Research. Fall93, Vol. 5, p243-264. 22p. 4 Charts.*

Kotter, John P. (1995) Leading change: why transformation efforts fail. *Harvard business review, 1995-03, Vol.73 (2), p.59-67.*

Krippendorff, Klaus (2019) Content analysis: an introduction to its methodology. *SAGE Publications, Inc.*

Kücükgül, Egemen – Cerin, Pontus – Liu, Yang (2022) Enhancing the value of corporate sustainability: An approach for aligning multiple SDGs guides on reporting. *Journal of cleaner production, 2022-01, Vol.333, p.130005, Article 130005.*

Mayring, Philipp (2000) Qualitative Content Analysis. *Forum, qualitative social research, 2000-06, Vol.1 (2)*

Porter, Michael E. – van der Linde, Claas (1995) Toward a New Conception of the Environment-Competitiveness Relationship. *The Journal of economic perspectives, 1995-10, Vol.9 (4), p.97-118.*

Revell, Andrea – Stokes, David – Chen, Hsin (2010) Small businesses and the environment: turning over a new leaf?. *Business strategy and the environment, 2010-07, Vol.19 (5), p.273-288.*

Scagnelli, Simone Domenico – Corazza, Laura – Cisi, Maurizio (2013) How SMEs disclose their sustainability performance. Which variables influence the choice of reporting guidelines? *Accounting and Control for Sustainability, 2013, Vol.26, p.77-114.*

Sroufe, Robert (2017) Integration and organizational change towards sustainability. *Journal of cleaner production, 2017-09, Vol.162, p.315-329.*

Van, Hien Vo – Nguyen, Nha Minh – Abu Afifa, Malik – Vo, Dao Truc Thi – Van Bui, Duong (2025) Sustainability reporting quality and firm value in ASEAN+3: A series moderation model. *Corporate social-responsibility and environmental management, 2025-03, Vol.32 (2), p.2207-2224.*

Vigneau, Laurence – Humphreys, Michael – Moon Jeremy (2015) How do firms comply with international sustainability standards? Processes and consequences of adopting the global reporting initiative. *Journal of Business Ethics, 131(2), 469-486.*

Appendices

Appendix 1 Semi-structured interview guide

The aim of the interview is to gain an understanding of the following themes: the current level of sustainability management in the company:

- Existing ESG practices and performance indicators
- Resources and processes for ESG data collection
- ESG-related requirements from customers and financial stakeholders

Interviewees: Head of market development (responsible for the sustainability reporting process) and production manager of the company

Interview questions

1. What processes are in place for collecting sustainability-related data?
    - Is the data collected manually or through systems?
    - Is data collection based on regular measurements or conducted on an ad hoc basis?
    - Are clear responsibilities assigned for the collection of different types of data?
2. How is the collected sustainability data managed and stored?
    - Where is the data stored (e.g. Excel, ERP system, or other systems)?
    - Is there a common structure or standardised format for the data?
    - Who is responsible for the accuracy and timeliness of the data?
3. What resources does the company have for the collection and management of sustainability data?
4. What types of sustainability or reporting requirements are imposed on the company by external stakeholders?
    - Customers, financial institutions / investors or other partners?
    - What is the level of these requirements (e.g. questionnaires, audits, reporting frameworks)?
    - Have these requirements influenced data collection or related processes?

Appendix 2 Data protection notice

1. Rekisterin nimi	Implementation of the VSME Standard in SME Sustainability Reporting: A Constructive Case Study
2. Rekisterinpitäjä	Matlena Karvonen Turun Kauppakorkeakoulu Turun yliopisto
3. Vastuu henkilönyhteystiedot	maaurk@utu.fi
4. Henkilötietojen käsittelyt tarkoitukset ja käsittelyn oikeusperuste	Tutkimuksessa kerätyssä haastattelussa kartoitetaan case-yrityksen vastuullisuuden nykytilaa prosesseista vaastaavilta työntekijöiltä. Henkilötietojen EU:n yleisen tietosuoja-asetuksen 6 artiklan mukaisena käsittelyperusteena on ☒ käsittely on tarpeen tieteellistä tutkimusta varten (yleinen etu 6 art. 1 e-kohta).
5. Käsiteltävät henkilöryhmät	Rekisteriin tallennetaan rekisteröidyistä seuraavia tietoja: Haastateltavien näkemykset case-yrityksen vastuullisuusraportoinnin prosesseista, asemataso työpaikassa ja työkokemus.
6. Henkilötietojen vastaanottajat ja vastaanottajaryhmät	Tietoja ei siirretä eikä luovuteta tutkimusryhmän ulkopuolelle.
7. Tiedot tietojen siirrosta kolmansiin maihin	Henkilötietoja ei luovuteta EU:n tai Euroopan talousalueen ulkopuolelle.
8. Henkilötietojen säilyttämisaika tai sen määrittämisen kriteerit	Haastattelu litteroitiin Microsoft Teamsin litterointityökalun avulla. Kun tutkielma on hyväksytty, tutkimusaineistosta poistetaan suorat tunnistetiedot ja näitä tiedostoja säilytetään viisi vuotta tutkielman jälkeen Turun yliopiston suositusten mukaisesti.
9. Rekisteröidyn oikeudet	Rekisteröidyllä on oikeus pyytää pääsy häntä itseään koskeviin henkilötietoihin sekä oikeus pyytää tietojensa oikaisemista tai poistamista taikka käsittelyn rajoittamista tai vastustaa niiden käsittelyä.
10. Tiedot siitä, mistä henkilötiedot on saatu	Tiedot kerätään tutkimuksen haastatteluista.
11. Tiedot automaattisen päätöksenteon ml. profiloinnin olemassa olosta	Tietoja ei käytetä automaattiseen päätöksentekoon tai profiloinnin tekemiseen.

Appendix 3 Use of artificial intelligence

Generative artificial intelligence has been used as a supportive tool in the preparation of this thesis. The tools used, their purposes, and the verification measures are specified below. I have familiarised myself with the University of Turku School of Economics guidelines on the use of AI and have complied with them. I confirm that I have used AI tools with due care and have reported their use in accordance with the applicable guidelines.

Tool used: OpenAI ChatGPT (GPT-5.3 language model)

Stages of use: various stages of the research process

Purpose of use: AI was utilised as a supportive tool, particularly for English-language translation, linguistic refinement, the identification of potentially relevant academic sources, and the structuring of the thesis.

Example prompt: “Translate the following paragraph into academic English: (paragraph from the thesis)”

Verification: All outputs generated by AI were critically evaluated, and no AI-generated content has been used as such in the thesis. All analysis, interpretations, findings, and conclusions have been independently produced by the author. Furthermore, all sources cited in the thesis have been selected and verified by the author to ensure their relevance and reliability.

The use of artificial intelligence has complied with the guidelines of the University of Turku, and full responsibility for the content of the thesis rests entirely with the author.