

***Understanding the Responsibilities and
Barriers for Sustainability Managers in
Corporate Sustainable Transformation
in the German Finance Industry***

Liza Kirchberg

Doctor of Business Administration

University of Worcester

2024

'The people who are crazy enough to think they can change the world are the ones who do'.

Steve Jobs

Declaration

I, Liza Kirchberg, declare that the work in this thesis was carried out in accordance with the regulations of the University of Worcester and is original except for those indicated by specific references in the text. No part of the thesis has been submitted as part of any other academic award. The thesis has not been presented to any other educational institution in the United Kingdom or overseas. Any views expressed in the thesis are those of the author and in no way represent those of the university.

Signed: Liza Kirchberg

Date: 18. June 2024

Acknowledgements

The publication of this thesis marks the conclusion of my Doctorate in Business Administration journey. Reflecting on this path, it's remarkable to see how different life choices, both deliberate and unforeseen, have intertwined to bring me to this moment. I am deeply grateful to the invaluable 'Guiding Companions' who made this publication possible.

I begin by expressing my deepest gratitude to my two supervisors, **Dr. Robin Bell** and **Dr. Jane Keenan**, from the University of Worcester. Despite the geographical distance between us, your unwavering support has been a constant presence throughout this journey. Your feedback has been invaluable, and your guidance has consistently brought clarity, helping me stay on course through this rollercoaster of a journey. I also extend my heartfelt thanks to **Nichola Armstrong** and **Dr. Volker Wittberg** for your steadfast support along the way.

My doctoral journey was made even more memorable by my amazing cohort: **Annika, Nina, Annika, Anke, Werner, and Christian**. Together, we've achieved so much, and I'm incredibly proud of each one of us! A special thanks as well to **Dr. Inga Knoche** for always having an open ear and generously sharing your advice with me – you never grew tired of my questions.

From the bottom of my heart, I want to thank you, **Mama** and **Papa** – the best parents in the world, whom I love more than anything. Your endless love, tireless support, and unwavering belief in me have meant everything. Thank you for teaching me strength and courage, and for showing me that nothing is impossible if you work hard enough for your dreams.

This brings me to my loving, beautiful, and brilliant little sister, **Anja**. I am incredibly proud of you and love you with all my heart. I am so grateful to know that we will always be there for each other, no matter what.

Dear **Oma**, you made everything in this world seem possible because “Liza can.” You are my hero, and you've played a huge role in shaping who I am today. Even though **Opa** couldn't be with us on this journey, I know he is immensely proud of me and will always hold a special place in my heart. I can imagine how happy he is that I completed my doctorate in England, his happy place – a sign, that he was, and always will be, with me as my guardian angel.

From the bottom of my heart, I thank you, **Stefano**, for your endless love. You are my rock. We have faced so many highs and lows together, and each challenge has only made us stronger. I deeply appreciate how we support each other to become the best versions of ourselves. Thank you for always believing in me and for standing by me with all your unconditional, warm love and strength in all my ideas.

Thank you to **Oma Elli** for always having enough reasons to celebrate the small milestones with your 'Pfälzer' wines. Thank you for being a part of this very important journey.

This is my contribution toward achieving the Sustainable Development Goals to preserve the beauty of Mother Earth.

Abstract

As climate change impacts escalate and regulatory frameworks evolve, the finance industry is increasingly important in driving sustainable transformation. This thesis investigates the role of sustainability managers in steering corporate sustainable transformation in the German finance industry, focusing on their understanding, responsibilities, and barriers to success. Addressing a gap in the literature, this research delves into the responsibilities of sustainability managers in the German financial sector, areas critical for advancing effective sustainability strategies tailored to this industry's challenges.

Employing a qualitative grounded Delphi study within a social-constructivist paradigm, this research engaged 28 sustainability managers to share their perspectives on their understanding, responsibilities and perceived transformation barriers. Qualitative data was collected through two rounds of online questionnaires and analysed using grounded theory coding (open, axial, and selective), achieving consensus statements with 75% – 100% agreement among participants.

The findings demonstrate that sustainability managers perceive corporate sustainability transformation as a holistic reconfiguration of business models, demanding the integration of sustainability goals into organisational processes and decision-making. This understanding differs from narrower concepts of corporate sustainable change and development. The study also reveals a significant discrepancy between these sustainability managers' official and perceived responsibilities, underscoring their under-recognised yet crucial role as 'change agents' for sustainability and 'knowledge brokers'. Furthermore, the research highlights the critical influence of top management's commitment and change-conducive corporate culture as essential for overcoming transformation barriers.

This work enriches the academic discourse on sustainability in the German financial industry and offers practical recommendations for enhancing corporate sustainability transformation strategies. By delineating the complex roles and systemic challenges that sustainability managers face, this thesis facilitates the adoption of effective sustainability practices, especially in the German finance industry.

Keywords: Corporate Sustainable Transformation, German Finance Industry, Sustainability Manager, Grounded Delphi Method

Table of Contents

Declaration	I
Acknowledgements	II
Abstract	IV
List of Figures	IX
List of Tables	X
Abbreviations	XI
1. Introduction	1
1.1 Context	1
1.1.1 Sustainable Environment as the Basis for Economic Stability	1
1.1.2 Politics Enabling Corporate Sustainable Development	4
1.1.3 Sustainability in the German Finance Industry	5
1.1.4 Sustainable Development in the German Finance Industry	6
1.1.5 Evolving Responsibilities of Sustainability Managers	8
1.2 Research Aim, Questions and Objectives	10
1.3 Contribution	11
1.4 Method	12
1.5 Thesis Structure	13
2. Literature Review	14
2.1 Development of Corporate Sustainability	15
2.1.1 Corporate Sustainability	16
2.1.2 Achieving Corporate Sustainability	18
2.1.3 Corporate Sustainability Frameworks	18
2.1.4 Sustainable Development	20
2.1.5 Corporate Sustainable Development in Practice	22
2.1.6 Sustainable Change	22
2.1.7 Corporate Sustainable Change in Practice	23
2.1.8 Sustainable Transformation	24

2.1.9 Corporate Sustainable Transformation in Practice	26
2.1.10 Comparison of the Terms	26
2.2 Barriers to Corporate Sustainability Transformation	28
2.3 Responsibility of Sustainability Managers	30
2.4 Identified Gaps in the Literature	32
2.5 Summary	34
3. Methodology	36
3.1 Philosophy	36
3.1.1 Role of the Researcher	38
3.1.2 Ontology	38
3.1.3 Epistemology and Axiology	39
3.1.4 Social Constructivism	40
3.2 Research Design	41
3.2.1 Choice of Research Design	41
3.2.2 Delphi Study	42
3.2.3 Grounded Theory Approach	43
3.2.3.1 Open Coding	44
3.2.3.2 Axial Coding	44
3.2.3.3 Selective Coding	45
3.2.4 Grounded Delphi Method	45
3.3 Rigour	46
3.4 Ethics	49
3.5 Conducting the Grounded Delphi Method	51
3.5.1 Sampling Method	51
3.5.2 Sampling Criteria	52
3.6 Round°1: Open-ended Online Questionnaire	52
3.6.1 Round°1: Questionnaire Development	52
3.6.2 Round°1: Pilot Test	54
3.6.3 Round°1: Data Collection	55
3.6.4 Round°1: Participant Recruitment and Retention	56

3.7 Round°1: Coding	57
3.7.1 Round°1: Coding Process 'Context'	58
3.7.2 Round°1: Coding Process 'Understanding'	60
3.7.3 Round°1: Coding Process 'Responsibility'	63
3.7.4 Round°1: Coding Process 'Barriers'	66
3.7.5 Round°2: Pilot Test	70
3.7.6 Round°2: Level of Consensus	70
3.7.7 Round°2: Summary	71
3.8 Summary	72
4. Data Analysis and Results	73
4.1 Round°2: Data Analysis	73
4.1.1 Assessing Sustainability Manager's Context	74
4.1.2 Answering the First Research Question	77
4.1.3 Answering the Second Research Question	86
4.1.4 Answering the Third Research Question	95
4.2 Summary	107
5. Discussion	108
5.1 Sustainability Managers' Understanding	108
5.2 Sustainability Managers' Responsibilities	110
5.3 Sustainability Managers' Perceived Barriers	112
5.4 Summary	114
6. Conclusion	116
6.1 Achieving the Research Objectives	117
6.1.1 Achieving the First Research Objective	117
6.1.2 Achieving the Second Research Objective	119
6.1.3 Achieving the Third Research Objective	121
6.2 Contribution to Knowledge	123
6.3 Contribution to Practice and Recommendations for Action	124
6.4 Limitations and Future Research Directions	126
6.5 Reflection	128

6.6 Summary	129
References	130
Appendix	146

List of Figures

Figure 1: Country Overshoot Day 2023 _____	2
Figure 2: SDGs Wedding Cake _____	3
Figure 3: Financing Structure of German Small and Medium Enterprises _____	6
Figure 4: Sustainable Development Goals _____	20
Figure 5: Sustainable Development Goals Transformation Paths _____	24

List of Tables

Table 1: Term Comparison _____	26
Table 2: Effectiveness Context for Sustainability Manager _____	74
Table 3: Differences Between Corporate Change, Transformation, and Development ____	78
Table 4: Understanding Corporate Sustainable Transformation _____	80
Table 5: Future Perspectives on Corporate Sustainable Transformation _____	81
Table 6: Key Drivers of Future Corporate Sustainable Transformation _____	82
Table 7: Official Responsibilities in Corporate Sustainable Transformation _____	86
Table 8: Additional Responsibilities in Corporate Sustainable Transformation _____	87
Table 9: Discrepancies Between Official and Additional Responsibilities _____	90
Table 10: Future Development of Responsibilities _____	92
Table 11: Barriers to Corporate Sustainable Transformation _____	95
Table 12: Enablers of Corporate Sustainable Transformation _____	99
Table 13: Emerging Enablers of Corporate Sustainable Transformation _____	102

Abbreviations

SDGs Sustainable Development Goals

UN United Nations

1. Introduction

This introductory section provides an overview of the research context and the resulting research needs. Following the outline and description of the research context, the research aim, questions, and objectives are presented. Subsequently, the research contribution of this thesis is summarised, along with the underlying method. This section concludes with the presentation of the thesis structure, offering a brief and concise overview of each section.

1.1 Context

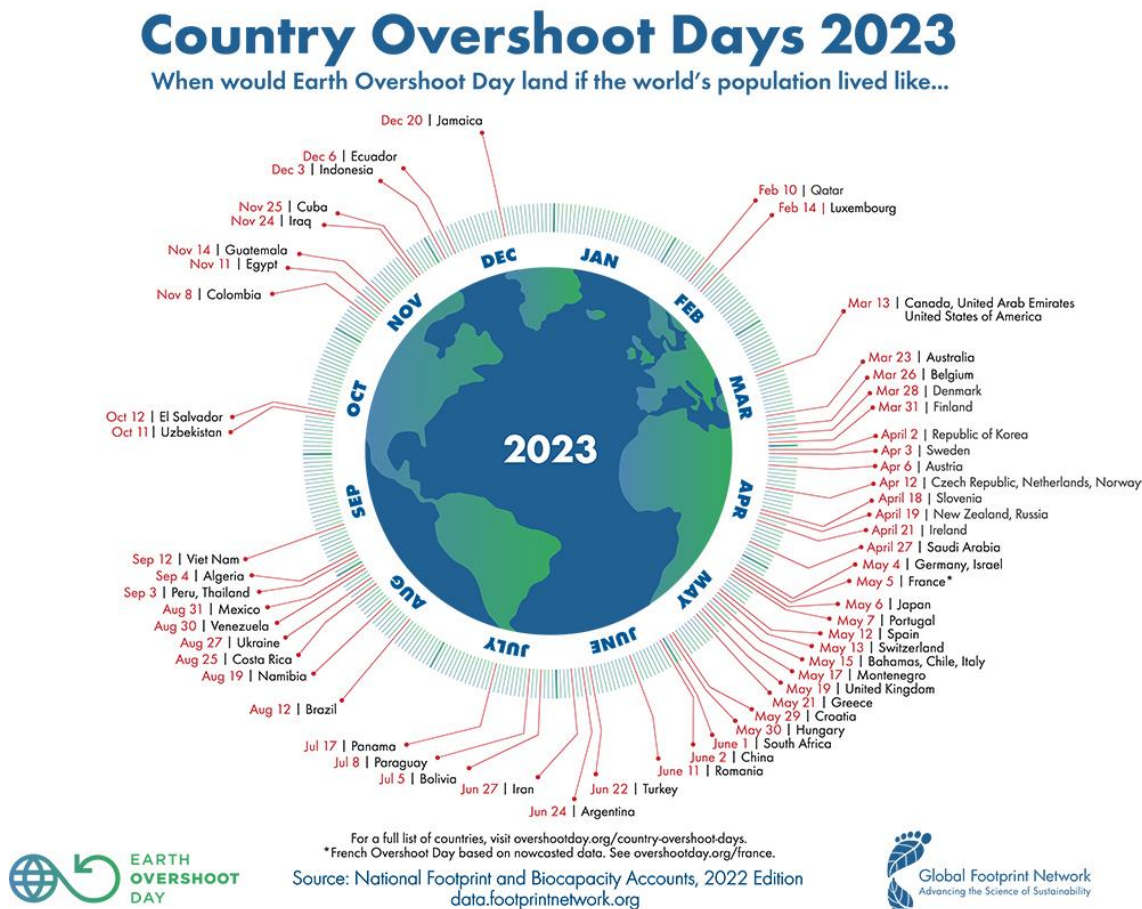
1.1.1 Sustainable Environment as the Basis for Economic Stability

Since 2018, notable climate conferences have highlighted that the global economy is consuming natural resources at an unsustainable rate. According to the Circular Gap Report (2023), 70% more resources than the Earth can safely replenish are used, with only 8.6% of these materials being recycled, highlighting a significant circularity gap. Further, global circularity has decreased from 9.1% in 2018 to 8.6% in 2020 (Circular Gap Report, 2023). As the status quo of the global economic system and the global population in this Circular Gap Report show, only a few companies and citizens have established resource-efficient production cycles or behaviours. This unsustainable trend underscores the need to shift towards more sustainable economic practices, as a sustainable environment forms the foundation for society and health and is the basis for economic stability. However, sustainable development is a challenge, as issues with climate change and resulting regulatory measures are increasing. According to the Circular Gap Report 2023, regenerative and ethical behaviour rather than extractive and exploitative practices must become the norm. The implications of these practices are profound. The Intergovernmental Panel on Climate Change (2023) reports a projected global warming of 3.2°C by 2050, far exceeding the targets set by the Paris Agreement, emphasising the urgent need to mitigate climate change.

In 2023, according to the Global Footprint Network, Germany's so-called 'Country Overshoot Day' was set for May 4, indicating that its ecological footprint exceeded its biocapacity. This marked the day on which 'Earth Overshoot Day' would have occurred if the entire global population lived, consumed, and produced like Germany. Official data ranks Germany 16th worldwide in terms of its ecological footprint. This measure quantifies the amount of biological materials consumed and the amount of carbon emissions produced, compared to how much natural resources their ecosystems can renew (Figure 1). The concept of 'Country Overshoot Day' is derived from the global 'Earth Overshoot Day,' which marks when humanity's demand for ecological resources in a given year exceeds what Earth can regenerate in that year.

Germany's early overshoot day highlights the country's high level of resource consumption and waste production, which substantially surpasses the global average. This overconsumption is driven by factors such as high levels of meat consumption, reliance on fossil fuels, and a significant amount of waste generation per capita. Germany's position on the list of countries with the earliest overshoot days draws attention to its environmental policies and the urgent need for sustainable practices (Global Footprint Network, 2023).

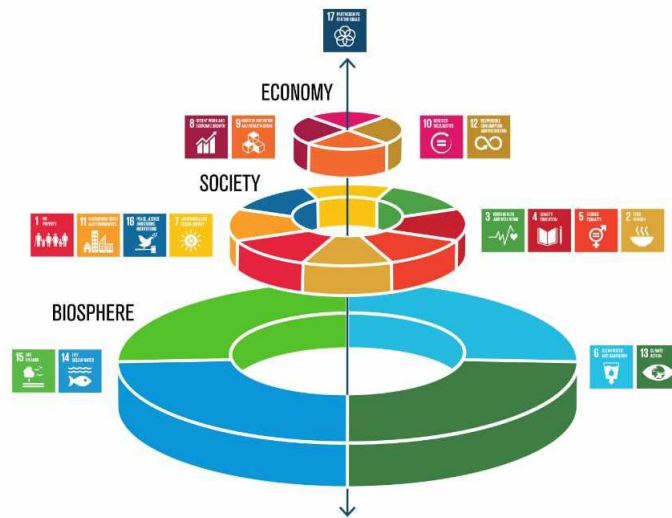
Figure 1: Country Overshoot Day 2023



Source: Global Footprint Network (2023).

According to the United Nations (UN) and as detailed in the *Journal of Health Monitoring*, 2023, a sustainable environment and a healthy, capable workforce are essential for global economic success. The impacts of climate change, referred to as physical sustainability risks, along with resulting environmental disasters, adversely affect populations – leading to issues such as illness, hunger, drought, poverty, climate refugees, and war – and economies, affecting international supply chains and causing labour and skilled-worker shortages. The 17 Sustainable Development Goals (SDGs) are newly arranged in a hierarchy depicted as a wedding cake in Figure 2, which illustrates the foundational importance of these goals, as further explored in the literature review in the second section.

Figure 2: SDGs Wedding Cake



Source: Stockholm University (2024).

The so-called 'SDG Wedding Cake' from Stockholm University (2024) presents a layered structure of the SDGs, emphasising their interconnected nature and mutual dependencies across four distinct levels. At its foundation lies the 'Biosphere Circle', which includes SDGs 6 (Clean Water and Sanitation), 13 (Climate Action), 14 (Life Below Water), and 15 (Life on Land). This circle is essential as it sustains all life on Earth by maintaining the health of natural ecosystems that provide critical resources and climate regulation (Stockholm University, 2024).

Built upon this ecological base is the 'Society Circle', comprising SDGs 1 (No Poverty), 2 (Zero Hunger), 3 (Good Health and Well-being), 4 (Quality Education), 5 (Gender Equality), 7 (Affordable and Clean Energy), 11 (Sustainable Cities and Communities), and 16 (Peace, Justice, and Strong Institutions). This layer fosters a stable and equitable society where basic human needs are met and rights are safeguarded, enabling individuals to contribute effectively to the economy and their communities (Stockholm University, 2024).

Above the societal layer is the 'Economy Circle', which involves SDGs 8 (Decent Work and Economic Growth), 9 (Industry, Innovation, and Infrastructure), 10 (Reduced Inequalities), and 12 (Responsible Consumption and Production). This segment underscores the necessity of a sustainable economic system that promotes equitable employment, fosters innovation, and encourages an economy that operates within the limits of our planet (Stockholm University, 2024).

SDG 17 (Partnerships for the Goals) crowns the model, encapsulating the overarching goal of global collaboration essential for achieving all other SDGs. This top layer highlights the

importance of international partnerships, mobilising resources, sharing knowledge, and implementing effective strategies across borders (Stockholm University, 2024). To ensure future economic success, every organisation must reconsider its activities and their impacts on these 17 SDGs and how these, in turn, affect the organisation both positively and negatively. To foster this mindset within the economic sector, developing the necessary expertise and understanding of this complex interaction is vital for sustainable development. Political leadership and regulatory frameworks are crucial, alongside the emerging role of sustainability managers, who are responsible for integrating these goals into corporate strategies, ensuring that sustainability becomes integral to operational and strategic decisions.

1.1.2 Politics Enabling Corporate Sustainable Development

Political frameworks play a pivotal role in steering economies towards sustainability. Germany, for example, is a signatory to key international agreements like the Paris Climate Agreement and the European Green Deal, which aim to drastically reduce carbon emissions and transition to a climate-neutral economy by 2050 (European Commission, 2023). Since irreversible climate damage and its consequences threaten the economic system if society and the economy refuse to develop sustainably, everyone in the economy is obligated to act, giving consumers, in the end, no other choice than to consume and, therefore, live sustainably. However, the minority act purely out of conviction, and politics may be an enabler of economic, financial, and societal development, which produces the milestone process of achieving a sustainable basis. Because governments worldwide now better understand the climate situation based on scientific findings and the already tangible effects of climate change, they have committed to achieving the 17 SDGs by 2030. Limiting the focus on Germany in this research, the essential political measures aiming for overall sustainable development include the Kyoto Protocol, which failed; the Paris Climate Agreement, which limits global warming to 1.5°C; and, more recently, the European Green Deal, which will transform Europe to the first climate-neutral continent by 2050 (European Commission, 2023). These political measures must be implemented by companies themselves, which poses a significant challenge, as these regulations cannot be realised through minor adjustments but rather question entire, century-old business models. Companies must reinvent themselves – including their technologies, product portfolios, international supply chains, and by upskilling employees – to operate sustainably. European politics use the financial sector as a lever and accelerator of this sustainable development process, as most companies rely on financial resources to grow and transform. How strongly companies depend on the financial sector and how the German finance industry can support sustainable development are outlined in more detail in the following sections.

1.1.3 Sustainability in the German Finance Industry

In Germany, sustainability is embedded in financial practices and products. Recent developments in Germany's financial industry illustrate a growing trend towards integrating environmental, social, and governance criteria into investment and banking practices and developing new sustainable products. For example, the adoption of green bonds and sustainable investment funds. These financial products align with global sustainability standards and cater to the increasing demand from investors seeking ethical investment opportunities (Schaltegger et al., 2023).

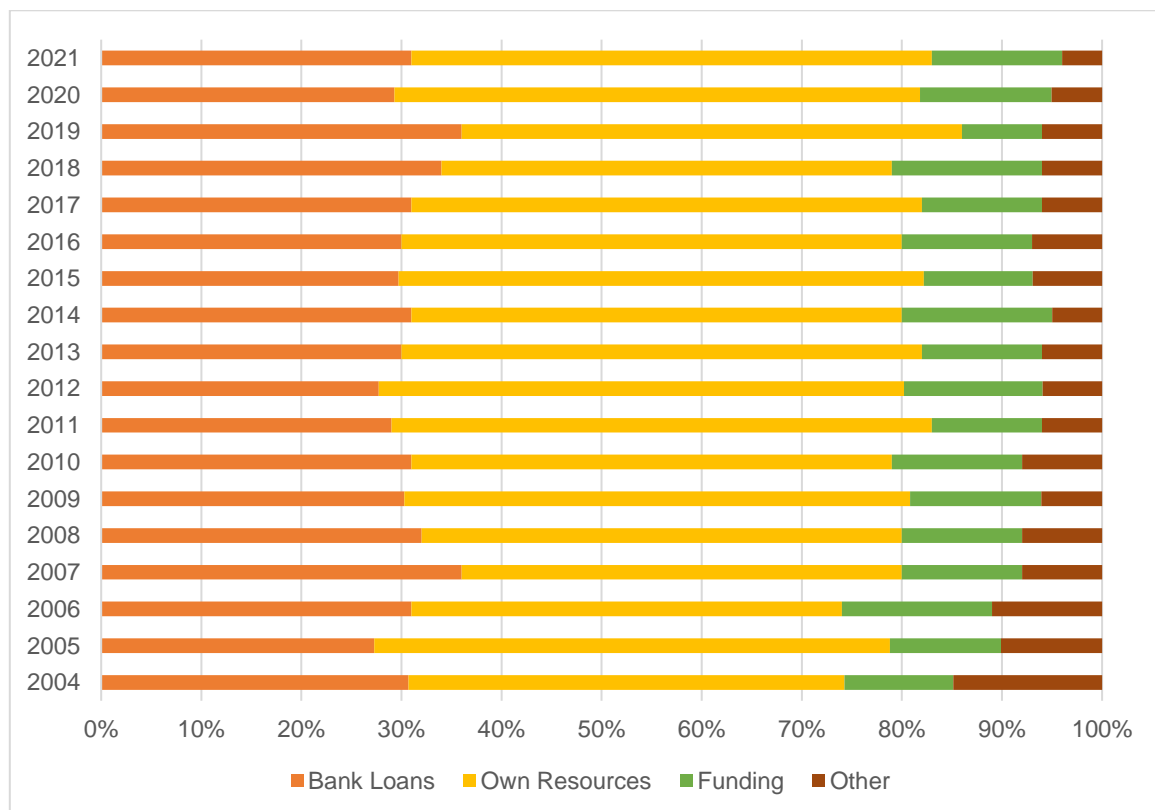
Building on this foundation, the role of corporate social responsibility in the financial sector has become increasingly pronounced. Financial institutions leverage corporate social responsibility to enhance their market positioning and meet the growing consumer demand for ethical investment options. Products like green bonds and sustainable funds exemplify how financial instruments can effectively incorporate corporate social-responsibility principles, supporting broader environmental and social goals (Stoian & Gilman, 2016). This strategic use of corporate social responsibility aligns with global sustainability standards and drives the financial sector's commitment to sustainable development.

Moreover, the European Green Deal and the Paris Climate Agreement have set ambitious sustainability targets, which have significantly influenced financial institutions in Germany. These regulations require banks to adopt stricter lending criteria and investment policies prioritising sustainability and affecting lending conditions with environmental, social, and governance scorings, fundamentally reshaping their operational strategies (European Commission, 2022). Furthermore, technology is pivotal in facilitating sustainable finance. Innovations like blockchain and artificial intelligence are being leveraged to enhance transparency and efficiency in tracking and managing sustainable investments (Carollo & Guerci, 2017). These technologies can enable financial institutions to meet regulatory requirements and provide better client services while prioritising sustainability. However, comparing Germany's sustainable finance initiatives with those of other countries – such as the Netherlands and Scandinavian nations, known for their advanced sustainable finance markets – provides valuable insights (Annosi et al., 2024). These comparisons can help identify unique challenges that German financial institutions face and reveal opportunities for learning from global best practices. Stoian and Gilman (2016) highlight how strategic integration of corporate social responsibility into core business operations aligns with and capitalises on regulatory frameworks to enhance profitability and market positioning, which is essential for financial institutions operating in such progressive regulatory environments.

1.1.4 Sustainable Development in the German Finance Industry

The German finance industry is crucial in funding the transition towards sustainability. Banks and financial institutions increasingly integrate environmental, social, and governance criteria into their operations, influenced by regulatory frameworks such as the European Green Deal and the European Taxonomy (Schaltegger et al., 2023; European Commission, 2022). These changes are essential for aligning financial practices with sustainable development goals. As of 2018, approximately 3.467 million German companies – making up 99.5% of all businesses in Germany – were classified as small and medium enterprises (IfM Bonn, 2022). In 2021, 31% of these enterprises financed investments through bank loans, totalling EUR 67 billion, with 538,000 small and medium enterprises using bank loans for investment financing (KfW, 2022). In 2021, approximately half of these enterprises' financing came from their own funds, such as reserves, profits, or cash flow, amounting to EUR 111 billion. Subsidies accounted for 13% of investment financing, while other forms of financing – like equity capital, small and medium enterprises bonds, or mezzanine capital – were less significant due to high transaction costs (KfW, 2022). Figure 3 illustrates the financing structure of German small and medium enterprises from 2004 until 2021 and is clustered in bank loans, own resources, funding, and others.

Figure 3: Financing Structure of German Small and Medium Enterprises



Source: KfW (2022).

Moursellas et al. (2023) reveal that external enablers such as governmental support and regulatory frameworks significantly influence small and medium enterprises' adoption of sustainable practices across Europe. This insight is critical for understanding the German financial sector's role in fostering sustainability among these enterprises. The researchers suggest that enhancing these enablers could lead to broader adoption of sustainability practices among small and medium enterprises, aligning with broader environmental and social goals (Moursellas et al., 2023). This heavy reliance on financing underscores banks' critical role in supporting these companies and achieving their carbon-emissions targets, exerting significant pressure on the financial system.

From a broader perspective, according to a 2021 report by the *Bundesfinanzministerium*, the German federal government is keen on transforming Germany into a premier hub for sustainable finance. The government has outlined key objectives for doing so, which include promoting sustainable finance practices globally and throughout Europe, capitalising on opportunities to finance transformational projects, and incorporating sustainability impacts into financial decisions. Improving risk management in the finance industry and ensuring the stability of the financial markets are also priorities. The government's strategy bolsters Germany's financial centre, expands its expertise, and establishes the German federal government as a leading example of sustainable finance practices in the financial system (Bundesfinanzministerium, 2021).

Furthermore, Moursellas et al. (2023) identify barriers, such as a lack of resources, expertise, and initial capital expenditures, as significant challenges to implementing sustainability practices among particularly small and medium enterprises. Addressing these barriers is essential for banks as they consider loan approvals, emphasising the importance of financial institutions understanding and mitigating these risks when financing particularly small and medium enterprises (Moursellas et al., 2023).

The European Taxonomy, the 'Financing Sustainable Growth Action Plan', has introduced a standard classification system for sustainable economic activities, assigning banks a key role in the sustainable development process dictated by regulatory standards (European Commission, 2022). This taxonomy sets financial targets, requiring regulators to issue sustainable financing in the long term through strict selection criteria and to price non-sustainable financing so high that companies can no longer afford unsustainable loans. Banks and their loan portfolios are scrutinised under the rules of the European Taxonomy and priced in their refinancing, pushing banks to aim to have only sustainable companies in their portfolios in the long run (European Commission, 2022).

'Transitional sustainability risks' refer to the evolving nature of sustainable development and its impact on a company's business model and creditworthiness. Companies that implement sustainable practices minimise these risks, which banks evaluate in their lending decisions. Firms demonstrating a solid commitment to sustainability – encompassing environmental, social, and governance aspects – are considered more future-proof and less risky, thus gaining easier access to attractive financing conditions. These connections create a strong interdependency between companies and financing banks.

Legislation further intensifies the pressure on banks by linking their climate goals to the sustainable development of their clients. Under 'Scope 3' carbon-emissions reporting regulations, banks are required to include the pre-calculated carbon emissions of their financed companies in their climate balance sheets. Failure of these companies to meet their 1.5°C targets in their climate balance will also reflect failure on the banks' part in their carbon-emissions goals.

In conclusion, banks play a pivotal role in the German economic system, as companies depend heavily on bank financing and rely on lenders to guide sustainable economic development, as legislation mandates (European Commission, 2022). This outlined interdependence applies to all types of financial institutions in Germany, highlighting the necessity for expert knowledge in managing these transformations, mainly through the emerging role of sustainability managers within banks. The insights from Moursellas et al. (2023) reinforce the need for targeted support measures to enhance the adoption of sustainable practices among particularly small and medium enterprises, thus further integrating sustainability into the core financial strategies of banks.

1.1.5 Evolving Responsibilities of Sustainability Managers

The role of sustainability managers has become increasingly critical in navigating the complex interplay between economic growth and sustainability goals. Sustainability managers act as 'agents of change' in their organisations, promoting sustainable practices that align with global standards and regulatory requirements (Borglund et al., 2021; Schaltegger et al., 2023). These managers implement sustainability strategies and are responsible for aligning them with broader corporate goals, thus playing a crucial role in the transformative processes in their organisations (Annosi et al., 2024).

Historically, sustainability managers' responsibilities have spanned many activities, including mergers and acquisitions, product development, financing, cost savings, product lifecycle analyses, partnerships, and stakeholder engagement. These roles facilitate essential connections both in the company and between the company and external stakeholders, like

investors, NGOs, consultants, and business schools (Wright et al., 2012; Strand, 2013, 2014; Miller & Serafeim, 2014; Borglund et al., 2017; Carollo & Guerri, 2017).

Annosi et al. (2024) further illuminate the evolving challenges that sustainability managers face – particularly their role in mediating internal goal conflicts and the need for top management support to navigate these complexities. The researchers emphasise that sustainability managers often act as brokers in their organisations, managing tensions between immediate financial objectives and long-term sustainability goals. This brokerage role is crucial for aligning diverse departmental goals with overarching sustainability strategies and overcoming resistance to change, thereby enhancing the strategic integration of sustainability within corporate practices.

The demand for sustainability managers in Germany is high, with thousands of open positions listed across major job platforms (Glassdoor, 2023; LinkedIn, 2023; Stepstone, 2023; Indeed, 2023). This surge reflects a keen interest in and need for sustainability management expertise, mainly when the financial sector is critical in steering the economy towards sustainability. The substantial responsibilities of sustainability managers have been documented since the early 2000s, yet recent data suggest that the demand and scope of these roles continue to grow, highlighting a dynamic field that is still developing and evolving (Acre, 2011; GreenBiz, 2018; Weinreb Group, 2014, 2018; Borglund et al., 2021).

The importance of sustainability managers in the German financial sector is particularly evident when considered within broader regulatory and strategic frameworks such as the European Green Deal and the European Taxonomy. These frameworks mandate a transformative agenda for financial institutions, aiming for climate neutrality by 2050, and compel such institutions to integrate deep sustainability practices into their operations (European Commission, 2020). The financial sector's role in economic growth, combined with the increasing climate-related financial risks, underscores the necessity for sophisticated expertise in sustainable finance – a role that sustainability managers are uniquely positioned to fulfil.

However, despite the importance of these managers, a knowledge gap exists – particularly in the German financial industry – regarding the specific responsibilities and strategic integration of sustainability managers. This gap is evident in the scarcity of research focusing on the evolving roles of these managers in alignment with stringent sustainability regulations and corporate strategies. Researchers like Miller and Serafeim (2014) and Vallentin and Spence (2017) highlight the need for more studies in this area. Moreover, the rising demand for sustainability managers, as evidenced by recent job postings, further supports the urgent need for focused academic and practical investigations into their roles, responsibilities, and transformation barriers (Borglund et al., 2021; MacDonald et al., 2020). Given these contexts and the strategic importance of sustainability in the financial sector, it is imperative to conduct

further research on the role of sustainability managers. Such research would provide valuable insights into how these professionals can effectively contribute to the sustainable transformation of companies in the German financial industry. Understanding these aspects is crucial for the strategic alignment and efficacy of sustainability initiatives within financial institutions and ensuring that these institutions can lead the transformation towards a sustainable financial system. This role is essential for the sector to remain competitive and resilient in the face of evolving environmental and regulatory landscapes, ultimately contributing significantly to the broader goal of achieving climate neutrality by 2050.

1.2 Research Aim, Questions and Objectives

This research aims to explore the understanding, responsibilities, and perceived barriers of sustainability managers in the German finance industry concerning corporate sustainable transformation.

The following Research Questions arise from the Research Aim:

1. What are sustainability managers' understanding of corporate sustainable transformation in the German finance industry?
2. What responsibilities do sustainability managers have in corporate sustainable transformation within the German finance industry?
3. What barriers do sustainability managers perceive to their responsibilities in the corporate sustainable transformation process in the German finance industry?

To achieve this Research Aim, this thesis pursues several Research Objectives:

1. To identify sustainability managers' understanding of corporate sustainable transformation within the German finance industry.
2. To delineate the responsibilities of sustainability managers in corporate sustainable transformation within the German finance industry.
3. To identify the barriers sustainability managers perceive to their responsibilities in the corporate sustainable transformation process within the German finance industry.

1.3 Contribution

This thesis explores sustainability managers' understanding of corporate sustainable transformation in the German finance industry, as well as their responsibilities and the barriers to success they perceive in this context. The researcher addresses Göpel's (2020) and Sachs et al.'s (2019) demand to contribute academically to sustainability understanding in a transformative environment.

Schaltegger et al. (2023) define corporate sustainability agents as pivotal figures in such transformations, underscoring their role in initiating radical organisational changes that extend beyond mere compliance to foster a society that operates within safe and just planetary boundaries. The first objective of this study is to identify how sustainability managers understand corporate sustainability transformation. Since these sustainability managers are supposed to be hired to guide and lead sustainable transformation within companies, it is crucial to understand their perspectives and interpretations of this endeavour and how these may differ from those in the existing literature. Investigating their understanding and making it visible within the German financial industry helps form a unified understanding of corporate sustainable transformation.

Another contribution of this research is to provide more clarity and transparency about the responsibilities of sustainability managers in corporate sustainability transformation in the German finance industry. To research this responsibility description and perception as accurately as possible, it is explored from the perspective of the affected target group – the sustainability managers. Schaltegger et al. (2023) emphasise that these agents are vital in driving the necessary change by navigating and mediating between conflicting sustainability and economic goals, thereby significantly shaping corporate strategies. This contribution also addresses the calls from Borglund et al. (2021) by examining Germany's research area, the perspective of sustainability managers, and how their role relates to and evolves with corporate strategy.

Annosi et al. (2024), who limited their research to the Netherlands, stressed the need for a deeper exploration of sustainability managers' role as brokers of sustainability and profitability within organisations in other countries, navigating the inherent tensions between these two conflicting objectives. Their study reveals how sustainability managers must reconcile internal goal conflicts, resistance to change, and critical barriers to effective, sustainable transformation. The findings emphasise that future research must focus on the cognitive and institutional contexts that influence sustainability managers' actions, suggesting a multi-level analytical approach that considers individual, organisational, and institutional factors contributing to understanding the roles of sustainability managers from their own perspectives.

Having more clarity about the responsibilities of sustainability managers reduces internal organisational misunderstandings, contributes to a better understanding of this newly established position – both internally and externally – and delineates the extent to which sustainability managers are responsible for corporate sustainable transformation and where their area of responsibility ends. Furthermore, this research addresses the need for more research to implement transformation strategies, as Sachs et al. (2019) demand; it investigates the barriers that sustainability managers face in the German financial industry in fulfilling their responsibility for corporate sustainable transformation. Studying these barriers from the perspective of this relevant target group enables companies – especially those in the German finance industry – to take timely measures and preparations to minimise these transformation barriers. This would benefit the entire transformation effort, as implementing sustainable strategies and sustainable organisational development would function more efficiently, achieving regulatory goals more swiftly.

1.4 Method

This study uses an inductive, qualitative research design based on social constructivism. Additionally, this research investigates the responsibilities and barriers to transformation of sustainability managers in corporate sustainable transformation from the perspectives of experts. Consequently, personal viewpoint played a significant role in this research, which justifies using qualitative data collection. Moreover, this research also explores sustainability managers' assessments of future changes in understanding, responsibilities, and transformation barriers. In this respect, the involvement of representative actors in forecasting expected developments in the sense of corporate sustainable transformation and the transformation barriers they perceive suggests using a forecasting technique, which justifies the Grounded Delphi Method. Therefore, the Grounded Delphi Method was chosen to generate new knowledge. Additionally, the grounded approach enables a structured data collection and analysis method and minimises potential bias. An expert panel of 28 sustainability managers from the German financial industry was assembled for the data collection. In the first round of data collection, the experts answered an anonymous online questionnaire. Their responses were analysed using the Straussian Grounded Theory Method, which uses open, axial, and selective data coding. Based on the results, consensus statements were formulated and evaluated by the same 28 experts in a second round of data collection. The results of these two rounds led to a database and insights into this research field.

1.5 Thesis Structure

This thesis is organised into six sections. The introduction section introduces the research context, aim, questions, and objectives. The second section's literature review delves into the existing body of knowledge as of May 2024, highlighting research gaps. The third section outlines the study method. It begins by defining the research philosophy and strategy using the Grounded Delphi Method. The section details the data-collection process, including the researcher's role, adherence to rigorous standards, and research ethics. It explains the data-gathering process through an online questionnaire conducted in two rounds and describes the three coding steps used. Furthermore, it discusses the development of the second online questionnaire and how the consensus statements were built. The fourth section focuses on the data analysis and the findings that address and answer each research question. This section evaluates the data in the chosen research design, bridging theory, and practical evidence. The fifth section engages in a critical discussion, contrasting these findings with the existing literature and highlighting this study's contributions to the field. The sixth section concludes the thesis by discussing its contributions to academic knowledge and practical implications for the future. It also includes personal and professional reflections from the researcher, providing closure to the research journey.

2. Literature Review

This section presents a narrative literature review that deepens the exploration of the context introduced in the first section, laying a solid foundation for the specialised knowledge sought throughout this thesis. The review is pivotal, as it addresses the considerable gaps in focused studies on corporate sustainable transformation in the German financial industry despite the abundant literature on sustainability more broadly. This emergent area of research, emphasised by the novelty and unique aspects of corporate sustainable transformation, justifies the narrative review approach adopted here. This approach is particularly advantageous as it integrates a diverse range of current publications, facilitating a fluid and comprehensive analysis unbounded by the rigid structures typical of systematic reviews (Bolderston, 2008). It also supports examining multiple interconnected research questions relevant to this thesis, acknowledging that the selection of literature may reflect the researcher's subjectivity (Ferrari, 2015).

The European Green Deal's 2020 objectives for achieving climate neutrality by 2050 and the subsequent EU Taxonomy highlight the transformative agenda set for the German financial industry, emphasising a critical need for effective strategies and capable management to navigate these changes. Literature such as Sachs et al. (2019) and Göpel (2020) point to a significant deficit in studies focusing on developing and implementing transformation strategies – particularly those involving the roles and perspectives of sustainability managers.

This thesis investigates how sustainability is integrated into corporate strategies and the challenges that arise during this transformation; it addresses the lack of research on the responsibilities of sustainability managers, as highlighted by Borglund et al. (2021). Additionally, it explores the anticipated shifts in their responsibilities, as researchers like Miller and Serafeim (2014) and Vallentin and Spence (2017) outline, mainly focusing on how these roles are understood and executed in the German financial industry.

Organised into five sections, the literature review methodologically unfolds to cover critical areas. The initial subsection introduces the literature review, setting the stage for a thorough exploration. Following this, 'Corporate Sustainability' is explored, elucidating its definitions, variations, mechanisms for achieving it, and the role of sustainability frameworks. This section not only rationalises the choice of corporate sustainable transformation as the central concept of this thesis but also illuminates the understanding that sustainability managers in the German finance industry have of this term, directly addressing the first research objective.

The subsequent section examines the barriers that arise within or because of corporate sustainable transformation, illuminating the challenges organisations face. This examination

highlights the barriers that sustainability managers perceive to their responsibilities in the transformation process, thus addressing the third research objective.

The discussion then shifts to the current literature on the roles and responsibilities of sustainability managers, outlining how they contribute to promoting corporate sustainability. This directly addresses the second research objective, focusing on delineating the responsibilities of these managers.

The final section synthesises insights from the previous sections, showcasing how they inform this research and their implications for the field. The section concludes by connecting the reviewed literature to the research questions and objectives, illustrating a systematic build-up and interconnection of the topics discussed. Thus, it provides a comprehensive overview of the field as it pertains to this thesis, ensuring that the literature review comprehensively addresses each research objective and establishes a clear framework for the subsequent sections.

2.1 Development of Corporate Sustainability

The contemporary discourse on sustainability is increasingly complex due to its broad application across various sectors and contexts and has gained significant attention, leading to difficulties in interpretation, implementation, and operationalisation, especially in business practices (Bansal, 2005; Faber et al., 2005; Kok et al., 2019). Despite its current popularity, the origin of sustainability as a concept can be traced back to 1713, as presented by Carlowitz, a Saxon mine captain who advocated for a conservation-based approach to forest management, emphasising the alignment of logging activities with the natural growth rate of trees to ensure long-term resource preservation (Carlowitz, 2000; Müller-Christ, 2014).

This early conceptualisation of sustainability underscores conserving finite resources as a fundamental consideration for societal and commercial operations. However, the evolution of sustainability theory, notably with Elkington's 'Triple Bottom Line' framework, signalled a paradigm shift (Elkington, 1994). The 'Triple Bottom Line' balances social, environmental, and economic concerns, resulting in an approach that deviates from the initial ecological focus, thereby equating profit-seeking and social considerations with the need for environmental preservation and protection (Elkington, 1997). Because of this shift, there has been a perceptible decrease in the emphasis on the importance of natural resources in the discourse on sustainability. Despite this shift, sustainability, as initially proposed by Carlowitz, especially the prudent management of resources, remains integral to sustainable economic activity and the long-term viability of societies and businesses (Carlowitz, 2000). Still, the official concept of sustainability – in Germany, Europe, and globally – embodies using resources to meet

present needs without compromising the ability of future generations to fulfil their own needs (World, 1987).

The European Strategy for Sustainable Development, introduced in 2001 and revised in 2006, provides a framework to improve the quality of life for current and future generations (European Commission, 2006). Göpel, a German expert in sustainability and transformation research, critically highlights the symbiotic relationship between global economic growth and rising climate change – despite all the existing definitions and political approaches as to how the economy should act (Göpel, 2020). The ongoing effects of climate change have led to significant social problems and economic damage across all sectors worldwide. Within this context, Göpel critiques the economic paradigm that has dominated since the 19th century and its pervasive influence in all societal domains, while in today's existing paradigm, humans and nature are primarily defined as factors of production (Göpel, 2020). This produces Göpel's central argument: achieving economic growth today requires a fundamental transformation, essentially decoupling economic growth from climate change (Göpel, 2020). Thus, her proposition implies the potential for balanced and sustainable growth that harmonises economic interests with environmental conservation and social welfare.

As this study focuses on corporate sustainable transformation, the subsequent part of this section distinguishes between the general definition of 'sustainability' and 'corporate sustainability'. Furthermore, the terms 'corporate sustainable development', 'corporate sustainable change', and 'corporate sustainable transformation' are defined and differentiated through intensive literature research.

2.1.1 Corporate Sustainability

'Corporate sustainability' refers to the actions taken by a company to manage its impact on the environment, society, and economy. Recently, it has become an increasingly important issue for companies worldwide due to the growing awareness of climate change and related environmental and social problems and the increasing demand from customers, employees, investors, and other stakeholders for sustainable business practices. In studies, 'corporate sustainability' and 'corporate social responsibility' are often used synonymously (Waddock, 2004; Mensah et al., 2017). Nevertheless, definitions or related concepts differ according to key factors and are influenced by time, place, and specific legal, political, and social frameworks (Pava, 2008; Mio & Venturelli, 2013; Venturelli et al., 2017). Various authors, therefore, point to the heterogeneity of existing definitions in the literature (Dahlsrud, 2008; Matten & Moon, 2008; Venturelli et al., 2017).

In 1953, Howard Bowen published a definition of 'corporate sustainability' in his book *'The Social Responsibilities of the Businessman'*, which is cited frequently in the literature. According to Bowen, 'corporate sustainability' is *'the obligation of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of objectives and values of our society'* (Bowen, 1953, p.6). Bowen is the first to emphasise achieving long-term business success without ignoring environmental and social responsibility and a corporate strategy incorporating 'Triple Bottom Line' concerns into a sustainable business approach (Eweje, 2011; Caprar & Neville, 2012). As a result, corporate sustainability calls for integrating social and environmental objectives into the company's financial goals and a related willingness to be accountable for corporate actions (e.g., through reporting to a broader group of stakeholders (Gao & Zhang, 2006; World Bank Group, 2007).

Today's definition of 'corporate sustainability', provided by the World Business Council for Sustainable Development in 2020, defines it as *'the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large'* (WBCSD, 2020). Another definition highlighting the importance of environmental sustainability is the UN Global Compact, which defines corporate sustainability as *'a company's delivery of long-term value in financial, social, environmental, and ethical terms'* (UN, 2018).

According to Dyllick and Hockerts (2002, p. 131), corporate sustainability is about *'meeting the needs of a company's direct and indirect stakeholders without compromising the company's ability to meet the needs of future stakeholders'*. It describes the prioritisation of the company's interests, considering employees and relevant stakeholders in the society where the company operates (Mensah et al., 2017). These definitions commonly apply voluntarism and commitment beyond existing and applicable legal requirements (Dyllick & Hockerts, 2002; von Hauff & Kleine, 2014).

Generally, the literature on corporate sustainability consistently underscores the importance of integrating sustainability into business strategy and operations, collaborating with stakeholders to promote sustainable business practices, and measuring and reporting sustainability performance.

However, from the researcher's point of view, two elements receive comparatively less attention in the identified literature: Firstly, a company's location, shaped by unique environmental, social, and economic conditions, could have profound implications for its sustainability practices, necessitating an adaptive approach to sustainability strategy. Secondly, sustainability is often considered in many definitions only when demanded by interest groups or when it is financially beneficial in the short or medium term.

Instead, based on Carlowitz's (2000) original idea, the emphasis should be on what the company can do for sustainability, recognising the critical role of a healthy society and environment for its long-term viability. Consequently, there is the need for impact-driven strategies to ensure long-term success, with a company's commitment to sustainability as a strategic core rather than a secondary, contingent consideration.

2.1.2 Achieving Corporate Sustainability

'Transformations towards sustainability' have grown increasingly central in global sustainability research and policy discourse (Patterson et al., 2017). The literature in this area is broad and divergent, characterised by terminological distinctions such 'sustainable change', 'sustainable transformation', and 'sustainable development'. The elucidation of these constructs often reveals overlaps and interplays, leading to a critical necessity for distinct conceptual clarifications (Folke et al., 2016). Still, the central challenge remains: achieving greater sustainability in organisational change management in the contemporary world (Matos & Clegg, 2013).

To meet this challenge, a more intricate process is required. The implementation of sustainability within companies, as illustrated by the disparate perspectives of the authors referenced, demands modifications. These entail changes, transformations, and developments of entire business models for successfully incorporating a sustainability strategy within a company.

To address the research aim, it is imperative to have a foundational comprehension of the prevailing frameworks that empower these change, transformation, and development processes. By pursuing a holistic environmental, social, and governance approach, these frameworks highlight extant gaps in organisations, mandate a continuous enhancement of the status quo, and, thus, compel enterprises to engage comprehensively with the matter. This section also explains the terms, their commonalities, and their significant differences.

2.1.3 Corporate Sustainability Frameworks

Existing corporate sustainability frameworks provide a set of criteria for companies to achieve corporate sustainable transformation to meet the overall SDGs. These standards are often developed by third-party organisations or industry associations and are intended to provide a common language and framework for reporting sustainability performance (Boiral, 2011). The well-known, relevant standard-setting organisations are also strong institutional actors with high market and standard-setting power (Bansal, 2005; Ramus & Montiel, 2005; Aguilera et al., 2004; Campbell, 2007; Epstein et al., 2017). This power structure suggests that their

standards have a lasting influence on the decisions made in practice (Windolph et al., 2014). This means that these recognised frameworks are among the decisive factors in how a company defines its sustainability positioning.

One commonly cited definition of corporate sustainability standards is provided by the Global Reporting Initiative, which defines corporate sustainability reporting standards as '*a comprehensive set of standards for sustainability reporting, covering economic, environmental, and social impacts*' (GRI, 2023). The Global Reporting Initiative provides a widely recognised framework for sustainability reporting and has been adopted by many companies worldwide (European Commission, 2011).

The most common German regulatory framework, Deutscher Nachhaltigkeits Kodex ('German Sustainability Code'), is an industry-independent standard for transparent non-financial reporting on a company's sustainable transformation. Companies of any size and legal form can apply for the Deutscher Nachhaltigkeitskodex, which is based on global and European standards for non-financial sustainability reporting and defines 20 performance indicators on the status quo and outlook for sustainable transformation in companies (German Council for Sustainable Development, 2016).

In January 2023, the Corporate Sustainability Reporting Directive came into force in Europe. The directive must be transposed into national law in Germany and all other European member states within 18 months. However, Europe plans to introduce a standard for sustainability reporting, the European Sustainability Reporting Standards (ESRS; 2023) – an adaptation of the Deutscher Nachhaltigkeitskodex to the requirements of the Corporate Sustainability Reporting Directive and the ESRS. The aim is for all companies in Germany to continue to use the Deutscher Nachhaltigkeitskodex – regardless of whether they report in Germany or internationally, voluntarily or subject to reporting requirements. This adaptation will occur in 2023 and 2024 (DNK, 2023). The Deutscher Nachhaltigkeitskodex is also a tool for organisational gap analysis, where significant gaps must be filled to meet the organisation's sustainability strategy goals.

Overall, the literature on corporate sustainability standards emphasises the importance of developing and implementing sustainability standards to provide a common language and framework for assessing and reporting sustainability performance. These standards can help companies identify organisational improvement areas, engage with stakeholders, and enhance their reputation for sustainability performance.

2.1.4 Sustainable Development

In 2015, under the umbrella of the *United Nations Framework Convention on Climate Change*, countries worldwide came together to form the Paris Climate Agreement, aiming to limit global warming to 1.5°C above pre-industrial levels (UN, 2015; 2018). This landmark agreement recognises the profound impact of climate change and the need for urgent and significant actions from all countries. Following this commitment, the United Nations developed a comprehensive sustainable development framework known as the ‘*UN 30 Agenda for Sustainable Development*’. Officially adopted in September 2015, this agenda is a broad and far-reaching blueprint to enhance global peace and prosperity. It comprises 17 SDGs covering a wide range of social, economic, and environmental objectives. These goals include ending poverty and hunger, achieving gender equality, ensuring access to clean water and energy, promoting decent work, and taking strong actions on climate change. The SDGs are designed to be universally applicable, encouraging all countries to participate in a collective journey towards sustainable development. Each goal is interconnected; often, the key to success for one will involve tackling issues more commonly associated with another. The deadline for achieving these goals is set for 2030, emphasising the urgent need for action. Implemented by the 193 Member States of the United Nations, the SDGs are not legally binding; however, countries are expected to take ownership and establish frameworks for the achievement of the 17 Goals (UN, 2015; 2018):

Figure 4: Sustainable Development Goals



Source: United Nations (2015)

The SDGs thus express a global understanding of the achievements to be made for sustainable development (Müller et al., 2015). However, despite their general international and political adoption and their elaboration in practice-oriented circles, it does not seem apparent in practice how the SDGs can be transferred, applied, or monitored for individual national and regional requirements (Müller et al., 2015).

The Brundtland Report in 1987 defines sustainable development as '*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*' (World, 1987). This definition clearly shows the macro-level aspect of the global 17 SDGs, which cannot be achieved by one organisation itself. It also underscores the delicate balance between economic growth, environmental protection, and social equity, ultimately aiming for intergenerational equity (UN, 1992; Müller-Christ, 2014). In addition to these aspects, the Brundtland Report emphasises the impact of business on the environment and society, raising awareness of this approach (World, 1987; von Hauff & Kleine, 2014).

This consideration of the role of business illustrates the interconnectedness of various sectors in achieving sustainable development. Scholars and policymakers have expanded and detailed this notion of sustainable development. Pearce et al. (1989) argue that sustainable development involves conserving natural resources and their optimal allocation to satisfy human needs. They highlight the importance of considering both present and future benefits derived from the natural environment in decision-making. Sen (2001), in his work '*Development as Freedom*', broadens sustainable development to encompass material needs and the expansion of human capabilities, freedoms, and choices, thereby amplifying the social dimensions of sustainability.

Sustainable development, sustainable transformation, and sustainable change are interconnected but have distinct applications. Sustainable development primarily focuses on the macro level, highlighting global socioeconomic and environmental interactions, often in policymaking. Consequently, an academically accepted definition of sustainable development for this research is as follows:

'Sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance the current and future potential to meet human needs and aspirations, including the expansion of human capabilities, freedoms, and choices. Thus, it addresses various social, economic, and environmental objectives encapsulated in the 17 Sustainable Development Goals' (WCED, 1987; Sen, 2001; UN, 2015).

2.1.5 Corporate Sustainable Development in Practice

No practical example that simultaneously fulfils or accomplishes all 17 SDGs was identified in the literature. Many corporate sustainability strategies contribute to achieving the 17 SDGs through sustainable changes and their overarching corporate sustainability strategy. Consequently, the approach to sustainable development remains a political and regulatory construct on a meta-level, defining the scope of action and attempting to attain these goals through a collective effort of societal and corporate initiatives.

The *Volksbank eG – Die Gestalterbank*, with nearly 1,000 employees and a balance sheet total of almost EUR 12 billion as of December 31, 2023, ranked to that date as the 4th largest Volksbank ('Cooperative Bank') in Germany and is a practical example to illustrate activities in line with the academic character of sustainable development, sustainable change, and sustainable transformation. Since 2020, this bank has been obliged to provide sustainability reports and does so to align with the Deutscher Nachhaltigkeitskodex (DNK, 2022). This report transparently communicates all measures and efforts for internal and external stakeholders in the corporate sustainability strategy. In the bank's own sustainability strategy, six future-oriented themes were identified to which the bank intends to make a concrete contribution. These six themes have been derived from six of the 17 SDGs. They are assessed during the lending process to determine how much a granted loan contributes to these predetermined future-oriented themes. In this manner, the bank can evaluate in its annual Deutscher Nachhaltigkeitskodex report how much capital has been allocated to six of the 17 SDGs. Theoretically, this approach could be extended to cover all 17 SDGs. To fully commit to the 17 SDGs and their achievement, as well as their integration into the corporate DNA, 100% of all assets and internal and external business activities would need to contribute entirely to all 17 SDGs (DNK, 2022).

2.1.6 Sustainable Change

The success of achieving the 17 SDGs is based on all the changes made by society and organisations, which lead to an organisational transformation process and a global sustainable development process. Sustainable change is a concept that has gained increasing attention in the academic world, permeating a broad spectrum of disciplines from business and organisational development to environmental science and public health (Benn et al., 2014).

The sustainable change model focuses on short-term objectives and aims for long-lasting, positive transformations in systems and behaviours, often specifically emphasising environmental, social, and economic responsibility (Doppelt, 2017).

In academic discourse, sustainable change is described as: *‘Transformation is a process in which resource exploitation, investment direction, technological development orientation, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations. It emphasises the balance and simultaneous pursuit of economic prosperity, environmental quality, and social equity, famously called the triple bottom line’* (Elkington, 1997; WCED, 1987).

Wheeler and Sillanpää (1997) extend this definition by underscoring the importance of participation and inclusivity in the process, suggesting that sustainable change requires all stakeholders’ engagement.

Hopwood et al. (2005) support the ‘Triple Bottom Line’ perspective of the three dimensions of sustainable change: environmental limits, social justice, and economic prosperity. They argue that any attempt towards sustainable change must balance these elements, thus creating an ongoing, dynamic process. In terms of application, scholars have mainly focused on organisational change.

Benn et al. (2014) discuss how organisations can instigate and manage changes that contribute to sustainability. They suggest that change must be embedded at all levels, from the organisational culture and processes to the individual behaviour of employees.

The nature of sustainable change – its scale, complexity, and impacts – necessitates comprehensive, interdisciplinary study and action. By its definition, sustainable change is not a goal but a process to be engaged in, demanding continuous effort and adaptation. This makes the scholarly conversation about sustainable change important, inherently dynamic, and ever-evolving.

2.1.7 Corporate Sustainable Change in Practice

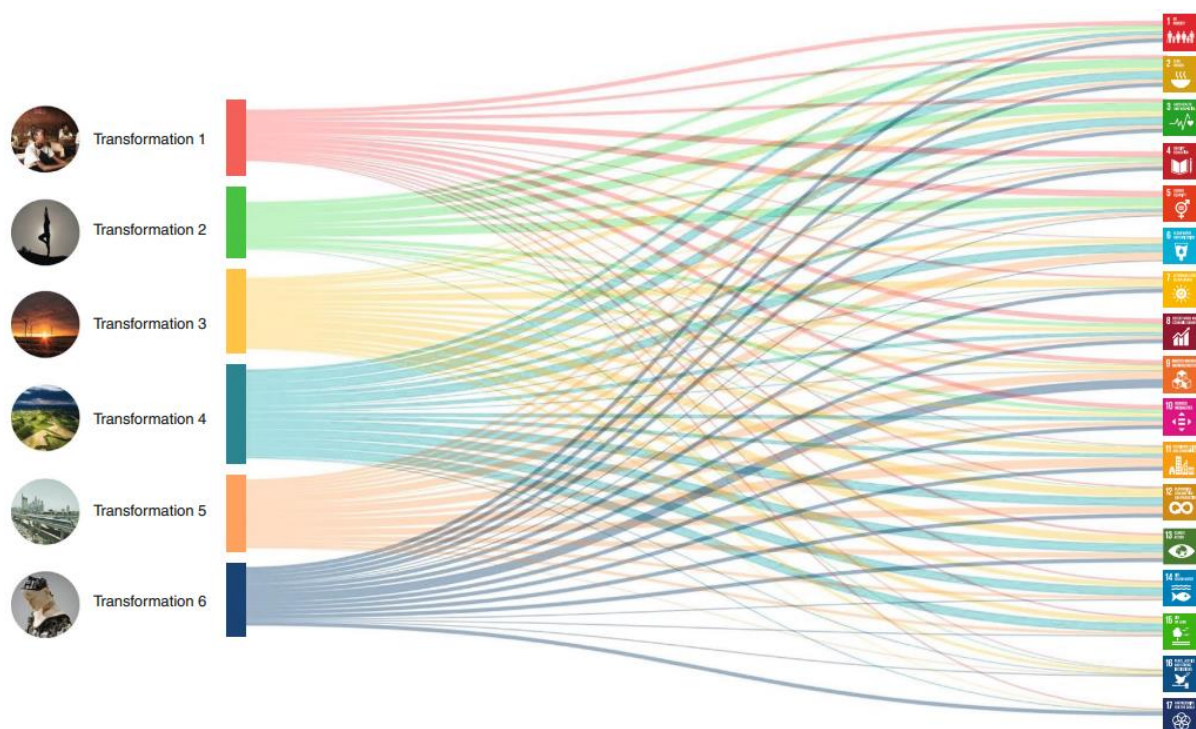
According to Doppelt’s (2017) definition, the main characteristic of sustainable change is the focus on short-term objectives while aiming for long-lasting, positive transformations (...). These changes can be implemented quickly in the short term and are not necessarily interrelated; in the long term, they should enable sustainable transformation and have an overall impact on achieving sustainable development in the 17 SDGs. Activities illustrative of the practice as presented by *Volksbank eG – Die Gestalterbank* in accordance with the definition of sustainable change include, for instance, the realignment of traditional membership, modified through the addition of an ecological component into membership with environmental impact. Another example is the revised code of conduct for all employees, which, since 2020, has also demanded more sustainable behaviour from the employees through the addition of a new section, such as forgoing air travel, implementing energy-saving

measures, or introducing so-called 'job bikes' as an alternative to traditional company cars as a part of the salary. Supplementary examples of sustainable change may include transitioning to more environmentally friendly paper, stricter waste separation, renouncing plastic credit cards, and replacing cornstarch credit cards (DNK, 2022). All these sustainable change measures have been implemented independently of one another and could be introduced and realised in the short term. These discrete sustainable change activities collectively contribute to the bank's guiding sustainability strategy. Additionally, these types of rapidly implementable sustainable change measures serve primarily in external communication to enhance positive image effects. However, consequently, ecological changes carry the risk of greenwashing if the core ethos of the organisation remains perceived as 'grey' rather than 'green'.

2.1.8 Sustainable Transformation

To transform companies sustainably, they need leadership commitment, the ability to engage with multiple stakeholders along the value chain, widespread employee engagement, and disciplined mechanisms for execution (Eccles et al., 2012). They also require frameworks that can direct such transformations holistically. Sachs et al. (2019) provide a comprehensive approach in Figure 5, introducing the six transformation paths, which act as modular building blocks of SDG achievement.

Figure 5: Sustainable Development Goals Transformation Paths



Source: Sachs et al. (2019) – Sankey diagram; The thicker the line, the greater the contribution of that Transformation to meeting the SDGs.

These transformations cover six areas: (a) education, gender, and inequality; (b) health, wellbeing, and demography; (c) energy decarbonisation and sustainable industry; (d) sustainable food, land, water, and oceans; (e) sustainable cities and communities; and (f) the digital revolution for sustainable development. They offer an actionable framework for mobilising governments, businesses, and civil society around targeted problem-solving and SDG implementation.

The emphasis by Sachs et al. (2019) on profound, deliberate, long-term structural changes, especially in resource use, infrastructure, and social relations, resonates with the observations of Eccles and Serafeim (2013) regarding the nature of the sustainable strategy process. Furthermore, the challenges outlined by Sachs et al. (2019), including identifying priority investments and regulatory challenges, underline the necessity of having well-defined parts of government work seamlessly with business and civil society. Such collaborative efforts mirror Sancak's (2023) notion of sustainable transformation as a planned organisational change aimed at shifting the organisation from its current state towards a desired sustainable model (Stouten et al., 2018). As Abson et al. (2016) described, sustainable transformation embodies comprehensive systemic modifications in socio-ecological structures. This perspective aligns well with the SDGs' ambition of addressing interconnected issues, from gender inequality to energy decarbonisation. Furthermore, Folke et al. (2016) point out the complexities that sustainable transformation seeks to address, such as climate change and social inequality and find parallels in the transformative objectives of the SDGs. The multi-dimensional changes required, like culture, technology, and economics (Loorbach, 2010), also align with the deep-rooted transformations identified by Sachs et al. (2019). According to Folke et al. (2010), the sustainable transformation concept is central to resilience, as is the capacity of socio-ecological systems to withstand disturbances while maintaining their core functions. Similarly, the six transformation paths emphasise meeting time-bound targets like net-zero carbon emissions by mid-century, highlighting the urgency and commitment to building a resilient future.

In conclusion, the interconnectedness of sustainable transformation paths and the SDGs by Sachs et al. (2019) underscore sustainable change's required depth and breadth. While sustainable transformation delves into the profound change levels necessary for sustainability, sustainable transformations provide the building blocks to achieve such change. Together, they provide a holistic vision wherein sustainable transformation represents deep-rooted changes, sustainable change denotes incremental modifications, and sustainable development stands as the overarching goal they collectively aim to realise. Overall, Sachs et al. (2019) identified significant knowledge gaps in designing pathways and strategies for each transformation, implementing them, and monitoring the results.

2.1.9 Corporate Sustainable Transformation in Practice

Based on the identified definitions, the main characteristic of sustainable transformation is the focus on long-lasting, complex objectives while aiming to impact the 17 SDGs. To continue with the practical example of *Volksbank eG – Die Gestalterbank*, this section provides an example of corporate sustainable transformation. Processes are based on deeply integrated changes. To make a company more sustainable, it is necessary to educate and inform all employees why corporate sustainable transformation is necessary and how it can be achieved. Many individual corporate sustainable change activities, such as implementing sustainability training for all employees, establishing a sustainability channel on the intranet (channel for internal communications), various sustainability updates in the respective departments, and competitions promoting sustainable behaviours, have collectively led to employees significantly transforming their work and behavioural practices sustainably. This transformative measure can be quantified by a noticeable reduction in the carbon footprint in the climate strategy, which collectively contributes to corporate sustainable development and, therefore, to the 17 SDGs (DNK, 2022).

2.1.10 Comparison of the Terms

Each approach has relevance to making a company resilient to today's and future challenges. Still, the choice of approach often depends on the specific circumstances, challenges, and aims of a company. The following table provides an overview and compares the three terms – 'corporate sustainable development', 'corporate sustainable change', and 'corporate sustainable transformation' – for a more precise understanding:

Table 1: Term Comparison

	Sustainable Change	Sustainable Transformation	Sustainable Development
Short Definition	Small-scale changes or adjustments are carried out sustainably, often within existing frameworks or systems (Kuhlman & Farrington, 2010).	Comprehensive changes to systems, structures, and behaviours that facilitate sustainable development (Fazey et al., 2018).	A development approach that meets the needs of the present without compromising the ability of future generations to meet their own needs. It encompasses social, economic,

			and environmental dimensions (WCED, 1987).
Primary Focus	Efficiency, Reduction, and Preservation (Kuhlman & Farrington, 2010).	Innovation, Disruption, and Resilience (Fazey et al., 2018).	Balance of Economic Growth, Social Inclusion, and Environmental Protection (WCED, 1987).
Timescale	Short to Medium-term.	Medium to Long-term.	Long-term.
Key Outcome	Limited impact; improves current practices, products or processes (Benn et al., 2014).	Fundamental, systemic shift leading to the creation of new sustainable systems (Westley et al., 2011).	Prosperous, equitable, and liveable societies in harmony with the natural environment (Griggs et al., 2013).
Challenges	Resistance to change, a lack of awareness or skills, and limited resources (Moser & Ekstrom, 2010).	Complexity and uncertainties require significant resources and capabilities to alter the status quo radically (Geels, 2011).	Conflicts between social, economic, and environmental goals, policy coherence, effective governance, and adequate resources (Sachs, 2015).

Source: Created by the author.

In summary, sustainable change activities are relevant for every company to meet global regulatory targets. Depending on the business model, there may be companies for which minor adjustments are sufficient to achieve the set goals. Companies that are or will be confronted with significant sustainability issues and operate in rapidly changing contexts should consider holistic, sustainable transformation. In any case, the macro-level goal should focus on sustainable development (i.e., to achieve business success that contributes to social and environmental sustainability (Dyllick & Muff, 2016).

2.2 Barriers to Corporate Sustainability Transformation

Corporate sustainability transformation faces significant barriers that must be recognised and addressed to unlock the full potential of these initiatives and successfully implement a sustainability strategy. This section revisits these barriers, focusing on their implications for sustainability managers in the German finance industry.

Schaltegger et al. (2023) discuss corporate sustainability agents' challenges in driving deep and meaningful change within organisations, pointing to internal and external pressures that can obstruct sustainable transformations.

Álvarez et al. (2018) identified a significant gap in knowledge and technical expertise as prevalent barriers across various sectors. This lack of clarity on sustainability transformation can impede effective implementation and strategic decision-making. In the German finance industry, where specific regulatory and market complexities exist, the role of sustainability managers becomes crucial in bridging this knowledge gap, ensuring that sustainability concepts are well-understood and applied pragmatically (Álvarez et al., 2018).

The studies by Orji (2019) and Meijer et al. (2019) highlight poor leadership as a significant barrier to effective sustainability transformation. Good leadership is essential for navigating the challenges of sustainability demands as leaders drive organisational culture and strategy. This barrier directly relates to the second research question, emphasising the need to delineate the responsibilities of sustainability managers in fostering a culture that supports sustainable practices (Orji, 2019; Meijer et al., 2019).

The imbalance between short-term and long-term goals noted by Virmani et al. (2020) often results in strategic misalignments. This barrier is crucial for sustainability managers, who must balance immediate financial pressures with long-term sustainability goals. Understanding and addressing this barrier is fundamental to achieving the strategic objectives of sustainable transformation in individual sectors, as in this research case, the finance sector (Virmani et al., 2020).

Adding to these insights, Olesson et al. (2023) explore the intricate dynamics of institutional logics as barriers to sustainability. They highlight how different institutional logics within organisations – specifically, commercial, professional, and sustainable ones, can conflict with or align with sustainable transformation initiatives. This complex interplay can create substantial barriers when existing commercial or professional logics are misaligned with sustainability goals, significantly impacting the role and effectiveness of sustainability managers in driving change (Olesson et al., 2023).

Guadagnin et al. (2023) highlight several systemic and cultural barriers to implementing sustainability within Brazilian business schools. These include a lack of a unified understanding

of sustainability concepts, sustainability not driving strategic decisions, rigid management processes, and a scarcity of financial resources dedicated to sustainability initiatives. These barriers underscore the critical role of integrating sustainability into the core strategic frameworks and fostering an organisational culture that prioritises sustainable practices. For sustainability managers in the German finance industry, overcoming these barriers involves aligning sustainability with corporate strategies and addressing cultural resistance and bureaucratic inertia that hinder effective implementation (Guadagnin et al., 2023).

The lack of a uniform, efficient legal framework, as discussed by Gupta et al. (2020) and Caldera et al. (2019), complicates compliance and enforcement of sustainability standards. In Germany, where the financial industry is tightly regulated, sustainability managers face the challenge of navigating these complexities, prioritising establishing a clear and effective legal framework for facilitating transformation (Gupta et al., 2020; Caldera, Desha and Dawes, 2019).

Financial barriers such as the lack of resources and high initial costs, as identified by Álvarez et al. (2018), are particularly pertinent in the finance industry. These barriers influence decision-making processes and can deter adopting sustainable practices unless adequately managed by sustainability managers, who must ensure that investments align with long-term benefits (Álvarez et al., 2018).

Volatile customer demands and preferences and the absence of stakeholder integration can hinder the effectiveness of sustainability strategies. For sustainability managers, engaging stakeholders and aligning market dynamics with sustainable practices are essential for successful transformation (Virmani et al., 2020).

As highlighted by Malek and Desai (2019), inefficiencies in target control and monitoring systems pose significant challenges. These operational barriers require sustainability managers to develop robust systems that can effectively quantify and leverage sustainability benefits (Malek and Desai, 2019).

Annosi et al. (2024) add that sustainability managers frequently encounter internal goal conflicts and organisational resistance, critical barriers to sustainability transformation. These conflicts often arise from balancing economic and environmental goals, demanding a robust framework of support from higher management levels to facilitate effective brokering and negotiation between conflicting parties (Annosi et al., 2024). Additionally, the study underscores the importance of institutional support and the integration of ambidextrous organisational capabilities to overcome these internal challenges, further enhancing the strategic role of sustainability managers in navigating and mediating these organisational complexities (Annosi et al., 2024).

This thesis addresses these barriers through the lens of sustainability managers, aiming to provide insights into the challenges and responsibilities faced by these professionals in the German finance industry. Having identified and discussed the barriers to corporate sustainability transformation, it is imperative to delve deeper into the specific responsibilities of sustainability managers.

2.3 Responsibility of Sustainability Managers

The role of sustainability managers has evolved significantly – particularly since the early 2000s – as these professionals have become central to integrating sustainability into corporate strategies (Acre, 2011). Studies by GreenBiz (2018) and the Weinreb Group (2014, 2018) have documented their growing influence, highlighting a broader recognition of sustainability and corporate social responsibility's role in modern business strategies.

According to Schaltegger et al. (2023), corporate sustainability agents are instrumental in pushing for transformations that align with global sustainability standards, such as the 17 SDGs, which require them to operate across strategic and operational dimensions in their organisations.

Sustainability managers oversee the company's sustainability strategies from inception through implementation and results assessment, profoundly shaping corporate practices (Kanashiro & Rivera, 2017; Strand, 2013, 2014). Their responsibilities have expanded beyond the oversight of sustainability initiatives to include strategic decision-making and influencing organisational behaviours, which are crucial for the long-term integration of sustainable practices within corporations (Kanashiro & Rivera, 2017; Strand, 2013, 2014).

These managers are increasingly involved in core business operations such as mergers and acquisitions, product development, and stakeholder engagement, reflecting their importance internally and in the broader corporate social responsibility discourse alongside investors, NGOs, and business schools (Acre, 2011). The decision to appoint sustainability managers often stems from a desire to enhance the organisation's reputation, integrate corporate social responsibility more deeply into the business, and improve the efficiency of sustainability initiatives (Borglund, 2021; Wiengarten et al., 2015). Being close to or part of top management allows sustainability managers to effectively influence sustainability efforts and align them with corporate strategies (Borglund, 2021).

Moreover, the role of sustainability managers may be a corporate response to societal pressures for sustainable practices, a theme explored through the institutional logic perspective by scholars such as Bondy et al. (2012) and Frostenson & Helin (2017). This perspective emphasises the importance of organisational and societal contexts in shaping the

roles and responsibilities of sustainability managers (Risi & Wickert, 2016). Testa et al. (2016, 2018, 2020) have traced the evolution of sustainability managers from implementers of specific initiatives to leaders in addressing broader environmental challenges, including climate change.

Discussions around the structural positioning of sustainability managers within organisations highlight the relevance of their proximity to top management, the role of sustainability committees, and the centralisation or decentralisation of sustainability roles as organisations mature in their sustainability journeys (Borglund, 2021; Wiengarten et al., 2015). The financial implications of sustainability efforts also suggest a positive correlation between the role of sustainability managers and organisational performance, though this relationship is influenced by various factors, including the sustainability manager's characteristics and the organisation's prior sustainability record (Kanashiro & Rivera, 2017; Peters et al., 2019).

Research by Annosi et al. (2024) adds depth by emphasising the important role of sustainability managers in handling internal goal conflicts between sustainability and profitability, highlighting their role as organisational brokers. This research points out that effective sustainability management requires support from top management levels to overcome internal resistance and successfully implement sustainable practices, which is crucial for organisational ambidexterity in sustainability and profitability (Annosi et al., 2024).

The complexities and challenges inherent in the role of sustainability managers are substantial, involving navigating different logics and occasionally conflicting demands. These complexities often lead to identity struggles in the role, highlighting the multifaceted nature of sustainability management (Carollo & Guerri, 2017; Wright et al., 2012). While no definitive description of the sustainability manager profession exists, the role undeniably encompasses various tasks, including managing organisational complexities and fostering collaboration across departments and external stakeholders (MacDonald et al., 2020).

The shared values among sustainability managers and their commitment to sustainable business practices are crucial for fostering a unified approach to sustainability within organisations (Brés et al., 2019). Additionally, developing specific skills such as strategic thinking, leadership, and communication is essential for sustainability managers to effectively integrate sustainability into core business strategies and manage stakeholder relationships (Smith & Jones, 2023).

However, a notable gap exists in the literature regarding the specific barriers that sustainability managers face – particularly those related to business strategy and the professional logic of sustainability managers. While some studies touch upon these issues (Álvarez et al., 2018; Bag et al., 2018; Malek & Desai, 2019; Gupta et al., 2020; Raghuvanshi & Agrawal, 2020), a comprehensive understanding of how sustainability managers navigate and perceive these

barriers in practice is lacking. This gap underscores the need for further research, which is crucial for advancing the field of sustainability management and enhancing its practical application in the corporate world.

In conclusion, while the roles and responsibilities of sustainability managers have considerably evolved and are critical for embedding sustainability into business strategies and operations, significant research gaps remain. These gaps provide fertile ground for investigating how sustainability managers in the German finance industry understand, implement, and navigate the complexities of corporate sustainable transformation – directly addressing this study's research aim and objectives.

2.4 Identified Gaps in the Literature

This thesis explores sustainability managers in the German finance industry, focusing on their understanding, responsibilities, and barriers concerning corporate sustainable transformation. The literature review indicates that while there is abundant research on sustainability broadly, specific studies addressing the nuanced roles of sustainability managers, especially in the finance sector and particularly in Germany, are scarce.

Schaltegger et al. (2023) contribute significantly to this field by delineating the roles of corporate sustainability agents, who are central figures in spearheading the necessary changes within firms to achieve sustainable operations and practices.

The literature further reveals a research gap in how sustainability managers in the German finance industry understand corporate sustainability transformation. Existing studies provide a general overview of corporate sustainable transformation but lack depth in these professionals' context-specific interpretations and applications within this industry. This gap is noteworthy because understanding these managers' perspectives is crucial for developing effective sustainability strategies decoupling economic growth from increasing climate change that are both practical and adaptable to the unique challenges of the financial sector in Germany (Göpel, 2020; Sachs et al., 2019).

Oleson et al. (2023) delve into the conflicting roles of institutional logics in sustainability initiatives within organisations. Their study illustrates that the dynamics between commercial, professional, and sustainability logic can significantly influence the efficacy and direction of sustainable transformations. Such insights underscore a complex layer of institutional barriers that sustainability managers must navigate, which is particularly relevant in the finance sector, where traditional commercial logic is deeply entrenched. This addition highlights a crucial area for further exploration: the institutional logic at play within financial organisations in Germany

and their impact on sustainability integration, offering a nuanced perspective on the strategic challenges faced by sustainability managers.

The roles and responsibilities of sustainability managers have evolved, but detailed research on how these responsibilities are executed in the German financial industry is lacking (Borglund et al., 2021). There is a need for a more detailed exploration of how these managers integrate sustainability into corporate strategies and operations. This gap is significant as it affects the implementation of effective sustainability practices that can contribute to the broader corporate sustainable transformation goals mandated by initiatives like the European Green Deal.

Annosi et al. (2024) highlight the complexities sustainability managers face in aligning sustainability with profitability, revealing that these managers often act as organisational brokers who navigate internal goal conflicts and resistance. This adds a layer to understanding the barriers that sustainability managers face in integrating sustainability practices effectively, emphasising the importance of support from higher management levels to overcome these barriers and achieve corporate ambidexterity (Annosi et al., 2024).

Another underexplored area is the barriers that sustainability managers face in the German finance industry. While some studies have touched on general challenges in corporate sustainable transformation, there is a lack of detailed research focusing on the barriers perceived and experienced by those within this niche role. Understanding these barriers is critical to developing realistic and effective strategies to overcome the barriers unique to this industry (Sachs et al., 2019).

The research gaps identified through the literature review demonstrate a clear need for this thesis to focus on the understanding, responsibilities, and barriers perceived by sustainability managers in the German finance industry concerning corporate sustainable transformation. This research aims to significantly contribute to the academic literature and practical implementation of sustainability practices in this critical economic sector by addressing these gaps through the underlying research questions. The findings should provide actionable insights that can be used to refine corporate sustainability strategies and enhance the effectiveness of sustainability managers in navigating the complexities of the German financial landscape. This exploration is not only timely but essential, given the pressing global imperatives for sustainability and the pivotal role of the financial industry in achieving them.

2.5 Summary

This literature review has methodically explored the multifaceted dimensions of corporate sustainability, culminating in a nuanced understanding relevant to sustainability managers' evolving role in the German financial industry. Through a narrative review approach, this examination has revealed significant gaps and provided a rigorous foundation for addressing the specific objectives of this thesis. Central to this discourse is recognising the urgent need for corporations – particularly in the German finance industry, to integrate sustainability not merely as a peripheral activity but as a core component of their strategic operations. Influenced by seminal works such as Göpel (2020), this review underscores the imperative to decouple economic growth from environmental degradation – a transformative idea that challenges traditional business models and calls for innovative strategies that embed sustainability at their core. Moreover, the literature has highlighted a critical oversight regarding businesses' geographical context, which profoundly influences their sustainability strategies and outcomes. This gap in the literature suggests a broader scope for research that extends beyond damage control to actively harnessing corporate influence for sustainable development – particularly in alignment with the 17 SDGs. Despite the broad discourse on sustainability, the specific role and challenges faced by sustainability managers – especially in regulatory frameworks like the European Green Deal and the EU Taxonomy – remain mainly underexplored.

This review has identified a crucial need for research on how sustainability managers navigate and influence corporate strategies amidst these complexities. The evolving responsibilities of these managers, as discussed by authors such as Borglund et al. (2021) and MacDonald et al. (2020), highlight a dynamic field where strategic decision-making intersects with sustainable practice.

Annosi et al. (2024) further emphasise the critical role of sustainability managers in brokering between internal and external stakeholders to address and balance conflicting goals, underscoring the necessity for comprehensive support systems within organisations in the Netherlands to empower these managers in their strategic roles (Annosi et al., 2024).

This review also points to the financial sector's significant influence in driving profitable and sustainable economic activities. The introduction of frameworks like the EU Taxonomy has reshaped the landscape, necessitating a reassessment of how financial activities are classified and funded. In this context, sustainability managers are pivotal in aligning corporate strategies with sustainable outcomes. This task has become increasingly complex and demanding due to new regulatory pressures. This literature review addresses these themes and sets the stage for the subsequent sections of this thesis, which aim to delve deeper into the understanding, responsibilities, and perceived barriers in the corporate sustainable transformation of sustainability managers in this sector.

The gaps identified herein not only justify the focus of this research but also highlight its potential contribution to the broader academic and practical discourse on sustainability. This review's synthesis aligns with the research's aim to explore the understanding, responsibilities, and perceived barriers of sustainability managers regarding corporate sustainable transformation in the German finance industry. This alignment is detailed in the research questions designed to probe the depths of corporate strategy integration, the strategic role of sustainability managers, and the barriers they face in guiding corporate sustainable transformation.

In conclusion, the literature review has established a base for this research, highlighting both the complexity of the challenges and the critical role of sustainability managers in navigating these challenges. By bridging identified gaps with targeted research, this thesis aspires to contribute significantly to the discourse on corporate sustainable transformation, providing actionable insights and strategic directions for sustainability managers in the rapidly evolving financial sector. This exploration is not only timely but essential, given the pressing global imperatives for sustainability and the pivotal role of the financial industry in achieving them.

3. Methodology

This section outlines the research methodology devised to explore the three objectives of this thesis, which focus on understanding, responsibilities, and barriers faced by sustainability managers in the German finance industry concerning corporate sustainable transformation. The three guiding research questions are:

1. What are sustainability managers' understanding of corporate sustainable transformation in the German finance industry?
2. What responsibilities do sustainability managers have in corporate sustainable transformation within the German finance industry?
3. What barriers do sustainability managers perceive to their responsibilities in the corporate sustainable transformation process in the German finance industry?

To address these questions, the section begins by establishing the philosophical underpinnings that inform the research approach. This includes selecting an appropriate research paradigm and methodology that aligns with the study's exploratory nature. The research strategy and design are then detailed, highlighting how they contribute to a comprehensive understanding of the research objectives. This involves outlining the researcher's role in the data-gathering process, the methods employed for data collection, and the steps taken to ensure the rigour and ethical integrity of the research. This is followed by the data-collection method and the presentation of the two qualitative online questionnaires. The first qualitative online questionnaire explores the perspective of sustainability managers based on the underlying research objectives. The second qualitative online questionnaire is designed to delve deeper into the consensus statements identified in the first data-collection phase. This methodological framework sets the stage for the subsequent analysis of the gathered data and concludes with a summary of the methodological approach.

3.1 Philosophy

From the outset, the perception of our world and the creation of new knowledge guide the inception of a research idea. Acknowledging this is a fundamental step in any research project. Such a worldview is often referred to as a 'paradigm', a '*fundamental belief system based on ontological, epistemological, and methodological assumptions*' (Guba & Lincoln, 1994, p. 107). Guba & Lincoln (2005) also consider axiology an essential element within a paradigm's framework.

This research explores sustainability managers' understanding, responsibilities, and perceived barriers concerning corporate sustainable transformation in the German finance industry, which involves comprehending the phenomenon and its impact on organisations and identifying key future indicators that may impact their current worldview.

Positioned in the social contexts of the German finance industry, the study requires a clear philosophical underpinning (epistemology, ontology) to derive a coherent methodology for its framework. The variability in interpreting terms such as 'philosophy', 'epistemology', 'ontology', and 'methodology' presents a primary challenge in defining a research approach (Crotty, 1998), emphasising the need for consistency and logic in these foundational elements.

The research framework adopts the structure proposed by Saunders et al. (2009), who introduced the 'research onion', layering the research process from philosophical considerations to methodological execution. This model underscores the importance of a coherent research design.

After exploring various paradigms, the objective, fact-based positivist approach, which emphasises ontological objectivity and epistemological generalizability, was found unsuitable. Instead, this research leans towards acknowledging the socially constructed nature of sustainability practices in the German finance industry. This subjective experience is essential for grasping the complexities of corporate sustainable transformation as it relates to the perceptions and responsibilities of sustainability managers.

Positivism, which emphasises objectivity and generalizability, and interpretivism, which focuses on subjective experiences, were both deemed unsuitable for addressing the research questions. Similarly, the critical-realist perspective, positioned between positivism and interpretivism, did not fully align with the nuanced understanding sought in this study. Thus, constructivism, viewing knowledge as a socially constructed phenomenon, emerged as the most fitting perspective for this research.

In summary, this research understands the social constructs and subjective realities navigated by sustainability managers, accommodating the complex interplay of responsibilities, understanding, and barriers to corporate sustainability in the German finance industry. This nuanced stance justifies the choice of a social constructivist philosophy to address the research questions effectively.

3.1.1 Role of the Researcher

The research topic was chosen because the researcher has firsthand experience with the challenges outlined in the literature review within her professional role. Through numerous interactions with other sustainability managers, she has witnessed the problems and barriers hindering successful corporate sustainable transformation. This topic holds personal significance for the researcher, as it aligns with her broader goal of safeguarding human health and preserving the environment while fuelling her professional drive to seek solutions for overcoming these obstacles.

Given the researcher's intimate familiarity with the subject matter and her business connections with some research participants through shared professional activities, the research methodology must enable a nuanced understanding without direct interaction during data collection and analysis. Although the researcher shares a professional background with the participants, it is essential to recognise that this insider perspective could influence the results. Thus, the qualitative approach chosen for the project cannot be divorced from the researcher's experience, knowledge, and convictions.

This marks a distinct departure from purely quantitative research approaches, as Saunders et al. (2019) highlighted, underscoring the blurred boundary between the researcher and the research process in qualitative studies. As an insider researcher operating in the same industry as the participants, the researcher brings extensive firsthand experience as a sustainability manager in corporate sustainable transformation. This insider status necessitates special measures throughout the research process to ensure authenticity and minimise bias. The researcher let the data speak for itself, free from undue influence from personal context or prior experiences.

3.1.2 Ontology

Ontology pertains to assumptions about the nature of reality. Saunders et al. (2019) elucidate that within business research, ontology frequently navigates between two main perspectives: objectivism and subjectivism. Easterby-Smith et al. (2021) separate realism from relativism and nominalism. Subjectivism and relativism posit that social phenomena are birthed from individual actions and perceptions, and facts depend on the observer's viewpoint, resonating with the tenets of social constructivism. Guided by the researcher's conviction, the stance is that multiple realities exist, shaped by cultural, historical, and societal frameworks (Guba & Lincoln, 1994). This belief is anchored in the principle that reality is a social construct and that no 'real world' exists in isolation from human interpretations and actions (Saunders et al., 2019). Consequently, the research insights and findings, rooted in the viewpoints of

sustainability managers, adopt a relativist approach. Therefore, this approach values individual interpretations and is very well-suited to answer the underlying research questions and contribute to the research objectives.

3.1.3 Epistemology and Axiology

Epistemology, at its core, concerns the nature of knowledge, examining both the criteria that researchers use to deem knowledge acceptable (Saunders et al., 2019; Crotty, 1998) and the intricate connection between our comprehension of reality and the essence of acknowledged knowledge (Easterby-Smith et al., 2021).

Further, axiology adds another dimension by addressing the researcher's stance on the role of values in the research process (Saunders et al., 2019). Such values are not standalone; they're intertwined with the experiences and perspectives of the researcher. As highlighted in section 3.1.1, the role of the researcher is central to framing the complete philosophical spectrum. Sustainability managers merging professional experiences with the gathered data can blur the lines for a purely objective separation. This interplay between the researcher's experiential knowledge and insights gleaned from participants evolves into a shared knowledge platform. This platform is continually moulded through abstract thought processes and a profound conceptualisation of the phenomenon being researched (Saunders et al., 2019). Cultural beliefs, practices, and set rules play a crucial role in this interplay, impacting the viewpoints of individuals within a researched context (Bossy et al., 2018). At the heart of this research lies the social constructivism paradigm. This orientation of constructivism stresses the symbiotic and subjective relationship between the researcher and the participants, leading to a collaborative construction of meaning (Hammerschmidt, 2020; Mills et al., 2006). This study's methodology is sheltered under the constructivist paradigm and synchronises with social constructivism, acknowledging the myriad realities birthed by individual assumptions. It postulates that researchers venture to comprehend and contextualise the environments in which their participants operate (Creswell, 2009). This approach respects the lived experiences and the accompanying social-cultural frameworks, rendering it apt for this study's setting (Saunders et al., 2009).

From a broader perspective, this viewpoint is directed by knowledge and reality, individual conversations, and discourses. Magala (2002, p. 23) asserts, '*Social constructivism is a collective of theories and methods in the social sciences. It dissects how groups and individuals 'formulate' social reality by creating meanings and deciphering relationships, interactions, and environments*'. While the definition of social constructivism remains fluid, its core revolves around specific shared assumptions (Magala, 2002, p. 17; Burr & Dick, 2017).

As a natural progression, this study's inductive qualitative research framework acknowledges the existence of diverse realities. It appreciates the dawn of new insights through social constructs, underlined by the researcher's proximity to the research milieu and the human tendency to derive meaning based on personal perspectives. Conclusively, the research question's alignment produces adopting a qualitative approach, further validated by the study's exploratory nature and its firm anchorage in the philosophical underpinnings of social constructivism.

3.1.4 Social Constructivism

Given this research aim – to explore the understanding, responsibilities, and perceived barriers of sustainability managers in the German finance industry concerning corporate sustainable transformation – social constructivism is the most appropriate research philosophy. This choice is supported by its alignment with the literature gaps and the contributions it enables, which are critical in enhancing the operational and strategic aspects of sustainability practices in the German finance industry.

Social constructivism, which views knowledge as constructed through social interaction and cultural contexts (Crotty, 1998), offers a framework that enables a deeper exploration of subjective perspectives in their specific organisational and socioeconomic contexts. Burr and Dick (2017) enhance this understanding by emphasising that the concepts and categories we use are historically and culturally specific, and the knowledge we operate with is maintained and shaped through ongoing social processes.

By adopting a social constructivist approach, this research can critically examine the responsibilities, understandings, and barriers faced by sustainability managers in a way informed by their experiences and interactions in the German finance industry. This perspective is particularly valuable for addressing the operational challenges Borglund et al. (2021) highlighted and the integration issues within corporate strategies.

Burr and Dick (2017) support this approach by underscoring the importance of interaction and social practices, emphasising that our constructions of the world are linked to power relations and have implications for how individuals are allowed to act and treat others in these frameworks. Furthermore, Burr and Dick (2017) point out that knowledge and social action are interlinked, suggesting that our understandings influence and are influenced by the social dynamics around us, focusing on the dynamics of interaction rather than static structures. This aligns with the methodological need to capture sustainability managers' lived experiences and tacit knowledge, providing insights for effectively implementing sustainability strategies and practices. Research findings derived from a social constructivist perspective should offer

actionable insights that can refine corporate sustainability strategies and enhance the effectiveness of sustainability managers in navigating the complexities of the German financial industry. This contributes to academic literature and the practical implementation of sustainability practices, ensuring that the strategies developed are relevant and tailored to the challenges and opportunities in the German financial industry.

In summary, social constructivism justifies its selection as the research philosophy for this study by providing the necessary framework to interpret the complex social interactions and cultural influences that shape the roles and perceptions of sustainability managers in the German finance industry. This approach aligns with the research objectives and enriches the understanding of corporate sustainability practices, thereby enhancing strategic integration and operational effectiveness in the sector. Burr and Dick's (2017) insights on the critical attitude towards presupposed knowledge, the historical and cultural specificity of concepts, and the focus on language and process dynamics further solidify the rationale for this philosophical choice.

3.2 Research Design

The research design is the framework for collecting and analysing the data to answer the research questions and achieve the research objectives, providing reasoned justification for the choice of data sources, collection methods, and analysis techniques (Saunders et al., 2019). Therefore, it starts with selecting the most appropriate research design as the general plan of action (Saunders et al., 2019); it further justifies the method of choice and the resulting coding process, and finally, the rationale for selecting the Grounded Delphi Method.

3.2.1 Choice of Research Design

The research design is an essential component of every research project and should rigorously address the research questions while permanently being anchored in a philosophical context (Howard, 2015). The basis for selecting the research design lies in the philosophical foundations of this research, coupled with the inductive approach and qualitative methodological choice. The researcher evaluated action research, case studies, constructivist grounded theory, and Delphi studies in this research context. The rationale behind this selection was its applicability in real-world scenarios and compatibility with the outlined research philosophy. After an intensive literature review of the mentioned strategies, the researcher chose a modified version of the 'Delphi Study', the so-called 'Grounded Delphi Method', as the research design for this thesis, which is explained in detail in the following sections.

3.2.2 Delphi Study

The Delphi study has its origins as far back as 1950 when Kaplan et al. (1950) used the term 'Delphi' to refer to the 'oracle' of future events. It is traditionally defined as a method to obtain reliable consensus from a group of experts through a series of intensive questionnaires interspersed with controlled opinion feedback (Kaplan et al., 1950; Meißner, 2012).

The Delphi method, described by Linstone and Turoff (1975), effectively structures group communication to tackle complex problems. This includes various purposes such as forecasting, policy analysis, and consensus-building, employing a controlled, decentralised communication process to address uncertain, often future-oriented questions (Häder, 2014). The goal is typically to achieve a consensus among the experts, facilitated by anonymising feedback to avoid typical group dynamics and power imbalances (Meißner, 2012; Häder, 2014).

In the research aim – exploring the understanding, responsibilities, and perceived barriers of sustainability managers concerning corporate sustainable transformation – the Delphi method's ability to refine complex, expert-based discussions into actionable insights is precious. This method enables systematically exploring expert assessments, further qualifying them to derive robust conclusions and action strategies (Cuhls et al. 1998). The research objectives are deeply connected to understanding and evaluating expert opinions in the dynamic field of corporate sustainability in the finance industry. The Delphi method's structured yet flexible framework makes it an ideal choice for:

Idea Condensation: This qualitative approach leverages the panel's expertise to develop problem-solving proposals from the collected ideas. Unlike the classic approach, the results from the initial round are evaluated qualitatively by the experts in subsequent rounds to foster a deeper understanding and more nuanced perspectives on the subject matter (Häder, 2014).

Establishment of Factual Situations: This approach determines factual situations as accurately as possible, blending qualitative and quantitative data to establish a comprehensive view (Häder, 2014).

Identification of Expert Opinions: This involves a quantitative and qualitative assessment of expert opinions to gauge majority opinions and improve them through iterative surveys (Häder, 2014).

Consensus Building: This focuses on harmonising group opinion and prioritising consensus where the continuation of the survey depends on reaching a defined dispersion of responses (Häder, 2014).

These four types show various aspects of the research questions, from understanding the fundamental concepts of sustainable transformation to identifying specific barriers and responsibilities that sustainability managers perceive.

Despite its strengths, the Delphi study is sometimes criticised for the potential invalidity of a consensus, where even a unanimous expert panel may be incorrect. This highlights the importance of dissent and the critical evaluation of consensus as quality features of research outcomes (Häder, 2014). Moreover, methodological relevance criteria, essential for finding results, often emerge only after the application, challenging the knowledge-gain process (Linstone & Turoff, 1975; Rowe & Wright, 1999; Meißner, 2012; Häder, 2014).

In conclusion, the Delphi study provides a rigorous framework for addressing this study's research questions – particularly in its qualitative and consensus-building formats. Facilitating structured yet flexible expert engagement ensures that the findings are comprehensive and reflect a deep understanding of the complex dynamics within corporate sustainability practices in the finance industry. The approach aligns well with the need to capture current expert assessments and project future scenarios, making it an invaluable tool for this research.

3.2.3 Grounded Theory Approach

Grounded Theory was first formulated by Glaser and Strauss (1967). They saw the key task of the researcher as being to develop theory through the 'comparative method', which means analysing the same event or process in different contexts (Easterby-Smith et al., 2021). Glaser and Strauss (1967) integrated quantitative research logic and rigour into qualitative data analysis to extract theories from the data. The approach involves 'discovering theory from data systematically obtained and analysed in social research' (Glaser & Strauss, 1967). A tightly data-bound, structured, grounded theory approach ensures methodological rigour throughout the study (Corbin & Strauss, 1998; Hammerschmid, 2020; Knoche, 2022). Grounded Theory provides tools for qualitative research, with data coding as a central component (Flick, 2009; Päiväranta et al., 2011; Howard, 2015).

From the original approach, three main streams emerged (Flick, 2009): the classical approach by Glaser, the structured approach by Strauss, and the constructivist approach by Charmaz (Hammerschmid, 2020). These approaches differ in their coding methodologies, and their underlying philosophical assumptions vary (Howard, 2015). The most significant differences lie in the coding framework, the applied use of the literature, and the underlying philosophy (Hammerschmidt, 2020). In Grounded Theory, coding describes the '*process of developing codes, categories, and concepts*' (Flick, 2009, p. 435). A 'code' is a word or a short phrase that summarises the meaning of a chunk of data (Easterby-Smith et al., 2021). While different views

by Strauss & Corbin (1998), Glaser (1992), and Charmaz (2006) are not the focus of this research (for a full comparison, see details in Hammerschmid (2020)), it is the shared core, the multi-step coding process – that is, pertinent to this research (Flick, 2009). Coding derives features, categories, and their relationships from the data (Päivärinta et al., 2011). According to Urquhart et al. (2010), a researcher's *'own ontological and epistemological stance influences the coding, data analysis, and application of Grounded Theory'*. Thus, the researcher's worldview may be through the coding principles of grounded theory during data analysis.

3.2.3.1 Open Coding

Open coding disaggregates data into units in grounded theory (Saunders et al., 2019). It identifies, describes, and classifies the main ideas and phenomena in the data (Flick, 2009; Päivärinta et al., 2011). The coding can be applied at the word, line, sentence, or paragraph level. According to Easterby-Smith et al. (2021), open coding is guided by open questions such as:

- What are these data about?
- Whose point of view is reflected in the data?
- How is this view expressed?

These codes describe the content of marked passages in qualitative data (Strauss & Corbin, 1998; Flick, 2009). The coding depth varies depending on the study context, significance, and coding objectives (Howard, 2015).

3.2.3.2 Axial Coding

Based on open coding, so-called 'axial coding' is recognised as the second coding step of relationships between identified categories in grounded theory. It refers to looking for relationships between the categories of data that have emerged from open coding (Saunders et al., 2019). As relationships between categories are recognised, they are rearranged into a hierarchical form, with the emergence of subcategories (Saunders et al., 2019). The essence of this approach is to explore and explain a phenomenon by identifying what is happening and why, the environmental factors that affect it, how it is managed in the context being examined, and the outcomes of the action that has been taken (Saunders et al., 2019). Thus, relationships and categories arise inductively from the text and are deductively verified (Strauss & Corbin, 1998; Flick, 2009).

3.2.3.3 Selective Coding

As the third step in the coding process – based on open and axial coding – selective coding intends to identify principal categories (Saunders et al., 2019). Thus, selective coding is a process of integrating categories to produce theory in grounded theory (Saunders et al., 2019). It delves deeper into relevant categories and forms core concepts (Flick, 2009), focusing on theory development in the grounded theory and revealing the core themes (Päivärinta et al., 2011). This process aims at general concepts (Strauss & Corbin, 1998) and concludes when no new insights emerge (Flick, 2009). Although the classic grounded theory does not serve as a methodological foundation in this study, its coding procedures facilitate a structured way of data analysis in a Delphi study to define categories and understand their relationships to each other. It also forms the basis for the selected grounded Delphi method, explained in the following section.

3.2.4 Grounded Delphi Method

The analysis of the Grounded Delphi Method (the combination of the Delphi Method and Grounded Theory) has highlighted their strengths and weaknesses in exploratory research (Howard, 2015). Motivated by these findings, Päivärinta et al. (2011) combined the Delphi Method with techniques from the Grounded Theory to optimise theory development. This approach aimed to harness the advantages of both methods while balancing their respective limitations (Howard, 2015). In this regard, Päivärinta et al. (2011) emphasised the significance of grounded theory principles during data collection and analysis, as cited in Howard (2015, p. 112).

To date, the Grounded Delphi Method has seen limited application. Its inaugural use traces back to the project by Päivärinta et al. (2011). Other instances include the dissertations by Hussey (2012), who explored decision-making processes through prayer, and Howard (2015), who examined information professionals in cultural institutions in Australia. More recently, Higgins et al. (2021) used the Grounded Delphi Method to study autistic burnout, and Knoche (2022) researched digital transformation in German small and medium enterprises. For the further development of the Grounded Delphi Method and to expand its applicability, Päivärinta et al. (2011) integrated the suggestion by Okoli and Pawlowski, urging experts to justify their perspectives, thus garnering additional insights, as quoted in Päivärinta et al. (2011).

Based on social-constructivist assumptions, humans create knowledge in their social realities (Burr & Dick, 2017). This is particularly true for experts who develop specialised expertise in their respective social contexts. Through the Grounded Delphi Method, experts will discuss and consolidate knowledge. It enables asynchronous, interactive knowledge formation and

intends to consider potential power relations in the expert panel and their interactions with researchers. It is essential to emphasise that power relations and worldviews are closely intertwined (Burr & Dick, 2017).

When carefully applied, the Grounded Delphi Method is a versatile tool, especially for questions arising from an incomplete understanding of a problem or phenomenon (Rowe & Wright, 1999; Skulmoski et al., 2007).

Its online applicability facilitates access to experts, even during pandemic times. A central feature of the method is the anonymity of the experts, which minimises potential group dynamics and grants time autonomy to every expert, thereby reducing dropout rates. Qualitative data analysis, especially coding based on grounded theory, offers a structured approach to theory-building. This approach is justified in the research subject and understanding of the phenomenon. This method ensures a structured data-collection process that enables evolutionary knowledge development. The required feedback or rating of consensus statements built after the first round sharpens understanding and enhances data quality. The diversity of expert opinions enables a profound investigation of the phenomenon. This holistic approach, based on the contributions of various experts with unique perspectives, promises nuanced results. Anonymity prevents power imbalances and the overdominance of specific views. Thus, a theoretically grounded, practically implementable approach can be developed, assisting organisations in adapting to newly identified future challenges. In conclusion, the data evaluation method relies on open, axial, and selective coding. In the second round, expert statements are validated to ensure reliable results. This approach was pursued in this study's initial data-collection phase, with further details provided in the following subsections. Thus, the adapted Grounded Delphi Method will lead this study, focusing precisely on the desired knowledge object while maintaining a profound philosophical understanding.

3.3 Rigour

Regarding evaluating the quality of a study, quantitative and qualitative approaches differ. In quantitative approaches, rigour is assessed through validity, reliability, and objectivity (Amaratunga et al., 2002). Ensuring rigour in qualitative research is one of the concerns in academia, as the concepts of 'reliability' and 'validity' were developed in the natural sciences (Ritchie & Lewis, 2003, p. 270). Because of this and the very different epistemological basis of qualitative research, there are real concerns about whether the same concepts have any value in determining the quality and sustainability of qualitative evidence (Ritchie & Lewis, 2003, p. 270). According to Easterby-Smith et al. (2021), the question should be, '*Does the study use appropriate data, concepts, and methods?*'.

It is believed in qualitative approaches that even in a qualitative design, quality can be checked against specific standards. Lincoln and Guba (1985) break down the overall trustworthiness of qualitative research in five areas:

The first area is 'credibility', which asks whether good, relevant, or valid data was collected. Credibility can be checked by questioning whether the 'right questions' were asked and whether the responses were collected 'accurately' (Bell, 2023; Jensen, 2008). When attempting to apply the aspect of 'credibility' to the underlying research project, one can refer to the positive feedback from the research participants. First and foremost, the data-collection process, including initial contact and the online questionnaire, was tested in a pilot test; only then did the official data collection begin. Although all responses in the online questionnaire were optional and not mandatory, all questions were answered thoroughly. Additionally, some experts voluntarily described the questionnaire to the researcher as very interesting and effective. The online data collection using the software LimeSurvey – which is explained in more detail in the upcoming sections – ensures accurate data collection through its digital application. Since the experts composed their responses in writing themselves, the necessary precautions were directly taken in the choice of data-collection method. Additionally, the character of a Delphi study is to achieve consensus in the data, which is achieved through several rounds of interaction with the participants. The researcher formulates statements from the data analysis process, which the participants need to agree or disagree on. Thus, the conclusions drawn from the data collection were made by both the researcher and the experts who agreed on the final consensus statements. This way, the chosen Delphi study supported the credibility of the drawn conclusion in the qualitative research. Another aspect of credibility that can be increased by designing contact with participants so they can grasp the study context (Jensen, 2008) is the language. Since the researcher's and participants' native language is German, communication with the participants, information on the questionnaires, and the entire study were conducted in German, which prevented misunderstandings due to linguistic imbalances. In the researcher's opinion, this ensured better linguistic nuances, idioms, and depth of content.

The second area is 'dependability', which questions whether the timing or context has affected the data-collection process. To check this, one should analyse whether there were ordinary problems with the timing of data collection that may have impacted the quality of the answers made by the participants (Bell, 2023). To assess dependability, particular attention was paid to the timing of the invitations to prevent potential problems (absences, vacations, holidays), as the first survey was sent out in November 2023. From practical experience, December is typically not a good month for data collection, representing an additional task during working hours or a voluntary activity in one's free time. Due to year-end closing activities, many German employees are extra professionally and privately busy in December. Therefore, the first round

of data collection could be mainly completed by early December without any dropouts or technical problems, which was reflected in the relatively quick response time of the experts. Furthermore, due to the online nature of the data-collection process, all the participants were free to choose where (place) they wanted to answer and when (time) they wanted to answer the survey.

The third area is 'confirmability', which questions whether the data was interpreted objectively. This can be assessed by considering whether the interpretation could be biased by the researcher's perceptions (Bell, 2023; Jensen, 2008). To address the aspect of 'confirmability', the researcher disclosed her role as a researcher at the beginning of her research work and outlined her professional connection to the target group. Even though it is a qualitative research format and the values and views in this thesis play an important role, the chosen research design supports objective data analysis. Applying the Grounded Delphi Method in three coding steps aims to develop a new theory from the data and reduce bias. The structured coding process is based on the fundamental idea of Glaser and Strauss (1967), whose original notion of grounded theory techniques was 'to apply the logic and rigour of quantitative studies to qualitative data' (Hammerschmid, 2020, p. 71). Since the researcher is aware of this risk, constant self-reflection on the approach and interpretation is a matter of course during the research process. Additionally, the character of the Delphi study supports confirmability due to the overall aim of achieving consensus in the final stage of data collection. Thus, it is not only the researcher who interprets the data. Moreover, the final statements were a consensus among all the participants. This is supported by Jensen (2008, p. 113), who states that transparency helps confirmability, which can be achieved by having selected participants 'review part of the coding and meaning-making process'. With one more specific reference to Delphi studies, Brady (2015) states, *'In Delphi studies, the primary control of rigour is the ability of participants to expand and revise data as the study progresses, and the use of consensus in determining which responses and data are valid'*. For the present study, the chosen method of data analysis of the qualitative data in Round 1 – coding according to grounded theory – increased rigour.

The fourth area examines 'transferability', which means how useful the underlying research is in other contexts and how the recommendations can be transferred to make a more significant impact (Bell, 2023). Regarding transferability, the researcher is convinced that the results gained from this research will be valuable in the German financial system and other economic sectors. The conclusions will provide further insight into transferability; therefore, the researcher delves deeper into this aspect in the final section of this thesis.

According to Lincoln and Guba (1985), there are further things that can compromise trustworthiness; for example, there are three potential biases: interviewer bias, interviewee bias, and participation bias. The choice of how to collect the data reduced interviewer bias as much as possible. As the data was collected via an online questionnaire, interviewer bias plays no role in this research project. The interviewee bias concerns the truthful answers of the research participants; the online questionnaire supported an honest way of responding to the questions. Instead of reacting in a not-truthful manner to questions, the participants would probably have chosen not to answer the question online at all, which would have been an option because all questions were voluntary. Furthermore, the experts could respond privately and anonymously. Thus, there was no risk of exposure during the entire data-collection process. Finally, the participation bias concerns the study's participant selection. The researcher selected the participants in her network based on her knowledge of their expert status and accomplishments. Still, the online questionnaire asks at the beginning of the survey how many years of professional experience the participants have in the relevant research field so the expert status can be assured.

3.4 Ethics

Although management research generally does not undertake studies that put at risk the lives of those who take part (...), many ethical principles still apply (...) 'do no harm' (Easterby-Smith et al., 2021). Bryman (2015) identified ten key principles in research ethics:

1. Ensuring no harm comes to participants.
2. Respecting the dignity of research participants.
3. Ensuring the full informed consent of research participants.
4. Protecting the privacy of research participants.
5. Ensuring the confidentiality of research data.
6. Protecting the anonymity of individuals or organisations.
7. Avoiding deception about the nature or aims of the research.
8. Declaring affiliations, funding sources, and conflicts of interest.
9. Communicating research honestly and transparently.
10. Avoid misleading or false reporting of results.

While the first six principles focus on protecting the interests of the research subjects, the other four are intended to protect the integrity of the research community (Easterby-Smith et al., 2021). Thus, this highlights the necessity for researchers to avoid conflicts of interest, especially regarding later published results (Brymann, 2015).

In this research, the researcher did, to the best of her ability, ensure that no harm was done to the research participants and that the dignity of the participants was respected. Therefore, the researcher strictly adhered to the guidelines provided by the University of Worcester and the associated ethical principles. This also meant that the entire qualitative data-collection process was thoroughly prepared by the researcher and approved by the official ethics committee of the university before the pilot and potential study participants were contacted. The ethics committee thus consented to the procedure proposed by the researcher. Part of this approval process was to ensure that the participants gave fully informed consent, for instance, obtained at the beginning through a declaration of consent. Participation in the research was entirely voluntary, and participants had the right to withdraw their consent at any time. Furthermore, the privacy of the research participants plays a crucial role. Therefore, the procedure and the data collection were carried out via an anonymised online questionnaire, which did not collect any sensitive or personal data from the research participants, ensuring no possibility of identifying the individual participants.

To maintain confidentiality and anonymity, it must not be possible to conclude the identity of the participants from the results (Anastas, 2004). Therefore, individuals' anonymity was protected. Moreover, apart from the researcher herself, no other person had access to the raw, unprocessed research data.

Overall, only the data necessary for this research was collected. A close collaboration between the researcher and the supervising professor ensured that any deception about the nature or aims of the research was avoided. As part of the ethics application, affiliations, funding sources, and potential conflicts of interest were also disclosed. Power relations were considered between the researcher, the experts, and the research context. Participation was based on absolute voluntariness to not create any pressure or sense of obligation on the researcher's part for a potential participant (Brymann, 2015). The research results will be communicated honestly and transparently using the described Grounded Delphi Method. Misleading or false reporting of results was avoided.

3.5 Conducting the Grounded Delphi Method

This section focuses on the criteria and method for selecting study participants and clarifies the sampling method. It describes the research participants and concerns about conducting qualitative data in this study's first and second rounds. Therefore, it introduces the open-ended online questionnaire developed from the literature review and the underlying research questions. It outlines the data-collection technique and describes the pilot interview. Furthermore, this section presents the second online questionnaire, which consists of developing the consensus statements based on the first round of data collection and the second pilot interview. Thus, it concerns the necessary steps to collect the qualitative data before the next main section delves into the data analysis process of the results from both rounds of data collection.

3.5.1 Sampling Method

In aligning with a constructivist grounded theory approach, as advocated by Charmaz (2014), this research acknowledges that the demographic representation of the sample is not of primary concern unless it contributes to a deeper understanding and exploration of emerging categories and theory. This standpoint is corroborated by Butler et al. (2018), who suggest that an undue emphasis on participant demographics may lead to data collection lacking the necessary depth for developing substantial categories and supporting theory advancement. Accordingly, while the optimal participant count for a Delphi study is debated, with recommendations ranging from 6 to 40 for qualitative or modified approaches (Häder, 2014), this research prioritises quality over quantity to prevent data quality loss, even with participant withdrawal post-initial data collection. This study's resilience stems from its qualitative method, which forgoes the need for large sample sizes, characteristic of quantitative research. Instead, it seeks to achieve informational saturation through a Delphi process involving a round of feedback on the first round of collected data, with the survey rounds repeating based on the depth and range of the expert feedback received (Häder, 2014). The goal is to reach data saturation by cycling back the collated data to the experts, fostering an environment conducive to reaching a consensus by the second round of data collection, as evidenced by previous qualitative Delphi studies, such as Knoche's (2022) research. The qualitative nature of this method enables varied opinions on the number of necessary experts. The research plan is committed to 28 experts and is manageable through personal and selective recruitment strategies, underscoring the study's flexibility and robustness against participant fluctuation (Häder, 2014).

3.5.2 Sampling Criteria

The criteria for selecting the experts are derived from the research objectives (Jünger, 2011, p. 200 ff.). Given the relative novelty of the sustainability manager role in the German financial industry, a purposive sampling strategy is employed. The researcher's criteria will direct this purposive sampling to select experts who have established a foundation in sustainability in their organisations, leveraging the researcher's extensive network across Germany. This ensures that the chosen research participants are experts in their field and contribute rich and contextually relevant data. Therefore, for this research, sustainability managers with experience in corporate sustainable transformation are sought, either currently holding a responsible position or having held such a position. The sample will comprise experts from multiple companies, aiming to obtain a comprehensive picture of the different experiences and perspectives of sustainability managers across companies in the German financial industry, as the researcher operates within this industry and has a relevant network. This focus will also ensure that this research's outcomes and recommendations are significantly more specific, especially since this sector faces immense political pressure to empower the economy in its sustainable transformation process. A meticulous selection of such experts is essential, given these criteria. Owing to the researcher's network, there's no need for external gatekeepers to get access to this target group. Given the typical experience level of the experts, their answers will very likely provide a multifaceted representation of their perspectives, regardless of their relationship with the researcher, especially since the online questionnaire does not involve direct interaction between the participants with each other or with the researcher herself.

3.6 Round°1: Open-ended Online Questionnaire

3.6.1 Round°1: Questionnaire Development

As Häder (2014) described, a questionnaire should meet specific criteria. First, the questions should be clear and relevant to the expert group to prevent misunderstandings and garner valuable responses. Second, the questionnaire should be designed in an open format to collect qualitative data. Howard (2015) emphasises that a questionnaire is a tool for the researcher to gather data in line with the research questions and achieve the study's knowledge objectives. The quality of this data is pivotal to the study's success. The questionnaire for this study is logically divided into four different areas, which cover 16 questions, of which three allow the participants to add further thoughts or feedback in a free-text field. While the first area focuses on the context, the other three areas address one research question each.

The first area, 'Context', captures the experts' professional data. It asks experts to self-assess their expertise in corporate sustainable transformation. This self-assessment will later be used to ensure the quality of the results and verify the status of each expert (Häder, 2014). This data is indirectly related to the experts but instead assists the researcher in evaluating their status and qualifications. The following statements are to be made by the experts:

- *How many years of professional experience do you have as a (former) sustainability manager (or similar title)? Please select an option.*
 - *Up to 12 months / Up to two years / Over two years*
- *Describe in a few sentences where your position as a (former) sustainability manager (or similar title) is/was embedded in the organisational structure and how you assess this placement for your effectiveness.*

The second area, 'Understanding', addresses the first research question. For this purpose, the context regarding corporate sustainable transformation is explored in more detail, and the experts' understanding is collected. Moreover, the future perspective is addressed:

- *Describe in a few sentences the differences between the terms if there are differences in perception/implementation for you.*
 - *CST = Corporate Sustainable Transformation*
 - *CSC = Corporate Sustainable Change*
 - *CSD = Corporate Sustainable Development*
- *Define 'corporate sustainable transformation' in your own words.*
- *Describe in 1–3 sentences how you expect the understanding of 'corporate sustainable transformation' to change over the next 15 years.*
- *Name what you believe will be the future drivers of understanding for 'corporate sustainable transformation'.*
- *Do you have any additional thoughts on this context that the previous questions have not covered? If so, you may elaborate on them here.*

The third area, 'Responsibility', addresses the second research question by exploring the responsibility sustainability managers perceive in corporate sustainable transformation.

- *Describe in 1–3 sentences the official responsibility you hold as a sustainability manager (or similar title) concerning 'corporate sustainable transformation'.*
- *Describe in 1–3 sentences the responsibilities you perceive as a sustainability manager (or similar title) within 'corporate sustainable transformation'.*

- *Explain in 1–3 sentences why there is a difference between the official responsibilities and the responsibilities you perceive.*
- *Describe in 1–3 sentences how you expect the responsibilities of a sustainability manager (or similar title) to change over the next 15 years.*
- *Do you have any additional thoughts in this context that the previous questions have not addressed? If yes, you may explain them here.*

The fourth and final area, 'Transformation Barriers', deals with the third research question. Its purpose is to identify the barriers that sustainability managers perceive in corporate sustainable transformation as well as responsibility-related enablers, which, from the perspective of the sustainability managers, can help reduce the perceived barriers and collect enabling ideas for future recommendations for action.

- *Name the transformation barriers you perceive in 'corporate sustainable transformation' from your perspective.*
- *Name enablers of transformation that you perceive in 'corporate sustainable transformation' from your perspective.*
- *Describe the decisions and adjustments necessary to enable the sustainable transformation process of companies in the future.*
- *Do you have any additional thoughts in this context that the previous questions have not addressed? If yes, you may explain them here.*

The questionnaire for the first round of data collection primarily generates extensive information from the expert panel on the various aspects previously described as relevant and uses this database to lay the foundation for answering the underlying research questions.

3.6.2 Round°1: Pilot Test

Before the primary data collection begins, a pilot test should examine the comprehensibility of the questionnaire for both quantitative and qualitative research (Schreiber, 2008). According to Häder (2014), pilot tests are shortened versions of the main study with fewer participants. In this research, the pilot tests aimed to validate the clarity of the questions and better estimate the required time for answering them (Lancaster et al., 2004; Schreiber, 2008; Häder, 2014) and, critically, to check the user experience of the LimeSurvey software. For the pilot test, two experienced managers from the researcher's private network were approached and asked to go through the whole online journey, starting at the first point of interaction, the contact email,

which presents the study and its data-collection process. Thus, it was also required that the list of questions in the online survey be read, and constructive feedback is provided directly in the LimeSurveys free text answer fields per question. The two pilot participants were encouraged to critically review every question and the whole point-of-contact process from the start to the final page of the online questionnaire from a participant's perspective. Overall, the feedback on the questions was very positive and concise. Notes were made on only a few questions regarding a more comprehensible formulation. The revised questionnaire was then finalised as the ultimate version for the data collection.

3.6.3 Round°1: Data Collection

As explained in the previous sections, the Grounded Delphi Method and qualitative data collection via an online questionnaire were chosen for this research. However, various methods for its implementation are possible. For instance, an initial survey round is often conducted using semi-structured interviews, open questionnaires, or focus groups, like the approach taken by Howard (2018) for the Grounded Delphi Method. Knoche (2022) employed qualitative online questionnaires in her study and elaborated on the advantages and disadvantages of different data-collection methods.

When directly comparing qualitative techniques such as interviews, focus groups, and open online questionnaires, studies (Jankowicz, 2005; Flick, 2009; Saunders et al., 2009; Häder, 2014) suggest that the advantages of an open online questionnaire for data collection using the Delphi method prevail. Another advantage is the preservation of the anonymity of the experts, which counteracts potential power imbalances or dominance of individual experts. In addition, the logistical challenge of physical meetings with the participating experts is circumvented. Since the participating experts are from all over Germany, physical meetings would not only be expensive and time-consuming but, given the busy schedules of the selected experts, also problematic in terms of organisation. An online questionnaire offers the considerable advantage that each expert can complete the responses flexibly according to their schedule, thus whenever and wherever they want. This strongly supports the chance for successful participation and appears to be the most suitable method for the experts and the researcher.

As participation is voluntary and non-binding, the participants have no incentives for participation besides a summary of the data-collection results as soon as the researcher gets official permission to communicate them.

3.6.4 Round°1: Participant Recruitment and Retention

The recruitment and first round of data collection for this doctoral study, which occurred between November 8th and December 29th, 2023, were intricately planned and officially ethically approved. Following approval from the university's ethics committee in October 2023, the researcher initiated the recruitment phase.

The first step involved contacting 20 potential experts on November 8th using the researcher's university email address. This initial contact, which included the ethically approved participant information sheet about the study, was designed to introduce the research and invite participation. Importantly, this invitation emphasised that expressing interest was not a binding commitment, giving the experts one week to decide on their involvement. As expressions of interest were received, the participants were sent ethically approved consent forms to ensure complete transparency about the nature and scope of the study. The researcher, leveraging their expertise in the field, reassured participants about the non-sensitive nature of the questions and the data to be collected.

The online questionnaire was distributed using the software LimeSurvey after the consent process. This software tool was selected for various reasons: its widespread recognition in Germany and its monthly cost plan flexible and cost-effectiveness; it is in compliance with data protection laws; it is suited for anonymous data collection; it is very flexible in questionnaire design; it has ease of use; and it has positive user feedback in a pilot test. After changing the initial plan of setting a uniform start time for the survey after collecting all consent forms, the researcher chose a more dynamic approach.

Recognising the importance of capitalising on the participants' immediate interest, the online invitation links were sent individually and directly after receiving each signed consent form. Although this approach was more time-intensive for the researcher, this adaptive strategy – particularly in tracking responses, resulted in a zero dropout rate. The participants were given 14 days to complete the online questionnaire; if necessary, reminders were sent out after 10 days. The online questionnaire was conducted in German to lower participation barriers and enhance the quality of the qualitative data collection, aligning with the daily business language of the selected target group. The estimated duration for completing the online questionnaire, set at 29 minutes based on the pilot test, was communicated in the preliminary information. Feedback from participants indicated that this timeframe was generally accurate, with only two out of 28 participants reporting a longer completion time.

The approach of sending individual invitation links led to an unexpected benefit: by the end of November, not only were the initially targeted 20 complete responses received, but the high quality of these responses also motivated the researcher, in consultation with their doctoral supervisor, to contact and invite additional participants.

This decision extended the data-collection period by four weeks, culminating in 28 complete responses, a 40% increase over the initial target. The first round of data collection concluded on December 29th, 2023. The researcher personally emailed all the participants, thanking them for their contributions, informing them about the successful completion of this first data-collection phase, and reminding them about the upcoming second online questionnaire in four weeks. This follow-up communication was crucial in maintaining a close relationship with the participants and ensuring their engagement for subsequent study phases. Overall, the process from ethical approval to the completion of the first round of data collection was marked by a commitment to conducting rigorous, honest, and participant-centred research, characterised by adaptability and effective communication.

3.7 Round°1: Coding

In the first round, 11,662 words of qualitative data were collected. After the first round of data collection, the researcher exported all the responses for each question into a Word document and compiled them, followed by the importation into the NVivo software provided by the university.

The document was analysed word-for-word in a time-consuming process in the first open coding process. The chosen approach seemed unsatisfying when the researcher considered the following axial coding. What seemed misleading at this point was that the online questionnaire questions were divided into four sections with four different focuses. Therefore, depending on the respective section, the code 'Board' could have vastly different meanings. 'Board' could thus represent placement in the organisational chart, a success factor, or a transformation barrier. Depending on the section and context, the code 'Board' had a different significance, which is why the researcher found it very challenging to initiate the two further coding stages, as she would have had to add, for example, the code 'Board' to various overarching categories. For this reason, the researcher started the open-coding process all over again. For that, the collected data was separated according to the four main areas, resulting in four separate Word documents focused on the four main areas of the questionnaire: context, which relates to all three research questions; understanding, which relates to the first research question; responsibility, which relates to the second research question; and barriers, which relate to the third research question.

Therefore, the whole coding process started again from the beginning, and the researcher took each Word document separately. Hence, a separate coding process for each Word document was carried out for all three coding stages. While the first theme focuses on getting rich data for the overall context of all three research questions, the following three areas – 'Understanding' (addresses the first research question), 'Responsibility' (addresses the second

research question), and 'Barriers' (addresses the third research question) – target a specific research question each. The coding process for the first round was carried out according to this structure. The following subsections deal with the practical application of the three coding steps – documented in the Appendix – to develop the questionnaire for the second round of data collection, presented below.

3.7.1 Round°1: Coding Process 'Context'

The first area of the questionnaire was to collect qualitative data from the research participants. In contrast to the following three main areas, the 'context' contributes not only to answering a specific research question but also to generating important information that will contribute to all three research questions in the analysis, enriching the results, conclusions, and recommendations for future research. Since the collected data reflects the individual perspectives of the experts, the context, in terms of the environment in which the experts operate, can play a significant role in interpreting the results.

In this first area, the first question was asked about the expertise gained over the years in the required context of sustainable transformation. However, these responses were not evaluated as part of the coding process and were not coded. In summary, 28 experts participated in the first round of data collection. Most – 15 out of 28 – have over two years of experience in sustainable transformation. Ten participants have up to two years of expertise in this field, and three out of 28 experts have been involved in sustainable transformation for up to 12 months. Thus, the expertise of the participating sustainability managers was formally ensured at the beginning of the data collection.

The second question concerning 'context' collected data on the positioning of the experts in the organisation and how this positioning is perceived regarding their successful impact. The open-coding process resulted in 32 codes and 214 references. The most frequently mentioned references are the codes 'Board' (27 references), 'short paths (of communication)' (19 references), 'proximity to the board' / 'coordination' (12 references each), and 'regular board exchange' / 'staff position' / 'sustainability department' and 'corporate development' (11 references each). Also noteworthy were 'executive' (nine references), 'cross-departmental' / 'steering committee', and 'improvable' (six references each).

In the next coding step, the identified individual codes are combined into categories as part of axial coding. The open codes have been derived into the following categories: Communication and Networking, Corporate Leadership and Management, Project and Sales Management, Strategy and Organisational Development, and Structural and Operational Aspects.

In the final coding step, the identified categories through axial coding based on the open codes are combined into the last core categories as part of the selective coding step. These serve as the basis for the subsequent formulation of statements for the second round of the Delphi study:

The core category, 'Strategic Corporate Leadership', focuses on how strategic decisions are made, implemented, and communicated throughout the company. This category is based on one axial code, 'strategy and organisational development', five open codes and 39 references.

The core category 'Operational Excellence and Innovation' emphasises the importance of efficient operational processes and the promotion of innovations for business success. This category is based on two axial codes, 'project and sales management' and 'structural and operational aspects', 14 open codes and 56 references.

The core category, 'Organisational Culture and Stakeholder Integration', focuses on how the company maintains its culture and shapes interactions with various stakeholders, including executives and boards. This category is based on one axial code, 'communication and networking', four open codes and 54 references.

In summary, the following three statements can be derived from the coded data, which build the first part – namely, 'context', of the questionnaire for the second round of data collection:

Question 1.2: Describe where your position as a (former) sustainability manager (or similar title) is/was embedded in the organisational structure and how you assess this placement for your effectiveness:

- *'Short paths' and the resulting proximity to (top) management are crucial for effectively integrating sustainability initiatives into the company's strategy, processes, and line activities.*
- *Coordinative, cross-departmental collaboration with sustainability management is essential for integrating sustainability topics across all company divisions and (internal/external) stakeholders.*
- *The more top-down the corporate culture is shaped, the more important the role of (top) management in actively driving and embodying sustainability goals becomes. This role is, in turn, closely intertwined with the effectiveness of sustainability management.*

3.7.2 Round°1: Coding Process 'Understanding'

During the open coding of the second area, focusing on 'understanding', 96 open codes were marked. Since these questions reflect sustainability managers' understanding of 'corporate sustainable change' (37 references), 'corporate sustainable transformation' (89 references), and 'corporate sustainable development' (38 references), it is logical that these codes were frequently assigned. Additionally, 'Regulation' (41 references) was a quite prominent topic in the answers of the second section, followed by 'Business Model Development' (26 references) and 'Climate Impacts' (24 references), as well as 'Conscious Change' (22 references).

Axial coding again identified connections between the open codes and grouped them into higher-level categories to gain deeper insights into the qualitative data. The 96 individual codes were analysed and organised into the six following thematic clusters to identify the central themes:

- Awareness and Culture
- Corporate Change and Transformation
- Economic Factors and Challenges
- External Influences and Regulation
- Risks and Opportunities
- Sustainability and Social Responsibility

The third step, selective coding, formed three core categories, focusing on answering the first research question and reflecting a comprehensive understanding of corporate sustainable transformation from the perspective of sustainability managers. Subsequently, corresponding consensus statements were derived from the posed questions for developing the second questionnaire. This allocation reflects how the individual axial codes contribute to the overarching themes of corporate sustainable transformation and provides a structured foundation for understanding how this core category relates to the overall first research question:

The core category 'Strategic and Holistic Change' encompasses the profound and comprehensive company changes required for corporate sustainable transformation. It refers to the realignment of business models, corporate strategies, and organisational structures to integrate sustainability into all aspects of corporate governance. It also considers economic viability, competitiveness, and adaptation to future challenges. This category addresses the core of corporate sustainable transformation by highlighting the need for a holistic approach to sustainable changes beyond isolated measures. It forms the basis for an understanding of what sustainability managers perceive as corporate sustainable transformation and how they

implement their understanding of it in the companies. This core category is based on two axial codes, 'Corporate Change and Transformation' and 'Economic Factors and Challenges', 42 open codes and 363 references.

The core category 'Awareness Change and Education' refers to the change in consciousness and attitudes regarding sustainability in the company and society. It encompasses educational and communication measures to foster understanding and appreciation for sustainable practices. It also considers the cultural transformation in companies necessary for sustainable corporate development. This category deals with how understanding and attitudes towards sustainability influence corporate sustainable transformation. It shows that implementing corporate sustainable transformation requires structural changes and a shift in mindset and culture at an individual and organisational level. This core category is based on two axial codes, 'Awareness and Culture Sustainability' and 'Social Responsibility', 30 open codes and 142 references.

The core category 'External Influences and Regulation' encompasses the role of external factors such as legal regulations, political frameworks, market dynamics, and societal expectations. It highlights how these external influences motivate companies to implement sustainable practices. The role of risks and opportunities arising from the external environment is also considered. This category demonstrates that the understanding of corporate sustainable transformation does not occur in isolation in the company but is strongly influenced by external factors and requirements. This core category is based on two axial codes, 'External Influences and Regulation' and 'Risks and Opportunities', 23 open codes and 125 references.

Finally, the following consensus statements provide a more comprehensive perspective on corporate sustainable transformation by highlighting the importance of strategic leadership, education, and continuous adaptation to external challenges and opportunities. They serve as a solid foundation for understanding the complexity of corporate sustainable transformation and dynamics from the sustainability managers' perspective and how sustainability managers understand the difference between the terms corporate sustainable change, corporate sustainable transformation, and corporate sustainable development. The statements presented below are the basis for the second round:

Question 2.1: Describe the differences between the terms CST, CSC, and CSD if you have differences in perception/implementation:

- *Corporate sustainability transformation (CST) is a comprehensive and strategic change encompassing the entire business model and corporate culture. This includes the challenge of integrating sustainability into the whole corporate structure without compromising competitiveness.*

- *Corporate sustainability change (CSC) refers to an individual, not necessarily interconnected, internal changes within a company.*
- *Corporate sustainability development (CSD) emphasises the continuous development of specific projects or areas to achieve the company's long-term sustainability goals.*
- *CST is more ambitious and far-reaching than CSC and CSD, as it involves a fundamental, sustainable realignment of the company's strategy, transforming towards a sustainable business model.*

Question 2.2: Define 'corporate sustainable transformation' in your own words:

- *CST is a conscious, profound, and extensive transformation within a company that integrates sustainability aspects into all core processes, moving towards a sustainable business model.*
- *CST is driven by a new understanding of a company's ecological, social, and economic responsibilities, highlighting the need for further research, education, and awareness.*
- *CST encompasses a comprehensive realignment of corporate culture, strategy, and processes to operate sustainably and responsibly in the long term, ensuring future viability.*

Question 2.3: Describe how you expect the understanding of 'corporate sustainable transformation' to change over the next 15 years:

- *The understanding of CST will deepen as sustainability is increasingly seen as an economic necessity and an ethical obligation.*
- *Technological advancement and global challenges such as climate change will intensify the urgency and scope of the required CST, underscoring the need for further research and education.*
- *Awareness of the importance of social and ecological responsibility will continue to grow, with younger generations playing a key role in CST.*

Question 2.4: Name what you believe will be the future drivers of understanding for 'corporate sustainable transformation':

- *Regulatory requirements and political frameworks are the main drivers for the corporate understanding of CST.*

- *Advances in technology and innovation, along with growing societal pressure (such as experiences of the effects of climate change, resource scarcity, and resulting price increases) and the resulting shift in consumer behaviour, promote the understanding and necessity of CST.*
- *The visibility of economically successful case studies contributes to a deeper understanding of CST.*
- *Awareness raised through research and education promotes the understanding and necessity of CST.*

The answers to Question 2.5, which asks the participants for additional thoughts in this context, were integrated into the consensus statements above through the three coding steps.

3.7.3 Round°1: Coding Process 'Responsibility'

During the open coding process of the third area, which focused on the 'responsibility' of the sustainability managers in corporate sustainable transformation in their organisation, 83 open codes were marked. The most present codes in sustainability managers' responsibility are 'coordination of cross-sectional implementation' (18 references), the 'job description corresponds to responsibility' (18 references), the 'implementation of sustainability strategy' (15 references) and a 'deep integration of sustainability into the business model' (15 references). Also frequently named are 'interface function' (13 references) and 'regulatory requirements' (12 references).

Axial coding involved again identifying connections between the open codes and grouping them into higher-level categories to gain deeper insights into the data. The 83 codes were analysed and organised into eight thematic clusters to identify the central themes and patterns in the responses of the 28 research participants. These clusters were:

- collaboration and team dynamics,
- communication and stakeholder management,
- external influences and market changes,
- futures changes and adaptations,
- official and perceived responsibilities,
- operational challenges and workload,
- personal and organisational development; and

- strategic and operational challenges.

Selective coding was conducted in the next step, and consensus statements were formed for the second round of data collection. This meant building core categories from the axial categories again, reflecting how sustainability managers perceive their responsibilities.

The core category 'Responsibility and Influence in Transition' focuses on the evolving role and increasing influence of sustainability managers in corporate sustainable transformation. It encompasses both official responsibilities and the challenges arising from the perception of this role in a dynamic corporate environment. This category illuminates how sustainability managers' responsibilities evolve and adapt to drive effective and sustainable organisational changes. This core category is based on three axial codes: 'Official and Perceived Responsibilities', 'Personal and Organisational Development', and 'Future Changes and Adaptations'. It is also based on 31 open codes and 98 references.

The 'core category 'Strategic Integration and Operations Management' focuses on integrating sustainability strategies into the core business and managing operational challenges. It considers the necessity of profoundly embedding sustainability into all business aspects and the operational demands and workload that come with it. It reflects how sustainability managers develop, implement, and continuously adjust strategic plans to meet the requirements of sustainable corporate management. This core category is based on two axial codes, 'Strategic and Operational Challenges' and 'Operational Challenges and Workload', 29 open codes and 93 references.

The core category 'Communication, Collaboration, and Stakeholder Relationships' encompasses the importance of effective communication, collaboration, and stakeholder relationship management. It emphasises the role of sustainability managers as intermediaries and multipliers within and outside the organisation. It highlights how crucial communication and networking work is for successfully implementing sustainability strategies. This core category is based on two axial codes, 'Communication and Stakeholder Management' and 'Collaboration and Team Dynamics', 17 open codes and 58 references.

The core category 'Adapting to External Challenges and Market Changes' addresses how sustainability managers respond to external influences and changing market demands. It includes adapting to regulatory requirements and seizing market opportunities. This category shows how sustainability managers use external challenges as opportunities for innovation and transformation. This core category is based on one axial code, 'External Influences and Market Changes', six open codes, and 20 references.

Finally, the consensus statements below offer a deeper insight into sustainability managers' evolving roles and responsibilities within corporate sustainable transformation. These statements emphasise the strategic leadership required, the ongoing need for education and

skill development, and the critical importance of adapting to internal organisational dynamics and external environmental challenges. These insights are a robust foundation for understanding sustainability management responsibilities' complex and dynamic nature within corporate sustainable transformation and lead to the following statements for a second Delphi round:

Question 3.1: Describe the official responsibility you hold as a sustainability manager (or similar title) concerning 'corporate sustainable transformation':

- *Developing and implementing sustainability strategies aimed at comprehensive corporate transformation.*
- *Adapting the company to regulatory requirements and developing sustainability goals, focusing on long-term profitability and competitiveness.*
- *Communicate and coordinate collaboration with internal stakeholders to promote a sustainable corporate culture and support knowledge transfer in the company.*
- *Monitoring and reporting on sustainability performance increases transparency and accountability for internal and external stakeholders.*
- *In close, cross-functional exchange and (indirectly) reporting to the (top) management.*

Question 3.2: Describe the additional responsibilities you perceived and undertook as a sustainability manager (or similar title) in the 'corporate sustainable transformation':

- *A more pronounced role as a 'change agent' and internal advocate, often confronted with the challenge of overcoming internal resistance and fostering a willingness to embrace change among the workforce.*
- *A more prominent, direct involvement in implementing department-specific sustainability projects, which the departments themselves should increasingly initiate.*
- *A stronger focus on innovation for specific sustainability issues and a significant contribution to developing market opportunities and new business areas.*
- *There is a greater emphasis, alongside strategic measures, on translating operational and practical solutions into achievable actions.*
- *A more prominent role as an 'explainer' and knowledge disseminator in the company.*

Question 3.3: Explain the reason if there is a difference between the official responsibilities and the responsibilities you perceived:

- The corporate cultural dimension of CST is often still underestimated and, therefore, is only partially reflected in the official job description.*
- There is often a gap experienced between the strategic vision of the company and its practical implementation, especially when integrating sustainability into all business areas, indicating the need for better alignment and clarity in roles and expectations.*
- The discrepancy between official and perceived responsibilities often arises due to inadequate resources and a lack of prioritisation by the (top) management, leading to an expansion of official duties.*
- The unofficial role is perceived as more comprehensive and influential than what is laid out in the official job description, highlighting the need for stronger recognition and support in the company.*

Question 3.4: Describe how you expect the responsibilities of a sustainability manager (or similar title) to change over the next 15 years:

- The role will evolve from a predominantly coordinating and advisory function today to a central management role, where it actively contributes to shaping the company's future.*
- Responsibility is becoming increasingly strategic and specialised, with a stronger focus on integrating sustainability into the company's strategy and corporate culture. Additionally, employees in various professional roles are, to some extent, evolving into 'sustainability managers'.*
- A key role in adapting to changing market conditions and regulatory requirements while driving innovative solutions, new technologies, and sustainable business models.*

3.7.4 Round°1: Coding Process 'Barriers'

During the open coding process of the fourth area, which focused on the 'barriers' sustainability managers perceive in the corporate sustainable transformation in their organisation, 71 open codes were marked. The most present codes in 'barriers' are 'Enabler Role Model and Prioritisation Top Management' (24 references), 'Enabler Practical Regulatory Compliance' (22 references), 'Barrier Lack of Sustainability Understanding' (19 references), 'Enabler Pressure from External Stakeholders' (17 references), 'Enabler Communication and Integration of

Employees' (16 references). Overall, the coding also enables an inverse conclusion. If the barriers were initially asked about, and for example, the lack of top management prioritisation was mentioned, then this code could be identified as an enabler during the responses. Axial coding involved again identifying connections between the open codes and grouping them into higher-level categories to gain deeper insights into the data. The 71 open codes were analysed and organised into 16 thematic clusters to identify the central themes:

- Awareness and External Influences
- Economic and Market Opportunities
- Enabling Strategies and Leadership
- External perception and engagement barriers
- Knowledge and Understanding Barriers
- Knowledge Management and Education
- Market and Economic Barriers
- Organisational and Cultural Barriers
- Organisational Capacity and Resource Management
- Regulatory and Compliance Barriers
- Regulatory and Policy Support
- Resource and Capacity Barriers
- Stakeholder Engagement and Communication
- Strategic Vision and Integration Barriers
- Technological and Innovation Barriers
- Technology and Innovation

Facing the third research question, selective coding was conducted to form consensus statements for the second round. This involved forming core categories from the axial categories, reflecting how sustainability managers perceive transformation barriers in corporate sustainable transformation:

The core category, 'Strategic Leadership and Decision-Making', focuses on the role of strategic leadership and decision-making processes in facilitating sustainable transformation. It encompasses developing and implementing effective strategies, leadership commitment, and integrating sustainability principles into corporate decision-making processes. Understanding

the role of leadership and strategic decision-making is vital in identifying and overcoming barriers in corporate sustainable transformation. It reflects the importance of a top-down approach and aligning organisational culture with sustainability goals. This core category is based on five axial codes, 26 open codes, and 128 references.

The core category 'Knowledge and Learning Systems' highlights the significance of knowledge management, education, and continuous learning in overcoming barriers to sustainability. It involves developing comprehensive learning systems, knowledge sharing, and fostering a culture of constant improvement and innovation. Addressing gaps in knowledge and understanding is key to addressing barriers in the corporate sustainable transformation. It underscores the need for enhanced awareness and understanding of sustainability issues at all organisational levels. This core category is based on four axial codes, 16 open codes, and 62 references.

The core category 'Stakeholder Collaboration and External Dynamics' emphasises the importance of engaging with internal and external stakeholders and adapting to external dynamics. It involves proactive communication, collaboration with external entities, and responsiveness to external pressures and market opportunities. This question emphasises engaging with various stakeholders and adapting to external dynamics. It involves proactive communication, collaboration with external entities, and responsiveness to external pressures and market opportunities. It illustrates the need for an outward-looking approach and active engagement with internal and external stakeholders. This core category is based on five axial codes, 19 open codes, and 92 references.

The core category 'Resource Management and Organisational Infrastructure' addresses the management of resources and organisational infrastructure to support corporate sustainable transformation. It encompasses resource allocation, capacity building, and establishing supportive structures and systems. Efficient resource management and robust organisational infrastructure are critical to overcoming barriers in corporate sustainable transformation. This category highlights the need for sufficient resources and an enabling corporate environment for sustainable practices. This core category is based on two axial codes, nine open codes and 45 references.

Finally, the consensus statements below offer a deeper insight into the barriers that sustainability managers perceive within corporate sustainable transformation and form the basis for the second round:

Question 4.1: Name the transformation barriers you perceive in 'corporate sustainable transformation' from your perspective:

- The level of deep integration into the areas has not been reached yet. As a result, every sustainability activity is perceived as a time-consuming additional task or additional cost.*
- The gap between the strategic vision for sustainability and its actual implementation in practice is often due to insufficient support and a lack of understanding of sustainability at the (top) management level.*
- Resistance and a lack of willingness to change in corporate cultures and structures make integrating new practices and sustainable values challenging.*
- The lack of comprehensive sustainability knowledge and internal training of employees produces a misalignment between sustainability goals and the execution of everyday business practices.*
- There is a prevalent focus on short-term financial gains over long-term sustainability goals, often resulting in limited resources, capacity, and commitment to transformative sustainability initiatives.*
- Absence of a holistic, top-down role model function and associated active demonstration of the sustainability strategy.*

Question 4.2: Name enablers of transformation that you perceive in 'corporate sustainable transformation' from your perspective:

- Advocacy and the associated visible and exemplary commitment of top management promote a change-oriented organisational culture that prioritises sustainability in business processes and actively integrates it.*
- Regulatory pressure and increasing demands from external stakeholders.*
- Building internal capacities through developing sustainability expertise and establishing multipliers or additional sustainability specialists.*
- Use innovative technologies and quantify sustainability activities to align organisational objectives with sustainable goals.*
- Increasing damage events due to climate change (e.g., credit defaults) and the resulting economic consequences.*
- Clear economic best practices in the competitive environment.*

Question 4.3: Describe the decisions and adjustments necessary to enable the sustainable transformation process of companies in the future:

- *Ensure sustainability expertise in (top) management and the associated integration of ESG into all decision-making processes.*
- *Cultivate a change-oriented organisational culture.*
- *Provide education and department-specific training.*
- *Establish collaborative, cross-company networks for knowledge and resource exchange.*
- *Continuously adapt sustainability strategies that respond to regulations, volatile market dynamics, and stakeholder feedback.*
- *Central embedding in the goal system through quantification and incentivisation.*
- *Integrate ESG throughout the entire education system (new general knowledge).*

3.7.5 Round°2: Pilot Test

The pilot test in the second round followed the procedure of the first round, as it had proven effective after the researcher completed the questionnaire for Round 2 in the LimeSurvey software; the same pilot participants as in the first round were contacted. The pilot participants again received an invitation to participate online from their email addresses. This way, the software and the integrated texts could be directly tested. Moreover, the pilot participants reported the time required for the second round, eight to ten minutes, back to the researcher. Once the pilot round was completed, the researcher, as in the first round, could import the email addresses of the 28 research participants into the software, thereby initiating the second process.

3.7.6 Round°2: Level of Consensus

In the second round of the Delphi study, the focus was on qualitatively evaluating experts' statements into consensus statements to identify relevant aspects for the final discussion and subsequent development of results. As with a few other elements of the Delphi Study incorporated into the Grounded Delphi Method, there are no set criteria to determine consensus:

In the literature review, Heiko (2012) examined 15 types of consensus measurement, one of which is defining agreement in the data-collection rounds. This level 'can be based on accepted

standards, such as political voting systems (e.g., a simple majority, a two-thirds majority, the absolute majority)' (Heiko, 2012, p. 1530).

Based on this, Howard (2018), followed by Knoche (2022), determined that a three-quarters majority – or 75% consensus – would be acceptable. This level of consensus enables a more precise representation of expert opinion than a simple majority (Knoche, (2022). For the evaluation, like Knoche (2022), a differentiated 5-point Likert scale was used, which more accurately reflects the attitudes of the experts than simple 'Yes/No' options and includes the following choices:

- Fully agree
- Rather agree
- Neither agree nor disagree
- Rather disagree
- Do not agree at all

This scale primarily represents general frequencies without measuring the distances between the options. It represents a 'discrete ordinal scale' as a 'nominal feature' (Marateb et al., 2014, p. 48), meaning it reflects the degree of expression but does not allow quantitative measurements of individual statements. This qualitative approach was chosen to capture the attitudes of the research participants towards the statements without relying on statistical operations. Thus, the responses have no numerical value. Achieving a consensus of over 75% in the responses 'fully agree' and 'rather agree' led to accepting a statement and was considered in the discussion of results. Thus, the study remained fully qualitatively focused, without quantitatively measuring individual statements, and primarily served to generate critical ideas for the study's research questions.

3.7.7 Round°2: Summary

The second round occurred between 22 January 2024 and 9 February 2024. It aimed to gain deeper insights into the consensus statements generated from the first round and create a basis for answering the research questions. The selection of research participants remained unchanged, and official consent for participation in a second round had already been obtained in November 2023 through the consensus forms. Furthermore, the research participants were informed again about an upcoming second round in approximately four to six weeks in the researcher's end-of-year 2023 email. Therefore, all 28 research participants were likewise sent the LimeSurvey link for anonymous online participation. However, this time, all research participants were invited to the second round simultaneously, which reduced the researcher's

workload in terms of time management for each participant. The experts had another 14 days to evaluate and submit the online questionnaire. The response rate in the second round was 100%. The responses were stored on the LimeSurvey platform and were again exported into an Excel file for evaluation. The second round focused on evaluating each statement, considering only the responses 'fully agree' and 'rather agree'. The percentage agreement values of each statement were summarised in an Excel list.

In addition, responses from the free-text fields were exported into a Word document. These qualitative data, along with the comments on the respective statements, were considered together. Comments similar in content were paraphrased, while different contents were presented as direct quotes or formulated in the results. This additional information helped me better understand the evaluation results without influencing the predetermined consensus level. The second round of data collection followed the procedure of the first round, as already described in this section. A detailed description of the results is in the fourth section, which analyses the results and formulates the findings of this research.

3.8 Summary

This section has established the methodological framework for the study. For this purpose, the philosophical positioning of the study was introduced and justified after contextualising the research. Following this, the chosen research strategy was derived, presented, and critically discussed in depth to describe the specific process of the Grounded Delphi Method. Moreover, there was a thorough engagement with rigour and ethical aspects, after which the Ethics Committee approved data collection in October 2023.

Data collection involved 28 experts from the German finance industry. The first round of the online questionnaire was described, from preliminary considerations about the questionnaire design to the pilot test and the execution of the first round of data collection. The qualitative data from the first round were coded according to grounded theory (open, axial, and selective coding). They could be formulated into statements, which formed the basis for the second round of the online questionnaire. Once again, all 28 experts participated, and a dropout rate of 0% was recorded. Thus, the second round of data collection was also successfully conducted, in which the experts qualitatively responded to the proposed statements.

The following section addresses the results of the second round of data collection, analyses them, and formulates the findings for the subsequent discussion.

4. Data Analysis and Results

This research explores sustainability managers' understanding, responsibilities, and perceived barriers concerning corporate sustainable transformation in the German finance industry. The following three research questions will be answered in this chapter, based on the results of the second round and the interpretation of the qualitative data by the researcher:

1. What are sustainability managers' understanding of corporate sustainable transformation in the German finance industry?
2. What responsibilities do sustainability managers have in corporate sustainable transformation within the German finance industry?
3. What barriers do sustainability managers perceive to their responsibilities in the corporate sustainable transformation process in the German finance industry?

The results of this chapter will be the basis for the discussion in the fifth chapter.

4.1 Round°2: Data Analysis

As described in detail in the method section, 'consensus statements' regarding the original questions of the questionnaire were formed from the results of the first data collection. The 28 participating sustainability managers then assessed these on a 5-point Likert scale to determine whether they agreed with the consensus. A critical threshold for agreement was set at 75%. Hence, all consensus statements receiving a 75% or higher approval rate from the experts were valuable in answering the research questions and thus are discussed with constant regard to the existing literature in the fifth section. The results are based on a 100% response rate and 0% dropout rate in the first and second rounds of data collection and are further supported by quotes from the experts from the first round. The Appendix shows the underlying Excel sheet, in which the consensus was summarised and calculated.

The following presentation is structured around the four main areas – context, understanding, responsibility, and barriers – which also shaped and guided the original structure of the two online questionnaires. The consensus rates were calculated on an Excel sheet. To ensure anonymity, the quotes from study participants are presented using pseudonyms, such as XX.1.2, whose identities are known only to the researcher.

4.1.1 Assessing Sustainability Manager's Context

The role of context in qualitative research and social constructivism is crucial, influencing how findings are interpreted and ensuring the relevance of data. Baxter and Jack (2008) emphasise the impact of social and cultural contexts on how participants interpret their experiences. Patton (2015) notes that understanding these contexts enriches the depth of data, aligning findings with real-world experiences. Creswell and Poth (2017) highlight how context informs methodological choices to suit cultural and situational nuances. Therefore, understanding the context in which sustainability managers operate is essential for the following data analysis since the analysis explores how the operational context of sustainability managers influences their perceptions and responsibilities related to corporate sustainable transformation.

The following Table 2 below displays the consensus rate among experts regarding the organisational context perceived as effective by themselves in their (former) role as sustainability managers and the crucial elements therein.

Table 2: Effectiveness Context for Sustainability Manager

'Short paths' and the resulting proximity to (top) management are crucial for effectively integrating sustainability initiatives into the company's strategy, processes, and line activities.	100%
Coordinative, cross-departmental collaboration with sustainability management is essential for integrating sustainability topics across all company divisions and (internal/external) stakeholders.	96%
The more top-down the corporate culture is shaped, the more important the role of (top) management in actively driving and embodying sustainability goals becomes, which, in turn, is closely intertwined with the effectiveness of sustainability management.	93%

In a top-down culture, the proactive and pro-sustainability positioning of top management towards sustainability initiatives is crucial. This ensures that sustainability measures are perceived as more important and prioritised, even during capacity constraints. Short communication channels between experts and management expedite projects. However, increased, indirect communication between sustainability managers and top management can lead to complications, inaccuracies, divergent results, and slower implementation. A 100% consensus level indicates that 'short paths' and proximity to management are key outcomes, suggesting that experts either hold positions close to top management or make important decisions through direct exchanges, bypassing intermediary levels. This consensus is supported, among others, for example, by FW.1.2, who points out how his organisational

placement close to the Chief Executive Officer and the resulting short and direct paths of communication are crucial for his work success:

‘... executive in corporate strategy, belonging to the Chief Executive Officers department. The placement is optimal for my activities, as there is regular direct contact with the Chief Executive Officer despite intermediate hierarchical levels. From this prominent, central role, there is reach throughout the entire organisation.’

More valuable quotes support the direct communication and resulting reporting line to the (top) management, as revealed by CS.1.2:

‘I am ... directly reporting to the Chief Executive Officer.’

Furthermore, MS.1.2 points out how direct proximity to the (top) management can be very supportive of adding more value to this organisational positioning:

‘Direct proximity to the board is very helpful and meaningful.’

Similarly, establishing short paths to top management can be applied to other areas in the company. Accordingly, sustainability managers agree that direct and cross-departmental communication and the implementation of measures are also conducive to transformation. In terms of the organisational placement of a sustainability manager, this means it should be a position on the organisational chart, reporting directly to the Chief Executive Officer while being able to interact directly with implementing departments without additional communication loops. This is supported in the following quotes and was rated with 96% approval, for example, by RM.1.2, who shares:

‘Success requires a close exchange with (almost) all departments.’

Additionally, PG.1.2 names an established ESG committee that meets regularly and thus supports cross-departmental collaboration:

‘... a company-wide ESG committee with representatives from business divisions, staff units, and back-office units affected by sustainability aspects.’

While MH.1.2 centres attention on the important function in terms of collaboration on sustainability management:

‘... rather, the collaboration occurs directly with the sustainability management.’

Or in other words, SS.1.2 says:

‘... close exchange with leaders and specialists who ultimately are responsible for implementation within the organisation.’

Consequently, it is essential that the person with whom the sustainability managers work represents the other department and is responsible for ESG matters in cross-department communication or an ESG committee.

Fostering direct access to top management logically results in the success of sustainable transformation in the company and the effectiveness of the sustainability manager in fulfilling their responsibilities. These crucially depend on top management's behaviour and their demonstration of commitment to implementing the sustainability strategy. Given the consensus among experts in a top-down culture, it can be inferred that the German finance industry predominantly operates with hierarchical structures, emphasising top-down management approaches in its corporate culture.

Thus, the third consensus statement, supported by 93% of experts, underscores the pivotal role of top management's stance on sustainability in the organisation's top-down culture in achieving sustainability objectives. For instance, SB.1.2 suggests that top management should actively advocate for sustainability and prioritise it during management meetings with other leaders in the organisation.

'... emerging placement in leadership meetings or associations.'

MS.1.2 points out that if (top) management presents a topic, it has more value, which is essential because regulations are getting stricter, and sustainability cannot be ignored:

'Direct proximity to the board is very helpful and meaningful as the topic becomes increasingly significant both qualitatively and quantitatively due to rising regulation.'

As well as TR.1.2 mentions that for getting good results and being heard in an organisation, the support of the top management is crucial:

'Support from the top down is a crucial deciding factor for me.'

This section was designed to establish the foundational context that informs the results discussed throughout this thesis. Context in qualitative research and social constructivism critically shapes the interpretation and relevance of findings, influencing the meanings participants assign to their experiences.

As Baxter and Jack (2008) highlight, social and cultural contexts significantly affect participant interpretation. Further, Patton (2015) noted that understanding these contexts deepens the data's relevance and ensures findings are grounded. This principle is essential in examining the role of sustainability managers operating within complex organisational structures and cultural settings.

The results from this section underscore that top management's commitment to sustainability dictates its prominence in the company and respect for sustainability managers. A longer communication path between sustainability managers and top management tends to dilute this support, adversely affecting the sustainability manager's ability to perform effectively in their context. These introductory context insights set the stage for understanding the crucial role of context in influencing the perceptions, responsibilities, and challenges sustainability managers face in the organisational hierarchy.

4.1.2 Answering the First Research Question

These subsection consensus statements address the first research question, which explores how sustainability managers perceive and understand corporate sustainable transformation. The literature review reveals distinctions among the terms 'sustainable change', 'sustainable transformation', and 'sustainable development'. For this thesis, 'corporate sustainable transformation' was selected as the primary focus due to its relevance and specificity.

A gap in the literature concerns the insights of sustainability managers regarding their interpretation and application of these concepts. As implementation experts, their perspectives are crucial yet underrepresented – particularly in the context defined by this research. Ideally, these terms should be clearly and consistently defined across the corporate landscape to ensure a unified understanding among all stakeholders. Such clarity would facilitate more effective communication and the implementation of sustainability strategies within organisations. Although some experts openly expressed that these terms are partially unknown and that no distinction has been made in practice so far, as CS.2.1 says:

'I have never seen a definition for any of these terms before, and it was not part of my Sustainability Manager Certification programme.'

Significantly, two experts point out Corporate Sustainable Development as an unknown term like MH.2.1 admits:

'CSD ??'

As well as FW.2.1:

'I have no clear understanding of CSD.'

Still, there was enough high-quality data to define those terms and generate new knowledge. The following Table 3 shows the results concerning sustainability managers' understanding of corporate sustainable transformation and the differences between corporate change, transformation, and development:

Table 3: Differences Between Corporate Change, Transformation, and Development

Corporate sustainability transformation is a comprehensive and strategic change encompassing the entire business model and corporate culture. This includes the challenge of integrating sustainability into the whole corporate structure without compromising competitiveness.	96%
Corporate sustainability change refers to an individual, not necessarily interconnected, internal changes within a company.	96%
Corporate sustainability development emphasises the continuous development of specific projects or areas to achieve the company's long-term sustainability goals.	89%
Corporate sustainability transformation is more ambitious and far-reaching than corporate sustainability change and corporate sustainability development, as it involves a fundamental sustainable realignment of the company's strategy, transforming towards a sustainable business model.	96%

Concerning corporate sustainable transformation, the quotes show that the experts come to a common understanding that the whole organisation and business model are affected, as well as its corporate culture, which plays a significant role in integrating sustainability into its core over a long-lasting process. This is, for example, supported by the quote from FW.2.1, who understands corporate sustainable transformation as:

'I understand a profound, lasting, intentionally induced change.'

Furthermore, DS.2.1 points out the long-lasting process as:

'... focuses more on the bigger picture with the rather passive derivation; what does this mean for us as a company.'

TR.2.1 highlights in the quote the important fact of a long-term process, which also affects the corporate culture and strategy:

'Transformation means a long-term and substantially more comprehensive company restructuring, including the culture, strategy, etc.'

With a consensus level of 96%, the participating experts were satisfied with the statement about the concerns about corporate sustainable transformation. Based on the quotes, corporate sustainable change differs from corporate sustainable transformation, especially because individual and short-term changes do not need to be interconnected, and an overall

strategic sustainability goal is not required. Neither is a supportive corporate culture an element of the definition. This is supported, for example, by BS.2.1, which says:

‘Corporate sustainable change is always a transition towards a specific goal; the change is complete once the goal is reached.’

AK.2.1 highlights the point that corporate sustainable change does not aim for a holistic transformation but relatively quick wins as small sustainable changes:

‘Corporate sustainable change focuses on sustainable changes within the company, without aiming for a complete transformation.’

BF.2.1 highlights corporate sustainable change with the detail of a much smaller scope of action:

‘The scope of consideration is smaller (than in corporate sustainable transformation or corporate sustainable development).’

The experts purely related corporate sustainable development to an organisation’s scope. This term differs from corporate sustainable transformation in the continuous development of projects, processes, etc. Hence, it is not achieved by a successful change like corporate sustainable change and does not focus on the whole business model like corporate sustainable transformation. This consensus is supported by the quotes from SB.2.1, who relates in his quote to the development of products as an ongoing process:

‘Corporate sustainable development describes the sustainable development of the business model and associated products.’

The quote from AK.2.1 points out the characteristic of continuous development over time in terms of adjustments or improvements:

‘Corporate sustainable development focuses on the company’s sustainable development over time. This includes continuous adjustments and improvements to achieve long-term ecological, social, and economic goals.’

Overall, like corporate sustainable transformation, corporate sustainable development is developing the company in terms of its sustainability goals, as supported by SZ.2.1:

‘Describes the company’s alignment with sustainability goals.’

After the previous section focused solely on distinguishing between corporate sustainable transformation, change, and development, the comprehensive definition of corporate sustainable transformation was then requested and collected from the experts. Some experts additionally referred to their response to Question 2.1, as many had already taken extensive time in the questionnaire to elaborate on each term’s definition.

Nevertheless, further high-quality data on the experts' definition of corporate sustainable transformation was provided, which has now been consolidated into three consensus statements. The experts rated these three statements at 100%, 93%, and 96%, respectively; therefore, all statements are part of the results and discussion.

Table 4: Understanding Corporate Sustainable Transformation

Corporate sustainable transformation is a conscious, profound, and extensive transformation within a company that integrates sustainability aspects into all core processes, moving towards a sustainable business model.	100%
Corporate sustainable transformation is driven by a new understanding of a company's ecological, social, and economic responsibilities, highlighting the need for further research, education, and awareness.	93%
Corporate sustainable transformation encompasses a comprehensive realignment of corporate culture, strategy, and processes to operate sustainably and responsibly in the long term, ensuring future viability.	96%

Based on the conclusions on corporate sustainable transformation in this section above, it can be added that further research and education are needed to align the whole company and its culture 'on board'. Another critical point is the integration of sustainability aspects into all core processes to enable a holistic transformation towards the company's sustainability goals. Therefore, the experts often emphasise the words 'consciously induced' and 'comprehensive change', referring to the entire enterprise, such as FW.2.2:

'Corporate sustainable transformation is a consciously induced, profound change in a company's core processes, products, and/or business model, driven by sustainability aspects (environmental, social, and/or government dimensions).'

While SZ.2.2 points out a whole business model shift through a transformational process:

'Corporate sustainable transformation is the most comprehensive and describes the transformation of the business model towards a sustainable business model.'

In a comparison of the differences in corporate sustainable development, MS.2.2 shares the idea of integrating environmental, social, and government into not one but all business processes:

'Integration of environmental, social and/or government into the business model, aligning all relevant processes towards sustainability.'

Which is also supported by AK.2.2:

‘Strategic restructuring of a company to integrate sustainable practices into all aspects of its business operations to act responsibly in the long term ecologically, socially, and economically.’

The next question, which still focused on answering the first research question, addressed a specific feature of a Delphi study: the aspect of the future. Therefore, experts were asked to describe how they expect the understanding of corporate sustainable transformation to change in the next 15 years. From the qualitative data, three consensus statements were again formulated and confirmed by the experts in the second round – namely, 100%, 96%, and 82%, and therefore will influence answering the first research question.

Table 5: Future Perspectives on Corporate Sustainable Transformation

The understanding of corporate sustainable transformation will deepen as sustainability is increasingly seen as an economic necessity and an ethical obligation.	100%
Technological advancement and global challenges such as climate change will intensify the urgency and scope of the required corporate sustainable transformation, underscoring the need for further research and education.	96%
Awareness of the importance of social and ecological responsibility will continue to grow, with younger generations playing a key role in corporate sustainable transformation.	82%

Based on the knowledge gained in this section about corporate sustainable transformation, this part highlights the estimated changes this definition will undergo in the next 15 years. The experts shared a common consensus, mainly because the understanding will deepen the economics related to our society. Among others, the opinion of FW.2.3 stands out, and interestingly, the following quote from FW.2.3 also ties into the future financial credibility problem described in the introductory section and the close relationship between banks and the economy, which mutually depends on achieving their sustainability goals:

‘Economic necessity will be decisive, and companies will recognise that clinging to outdated technologies is not only damaging to the climate but also uneconomic. Likewise, access to financing will become difficult to impossible if no efforts are made regarding corporate sustainable transformation.’

Another quote from AK.2.3 underlines the upcoming and essential economic aspect:

‘Companies will likely increasingly recognise that sustainable practices are not only an ethical obligation but also a crucial factor for long-term business success.’

The second statement addresses the future imperative of technological development, accelerating climate change, and its resulting impacts. This was powerfully described in connection with the necessary knowledge, as exemplified in quotes from BS.2.3:

‘... the more knowledge and experience are accumulated in the field.’

Other experts, for example, RM.2.3 highlight the experiences with the consequences of climate change, which will lead to the need for further research to find solutions:

‘... include personal experiences with the consequences of climate change.’

Although approved by the majority, the third statement had some experts dissenting, not entirely comfortable with mentioning the younger generation playing a key role, as illustrated by MH.2.3:

‘Furthermore, understanding of the issue tends to be more pronounced among the younger generation than the older.’

Nevertheless, the statement was ratified with over 82% approval, mainly focusing on increased social and environmental responsibility.

In addition to the quotes already named in this section, for example, this is illustrated with the statement from SS.2.3:

‘... sustainability awareness ... will not only expand but become an integral part.’

The experts answered the last question in this area concerning ‘understanding’, which provided valuable data to answer the first research question, which dealt with the future drivers of understanding corporate sustainable transformation. Due to the high-quality qualitative data and the different aspects described and mentioned, four consensus statements were formed. The experts approved all four statements with agreements of 89%, 96%, 86%, and 82%.

Table 6: Key Drivers of Future Corporate Sustainable Transformation

Regulatory requirements and political frameworks are the main drivers for the corporate understanding of corporate sustainable transformation.	89%
Advances in technology and innovation, along with growing societal pressure (such as personal experiences of the effects of climate change, resource scarcity, and resulting price increases), as well as the resulting shift in	96%

consumer behaviour, promote the understanding and necessity of corporate sustainable transformation.	
The visibility of economically successful case studies contributes to a deeper understanding of corporate sustainable transformation.	86%
Awareness raised through research and education promotes the understanding and necessity of corporate sustainable transformation.	82%

The first statement highlights the importance of regulatory requirements and political frameworks as the main drivers. Compared to the second one, which had a consensus of 96%, this statement received a consensus rate of 89%, which can be a consequence because experts see personal effects as one of the main drivers. So generally, if the word ‘main driver’ had been replaced with ‘important drivers’, the acceptance rate would eventually be much higher. However, politics is pushing for a future understanding of sustainable corporate transformation, which may help formulate a common future understanding of our economy and society. The quote by JZ.2.4 combines the two consensus statements Focusing on regulation and climate change effects:

‘I see two drivers, regulation and personal impact from climate change.’

Likewise, CS.2.4 also combines those two drivers in one quote:

‘Impact from climate change and regulation.’

As agreed in the current understanding of the drivers of the question, personal impact was mentioned as an essential point. Again, this point will gain importance in the future as the effects of climate change and societal changes sharpen. As quoted by MH.2.4 says:

‘Personal experiences or impacts are, in my opinion, always the biggest (future) driver of understanding.’

And BF.2.4:

‘Again, Personal impact. For example, rising energy costs, intense discussions among proponents in one’s social circle, or forest dieback among nature enthusiasts.’

If there is no common understanding of corporate sustainable transformation combined with the fear of changing and transforming a whole business model, then there is the fear and risk of failing such a transformation. Therefore, it seems best-practice businesses that have successfully undergone such a transformation and now have a much stronger position in the competitive field can be a real driver for others to follow.

PR.2.4 shares this thought in this statement:

'Successful transformation role models who show on a broad scale (explicitly, not just in niches!) how sustainability and economy can be successfully reconciled and regulated.'

Furthermore, if customers start asking for sustainable alternatives and would also change the product if a competitor offered a sustainable version of the product needed, this can also be an important future driver for companies to understand what a sustainable transformation means, what an alternative product looks like, and why it is necessary. AK.2.4 says:

'Secondly, consumer awareness and the associated demand: The increasing demand for sustainable products and services due to consumers' growing environmental awareness could encourage companies to invest more in sustainable practices to strengthen their market position and ensure customer satisfaction.'

A change in customer behaviour can also be enabled by knowledge transfer in the media and education about sustainability, supported by SZ.2.4:

'Integration of sustainability into traditional training professions and media (social media and traditional media).'

Based on the findings from this subsection, the first research question can be answered:

Sustainability managers articulate a distinct and comprehensive understanding of corporate sustainable transformation, framing it as a strategic, holistic process that fundamentally reconfigures the entire corporate entity. This transformation extends beyond incremental changes or developmental improvements to represent a profound, systemic shift that integrates sustainability into every aspect of the organisational structure and its operational ethos.

Sustainability managers understand corporate sustainable transformation as an all-encompassing change affecting the business model and culture extensively. Unlike simpler sustainability changes that may target specific areas or processes, transformation is about embedding sustainable practices into the core of the organisation's strategy and operations.

Furthermore, corporate sustainable transformation involves a fundamental realignment of the company's strategy, aligning it with long-term sustainability goals. It is a deliberate, strategically planned process aimed at transitioning the business towards sustainable operations that are ecologically responsible, socially equitable, and economically viable.

Compared to corporate sustainability change, the transformation is more ambitious than mere change, which may refer to discrete, unconnected modifications in the company.

Transformation requires a continuous, connected effort that transcends simple goal achievement and involves a permanent shift in company operations.

Compared to corporate sustainability development, transformation is broader, targeting a comprehensive overhaul of the business model and corporate culture. In contrast, development focuses on ongoing improvements in specific projects or sectors for sustainability. It's not just about progressive enhancements but a foundational change in the company's direction and operations.

An additional crucial aspect of understanding conveyed by sustainability managers is the role of corporate culture in facilitating or hindering sustainable transformation. They emphasise that a supportive, sustainability-focused culture is essential for the transformation to take root and flourish, affecting long-term outcomes.

Sustainability managers also highlight the importance of integrating sustainability into all core business processes. This integration ensures that every operational decision and business initiative is aligned with sustainability principles, reinforcing the transformation at every level of the organisation.

Over the next 15 years, sustainability managers expect the understanding of corporate sustainable transformation to deepen as sustainability's economic, social, and ethical imperatives become more pronounced. They anticipate this deeper understanding will be driven by technological advancements, global ecological challenges, and shifting regulatory landscapes. Key factors expected to influence this evolving understanding include the growing impact of climate change, technological innovations, and the increasing role of societal and consumer behaviour shifts in driving corporate sustainability agendas.

In conclusion, sustainability managers view corporate sustainable transformation as a profound, strategic overhaul that fundamentally shifts a company's operations and culture towards sustainability. It is a holistic change, distinctly more comprehensive than isolated sustainability changes or continuous developments, designed to ensure the long-term viability and responsibility of the business in a changing world.

4.1.3 Answering the Second Research Question

This area focuses on the findings on responsibilities to answer the second research question, which determines sustainability managers' responsibilities in corporate sustainable transformation. As profoundly revealed in the second section, the research about the responsibilities of sustainability managers in corporate sustainable transformation still offers much potential. Due to the multitude of responsibilities of sustainability managers, five consensus statements were formulated in the first part, which questioned sustainability managers' responsibilities in corporate sustainable transformation. The experts confirmed all statements with very high acceptance rates – namely, 100%, 89%, 100%, 93% and 96%, and therefore are part of the final results.

Table 7: Official Responsibilities in Corporate Sustainable Transformation

Developing and implementing sustainability strategies aimed at comprehensive corporate transformation.	100%
Adapting the company to regulatory requirements and developing sustainability goals, focusing on long-term profitability and competitiveness.	89%
Communicate and coordinate collaboration with internal stakeholders to promote a sustainable corporate culture and support knowledge transfer within the company.	100%
Monitoring and reporting on sustainability performance increases transparency and accountability to internal and external stakeholders.	93%
In close, cross-functional exchange and (indirectly) reporting to the (top) management.	96%

Sustainability managers are officially responsible for implementing sustainability strategies, which can only be done through communication and coordinated collaboration with internal stakeholders. This supports internal knowledge transfer and promotes a sustainable corporate culture. All experts agreed on that with a 100% response rate, which can be supported, for example, by the statement in BF.3.1:

'... responsibility for the sustainable strategic orientation of the company. Developing the sustainability strategy, linking with other departments' and 'Making the company 'fit' for sustainable topics. Bringing together important cross-departmental interfaces.'

JP. 3.1 links to another important point – namely, dealing with constantly evolving regulatory requirements, on which 89% agreed:

‘... developing a sustainability strategy, developing sustainable development in key areas for stakeholders, implementing concrete measures, and fulfilling regulatory requirements, especially sustainability reporting.’

One reason why the regulatory part achieved only 89% can be explained by every organisation needing to have a legal department whose daily business is to make the company align with (new) regulatory requirements.

Therefore, it is not the primary responsibility of sustainability managers; it is more about making the legal department aware of changes and maybe supporting them with the proper knowledge about sustainability. FW.3.1 says:

‘... ensuring compliance with regulatory requirements; identification and exploitation of business opportunities.’

Since developing and implementing sustainability strategies is a main responsibility, sustainability managers are also responsible for developing and integrating a supportive monitoring and reporting system on sustainability performance, as PG.3.1 says:

‘... ensuring the initiatives work towards the same goals.’

This part presents the findings on what sustainability managers perceive as additional responsibilities not in the official job description. Five statements were formulated, all of which received the necessary approval from the experts. Still, they have not been approved by over 90%, which can be explained by that all sustainability managers work in different organisations and therefore perceive additional responsibilities based on their context, culture, etc.

Table 8: Additional Responsibilities in Corporate Sustainable Transformation

A more pronounced role as a ‘change agent’ and internal advocate, often confronted with the challenge of overcoming internal resistance and fostering a willingness to embrace change among the workforce.	82%
A more prominent, direct involvement in implementing department-specific sustainability projects, which the departments themselves should increasingly initiate.	89%
A stronger focus on innovation for specific sustainability issues and a significant contribution to developing market opportunities and new business areas.	82%

A greater emphasis, alongside strategic measures, on translating operational and practical solutions into achievable actions.	82%
A more prominent role as an 'explainer' and knowledge disseminator within the company.	89%

Of the experts, 82% agreed that they internally assume a significantly more pronounced role as 'change agents' and 'multipliers'. In this capacity, they face overcoming internal resistance and fostering a positive attitude towards change. Sustainable transformation is closely linked to entrepreneurial change, and a workforce receptive to change is thus a necessary foundation. The quote from FW.3.2 supports this statement:

'... Additionally, in practice, the role as an internal multiplier and change agent (knowledge and mindset) is significantly more pronounced.'

CS.3.2 adds that an official responsibility should be much more linked to internal communication regarding employee sensitisation. This makes sense because, as the findings in this research show, the success of corporate sustainability is strongly linked to the corporate culture. Thus, depending on the status quo of corporate culture, there is more or less responsibility in enabling them, through sensitisation and specific knowledge, to take on the role of a 'change agent':

'The focus needs to be much stronger on employee sensitisation.'

Additionally, sustainability managers seem more involved in other departments' sustainability projects than are officially recognised. Ideally, sustainability managers would – based on their official responsibilities – be responsible for effective cross-department communication but not for the project work in the departments themselves. According to experts, 89% agree with this statement. For example, MO.3.2:

'I am actually not only involved in coordination but often also substantively involved in sustainability activities.'

BH.3.2 adds an important fact – namely, that the whole responsibility for all related projects cannot rest only on one person; it should ideally be integrated into the company goals, and therefore, every department should be responsible for achieving those goals:

'... the complete responsibility (including implementation) cannot rest on one person.'

And SS.3.2:

'In various areas, I am expected to be responsible for and implement tasks from the departments. All under the motto: 'What is the point of having a sustainability manager if they only coordinate and do not make my area sustainable?'

The quote by SS.3.2 clearly shows a situation in a company that does not understand that sustainability tasks are not an add-on topic but need to be integrated into every department's daily work and, therefore, are the responsibility of every single employee – not only the sustainability managers themselves.

Another aspect, rated with 82% agreement of greater responsibility than officially designated from the perspective of sustainability managers, is the focus on innovation and the associated development of market opportunities and new business areas focusing on sustainability. Statements from RM.3.2 support this consensus statement:

'I am an initiator and driver ... I develop new ideas/projects/events/measures to have a more sustainable impact.'

CB.3.2 also points out:

'Innovative suggestions and recommendations. ... the importance of innovation in terms of corporate sustainable development responsibilities. To transform a business holistically sustainable, innovation is an essential factor in reinventing yourself as a company to create new business opportunities if old products no longer meet customers' needs.'

Partially aligned with the second consensus statement (greater involvement in the projects of the respective departments), this statement by CR.3.2 emphasises a stronger focus on strategic measures and translating purely operational solutions into feasible actions.

'Concrete impulses are sometimes not accepted and/or not understood.'

Or, as JZ.3.2 says, departments still need more support in defining sustainable measures due to a lack of knowledge of how to do it on their own:

'Support them in defining measures for sustainable transformation.'

The fifth statement, with 89% agreement, was succinctly summarised by MS.3.2:

'Persuader and explainer for sustainability internally and externally.'

Other experts described the more pronounced responsibility of an explainer and knowledge disseminator with words such as FW.3.2, which directly links again to the role of a 'change agent':

'... the role as an internal multiplier ... knowledge and mindset.'

According to CS.3.2, when defining the official responsibilities of sustainability managers, the focus should be much more on a critical perspective and evaluation of how much work this new role must put into the whole culture to enable them:

‘The focus must lie much more on employee sensitisation than the organisation and the board had previously thought.’

Building upon the knowledge in this area, the following findings address the reasons behind the non-overlapping official responsibilities and those additionally perceived by sustainability managers. The findings have been summarised into four consensus statements adopted by experts with 82%, 86%, 89%, and 79% agreement.

Table 9: Discrepancies Between Official and Additional Responsibilities

Corporate sustainable transformation's cultural dimension is often underestimated and is only partially reflected in the official job description.	82%
There is often a gap experienced between the strategic vision of the company and its practical implementation, especially when integrating sustainability into all business areas, indicating the need for better alignment and clarity in roles and expectations.	86%
The discrepancy between official and perceived responsibilities often arises due to inadequate resources and a lack of prioritisation by the (top) management, leading to an expansion of official duties.	89%
The unofficial role is perceived as more comprehensive and influential than what is laid out in the official job description, highlighting the need for stronger recognition and support within the company.	79%

Because of the findings in this section, it seems logical that, as a reason for the non-overlapping in official and additionally perceived responsibilities of sustainability managers, the wrong assessment or even the ‘not thinking it matters in this context’ of the corporate culture is an important aspect and received 82% consensus. The lower level of consensus in comparison can be explained by that the participating experts come from different organisations with different corporate cultures. Therefore, this statement can vary from expert to expert, but a consensus was reached, which means it is essential to consider which FW.3.3 supports the following:

‘The corporate cultural dimension of corporate sustainable transformation is often underestimated and thus only partially reflected in the official job description.’

The second consensus statement, evaluated with 86% agreement, highlights a gap between the company's strategic vision and practical implementation, especially regarding integrating sustainability into all business areas. It indicates the need for better alignment and clarity in roles and expectations. MO.3.3 describes it as follows:

'Due to the complexity of the issue and the many uncertainties (but also ignorance), roles and responsibilities in the organisation are not always immediately clear. On the one hand, all issues must be bundled with me so that synergies can be leveraged and networking can occur. On the other hand, it must also be clear that this issue must be interwoven cross-sectionally into the organisation/existing responsibilities.'

Still, the lack of knowledge of sustainability and maybe the clear picture of the responsibility of a sustainability manager perceived by other departments produces, as SS.3.3 says:

'Resistance and misunderstanding towards sustainability (fear of change, too much to do in daily business, etc.).'

This produces the following statement, with 89% agreement, where experts concurred that the disparity between official and additionally perceived responsibilities often arises from inadequate resources and a lack of prioritisation by (top) management, leading to an expansion of official tasks or resources needed, like AK.3.3 says:

'Sustainability sometimes stops where it causes avoidable costs (resources).'

Again, this pointed out that sustainability tasks need to be deeply integrated into every department's goals, as explained by MO.3.3:

'Due to the complexity of the issue and the many uncertainties (but also ignorance), roles and responsibilities in the organisation are not always immediately clear. On the one hand, all issues must be bundled with me so synergies can be leveraged, and networking can occur. On the other hand, it must also be clear that this issue must be interwoven cross-sectionally into the organisation/existing responsibilities.'

Another burden is the recognition and attention of internal and external stakeholders, who are also responsible for decision-making processes and should always make their decisions align with the company's sustainability goals. As it seems, this is not the case in CR.3.3 proofs:

'Recognition of the topic's relevance for internal and especially external stakeholders is still lacking.'

With 79% agreement, the fourth statement emerged from the quotes as another message or consequence: the unofficial role is perceived as more comprehensive and influential than defined in the official job description.

This underscores the need for greater recognition and support in the company and especially from the top management, as quoted by KA.3.3:

‘Hierarchies are still extremely adhered to. If the department head or board has a different opinion, unfortunately, the sustainability manager ‘below’ can struggle to make an impact.’

Next, the future aspect of a Delphi study was once again incorporated into the questionnaire, thus forming part of the statement formulation. The following and final question concerning responsibilities addressed the expectations of sustainability managers regarding how their responsibilities will change over the next 15 years. The researcher captured three consensus statements and garnered agreement from experts at 86%, 93%, and even 100%.

Table 10: Future Development of Responsibilities

The role will evolve from a predominantly coordinating and advisory function today to a central management role, actively contributing to shaping the company's future.	86%
Responsibility is becoming increasingly strategic and specialised, with a stronger focus on integrating sustainability into the company's strategy and corporate culture. Additionally, employees in various professional roles are, to some extent, evolving into ‘sustainability managers’.	93%
A key role in adapting to changing market conditions and regulatory requirements while driving innovative solutions, new technologies, and sustainable business models.	100%

According to experts, the role of sustainability managers will be integrated into management or even at the top management level, making it less of an operative responsibility and more of a strategic function. This is what the experts agreed on with 86% consensus, as SS.3.4 describes:

‘To become a manager who maintains an overview.’

As well as MH.3.4:

‘In the long term, a separate board department is conceivable to do justice to the importance.’

And highlighted by CR.3.4:

'The role of a sustainability manager must be anchored at the board level or at least at the 2nd level and equated with functions like chief financial officer or chief innovation officer.'

This will be the answer to the current lack of (top) management understanding, knowledge, and support. It would be the solution to point out the importance of ensuring that the top management level has expert knowledge integrated into its level. Furthermore, sustainability would be considered in every management discussion and decision.

Similar but with a different focus, the second consensus statement, approved by 93%, suggests that responsibilities will become increasingly strategic and specialised, with a stronger emphasis on ensuring sustainability in corporate strategy and culture. Additionally, employees in any functional role will, to some extent, become 'sustainability managers' themselves. FW.3.4 well summarises this:

'I expect a shift from generalists to specialists. Sustainability will become the 'New Normal' and affect everyone, meaning employees in any functional role will become 'sustainability managers' to some extent.'

Furthermore, DS.3.4 says:

'... every department naturally works on its sustainability issues.'

The third and final statement received 100% agreement. It combines expecting responsibilities to shift towards a critical role in adapting to changing market conditions and regulatory requirements while driving innovative solutions, new technologies, and sustainable business models. This can only work if the sustainability manager position in the organisation will move out of the 'line' activities, as supported by KA.3.4:

'It will gain importance, and these positions must be removed from the lines. It is not just about completing tasks but entrepreneurial responsibility.'

The innovative aspect is also shown in the quote by MO.3.4:

'... more like business developers or transformation managers, with sustainability being thought of quite naturally.'

Based on the findings from this subsection, the second research question can be answered:

Sustainability managers are pivotal in guiding corporations through sustainable transformation. This role transcends traditional management duties, integrating strategic development, stakeholder collaboration, and a robust commitment to innovation and cultural change.

Sustainability managers formulate and execute strategies that drive comprehensive transformation across the corporate landscape. This role involves establishing sustainability goals aligned with long-term profitability and competitiveness and adapting business models to meet changing regulatory requirements. Their strategies ensure that sustainability permeates every aspect of the organisation, from core operations to new market initiatives.

One of the core functions of sustainability managers is to cultivate a culture that embraces sustainable practices. This involves persistent efforts to sensitise and educate all company stakeholders about the importance of sustainability. Through effective communication and collaboration, they ensure that sustainability is not perceived as an isolated agenda but as an integral part of the corporate ethos. This role extends to acting as change agents instrumental in overcoming resistance and fostering a corporate environment that is receptive to change, thereby enhancing the company's capacity for sustainable development.

To maintain accountability and transparency, sustainability managers oversee the monitoring and reporting of sustainability performance. They develop systems that track progress and report on sustainability metrics to internal and external stakeholders. Their role ensures that sustainability efforts are measurable and meet the standards set by regulatory bodies and internal benchmarks.

Beyond their official capacities, sustainability managers often take on roles that involve direct participation in department-specific projects and initiatives. They are not only coordinators but also key players in implementing sustainability across various departments, ensuring that every sector of the organisation contributes to the overarching sustainability goals. They lead by example in integrating sustainability into daily operations and strategic initiatives, emphasising the importance of innovation in developing sustainable products, services, and processes that cater to evolving market needs and regulatory landscapes.

As the corporate world evolves, the role of sustainability managers is anticipated to become more central, moving from advisory capacities to critical managerial roles in the corporate hierarchy. This shift reflects the growing recognition of sustainability as vital to corporate strategy and in shaping long-term business models and practices. The future sees these managers as policy implementers and integral components of the top management echelon, involved in decision-making processes that define the company's trajectory.

In summary, the role of sustainability managers is expansive and dynamic, addressing a corporation's immediate and strategic sustainability needs. As businesses continue to recognise the critical importance of sustainability, the responsibilities of these managers are evolving to encompass a broader scope that necessitates a deep integration into the corporate structure and strategy. Their work is crucial in meeting current sustainability demands and positioning the company for future challenges and opportunities in the sustainable landscape.

4.1.4 Answering the Third Research Question

This section addresses RQ3, which pertains to the barriers that sustainability managers perceive regarding their corporate sustainability transformation responsibilities. Additionally, and concerning the later implications for practice, next to the barriers addressed in the focus of the underlying third research question, the sustainability managers also name perceived enablers related to the barriers to get a more profound feeling of whether those transformation barriers related to their responsibilities can be managed or prevented. The following table shows the consensus statement, which examines the barriers that sustainability managers perceive to corporate sustainable transformation. Due to the diversity and volume of qualitative data, the responses were formulated into six consensus statements.

Table 11: Barriers to Corporate Sustainable Transformation

The level of deep integration into the areas has not been reached yet. As a result, every sustainability activity is perceived as a time-consuming additional task or additional cost.	93%
Absence of a holistic, top-down role model function and associated active demonstration of the sustainability strategy.	86%
The gap between the strategic vision for sustainability and its implementation in practice is often due to insufficient support and a lack of understanding of sustainability at the (top) management level.	82%
Resistance and a lack of willingness to change in corporate cultures and structures make integrating new practices and sustainable values challenging.	82%
The lack of comprehensive sustainability knowledge and internal training of employees leads to a misalignment between sustainability goals and the execution of everyday business practices.	79%

There is a prevalent focus on short-term financial gains over long-term sustainability goals, often resulting in limited resources, capacity, and commitment to transformative sustainability initiatives.	75%
--	-----

This first-listed barrier comes less unexpectedly. Since the lack of knowledge and integration of sustainability tasks into every department – which is perceived by the sustainability managers as an additional, unofficial responsibility to change that – it is not only a significant amount of work for the sustainability managers (perceived responsibilities) but also a barrier, on which 93% of the experts agreed. Hence, the lower the integration of sustainability into each department, the more of a barrier the experts perceive. This means that every sustainability activity is perceived as a time-consuming additional task or additional cost by employees and departments. Therefore, sustainability tasks are seen as burdens or add-on tasks, for example, as named by SS.4.1:

‘... no deep integration into the areas, but an add-on.’

Or, as SB.4.1 describes, it is a burden for other departments as long it is not profoundly integrated or understood as a part of everyone’s work:

‘Sustainability is understood as an additional burden.’

Employees have an aversion to changes in their everyday work if they are not deeply integrated into their tasks, processes, etc. FW.4.1 says:

‘Aversion to changes in one’s own everyday work.’

Because according to DS.4.1:

‘We (the employees’ perspective) only jump as high as we have to.’

These statements also led to another consensus statement supported by the mentioned quotes. In the second statement, the researcher achieved a consensus of 86% addressing the transformation barrier of the missing holistic, top-down role modelling and associated active living of the sustainability strategy. As shown in the findings before, this barrier is also a logical consequence of the knowledge generated. Not only do the sustainability managers need short paths of communication and the support of the top management to be heard and respected by other departments, but the top management also must take a credible role in promoting those sustainability goals. Therefore, if this is not happening, it becomes a transformation barrier, especially in top-down organisational cultures.

Building on the second consensus statement, the third barrier the experts agreed on with 82% consensus concerns the discrepancy between the strategic vision for sustainability and its actual implementation in practice, often due to insufficient support due to a lack of sustainability understanding at the (top) management level. Organisations and top management are strong

in developing strategies for their external reports and reputation. Still, the actual implementation of those concepts and strategies seems insufficient. Reasons for that can be, as DS.4.1 says:

'Old beliefs are still anchored at the management/board level, and a lack of clear commitment is an unmistakable message to employees.'

And again, the common reason quoted by RM.4.1:

'Sustainability is not lived top-down, executives are not committed, and there is a lack of understanding.'

Very related to the add-on topic barrier, the big picture, which sees the whole organisation as one and supports the entire organisation as one in reaching specific goals, is often disrupted by departments only thinking in their silos, as BF.4.1 puts it:

'Executives still thinking in silos (there are simply too many).'

Again, a very related barrier to the three listed above is the fourth consensus statement, which has an agreement rate of 82%. It concerns the resistance and lack of willingness to change in corporate cultures and structures, which complicates the integration of new practices and sustainable values. This is also related to sustainability managers, who strongly perceive additional responsibilities as 'change agents' to motivate and enable the organisation to adopt sustainability practices and transfer knowledge. It is also connected with the motivation of the 'we jump only as high as we need to' quote by DS.4.1, as sustainability is still seen as an 'add-on' activity. Again, this is closely related to the lack of understanding and knowledge, as SZ.4.1 puts it:

'Lack of understanding in other teams.'

And PB.4.1 concerning the 'change agent' responsibility and constant motivator:

'Lack of willingness to change.'

Which also can end up in a complete resistance mentality, like MH.4.1 says:

'In addition, there is indifference, 'I can't change anything anyway,' 'Let the others do it first.'

The aversion to change the mentality of an organisation's culture supports this barrier regarding FW.4.1:

'Lack of entrepreneurship and willingness to take risks, aversion to changes in one's own everyday work, neglect of the corporate cultural dimension of sustainability.'

The lack of comprehensive sustainability knowledge and internal training of employees, leading to a misalignment between sustainability goals and the execution of everyday business practices, was agreed upon by 79%. SB.4.1 describes it as:

'No uniform sustainability knowledge.'

And JK.4.1 says:

'Lack of know-how in departments.'

And CB.4.1:

'The breadth and the connections of this issue are only partially understood. Unfortunately, this runs through all company areas and complicates transformation efforts.'

Exactly 75%, thus precisely at the threshold of the necessary agreement rate, agree with the sixth statement, which observes a prevailing focus on short-term financial gains over long-term sustainability goals, often resulting in limited resources, capacity, and engagement for transformative sustainability initiatives. For the researcher, it is a logical consequence based on the new knowledge and insights from the experts in the previous areas. Still, the consensus level seems low compared to the other statements. It should have a logical consequence, as 'economic and strong best price business models' are enablers in understanding corporate sustainable transformation. On the positive side, not all organisations' experts are from the economic aspect. They are perceived as a significant barrier, which means financing the sustainable transformation is not a problem. Still, 75% agreed with this statement, which means it is part of the results of this thesis. Still, the corporate sustainable transformation is, for many organisations, a 'black box' in terms of profits, as FW.4.1 says:

'High investment requirements with unclear profit opportunities.'

And as SS.4.1 quotes:

'Too high costs.'

Often, it seems that sustainability competes with regular profits, as CS.4.1 says:

'Lack of sustainability priority (revenue or more sustainability?).'

Or even worse, complete ignorance of the topic results in not hiring experts at all to save costs, like BF.4.1 says:

'No sustainability manager to save costs or similar.'

To gain an even deeper understanding of the barriers that sustainability managers perceive based on their responsibilities in corporate sustainable transformation, they were asked the following question: If, from their perspective, enablers do or could exist to minimise the

perceived barriers to corporate sustainable transformation. Therefore, the following two areas focus on enablers that sustainability managers perceive based on the barriers related to their responsibilities (e.g., how they perceive today and what they expect in the future). Sustainability managers were asked about potential enablers within corporate sustainable transformation, again individually based on their perception. The researcher could derive six transformation enablers from the qualitative data and summarise them as statements, all of which received the necessary approval from the experts.

Table 12: Enablers of Corporate Sustainable Transformation

Advocacy and the associated visible and exemplary commitment of top management promote a change-oriented organisational culture that prioritises sustainability in business processes and actively integrates it.	93%
Regulatory pressure and increasing demands from external stakeholders.	93%
Building internal capacities through developing sustainability expertise and establishing multipliers or additional sustainability specialists.	93%
Utilise innovative technologies and quantify sustainability activities to align organisational objectives with sustainable goals.	82%
Increasing damage events due to climate change (e.g., credit defaults) and the resulting economic consequences.	75%
Clear economic best practices in the competitive environment.	79%

Again, it seems that top management can, on the one hand, be one of the main barriers that sustainability managers perceive, but, on the other hand, directly influence minimising this barrier and turning it into an enabler. Indeed, the more top-down the culture, the more enablers there are, reducing perceived barriers. The first statement addresses top management's visible and exemplary role in implementing and embodying sustainability measures on the agenda. This behaviour fosters a change-oriented organisational culture that prioritises sustainability in business operations and actively integrates it. With a 93% consensus, this statement reflects the experts' opinions, as evidenced by the following quotes from FW.4.2:

'Role modelling by top management.'

And gain two statements that address the necessary support from the top management as an essential enabler. The first one is by SZ.4.2, who says

'Support from top management' is a key aspect,

and the second statement by JZ.4.2:

‘Success, in my view, depends on the board and its attitude toward sustainability.’

Again, essential is a ‘clear line’ in decision-making from the top management, always keeping their environmental, social, and governance goals present and integrated into every decision, like JP. 4.2 says:

‘Top management with clear stance and goals.’

The second statement, which also achieved a consensus of 93%, sees the regulatory pressure exerted on the industry, combined with the increasing demands of external stakeholders, as enabling corporate sustainable transformation and, therefore, impacting the perceived barriers positively. External stakeholders are an essential interest group of the company, as they are, on the one hand, often integrated into decision-making and, on the other hand, as customers; their voice is important because if a company wants to be profitable, it must serve its customer’s needs. So, if those needs shift towards a sustainable ambition, this is also an identified driver for understanding corporate sustainable transformation and a future driver for developing this understanding. Now, it also is an essential enabler for sustainability managers and is not only related to their understanding. DS.4.2 says that:

‘Clear positioning or addressed expectations of relevant stakeholders or owners and customers’ expectations.’

And, of course, PG.4.2:

‘Customers can be enablers.’

As well as FW.4.2:

‘Active inquiries from our own customers.’

Besides that, the regulatory aspect is also identified as a driving factor in understanding. The following statements illustrate this in MR.4.2:

‘Regulation certainly plays a significant role.’

Another transformation enabler, with a consensus of 93%, is the development of internal capacities by cultivating sustainability expertise in business fields, aiming to build further multipliers and sustainability specialists in-house. The following statements illustrate this consensus such as CR.4.2 says:

‘Motivated multipliers to drive the topic forward.’

And regarding how to catch the attention of the employees, BF.4.2 mentioned an interesting aspect, which is to emotionalise communication:

'Use narratives for better understanding, integrate communication with employees, and have personal conversations (less online) to add more emotions to the topic.'

Also, an essential enabler of corporate sustainable transformation from the perspective of sustainability managers is using innovative technologies and quantifying sustainability activities to align organisational goals with measurable, sustainable objectives. The following statements illustrate this consensus of 82%, such as PB.4.2 says:

'Clear benefits or demonstrable revenue model in a sustainable business case.'

Significant as well are the chances a sustainable transformation and reinventing the business model have of saving costs in the long run, as the JP. 4.2 quote shows:

'Revenue or cost-saving potentials can be quantified.'

Or like AK.4.2 says:

'Innovative technologies: Integrating sustainable technologies can increase efficiency and reduce resource consumption.'

These statements support another consensus statement in this category, expressly stating that 79% of sustainability managers agree that transparent, economically sustainable best practices in a competitive environment are also corporate sustainability transformation enablers.

Increasing climate change-related damage events (e.g., credit defaults) and associated economic consequences form the fifth consensus statement, which sustainability managers agreed upon by 75%, which is also closely related to the future drivers of understanding corporate sustainable transformation – namely personal impact. This statement is supported by PG.4.2:

'Risks from climate change and biodiversity losses.'

JK.4.2 points out that climate change will harm the security of the loan portfolio:

'Increasing damage events and credit defaults.'

The final section of data collection addresses the decisions and adjustments necessary from the perspective of sustainability managers to enable corporate sustainable transformation in the future to positively impact the barriers that sustainability managers perceive in corporate sustainable transformation. Seven consensus statements were formed from the qualitative data, with high consensus rates ranging from 93% to 100%.

Table 13: Emerging Enablers of Corporate Sustainable Transformation

Ensure sustainability expertise in (top) management and the associated integration of environmental, social, and governance into all decision-making processes.	96%
Central embedding in the goal system through quantification and incentivisation.	100%
Cultivate a change-oriented organisational culture.	96%
Provide education and department-specific training.	93%
Establish collaborative, cross-company networks for knowledge and resource exchange.	96%
Continuously adapt sustainability strategies that respond to regulations, volatile market dynamics, and stakeholder feedback.	100%
Integrate environmental, social and governance throughout the entire education system (new general knowledge).	96%

The first statement, focusing on ensuring sustainability expertise in (top) management and the associated integration of environmental, social, and governance factors into all decision-making processes, achieved a consensus rate of 96%. Since this was also a recommendation from sustainability managers in the areas analysed before, it seems again to have a logical consequence as an enabler in the corporate sustainable transformation in terms of affecting the perceived barriers in a supportive way and, therefore, minimising them. This is supported, among others, by JP. 4.3:

'Building understanding (...) briefing of top management by external consultants, as well as forming responsibilities/committees and providing authority and resources.'

And again, DS.4.3:

'Environmental, Social and Governance criteria must serve as a compass in all corporate decisions.'

As well as PB.4.3:

'Sustainability expertise on a broad basis and associated top management commitment.'

This statement is also supported by its integration into the target systems, as this is also a (decision-making) process. With 100% agreement, the central anchoring in the target system through quantification and incentivisation was evaluated and can be supported, as FW.4.3 says, by

'Meaningful incentive systems.'

Also, in terms of that, employees get rewarded when reaching their departments' sustainability goals, and there is also the recommendation concerning integrating the goals of the top management in the salary system. This means that if the company reaches its sustainability goals, it affects the salary of the top management, as well as if they are not achieved. CR.4.3 says:

'Board of directors and supervisory boards must be more directly involved in responsibility, and sustainability goals must also be defined for them.'

PR.4.3 recommends to

'Adapt the KPI and incentive systems, and regularly review those mentioned above.'

The third consensus statement, with a consensus of 96%, addresses establishing a change-oriented organisational culture as a necessary adaptation to enable sustainable corporate transformation. Like the other enablers, this one is again closely related to the sustainability managers' important responsibility in being a change agent and an organisational culture, which is, in terms of change resistance, a transformation barrier. The following statements support this statement, like JZ.4.3 highlights the:

'Involvement of all and everyone in the transformation.'

It clarifies that the transformation can only be successful if everyone is 'on board'. BF.4.3 mentioned an exciting point: carefully selecting new employees, if possible, ensuring they value an agile and change culture and maybe have sustainability knowledge. Therefore, the basis for a successful transformation can already start by selecting and onboarding new employees and preventing possible barriers for sustainability managers right from the beginning:

'Conscious selection of new employees, deliberately bringing values into effect within the organisation. Becoming effective from the inside out.'

Similar, according to AK.4.3:

'At the same time, it is important to promote a sustainable corporate culture that focuses on environmental awareness, social responsibility, and ethical behaviour.'

This brings up the next enabler – namely education and department-specific training, which, at 93%, are also important measures, according to experts, to better shape corporate sustainable transformation in the future. As this analysis concludes, the lack of sustainability knowledge produces many barriers or perceived responsibilities in responsibility and understanding. Therefore, according to PG.4.3, the related enabler is

‘Building up know-how.’

TR.4.3 includes the aspect of education and JP. 4.3 calls it

‘Training and internal communication.’

Internal communication is mentioned as an enabler in reducing the perceived corporate sustainable transformation barriers, which supports the perceived responsibility of a sustainability manager in terms of the more perceived task of explaining and communicating. This also leads to the following statement: Based on the strongly perceived responsibility of the sustainability manager in being over officially thought involved in other departments’ sustainability projects due to the lack of general sustainability knowledge or knowledge about their responsibilities, this enabler is a logical response to the problem: Creating collaborative, cross-company networks for knowledge and resource exchange achieves a high consensus of 96% among sustainability managers, as underscored by the following statements, as MO.4.3 expresses it:

‘The collaboration between real and financial economies will change enormously and offers opportunities for shaping the big picture together.’

With 100% agreement among the sustainability managers, the continuous adaptation of sustainability strategies responding to regulation, volatile market dynamics, and stakeholder feedback was evaluated and is, therefore, one of the essential and necessary measures to enable corporate sustainable transformation in the future while reducing the perceived barriers by sustainability managers and therefore supporting them in fulfilling their tasks effectively. This is especially needed to address specific challenges, as mentioned by PG.4.3:

‘High complexity with simultaneously inconsistent regulation.’

And JK.4.3:

‘Interoperability of regulation and skilful translation into benefits for customers and companies.’

As another necessity and with a 96% agreement, integrating environmental, social, and governance dimensions throughout the education system (new common knowledge) also empowers corporate sustainable transformation outside a company.

FW.4.3 input encapsulates this statement:

'Building knowledge and training of professionals, as well as integration into curricula of universities.'

And SZ.4.3:

'Integration into business education and sustainability must move out of the niche and become common knowledge.'

In summary, and later, this will be important in future recommendations. Current enablers include top management's visible commitment, which fosters a sustainability-oriented organisational culture. Regulatory pressures and stakeholder demand drive change, along with the development of internal sustainability expertise and technological innovation. Economic impacts from climate change events and observing sustainable best practices in the competitive landscape further motivate transformation. In the future, sustainability managers will highlight the importance of integrating sustainability expertise at the management level and aligning all decision-making processes with environmental, social, and governance criteria. They emphasise the need for clear sustainability objectives integrated into the company's goals with proper incentives. Cultivating a change-oriented culture, providing targeted education, and fostering collaborative networks are key for ongoing adaptation and improvement. Expanding environmental, social, and governance principles throughout the educational system is fundamental to sustaining long-term transformation.

With the knowledge gathered to this point, the third research question can be answered as follows:

Sustainability managers identify several significant barriers that hinder their effectiveness and the broader corporate sustainability transformation process. These barriers challenge the implementation of sustainability strategies and affect sustainability managers' ability to fulfil their responsibilities effectively.

Insufficient Integration of Sustainability: Sustainability managers report that sustainability initiatives are often perceived as additional burdens rather than integral elements of organisational processes. This lack of profound integration results in sustainability activities being viewed as time-consuming and costly extras rather than essential components of business operations. This perception can demotivate employees and lead to resistance, as sustainability is seen as an imposition rather than a value-add. The integration issue of every sustainability activity that is not profoundly embedded is seen as an additional task or cost.

Lack of Leadership and Role Modelling: A significant barrier identified is the absence of a holistic, top-down role model function within organisations. Sustainability managers stress the importance of leadership in actively promoting and demonstrating sustainability strategies.

Without this, the transformation efforts lack credibility and momentum. The failure of top management to embody sustainability goals transparently and actively hampers the entire transformation process.

Strategic and Implementation Gap: There is a notable gap between the strategic vision for sustainability and its practical application. This barrier often stems from insufficient support and understanding of sustainability at the top management level. Despite well-articulated strategies, actual practice lags due to old beliefs anchored at the management or board level and a lack of clear commitment communicated to employees.

Cultural Resistance: Resistance to change within corporate cultures and structures significantly complicates the integration of new practices and sustainable values. This barrier is intricately linked to sustainability managers' role as 'change agents', whose efforts are often undermined by a general reluctance to alter established working methods. This resistance manifests as a deep-rooted aversion to altering everyday work routines, further exacerbated by a lack of understanding across teams.

Knowledge Deficit and Training Insufficiencies: The lack of comprehensive sustainability knowledge and the insufficient internal training of employees lead to a misalignment between sustainability goals and daily business practices. Without uniform sustainability knowledge and skills across departments, sustainability efforts are fragmented and less practical.

Short-term Financial Focus Over Long-term Sustainability: Focusing on short-term financial gains often overshadows long-term sustainability goals, resulting in constrained resources, limited capacity, and reduced commitment to sustainable initiatives. The focus on immediate profitability undermines the ability to invest in and prioritise long-term sustainability transformations, which are crucial for the company's sustainable future.

In summary, the barriers identified by sustainability managers highlight significant challenges in embedding sustainability deeply within corporate structures and cultures. These challenges range from organisational and leadership issues to cultural resistance and practical implementation gaps. Addressing these barriers requires a concerted effort from all levels of the organisation – particularly from top management, to realign priorities and foster a corporate environment conducive to sustainable transformation.

4.2 Summary

The successful completion of the second round of data collection with a remarkable 100% participation rate from all 28 experts underscores this research topic's significant relevance to corporate sustainable transformation – particularly in the German financial industry. This engagement, coupled with 0% dropouts, reflects not only the experts' high valuation of the subject matter but also the effectiveness and practice orientation of the research methodology and questionnaire design employed by the researcher. The consensus on all evaluated statements, surpassing the 75% threshold, provides a valuable foundation for the subsequent discussions and literature integration in the following fifth and final sections, the conclusion of this thesis. This research segment has elucidated three areas based on the three research questions: the understanding, responsibilities, and perceived barriers of sustainability managers in corporate sustainable transformation. This section responds to the initial research objectives and sets the stage for discussions and actionable formulation.

5. Discussion

This section delves into the findings from the qualitative research on the understanding, responsibilities, and barriers faced by sustainability managers in the German finance industry in corporate sustainable transformation. Building upon the results presented in the previous section, this discussion contextualises and deepens understanding by comparing these findings against the established literature reviewed in the second section. The aim is to elucidate how the new insights from this research corroborate and extend existing academic discussions on corporate sustainable transformation.

This section contributes significantly to the academic field by critically analysing how the understanding of corporate sustainable transformation, sustainability managers' responsibilities, and barriers they perceived align with or deviate from the literature and where this research has added new knowledge in the German finance industry. Furthermore, it lays the groundwork for the conclusions and recommendations detailed in the subsequent final section, thereby shaping future research directions and practical applications in sustainability management.

5.1 Sustainability Managers' Understanding

The literature defines corporate sustainable transformation as a profound, systemic change within a company, targeting all core processes and aligning them with sustainable development goals. This transformation is not just a shift in practices but a fundamental realignment of the company's business model and corporate culture (Fazey et al., 2018; Westley et al., 2011).

According to this research, sustainability managers in the German financial industry similarly perceive corporate sustainable transformation as an all-encompassing change. This is supported by participant DS.2.1, who emphasises the 'bigger picture' and the need for a 'passive derivation' of what sustainability means for the company. The participant views corporate sustainable transformation as a series of changes and a profound, integrated shift in how the company operates and positions itself in the market.

While the academic perspective provides a structured definition, the practical insights from sustainability managers highlight several challenges in implementing these transformations. For example, participant FW.2.1 describes the corporate sustainable transformation as a 'profound, lasting, intentionally induced change', pointing out the need for intentional strategy and long-term commitment. TR.2.1 reinforces this by noting that transformation involves a 'long-term and substantially more comprehensive company restructuring, including culture, strategy, etc.' These insights align with the academic goal of achieving a fundamental systemic

shift but also underscore the complexity of transforming established corporate structures and cultures, areas where the literature may lack detailed practical strategies.

A significant aspect of sustainability managers' understanding of corporate sustainability transformation is the integration of sustainability into all core business processes. FW. 2.2 explicitly highlights this, seeing corporate sustainable transformation as a 'consciously induced, profound change' involving all dimensions of sustainability – environmental, social, and governance. AK.2.2 also mentions the strategic restructuring needed to integrate sustainable practices across all business operations. This view aligns well with the literature, which discusses the necessity of profoundly and broadly embedding sustainability within a company's operations and strategies (Borglund et al., 2021).

Looking forward, sustainability managers anticipate significant developments in understanding corporate sustainable transformation. They predict a deepening recognition of sustainability as both an economic necessity and an ethical obligation, driven by technological advancements and global challenges like climate change. Participant FW.2.3 underscores that economic imperatives will increasingly drive corporate sustainable transformation, supported by AK.2.3, who notes the rising recognition of sustainability as crucial for long-term business success. This forward-looking perspective is particularly vital, as it suggests a shift from viewing sustainability as merely an ethical choice to recognising it as a core component of strategic business resilience and economic viability.

In conclusion, sustainability managers in the German financial industry have a comprehensive and nuanced understanding of corporate sustainable transformation that broadly aligns with academic definitions but is enriched by real-world insights and applications. Their perspectives highlight corporate sustainable transformation practical challenges, strategic necessities, and future directions, offering a richer, more applied understanding than in the literature alone. This discussion bridges the gap between theory and practice by weaving these practical insights with the theoretical frameworks discussed in the literature. It provides a detailed understanding of how corporate sustainable transformation is conceptualised and implemented by key stakeholders in a critical sector of the economy. This enriches the academic discourse with valuable practical perspectives, offering a more precise roadmap for achieving sustainable transformation in the corporate world.

5.2 Sustainability Managers' Responsibilities

Addressing the second research question, which concerns the responsibilities of sustainability managers in corporate sustainable transformation in the German finance industry, again requires integrating insights from the qualitative data, participant quotes, and the state of the underlying literature. This synthesis helps understand the evolving role of sustainability managers as they guide corporations through sustainable transformations.

As detailed in the second section, the literature illustrates a significant evolution in the role of sustainability managers since the early 2000s, with an increasing recognition of their strategic importance in integrating sustainability into corporate strategies (Kanashiro and Rivera, 2017; Strand, 2013). Sustainability managers have transitioned from overseeing sustainability strategies to playing a pivotal role in strategic decision-making, influencing organisational behaviours, and managing sustainable supply chains. This broadening scope mirrors the findings where sustainability managers are tasked with developing comprehensive strategies for corporate sustainable transformation, adapting to regulatory changes, fostering sustainable corporate culture, and ensuring transparency through monitoring and reporting (Participants BF.3.1; JP. 3.1).

The responsibilities of sustainability managers in developing and implementing corporate sustainable transformation strategies and fostering stakeholder collaboration resonate with existing literature that underscores their strategic oversight and the importance of stakeholder engagement (Borglund et al., 2021). For instance, the findings from the current study highlight the responsibility of sustainability managers in adapting business models to meet regulatory demands and ensure long-term viability, which extends the discussion about their strategic involvement in organisational practices (Kanashiro and Rivera, 2017).

However, the underlying research also points to areas where the existing literature has gaps or diverges from the new findings. While the literature broadly discusses the evolving nature of sustainability issues, the specific emphasis on regulatory adaptation as a primary function of sustainability managers is less pronounced. Moreover, the responsibilities of sustainability managers in balancing regulatory demands with ambitious sustainability goals illustrate a nuanced responsibility that extends the existing literature by providing a more detailed exploration of how these dual objectives are managed.

Exploring additional responsibilities perceived by sustainability managers, the study reveals that sustainability managers act as 'change agents', are directly involved in department-specific sustainability projects, and focus on innovation to advance market opportunities. These findings align with the literature, who name them corporate change agents for sustainability, highlighting their influence in transforming organisations towards sustainable practices (Schaltegger et al. 2023). This perspective resonates with the findings of this

research, which state that sustainability managers are developing and implementing comprehensive corporate sustainable transformation strategies while adapting business models to regulatory changes and fostering a sustainable corporate culture. It also aligns with the findings on sustainability managers steering pro-environmental behaviours and handling sustainable supply chains (Testa et al., 2016). The results do not further support Göpels's worldview of specifically decoupling the economic growth of the organisation from further enhancing climate change, which should be guided by sustainability managers (Göpel, 2020).

However, the additional responsibilities extend beyond the official roles, indicating a discrepancy between the official job descriptions and the actual, broader, and more influential roles that sustainability managers undertake, such as overcoming internal resistance and fostering adaptability (Annosi, 2024). The gap between official and additional responsibilities is partly due to the underestimation of corporate sustainable transformation cultural aspects and the disconnect between strategic plans and execution. This insight extends the literature by highlighting the importance of organisational culture in corporate sustainability transformations, an area often overlooked in favour of more tangible, strategic elements, which again supports the name 'corporate change agents' (Schaltegger et al., 2023).

The results of the second research question contribute to the literature by detailing the comprehensive nature of sustainability managers' responsibilities beyond traditional corporate social responsibility initiatives, emphasising the interconnected approach needed for effective corporate sustainable transformation. It also highlights the importance of internal education and knowledge transfer as crucial responsibilities of sustainability managers, suggesting that these aspects are critical for fostering a sustainable organisational culture and ensuring the successful implementation of sustainability strategies. In conclusion, the discussion of the second research question elucidates the multifaceted responsibilities of sustainability managers in the German finance industry, showing both alignment with and extensions to the existing literature. The insights from this study emphasise the strategic, operational, and cultural dimensions of sustainability managers' roles, contributing to a nuanced understanding of their responsibilities in driving corporate sustainable transformation. It furthermore details the comprehensive nature of sustainability managers' responsibilities beyond traditional corporate social responsibility initiatives, emphasising the interconnected approach needed for effective corporate sustainable transformation. It also highlights the importance of internal education and knowledge transfer as sustainability managers' crucial responsibilities, suggesting these aspects.

5.3 Sustainability Managers' Perceived Barriers

Addressing the third and final research question, which focuses on the barriers perceived by sustainability managers related to their responsibilities in corporate sustainable transformation in the German finance industry, involves again integrating the data from participant responses with the existing literature. This synthesis enables an examination of how aligned the perceived barriers by sustainability managers are with documented challenges in the literature and where new insights have emerged from the study.

The insufficient integration of sustainability into the business core is highlighted as a barrier perceived by sustainability managers related to their responsibilities in corporate sustainable transformation in the German finance industry. The participants highlighted this barrier and quoted SS.4.1: 'No deep integration into the areas, but an add-on', as well as SB.4.1: 'Sustainability is understood as an additional burden'. Therefore, the predominant barrier is the inadequate integration of sustainability into daily operations, making it perceived as an additional burden for employees rather than an integral part of every business process. This aligns with the literature noting operational inefficiencies in sustainability integration and the need for a more embedded approach within corporate structures to ease implementation (Schaltegger et al., 2023; Olesson et al., 2023).

Another result of the lack of leadership and role modelling, which results in the absence of a holistic, top-down role model function within organisations, was identified as a significant barrier, quoted as DS.4.1: 'Old beliefs are still anchored at the management/board level. Lack of clear commitment is an unmistakable message to employees'. and RM.4.1: 'The theme is not lived top-down, there is no commitment from executives, and there is a lack of understanding'. This finding resonates with existing studies that emphasise the critical role of leadership in effectively communicating and demonstrating sustainability strategies (Meijer et al., 2019; Annosi et al., 2024). Leadership's failure to actively embody and promote sustainability goals can significantly hamper transformation efforts.

Participants pointed out a notable gap between the strategic vision for sustainability and its practical application, as DS.4.1 highlights the organisational culture mindset as 'We only jump as high as we have to', which is also related to the insufficient integration of sustainability into the business core, meaning that as long as sustainability is not deeply integrated into every business process, employees see sustainability as additional tasks that are not part of their job description, which again sets the level of 'how high' they must jump. This result often stems from insufficient support and a lack of understanding of sustainability at the (top) management level. This barrier is well-documented in the literature, where strategic misalignments due to short-term financial focuses are discussed as major hurdles in achieving long-term sustainability goals (Virmani et al., 2020). However, as part of the answer to the third research

question, the result adds significant practical value and more understanding of its reasons to help understand the barrier and identify solutions to lower it.

Another result is the resistance to corporate change within corporate cultures, which makes integrating new sustainable practices and values challenging, for example, as FW.4.1 'Aversion to changes in one's own everyday work' and MH.4.1 'In addition, there is indifference', 'I can't change anything anyway', and 'Let the others do it first'. This result is intricately linked to the role of sustainability managers as 'change agents' and is therefore closely aligned with literature that highlights organisational resistance and cultural inertia as significant impediments to sustainability (Schaltegger et al., 2023; Guadagnin et al., 2023). It is also linked to the need for a more embedded approach within corporate structures to ease implementation (Schaltegger et al., 2023; Olesson et al., 2023), which can, therefore, influence the culture mindset in 'We only jump as high as we have to', stated by DS.4.1.

The deficit of comprehensive sustainability knowledge and inadequate internal training can lead to a misalignment between sustainability goals and daily business practices. Statements from JK.4.1 'Lack of know-how in departments' and CB.4.1 'The "breadth" and the connections of this issue are only partially understood. this runs through all company areas and complicates transformation efforts' support the literature's findings regarding the need for enhanced internal education and capability building within organisations to foster a deeper understanding of and commitment to sustainability (Olesson et al., 2023). This is also closely aligned with that sustainability managers are, to some extent, more involved in departments' sustainability tasks than their official responsibility requests, since a lack of sustainability knowledge results in a misalignment between sustainability goals and daily business practices.

Regarding profit, focusing on short-term financial gains over long-term sustainability goals was identified as a barrier perceived by sustainability managers regarding decision-making and implementing sustainable aspects. It also results in limited resources and commitment to transformative initiatives. Quotes by CS.4.1, who says it is all about 'Lack of sustainability priority (revenue or more sustainability?)'. and SS.4.1 'Too high costs' for implementing sustainability tasks reflect the prevalent organisational focus on short-term financial gains over long-term sustainability initiatives, pointing to a fundamental conflict in priorities that impedes sustainable transformation. The literature explores this well, and the financial sector's short-termism is critiqued for undermining sustainable investment (Moursellas et al., 2023).

The barriers identified by sustainability managers in this study are supported mainly by existing literature, which underscores the complexities and challenges of integrating sustainability into corporate strategies and operations. However, the study contributes new insights, highlighting the intensity of these barriers in the German finance industry, a sector under considerable regulatory and market pressure to adopt sustainable practices due to its pivotal role in funding

and investment. Furthermore, in terms of image, it seems fair to remember how banks expect their customers to transform sustainability to maintain attractive loan conditions, while the banks themselves do not show any effort to prioritise corporate sustainable transformation when it comes down to making a profit in the short term.

Furthermore, this research illuminates the real-world implications of these barriers, mainly how they manifest in sustainability managers' daily responsibilities, providing a practical perspective often glossed over in more theoretical discussions. The emphasis on the discrepancy between official responsibilities and the broader roles that sustainability managers take on suggests a significant gap in existing corporate strategies and structures that must be addressed to facilitate effective corporate sustainable transformation.

In conclusion, the discussion around the third research question elucidates the critical barriers that sustainability managers in the German finance industry perceive concerning their responsibilities in driving corporate sustainable transformation. While there is substantial alignment with existing literature, the insights from this study extend the understanding of these barriers, highlighting the practical challenges sustainability managers face and suggesting a need for more nuanced approaches in leadership, cultural change, and strategic alignment within organisations. It also shows how interconnected their responsibilities and barriers are and how they affect each other. These findings contribute to academic discourse and offer valuable practical insights for organisations striving to overcome these barriers and achieve corporate sustainable transformation.

5.4 Summary

The insights garnered through this research underscore a complex interplay between the theoretical frameworks of corporate sustainable transformation and the pragmatic experiences of sustainability managers in the German finance industry. The findings affirm the strategic and operational expansions in the role of sustainability managers, aligning with the literature highlighting their growing influence in steering organisational sustainability agendas. However, this research also reveals new dimensions of their role – particularly in bridging significant gaps between sustainability aspirations and operational realities.

Key themes such as the integration of sustainability into core business processes, the pivotal role of top management and leadership in modelling sustainable behaviours, and the critical need for comprehensive internal education and stakeholder engagement have been reaffirmed and expanded upon in this study. The barriers identified, including cultural resistance to change and the ongoing challenge of aligning long-term sustainability goals with short-term financial objectives, are in line with existing studies but are brought to life with direct quotes and practical

experiences and insights from the field, which, to some extent, supported existing literature and made it more adaptable or understandable for practice.

Moreover, this research contributes new perspectives on the proactive and often expansive responsibilities sustainability managers assume beyond their official capacities, acting as 'agents of change', educators, and internal advocates for sustainability. This extends the literature by providing a detailed, practical understanding of these roles and highlights the need for organisations to redefine and support these positions more robustly from the top down, strategy-wise, and with financial and personal resources.

In conclusion, this section enriches the academic discourse on sustainability management by integrating qualitative findings with theoretical constructs. It provides a nuanced view of the challenges and strategies involved in embedding sustainability in the complex environment of the German finance industry. Doing so validates and extends the current knowledge, offering a grounded perspective to guide future academic inquiries and practical implementations in corporate sustainability.

6. Conclusion

As this thesis concludes, reflecting on the research journey is imperative to address the central research objectives. This introductory section recapitulates the research's aim, underscores its importance, elucidates the addressed calls, and outlines the methodology employed, bridging the subsequent detailed discussions in this final section.

This research explored the understanding, responsibilities, and perceived barriers of sustainability managers concerning corporate sustainable transformation in the German finance industry. The investigation was crucial, as sustainability managers are pivotal in guiding their organisations towards sustainable practices essential for long-term economic stability and ecological balance. The relevance of this research extends beyond academic curiosity; it addresses practical needs in a sector critical to the global ambition of sustainable development amidst escalating environmental and regulatory challenges. This thesis responded to calls from leading scholars and practitioners for a deeper understanding of the roles and challenges faced by sustainability managers. Such insights are vital for effectively aligning corporate strategies with global sustainable development goals. Focusing on the German financial industry, a critical player in international finance and leading in sustainability ambitions based on the European Green Deal, this study contributes to the broader discourse on sustainable economic practices, providing actionable insights that can guide policy-making and corporate strategy. The research methodology was rooted in an inductive, qualitative approach, leveraging the Grounded Delphi Method to gather rich, detailed data from 28 sustainability managers in the German financial industry. This method enabled the capture of nuanced perspectives on understanding, responsibilities, and barriers to corporate sustainable transformation. The data collection was conducted in two phases: An initial qualitative survey through an online questionnaire and a round of consensus evaluation, ensuring the robustness and depth of the findings.

Progressing through this concluding section, each section will systematically address each research objective outlined at the outset of this study:

1. To identify sustainability managers' understanding of corporate sustainable transformation within the German finance industry.
2. To delineate the responsibilities of sustainability managers in corporate sustainable transformation within the German finance industry.
3. To identify the barriers sustainability managers perceive to their responsibilities in the corporate sustainable transformation process within the German finance industry.

As the conclusion of this thesis, this section revisits these objectives, summarising the essential findings and discussing their implications for theory and practice. It recommends strategies for overcoming identified barriers and proposes directions for future research. Ultimately, this will cement the thesis's contributions to sustainability management and corporate governance in the German financial industry.

6.1 Achieving the Research Objectives

6.1.1 Achieving the First Research Objective

This research addressed the critical role of sustainability managers in driving corporate sustainability transformation in the German finance industry. The first research objective, exploring sustainability managers' understanding of corporate sustainable transformation, was achieved through an extensive qualitative analysis incorporating a literature review and industry professionals' insights.

The findings illustrate that sustainability managers in the German finance industry have a robust and nuanced understanding of corporate sustainable transformation. They view it not merely as a series of changes but as a profound, systemic shift that impacts all core processes of an organisation. This transformation encompasses environmental aspects and deeply integrates social and governance dimensions into corporate strategies and operations.

The study's consensus indicates that sustainability managers understand this transformation to be a comprehensive, intentional, and strategic overhaul of the company's business model and operational ethos. This view aligns with academic definitions, which describe corporate sustainable transformation as a radical realignment of a company's operations and strategies to embed sustainability at its core (Fazey et al., 2018; Westley et al., 2011).

The insights gathered also highlight several practical challenges in implementing these transformations. Sustainability managers pointed out the complexity of modifying established corporate structures and cultures, which requires strategic intent and a commitment to long-term goals. This understanding underscores the importance of sustainability managers as leaders and intermediaries in advocating and executing these transformative strategies in their organisations.

Moreover, sustainability managers have identified the integration of sustainability into all core business processes as crucial. This involves a fundamental shift from traditional business practices to balance and enhance economic viability, social equity, and environmental responsibility.

The role of digitalisation and being innovative was frequently mentioned as pivotal in supporting these changes, facilitating a smoother transition, and enabling the long-term success of sustainable practices.

Looking ahead, sustainability managers anticipate that the understanding of corporate sustainable transformation will continue to evolve. They expect it to be increasingly recognised as an ethical and fundamental economic necessity. This is driven by the escalating impacts of climate change, technological advancements, and changing regulatory frameworks that demand a more sustainable operational approach. The anticipation is that as these transformations become more rooted in economic strategy, the integration of sustainability will transition from being a competitive advantage to an essential requirement for corporate survival.

By synthesising these insights, this research has successfully mapped the understanding of sustainability managers regarding corporate sustainable transformation in the German finance industry. The discussions and findings align with the existing academic literature and enrich it by integrating real-world applications and challenges these professionals face. This research has thus bridged a research gap in the literature by providing a detailed, practical perspective on how sustainability is conceptualised and implemented at the corporate level – particularly in a high-stakes industry like finance.

The first research objective was thoroughly addressed through detailed qualitative data analysis, which included capturing the understanding of the corporate sustainable transformation of sustainability managers using the Grounded Delphi Method. This approach ensured a comprehensive understanding of the conceptualisations and nuances perceived by those at the forefront of corporate sustainability efforts.

This research objective's achievement is significant as it provides a clear, detailed insight into the complexities of corporate sustainable transformation as understood by key stakeholders. It also lays a foundation for further research and practice, suggesting that the role of sustainability managers will be increasingly central in guiding corporations towards sustainable futures.

In conclusion, this research segment confirms that sustainability managers in the German finance industry have a critical, strategic role in driving corporate sustainable transformations. Their understanding of this process is deep and broad, encapsulating the multifaceted challenges and opportunities that sustainability presents in modern corporate strategies. This understanding supports their daily responsibilities and shapes the more comprehensive corporate agenda towards a more sustainable, resilient, and ethically grounded future.

6.1.2 Achieving the Second Research Objective

The second research objective of this thesis was to delineate the responsibilities of sustainability managers in driving corporate sustainability transformation in the German finance industry. This objective is critical, given the strategic position these managers occupy at the intersection of regulatory compliance, strategic planning, and operational execution in the pursuit of sustainable business practices.

The study conclusively found that sustainability managers bear many responsibilities beyond traditional views of environmental stewardship, including substantial strategic and operational roles. These managers are pivotal in developing and implementing sustainability strategies for a comprehensive corporate sustainability transformation. They adapt corporate models to comply with evolving regulatory requirements while ensuring that these adaptations do not compromise long-term profitability and competitiveness (Schaltegger et al., 2023; Meijer et al., 2019).

Their role involves communication and collaboration with internal stakeholders to foster a sustainable corporate culture. This includes supporting knowledge transfer in the company to ensure sustainability values are embedded throughout the organisation. The responsibility extends to monitoring and reporting sustainability performance and increasing transparency and accountability to internal and external stakeholders (Vallentin & Spence, 2017; Borglund et al., 2021).

The research highlighted the evolving nature of the sustainability manager's role, as described in the literature and confirmed by participant insights. These professionals are increasingly seen as strategic overseers, deeply involved in shaping organisational behaviour and managing sustainable supply chains (Annosi et al., 2024). This broadened scope of responsibility is vital as sustainability managers ensure the alignment of corporate strategies with global sustainability standards and stakeholder expectations. Moreover, sustainability managers in the German finance industry are tasked with meeting rigorous regulatory demands while pushing ambitious sustainability goals (Göpel, 2020; Sachs et al., 2019). This nuanced responsibility was identified as a significant area where current literature was expanded by providing a detailed exploration of how sustainability managers navigate these competing priorities.

The qualitative data from the study underscored that sustainability managers frequently act as 'change agents' in their organisations. They are directly involved in department-specific sustainability projects and focus on innovation to create new market opportunities. This finding aligns with contemporary research that positions sustainability managers as critical players in transforming organisations towards sustainable practices (Meijer et al., 2019; Annosi et al., 2024).

In practice, sustainability managers are often tasked with overcoming internal resistance and fostering adaptability, roles that go beyond their official job responsibilities. These additional responsibilities highlight a gap between defined roles and sustainability managers' broader, more influential roles. Such discrepancies suggest an underestimation of the corporate cultural aspects of corporate sustainable transformation and a disconnect between strategic plans and execution (Olesson et al., 2023).

Looking forward, the responsibilities of sustainability managers should become more central and integrated into higher management levels. This evolution reflects a growing recognition of the strategic importance of sustainability in shaping corporate futures. The role of sustainability managers is anticipated to shift from predominantly coordinating and advisory to decisively managerial, actively contributing to shaping the company's strategic direction.

The responsibility of sustainability managers is also becoming increasingly specialised, with a stronger focus on integrating sustainability into the company's strategy and corporate culture. Furthermore, there is an expectation that every employee will, to some extent, take on the role of a 'sustainability manager', underscoring the pervasive influence of sustainability in future corporate structures (Miller & Serafeim, 2014).

This research has successfully delineated the complex and dynamic responsibilities of sustainability managers in the German finance industry, highlighting their critical role in driving corporate sustainable transformation. The findings confirm the extensive scope of these responsibilities outlined in the literature and extend it by detailing the practical challenges and strategic implications faced by sustainability managers in the German financial industry.

In achieving this research objective, the study has enriched the understanding of the role of sustainability managers, emphasising the interconnected approach needed for effective corporate sustainable transformation. It has also illuminated the importance of internal education and knowledge transfer as crucial responsibilities, suggesting that fostering a sustainable organisational culture is essential for successfully implementing sustainability strategies (Schaltegger et al., 2023).

In summary, the role of sustainability managers in the German finance industry is both expansive and pivotal, requiring a deep integration of sustainability into corporate strategy and operations. Their responsibilities are integral to navigating current sustainability challenges and shaping their organisations' long-term sustainability trajectory. This research contributes a nuanced perspective to the literature, offering a comprehensive view of the evolving responsibilities of sustainability managers in a critical economic sector.

6.1.3 Achieving the Third Research Objective

The third research objective focused on identifying the barriers that sustainability managers perceive related to their responsibilities within corporate sustainable transformation in the German finance industry. Exploring these barriers is essential for understanding the complexities and challenges that impede sustainable practices within organisations.

A primary barrier identified by sustainability managers is the insufficient integration of sustainability into core business processes. Sustainability initiatives are often seen as add-ons rather than integral components of business operations. This perception produces sustainability being viewed as a burdensome task rather than a fundamental aspect of everyday business activities. The study revealed that sustainability activities are perceived as time-consuming and costly without deep integration, hindering the overall transformation process (Sachs et al., 2019; Göpel, 2020).

Another significant barrier is the lack of leadership and effective role modelling, primarily at the management level. Sustainability managers highlighted that a top-down commitment from management is crucial for embedding sustainability within corporate culture. However, old beliefs and a lack of clear commitment from the 'top of the organisation' often result in a lack of direction and motivation at lower levels. This absence of leadership undermines the efforts to drive meaningful change and hinders sustainability managers' ability to foster a culture of sustainability (Vallentin & Spence, 2017).

The gap between the strategic vision for sustainability and its practical implementation represents a critical barrier. While organisations may develop forward-thinking sustainability strategies, execution often falls short. This discrepancy can be attributed to insufficient support from top management and a fundamental misunderstanding of sustainability's implications and requirements. This produces strategic plans that are not fully realised, impeding the organisation's ability to meet its sustainability goals (Schaltegger et al., 2023).

Resistance within corporate culture poses a significant barrier to integrating new sustainable practices and working towards sustainable transformation. As 'change agents', sustainability managers frequently encounter resistance to altering established practices and mindsets. This resistance is often rooted in a reluctance to change daily work routines and a pervasive view of sustainability as an optional or secondary concern. Overcoming this barrier requires continuous efforts to shift the corporate culture towards embracing sustainability as a core value (Annosi et al., 2024; Olesson et al., 2023).

A deficit in sustainability knowledge and training within companies also stands out as a significant barrier. The lack of a comprehensive understanding of sustainability across departments produces a misalignment between sustainability objectives and business operations. Sustainability managers emphasise the need for enhanced training programmes and knowledge transfer to bridge this gap, ensuring all employees understand and can contribute to sustainability goals (Meijer et al., 2019).

Finally, prioritising short-term financial gains over long-term sustainability objectives is a prevalent barrier. This focus on immediate profitability often restricts resources and commitment to sustainable initiatives, limiting the scope and depth of transformation efforts. Sustainability managers find this short-term focus a fundamental conflict influencing the broader adoption of sustainable practices in the finance industry (Borglund et al., 2021).

In conclusion, the research has successfully identified and detailed the barriers perceived by sustainability managers in the German finance industry regarding their responsibilities in corporate sustainable transformation. These barriers, from integration issues to leadership deficiencies and cultural resistance, highlight sustainability managers' multifaceted challenges. Addressing these barriers is crucial for advancing corporate sustainable transformation, requiring strategic interventions at various organisational levels.

By identifying these barriers, the research contributes to a deeper understanding of corporate sustainable transformation. It also provides a foundation for developing strategies to overcome these barriers, facilitating more effective integration of sustainability into corporate practices. This achievement fulfils the third research objective and enhances the overall discourse on sustainability in corporate management, offering valuable insights for both academic and practical applications.

In summary, this research's delineation of these barriers provides crucial insights into sustainability managers' challenges, underscoring the need for comprehensive strategies to address organisational, cultural, and structural changes. This understanding is vital for companies in the finance industry and beyond, aiming to achieve true sustainability in their operations.

6.2 Contribution to Knowledge

The current research addresses a gap by examining sustainability managers in the German finance industry. Previous studies, such as those by Borglund et al. (2021), primarily focused on Swedish sustainability managers, offering a regional perspective that does not necessarily translate to different economic, cultural, and regulatory environments. Focusing on Germany, a leading European economy with specific regulatory and market conditions influenced by initiatives such as the European Green Deal, this research provides new insights into how sustainability is integrated into corporate strategies under different national conditions and cultural aspects.

This study enriches the understanding of the evolving role of sustainability managers in corporate settings, a topic highlighted by Miller and Serafeim (2014) and Vallentin and Spence (2017). By identifying how the role of sustainability managers should transition from advisory to central management functions, this research offers a forward-looking perspective on the strategic positioning and specialisation of these roles within corporate structures, especially in the German finance industry. It directly addresses calls for more detailed studies on how the responsibilities of sustainability managers will develop in the future – particularly in the framework of corporate sustainable transformation.

Aligning with Göpel's (2020) work, this research substantiates the argument that climate change impacts reshape corporate understanding of sustainability transformation. By evidencing how sustainability is increasingly recognised as a strategic component rather than a standalone issue, this study advances the integration of environmental, social, and governance factors into overall business strategies. This responds to Göpel's (2020) assertion about the necessity of integrating climate strategies into business operations while decoupling economic development from increasing climate change and demonstrates practical applications through the involvement of sustainability managers in strategic decision-making processes.

One of this research's contributions is clarifying terms such as 'corporate sustainability transformation', 'corporate sustainable change', and 'corporate sustainable development' in the specific context of the German financial industry. This differentiation responds to the recognised need in the literature for more precise definitions and understandings of these terms as they apply in practice. This research's findings regarding how sustainability managers define and differentiate these concepts help fill a theoretical gap and offer a grounded basis for future academic and practical applications.

Further contributing to the academic discourse, this research delves into the barriers that sustainability managers face, as identified in existing literature by authors like Sachs et al. (2019) and Meijer et al. (2019). It confirms these barriers and explores them from the unique perspective of those tasked with overcoming them in the finance sector. The detailed exploration of these barriers and proposed strategies for overcoming them provides practical implications for sustainability management. It adds a nuanced understanding of the challenges involved in corporate sustainable transformation.

By identifying how sustainability managers can theoretically and practically overcome barriers to corporate sustainable transformation, this research offers actionable recommendations that align with the strategic needs of businesses – particularly in the finance sector. Focusing on training, management involvement, and strategic integration of sustainability goals provides a blueprint for companies seeking to enhance their sustainability efforts.

In summary, this research significantly contributes to the academic understanding of corporate sustainability by providing new insights into the responsibilities, barriers, and strategic importance of sustainability managers in the German finance industry. It expands the geographic scope of existing research, adds depth to the discussion of sustainability roles, integrates sustainability with broader business strategies, and offers practical solutions to overcome systemic transformation barriers. This comprehensive approach not only fills identified gaps in the literature but also advances the discourse on sustainability in corporate settings, focusing on the German financial industry as a critical sector in the European Green Deal.

6.3 Contribution to Practice and Recommendations for Action

This research offers vital insights into the practice of sustainability management – particularly in the German financial industry. It effectively bridges gaps between academic understanding and practical application. This section integrates the practical contributions with actionable recommendations, ensuring that the findings illuminate theoretical perspectives and drive corporate sustainable transformation in business practices, especially in the German financial industry.

A crucial practical outcome of this study is the refined understanding of corporate sustainable transformation, which this research defines from the perspective of sustainability managers. By articulating these views, the research provides foundational knowledge for top management, facilitating the effective integration of corporate sustainable transformation into strategic objectives. Companies are thus equipped to move beyond rhetorical commitment to practically implement sustainability goals.

Sustainability managers' evolving roles and responsibilities are detailed, offering corporate leadership insights on supporting these key personnel. Organisations can now tailor support systems, including training and resource allocation, to overcome operational and cultural challenges identified in this research, ensuring sustainability managers have the tools to enable and succeed.

Identifying specific barriers that sustainability managers face allows companies to adopt targeted mitigation strategies. This research recommends enhancing internal education, fostering supportive corporate cultures, and aligning sustainability with corporate strategy to facilitate effective, sustainable corporate transformation.

This study is particularly beneficial for human resources departments and organisational development strategists, as it clearly explains the qualifications and support sustainability managers require. Additional recommendations for action include role-specific training, such as developing training programmes that address the unique challenges and responsibilities of sustainability managers, ensuring they are well-prepared to meet their roles effectively. Furthermore, tailored recruitment strategies can attract candidates with the necessary skills and mindset for effective sustainability management.

More transparency about sustainability managers' extensive roles and related challenges can enhance job satisfaction and retention. Organisations are encouraged to recognise and address these sketched complexities, fostering an environment where sustainability managers feel supported and valued.

Furthermore, the practical recommendations from this study encourage organisations to address challenges in implementing corporate sustainable transformation pre-emptively, such as ensuring that all stakeholders, especially top management, share a common understanding of sustainability terms and their implications for business strategy, as well as demonstrating top management's commitment to sustainability, serving as a model for the organisation, and reinforcing the strategic importance of sustainability initiatives. It is also essential to ensure that the responsibilities of sustainability managers are well understood and communicated across the organisation to prevent overlaps and conflicts with other departments. The efficiency and impact of sustainability strategies will be enhanced by providing short communication paths and close collaboration between sustainability managers and top management. Another essential point to evaluate is cultural readiness. Conducting initial assessments of corporate culture to gauge change readiness ensures that sustainability strategies are introduced in a manner that is likely to be accepted and supported.

Finally, there is a significant impact on empowering department-specific 'change agents'. By developing roles within departments that can act as sustainability multipliers and supporting sustainability managers by taking on some responsibilities related to implementing and managing sustainability projects.

By integrating these insights and recommendations for action into corporate strategies, organisations can enhance their sustainability efforts, ensuring that they are aligned with current regulatory and market conditions and robust enough to adapt to future challenges.

This research significantly contributes to the practical understanding and application of sustainability in the corporate sector – particularly in the German financial industry. By providing a comprehensive overview of the roles, challenges, and strategic importance of sustainability managers in this sector, this study equips organisations with the necessary knowledge and tools to advance their sustainability agendas more effectively. This is crucial given the urgent global imperatives for sustainability and the pivotal role of the financial industry in general in achieving sustainable development goals.

6.4 Limitations and Future Research Directions

This thesis acknowledges several limitations that, while inherent to its design, do not detract from its contributions. These limitations pave the way for future research directions, potentially enriching the current findings and expanding the discourse around the role of sustainability managers.

The primary limitation of this study is its exclusive focus on the perspectives of sustainability managers. While this focus provides deep insights into their responsibilities and related barriers they perceive in their organisations in corporate sustainable transformation, it may not fully capture the broader organisational context or other stakeholders' perspectives. Future studies could broaden the scope to include other key players within organisations to provide a more holistic understanding of corporate sustainability transformation dynamics.

Furthermore, this research focuses on the German financial industry, which may limit the generalizability of the findings to other sectors or regions. Future research could, therefore, replicate this study in different industries or internationally to compare how the responsibilities and perceptions of sustainability managers vary across various cultural and economic contexts. Such studies could validate the findings of this thesis and potentially reveal unique sector-specific challenges and strategies.

While this thesis's qualitative design provides rich, detailed data, it is inherently subjective and constructed from a social constructivist perspective. As a result, this approach limits – to some extent – the ability to generalise the findings broadly. Employing quantitative methods, such

as quantitative surveys or larger-scale data analysis, could provide additional validation and weight to the insights gained, offering a more robust statistical basis for the conclusions drawn.

Another limitation could be selecting experts from the researcher's business network, which may introduce a bias towards views that align with the researcher's perspectives. Future studies may aim to use a more randomised or stratified sampling method to mitigate this bias and enhance the objectivity of the findings.

Further research could also investigate whether sustainability managers' understanding and perceived barriers to corporate sustainable transformation are consistent across different sectors or regions. Such comparative studies could strengthen the role of sustainability managers in academia and practice by highlighting universal challenges and strategies and sector-specific nuances.

Another future research direction may be exploring the impact of organisational hierarchy. Exploring the influence of sustainability managers' hierarchical position in their organisations on their ability to effect change could provide deeper insights into the systemic barriers and enablers of corporate sustainable transformation. This research could mainly focus on the relationship between hierarchy, proximity to top management, and the efficacy of sustainability strategies.

Another interesting point to bring these studies' results into another context may be long-term studies that track the evolution of the sustainability manager's role over time, especially in response to global sustainability challenges and evolving regulatory frameworks, which would be invaluable. These studies could document shifts in responsibilities, strategic influence, and the overall impact of sustainability managers on corporate sustainability.

One last point for future research directions could be investigating how sustainability managers integrate sustainability with broader corporate strategies, which could offer practical insights for aligning business objectives with sustainability goals. This research could focus on operationalising sustainability within corporate governance structures to enhance business performance and sustainability outcomes.

By addressing these limitations and exploring the suggested future research directions, subsequent studies can build on this thesis's foundation to further illuminate the critical role of sustainability managers in driving corporate sustainability transformation. Such research is essential for advancing sustainability practices and achieving the 17 SDGs.

6.5 Reflection

Reflecting on my journey since October 2021, when I embarked on the Doctor of Business Administration programme in Bielefeld, Germany, it feels like revisiting another lifetime. My ambition was to earn my doctorate and make a meaningful contribution linked to my then professional identity as a head of sustainability at one of Germany's largest Volksbanks.

I am grateful for the Doctor of Business Administration programme at the University of Worcester with the Fachhochschule des Mittelstands, Bielefeld. This programme offered an international degree while allowing me to contribute to business practice without sacrificing my career, an opportunity rare in Germany, where doctoral studies typically demand full-time university commitment. The decision not to tether my research to the company I worked for was crucial. I sought to maintain independence in my topic, enabling me to conduct my research anytime, anywhere, without reliance on company-specific data. This autonomy proved invaluable when my company underwent a merger that upended my professional landscape. Fortunately, my thesis remained unaffected, validating my choice to separate my doctoral work from my employer.

As I progressed through my thesis, the complexity of my job meant that fewer people in my personal life could relate to the challenges I faced. While my supervisors were instrumental from inception to completion, the isolation from others in my private life became more pronounced. However, my ability to navigate concerns and thoughts independently played a significant role in my journey. I learned that the doctoral process cannot be rushed. Each step must be taken deliberately, a lesson that grounded me and taught me patience, contrasting with my usual pace of trying to stay several steps ahead.

This journey has profoundly enriched my critical and abstract thinking abilities. The doctoral process pushed me to connect concepts at an even higher meta-level, preparing me for future challenges in my career. Additionally, the programme's international scope significantly honed my English language skills and broadened my cultural competencies, enriching my professional interactions. One of the most impactful lessons has been recognising the wealth of knowledge within academia and its applicability to business practice. Instead of reinventing the wheel, I've learned the value of leveraging existing academic insights to enhance efficiency and competitiveness in my professional endeavours.

In conclusion, the Doctor of Business Administration has been transformative, endowing me with invaluable skills and insights that I will carry forward in my career. I am deeply thankful for all the learning and personal growth this experience has afforded me, as well as for the wonderful people I met on this journey and the connections I made. I am incredibly proud of myself for pushing through this doctorate with such determination, once again proving to myself that I can achieve anything. This achievement will always remind me of my potential.

6.6 Summary

Investigating corporate sustainable transformation in the German financial industry has uncovered multifaceted insights, enriched by employing a deliberate framework guiding the scope of research while embracing its inherent complexities. The research design adhered to a consistent, structured approach, adopting a social constructivist perspective to capture the experiential realities of sustainability managers in this sector. This meticulous process addressed the research questions in depth, yielding results that enriched theoretical discussions and provided actionable, practical implementation recommendations in operational contexts.

This research reveals a consistent underestimation of the cultural dimensions of corporate sustainable transformation. This misalignment, coupled with a disconnect between strategic intentions and practical execution and a lack of sufficient resources or top management support, compels sustainability managers to assume roles that significantly exceed their official responsibilities. This situation underscores a critical need for clearly defined roles and enhanced support from top management, ensuring that sustainability managers are empowered to influence corporate strategies and operations effectively.

Moreover, this research underscores the pivotal role of sustainability managers as ‘agents of change’ in their organisations. Their deep understanding of corporate sustainable transformation and the strategic and operational challenges they navigate positions them as key figures in driving sustainable business practices that align with regulatory demands and market expectations.

Furthermore, the findings highlight organisations’ need to bolster sustainability frameworks, ensuring they align more closely with evolving global sustainability standards and stakeholder expectations.

In conclusion, the contributions of this thesis extend beyond academic enrichment, offering substantial practical implications for enhancing sustainability management in the German financial industry. By delineating the responsibilities, barriers, and strategic importance of sustainability managers, this research equips organisations with the knowledge and strategies necessary to advance their sustainability agendas more effectively. This is crucial amidst urgent global sustainability imperatives and the critical role of the financial industry in achieving national and international sustainable development goals. The insights garnered here serve as a valuable foundation for future research, suggesting directions that could further illuminate the dynamic role of sustainability managers and the effective integration of sustainability practices across various corporate sectors. As this field evolves, exploring these themes will be vital to advancing the theoretical and practical understanding of corporate sustainable transformation.

References

- Abson, D.J., Fischer, J., Leventon, J., Newig, J., Schomerus, T., Vilsmaier, U., von Wehrden, H., Abernethy, P., Ives, C.D., Jager, N.W. and Lang, D.J. (2016). Leverage points for sustainability transformation. *Ambio*, 46(1), pp.30–39. doi:<https://doi.org/10.1007/s13280-016-0800-y>.
- Acre (2011). *The Emergence of the Chief Sustainability Officer*. [online] Available at: http://assets.acre.com/white_papers/The_Emergence_of_the_CSO.pdf [Accessed 15 October 2024].
- Aguilera, R.V., Rupp, D.E., Williams, C.A. and Ganapathi, J. (2007). Putting the S Back in Corporate Social responsibility: a Multilevel Theory of Social Change in Organizations. *Academy of Management Review*, 32(3), pp.836–863. doi:<https://doi.org/10.5465/amr.2007.25275678>.
- Amaratunga, D., Baldry, D., Sarshar, M. and Newton, R. (2002). Quantitative and qualitative research in the built environment: application of ‘mixed’ research approach. *Work Study*, 51(1), pp.17–31. doi:<https://doi.org/10.1108/00438020210415488>.
- Anastas, J.W. (2004). Quality in Qualitative Evaluation: Issues and Possible Answers. *Research on Social Work Practice*, 14(1), pp.57–65. doi:<https://doi.org/10.1177/1049731503257870>.
- Annosi, M., Mattarelli, E., Domenico Dentoni and Antonio Messeni Petruzzelli (2024). The micro-foundations of ambidexterity for corporate social performance: A study on sustainability managers’ response to conflicting goals. *Long Range Planning*, 57(1), p.102412. doi:<https://doi.org/10.1016/j.lrp.2023.102412>.
- Bag, S., Gupta, S. and Telukdarie, A. (2018). Importance of innovation and flexibility in configuring supply network sustainability. *Benchmarking: An International Journal*, 25(9), pp.3951–3985. doi:<https://doi.org/10.1108/bij-06-2017-0132>.
- Bansal, P. (2005). Evolving sustainably: a longitudinal study of corporate sustainable development. *Strategic Management Journal*, 26(3), pp.197–218. doi:<https://doi.org/10.1002/smj.441>.
- Baxter, P. and Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, 13(4), pp.544–559. doi:<https://doi.org/10.46743/2160-3715/2008.1573>.

- Bell, R. (2023). Business research: Rigour in qualitative research. [video] YouTube. Available at:
https://www.youtube.com/watch?v=IGAqwYY8r_0&list=PL0Uv5t9MmHa004_VZZCXxU39M7zfCnLrz&index=18 [Accessed 30 May 2024].
- Benn, S., Edwards, M. and Williams, T. (2014). *Organizational Change for Corporate Sustainability*. Routledge. doi:<https://doi.org/10.4324/9781315819181>.
- Boiral, O. (2011). Managing with ISO systems: Lessons from practice. *Long Range Planning*, 44(3), pp.197–220. doi: <https://doi.org/10.1016/j.lrp.2010.12.003>.
- Bolderston, A. (2008). Writing an Effective Literature Review. *Journal of Medical Imaging and Radiation Sciences*, 39(2), pp.86–92. doi:<https://doi.org/10.1016/j.jmir.2008.04.009>.
- Bondy, K., Moon, J. and Matten, D. (2012). An Institution of Corporate Social Responsibility (CSR) in Multi-National Corporations (MNCs): Form and Implications. *Journal of Business Ethics*, 111(2), pp.281–299. doi:<https://doi.org/10.1007/s10551-012-1208-7>.
- Borglund, T., Frostenson, M., Helin, S. and Arbin, K. (2021). The Professional Logic of Sustainability Managers: Finding Underlying Dynamics. *Journal of Business Ethics*. 182(4), pp.59-76. doi:<https://doi.org/10.1007/s10551-021-05000-1>.
- Borglund, T., Hans De Geer, Sweet, S., Magnus Frostenson, Lerpold, L., Nordbrand, S., Sjöström E. and Karolina Windell (2017). *CSR and sustainable business*. Stockholm: Sanoma Utbildning.
- Bossy, D., Knutsen, I.R., Rogers, A. and Foss, C. (2018). Moving between ideologies in self-management support - A qualitative study. *Health Expectations*, 22(1), pp.83–92. doi:<https://doi.org/10.1111/hex.12833>.
- Bowen, H.R. (1953). *Social responsibilities of the businessman*. Iowa City: University Of Iowa Press.
- Brady, S.R. (2015). Utilizing and Adapting the Delphi Method for Use in Qualitative Research. *International Journal of Qualitative Methods*, 14(5), p.160940691562138. doi:<https://doi.org/10.1177/1609406915621381>.
- Bryman, A. (2015). *Business Research Methods*. 4th ed. Oxford: Oxford University Press.
- Bundesfinanzministerium (2021). Deutsche Sustainable Finance-Strategie. Available at: https://www.bundesfinanzministerium.de/Content/DE/Downloads/Broschueren_Bestellservice/deutsche-sustainable-finance-strategie.pdf?__blob=publicationFile&v=6 [Accessed 30 May 2024].

- Burr, V. and Dick, P. (2017). Social Constructionism. In: B. Wagoner, N. Basov, and I. Gannegoda, eds., *The Palgrave Handbook of Critical Social Psychology*. pp.59–80. doi: https://doi.org/10.1057/978-1-137-51018-1_4.
- Butler, A.E., Copnell, B. and Hall, H. (2018). The development of theoretical sampling in practice. *Collegian*, 25(5), pp.561–566. doi:<https://doi.org/10.1016/j.colegn.2018.01.002>.
- Caldera, H.T.S., Desha, C. and Dawes, L. (2019). Evaluating the enablers and barriers for successful implementation of sustainable business practice in 'lean' SMEs. *Journal of Cleaner Production*, 218(1), pp.575–590. doi:<https://doi.org/10.1016/j.jclepro.2019.01.239>.
- Campbell, J.L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of Management Review*, 32(3), pp.946–967.
- Caprar, D.V. and Neville, B.A. (2012). 'Norming' and 'Conforming': Integrating Cultural and Institutional Explanations for Sustainability Adoption in Business. *Journal of Business Ethics*, 110(2), pp.231–245. doi:<https://doi.org/10.1007/s10551-012-1424-1>.
- Carlowitz, H. (2000) *Sylvicultura oeconomica: Hausswirthliche Nachricht und Naturmäßige Anweisung zur Wilden Baum-Zucht*. Reprint of. Bad Schmiedeberg: Dr. Bernd Bendix Söllichau.
- Carlowitz, H. (2000). *Sylvicultura Oeconomica*. Reprint of the original edition from 1713. Leipzig: Verlag von Michael Klemm.
- Carollo, L. and Guerri, M. (2017). 'Activists in a Suit': Paradoxes and Metaphors in Sustainability Managers' Identity Work. *Journal of Business Ethics*, 148(2), pp.249–268. doi:<https://doi.org/10.1007/s10551-017-3582-7>.
- Charmaz, K. (2006). *Constructing grounded theory: a practical guide through qualitative analysis*. Los Angeles; London: Sage.
- Charmaz, K. (2014). *Constructing grounded theory*. Los Angeles: SAGE.
- Circular Gap Report (2023). Available at: https://assets.website-files.com/5e185aa4d27bcf348400ed82/6543792887e495a73bab98ee_20220114%20-%20CGR%20Global%202022%20-%20report%20-%2010x297mm.pdf. [Accessed 30 May 2024].
- Creswell, J.W. (2007). *Research design: qualitative and mixed methods approaches*. London: Sage.
- Creswell, J. and Poth, C.N. (2017). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. 4th ed. Thousand Oaks, CA: Sage publications.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approach*. London: Sage Publications.

Crotty, M. (1998). *The Foundations of Social Research: Meaning and Perspective in the Research Process*. London: Sage Publications.

Cuhls, K. and Kimpeler, S. (2008). Delphi-Report: Zukünftige Informations- und Kommunikationstechniken. *publica.fraunhofer.de*. Available at: <https://publica.fraunhofer.de/entities/publication/c2ac92de-19aa-4a06-9c2c-b248f4af55e9/details>. [Accessed 30 May 2024].

Cuhls, K. et al. (1998). Delphi '98 – Umfrage: Studie zur globalen Entwicklung von Wissenschaft und Technik. Karlsruhe: FhG-ISI. Available at: Delphi '98 - Umfrage. Studie zur globalen Entwicklung von Wissenschaft und Technik. Zusammenfassung der Ergebnisse (fraunhofer.de), [Accessed 30 May 2024].

Dahlsrud, A. (2008). How Corporate Social Responsibility Is defined: an Analysis of 37 Definitions. *Corporate Social Responsibility and Environmental Management*, 15(1), pp.1–13.

De Matos, J.A. and Clegg, S.R. (2013). Sustainability and Organizational Change. *Journal of Change Management*, 13(4), pp.382–386. doi:<https://doi.org/10.1080/14697017.2013.851912>.

Deutscher Nachhaltigkeits Kodex (2022). Available at: <https://datenbank2.deutscher-nachhaltigkeitskodex.de/Profile/CompanyProfile/14111/de/2022/dnk> [Accessed 30 May 2024].

Deutscher Nachhaltigkeits Kodex (2023). Checkliste für die Erklärung nach dem Deutschen Nachhaltigkeitskodex. Available at: www.deutschernachhaltigkeitskodex.de/Home/DNK/CSR-RUG [Accessed 30 May 2024].

Doppelt, B. (2017). *Leading change toward sustainability: A change-management guide for business, government and civil society*. 2nd ed. Abingdon, UK: Routledge.

Dyllick, T. and Hockerts, K. (2002). Beyond the business case for corporate sustainability. *Business Strategy and the Environment*, 11(2), pp.130–141. doi:<https://doi.org/10.1002/bse.323>.

Dyllick, T. and Muff, K. (2016). Clarifying the Meaning of Sustainable Business. *Organization & Environment*, 29(2), pp.156–174. doi:<https://doi.org/10.1177/1086026615575176>.

Easterby-Smith, M., Thorpe, R. and Jackson, P. (2021). *Management and Business Research*. New York: Sage.

Eccles, R.G. and Serafeim, G. (2013). The performance frontier: Innovating for a sustainable strategy. *Harvard Business Review*, 91(5), pp.50–60.

Eccles, R.G., Perkins, K.M., Serafeim, G. (2012). How to Become a Sustainable Company. *MIT Sloan Management Review*, pp. 42–50.

Elkington, J. (1994). Towards the Sustainable Corporation: Win-Win-Win Business Strategies for Sustainable Development, *California Management Review*, 36(2), pp. 90–100.

Elkington, J. (1997). *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*. Oxford: Capstone Publishing Ltd.

Epstein, M.J., Buhovac, A.R., Elkington, J. and Leonard, H.B. (2017). *Making sustainability work*. 2nd ed. Abingdon, UK: Routledge. doi: <https://doi.org/10.4324/9781351276443>.

European Commission (2006). *Renewed EU Strategy for Sustainable Development*. Brussels: European Commission.

European Commission (2011). *EUR-Lex - 52011DC0681 - EN - EUR-Lex*. [online] Europa.eu. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52011DC0681> [Accessed 30 May 2024].

European Commission (2022). *A new sustainable finance strategy and implementation of the action plan on financing sustainable growth*. Available at: https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainablefinance/overview-sustainable-finance_en#action-plan. [Accessed 30 May 2024].

European Commission (2023). *EU taxonomy for sustainable activities*. [online] Available at: https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en [Accessed 30 May 2024].

European Commission (2023). *Europäischer Grüner Deal*. [online] Available at: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_de. [Accessed 30 May 2024].

European Sustainability Reporting Standards (ESRS) (2023). Available at: (<https://www.deutscher-nachhaltigkeitskodex.de/de-DE/Home/Berichtspflichten/CSRD>) [Accessed 30 May 2024].

Eweje, G. (2011). A Shift in corporate practice? Facilitating sustainability strategy in companies. *Corporate Social Responsibility and Environmental Management*, 18(3), pp.125–136. doi:<https://doi.org/10.1002/csr.268>.

Faber, N., Jorna, R. and van Engelen, J. (2005). The sustainability of ‘sustainability’: A study into the conceptual foundations of the notion of ‘sustainability’. *Journal of Environmental Assessment Policy and Management*, 7(1), pp.1–33. doi: <https://doi.org/10.1142/s1464333205001955>.

- Fazey, I., Schäpke, N., Caniglia, G., Patterson, J., Hultman, J., van Mierlo, B., Säwe, F., Wiek, A., Wittmayer, J., Aldunce, P., Al Waer, H., Battacharya, N., Bradbury, H., Carmen, E., Colvin, J., Cvitanovic, C., D'Souza, M., Gopel, M., Goldstein, B. and Hämäläinen, T. (2018). Ten essentials for action-oriented and second-order energy transitions, transformations and climate change research. *Energy Research & Social Science*, 40, pp.54–70. doi:<https://doi.org/10.1016/j.erss.2017.11.026>.
- Ferrari, R. (2015). Writing narrative-style literature reviews. *Medical Writing*, 24(4), pp.230–235. doi:<https://doi.org/10.1179/2047480615Z.000000000329>.
- Flick, U. (2009). *An Introduction to Qualitative Research*. London: Sage Publications.
- Folke, C., Carpenter, S.R., Walker, B., Scheffer, M., Chapin, T. and Rockström, J. (2010). Resilience thinking: Integrating resilience, adaptability, and transformability. *Ecology and Society*, 15(4), p. 20.
- Folke, C., Biggs, R., Norström, A.V., Reyers, B. and Rockström, J. (2016). Social-ecological resilience and biosphere-based sustainability science. *Ecology and Society*, 21(3).
- Frostenson, M. and Helin, S. (2017). Ideas in conflict: a case study on tensions in the process of preparing sustainability reports. *Sustainability Accounting, Management and Policy Journal*, 8(2), pp.166–190. doi:<https://doi.org/10.1108/sampj-02-2015-0015>.
- Gao, S.S. and Zhang, J.J. (2006). Stakeholder engagement, social auditing and corporate sustainability. *Business Process Management Journal*, 12(6), pp.722–740. doi:<https://doi.org/10.1108/14637150610710891>.
- Geels, F.W. (2011). The multi-level perspective on sustainability transitions: Responses to seven criticisms. *Environmental Innovation and Societal Transitions*, 1(1), pp.24–40. doi:<https://doi.org/10.1016/j.eist.2011.02.002>.
- German Council for Sustainable Development. (2016). *The Sustainability Code: Benchmarking sustainable economy*. Berlin: German Council for Sustainable Development.
- Glaser, B. (1992). *Basics of grounded theory analysis— emergence vs. forcing*. Mill Valley, CA: Sociology Press.
- Glaser, B. and Strauss, A. (1967). The discovery of grounded theory: strategies for qualitative research. Hawthorne: *Aldine Publishing Company*. doi: 10.2307/2094063.
- Glassdoor, (2023). *Sustainability Manager Jobs in Deutschland*. [online] Available at: https://www.glassdoor.de/Job/deutschland-sustainability-manager-jobs-SRCH_IL.0,11_IN96_KO12,34.htm [Accessed 31 May 2024].

Global Footprint Network (2023). *Country Overshoot Days 2023 - Earth Overshoot Day*. [online] Earth Overshoot Day. Available at: <https://www.overshootday.org/newsroom/country-overshoot-days/> [Accessed 30 May 2024].

Göpel, M. (2020). *Unsere Welt neu denken – Eine Einladung*, Ullstein Hardcover, 2020.

GreenBiz (2018). *GreenBiz*. [online] Available at: <https://www.greenbiz.com/> [Accessed 30 May 2024].

GRI (2023). *Global Reporting Initiative*. [online] Globalreporting.org. Available at: <https://www.globalreporting.org/> [Accessed 30 May 2024].

Griggs, D., Stafford-Smith, M., Gaffney, O., Rockström, J., Öhman, M.C., Shyamsundar, P., Steffen, W., Glaser, G., Kanie, N. and Noble, I. (2013). Sustainable development goals for people and planet. *Nature*, 495(7441), pp.305–307. doi:<https://doi.org/10.1038/495305a>.

Guadagnin, A., Pauli, J., Ruffatto, J. and Leila Dal Moro (2023). Barriers and possible drivers for the implementation of sustainability in Brazilian business schools. *International journal of sustainability in higher education*, 25(3), pp.577–595. doi:<https://doi.org/10.1108/ijshe-07-2022-0227>.

Guba, E.G. and Lincoln, Y.S. (1994). Competing paradigms in qualitative research. In: N.K. Denzin and Y.S. Lincoln, eds. *Handbook of qualitative research*. Thousand Oaks, CA: SAGE Publications, pp.105–117.

Guba, E. and Lincoln, Y. (2005). Paradigmatic Controversies, Contradictions, and Emerging Confluences in Denzin, N. K. and Lincoln, Y. S. (eds.) *The Sage Handbook of Qualitative Research*. Thousand Oaks: Sage Publications, pp. 191- 215.

Gupta, H., Kusi-Sarpong, S. and Rezaei, J. (2020). Barriers and overcoming strategies to supply chain sustainability innovation. *Resources, Conservation and Recycling*, 161, p.104819. doi: <https://doi.org/10.1016/j.resconrec.2020.104819>.

Häder, M. (2014). *Delphi-Befragung: ein Arbeitsbuch*. Wiesbaden: Springer.

Hammerschmid, M. (2020). *How could a formal same-gender dyad mentoring programme for women be adjusted to be a better tool to combat skill shortages in management, from the case study participants' perception?* University of Worcester in collaboration with FHM Bielefeld [thesis].

Heiko, A. (2012). Consensus measurement in Delphi studies: review and implications for future quality assurance. *Technological Forecasting and Social Change*, 79(8), 1525-1536.

- Higgins, J.M., Arnold, S.R., Weise, J., Pellicano, E. and Trollor, J.N. (2021). Defining autistic burnout through experts by lived experience: Grounded Delphi method investigating #AutisticBurnout. *Autism*, 25(8), p.136236132110198. doi:<https://doi.org/10.1177/13623613211019858>.
- Hopwood, B., Mellor, M. and O'Brien, G. (2005). Sustainable development: mapping different approaches. *Sustainable Development*, 13(1), pp.38–52. doi:<https://doi.org/10.1002/sd.244>.
- Howard, K. (2015). *Educating cultural heritage information professionals for Australia's galleries, libraries, archives and museums: a grounded Delphi study*, Queensland University of Technology [thesis].
- Howard, K.J. (2018). Emergence of a new method: The Grounded Delphi method. *Library and Information Research*, 42(126), pp.5–31. doi: <https://doi.org/10.29173/lirg746>.
- Hussey, D. (2012). *In what ways does prayer create integration between intuitive and logical decision-making processes for the Christian business leader? A Grounded Delphi Method Exploration*, Capella University [thesis].
- IfM Bonn (2022). *Deutschland*. [online] www.ifm-bonn.org. Available at: <https://www.ifm-bonn.org/statistiken/unternehmensbestand/kmu-insgesamt/deutschland#:~:text=KMU%20insgesamt%20gem%C3%A4%C3%9F%20KMU-Definition%20der%20EU-Kommission%20In%20Deutschland,und%20mittleren%20Unternehmen%20%28KMU%3A%2099%2C4%25%20aller%20Unternehmen%29%20zugerechnet> [Accessed 30 May 2024].
- Indeed, (2023). *Sustainability Manager Jobs in Deutschland*. [online] Available at: <https://de.indeed.com/jobs?q=Sustainability+Manager&l=Deutschland&from=searchOnHP&vk=ed3f7316f80d0c6e> [Accessed 31 May 2024].
- IPCC (2023). *Synthesis report of the IPCC Sixth Assessment Report (AR6) Summary for Policymakers*. [online] IPCC. Intergovernmental Panel on Climate Change. Available at: https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf.
- Jankowicz, A. (2005). *Business Research Projects*. 2nd edn. London: Chapman and Hall.
- Jensen, D. (2008). Confirmability', in Given, L. M. (ed.) *The SAGE encyclopedia of qualitative research methods*. Thousand Oaks: SAGE Publications, p. 112, pp.138-139.
- Journal of Health Monitoring (2023). [online] Available at: https://www.rki.de/DE/Content/Gesundheitsmonitoring/Gesundheitsberichterstattung/GBEDownloadsJ/JHealthMonit_2023_S3_Sachstandsbericht_Klimawandel_Gesundheit_Teil1.pdf?__blob=publicationFile [Accessed 30 May 2024].

Jünger, S. (2011). Serie: Methodik in der palliativmedizinischen Forschung – Die Delphi-Methode: Teil 2. *Zeitschrift für Palliativmedizin*, 12(06), pp.245–247. doi:<https://doi.org/10.1055/s-0031-1295605>.

Kanashiro, P. and Rivera, J. (2017). Do Chief Sustainability Officers Make Companies Greener? The Moderating Role of Regulatory Pressures. *Journal of Business Ethics*, 155(3), pp.687–701. doi:<https://doi.org/10.1007/s10551-017-3461-2>.

KfW (2022). *KfW Bankengruppe*. [online] Available at: <https://www.kfw.de/%C3%9Cber-die-KfW/KfW-Research/Mittelstand.html#:~:text=Der%20Mittelstand%20finanzierte%20im%20Jahr,Bankkr edite%20lag%20bei%20125.000%20EUR> [Accessed 30 May 2024].

Knoche, I. (2022). *Exploring Digital Transformation in German Mittelstand to Identify and Advance Future Key Competencies from a Strategic Human Resource Management Perspective – A Grounded Delphi Study*, University of Worcester, UK. [thesis].

Kok, A.M., de Bakker, F.G.A. and Groenewegen, P. (2019) 'Sustainability Struggles: Conflicting Cultures and Incompatible Logics', *Business and Society*, 58(8), pp. 1496– 1532

Kuhlman, T. and Farrington, J. (2010). What Is Sustainability? *Sustainability*, 2(11), pp.3436– 3448. doi:<https://doi.org/10.3390/su2113436>.

Lancaster, G.A., Dodd, S. and Williamson, P.R. (2004). Design and analysis of pilot studies: recommendations for good practice. *Journal of Evaluation in Clinical Practice*, 10(2), pp.307– 312. doi:<https://doi.org/10.1111/j..2002.384.doc.x>.

Lederer, B. (2022). *Die „Kunst“ der Fragebogengestaltung*, Universität Innsbruck. [online] Available at: https://www.uibk.ac.at/iezw/mitarbeiterinnen/seniorlecturer/bernd_lederer/downloads/fragebogendesign.pdf [Accessed 30 May 2024].

LinkedIn, (2023). *Sustainability Manager Jobs in Deutschland*. [online] Available at: https://www.linkedin.com/jobs/search/?currentJobId=3926095888&geoid=91000006&keywords=Sustainability%20Manager&location=Deutschland%2C%20%C3%96sterreich%20und%20die%20Schweiz&origin=JOB_SEARCH_PAGE_LOCATION_AUTOCOMplete&refresh=true [Accessed 31 May 2024].

Linstone, H. and Turoff, M. (1975). *The Delphi method*. Reading: Addison Wesley.

Loorbach, D., (2010). *Transition management for sustainable development: A prescriptive, complexity-based governance framework*. Governance. Utrecht: International Books.

- MacDonald, A., Clarke, A., Ordonez-Ponce, E., Chai, Z. and Andreasen, J. (2020). Sustainability Managers: The Job Roles and Competencies of Building Sustainable Cities and Communities. *Public Performance & Management Review*, 43(6), pp.1413–1444. doi:<https://doi.org/10.1080/15309576.2020.1803091>.
- Magala, S. (2002). Organising as improvisations (methodological temptations of social constructivism), *ERIM Report Series Research in Management*. Available at: <hdl.handle.net/1765/230>.
- Malek, J. and Desai, T.N. (2019). Prioritization of sustainable manufacturing barriers using Best Worst Method. *Journal of Cleaner Production*, 226, pp.589–600. doi:<https://doi.org/10.1016/j.jclepro.2019.04.056>.
- Marateb, H.R., Mansourian, M., Adibi, P. and Farina, D. (2014). Manipulating measurement scales in medical statistical analysis and data mining: A review of methodologies. *Journal of Research in Medical Sciences: The Official Journal of Isfahan University of Medical Sciences*, 19(1), pp.47–56. Available at: <https://pubmed.ncbi.nlm.nih.gov/24672565/> [Accessed 30 May 2024].
- Matten, D. and Moon, J. (2008). ‘Implicit’ and ‘Explicit’ CSR: A Conceptual Framework for a Comparative Understanding of Corporate Social Responsibility. *Academy of Management Review*, 33(2), pp.404–424. doi:<https://doi.org/10.5465/amr.2008.31193458>.
- Meijer, L., Smits, R., Vermeulen, P. and van der Veen, G. (2019). Barriers and drivers for technology commercialization by SMEs in the Dutch sustainable energy sector. *Renewable and Sustainable Energy Reviews*, 112, pp.114–126. doi: 10.1016/j.rser.2019.05.050.
- Meißner, A. (2012). *Lerntransfer in der betrieblichen Weiterbildung: theoretische und empirische Exploration der Lerntransferdeterminanten im Rahmen des Training off-the-job*. Köln: Josef Eul Verlag GmbH.
- Mensah, H.K., Agyapong, A. and Nuerter, D. (2017). The effect of corporate social responsibility on organizational commitment of employees of rural and community banks in Ghana. *Cogent Business & Management*, 4(1). doi:<https://doi.org/10.1080/23311975.2017.1280895>.
- Miller, K.P. and Serafeim, G. (2014). Chief sustainability officers: Who are they and what do they do? In: R. Henderson, R. Gulati, and M. Tushman, eds. *Leading sustainable change: An organizational perspective*. Oxford: Oxford University Press, pp. 202–220.
- Mills, J., Bonner, A. and Francis, K. (2006). The Development of Constructivist Grounded Theory. *International Journal of Qualitative Methods*, 5(1), pp.25–35. doi:<https://doi.org/10.1177/160940690600500103>.

- Mio, C. and Venturelli, A. (2013). Non-financial Information About Sustainable Development and Environmental Policy in the Annual Reports of Listed Companies: Evidence from Italy and the UK', *Corporate Social Responsibility and Environmental Management*.
- Moser, S.C. and Ekstrom, J.A. (2010). A framework to diagnose barriers to climate change adaptation. *Proceedings of the National Academy of Sciences*, 107(51), pp.22026–22031. doi:<https://doi.org/10.1073/pnas.1007887107>.
- Moursellas, A., Malesios, C., Skouloudis, A., Evangelinos, K. and Dey, P.K. (2023). Perceived enablers and barriers impacting sustainability of small- and medium-sized enterprises: A quantitative analysis in four European countries. *Environmental Quality Management*, 32(3), pp.47–64. doi: <https://doi.org/10.1002/tqem.22128>.
- Müller, A., Janetschek, H. and Weigelt, J. (2015). Towards a governance heuristic for sustainable development. *Current Opinion in Environmental Sustainability*, 15, pp.49–56. doi:<https://doi.org/10.1016/j.cosust.2015.08.007>.
- Müller-Christ, G. (2014). *Nachhaltiges Wirtschaften*. 2nd ed. München: Oldenbourg Wissenschaftsverlag.
- Müller-Christ, G. (2014). *Nachhaltigkeitsmanagement, in Management und Nachhaltigkeit*. Wiesbaden: Springer Gabler.
- Nguyen, B. and Crossan, M. (2021). Character-Infused Ethical Decision Making. *Journal of Business Ethics*, 178(1), pp.171-191.
- Oleson, E., Nenonen, S. and Newth, J. (2023). Enablers and Barriers: The Conflicting Role of Institutional Logics in Business Model Change for Sustainability. *Organization & Environment*, 36(2), p.108602662311552. doi:<https://doi.org/10.1177/10860266231155210>.
- Orji, I.J. (2019). Examining barriers to organizational change for sustainability and drivers of sustainable performance in the metal manufacturing industry. *Resources, Conservation and Recycling*, 140, pp.102–114. doi:<https://doi.org/10.1016/j.resconrec.2018.08.005>.
- Päivärinta, T., et al. (2011). Grounding theory from Delphi studies. In: *Proceedings of the Thirty-Second International Conference on Information Systems, 2011, Shanghai*. Atlanta: Association for Information Systems.
- Patterson, J., Schulz, K., Vervoort, J., van der Hel, S., Widerberg, O., Adler, C., Hurlbert, M., Anderton, K., Sethi, M. and Barau, A. (2017). Exploring the governance and politics of transformations towards sustainability. *Environmental Innovation and Societal Transitions*, 24, pp.1–16. doi:<https://doi.org/10.1016/j.eist.2016.09.001>.
- Patton, M.Q. (2015). *Qualitative research & evaluation methods*. 4th ed. Thousand Oaks, CA: SAGE Publications.

Pava, M.L. (2008). Why Corporations Should Not Abandon Social Responsibility. *Journal of Business Ethics*, 83(4), pp.805–812. doi:<https://doi.org/10.1007/s10551-008-9666-7>.

Pearce, D. W., Markandya, A., Barbier, E. B. (1989). *Blueprint for a Green Economy*. London: Earthscan.

Peters, G.F., Romi, A.M. and Sanchez, J.M. (2018). The Influence of Corporate Sustainability Officers on Performance. *Journal of Business Ethics*, 159(4), pp.1065–1087. doi:<https://doi.org/10.1007/s10551-018-3818-1>.

Polman, P. (2014). Unilever CEO Paul Polman: Tackle sustainability challenges with a systems-based approach. *International Business Times UK*. Available at: <http://www.ibtimes.co.uk/unilever-ceo-paul-polman-tackle-sustainability-challenges-systems-based-approach-1433024> [Accessed 30 May 2024].

Raghuvanshi, J. and Agrawal, R. (2020). Revitalization of Indian SMEs for sustainable development through innovation. *Business Strategy & Development*. doi:<https://doi.org/10.1002/bsd2.109>.

Ramus, C.A. and Montiel, I. (2005). When are corporate environmental policies a form of greenwashing? *Business & Society*, 44(4), pp.377–414. doi:<https://doi.org/10.1177/0007650305278120>.

Risi, D. and Wickert, C. (2016). Reconsidering the ‘symmetry’ between institutionalization and professionalization: The case of corporate social responsibility managers. *Journal of Management Studies*, 54(5), pp.613–646. doi:<https://doi.org/10.1111/joms.12244>.

Ritchie, J. and Lewis, J. (2003). *Qualitative research practice: A guide for social science students and researchers*. London: SAGE Publications. Available at: https://mthoyibi.files.wordpress.com/2011/10/qualitative-research-practice_a-guide-for-social-science-students-and-researchers_jane-ritchie-and-jane-lewis-eds_20031.pdf [Accessed 30 May 2024].

Rowe, G. and Wright, G. (1999). The Delphi technique as a forecasting tool: Issues and analysis. *International Journal of Forecasting*, 15(4), pp.353–375. doi: [https://doi.org/10.1016/s0169-2070\(99\)00018-7](https://doi.org/10.1016/s0169-2070(99)00018-7).

Sachs, J.D. (2015). *The age of sustainable development*. New York: Columbia University Press. doi: <https://doi.org/10.7312/sach17314>.

Sachs, J.D., Schmidt-Traub, G., Mazzucato, M., Messner, D., Nakicenovic, N. and Rockström, J. (2019). Six Transformations to achieve the Sustainable Development Goals. *Nature Sustainability*, 2(9), pp.805–814. Available at: <https://www.nature.com/articles/s41893-019-0352-9> [Accessed 30 May 2024].

Sancak, I.E. (2023). Change management in sustainability transformation: A model for business organizations. *Journal of Environmental Management*, 330(1), p.117165. doi:<https://doi.org/10.1016/j.jenvman.2022.117165>.

Saunders, M. et al. (2009) *Research methods for business students*. 5th edn. Harlow: Pearson Education.

Saunders, M. et al. (2011) *Research methods for business students*. 6th edn. Harlow: Pearson Education.

Saunders, M. et al. (2019) *Research methods for business students*. 8th edn. Harlow: Pearson Education.

Schaltegger, S., Girschik, V., Trittin-Ulbrich, H., Weissbrod I., and Daudigeos, T. (2023). Corporate change agents for sustainability: Transforming organizations from the inside out. *Business Ethics, the Environment and Responsibility*, 32(1), pp.1–25. doi: <https://doi.org/10.1111/beer.12645>.

Schreiber, J. (2008). Pilot study. In: L.M. Given, ed. *The SAGE encyclopedia of qualitative research methods*. Thousand Oaks, CA: SAGE Publications, pp.624–626. doi: <http://dx.doi.org/10.4135/9781412963909.n453>.

Sen, A. (2001). *Development as freedom*. Oxford: Oxford University Press.

Skulmoski, G., Hartman, F. and Krahn, J. (2007). The Delphi method for graduate research. *Journal of Information Technology Education*, 6, pp.1–21. Available at: <https://www.jite.org/documents/Vol6/JITEv6p001-021Skulmoski212.pdf> [Accessed 30 May 2024].

Smith, J. and Jones, M. (2023). The role of sustainability managers in green business practices: An exploratory study. *Ecological Economics*, 203, p.107007. doi: <https://doi.org/10.1016/j.ecolecon.2022.107007>.

Stepstone, (2023). Sustainability manager jobs in Deutschland. [online] Available at: https://www.stepstone.de/jobs/vollzeit/Sustainability-Manager-or-Sustainability-Expert-or-Sustainability-Consultant/in-Deutschland/?action=facet_selected&q=%28Sustainability+Manager%29+OR+%28Sustainability+Expert%29+OR+%28Sustainability+Consultant%29 [Accessed 31 May 2024].

Stockholm University (2024). The SDGs wedding cake. [online] Stockholm Resilience Centre. Available at: <https://www.stockholmresilience.org/research/research-news/2016-06-14-the-sdgs-wedding-cake.html> [Accessed 30 May 2024].

- Stoian, C. and Gilman, M. (2016). Corporate social responsibility that 'pays': A strategic approach to CSR for SMEs. *Journal of Small Business Management*, 55(1), pp.5–31. doi: <https://doi.org/10.1111/jsbm.12224>.
- Stoian, C. and Gilman, M. (2016). Corporate Social Responsibility That 'Pays': A Strategic Approach to CSR for SMEs. *Journal of Small Business Management*, 55(1), pp.5–31. doi:<https://doi.org/10.1111/jsbm.12224>.
- Stouten, J., Rousseau, D.M. and De Cremer, D. (2018). Successful organizational change: Integrating the management practice and scholarly literatures. *Academy of Management Annals*, 12(2), pp.752–788. doi: <https://doi.org/10.5465/annals.2016.0095>.
- Strand, R. (2012). The Chief Officer of Corporate Social Responsibility: A Study of Its Presence in Top Management Teams. *Journal of Business Ethics*, 112(4), pp.721–734. doi:<https://doi.org/10.1007/s10551-012-1568-z>.
- Strand, R. (2014). Strategic Leadership of Corporate Sustainability. *Journal of Business Ethics*, 123(4), pp.687–706. doi:<https://doi.org/10.1007/s10551-013-2017-3>.
- Strauss, A. (1987). *Qualitative analysis for social scientists*. Cambridge University Press.
- Strauss, A. and Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park, CA: Sage Publications.
- Strauss, A., Corbin, J. (1998). *Basics of qualitative research: techniques and procedures for developing grounded theory*. 2nd edn. Thousand Oaks, CA: Sage Publications.
- Strauss, A.L. and Corbin, J.M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. 2nd ed. Thousand Oaks: SAGE Publications.
- Testa, M. et al. (2016). The role of sustainability managers in corporate social responsibility implementation: An exploratory study. *Journal of Business Ethics*. 134(1), pp.1-18. doi: <https://doi.org/10.1007/s10551-016-3074-7>.
- Testa, M. et al. (2018). The Role of the Sustainability Manager in Pro-environmental Behavior', *Journal of Business Ethics*, 152(4), pp.1169-1189. doi: 10.1007/s10551-018-3924-2.
- Testa, M. et al. (2020). The Evolving Role of the Sustainability Manager in the Face of Climate Change, *Journal of Business Ethics*, 167(3), pp.645-655. doi: 10.1007/s10551-020-04514-2.
- United Nations (1992). *Agenda 21: Programme of action for sustainable development. Rio Declaration on Environment and Development*. New York: United Nations.
- United Nations (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*. New York: United Nations.

United Nations (2018). *Transforming our world: The 2030 Agenda for Sustainable Development*. New York: United Nations.

United Nations Brundtland Commission (1987). *Report of the World Commission on Environment and Development: Our Common Future*. [online] Available at: <http://www.un-documents.net/our-common-future.pdf> [Accessed 30 May 2024].

United Nations Global Compact (2020). *United Nations Global Compact*. [online] Available at: <https://unglobalcompact.org/> [Accessed 30 May 2024].

Urquhart, C., Lehmann, H. and Myers, M.D. (2010). Putting the 'theory' back into grounded theory: Guidelines for grounded theory studies in information systems. *Information Systems Journal*, 20(4), pp.357–381. doi: <https://doi.org/10.1111/j.1365-2575.2009.00328.x>.

Vallentin, S. and Spence, L. (2017). Strategic CSR: Ambitions and critiques. *Cambridge University Press eBooks*, pp.63–85. doi: <https://doi.org/10.1017/9781316335529.006>.

Venturelli, A., Caputo, F., Leopizzi, R., Mastroleo, G. and Mio, C. (2017). How can CSR identity be evaluated? A pilot study using a fuzzy expert system. *Journal of Cleaner Production*, 141, pp.1000–1010. doi: <https://doi.org/10.1016/j.jclepro.2016.09.172>.

Virmani, N., Bera, S. and Kumar, R. (2020). Identification and testing of barriers to sustainable manufacturing in the automobile industry: A focus on Indian MSMEs. *Benchmarking: An International Journal*, 28(3), pp.857–880. doi: <https://doi.org/10.1108/bij-08-2020-0413>.

von Hauff, M. and Kleine, A. (2014). *Nachhaltige Entwicklung: Grundlagen und Umsetzung*. München: Oldenbourg Wissenschaftsverlag.

Waddock, S. (2004). Creating corporate accountability: Foundational principles to make corporate citizenship real. *Journal of Business Ethics*, 50(4), pp.313–327. doi: <https://doi.org/10.1023/B:BUSI.0000025088.67263.bf>.

WBCSD (2019). *World Business Council for Sustainable Development (WBCSD)*. [online] Available at: <https://www.wbcsd.org/> [Accessed 30 May 2024].

Weinreb Group (2014). *CSO back story II: The evolution of the chief sustainability officer*. [online] Available at: <https://weinrebgroup.com/wp-content/uploads/2018/07/CSO-Back-Story-II.pdf> [Accessed 30 May 2024].

Weinreb Group (2018). *Updated CSO research*. [online] Available at: <https://weinrebgroup.com/cso-update-december-2018/> [Accessed 30 May 2024].

Westley, F., Olsson, P., Folke, C., Homer-Dixon, T., Vredenburg, H., Loorbach, D., Thompson, J., Nilsson, M., Lambin, E., Sendzimir, J., Banerjee, B., Galaz, V. and van der Leeuw, S. (2011). Tipping toward sustainability: Emerging pathways of transformation. *AMBIO*, 40(7), pp.762–780. doi: <https://doi.org/10.1007/s13280-011-0186-9>.

Wheeler, D. and Sillanpää, M. (1997). *The stakeholder corporation: A blueprint for maximising stakeholder value*. London: Pitman Publishing.

Wiengarten, F., Lo, C.K.Y. and Lam, J.Y.K. (2015). How does sustainability leadership affect firm performance? The choices associated with appointing a chief officer of corporate social responsibility. *Journal of Business Ethics*, 140(3), pp.477–493. doi: <https://doi.org/10.1007/s10551-015-2666-5>.

Williams, A., Kennedy, S., Philipp, F. and Whiteman, G. (2017). Systems thinking: A review of sustainability management research. *Journal of Cleaner Production*, 148, pp.866–881. doi: <https://doi.org/10.1016/j.jclepro.2017.02.119>.

Windolph, E., Schaltegger, S. and Herzig, C. (2014). Implementing corporate sustainability. *Sustainability Accounting, Management and Policy Journal*, 5(4), pp.378–404. doi: <https://doi.org/10.1108/sampj-01-2014-0002>.

World (1987). *Our Common Future*. Oxford: Oxford University Press.

World Bank Group (2007). *Banking on sustainability: Financing environmental and social opportunities in emerging markets*. [online] Available at: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/434571468339551160/banking-on-sustainability-financing-environmental-and-social-opportunities-in-emerging-markets> [Accessed 30 May 2024].

Wright, C., Nyberg, D. and Grant, D. (2012). ‘Hippies on the third floor’: Climate change, narrative identity and the micro-politics of corporate environmentalism. *Organization Studies*, 33(11), pp.1451–1475. doi: <https://doi.org/10.1177/0170840612463316>.

Appendix

Ethics Application: Official Approval



EDUCATION, CULTURE AND SOCIETY RESEARCH ETHICS PANEL (ECS REP)

CONFIRMATION OF APPROVAL

30 October 2023

REP CODE: ECS23240003-R

SUSTAINABILITY MANAGERS IN THE CONTEXT OF CORPORATE SUSTAINABLE TRANSFORMATION: A DEEP DIVE INTO UNDERSTANDING, RESPONSIBILITY PERCEPTION, AND PERCEIVED BARRIERS

Dear Liza

Thank you for your revised application for proportionate review ethical approval to the Education, Culture and Society Research Ethics Panel submitted on 26 October 2023.

Your application has been reviewed in accordance with the University of Worcester Ethics Policy and in compliance with the Standard Operating Procedures for proportionate ethical review.

The outcome of the review is that the Panel is now happy to grant this project ethical approval to proceed.

Your research must be undertaken as set out in the approved application for the approval to be valid. You must review your answers to the checklist on an ongoing basis and resubmit for approval where you intend to deviate from the approved research. Any major deviation from the approved application will require a new application for approval.

As part of the University Ethics Policy, the University undertakes an audit of a random sample of approved research. You may be required to complete a questionnaire about your research.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Dr Peter Gossman'.

DR PETER GOSSMAN

Chair – Education, Culture and Society Proportionate Review Panel
Deputy Chair – Education, Culture and Society Research Ethics Panel
ethics@worc.ac.uk

Round°1: Communication Templates 'Data Collection'

Round One - LimeSurvey Email Vorlage

Wichtig: Einladung zur Teilnahme an meiner Dissertation | Umfrage von Liza Kirchberg

Hallo {FIRSTNAME},

vielen lieben Dank für deine so zeitnahe Rückmeldung und deine Unterstützung.

Hiermit lade ich dich nun ein, an meiner Dissertation mit dem Titel "Sustainability Managers in the Context of Corporate Sustainable Transformation: A Deep Dive into Understanding, Responsibility Perception, and Perceived Barriers" mitzuwirken.

Der Kurztitel der anonymen Online-Umfrage ist "{SURVEYNAME}"

Um an meiner Umfrage (Teilnahmedauer ca. 15 Minuten) teilzunehmen, klicke bitte auf den untenstehenden Link. Insgesamt hast du 14 Tage Zeit, um die Umfrage abzuschließen. Eine frühere Abgabe ist immer möglich 😊

Ich danke dir schon jetzt für deine Zeit! Let's create Impact!

Bei Fragen oder technischen Problemen komme bitte jederzeit auf mich zu.

Beste Grüße,

Liza

Klicke hier, um die Umfrage zu starten: {SURVEYURL}

- E-Mail: kirl1_21@uni.worc.ac.uk

Round One - LimeSurvey Email Vorlage

Wichtig: Erinnerung an die Einladung zur Teilnahme an meiner Dissertation | Umfrage von Liza Kirchberg

Hallo {FIRSTNAME},

Vor kurzem habe ich dich zu meiner Umfrage eingeladen, um Teil meiner Dissertation zu sein.

Leider habe ich gesehen, dass du noch keine Zeit hattest, die Umfrage auszufüllen. Mir ist bewusst, dass du zeitlich sehr eingespannt bist. Die Umfrage ist noch aktiv und es würde mir sehr viel bedeuten, wenn du noch Zeit für deine Teilnahme findest. Die Teilnahmedauer schätze ich auf 15 Minuten. Deine Ergebnisse kommen nicht nur mir, sondern uns Allen im Rahmen der nachhaltigen Transformation zugute.

Der Kurztitel der Umfrage ist '{SURVEYNAME}'

Um an meiner Umfrage teilzunehmen, klicke bitte auf den untenstehenden Link.

Ich danke dir schon jetzt für deine Zeit! Let's create Impact!

Bei Fragen komme bitte jederzeit auf mich zu.

Beste Grüße,

Liza

Klicke hier, um die Umfrage zu starten:
{SURVEYURL}

- E-Mail: kirl1_21@uni.worc.ac.uk

Round One - LimeSurvey Email Vorlage

Deine Teilnahme an meiner Dissertation war erfolgreich | Liza Kirchberg

Hallo {FIRSTNAME},

Vielen herzlichen Dank, dass du dir Zeit für deine Teilnahme an meiner qualitativen Datenerhebung genommen hast. **Ich weiß das sehr zu schätzen!**

Wie geht es weiter?

Ich widme mich zeitnah der Auswertung aller qualitativen Daten dieser ersten Fragerunde. Ziel dieser Studie ist es allgemeinen Konsens in den Antworten zu erhalten. Deshalb formuliere ich aus den vorhandenen Daten "Konsens-Statements" pro Frage, welche dann in einer zweiten Runde von dir in einer Skala zu bewerten und ggf. zu ergänzen sind. Mein Ziel ist es die zweite Runde in ca. sechs Wochen starten zu können, du erhältst dann erneut einen LimeSurvey Link. Die Teilnahme an der zweiten Runde wird auf ca. 5 Minuten geschätzt.

Ich wünsche dir und deiner Familie eine erholsame und besinnliche Weihnachtszeit und einen guten Rutsch ins neue Jahr! Bei Fragen komme bitte jederzeit auf mich zu.

Beste Grüße,

Liza

- E-Mail: kirl1_21@uni.worc.ac.uk

Round One - LimeSurvey Email Vorlage

Wichtig: Registrierungsbestätigung Umfrage von Liza Kirchberg

Hallo {FIRSTNAME},

du (oder jemand, der deine E-Mail-Adresse angegeben hat) hast dich erfolgreich für meine Umfrage mit dem Kurztitel {SURVEYNAME} angemeldet.

Um an meiner Umfrage teilzunehmen, klicke bitte auf folgenden Link: {SURVEYURL}

Insgesamt hast du 14 Tage Zeit die Umfrage vollständig abzuschließen. Eine frühere Abgabe geht natürlich immer 😊 Deine Teilnahmedauer wird auf ca. 15 Minuten geschätzt.

Wenn du dich nicht für diese Umfrage angemeldet hast und glaubst, dass dir diese E-Mail irrtümlicherweise zugeschickt worden ist, kontaktiere mich bitte umgehend.

Ich danke dir schon jetzt für deine Zeit! Let's create Impact!

Bei Fragen komme bitte jederzeit auf mich zu.

Beste Grüße,

Liza

- E-Mail: kir11_21@uni.worc.ac.uk
-

Round°2: Communication Templates 'Data Collection'

Round Two - LimeSurvey Email Vorlage

Einladung zur 2. Runde meiner Dissertation | Umfrage von Liza Kirchberg

Hallo {FIRSTNAME},

ich sage vorab nochmal ganz herzlich "Danke" für deine Unterstützung auch in der zweiten Runde meiner Dissertation mit dem Titel "Sustainability Managers in the Context of Corporate Sustainable Transformation: A Deep Dive into Understanding, Responsibility Perception, and Perceived Barriers". Der Kurztitel meiner anonymen Online-Umfrage ist "{SURVEYNAME}"

Diesmal wirst du nicht aufgefordert Freitext-Antworten zu formulieren, da ich bereits alle Antworten aus der ersten Runde als "Konsens-Statements" formuliert habe.

Bedeutet, du stimmst im besten Fall jedem einzelnen Statement zu und lässt kein Statement aus. Insgesamt hast du 14 Tage Zeit um die anonyme Online-Umfrage abzuschließen. Eine frühere Abgabe ist immer möglich, solltest du länger benötigen, teile mir das bitte kurz mit 😊

Um teilzunehmen (Teilnahmedauer ca. 8 - 10 Minuten), klicke bitte auf den untenstehenden Link.

Ich danke dir schon jetzt für deine Zeit! Let's create Impact!

Bei Fragen oder technischen Problemen komme bitte jederzeit auf mich zu.

Beste Grüße,

Liza

Klicke hier, um die Umfrage zu starten: {SURVEYURL}

- E-Mail: kirl1_21@uni.worc.ac.uk

Round Two - LimeSurvey Email Vorlage

Erinnerung an die Teilnahme an der 2. Runde meiner Dissertation | Liza Kirchberg

Hallo {FIRSTNAME},

ich habe gesehen, dass du die Umfrage leider noch nicht abgeschlossen hast.

Dein Aufwand ist in dieser Runde deutlich geringer als in der ersten Runde.

Diesmal wirst du nicht aufgefordert Freitext-Antworten zu formulieren, da ich alle Antworten aus der ersten Runde als "Konsens-Statements" formuliert habe. Bedeutet, du stimmst im besten Fall jedem einzelnen Statement zu und lässt kein Statement aus. Um jetzt an meiner Umfrage (Teilnahmedauer ca. 8 -10 Minuten) teilzunehmen, klicke bitte auf den untenstehenden Link.

Ich weiß es sehr zu schätzen, dass du an meiner Dissertation teilnimmst! 😊

Ich danke dir schon jetzt für deine Zeit! Let's create Impact!

Bei Fragen oder technischen Problemen komme bitte jederzeit auf mich zu.

Beste Grüße,

Liza

Klicke hier, um die Umfrage zu starten: {SURVEYURL}

- E-Mail: kirl1_21@uni.worc.ac.uk

Round Two - LimeSurvey Email Vorlage

Bestätigung für die Teilnahme an der 2. Runde meiner Dissertation | Liza Kirchberg

Hallo {FIRSTNAME},

Vielen herzlichen Dank, dass du dir Zeit für deine Teilnahme an meiner qualitativen Datenerhebung genommen hast. **Ich weiß das sehr zu schätzen!**

Im besten Fall sind alle Rückmeldungen so eindeutig, dass ich nicht aufgefordert bin, nochmal nachzuhaken.

Ich werte nun erneut alle qualitativen Daten aus und verarbeite diese im Kontext der Literatur.

Sobald ich von meiner Universität die Freigabe erhalte, dass ich meine Ergebnisse aufbereitet kommunizieren darf, lasse ich dir diese gerne zukommen!

Beste Grüße,

Liza

Round Two - LimeSurvey Email Vorlage

Registrierungsbestätigung für Teilnahmeumfrage an der 2. Runde | Liza Kirchberg

Hallo {FIRSTNAME},

du (oder jemand, der deine E-Mail-Adresse angegeben hat) hast dich erfolgreich für meine Umfrage mit dem Kurztitel {SURVEYNAME} angemeldet.

Um an meiner Umfrage teilzunehmen, klicke bitte auf folgenden Link: {SURVEYURL}

Insgesamt hast du 14 Tage Zeit die Umfrage vollständig abzuschließen. Eine frühere Abgabe geht natürlich immer 😊

Deine Teilnahmedauer wird auf ca. 15 Minuten geschätzt.

Wenn du dich nicht für diese Umfrage angemeldet hast und glaubst, dass dir diese E-Mail irrtümlicherweise zugeschickt worden ist, kontaktiere mich bitte umgehend.

Ich danke dir schon jetzt für deine Zeit! Let's create Impact!

Bei Fragen komme bitte jederzeit auf mich zu.

Beste Grüße,

Liza

Round°1: Open Coding 'Context'

1. Open Coding

Name	Dateien	Referenzen	Erstellt am	Erstellt von
Geschäftsmodell	1	89	25.11.2023 20:25	LK
Nachhaltigkeitsbewusstsein	1	84	26.11.2023 14:16	LK
Kultur	1	78	25.11.2023 20:17	LK
Regulatorik	1	74	25.11.2023 23:38	LK
CST	1	61	25.11.2023 19:45	LK
SM	1	61	26.11.2023 18:58	LK
Gesellschaft	1	60	25.11.2023 23:10	LK
Verantwortlichkeit	1	60	26.11.2023 18:58	LK
Top Down Wirkung	1	56	25.11.2023 16:09	LK
Klimawandel	1	52	25.11.2023 23:09	LK
Wirtschaftlichkeit	1	52	25.11.2023 23:18	LK
Ressourcen	1	45	26.11.2023 22:19	LK
Unternehmensstrategie	1	44	25.11.2023 15:39	LK
Bildung	1	39	26.11.2023 15:13	LK
Bewusste Veränderung	1	37	25.11.2023 19:55	LK
Kommunikation	1	34	26.11.2023 21:28	LK
Nachhaltigkeitsbereich	1	33	25.11.2023 15:55	LK
Fehlendes Know-How	1	31	25.11.2023 20:01	LK
Zukunftsfähigkeit	1	29	25.11.2023 20:16	LK
Prozesse	1	28	25.11.2023 20:23	LK
Stakeholder	1	28	26.11.2023 19:00	LK
Unternehmensentwicklung	1	27	25.11.2023 15:38	LK
Nähe C-Level	1	26	25.11.2023 15:34	LK
CSC	1	23	25.11.2023 19:45	LK
CSD	1	23	25.11.2023 19:45	LK
Vorbildsfunktion	1	23	28.11.2023 00:42	LK
Berichtend an C-Level	1	22	25.11.2023 15:38	LK
Positive Beispiele	1	21	28.11.2023 00:41	LK
Befähiger	1	20	28.11.2023 00:40	LK
ESG	1	17	25.11.2023 22:33	LK
Sensibilisierung	1	16	25.11.2023 20:27	LK
Unternehmensweite Strahlkraft	1	16	25.11.2023 15:40	LK
Experten	1	15	27.11.2023 15:20	LK
Innovation	1	15	26.11.2023 15:35	LK
Potenziale	1	12	26.11.2023 19:00	LK
KIPs	1	11	28.11.2023 13:23	LK
Kundennachfrage	1	11	28.11.2023 00:42	LK
Nähe Topmanagement	1	11	25.11.2023 15:48	LK
Technologie	1	11	25.11.2023 20:25	LK
Fachkräftemangel	1	8	26.11.2023 14:18	LK
Green Deal	1	8	25.11.2023 20:10	LK
Barrieren	1	7	27.11.2023 17:09	LK
Finanzierungen	1	7	26.11.2023 14:14	LK
Risikobereitschaft	1	7	27.11.2023 17:11	LK
Mitarbeiterbindung	1	6	26.11.2023 14:18	LK
Bottom Up	1	5	28.11.2023 00:47	LK
Pariser Klimaabkommen	1	5	25.11.2023 20:13	LK

Round°1: Open Coding 'Context'

1. Open Coding

 Name	 Dateien	Referenzen	Erstellt am	Erstellt von
 Bottom Up	1	5	28.11.2023 00:47	LK
 Pariser Klimaabkommen	1	5	25.11.2023 20:13	LK
 Good Corporate Citizenship	1	4	26.11.2023 14:13	LK
 Wissenschaft	1	4	26.11.2023 15:38	LK
 Klarheit	1	2	28.11.2023 00:42	LK
 NGOs	1	2	26.11.2023 15:31	LK
 Unbewusste Veränderung	1	2	25.11.2023 19:56	LK
 Image	1	1	28.11.2023 00:46	LK
 SDG	1	1	25.11.2023 20:09	LK

Round°1: Axial Coding 'Context'

2_Axial Coding		Suche Projekt	
Name	Dateien	Referenzen	
<input type="checkbox"/> Kommunikation und Vernetzung		0	0
<input type="radio"/> Regelmäßiger Vorstandsaustausch		1	11
<input type="radio"/> Unternehmenskommunikation		1	4
<input type="radio"/> Vorstand		1	27
<input type="radio"/> Vorstandsnähe		1	12
<input type="checkbox"/> Projekt und Vertriebsmanagement		0	0
<input type="radio"/> Projektmanagement		1	4
<input type="radio"/> Umsetzung durch alle Bereiche selbst		1	2
<input type="radio"/> Vertriebsmanagement		1	3
<input type="checkbox"/> Strategie und Organisationsentwicklung		0	0
<input type="radio"/> Bereichsübergreifend		1	6
<input type="radio"/> Innovation		1	5
<input type="radio"/> Organigramm		1	7
<input type="radio"/> Strategie		1	10
<input type="radio"/> Unternehmensentwicklung		1	11
<input type="checkbox"/> Strukturelle und operationale Aspekte		0	0
<input type="radio"/> Anforderungen		1	4
<input type="radio"/> Kapazität		1	3
<input type="radio"/> Marketing		1	1
<input type="radio"/> Nachhaltigkeitsbereich		1	11
<input type="radio"/> Reichweite		1	2
<input type="radio"/> Stabsstelle		1	11
<input type="radio"/> Unternehmensstruktur		1	2
<input type="radio"/> Verband		1	1
<input type="radio"/> Verbesserungsfähig		1	6
<input type="radio"/> Vorteile		1	5
<input type="radio"/> Zentrale Rolle		1	1

2_Axial Coding		Suche Projekt	
Name	Dateien	Referenzen	
<input type="radio"/> Nachhaltigkeitsbereich		1	11
<input type="radio"/> Reichweite		1	2
<input type="radio"/> Stabsstelle		1	11
<input type="radio"/> Unternehmensstruktur		1	2
<input type="radio"/> Verband		1	1
<input type="radio"/> Verbesserungsfähig		1	6
<input type="radio"/> Vorteile		1	5
<input type="radio"/> Zentrale Rolle		1	1
<input type="checkbox"/> Unternehmensführung und Management		0	0
<input type="radio"/> Bereich Business Excellence		1	2
<input type="radio"/> Führungskraft		1	9
<input type="radio"/> Führungskräftenähe		1	7
<input type="radio"/> Hauptverantwortlichkeit		1	4
<input type="radio"/> Koordination		1	12
<input type="radio"/> Kurze Wege		1	19
<input type="radio"/> Lenkungsausschuss		1	6
<input type="radio"/> Top-Down Wirkung		1	4
<input type="radio"/> Unternehmenssteuerung		1	2

Round°1: Selective Coding 'Context'

3_Selective Coding		Suche Projekt		
Name		Dateien	Referenzen	
Operative Exzellenz und Innovation		0	0	
Projekt und Vertriebsmanagement		0	0	
Projektmanagement		1	4	
Umsetzung durch alle Bereiche selbst		1	2	
Vertriebsmanagement		1	3	
Strukturelle und operationale Aspekte		0	0	
Anforderungen		1	4	
Kapazität		1	3	
Marketing		1	1	
Nachhaltigkeitsbereich		1	11	
Reichweite		1	2	
Stabsstelle		1	11	
Unternehmensstruktur		1	2	
Verband		1	1	
Verbesserungsfähig		1	6	
Vorteile		1	5	
Zentrale Rolle		1	1	
Organisationskultur und Stakeholder-Integration		0	0	
Kommunikation und Vernetzung		0	0	
Regelmäßiger Vorstandsaustausch		1	11	
Unternehmenskommunikation		1	4	
Vorstand		1	27	
Vorstandsnähe		1	12	

3_Selective Coding		Suche Projekt		
Name		Dateien	Referenzen	
Operative Exzellenz und Innovation		0	0	
Organisationskultur und Stakeholder-Integration		0	0	
Strategische Unternehmensführung		0	0	
Strategie und Organisationsentwicklung		0	0	
Bereichsübergreifend		1	6	
Innovation		1	5	
Organigramm		1	7	
Strategie		1	10	
Unternehmensentwicklung		1	11	
Unternehmensführung und Management		0	0	
Bereich Business Excellence		1	2	
Führungskraft		1	9	
Führungskräftenähe		1	7	
Hauptverantwortlichkeit		1	4	
Koordination		1	12	
Kurze Wege		1	19	
Lenkungsausschuss		1	6	
Top-Down Wirkung		1	4	
Unternehmenssteuerung		1	2	

Round°1: Open Coding 'Understanding'

1_Open Coding

Name	Dateien	Referenzen	
Definition CST		1	56
Regulatorik		1	41
Corporate Sustainable Transformation		1	33
Geschäftsmodellentwicklung		1	26
Klimawandelauswirkungen		1	24
Definition CSC		1	23
Bewusste Veränderung		1	22
Definition CSD		1	21
Corporate Sustainable Development		1	17
Nachhaltiges Unternehmen		1	16
Nachhaltigkeitsaspekte ESG		1	16
Organisationskultur		1	16
Unternehmensstrategie		1	16
Zielstruktur		1	16
Corporate Sustainable Change		1	14
Wirtschaftlichkeit		1	14
Prozessveränderungen		1	12
Gesellschaft		1	10
Wirtschaftssystem		1	9
Betroffenheit		1	8
Verständnis		1	8
Weiterentwicklung		1	7
Wettbewerbsfähigkeit		1	7
Wissenslücke		1	7
Herausforderungen		1	6
Hinterfragen		1	6
Technologischer Fortschritt		1	6
Top Down Kultur		1	6
Bewusstseinsveränderung		1	5
Externe Stakeholder		1	5
Innovation		1	5
Interne Stakeholder		1	5
Kundennachfrage		1	5

1_Open Coding

Name	Dateien	Referenzen
Kundennachfrage	1	5
Monitäre Aspekte	1	5
Positive Praxisbeispiele	1	5
Produktmanagement	1	5
Veränderung	1	5
Vorstandsrolle	1	5
Wissen	1	5
Zukunftsfähigkeit	1	5
Junge Generation	1	4
Maßnahmenplan	1	4
Soziale Verantwortung	1	4
Umweltschutz	1	4
Ungewissheit	1	4
Unternehmenswirkung	1	4
Bereitschaft	1	3
Bewusstes Handeln	1	3
Konsequenzen	1	3
Medien	1	3
Neue Märkte	1	3
Ökologische Verantwortung	1	3
Sensibilisierungsmaßnahmen	1	3
Soziale Gerechtigkeit	1	3
Verhaltensänderung	1	3
Zu langsame Transformation	1	3
Alte Generation	1	2
Ambitionsniveau	1	2
Bedeutungszunahme	1	2
Bildung	1	2
Fachkräfte	1	2
Fachkräftemangel	1	2
Finanzmittel	1	2
Kommunikation	1	2
NGOs	1	2

1_Open Coding

Name	Dateien	Referenzen
NGOs	1	2
Ökosystem	1	2
SDGs	1	2
Unternehmensführung	1	2
Unternehmenssteuerung	1	2
Wohlstandsverlust	1	2
Zielgruppen	1	2
Abnehmende Bereitschaft	1	1
Chancenbetrachtung	1	1
Eigeninitiative Verhaltensänderung	1	1
Existenz	1	1
Faire Arbeitsbedingungen	1	1
Gegenbewegungen	1	1
Intrinsische Motivation	1	1
Kreislaufwirtschaft	1	1
Langfristigkeit	1	1
Linientätigkeit	1	1
Literaturlücke	1	1
Lösungsansätze	1	1
Mitarbeiterbindung	1	1
Quantifizierung	1	1
Risikobetrachtung	1	1
Schadensereignisse	1	1
Strukturelle Rahmenbedingungen	1	1
Tiefenintegriert	1	1
Transparenz	1	1
Überzeugung	1	1
Umweltaktivisten	1	1
Versagen	1	1
Volatilität	1	1
Vorgabenänderung	1	1

Round°1: Axial Coding 'Understanding'

2_Axial Coding				
Name	Dateien	Referenzen	▼	E
UNTERNEHMENSWANDEL UND TRANSFORMATION		0	0	C
Definition CST		1		56
Corporate Sustainable Transformation		1		33
Geschäftsmodellentwicklung		1		26
Definition CSC		1		23
Definition CSD		1		21
Corporate Sustainable Development		1		17
Unternehmensstrategie		1		16
Zielstruktur		1		16
Nachhaltiges Unternehmen		1		16
Corporate Sustainable Change		1		14
Prozessveränderungen		1		12
Weiterentwicklung		1		7
Hinterfragen		1		6
Veränderung		1		5
Positive Praxisbeispiele		1		5
Maßnahmenplan		1		4
Ungewissheit		1		4
Unternehmenswirkung		1		4
Verhaltensänderung		1		3
Zu langsame Transformation		1		3
Unternehmenssteuerung		1		2
Zielgruppen		1		2
Unternehmensführung		1		2
Strukturelle Rahmenbedingungen		1		1
Tiefenintegriert		1		1
Versagen		1		1
Linientätigkeit		1		1
Literaturlücke		1		1
Lösungsansätze		1		1
Kreislaufwirtschaft		1		1

2_Axial Coding

Name	Dateien	Referenzen
UNTERNEHMENSWANDEL UND TRANSFORMATION	0	0
BEWUSSTSEIN UND KULTUR	0	0
Bewusste Veränderung	1	22
Organisationskultur	1	16
Verständnis	1	8
Wissenslücke	1	7
Top Down Kultur	1	6
Bewusstseinsveränderung	1	5
Wissen	1	5
Junge Generation	1	4
Bewusstes Handeln	1	3
Bereitschaft	1	3
Bildung	1	2
Alte Generation	1	2
Kommunikation	1	2
Ambitionsniveau	1	2
Abnehmende Bereitschaft	1	1
Intrinsische Motivation	1	1
Transparenz	1	1
Eigeninitiative Verhaltensänderung	1	1

2_Axial Coding

Name	Dateien	Referenzen
UNTERNEHMENSWANDEL UND TRANSFORMATION	0	0
BEWUSSTSEIN UND KULTUR	0	0
NACHHALTIGKEIT UND SOZIALE VERANTWORTUNG	0	0
Nachhaltigkeitsaspekte ESG	1	16
Betroffenheit	1	8
Interne Stakeholder	1	5
Soziale Verantwortung	1	4
Umweltschutz	1	4
Ökologische Verantwortung	1	3
Soziale Gerechtigkeit	1	3
Sensibilisierungsmaßnahmen	1	3
SDGs	1	2
Ökosystem	1	2
Faire Arbeitsbedingungen	1	1
Langfristigkeit	1	1
EXTERNE EINFLÜSSE UND REGULIERUNG	0	0
Regulatorik	1	41
Gesellschaft	1	10
Herausforderungen	1	6
Externe Stakeholder	1	5
Kundennachfrage	1	5
Medien	1	3
Konsequenzen	1	3
NGOs	1	2
Bedeutungszunahme	1	2
Gegenbewegungen	1	1
Vorgabenänderung	1	1
Umweltaktivisten	1	1

2_Axial Coding

Name	Dateien	Referenzen
UNTERNEHMENSWANDEL UND TRANSFORMATION	0	0
BEWUSSTSEIN UND KULTUR	0	0
NACHHALTIGKEIT UND SOZIALE VERANTWORTUNG	0	0
EXTERNE EINFLÜSSE UND REGULIERUNG	0	0
WIRTSCHAFTLICHE FAKTOREN UND HERAUSFORDERUNGEN	0	0
Wirtschaftlichkeit	1	14
Wirtschaftssystem	1	9
Wettbewerbsfähigkeit	1	7
Zukunftsfähigkeit	1	5
Vorstandsrolle	1	5
Produktmanagement	1	5
Monitäre Aspekte	1	5
Fachkräftemangel	1	2
Wohlstandsverlust	1	2
Finanzmittel	1	2
Fachkräfte	1	2
Mitarbeiterbindung	1	1
RISIKEN UND CHANCEN	0	0
Klimawandelauswirkungen	1	24
Technologischer Fortschritt	1	6
Innovation	1	5
Neue Märkte	1	3
Risikobetrachtung	1	1
Schadensereignisse	1	1
Überzeugung	1	1
Volatilität	1	1
Quantifizierung	1	1
Chancenbetrachtung	1	1
Existenz	1	1

Round°1: Selective Coding 'Understanding'

3_Selective Coding

Name	Dateien	Referenzen	E
Core Category 1 Strategischer und ganzheitlicher Wandel	0	0	0
UNTERNEHMENSWANDEL UND TRANSFORMATION	0	0	0
Definition CST	1	56	
Corporate Sustainable Transformation	1	33	
Geschäftsmodellentwicklung	1	26	
Definition CSC	1	23	
Definition CSD	1	21	
Corporate Sustainable Development	1	17	
Unternehmensstrategie	1	16	
Zielstruktur	1	16	
Nachhaltiges Unternehmen	1	16	
Corporate Sustainable Change	1	14	
Prozessveränderungen	1	12	
Weiterentwicklung	1	7	
Hinterfragen	1	6	
Veränderung	1	5	
Positive Praxisbeispiele	1	5	
Maßnahmenplan	1	4	
Ungewissheit	1	4	
Unternehmenswirkung	1	4	
Verhaltensänderung	1	3	
Zu langsame Transformation	1	3	
Unternehmenssteuerung	1	2	
Zielgruppen	1	2	
Unternehmensführung	1	2	
Strukturelle Rahmenbedingungen	1	1	
Tiefenintegriert	1	1	
Versagen	1	1	
Linientätigkeit	1	1	
Literaturlücke	1	1	
Lösungsansätze	1	1	
Kreislaufwirtschaft	1	1	

3_Selective Coding

Name	Dateien	Referenzen
Core Category 1 Strategischer und ganzheitlicher Wandel	0	0
UNTERNEHMENSWANDEL UND TRANSFORMATION	0	0
WIRTSCHAFTLICHE FAKTOREN UND HERAUSFORDERUNGEN	0	0
Wirtschaftlichkeit	1	14
Wirtschaftssystem	1	9
Wettbewerbsfähigkeit	1	7
Zukunftsfähigkeit	1	5
Vorstandsrolle	1	5
Produktmanagement	1	5
Monitäre Aspekte	1	5
Fachkräftemangel	1	2
Wohlstandsverlust	1	2
Finanzmittel	1	2
Fachkräfte	1	2
Mitarbeiterbindung	1	1
Core Category 2 Bewusstseinswandel und Bildung	0	0
Core Category 3 Externe Einflüsse und Regulierung	0	0

3_Selective Coding

Name	Dateien	Referenzen
Core Category 1 Strategischer und ganzheitlicher Wandel	0	0
Core Category 2 Bewusstseinswandel und Bildung	0	0
BEWUSSTSEIN UND KULTUR	0	0
Bewusste Veränderung	1	22
Organisationskultur	1	16
Verständnis	1	8
Wissenslücke	1	7
Top Down Kultur	1	6
Bewusstseinsveränderung	1	5
Wissen	1	5
Junge Generation	1	4
Bewusstes Handeln	1	3
Bereitschaft	1	3
Bildung	1	2
Alte Generation	1	2
Kommunikation	1	2
Ambitionsniveau	1	2
Abnehmende Bereitschaft	1	1
Intrinsische Motivation	1	1
Transparenz	1	1
Eigeninitiative Verhaltensänderung	1	1
NACHHALTIGKEIT UND SOZIALE VERANTWORTUNG	0	0
Core Category 3 Externe Einflüsse und Regulierung	0	0

3_Selective Coding

Name	Dateien	Referenzen
Core Category 1 Strategischer und ganzheitlicher Wandel	0	0
Core Category 2 Bewusstseinswandel und Bildung	0	0
BEWUSSTSEIN UND KULTUR	0	0
NACHHALTIGKEIT UND SOZIALE VERANTWORTUNG	0	0
Nachhaltigkeitsaspekte ESG	1	16
Betroffenheit	1	8
Interne Stakeholder	1	5
Soziale Verantwortung	1	4
Umweltschutz	1	4
Ökologische Verantwortung	1	3
Soziale Gerechtigkeit	1	3
Sensibilisierungsmaßnahmen	1	3
SDGs	1	2
Ökosystem	1	2
Faire Arbeitsbedingungen	1	1
Langfristigkeit	1	1
Core Category 3 Externe Einflüsse und Regulierung	0	0

3_Selective Coding

Name	Dateien	Referenzen
Core Category 1 Strategischer und ganzheitlicher Wandel	0	0
Core Category 2 Bewusstseinswandel und Bildung	0	0
Core Category 3 Externe Einflüsse und Regulierung	0	0
EXTERNE EINFLÜSSE UND REGULIERUNG	0	0
Regulatorik	1	41
Gesellschaft	1	10
Herausforderungen	1	6
Externe Stakeholder	1	5
Kundennachfrage	1	5
Medien	1	3
Konsequenzen	1	3
NGOs	1	2
Bedeutungszunahme	1	2
Gegenbewegungen	1	1
Vorgabenänderung	1	1
Umweltaktivisten	1	1
RISIKEN UND CHANCEN	0	0
Klimawandelauswirkungen	1	24
Technologischer Fortschritt	1	6
Innovation	1	5
Neue Märkte	1	3
Risikobetrachtung	1	1
Schadensereignisse	1	1
Überzeugung	1	1
Volatilität	1	1
Quantifizierung	1	1
Chancenbetrachtung	1	1
Existenz	1	1

Round°1: Open Coding 'Responsibility'

1_Open Coding			
Name	Dateien	Referenzen	
Koordination Bereichsübergreifende Umsetzung	1	18	
Funktionbeschreibung entspricht Verantwortung	1	18	
Implementierung Nachhaltigkeitsstrategie	1	15	
Tiefenintegration Nachhaltigkeit ins Geschäftsmodell	1	15	
Schnittstellenfunktion	1	13	
Regulatorische Anforderungen	1	12	
Zentraler Ansprechpartner	1	7	
Mehrarbeit durch Regulatorik	1	7	
Wissenstransfer	1	6	
Verantwortung ist gestiegen	1	6	
Zunehmende Wichtigkeit von Spezialisten	1	6	
Sensibilisierung Wichtigkeit	1	5	
Klimastrategie	1	5	
Veränderungsmanagement	1	5	
Mehrarbeit Wissen und Mindset Vermittlung	1	5	
Nachhalten Maßnahmenumsetzung	1	4	
Entwicklung Nachhaltigkeitsstrategie	1	4	
Wettbewerbsanalyse	1	4	
Fehlende Priorisierung durch das Top Management	1	4	
Bildung Nachhaltigkeitsvorstandsressort	1	4	
Unternehmenstransformation	1	3	
Weiterentwicklung Nachhaltigkeitsstrategie	1	3	
Impulsgeber	1	3	
Kommunikationsarbeit	1	3	
Aufbau neues Geschäftsfeld	1	3	
Innovationsmanagement	1	3	
Falsche Erwartungshaltung an Nachhaltigkeitsmanager	1	3	
Kapazitätsausbau notwendig	1	3	
Mehrarbeit wegen fehlendem Knowhow anderer Umsetzer	1	3	
Zu langsame Fortschritte	1	3	
Abwehrhaltung direkte Betroffenheit Belegschaft	1	3	
Erwartung Nachhaltigkeit als neues Normal	1	3	

1_Open Coding

Name	Dateien	Referenzen
Erwartung Nachhaltigkeit als neues Normal	1	3
Nachhaltigkeitsmanager wird Vergangenheit	1	3
Zunehmende Strategische Verantwortung	1	3
Stakeholder Management	1	2
Produktmanagement	1	2
Projektmanagement	1	2
Wissensbündelung	1	2
Interner Wissenstransfer	1	2
Umweltmanagement	1	2
Integration Nachhaltigkeit in Zielsystem	1	2
Wirtschaftlichkeit	1	2
Fehlende Zeit für Strategiearbeit	1	2
Fehlende Priorisierung Nachhaltigkeitsthemen	1	2
Mehrarbeit Risikomanagement	1	2
Zu lange Kommunikationswege	1	2
Hohe Abhängigkeit zu anderen Bereichen	1	2
Angst vor Veränderungen	1	2
Fehlende Kapazität	1	2
Realisierung Geschäftspotenzialen	1	1
Anreizsetzung	1	1
Ökologisches Engagement	1	1
Nachhaltiges Wirtschaften	1	1
Koordination Team Nachhaltigkeit	1	1
Vorstandsdialoge	1	1
Kulturarbeit	1	1
Durchsetzungskraft	1	1
Vernetzung	1	1
Interner Multiplikator	1	1
Mehrarbeit Sensibilisierung	1	1
Mehrarbeit durch externe Anforderungen	1	1
Nachhaltigkeitsfunktion wird von Belegschaft nicht ernst genommen	1	1
Mehrarbeit durch Marktveränderungen	1	1

1_Open Coding

Name	Dateien	Referenzen
Mehrarbeit durch Marktveränderungen	1	1
Knowhow Ausbau notwendig	1	1
Mehrarbeit Operative Themen	1	1
Fehlende Kundennachfrage	1	1
Mehr Verantwortung als Funktionsbeschreibung	1	1
Nachhaltigkeitsexperte wird zum Gesicht des Themas	1	1
Unterstützung Top Management gegeben	1	1
Fehlende Vorstandsunterstützung	1	1
Zusatzverantwortung Erreichung Nachhaltigkeitsziele	1	1
Mehrarbeit durch fachliche bereichsübergreifende Einbindung	1	1
Fehlende Veränderungsbereitschaft	1	1
Unternehmenskulturelle Dimension wird unterschätzt	1	1
Kulturarbeit nicht in offizieller Jobbeschreibung	1	1
Mangel an Kapazität für Zusatzthemen	1	1
Mehrarbeit Impulsgeber	1	1
Wahrgenommene Verantwortung größer als Jobbeschreibung	1	1
Fehlender Wille bei Kostenverursachung	1	1
Unklare Rollenverteilung	1	1
Hierarchie Strukturen als Bremser	1	1
Erwartung Spezialisierung Nachhaltigkeitsexpertise	1	1
Höherer Qualitätsanspruch Nachhaltigkeitsmanager	1	1

Round°1: Axial Coding ´ Responsibility´

2_Axial Coding

Name	Dateien	Referenzen
1_Offizielle und wahrgenommene Verantwortlichkeiten	0	0
Funktionbeschreibung entspricht Verantwortung	1	18
Zentraler Ansprechpartner	1	7
Verantwortung ist gestiegen	1	6
Veränderungsmanagement	1	5
Nachhalten Maßnahmenumsetzung	1	4
Wettbewerbsanalyse	1	4
Nachhaltigkeitsmanager wird Vergangenheit	1	3
Impulsgeber	1	3
Umweltmanagement	1	2
Mehr Verantwortung als Funktionsbeschreibung	1	1
Fehlender Wille bei Kostenverursachung	1	1
Fehlende Vorstandsunterstützung	1	1
Wahrgenommene Verantwortung größer als Jobbeschreibung	1	1
Unterstützung Top Management gegeben	1	1
Zusatzverantwortung Erreichung Nachhaltigkeitsziele	1	1
Kulturarbeit	1	1
Kulturarbeit nicht in offizieller Jobbeschreibung	1	1
Nachhaltigkeitsexperte wird zum Gesicht des Themas	1	1

2_Axial Coding

Name	Dateien	Referenzen
1_Offizielle und wahrgenommene Verantwortlichkeiten	0	0
2_Strategische und operative Herausforderungen	0	0
Tiefenintegration Nachhaltigkeit ins Geschäftsmodell	1	15
Implementierung Nachhaltigkeitsstrategie	1	15
Klimastrategie	1	5
Entwicklung Nachhaltigkeitsstrategie	1	4
Fehlende Priorisierung durch das Top Management	1	4
Unternehmenstransformation	1	3
Erwartung Nachhaltigkeit als neues Normal	1	3
Weiterentwicklung Nachhaltigkeitsstrategie	1	3
Angst vor Veränderungen	1	2
Integration Nachhaltigkeit in Zielsystem	1	2
Fehlende Priorisierung Nachhaltigkeitsthemen	1	2
Wirtschaftlichkeit	1	2
Fehlende Kundennachfrage	1	1
Fehlende Veränderungsbereitschaft	1	1
Nachhaltiges Wirtschaften	1	1
Unternehmenskulturelle Dimension wird unterschätzt	1	1

2_Axial Coding

Name	Dateien	Referenzen
1_Offizielle und wahrgenommene Verantwortlichkeiten	0	0
2_Strategische und operative Herausforderungen	0	0
3_Kommunikation und Stakeholder-Management	0	0
Sensibilisierung Wichtigkeit	1	5
Abwehrhaltung direkte Betroffenheit Belegschaft	1	3
Kommunikationsarbeit	1	3
Stakeholder Management	1	2
Interner Wissenstransfer	1	2
Vernetzung	1	1
Nachhaltigkeitsfunktion wird von Belegschaft nicht ernst genommen	1	1
Interner Multiplikator	1	1
4_Externe Einflüsse und Marktveränderungen	0	0
5_Zusammenarbeit und Teamdynamik	0	0
6_Persönliche und organisationale Entwicklung	0	0
7_Zukünftige Veränderungen und Anpassungen	0	0
8_Operative Herausforderungen und Arbeitsbelastung	0	0

2_Axial Coding

Name	Dateien	Referenzen
1_Offizielle und wahrgenommene Verantwortlichkeiten	0	0
2_Strategische und operative Herausforderungen	0	0
3_Kommunikation und Stakeholder-Management	0	0
4_Externe Einflüsse und Marktveränderungen	0	0
Regulatorische Anforderungen	1	12
Aufbau neues Geschäftsfeld	1	3
Produktmanagement	1	2
Anreizsetzung	1	1
Ökologisches Engagement	1	1
Realisierung Geschäftspotenzialen	1	1
5_Zusammenarbeit und Teamdynamik	0	0
6_Persönliche und organisationale Entwicklung	0	0
7_Zukünftige Veränderungen und Anpassungen	0	0
8_Operative Herausforderungen und Arbeitsbelastung	0	0

2_Axial Coding

Name	Dateien	Referenzen
1_Offizielle und wahrgenommene Verantwortlichkeiten	0	0
2_Strategische und operative Herausforderungen	0	0
3_Kommunikation und Stakeholder-Management	0	0
4_Externe Einflüsse und Marktveränderungen	0	0
5_Zusammenarbeit und Teamdynamik	0	0
Koordination Bereichsübergreifende Umsetzung	1	18
Schnittstellenfunktion	1	13
Hohe Abhängigkeit zu anderen Bereichen	1	2
Zu lange Kommunikationswege	1	2
Koordination Team Nachhaltigkeit	1	1
Hierarchie Strukturen als Bremser	1	1
Unklare Rollenverteilung	1	1
Durchsetzungskraft	1	1
Vorstandsdialoge	1	1
6_Persönliche und organisationale Entwicklung	0	0
7_Zukünftige Veränderungen und Anpassungen	0	0
8_Operative Herausforderungen und Arbeitsbelastung	0	0

2_Axial Coding

Name	Dateien	Referenzen
1_Offizielle und wahrgenommene Verantwortlichkeiten	0	0
2_Strategische und operative Herausforderungen	0	0
3_Kommunikation und Stakeholder-Management	0	0
4_Externe Einflüsse und Marktveränderungen	0	0
5_Zusammenarbeit und Teamdynamik	0	0
6_Persönliche und organisationale Entwicklung	0	0
Wissenstransfer	1	6
Bildung Nachhaltigkeitsvorstandsressort	1	4
Innovationsmanagement	1	3
Kapazitätsausbau notwendig	1	3
Projektmanagement	1	2
Wissensbündelung	1	2
Erwartung Spezialisierung Nachhaltigkeitsexpertise	1	1
Höherer Qualitätsanspruch Nachhaltigkeitsmanager	1	1
Knowhow Ausbau notwendig	1	1
7_Zukünftige Veränderungen und Anpassungen	0	0
8_Operative Herausforderungen und Arbeitsbelastung	0	0

2_Axial Coding

Name	Dateien	Referenzen
1_Offizielle und wahrgenommene Verantwortlichkeiten	0	0
2_Strategische und operative Herausforderungen	0	0
3_Kommunikation und Stakeholder-Management	0	0
4_Externe Einflüsse und Marktveränderungen	0	0
5_Zusammenarbeit und Teamdynamik	0	0
6_Persönliche und organisationale Entwicklung	0	0
7_Zukünftige Veränderungen und Anpassungen	0	0
Zunehmende Wichtigkeit von Spezialisten	1	6
Zunehmende Strategische Verantwortung	1	3
Zu langsame Fortschritte	1	3
Fehlende Zeit für Strategiearbeit	1	2
8_Operative Herausforderungen und Arbeitsbelastung	0	0

2_Axial Coding

Name	Dateien	Referenzen
1_Offizielle und wahrgenommene Verantwortlichkeiten	0	0
2_Strategische und operative Herausforderungen	0	0
3_Kommunikation und Stakeholder-Management	0	0
4_Externe Einflüsse und Marktveränderungen	0	0
5_Zusammenarbeit und Teamdynamik	0	0
6_Persönliche und organisationale Entwicklung	0	0
7_Zukünftige Veränderungen und Anpassungen	0	0
8_Operative Herausforderungen und Arbeitsbelastung	0	0
Mehrarbeit durch Regulatorik	1	7
Mehrarbeit Wissen und Mindset Vermittlung	1	5
Mehrarbeit wegen fehlendem Knowhow anderer Umsetzer	1	3
Falsche Erwartungshaltung an Nachhaltigkeitsmanager	1	3
Mehrarbeit Risikomanagement	1	2
Fehlende Kapazität	1	2
Mehrarbeit durch externe Anforderungen	1	1
Mehrarbeit durch fachliche bereichsübergreifende Einbindung	1	1
Mehrarbeit durch Marktveränderungen	1	1
Mehrarbeit Impulsgeber	1	1
Mehrarbeit Operative Themen	1	1
Mehrarbeit Sensibilisierung	1	1
Mangel an Kapazität für Zusatzthemen	1	1

Round°1: Selective Coding ´Responsibility´

3_Selective Coding

Name	Dateien	Referenzen	▼ Ei
Verantwortung und Einfluss im Wandel		0	0 0
1_Offizielle und wahrgenommene Verantwortlichkeiten		0	0
Funktionbeschreibung entspricht Verantwortung		1	18
Zentraler Ansprechpartner		1	7
Verantwortung ist gestiegen		1	6
Veränderungsmanagement		1	5
Nachhalten Maßnahmenumsetzung		1	4
Wettbewerbsanalyse		1	4
Nachhaltigkeitsmanager wird Vergangenheit		1	3
Impulsgeber		1	3
Umweltmanagement		1	2
Mehr Verantwortung als Funktionsbeschreibung		1	1
Fehlender Wille bei Kostenverursachung		1	1
Fehlende Vorstandsunterstützung		1	1
Wahrgenommene Verantwortung größer als Jobbeschreibung		1	1
Unterstützung Top Management gegeben		1	1
Zusatzverantwortung Erreichung Nachhaltigkeitsziele		1	1
Kulturarbeit		1	1
Kulturarbeit nicht in offizieller Jobbeschreibung		1	1
Nachhaltigkeitsexperte wird zum Gesicht des Themas		1	1
6_Persönliche und organisationale Entwicklung		0	0
Wissenstransfer		1	6
Bildung Nachhaltigkeitsvorstandsressort		1	4
Innovationsmanagement		1	3
Kapazitätsausbau notwendig		1	3
Projektmanagement		1	2
Wissensbündelung		1	2
Erwartung Spezialisierung Nachhaltigkeitsexpertise		1	1
Höherer Qualitätsanspruch Nachhaltigkeitsmanager		1	1
Knowhow Ausbau notwendig		1	1

3_Selective Coding

Name	Dateien	Referenzen	▼ Ei
Verantwortung und Einfluss im Wandel		0	0
1_Offizielle und wahrgenommene Verantwortlichkeiten		0	0
6_Persönliche und organisationale Entwicklung		0	0
7_Zukünftige Veränderungen und Anpassungen		0	0
Zunehmende Wichtigkeit von Spezialisten		1	6
Zunehmende Strategische Verantwortung		1	3
Zu langsame Fortschritte		1	3
Fehlende Zeit für Strategiearbeit		1	2
Strategische Integration und Operationsmanagement		0	0
Kommunikation, Zusammenarbeit und Stakeholder-Beziehungen		0	0
Anpassung an externe Herausforderungen und Marktveränderungen		0	0

3_Selective Coding

Name	Dateien	Referenzen	E
Verantwortung und Einfluss im Wandel		0	0
Strategische Integration und Operationsmanagement		0	0
2_Strategische und operative Herausforderungen		0	0
Tiefenintegration Nachhaltigkeit ins Geschäftsmodell		1	15
Implementierung Nachhaltigkeitsstrategie		1	15
Klimastrategie		1	5
Entwicklung Nachhaltigkeitsstrategie		1	4
Fehlende Priorisierung durch das Top Management		1	4
Unternehmenstransformation		1	3
Erwartung Nachhaltigkeit als neues Normal		1	3
Weiterentwicklung Nachhaltigkeitsstrategie		1	3
Angst vor Veränderungen		1	2
Integration Nachhaltigkeit in Zielsystem		1	2
Fehlende Priorisierung Nachhaltigkeitsthemen		1	2
Wirtschaftlichkeit		1	2
Fehlende Kundennachfrage		1	1
Fehlende Veränderungsbereitschaft		1	1
Nachhaltiges Wirtschaften		1	1
Unternehmenskulturelle Dimension wird unterschätzt		1	1

3_Selective Coding

Name	Dateien	Referenzen	E
Verantwortung und Einfluss im Wandel		0	0
Strategische Integration und Operationsmanagement		0	0
2_Strategische und operative Herausforderungen		0	0
8_Operative Herausforderungen und Arbeitsbelastung		0	0
Mehrarbeit durch Regulatorik		1	7
Mehrarbeit Wissen und Mindset Vermittlung		1	5
Mehrarbeit wegen fehlendem Knowhow anderer Umsetzer		1	3
Falsche Erwartungshaltung an Nachhaltigkeitsmanager		1	3
Mehrarbeit Risikomanagement		1	2
Fehlende Kapazität		1	2
Mehrarbeit durch externe Anforderungen		1	1
Mehrarbeit durch fachliche bereichsübergreifende Einbindung		1	1
Mehrarbeit durch Marktveränderungen		1	1
Mehrarbeit Impulsgeber		1	1
Mehrarbeit Operative Themen		1	1
Mehrarbeit Sensibilisierung		1	1
Mangel an Kapazität für Zusatzthemen		1	1
Kommunikation, Zusammenarbeit und Stakeholder-Beziehungen		0	0
Anpassung an externe Herausforderungen und Marktveränderungen		0	0

3_Selective Coding

Name	Dateien	Referenzen
Verantwortung und Einfluss im Wandel	0	0
Strategische Integration und Operationsmanagement	0	0
Kommunikation, Zusammenarbeit und Stakeholder-Beziehungen	0	0
3_Kommunikation und Stakeholder-Management	0	0
Sensibilisierung Wichtigkeit	1	5
Abwehrhaltung direkte Betroffenheit Belegschaft	1	3
Kommunikationsarbeit	1	3
Stakeholder Management	1	2
Interner Wissenstransfer	1	2
Vernetzung	1	1
Nachhaltigkeitsfunktion wird von Belegschaft nicht ernst genommen	1	1
Interner Multiplikator	1	1
5_Zusammenarbeit und Teamdynamik	0	0
Koordination Bereichsübergreifende Umsetzung	1	18
Schnittstellenfunktion	1	13
Hohe Abhängigkeit zu anderen Bereichen	1	2
Zu lange Kommunikationswege	1	2
Koordination Team Nachhaltigkeit	1	1
Hierarchie Strukturen als Bremser	1	1
Unklare Rollenverteilung	1	1
Durchsetzungskraft	1	1
Vorstandsdialoge	1	1
Anpassung an externe Herausforderungen und Marktveränderungen	0	0

3_Selective Coding

Name	Dateien	Referenzen
Verantwortung und Einfluss im Wandel	0	0
Strategische Integration und Operationsmanagement	0	0
Kommunikation, Zusammenarbeit und Stakeholder-Beziehungen	0	0
Anpassung an externe Herausforderungen und Marktveränderungen	0	0
4_Externe Einflüsse und Marktveränderungen	0	0
Regulatorische Anforderungen	1	12
Aufbau neues Geschäftsfeld	1	3
Produktmanagement	1	2
Anreizsetzung	1	1
Ökologisches Engagement	1	1
Realisierung Geschäftspotenzialen	1	1

Round°1: Open Coding 'Barrier'

1_Open Coding			
Name	Dateien	Referenzen	
Befähiger Vorbildsfunktion und Priorisierung Top Management	1	24	
Befähiger konkrete praxisnahe Regulatorik	1	22	
Barriere fehlendes Nachhaltigkeitsverständnis	1	19	
Befähiger Druck externe Stakeholder	1	17	
Befähiger Kommunikation und Integration Mitarbeitende	1	16	
Befähiger ESG Integration in Nachhaltigkeitsstrategie	1	13	
Befähiger unterstützende Organisationsstrukturen	1	12	
Befähiger Ertragspotenziale	1	11	
Befähiger positive Praxisbeispiele	1	8	
Barriere Wirtschaftlichkeitsbedenken	1	7	
Barriere Aufwand Erfüllung Regulatorik	1	7	
Befähiger Betroffenheit durch Klimawandel	1	7	
Befähiger Aufbau Kapazität und Ressourcen	1	7	
Barriere fehlendes Verständnis Management	1	6	
Barriere keine Kapazitäten	1	6	
Befähiger Wissensvermittlung und mediale Aufklärung	1	6	
Barriere ESG ist Zusatzaufgabe	1	5	
Barriere Silodenken der Bereiche	1	5	
Barriere fehlender Wille zur Veränderung	1	5	
Befähiger Nachhaltigkeitsexperten	1	5	
Befähiger veränderungsbereite Unternehmenskultur	1	5	
Befähiger interner Multiplikatoren	1	5	
Befähiger interne Bildung und Wissensvermittlung	1	5	
Befähiger Quantifizierbarkeit durch Daten	1	5	
Barriere fehlende Top Management Unterstützung	1	4	
Barriere fehlende Priorisierung von Nachhaltigkeit	1	4	
Barriere fehlende Nachhaltigkeitsstrategie	1	4	
Barriere Hierarchie und Struktur	1	4	
Befähiger Wettbewerbsdruck	1	4	
Befähiger Anreizsysteme	1	4	
Barriere Veränderungsangst	1	3	
Barriere fehlendes Interesse an ESG	1	3	
Barriere fehlende Gesellschaftliche Bildung	1	3	

1_Open Coding

Name	Dateien	Referenzen
Barriere fehlende Gesellschaftliche Bildung	1	3
Barriere der NICHT Betroffenheit von Katastrophen	1	3
Befähiger Wissensvermittlung im Bildungssystem	1	3
Notwendigkeit Gesamtkontext Vernetzung	1	3
Barriere nur das Nötigste machen	1	2
Barriere Abwarten	1	2
Barriere fehlendes Unternehmertum	1	2
Barriere Quantifizierbarkeit	1	2
Barriere Silodenken auf Regulatorik	1	2
Barriere fehlende Forderung externer Stakeholder	1	2
Barriere fehlendes Knowhow Vertrieb	1	2
Barriere Sorge der Überregulierung	1	2
Barriere fehlende Top Down Vorbildrolle	1	2
Befähiger internes Ideenmanagement	1	2
Befähiger Einsatz von Technologie	1	2
Befähiger konkreter Mehrwert und Nutzen	1	2
Notwendigkeit Forschung und Entwicklung	1	2
Barrieren	1	1
Barriere mangelnde Risikobereitschaft	1	1
Barriere Organisationskultur	1	1
Barriere fehlende Wichtigkeit Nachhaltigkeitsmanager	1	1
Barriere Unklare Verantwortlichkeiten	1	1
Barriere Ressourcenmangel	1	1
Barriere fehlende Strafen für Transformationsverweigerer	1	1
Barriere nicht Einkaufen von ESG Experten	1	1
Barriere ESG Gegner Einstellung	1	1
Barriere von Greenwashing Gefahr	1	1
Barriere fehlende Tiefenintegration	1	1
Barriere fehlende Wertschätzung für ESG-Treiber	1	1
Barriere Wettbewerbsangst	1	1
Barriere fehlende Daten Messbarkeit	1	1
Barriere fehlende IT Lösungen	1	1
Befähiger unternehmensübergreifende Kooperationen	1	1

1_Open Coding

Name	Dateien	Referenzen
Barriere fehlende IT Lösungen	1	1
Befähiger unternehmensübergreifende Kooperationen	1	1
Befähiger zunehmende Schadensereignisse und Risiken	1	1
Befähiger Wissenschaftliche Aufklärung	1	1
Befähiger interne Aufklärung und Bildung	1	1
Notwendigkeit Aufbau von Fachpersonal	1	1
Notwendigkeit Zugang finanzieller Mittel für Gründer	1	1
Notwendigkeit Reflexion und stetiges Hinterfragen	1	1

Round°1: Axial Coding 'Barrier'

2_Axial Coding

Name	Dateien	Referenzen
1_Organisatorische und kulturelle Barrieren	0	0
Barriere ESG ist Zusatzaufgabe	1	5
Barriere fehlender Wille zur Veränderung	1	5
Barriere Silodenken der Bereiche	1	5
Barriere fehlende Nachhaltigkeitsstrategie	1	4
Barriere fehlende Priorisierung von Nachhaltigkeit	1	4
Barriere fehlende Top Management Unterstützung	1	4
Barriere Hierarchie und Struktur	1	4
Barriere Veränderungsangst	1	3
Barriere Abwarten	1	2
Barriere fehlende Top Down Vorbildsrolle	1	2
Barriere fehlendes Unternehmertum	1	2
Barriere Organisationskultur	1	1
Barriere Unklare Verantwortlichkeiten	1	1
2_Wissen und Verständnisbarrieren	0	0
3_Ressourcen und Kapazitätsbarrieren	0	0
4_Regulatorik und Compliance Barrieren	0	0
5_Markt und Ökonomische Barrieren	0	0
6_Externe Anforderungen und Engagement Barrieren	0	0
7_Strategische Vision und Integration Barrieren	0	0
8_Technische und Innovationsbarrieren	0	0
9_Befähiger Strategie und Führung	0	0
10_Befähiger Wissen und Bildung	0	0
11_Befähiger Technologie und Innovation	0	0
12_Befähiger Stakeholder Engagement und Kommunikation	0	0
13_Befähiger Ökonomische Potenziale	0	0
14_Organisatorische Kapazität und Ressourcen	0	0
15_Regulatorische Unterstützung	0	0
16_Bewusstsein	0	0

2_Axial Coding

Name	Dateien	Referenzen
1_Organisatorische und kulturelle Barrieren	0	0
2_Wissen und Verständnisbarrieren	0	0
Barriere fehlendes Nachhaltigkeitsverständnis	1	19
Barriere fehlendes Verständnis Management	1	6
Barriere fehlendes Interesse an ESG	1	3
Barriere fehlende Gesellschaftliche Bildung	1	3
Barriere fehlendes Knowhow Vertrieb	1	2
Barriere fehlende Daten Messbarkeit	1	1
3_Ressourcen und Kapazitätsbarrieren	0	0
4_Regulatorik und Compliance Barrieren	0	0
5_Markt und Ökonomische Barrieren	0	0
6_Externe Anforderungen und Engagement Barrieren	0	0
7_Strategische Vision und Integration Barrieren	0	0
8_Technische und Innovationsbarrieren	0	0
9_Befähiger Strategie und Führung	0	0
10_Befähiger Wissen und Bildung	0	0
11_Befähiger Technologie und Innovation	0	0
12_Befähiger Stakeholder Engagement und Kommunikation	0	0
13_Befähiger Ökonomische Potenziale	0	0
14_Organisatorische Kapazität und Ressourcen	0	0
15_Regulatorische Unterstützung	0	0
16_Bewusstsein	0	0

2_Axial Coding

Name	Dateien	Referenzen
1_Organisatorische und kulturelle Barrieren	0	0
2_Wissen und Verständnisbarrieren	0	0
3_Ressourcen und Kapazitätsbarrieren	0	0
Barriere keine Kapazitäten	1	6
Befähiger Nachhaltigkeitsexperten	1	5
Barriere Ressourcenmangel	1	1
Barriere fehlende Wichtigkeit Nachhaltigkeitsmanager	1	1
Barriere nicht Einkaufen von ESG Experten	1	1
Notwendigkeit Aufbau von Fachpersonal	1	1
4_Regulatorik und Compliance Barrieren	0	0
Barriere Aufwand Erfüllung Regulatorik	1	7
Barriere Sorge der Überregulierung	1	2
Barriere Silodenken auf Regulatorik	1	2
Barriere fehlende Strafen für Transformationsverweigerer	1	1
Barriere von Greenwashing Gefahr	1	1
5_Markt und Ökonomische Barrieren	0	0
Barriere Wirtschaftlichkeitsbedenken	1	7
Barriere fehlende Forderung externer Stakeholder	1	2
Barriere Quantifizierbarkeit	1	2
Barriere mangelnde Risikobereitschaft	1	1
Barriere Wettbewerbsangst	1	1
Notwendigkeit Zugang finanzieller Mittel für Gründer	1	1
6_Externe Anforderungen und Engagement Barrieren	0	0
Barriere der NICHT Betroffenheit von Katastrophen	1	3
Barriere nur das Nötigste machen	1	2
Barriere ESG Gegner Einstellung	1	1
Barriere fehlende Wertschätzung für ESG-Treiber	1	1
7_Strategische Vision und Integration Barrieren	0	0

2_Axial Coding

Name	Dateien	Referenzen
7_Strategische Vision und Integration Barrieren	0	0
Notwendigkeit Gesamtkontext Vernetzung	1	3
Notwendigkeit Reflexion und stetiges Hinterfragen	1	1
Barriere fehlende Tiefenintegration	1	1
8_Technische und Innovationsbarrieren	0	0
Notwendigkeit Forschung und Entwicklung	1	2
Barriere fehlende IT Lösungen	1	1
9_Befähiger Strategie und Führung	0	0
Befähiger Vorbildsfunktion und Priorisierung Top Management	1	24
Befähiger ESG Integration in Nachhaltigkeitsstrategie	1	13
Befähiger veränderungsbereite Unternehmenskultur	1	5
10_Befähiger Wissen und Bildung	0	0
Befähiger Wissensvermittlung und mediale Aufklärung	1	6
Befähiger interne Bildung und Wissensvermittlung	1	5
Befähiger Wissensvermittlung im Bildungssystem	1	3
Befähiger interne Aufklärung und Bildung	1	1
Befähiger Wissenschaftliche Aufklärung	1	1
11_Befähiger Technologie und Innovation	0	0
Befähiger Quantifizierbarkeit durch Daten	1	5
Befähiger Einsatz von Technologie	1	2
Befähiger internes Ideenmanagement	1	2
12_Befähiger Stakeholder Engagement und Kommunikation	0	0
Befähiger Druck externe Stakeholder	1	17
Befähiger Kommunikation und Integration Mitarbeitende	1	16
Befähiger positive Praxisbeispiele	1	8
Befähiger interner Multiplikatoren	1	5
13_Befähiger Ökonomische Potenziale	0	0
14_Organisatorische Kapazität und Ressourcen	0	0
15_Regulatorische Unterstützung	0	0
16_Bewusstsein	0	0

2_Axial Coding

Name	Dateien	Referenzen
1_Organisatorische und kulturelle Barrieren	0	0
2_Wissen und Verständnisbarrieren	0	0
3_Ressourcen und Kapazitätsbarrieren	0	0
4_Regulatorik und Compliance Barrieren	0	0
5_Markt und Ökonomische Barrieren	0	0
6_Externe Anforderungen und Engagement Barrieren	0	0
7_Strategische Vision und Integration Barrieren	0	0
8_Technische und Innovationsbarrieren	0	0
9_Befähiger Strategie und Führung	0	0
10_Befähiger Wissen und Bildung	0	0
11_Befähiger Technologie und Innovation	0	0
12_Befähiger Stakeholder Engagement und Kommunikation	0	0
13_Befähiger Ökonomische Potenziale	0	0
Befähiger Ertragspotenziale	1	11
Befähiger Wettbewerbsdruck	1	4
Befähiger konkreter Mehrwert und Nutzen	1	2
14_Organisatorische Kapazität und Ressourcen	0	0
Befähiger unterstützende Organisationsstrukturen	1	12
Befähiger Aufbau Kapazität und Ressourcen	1	7
Befähiger unternehmensübergreifende Kooperationen	1	1
15_Regulatorische Unterstützung	0	0
Befähiger konkrete praxisnahe Regulatorik	1	22
Befähiger Anreizsysteme	1	4
16_Bewusstsein	0	0
Befähiger Betroffenheit durch Klimawandel	1	7
Befähiger zunehmende Schadensereignisse und Risiken	1	1

Round°1: Selective Coding ´Barrier´

3_Selective Coding			
Name	Dateien	Referenzen	
Strategische Führung und Entscheidung		0	0
7_Strategische Vision und Integration Barrieren		0	0
Notwendigkeit Gesamtkontext Vernetzung		1	3
Notwendigkeit Reflexion und stetiges Hinterfragen		1	1
Barriere fehlende Tiefenintegration		1	1
15_Regulatorische Unterstützung		0	0
Befähiger konkrete praxisnahe Regulatorik		1	22
Befähiger Anreizsysteme		1	4
1_Organisatorische und kulturelle Barrieren		0	0
Barriere ESG ist Zusatzaufgabe		1	5
Barriere fehlender Wille zur Veränderung		1	5
Barriere Silodenken der Bereiche		1	5
Barriere fehlende Nachhaltigkeitsstrategie		1	4
Barriere fehlende Priorisierung von Nachhaltigkeit		1	4
Barriere fehlende Top Management Unterstützung		1	4
Barriere Hierarchie und Struktur		1	4
Barriere Veränderungsangst		1	3
Barriere Abwarten		1	2
Barriere fehlende Top Down Vorbildsrolle		1	2
Barriere fehlendes Unternehmertum		1	2
Barriere Organisationskultur		1	1
Barriere Unklare Verantwortlichkeiten		1	1
9_Befähiger Strategie und Führung		0	0
Befähiger Vorbildsfunktion und Priorisierung Top Management		1	24
Befähiger ESG Integration in Nachhaltigkeitsstrategie		1	13
Befähiger veränderungsbereite Unternehmenskultur		1	5
4_Regulatorik und Compliance Barrieren		0	0
Wissen und Lernsysteme		0	0
Stakeholder Kollaboration und Externe Dynamiken		0	0
Ressourcen Management und Organisationsstrukturen		0	0

3_Selective Coding

Name	Dateien	Referenzen
Strategische Führung und Entscheidung	0	0
7_Strategische Vision und Integration Barrieren	0	0
15_Regulatorische Unterstützung	0	0
1_Organisatorische und kulturelle Barrieren	0	0
9_Befähiger Strategie und Führung	0	0
4_Regulatorik und Compliance Barrieren	0	0
Barriere Aufwand Erfüllung Regulatorik	1	7
Barriere Sorge der Überregulierung	1	2
Barriere Silodenken auf Regulatorik	1	2
Barriere fehlende Strafen für Transformationsverweigerer	1	1
Barriere von Greenwashing Gefahr	1	1
Wissen und Lernsysteme	0	0
2_Wissen und Verständnisbarrieren	0	0
Barriere fehlendes Nachhaltigkeitsverständnis	1	19
Barriere fehlendes Verständnis Management	1	6
Barriere fehlendes Interesse an ESG	1	3
Barriere fehlende Gesellschaftliche Bildung	1	3
Barriere fehlendes Knowhow Vertrieb	1	2
Barriere fehlende Daten Messbarkeit	1	1
10_Befähiger Wissen und Bildung	0	0
Befähiger Wissensvermittlung und mediale Aufklärung	1	6
Befähiger interne Bildung und Wissensvermittlung	1	5
Befähiger Wissensvermittlung im Bildungssystem	1	3
Befähiger interne Aufklärung und Bildung	1	1
Befähiger Wissenschaftliche Aufklärung	1	1
11_Befähiger Technologie und Innovation	0	0
8_Technische und Innovationsbarrieren	0	0
Stakeholder Kollaboration und Externe Dynamiken	0	0
Ressourcen Management und Organisationsstrukturen	0	0

3_Selective Coding

Name	Dateien	Referenzen
Strategische Führung und Entscheidung	0	0
Wissen und Lernsysteme	0	0
2_Wissen und Verständnisbarrieren	0	0
10_Befähiger Wissen und Bildung	0	0
11_Befähiger Technologie und Innovation	0	0
Befähiger Quantifizierbarkeit durch Daten	1	5
Befähiger Einsatz von Technologie	1	2
Befähiger internes Ideenmanagement	1	2
8_Technische und Innovationsbarrieren	0	0
Notwendigkeit Forschung und Entwicklung	1	2
Barriere fehlende IT Lösungen	1	1
Stakeholder Kollaboration und Externe Dynamiken	0	0
12_Befähiger Stakeholder Engagement und Kommunikation	0	0
Befähiger Druck externe Stakeholder	1	17
Befähiger Kommunikation und Integration Mitarbeitende	1	16
Befähiger positive Praxisbeispiele	1	8
Befähiger interner Multiplikatoren	1	5
6_Externe Anforderungen und Engagement Barrieren	0	0
Barriere der NICHT Betroffenheit von Katastrophen	1	3
Barriere nur das Nötigste machen	1	2
Barriere ESG Gegner Einstellung	1	1
Barriere fehlende Wertschätzung für ESG-Treiber	1	1
16_Bewusstsein	0	0
Befähiger Betroffenheit durch Klimawandel	1	7
Befähiger zunehmende Schadensereignisse und Risiken	1	1
5_Markt und Ökonomische Barrieren	0	0
13_Befähiger Ökonomische Potenziale	0	0
Ressourcen Management und Organisationsstrukturen	0	0

3_Selective Coding

Name	Dateien	Referenzen
Strategische Führung und Entscheidung	0	0
Wissen und Lernsysteme	0	0
Stakeholder Kollaboration und Externe Dynamiken	0	0
12_Befähiger Stakeholder Engagement und Kommunikation	0	0
6_Externe Anforderungen und Engagement Barrieren	0	0
16_Bewusstsein	0	0
5_Markt und Ökonomische Barrieren	0	0
Barriere Wirtschaftlichkeitsbedenken	1	7
Barriere fehlende Forderung externer Stakeholder	1	2
Barriere Quantifizierbarkeit	1	2
Barriere mangelnde Risikobereitschaft	1	1
Barriere Wettbewerbsangst	1	1
Notwendigkeit Zugang finanzieller Mittel für Gründer	1	1
13_Befähiger Ökonomische Potenziale	0	0
Befähiger Ertragspotenziale	1	11
Befähiger Wettbewerbsdruck	1	4
Befähiger konkreter Mehrwert und Nutzen	1	2
Ressourcen Management und Organisationsstrukturen	0	0
14_Organisatorische Kapazität und Ressourcen	0	0
Befähiger unterstützende Organisationsstrukturen	1	12
Befähiger Aufbau Kapazität und Ressourcen	1	7
Befähiger unternehmensübergreifende Kooperationen	1	1
3_Ressourcen und Kapazitätsbarrieren	0	0
Barriere keine Kapazitäten	1	6
Befähiger Nachhaltigkeitsexperten	1	5
Barriere Ressourcenmangel	1	1
Barriere fehlende Wichtigkeit Nachhaltigkeitsmanager	1	1
Barriere nicht Einkaufen von ESG Experten	1	1
Notwendigkeit Aufbau von Fachpersonal	1	1

Round°2: Overview Excel-Sheet Consensus Statements

ERGEBNIS ZUSAMMENFASSUNG ROUND 2	Vollkommen einverstanden	Eher einverstanden	Weder noch	Eher nicht einverstanden	Überhaupt nicht einverstanden	Konsens in %
Kontext						
„Kurze Wege“ und die daraus resultierende Nähe zum (Top) Management sind entscheidend, um Nachhaltigkeitsinitiativen effektiv in die Unternehmensstrategie, Prozesse und Linientätigkeit zu integrieren.	25	3				100%
	28					
Eine koordinative, bereichsübergreifende Zusammenarbeit mit dem Nachhaltigkeitsmanagement ist essenziell für die Integration von Nachhaltigkeitsthemen in allen Unternehmensbereichen und (internen/externen) Stakeholdern.	27		1			96%
	28					
Je top-down geprägter die Unternehmenskultur, umso wichtiger die Vorbildfunktion des (Top) Managements im aktiven Vorantreiben und Vorleben der Nachhaltigkeitsziele, welches wiederum eng mit der Wirkungserzielung des Nachhaltigkeitsmanagements verflochten ist.	18	8	1	1		93%
	27				1	
<i>Host du weitere Gedanken in diesem Kontext, die keine der bisherigen Fragen abgedeckt hat?</i> <i>Falls ja, kannst du diese hier erläutern.</i>	Menschen gewinnen/begeistern/motivieren, ggü. denen man keine Weisungsbefugnis hat; Fisch stinkt vom Kopf; Gru					
ERGEBNIS ZUSAMMENFASSUNG ROUND 2	Vollkommen einverstanden	Eher einverstanden	Weder noch	Eher nicht einverstanden	Überhaupt nicht einverstanden	Konsens in %
Verständnis 1/4						
CST (unternehmerische Nachhaltigkeitstransformation) wird als umfassender und strategischer Wandel verstanden, der das gesamte Geschäftsmodell und die Unternehmenskultur umfasst. Dies beinhaltet die Herausforderung, Nachhaltigkeit in die gesamte Unternehmensstruktur zu integrieren, ohne dabei die Wettbewerbsfähigkeit zu beeinträchtigen.	19	8		1		96%
	27				1	
CSC (unternehmerische Nachhaltigkeitsveränderungen) steht für einzelne, nicht zwingend zusammenhängende interne Veränderungen innerhalb des Unternehmens.	15	12		1		96%
	27				1	
CSD (unternehmerische Nachhaltigkeitsentwicklung) betont die kontinuierliche Entwicklung spezifischer Projekte oder Bereiche, um langfristige Nachhaltigkeitsziele des Unternehmens zu erreichen.	19	6	2	1		89%
	27				1	
CST ist ambitionierter und weitreichender als CSC und CSD, da es eine grundlegende und nachhaltige Neuausrichtung der Unternehmensstrategie beinhaltet - die Transformation hin zu einem nachhaltigen Geschäftsmodell.	25	2	1			96%
	28					
<i>Host du weitere Gedanken in diesem Kontext, die keine der bisherigen Fragen abgedeckt hat?</i> <i>Falls ja, kannst du diese hier erläutern.</i>	Unterscheidung in Praxis unbekannt; Vorübergehende, wirtschaftliche Einbußen unumgänglich; Zielwerte					
Verständnis 2/4						
CST ist eine bewusste, tiefgreifende und umfangreiche Veränderung in einem Unternehmen, die Nachhaltigkeitsaspekte in alle Kernprozesse integriert, hin zu einem nachhaltigen Geschäftsmodell	23	5				100%
	28					
CST wird durch ein neues Verständnis der ökologischen, sozialen und ökonomischen Verantwortung eines Unternehmens angetrieben, welches die Notwendigkeit weiterer Forschung, Bildung und Sensibilisierung hervorhebt.	16	10		2		93%
	26				2	
CST umfasst eine umfassende Neuausrichtung von Unternehmenskultur, Strategie und Prozessen, um langfristig nachhaltig und verantwortungsbewusst zu agieren und die Zukunftsfähigkeit sicherzustellen.	19	8	1			96%
	28					
<i>Host du weitere Gedanken in diesem Kontext, die keine der bisherigen Fragen abgedeckt hat?</i> <i>Falls ja, kannst du diese hier erläutern.</i>	spezifischer Rahmen					
ERGEBNIS ZUSAMMENFASSUNG ROUND 2	Vollkommen einverstanden	Eher einverstanden	Weder noch	Eher nicht einverstanden	Überhaupt nicht einverstanden	Konsens in %
Verständnis 3/4						
Das Verständnis von CST wird sich vertiefen, da Nachhaltigkeit zunehmend als ökonomische Notwendigkeit und ethische Verpflichtung angesehen wird.	16	12				100%
	28					
Technologischer Fortschritt und globale Herausforderungen wie der Klimawandel werden die Dringlichkeit und den Umfang der erforderlichen CST verstärken und die Notwendigkeit weiterer Forschung und Bildung unterstreichen.	18	9		1		96%
	27				1	
Das Bewusstsein für die Bedeutung von sozialer und ökologischer Verantwortung wird weiterwachsen, wobei die jüngeren Generationen eine Schlüsselrolle in der CST einnehmen werden.	14	9	3	2		82%
	26				2	
<i>Host du weitere Gedanken in diesem Kontext, die keine der bisherigen Fragen abgedeckt hat?</i> <i>Falls ja, kannst du diese hier erläutern.</i>	NHM wird überflüssig weil Tiefenintegriert; Technologie ist Schlüssel					

ERGEBNIS ZUSAMMENFASSUNG ROUND 2	Vollkommen einverstanden	Eher einverstanden	Weder noch	Eher nicht einverstanden	Überhaupt nicht einverstanden	Konsens in %
Verständnis 4/4						
Regulatorische Anforderungen und politische Rahmenbedingungen sind Haupttreiber für das unternehmerische Verständnis von CST.	16	9	1	2		89%
	26				2	
Fortschritte in Technologie und Innovation sowie der zunehmende gesellschaftliche Druck (bspw. persönliche Betroffenheit durch Klimawandelauswirkungen, Ressourcenverknappung und resultierende Preisanstiege) und das daraus sich veränderte Konsumentenverhalten fördern das Verständnis und die Notwendigkeit von CST.	13	14		1		96%
	27				1	
Die Sichtbarkeit wirtschaftlich erfolgreicher Praxisbeispiele tragen zu einem tieferen Verständnis von CST bei.	15	9	2	2		86%
	26				2	
Aufklärung durch Forschung und Bildung fördern das Verständnis und die Notwendigkeit von CST.	11	12	3	2		82%
	26				2	
<i>Hast du weitere Gedanken in diesem Kontext, die keine der bisherigen Fragen abgedeckt hat? Falls ja, kannst du diese hier erläutern.</i>	Politik fehlt					
Verantwortlichkeit 1/4						
Die Entwicklung und Implementierung von Nachhaltigkeitsstrategien, die auf eine umfassende Unternehmenstransformation abzielen.	13	15				100%
	28					
Die Anpassung des Unternehmens an regulatorische Anforderungen und die Entwicklung von Nachhaltigkeitszielen, wobei der Fokus auf langfristige Wirtschaftlichkeit und Wettbewerbsfähigkeit gelegt wird.	14	11	2	1		89%
	27				1	
Kommunikation und koordinative Zusammenarbeit mit internen Stakeholdern, um eine nachhaltige Unternehmenskultur zu fördern und die Wissensvermittlung innerhalb des Unternehmens zu unterstützen.	21	7				100%
	28					
Das Monitoring und Reporting von Nachhaltigkeitsleistungen, welches die Transparenz und Rechenschaftspflicht gegenüber internen und externen Stakeholdern erhöht.	19	7	2			93%
	28					
Im engen, bereichsübergreifenden Austausch und (indirekt) berichtend an das (Top) Management.	18	9	1			96%
	28					
<i>Hast du weitere Gedanken in diesem Kontext, die keine der bisherigen Fragen abgedeckt hat? Falls ja, kannst du diese hier erläutern.</i>						
ERGEBNIS ZUSAMMENFASSUNG ROUND 2	Vollkommen einverstanden	Eher einverstanden	Weder noch	Eher nicht einverstanden	Überhaupt nicht einverstanden	Konsens in %
Verantwortlichkeit 2/4						
Eine ausgeprägtere Rolle als „Change-Agent“ und interner Multiplikator, bei häufiger Konfrontation mit der Herausforderung, interne Widerstände zu überwinden und den Willen zur Veränderungsbereitschaft in der Belegschaft zu fördern.	15	8		4	1	82%
	23				5	
Ausgeprägtere, direkte Beteiligung an der Umsetzung von bereichsspezifischen Nachhaltigkeitsprojekten, welche zunehmend durch die Bereiche selbst erfolgen sollten.	16	9		2	1	89%
	25				3	
Ausgeprägterer Fokus auf Innovation für spezifische Nachhaltigkeitsthemen und maßgeblicher Beitrag zur Entwicklung von Marktchancen und neuen Geschäftsfeldern.	11	12	3	1		82%
	26				1	
Ausgeprägterer Fokus neben strategischen Maßnahmen auf Übersetzung von operativen und praktischen Lösungen in realisierbare Aktionen.	12	11		5		82%
	23				5	
Ausgeprägtere Rolle als „Erklärbar“ und Wissensvermittler im Unternehmen.	18	7	2		1	89%
	27				1	
<i>Hast du weitere Gedanken in diesem Kontext, die keine der bisherigen Fragen abgedeckt hat? Falls ja, kannst du diese hier erläutern.</i>						
Verantwortlichkeit 3/4						
Die unternehmenskulturelle Dimension von CST wird oft unterschätzt und findet sich somit nur eingeschränkt in der offiziellen Jobbeschreibung	12	11	3	2		82%
	26				2	
Erlebt wird oft eine Lücke zwischen der strategischen Vision des Unternehmens und der praktischen Umsetzung, insbesondere wenn es um die Integration von Nachhaltigkeit in alle Geschäftsbereiche geht, welches auf die Notwendigkeit einer besseren Abstimmung und Klarheit in den Rollen und Erwartungen hinweist.	11	13	2	2		86%
	26				2	
Die Diskrepanz zwischen offiziellen und wahrgenommenen Verantwortlichkeiten entsteht häufig durch unzureichende Ressourcen und mangelnder Priorisierung seitens des (Top) Managements, welches zu einer Ausweitung der offiziellen Aufgaben führt.	15	10	2	1		89%
	27				1	
Die inoffizielle Rolle wird umfassender und einflussreicher als in der offiziellen Jobbeschreibung festgelegt wahrgenommen, welches die Notwendigkeit einer stärkeren Anerkennung und Unterstützung im Unternehmen unterstreicht.	14	8	3	3		79%
	25				3	
<i>Hast du weitere Gedanken in diesem Kontext, die keine der bisherigen Fragen abgedeckt hat? Falls ja, kannst du diese hier erläutern.</i>						

ERGEBNIS ZUSAMMENFASSUNG ROUND 2	Vollkommen einverstanden	Eher einverstanden	Weder noch einverstanden	Eher nicht einverstanden	Überhaupt nicht einverstanden	Konsens in %
Verantwortlichkeit 4/4						
Die Rolle wird sich von einer heute vorwiegend koordinierenden und beratenden Funktion zu einer zentralen Managementrolle entwickeln, in der sie aktiv an der Gestaltung der Unternehmenszukunft mitwirkt.	16	8	2	2		86%
	26				2	
Die Verantwortlichkeit wird zunehmend strategischer und spezialisierter, mit einer stärkeren Fokussierung auf die Sicherstellung von Nachhaltigkeit in die Unternehmensstrategie und Unternehmenskultur. Zusätzlich werden Mitarbeitende egal in welcher fachlichen Funktion selbst in Teilen zu "Nachhaltigkeitsmanagern".	18	8	2			93%
	28					
Eine Schlüsselrolle in der Anpassung an sich ändernde Marktbedingungen und regulatorische Anforderungen, bei gleichzeitigem vorantreiben innovativer Lösungen, neuer Technologien und nachhaltiger Geschäftsmodelle.	14	14				100%
	28					
Hast du weitere Gedanken in diesem Kontext, die keine der bisherigen Fragen abgedeckt hat? Falls ja, kannst du diese hier erläutern.	NHM wird überflüssig; Tiefenintegration in die Bereiche hat stattgefunden; Mehr Strategie,- und Entw					
Barrieren und Befähiger 1/3						
Noch kein Level der Tiefenintegration in die Bereiche erreicht und demnach wird jede Nachhaltigkeitsaktivität als zeitintensive Zusatzaufgabe oder Zusatzkosten wahrgenommen.	12	14		1	1	93%
	26				2	
Die Diskrepanz zwischen der strategischen Vision für Nachhaltigkeit und ihrer tatsächlichen Umsetzung in der Praxis, oft aufgrund unzureichender Unterstützung wegen mangelndem Nachhaltigkeitsverständnis auf der (Top) Managementebene.	12	11	2	2	1	82%
	25				3	
Widerstände und fehlende Veränderungsbereitschaft in Unternehmenskulturen und -strukturen, was die Integration neuer Praktiken und nachhaltiger Werte erschwert.	12	11	3	2		82%
	26				2	
Der Mangel an umfassendem Nachhaltigkeitswissen und interne Schulungen von Mitarbeitern, was zu einer Fehlausrichtung zwischen Nachhaltigkeitszielen und Ausführung alltäglicher Geschäftspraktiken führt.	11	11	1	3	2	79%
	23				5	
Beobachtet wird eine vorherrschende Fokussierung auf kurzfristige finanzielle Gewinne über langfristige Nachhaltigkeitsziele, was oft in begrenzten Ressourcen, Kapazität und Engagement für transformative Nachhaltigkeitsinitiativen resultiert.	10	11	3	2	2	75%
	24				4	
Fehlende, ganzheitliche Top-Down Vorbildfunktion und damit verbundenem aktiven Vorleben der Nachhaltigkeitsstrategie.	13	11	1	2	1	86%
	25				3	
Hast du weitere Gedanken in diesem Kontext, die keine der bisherigen Fragen abgedeckt hat? Falls ja, kannst du diese hier erläutern.	Vorstände denken nicht langfristig (Amtszeit!); Mangelndes Verständnis für Zusammenhänge, Chancen,					
Barrieren und Befähiger 2/3						
Fürsprache, sowie ein damit einhergehendes sichtbares und vorbildliches Engagement des Top-Managements fördern eine veränderungsaffine Organisationskultur, die Nachhaltigkeit in Geschäftsabläufen priorisiert und aktiv integriert.	18	8	2			93%
	28					
Regulatorischer Druck und zunehmende Anforderungen externer Stakeholder.	19	7		1	1	93%
	26				2	
Aufbau interner Kapazitäten durch die Entwicklung von Nachhaltigkeitsexpertise und damit das einhergehende Etablieren von Multiplikatoren bzw. weiter Nachhaltigkeitsspezialisten.	15	11	1	1		93%
	27				1	
Die Nutzung innovativer Technologien und Quantifizierung von Nachhaltigkeitsaktivitäten, um Organisationsziele mit nachhaltigen Zielen messbar zusammenzuführen.	15	8	3	2		82%
	26				2	
Zunehmende Schadensereignisse durch Klimawandel (bspw. Kreditausfälle) und damit einhergehende wirtschaftliche Konsequenzen.	10	11	3	4		75%
	24				4	
Klare, wirtschaftliche Best Practices im Wettbewerbsumfeld.	13	9	1	5		79%
	23				5	
Hast du weitere Gedanken in diesem Kontext, die keine der bisherigen Fragen abgedeckt hat? Falls ja, kannst du diese hier erläutern.						
Barrieren und Befähiger 3/3						
Nachhaltigkeitsexpertise im (Top) Management sicherstellen und damit einhergehende Integration von ESG in alle Entscheidungsprozesse.	20	7	1			96%
	28					
Der Aufbau einer veränderungsaffinen Organisationskultur.	21	6		1		96%
	27			1		
Bildung und bereichsspezifische Schulung.	17	9	1	1		93%
	27			1		
Schaffung kollaborativer, unternehmensübergreifende Netzwerke für Wissens- und Ressourcenaustausch.	15	12	1			96%
	28					
Kontinuierliche Anpassung von Nachhaltigkeitsstrategien, die auf Regulatorik, volatile Marktdynamiken und Stakeholder Feedback reagieren.	17	11				100%
	28					
Zentrale Verankerung im Zielsystem durch Quantifizierung und Incentivierung.	20	8				100%
	28					
Integration ESG im gesamten Bildungssystem (neues Allgemeinwissen).	19	8	1			96%
	28					
Hast du weitere Gedanken in diesem Kontext, die keine der bisherigen Fragen abgedeckt hat? Falls ja, kannst du diese hier erläutern.	Integration von ESG in konventionelle Abläufe der U.Praxis					