The role of stakeholders in a transition toward advanced corporate sustainability:

A representation of the European wind power industry and the case of Vestas Wind Systems A/S

Emma Kurvits

Supervisors

Philip Peck

Lisa Heldt

LUND UNIVERSITY

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THE INTERNATIONAL INSTITUTE FOR
INDUSTRIAL ENVIRONMENTAL ECONOMICS

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Abstract

The wind power industry has long remained passive on broader sustainability issues, grounded in the perception that the industry is inherently linked with environmental sustainability. Within the past 5 years, there has been a dramatic change in the stakeholder and corporate perception of sustainability. Increasing expectations from stakeholders are pressuring wind OEMs to transition and advance corporate sustainability strategies. Contingencies that explain corporate responses as an effect on these stakeholder pressures are limited in researched and little is yet known about the patterns and mechanisms of transition processes in established firms in the wind industry. This work draws on stakeholder theory, sustainable transition literature, and incumbency perspectives to pluralize previous literature and generate knowledge in the stage between the identified change in stakeholder expectations, and the implementation of a corporate sustainability transition process. The thesis takes a particular focus on describing the stakeholder landscape in the wind industry, explaining the progression of external and internal sustainability perception over time, and explaining the implications of such developments on environmental corporate strategy decisions. Empirical data is collected from 49 news articles in 3 independent online news magazines, 7 interviews with company managers, and 7 participant observations, analyzed and coded through a content analysis approach in NVivo. The findings show that stakeholder expectations and corporate responses are a continuous balancing act of misalignment and realignment in sustainability perception. Both reactive and proactive strategy approaches may coexist, which can be based on underlying motivations that also coexist on a spectrum of risk avoidant contra value adding drivers. These concepts tend to be distinctly separated in prior literature. This thesis also supports a positive relationship between responsive corporate sustainability transition and incumbency. Further research would be beneficial in other renewable energy sectors to address shared issues regarding lowering CO_2 emissions in the supply chains, handling increasing waste streams, and improving circular approaches across industries.

Keywords: wind power industry; stakeholder theory; corporate sustainable transition; incumbency

Executive Summary

Despite the conspicuous benefits of renewable energy on global CO2 levels and climate change, firms in the wind power industry have long remained passive on broader ESG issues up until the past 5 years when there has been a dramatic change in perception of sustainability. Increasing expectations from stakeholders are currently pressuring the industry and wind OEMs to transition and advance their corporate sustainability strategies. Contingencies that explain corporate responses as an effect on these stakeholder pressures are limited in research (Gonzáléz-Benito & Gonzáléz-Benito, 2010; Bulgacov et al., 2015) and to the knowledge of the author, the stakeholder landscape specifically in the wind industry has not been sufficiently addressed in prior research. Literature on the role of incumbent firms in corporate sustainable transition is widely debated and dispersed, accommodating contradicting viewpoints (e.g., Darnall et al., 2010; Steen & Weaver, 2017). Thus *"the role of incumbencies in transitions is a vibrant and promising avenue for research"* (Turnheim & Sovakool, 2020, p.183) and little is yet known about the patterns and mechanisms of transition processes in established firms in the wind power industry. Thus, there is room for pluralizing theories and generating knowledge in the stage between what occurs on a firm level at the identified change in stakeholder landscape and expectations, and the implementation of a corporate transition process. From a practitioner viewpoint, there is also a need to balance the expectations for sustainability advancement in the industry through joint efforts, while ultimately being able to keep up with the competitive landscape.

The **research aim** is to elucidate and characterize recent sustainability developments in the industry, and in doing so provide explanations on how stakeholder pressure can shape sustainable transitions and broaden corporate sustainability strategies in established firms that are inherently linked to environmental sustainability. The thesis takes a particular focus on I) describing the stakeholder landscape in the wind industry, II) explaining the progression of external and internal sustainability perception over time, and III) explaining the implications of such developments on environmental corporate strategy decisions. This can also highlight potential challenges and opportunities from a practical standpoint that can be valuable in corporate settings. The addressed research questions are the following:

RQ 1: How has the stakeholder narrative and constellations in the wind industry changed in the past 5 years?

RQ 2: How does the corporate perception of sustainability develop in relation to the stakeholder narrative?

RQ 3: How are established firms responding to and shaping this development through their corporate sustainability strategy?

The **research design** follows a descriptive and explanatory approach, using two methods for data collection. First, a public document review of news articles covering environmental sustainability topics in the wind power industry was applied, followed by a case study approach, which consists of interviews and participant observations from an established wind power OEM in the industry. This design was applied to I) capture longitudinal data regarding the development of sustainability perception in the wind industry, and II) derive in-depth knowledge about company responses to these changes. The empirical basis circumscribes data from 49 news articles in 3 independent online news magazines, 7 interviews with company managers, and 7 participant observations. The data was systematically reviewed using qualitative content analysis in Nvivo and in-depth analysis of themes that were identified. An initial and independent coding framework for the document review and case study data was developed before the analysis process, based on stakeholder literature, and research on corporate

sustainable transition and incumbency. During the data analysis process, the coding frameworks were iteratively adjusted based on the emergent findings (See all coding frameworks in Appendix B-E).

The **empirical evidence** supports that stakeholder constellations and their sustainability perspective affect how a firm's internal sustainability consciousness develops, what strategic decisions the business responds with, and what implications this entail. Furthermore, these stakeholder relationships need to be maintained according to their differences and similarities in sustainability perception and maturity. At the same time, there is an underlying and shared view across stakeholders regarding expectations on how sustainability should develop in the industry.

The first research question (RQ1) is answered as follows: There has been a common alignment in the perception of sustainability across the wind power industry and its stakeholders for a major part of the industry's history. The consensus has been that the installation of wind turbines is inherently linked to promoting environmental sustainability globally, and concerns surrounding broader ESG issues have been limited. Within the past 5 years, the stakeholder perception of sustainability has matured, which has caused misalignment in expectations and sustainability output by wind OEMs. As enough stakeholder pressure had been built, a turning point came in 2018-2019 when a corporate response was inevitable and the process of realigning on stakeholder expectations became a priority. This realignment is still at an early stage and is an ongoing process.

The second research question (RQ2) enfolded underlying drivers that motivated the case company to mature and align its perception, beyond stakeholder pressure. The main identified drivers were attracting investment, enhancing corporate reputation, enhancing employment branding and corporate culture, staying ahead of policy changes, upholding social license to operate, and gaining competitive advantage. Drivers can also be concluded to be motivated by, on one side of a spectrum risk avoidance, and on the other side of that spectrum added value to the company and stakeholders. Some drivers lean more, some less, toward one side of the spectrum and may thus overlap. Similarly, there is not a clear cut between underlying motivational drivers when it comes to competitive advantage contra social license to operate as there are conflicting views from stakeholders regarding the perceived value and true value of advancing sustainability strategy. The reason for overlapping motivations on either side of the spectrum can further be manifested by the notion that different managers have varied views coexisting under the same company, which generates a more complex view on corporate drivers than suggest in previous literature.

The third and last research question (RQ3) is concluded in this manner: First, following the combination of different motivations behind corporate drivers, both reactive and proactive environmental strategies can overlap and coexist when the corporate sustainability transition takes place. This is a pluralized perspective to existing research, which tends to distinctly divide the two strategies. Second, the findings show that especially top managers and executives have a crucial role to play in the event of moving from a reactive approach to taking proactive measures, as they pertain power to mobilize transitions quickly and firmly. Lastly, collaboration and governance innovation are important additional constituents of proactive engagement that have shown to be interdependent and increasingly important mechanisms when shaping the sustainability strategy and future outlooks in the industry.

The **main contribution** of this thesis is the following: I) stakeholder perception and corporate responses can be seen as a continuous balancing act of misalignment and realignment in corporate and stakeholder perception of sustainability; II) both reactive and proactive strategy

approaches may coexist, and this can be based on underlying motivations coexisting on a spectrum of risk avoidant contra value adding drivers, or license to operate contra competitive advantage. These concepts tend to be distinctly separated in prior literature, while this thesis suggests that strategy approaches and motivational drivers are not bound to be either or. III) this thesis also supports a positive relationship between responsive corporate sustainability transition and incumbency, which is a research area that tends to divide researchers.

The main **practical implications** deducted from the empirical evidence are that companies going through a transition can predict to avoid risk and gain value from a positive corporate image. It also allows the company to better retain and gain skilled and sustainably driven employees in the workforce, especially in a company that is inherently linked with sustainability. However, caution should be applied when pushing sustainability image strongly and suddenly as both internal and external perceptions of the company might not have developed at the same pace or have not been accepted as genuine yet. It will take time for the company to be able to show improvements in the actions undertaken and to show advancement toward meeting the goals and targets. To ratify proactive engagement and drive the development toward meeting the targets, stakeholder collaboration within and across industries is important, especially for technological development to decrease CO_2 emissions in the supply chain and foster circular approaches. Industry collaboration can help distribute the costs across the value chain and advancing sustainability commitments is also increasingly advantageous to attracting investment.

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Abbreviations

CBM – Circular Business model

CE – Circular Economy

CS – Corporate sustainability

EEO – External Environmental Orientation

EMF – Ellen McArthur Foundation

EoL – End of Life

ESG – Environmental, Social, and Governance

EU – European Union

EWEA – European Wind Energy Association

GHG – Greenhouse Gas

IEO – Internal Environmental Orientation

IPCC – International Panel on Climate Change

LCA – Life Cycle Analysis

NCE – North & Central Europe

OEM – Original Equipment Manufacturer

O&G – Oil and Gas

SBTi – Science-Based Target initiative

ST – Sustainable Transition

UN – United Nations

UNGC – United Nations Global Compact

R&D – Research and Development

RE – Renewable Energy

WWF – World Wildlife Fund

1 Introduction

An important stepping-stone in lowering global GHG emissions is the transition toward renewable energy and the phase-out of fossil fuels. In 2020 the global electricity generation from renewable energy sources was at 29% and grew by approximately 7% in 2020. The largest RE increase is further expected to come from wind power with an estimated level of 17% increase globally in 2021 (IEA, 2021). Undoubtedly the wind energy sector has a key role to play in the global sustainability agenda. However, the industry has also been facing various critiques, much of it regarding local environment disturbances, the threat to wildlife, and noise & aesthetic pollution, which has given a rise to several opposition groups (Dai et al., 2015). Moreover, as sustainability is becoming increasingly important in the contemporary context and public discourse, companies are being pressured by stakeholders to put stronger efforts into their sustainability commitments, and the wind power industry is no exception (Wind Europe, n.d.). Indeed, external stakeholder has proven to play a key role in firms where sustainability is not historically part of a firm's core business model (Bulgacov, 2015).

While wind energy emits close to zero CO_2 emissions during operation, there are other sustainability aspects related to the consortium of developing a wind power project that should not be forgotten. The upstream and downstream aspects of an installed wind turbine create environmental pressures in several ways and there is a growing global concern for the environmental damages caused especially in manufacturing activities (Ahmadi-Gh & Bello-Pintado, 2022). Other environmental concerns also arise regarding e.g., transportation of components and end-of-life management, such as waste generated and recyclability of blades (Bonou et al., 2016; Wind Europe, n.d.).

Vestas is a global OEM leader in the wind industry and is currently transitioning from a renewable technology focus at the core of its business model, to an increasingly holistic approach expressed by the company as "sustainability in everything we do" (Vestas, 2021, p.9). This is manifested in their sustainability strategy that was launched at the beginning of 2020 (Vestas, 2020), along with their circularity roadmap which was released in October 2021 (Vestas, 2021). Considering that the company is a pioneer that has worked in the wind industry for over 40 years (Vestas, 2020), the launch of the sustainability strategy can be considered to arrive rather late in the day. However, compared to peers in the industry[1], Vestas has with their recently adopted sustainability strategy and circularity roadmap taken a leading role in advancing the sustainability approach of the entire industry.

This thesis will examine the relationship between stakeholder pressures, sustainability perception developments in the renewable energy sector, and corporate sustainability in the past 5 years. The focus is especially on studying the role that stakeholders play in driving and motivating incumbent firms to advance their sustainability strategy. The study further investigates what implications arise for firms that have taken the role of paving the way in setting industry standards. Knowledge is derived from studying the nexus of stakeholder theory, sustainable transition theory, and incumbency, which is applied specifically to a wind industry context. This is achieved by conducting an in-depth document review and case study on the global wind OEM Vestas Wind Systems A/S (hereby referred to as 'Vestas').

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[1] Looking at reports and strategies from peer companies like, Siemens Gamesa (2020), General Electric (2020), Nordex (2020) and Enercon (2020), they all address sustainability, but so far Vestas's commitments are the most extensive.

1.1 Industry and company background

The beginning of the modern wind industry dates to the early 1980's when the first wind turbines were installed in Europe. The European Wind Energy Association (EWEA) was formed in 1982 in Stockholm and was at this point represented by individuals, rather than firms. Today it is called Wind Europe and is a big advocator of wind energy, consisting of several national wind associations, wind OEMs and other corporations, and NGOs. Vestas and Enercon were the first pioneers in the industry to sell and install turbines across Europe, yet while being industry leaders in renewable energy it would take up until 2020 before Enercon published their first sustainability report (Enercon, 2020) and for Vestas to implement a sustainability strategy (Vestas, 2020). Several policies from the local government level to the EU level have been implemented to promote the adoption of renewable energy and international agreements such as the Kyoto protocol, EU renewable energy targets and the Earth Summit in Johannesburg in 2002 have been important events for working toward lowering dependency on oil&gas and to lower global carbon emissions (Wind Europe, n.d-b.). In 2015 the European Commission launched its latest plan for the 'Energy Union' which, among other things, focuses on energy security, efficiency, and climate action to decarbonize the economy (European Commission, 2015).

The sustainability focus during the history of the wind industry has been primarily focused on lowering direct emissions from energy systems. Apart from policymakers, social movements have played a key role in the development of the wind industry. Especially environmental groups in the 1990s played an important role in advocating for the wind energy sector as a solution to environmental problems such as acid rain, air pollution, nuclear waste, and climate change (Vasi, 2011). A survey by the Eurobarometer in 2007 showed that 71% of EU citizens were "very positive" about the use of wind power in their country at this time (Wind Europe, n.d-b). However, the industry has also faced various pushbacks from different directions from the public. The primary environmental issues that have been discussed in the past relate to wildlife and bio-system disturbances, visual pollution, noise, interference of electromagnets, and local changes in the landscape (Dai et al., 2015). Regardless of positive or negative perceptions, it is clear that the focus has been on the operating turbines, while upstream, downstream, and other supporting functions of installing a wind farm have been more or less neglected. The main message has long been that wind power equals lower emissions (when substituting for O&G) and thus is an inherently sustainable industry. However, from an LCA perspective, the production of component materials is the stage responsible for most CO2 emissions, which mostly come from operations at suppliers' sites. The components further require heavy transport from manufacturing to the wind farm location (Bonou et al., 2016). Another concern is regarding end-of-life management and the ability to recycle components. While 85-90% of a wind turbine's total mass can be recycled today, the blades are more challenging due to the composite materials used in the production (Wind Europe, n.d-a.). The blades make up 10% of a turbine and can today be recycled at a rate of approximately 40%. Currently, in Europe, most of the old blades are reused in other wind turbines while the ones that are not economically feasible to reuse are incinerated or end up in a landfill. The number of decommissioned blades in the next 5-10 years is predicted to be so high that the current management system needs to change, and more blades need to be recycled. (Pinna, 2021). In 2050 it is estimated that almost 40 million tons of turbine blade material will have to be disposed of (Daunton, 2021). In light of this, several wind industry bodies are calling on the EU to put a landfill ban on wind blades by 2025 (Snieckus, 2021).

1.1.1 *Vestas Wind Systems A/S*

With approximately 29,000 employees, over 145 GW of wind turbines installed in over 85 countries, and more than 40 years of experience in the wind industry the Danish company

Vestas is one of the world market leaders in wind turbine manufacturing. The company design, manufacture, install and service wind turbines onshore, and more recently offshore across the globe. Vestas' purpose is shaped by four core values: Simplicity, Collaboration, Accountability, and Passion, which are embedded throughout company functions and operations (Vestas, 2021). Sustainability is also a central part of the company. While the company's main historical contribution to sustainability may have been seen as its contribution to increasing the supply of wind-powered energy (Wüstenhagen, 2003), the company has made substantial changes to its sustainability approach in recent years. This has led the company to be named the most sustainable company in the world according to the Corporate Knights Global 100 ranking (Scott, 2022). Some of the historical milestones before this achievement include the parent company committing to ISO 14001 certification in the year 2000 (Wüstenhagen, 2003), and committing to the UNGC in 2009. More recent developments include launching a global sustainability strategy and establishing a sustainability department in 2019, and the launch of a circularity roadmap in 2020 (Vestas, 2020).

In the second sustainability report since the sustainability strategy was released, a comprehensive view of the approach, vision, goals and targets, progress, challenges, and key figures can be found. Sustainability at Vestas is defined as "…reducing or eliminating negative environmental and social impacts. It also means maximizing the value that our business and products create for our customers, employees, shareholders, suppliers, local communities, and the planet at large." (Vestas, 2021, p.9). In a materiality assessment conducted in 2020, 21 important sustainability topics were identified, whereof 9 are considered crucial. These are 1) material efficiency, sourcing, and disposal, 2) emissions and climate change strategy, 3) waste management, 4) occupational health and safety, 5) supply chain management, 6) production health and safety, 7) community relations, 8) broader environmental role in society, and 9) diversity and inclusion. Some of the major environmental targets set by the company include reducing carbon emissions in its own operations by 55% in 2025. In 2030 the company aims to be fully carbon neutral without offsets in its own operations, reduce 45% of carbon emissions per MWh delivered to the market in the supply chain, as well as reach 100% recyclability of rotors. By 2040 Vestas want to be able to deliver zero-waste turbines. The baseline is 2019. The carbon neutrality targets were validated in 2020 by the Science Based Target initiative (SBTi), which is a program led by the Carbon Project, the UNGC, the World Resources Institute, and WWF, to i.e., define and promote best practices in emissions reduction and net-zero targets in line with climate science (SBTi, 2020).

Figure 1-1 The four key goals in Vestas' sustainability strategy

Source: Vestas (n.d.) Reprinted with permission.

As mentioned in the industry background, circularity issues, especially the recyclability of blades have quickly become a main concern in the wind industry. In October 2021, Vestas released a circularity roadmap and became the first organization in the wind industry to translate the theory of circular economy into actionable goals and targets. The roadmap is based on three key areas:

design, operations, and material recovery, each area with several short-term and long-term targets (Vestas, 2021).

1.2 Problem Definition

Established firms in non-renewable sectors such as oil, gas, and coal are often viewed to be passive or resist sustainable transitions due to their vested interest in the energy system (Mäkitie, 2020). In contrast, wind energy firms can be distinguished from the former sector by the fact that wind power is a source of renewable and clean energy and therefore inherently linked with solving global environmental issues such as reducing CO2 emissions and mitigating climate change. The wind power industry has thus been challenging the status quo for how society produces energy. However, despite the conspicuous benefits of renewable energy, firms in the wind power industry have remained passive with broader ESG issues up until the past 5 years when there has been a change in perception of sustainability. Increasing expectations from external stakeholders (e.g., customers, policymakers, and social actors) are currently pressuring the industry to broaden the sustainability perspective and transition its corporate sustainability strategy towards a more holistic approach (Wind Europe, n.d-a.).

Analysts hold that stakeholder relationships are linked to a firm's sustainability maturity and how managers prioritize stakeholder claims, which affects how corporate transitions are driven internally (Mitchell et al., 1997; Baumgartner & Ebner, 2010). However, the contingencies that explain corporate responses as an effect on stakeholder pressure have been less researched (Gonzaléz-Benito & Gonzaléz-Benito, 2010; Bulgacov et al., 2015). To the knowledge of the author the stakeholder landscape in the wind industry has not been sufficiently addressed in prior research and therefore its implications on responses in corporate sustainability strategy approaches are also presumably substandard. By investigating key stakeholder constellations, which in this thesis are referred to as groups of stakeholders that are eminently present in the sustainability discourse and contribute to shaping the sustainability narrative[2] in the industry, important insights on what drives corporations to increase their environmental performance can be made more explicit.

Another angle that is discussed in academic literature is the role and behavior of incumbent firms in corporate and industry transitions. In general, research in this area is dispersed and contains contradicting viewpoints (e.g., Darnall et al., 2010; Steen & Weaver, 2017) and little is yet known about the patterns and mechanisms of transition processes in established firms in the wind industry. Thus *"the role of incumbencies in transitions is a vibrant and promising avenue for research"* (Turnheim & Sovakool, 2020, p.183)

There is room for pluralizing theories and generating knowledge in the stage between what occurs on a firm level, at the identified change in stakeholder landscape and expectations, and the implementation of a corporate transition process. This knowledge gap is illustrated in Figure 1-1. Theories and concepts from previous research can thus assist in generating tentative explanations and further derive new knowledge regarding the motivations and drivers in firms by applying it to the contextual development of sustainability in the wind power industry. This specific real-world setting is yet novel and has so far been lacking purposeful empirical investigation. From a practitioner standpoint, there is a need to balance the expectations for sustainability advancement in the industry through joint efforts, while also being able to keep up with the competitive landscape. By getting a better understanding of evolving stakeholder constellations and narratives and how companies respond to changing expectations, important knowledge could be derived for established industry-leading companies like Vestas to retain

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[2] Narrative is in this thesis referred to as the environmental topics and focus that dominate the industry discourse.

credit and value, meet stakeholder expectations, and increase the likelihood of maintaining their leading position in the market.
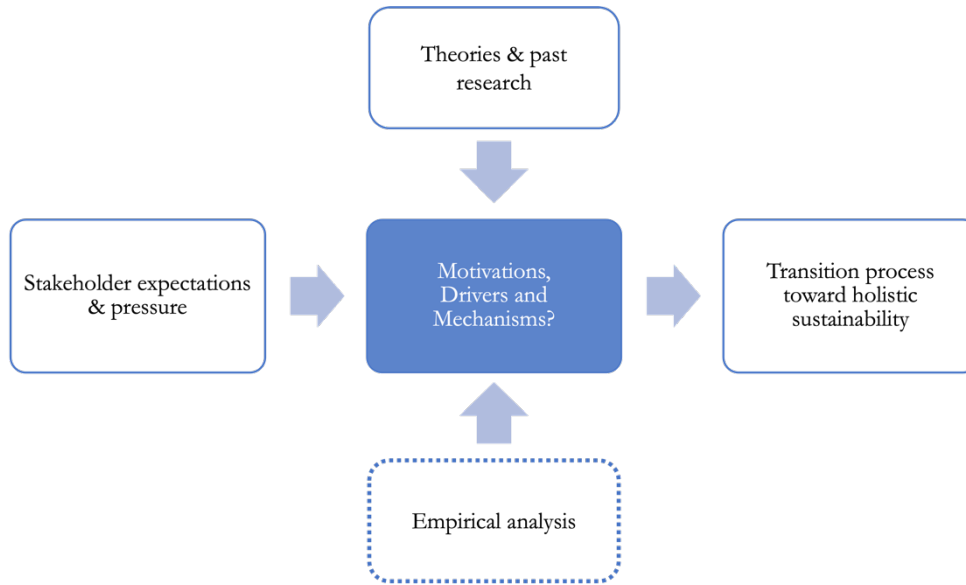
Figure 1-2 Visual illustration of the research gap

Source: Author's illustration

1.3 Aim and Research Questions

In response to the above problem discussion, this thesis aims to elucidate and characterize recent sustainability developments in the industry by providing explanations on how stakeholder pressure can shape sustainable transitions and broaden corporate sustainability strategies in established firms that operate in inherent environmentally-focused industries. This includes ascertaining and describing changes from a broader perspective in the wind industry's stakeholder landscape, and from a focused perspective investigating drivers and corporate strategic responses accordingly. In doing so, this thesis seeks to educe and pluralize knowledge in the conceptual nexus of stakeholder theory, sustainable transition, and incumbency, applied in a contemporary context.

The thesis is of descriptive and explanatory nature and takes a particular focus on I) describing the stakeholder landscape, II) explaining the progression of external and internal sustainability perception over time, and III) explaining the implications of such developments on environmental corporate strategy decisions. This can also help highlight potential challenges and opportunities from a practical standpoint that can be valuable to the corporate setting in general.

The following three research questions have been developed to meet the research aim:

RQ 1: How has the stakeholder narrative and constellations in the wind industry changed in the past 5 years?

RQ 2: How does the corporate perception of sustainability develop in relation to the stakeholder narrative?

RQ 3: How are established firms responding to and shaping this development through their corporate sustainability strategy?

1.4 Scope and Delimitations

This study is based on collecting and analyzing data from the wind industry through the lens of the individual firm. While the study considers changes in the broader industry, an important distinction is that the focus of this thesis is on producing knowledge about events on a *corporate level* as a response to changes in the broader industry.

Observations and in-depth interviews with employees at Vestas are used in a case example to answer the research questions. While Vestas is operating on a global level, most of the data collected are focused on the European market for two main reasons: I) to narrow down the scope to fit constraints in time and resources of this study, and II) since the interview participants are centered around North, West, and central Europe, this is also expected to be reflected in the obtained data.

This study also applies a temporal and geographical scope to the public document review. The news articles are consistently focused on the European market. A time horizon of 5 years, between 2017-2021, is used as a basis for the collection and analysis of all collected data. This is based on the logic that the wind industry's sustainability focus before 2017 was considered rather static. In 2017 only two of the five leading wind OEMs in Europe provided information to stakeholders through dedicated sustainability reporting. Not until 2020 this had been implemented by all of them. Therefore, the reason for starting the temporal scope in 2017 is to provide a baseline that captures the static era before Vestas and other wind OEMs started to broaden their sustainability commitments while avoiding redundant data by going further back in history. This is also outlined and explained in chapter 3.

1.5 Ethical considerations

1.4.1 Researcher honesty and personal integrity

One of the main ethical considerations to address is the fact that I have been conducting research with a company that I as an employee have a personal connection to. This could have implications on how data is collected and interpreted. Therefore, the study has been conducted in open and continuous dialogue with the company throughout the research phase to increase transparency. Further, I do not receive funding or compensation from the case company for the thesis project. The study uses different approaches for data collection and analysis to triangulate findings and avoid potential bias in this study. A richer discussion of the author's role and potential implications is provided in the limitations section in chapter 4.

1.4.2 Responsibilities to the subjects of research

The thesis follows the ethical principles presented by Bryman (2008) regarding the rights of the participants in social sciences research. The principles highlight participants' rights to I) be informed of the purpose of the research, II) permit to participate and withdraw consent at any stage of the process, III) have personal information handled with confidentiality, and IV) only have the information used for the purpose of the study. In this research, providing full anonymity is difficult as the number of employees of a position or within a certain department may be limited, allowing the reader to identify a participant from the working title. Therefore, participants must give their consent based on an informed decision of what participating in the research entails. To support this a consent form was distributed to the participants before the interviews, which was signed by both parties. The outcome of the study is not expected to be harmful or potentially harmful to any participants.

1.4.3 Managing and storing data records

With written consent from participants, interview data were recorded and stored on my personal computer and backed up on an external hard drive. The files are strictly confidential and stored solely for the purpose of this study, for a maximum of 5 years. Regarding company confidentiality, no documents or other information that has not been publicly disclosed, or has been granted permission by the company, has been used as a source of data.

1.6 Audience

The contribution of this study is expected to be of relevance both to other researchers and to practitioners. By contrasting and comparing theories derived from prior knowledge in the academic literature, this study delivers insights into their relevance and importance applied in a novel, and thus far, understudied context, which can be used to find pathways for future research. The main practitioner audience of this research are companies operating in other RE sectors (e.g., PV sector), established manufacturing companies in other industries that are planning to, or are currently, going through transition processes to advance their corporate sustainability strategy and managers in these companies and industries. Insights and findings from this study could lead to more effective ways for companies to engage with stakeholders and advance their sustainability commitments to satisfy stakeholders and bring value to the company.

1.7 Outline

This thesis is divided into 7 chapters that are organized as follows:

Chapter 1 introduces the research topic by introducing industry and company background, and explaining the problem definition, aim, and research questions that guide the analysis. Furthermore, it highlights important considerations regarding the scope, delimitations, ethical considerations, and intended audience.

Chapter 2 contains a review of current knowledge and concepts related to corporate sustainability and strategy. The purpose of this chapter is to provide the broader research context that this thesis builds on and contributes to.

Chapter 3 provides the conceptual and theoretical lens that is applied in this research to guide and mediate the data collection and analysis in order to answer the research questions and contribute to new knowledge.

Chapter 4 outlines the applied methodology and method, starting with presenting the research design, approach, and underlying logic of the research, followed by the methods chosen for data collection and data analysis. Finally, some limitations concerning data collection and analysis are highlighted.

Chapter 5 presents the main findings of the data from the document review and the case study combined with an analysis of the theoretical framework.

Chapter 6 discusses and interprets the findings from the aspect of their significance and relevance. This chapter also addresses the suitability of the research method and data limitations.

Chapter 7 concludes the research by summarizing and answering the research questions, followed by outlining practical implications and suggestions for future research.

2 Literature review on corporate sustainability and strategy

The purpose of this chapter is to review current knowledge in academic research on corporate sustainability and strategy to give a broad and nuanced understanding of the research that this thesis builds on. Since the focus of the thesis centers around events and drivers connected to the implementation of a sustainability strategy, the literature review will first outline current knowledge on corporate sustainability, followed by a more centered review on sustainability as a strategic approach. The review provides some important concepts and definitions that are relevant to the theoretical framework that is presented in the next chapter. Both gray literature and academic research are used in this chapter.

2.1 Corporate sustainability

On a macro-level, in society, 'sustainable development' is defined as the process to reach the goal of sustainability and when sustainable development is incorporated by an organization this is called corporate sustainability (Baumgartner & Ebner, 2010). Although corporate sustainability takes up increasing space in academia and among policymakers and businesses, managerial tools and frameworks to practically implement sustainability remain limited (Sanchez et al., 2022).

According to the classic definition by Elkington (1994) a sustainable company generates economic, social, and environmental benefits when striving for sustainable development, also known as the three pillars of sustainability. The early assertion of sustainability caused skepticism as social equity and environmental integrity was seen at odds with economic prosperity (Bansal, 2005). However, in the early 2000s, many large multi-national companies accepted that these sustainability principles were internally consistent, and the attitude and commitment to the principles changed considerably in its favor (Rondinelli & Berry 2000). It is now commonly assumed that corporate sustainable development can only be achieved at the intersection of the three pillars (Bansal, 2005).

In practice, **proactive** environmental actions can be distinguished as managerial routines and innovations that require organizational commitment, and that goes beyond what is required by law, to improve the natural environment (Hart, 2005). By implementing certain practices, firms can identify how the environment interacts with the corporate's production activities and thus how they can prevent environmental degradation (Rondinelli & Berry 2000; Darnall et al., 2010). Some examples of such practices include implementing environmental policies, using benchmarking as an assessment tool, establishing environmental performance goals and disclosing such information publicly, performing environmental audits, and training and engaging employees in ways to improve the environment (Darnall et al., 2010).

The selection of a company's environmental practices and actions is believed to depend on whether environmental considerations are interpreted by managers and executives as opportunities or threats (González-Benito & González-Benito, 2010). Indeed, there are divided views on the understanding, significance, and motivation for corporate sustainability practices. For some, it is merely a form of environmental **reactivity**, typical of companies that only strive to meet legal requirements and that associates sustainability with costs for the company, which is considered a 'necessary evil' to achieve corporate legitimacy (González-Benito & González-Benito, 2010; Hart, 2007; Bulgacov et. al, 2015). For others, it boils down to moral considerations (Hart, 2007; Bulgacov et. al, 2015) and environmental proactivity, which is typical of companies that strive to reduce their impact on the natural environment voluntarily (González-Benito & González-Benito, 2010). What can be concluded is that sustainability has

been accepted by firms as a precondition for doing business and achieving social legitimacy, but the approaches can differ vastly between different firms.

2.1.1 The environmental dimension of corporate sustainability

Baumgartner & Ebner (2010) lists what their research has found to be the most relevant environmental aspects that rise from corporate activities, namely, resource (material & energy) use, including recycled resources; emissions to air, water, and ground; waste and hazardous waste; impact on biodiversity; and environmental aspects of a product's life cycle.

The principle of environmental integrity ensures that the earth's land, air, and water resources are not eroded by human activities. Compromises in the natural environment will also lead to compromises in basic and necessary resources for human life, such as air, water, and food. Corporate environmental integrity thus entails putting effort to reduce the ecological footprint as every firm has an environmental impact (Bansal, 2005).

Similarly, Dyllick & Hockerts (2002) define ecologically sustainable companies as those that do not use natural resources above natural reproduction, that do not produce emissions at rates beyond the natural system capacity, and that does not engage in activities that degrade ecosystem services.

The link between renewable energy technologies and the environmental dimension could be described through the argument that RE firms promise alternatives to traditional energy sources and thus addresses the issue of both pollution and energy shortage. In an extensive literature review by Chang et al. (2017), it is revealed that sustainability issues of RE firms received less attention than in other energy sectors although the RE industry is not necessarily sustainable. Moseñe et al (2013) analyzed the sustainability reporting of Spanish wind energy companies and found that despite claims to be sustainable, the reliability, transparency, and credibility of these reports were lacking.

2.1.2 The social dimension of corporate sustainability

A common business approach to addressing the social dimension of sustainability is corporate social responsibility (CSR) which suggests that promoting the well-being of society is in accordance with a corporation's long-term interests (Chang et al., 2017). This entails that in corporate social responsibility not only shareholder interests and economic aspects are considered in corporate decisions, but legal, ethical, and discretionary expectations of all stakeholders are embraced (Bansal, 2005; Chang et al., 2017). Dyllick & Hockerts (2002) define socially sustainable companies as those that add value to the communities they operate in, and manage social capital in a way that stakeholders can understand and where they are in agreement with the company's values.

2.1.3 Sustainability and Circularity

In light of the ecological, social, and economic problems, like climate change, social inequality or biodiversity loss, the concept of Circular Economy is presented as a possible transition pathway in social structures, which has attracted interest from scientists, politicians, and corporate representatives lately (Geissdoerfer et al., 2017; Murray et al., 2017). The core goal is to improve resource productivity and efficiency (Nußholz, 2017) and move away from the current linear economy, or "take-make-dispose" system, that uses raw material from the earth and ends with disposed of products at the end of life. In contrast, the circular economy allows for natural resources to be in use for as long as possible through reuse and recovery strategies (Murray et al., 2017). Geissdoerfer et al., (2017) define the circular economy as "a regenerative

system in which resource input and waste, emission, and energy leakage are minimized by slowing, closing, and narrowing material and energy loops. This can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling" (p.759).

Recycling is a fundamental approach within the Circular Economy and is a significant part of sustainable practices (Murray et al., 2017), yet it should be managed as a last resort as the embedded value of the products and components are lost. Before this stage becomes inevitable the most effective way to retain a product's value is to maintain, reuse, repair, and/or refurbish them. When a product can no longer be used, components should instead be remanufactured and lastly recycled by being broken down into their constituent material (Ellen MacArthur Foundation, n.d.). Below is a summary from the Ellen MacArthur Foundation of some central concepts in the circular economy.

Table 1 Glossary of central Circular Economy concepts defined by Ellen MacArthur Foundation (n.d.).

Glossary	Definition
Recycle	"Transform a product or component into its basic materials or substances and reprocess them into new materials."
Refurbish	"Return a product to good working order. This can include repairing or replacing components, updating specifications, and improving cosmetic appearance."
Remanufacture	"Re-engineer products and components to as-new condition with the same, or improved, level of performance as a newly manufactured one."
Repair	"Operation by which a faulty or broken product or component is returned back to a usable state to fulfil its intended use."
Reuse	"The repeated use of a product or component for its intended purpose without significant modification."
Redistribute	"Divert a product from its intended market to another customer so it is used at high value instead of becoming waste"

Despite the increased importance of the circular economy for companies, academia, and policymakers, the conceptual relationship to sustainability is not clear (Geissdoerfer et al., 2017) and the circularity concept is prone to much criticism, especially when applied to circular business models (CBM) in corporations. Hofmann (2019) interprets criticism in the academic literature of CBMs and states that it is "just another green-coated business approach that reinforces neo-liberalism through its orientation toward shareholder value" (p.371). Most circularity conceptualizations appear to not reach fundamental change in business logic but rather incremental change, e.g., the issue of raising production and consumption that might lead to rebound effects, is not addressed. This in turn points to a weak sustainability approach (Bocken et al., 2018; Nußholz, 2017). Furthermore, closing the loop in global supply chains is a complex issue that is associated with high transaction costs and perceived uncertainty among the involved stakeholders (Rizos et al., 2016). It is thus important to understand that there are uncertainties about the positive environmental impacts of CBMs (Hofmann, 2019; Bocken et al., 2018; Nußholz, 2017) and that a circularity strategy or business model does not necessarily represent strong, holistic sustainability.

2.2 Corporate Sustainability as Strategy

Environmental business commitments to a firm's competitiveness and performance are a recurring theme in the environmental management field (Roy et al., 2001; Bidmon & Knab, 2018) and sustainability-related strategies are increasingly agreed upon among business executives to be necessary to be competitive in the business landscape (Dyllick & Muff, 2016). Strategically, general sustainability principles are incorporated into the organizational context i.e., environmental and social concerns are a part of the strategy, activities, and business operations (Montiel, 2008). In fact, sustainability has been regarded as an innovative strategic business opportunity to increase profits, increase market share, and reduce business risks. Moreover, socio-environmental practices have been indicated to enhance companies' strategic results (Bulgacov et. al, 2015; Dyllick & Muff, 2016). However, many organizations still find the benefits of environmental commitments to be unclear and uncertain since, in most cases, decisions are based on purely economic aspects (Roy et al., 2001), and many CS strategies do not reach their full potential or fail (Geissdoerfer et al., 2018). This might occur when companies neglect sustainability on a macro-level and instead focus on internal and incremental improvements solely for the benefit of the company (Dyllick & Muff, 2016; Landrum, 2018).

There are several organizational influences, factors, and drivers that support or hinder the integration of CS into strategic management (Engert et al., 2016). Engert & Baumgartner (2016) presents organizational structure and culture, leadership, employee motivation, management control, and communication as important internal factors that need to fit together coherently. Furthermore, when it comes to shaping any organizational strategic direction, the values and vision of that organization play a key role in terms of strategic power (Shrivastava, 1995). They drive culture as well as culture change (Humble, et al., 1994), which is necessary to foster the integration of sustainability (Engert & Baumgartner, 2016). Additionally, entrepreneurship and intrapreneurship are mechanisms that may result in organizations becoming environmental leaders which can provide an international competitive advantage (Porter & Van der Linde, 1995).

Baumgartner & Ebner (2010) define four general stages of sustainability strategy which describe different generic possibilities to deal with sustainability challenges in a firm. To develop a comprehensive sustainability strategy, all three pillars of sustainability need to be considered. Depending on the sustainability maturity level of the company, the focus is either more on causes or effects, a higher level of maturity is linked to a stronger focus on addressing the causes of environmental issues, rather than merely the effects.

Table 2 Four stages of sustainability strategy by Baumgartner & Ebner (2010).

Maturity	Strategy	Focus
Introverted	Risk mitigation strategy	- Legal and external standards - Avoid risk for the company
Extroverted	Legitimating strategy	- External relationships - License to operate
Conservative	Efficiency strategy	- Eco-efficiency - Cleaner production
Visionary	Holistic sustainability strategy	- Sustainability within all business activities - Differentiation & innovation - Offers stakeholders unique advantages

However, CS strategy implementation is a long-term and continuous process and depends on contextual issues, it is therefore difficult to generalize factors leading to successful strategy implementation (Manninen & Huiskonen, 2022).

2.2.1 Strong and holistic sustainability

When discussing sustainability, it should also be recognized that there exists a spectrum of different views and definitions of the concept. The range between weak and strong sustainability is a normative theory that identifies criteria for distinguishing sustainable from non-sustainable strategies (Roome, 2011).

There is no common consensus in the literature on the definition of holistic sustainability. Researchers have developed different typologies in defining the level of maturity of sustainability focus in firms. Often, they have attempted to rank different corporate activities and strategies and declare some mechanisms and approaches the 'most' sustainable. For example, in Baumgartner & Ebner's paper (2010), the 'Visionary' firm has the most holistic sustainability strategy. These strategies entail a strong commitment to becoming a market leader in sustainability issues and combine outside-in and inside-out perspectives. This means that the firm is oriented both on its impact on the market as well as on continuous improvements of sustainability inside the company. Other typologies and definitions of 'holistic' or the highest form of sustainability are summarized in the table below.

Table 3 Different academic definitions of holistic or strong sustainability.

Authors	Typology framing	Definition
Baumgartner & Ebner (2010)	Systemic visionary – holistic sustainability strategy	Strong commitment to becoming a market leader in sustainability issues and combines outside-in and inside-out perspectives, meaning that the firm is oriented both on its impact on the market as well as on continuous improvements of sustainability inside the company.
Dyllick & Muff (2016)	Business sustainability 3.0: Truly sustainable business	Truly sustainable business shifts its perspective from seeking to minimize its negative impacts to understanding how it can create a significant positive impact in critical and relevant areas for society and the planet. A Business Sustainability 3.0 firm looks first at the external environment within which it operates and then asks itself what it can do to help overcome critical challenges that demand the resources and competencies it has at its disposal (p. 165-166).
Sanchez et al. (2022)	Holistic sustainability	Policies with a long-term vision and a broad perspective that encompasses sustainable actions for reshaping the interaction of the company with its stakeholders (p.4).
Landrum & Ohsowski (2018)	Coevolutionary (very strong sustainability)	Firms understand the place of humans, corporations, and societies as existing in partnership with the natural world, giving as much as receiving (p.132).

One important aspect of achieving more holistic sustainability discussed by Grimm et al., (2022) is the expansion of focus from merely the own firm and its operations, to include actors upstream and downstream in the supply chain as well. However, pushing sustainability standards to suppliers can be a complex task, especially in global multi-tier supply chains. There might be

resistance from suppliers and sub-suppliers or conflict as they receive several different customer requirements, which would put the focal firm in a tough position. The success or failure in aligning requirements and objectives with multiple tiers of suppliers will thus affect the focal firm's ability to meet other stakeholder expectations and achieve more inclusive and holistic corporate sustainability.

3 Theoretical framework

The purpose of this chapter is to define the theoretical framework which is based on stakeholder theory, incumbency, and sustainable transition literature. This chapter also aims to connect the theories to corporate sustainability and strategy concepts as presented in the previous chapter. The purpose of the conceptual framework is to guide the data collection and data analysis process to adequately discuss results and contribute to academic knowledge. This chapter is solely based on academic research and does not contain any grey literature.

3.1 Stakeholder Theory, Management, and Salience

The classic explanation of stakeholders as defined by Freeman in 1984 reads "any group or individual who can affect or is affected by the achievement of the organization's objectives" (p. 25). This is a broad definition and much of the stakeholder theory literature both before and after Freeman has tried to define what counts as a stakeholder and what roles they play (Mitchell et al., 1997; Hörisch et al., 2014). Stakeholder theory also talks about how particular stakeholder groups have different views on organizations and their operations. In other words, there exist different social contracts with these groups that organizations must maintain, according to stakeholders' expectations (Deegan & Blomquist, 2006).

What is less relevant in this research is to define what 'any stakeholder' could be to wind OEMs, more relevant is to identify who has been the key stakeholders throughout the years, how this might have changed, and what this entails regarding expectations from stakeholders and responses from firms. Indeed, as identified by Mitchell et al (1997) stakeholder attributes are not held at a steady state, thus the power of influence can increase or decrease with time. This also means that all stakeholders are not equal or equally influential at times, but their influence depends on their possession of three different classes of stakeholder attributes, namely power, legitimacy, and urgency (Mitchell et al., 1997). Power can shortly be described as the ability and probability of one actor within a social relationship to bring about a desirable outcome despite resistance from the other(s) (Weber, 1947; Salancik & Pfeffer, 1974). Legitimacy is defined by Suchman (1995) as "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (p. 574). Lastly, urgency is defined by Mitchel et al., (1997) as "the degree to which stakeholder claims call for immediate attention" (p. 867) and is thus based on the time-sensitivity and criticality of the claims. These attributes can be possessed independently or in combination, resulting in a different type of stakeholder influence and salience, which is "the degree to which managers give priority to competing stakeholder claims" (p. 854).

Therefore, more important than finding a general definition of 'stakeholders' is how stakeholder theory is used in practice, and sustainability management. A fundamental aspect that explains the stakeholder approach is that "firms are actors in the social environment and thus should respond to pressures and demands from their stakeholders, to achieve their strategic objectives" (Linnenluecke & Griffiths, 2013, p.388). Stakeholder management can thus be useful for creating value in sustainable management, both internally and externally to a company (Hörisch et al., 2014). Researchers suggest that well-managed relationships with various stakeholders can be associated with better financial performance (e.g., Freeman, 1987; Bulgacov et al., 2015; Darnall et al., 2010). Stakeholders can also play a crucial role by pressuring organizations to adopt proactive business practices that improve their environmental performance (Darnall et al., 2010), and by including the interests of diverse external actors, companies can achieve enhanced reputation and legitimacy, gain competitive advantage, create wealth, and stimulate a distinctive position for the company (Hart, 2007; Darnall et al., 2015). Furthermore, a firm's ethical behavior is believed to be a valuable quality and a firm's social legitimacy will influence stakeholders' respect and trust (Pucheva, 2008).

However, there are challenges regarding how sustainability interests are created, co-created, and strengthened in stakeholder relationships (Hörisch et al., 2014). According to several surveys summarized and highlighted in a paper by Silva et al (2019), there seems to be a large general dissatisfaction among primarily consumers and managers regarding companies' sustainability performance measurements and assessments. This could be explained by inadequate understanding and integration of stakeholder expectations (Silva et al, 2019). It could also be a matter of difficulty and burden for companies to reconcile all stakeholder's interests. Regardless, research shows that the level of sustainability practices implemented in a company is strongly linked to the relationship with stakeholders, and their interests (Bulgacov et al., 2015). Something that has been less researched is the identification of the contingencies that explain the effects of such pressures (Gonzaléz-Benito & Gonzaléz-Benito, 2010).

3.1.1 Stakeholder constellations

As presented above, corporate activity is embedded in a network of stakeholder relationships. The type of stakeholders and their level of influence can vary vastly between industries, firms, and over time (Darnall et al., 2010; Mitchell et al., 1997; Hörisch et al., 2014). Research suggests that different corporate sustainability actions and response is encouraged by different types of stakeholders (Gonzaléz-Benito & Gonzaléz-Benito, 2010). For example, Henriques & Sadorsky (1999) supports the idea that environmental reactivity is associated with greater pressure from regulatory stakeholders and the media, whereas greater pressure from community stakeholders is associated with environmental proactivity.

There are different approaches in the literature on how to group stakeholders, most commonly to divide them into primary and secondary stakeholders (e.g., Donaldson & Preston, 1995; Chang et al., 2017) depending on if they have a direct economic state in a firm or not. However, since the focus in this thesis goes beyond purely economic aspects, stakeholder groups will be divided more objectively into external and internal stakeholders, following the logic of Hart and Milstein (2003) and Lozano (2018).

Table 4 Overview of internal and external stakeholders.

Internal Stakeholder	External stakeholders
Employees	Customers
Managers	Buyers & Suppliers
Shareholders	Investors
	Societal groups
	Media
	Academia
	Environmental Regulators
	Competitors

Internal stakeholders

Internal stakeholders include management and non-management employees, which are both critical to the performance of any corporate strategy (Freeman, 1984). Employees that are satisfied and supportive of a firm's environmental goals are more prone to continue their employment, while dissatisfied employees may terminate their employment and in more extreme cases engage in public whistle-blowing that would expose the firm's environmental negligence (Henriques & Sadorsky, 1996).

Managers play a central role in stakeholder management as their perception is critical to interpreting the level of stakeholder influence and salience when they make decisions regarding

corporate strategy (Darnall et al., 2010). Thus, it is not only the degree of stakeholder environmental pressure (pressure intensity) that matters but add also how this pressure is perceived by managers (perception capacity) in charge of strategic decisions. Managers' values and beliefs and their perception to interpret environmental themes as opportunities or threats might give rise to different sustainability initiatives (Gonzaléz-Benito & Gonzaléz-Benito, 2010).

External stakeholders

External stakeholder includes a wide range of actors, which cannot all be covered here. Some of the most commonly discussed actors in stakeholder management literature include customers, investors, societal groups, media, policymakers, and supply chain actors (e.g., Chang et al., 2017; Attanasio et al., 2022; Bulgacov et al., 2015).

Customers are naturally crucial to companies since there is a direct exchange of value between producers and consumers and without them, there could not be any business ongoing. In the conventional value creation process, these roles were distinct and occurred outside the market, however, customers are increasingly interested in defining and co-creating the value-creating process, which required deeper engagement and dialogue with customers (Prahalad & Ramaswamy, 2004).

Another crucial stakeholder group is corporate buyers or suppliers in the value chain. As supported by Gonzaléz-Benito & Gonzaléz-Benito (2010) the place in the value chain, and proximity to the end customer can be important to the level of environmental proactivity undertaken by a firm. Final producers often receive higher pressure intensity from stakeholders and thus must take leadership and push sustainability initiatives upstream in the value chain to satisfy other external stakeholders. However, it can also work the opposite way where buyers or suppliers that are dissatisfied with the environmental strategy of a focal firm are likely to respond by canceling purchases, selling agreements, stopping delivery of inputs, or requesting environmentally sound substitutes (Darnall et al., 2010).

Societal stakeholder groups have since the mid-1980s had a significant rise in influence in international affairs (Doh & Guay, 2006). These stakeholders include i.e., labor unions, local communities, environmental organizations, NGOs, and industry organizations (Etzion, 2007) which have the capacity to influence and muster public opinion on a firm (Freeman, 1984). When striving for influencing a firm's environmental strategy, different societal stakeholders often align in an attempt to increase their salience (Mitchell et al., 1997) and sum the role of monitoring discussions and in some cases work as enforcers of social and environmental standards (Hart & Milstein, 2003). An extension of societal stakeholders would also include the media and academia. The media can be a powerful stakeholder to influence a company or industry's reputation by discussing industry or company sustainability trends (Attanasio et al., 2022). It is also a platform for other stakeholders to voice their opinions and perception of firms (Hart & Milstein, 2003). The relationship between academia and industry has been widely discussed across the globe. The focus of academia is on research and publications while industry focus on practical applications of theory and innovation of technology, which forms a basis for business. Having a successful collaborative approach is thus imperative for long-term growth and to provide value to both parties (Koushik, 2020).

Another increasingly external stakeholder group is environmental regulators, which consist of individuals within the government who create and inspect a firm's compliance with environmental requirements. In case of non-compliance with those requirements or when communicating with regulatory stakeholders, the firm could risk incurring penalties (Henriques & Sadorsky, 1996).

3.2 Sustainability Transition, Stakeholders, and Incumbency

3.2.1 The role of stakeholders in sustainability transition

To discuss sustainability transitions (ST) processes, an understanding of what drivers exist for firms to take part in a change process toward sustainability in the first place is needed. From this review, it can be argued that these drivers can appear from different directions, on a horizontal and a vertical spectrum. The vertical spectrum contains on one end top-down factors, i.e., change coming directly from policymakers, regulation, and competition (Baldassare, 2020). It can also emerge from the bottom-up, which reflects changes in civil society and other societal groups (Ruggiero, 2021). Change can be driven between customers, competing organizations, or industry peers in form of isomorphism[3] or co-creation (Prahalad & Ramaswamy, 2004), where the crossing between sustainability-driven niche players and incumbent firms plays a key role (Schaltegger, 2016). Below, stakeholders as drivers have been mapped as top-down or bottom-up and according to the internal and external stakeholders presented in the previous section on stakeholder constellations. Note that competitors, customers, and suppliers have all been mapped both as top-down and bottom-up as their approach to driving sustainable transitions can occur in both ways (Darnall et al., 2010).
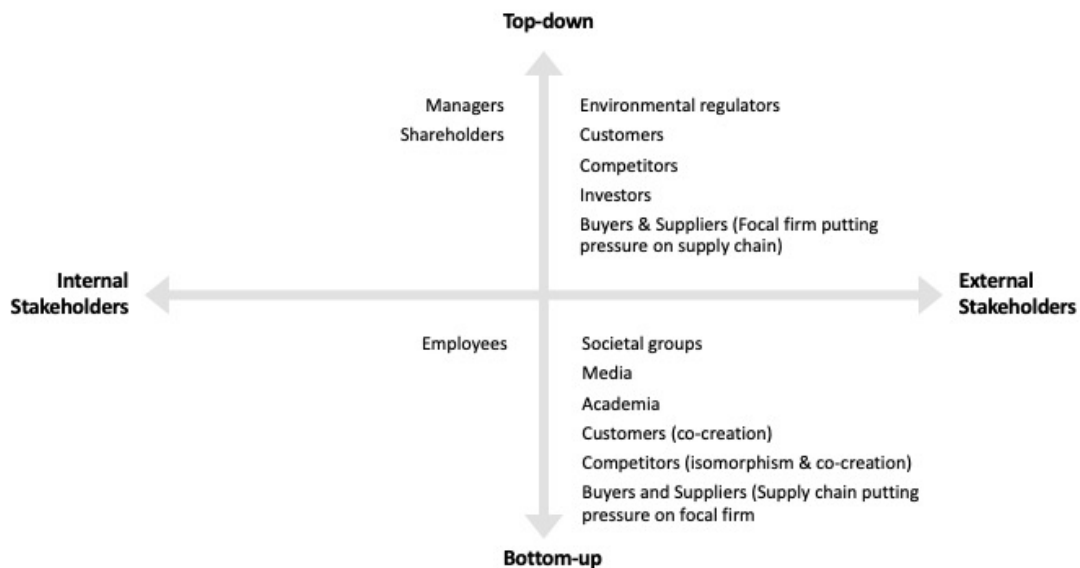
Figure 3-1 Stakeholder drivers for sustainability transition processes.

Source: Author's illustration based on research by Baldassare (2020), Ruggiero (2021), Prahalad & Ramaswamy (2004), Schaltegger, 2016, and Darnall et al., (2010).

Another angle that theory discuss is the relationship between stakeholders and organizational sustainable transition through environmental orientation. The environmental orientation of an organization reflects which extent managers and employees legitimize the organization's impact on environmental issues (Banerjee et al., 2003). The environmental orientation results from internal or external pressures that successfully develop environmental consciousness in the organization. The higher this consciousness is manifested, the more likely it is that a firm will

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[3] Isomorphism as a central concept in institutional theory and refers to the homogenization and force to resemble other organizations involved in the same environment to maintain a competitive position in the market (DiMaggio & Powell, 1983).

be environmentally proactive (Saleem et al., 2021). This is an important part of the business's strategic disposition and translates to how environmentally sustainable business operations are perceived by stakeholders (Chan & Ma, 2021). Banerjee et al., (2003) recognize two main dimensions of environmental orientation. Internal environmental orientation (IEO), which is society's expectations of an organization, concerning the natural environment, makes the organization develop standards and values to address the environment. Saleem et al., (2021) can also confirm in their study that IEO has a significant direct effect on proactive environmental strategies. In turn, external environmental orientation (EEO) is the response or the need of a response from an organization to the stakeholder's environmental concerns and relies i.e., on managers' perceptions of issues that merit a response. This has a direct effect on reactive environmental strategies in a firm.

There is thus a strong consensus in the literature that stakeholders have a significant influence not only on sustainability management but also on change processes and strategy (Bulgacov, 2015; Steen & Weaver, 2017; Pucheva, 2008; Ruggiero, 2021). Generally, where sustainability issues are not historically part of a firm's core business model, external stakeholders play a crucial role by bringing new perspectives and knowledge (Bulgacov, 2015). Especially customers are pointed out as a central stakeholder group, where "following the customer" (Steen & Weaver, 2017), upholding a positive reputation, or avoiding the risk of a negative reputation (Puncheva, 2008) are considered drivers for diversification. Thus, if there is a gap in expectation and outcome from stakeholders on a firm's sustainability commitments, as discussed by Silva et al (2019), one can expect that this would ultimately affect the firm reputation negatively.

3.2.2 Sustainable transition and incumbency

From the review, it becomes evident that literature on incumbency and ST goes hand in hand with the conceptual framework of the multi-level perspective (MLP), which talks about change processes in socio-technical regimes (Darnall et al., 2010; Steen & Weaver, 2017; Turnheim & Sovakool, 2020; Smith et al., 2005). Although this thesis will not dive deeper into this framework, it does highlight an important perspective, that incumbent firms many times are stereotyped as 'villains' by being locked into established regimes, i.e., preventing, or slowing down sustainable transition efforts (Penna & Geels, 2015; Stirling, 2014). This could further be explained, as discussed by Bowen (2002), by the firm size of many incumbent firms, which concur with organizational power and the ability to resist external stakeholder pressure. However, other researchers do not agree with this perspective and suggest that incumbent firms play an important role in industry and sustainable transitions (Steen & Weaver, 2017) and that large firms are more environmentally responsive than smaller firms (Darnall et al., 2010). Steen & Weaver did a study on incumbents' diversification in the oil&gas and hydropower industry and found that incumbents tend to be motivated by proactive factors, rather than reactive. This could be explained by the notion that incumbent firms might recognize the value of proactively engaging with transitions more tactically, e.g., to influence institutional change, or to gain a competitive advantage over rivals (Turnheim & Sovakool, 2020).

Another reason to think that incumbents have an important role to play is the notion that the European Commission, several national governments (e.g., Netherlands and Germany), and research & advocacy institutes (e.g., Ellen MacArthur Foundation) assume that incumbent companies and entrepreneurs are powerful players to shift from a linear to a circular economy, which is a radical reorganization of the current socio-technical regime (Murray et al., 2017; Su et al., 2013). Yet, considering the different perspectives on incumbents' role in ST, this type of research seems to call for more practical applications.

3.3 Synthesis

In general, there is a lot of past research on stakeholder theory, sustainable transitions, and incumbent firms, and there seems to be a strong positive relationship between stakeholder pressures and the adoption of proactive environmental performance in firms. Yet, several papers call for pluralizing perspectives and expanding research to other contexts and industries (e.g., Steen & Weaver, 2017; Turnheim & Sovakool, 2020; Silva et al, 2019). The recent sustainability development in the wind power industry has not been studied extensively but theories and concepts from the literature review could help in explaining and understanding the development and its implications for sustainability in the industry. Vestas is an incumbent firm going through a sustainability transition in a landscape where stakeholders play a key role. By better understanding why and how sustainability transitions are taking place and what role stakeholders and stakeholder management play, one might find more effective ways for companies to make more advanced sustainability commitments that satisfy stakeholders while bringing value to the company and society.

4 Research Methodology & Method

The first part of this chapter presents the research methodology, which includes the underlying research logic, approach and design applied in this thesis. Second, a description of the qualitative method is presented, which includes stages and reasonings for data collection and data analysis. Finally, this section is concluded by addressing the researcher's limitations.

4.1 Research Philosophy

The research paradigm refers to the type of philosophical framework and the researcher's perception of reality, which underlies how research is carried out. This in turn influences the chosen strategies and techniques for data collection and analysis (Collis & Hussey, 2014). The general philosophical orientation of this research follows the logic of a social constructivist worldview. The constructivist worldview focuses on deriving knowledge from the subjective meaning of certain experiences, objects, or phenomena, often formed by social, cultural, and historical norms that are present in an individual's life. As meanings can be multiple and varied, this type of research studies the complexity of these relationships (Creswell & Creswell, 2018). In this thesis, the underlying logic can be translated into deriving knowledge from the phenomena of changing (historical) norms in the wind industry, where the "individuals' life" refers to companies undergoing this change. The research design is built on the nature of the research problem which on one hand consists of recent and understudied changes in sustainability in the wind power industry. On the other hand, there exist tentative explanations from previous research in different fields (mainly business, management, sustainability, and institutional evolution and change), yet as these are many and often conflicting it is not obvious what applies in the context of wind OEMs. There is thus a need to understand the complexity behind the drivers and motivations for such changes. As such, this study is both **interdisciplinary** and **interpretive** in nature.

4.2 Research design

Following the worldview, a **qualitative** approach has been undertaken to I) capture longitudinal data regarding the development of sustainability perception in the wind industry and II) derive in-depth knowledge about company responses to these changes. Qualitative research is heavily based on interpretations by both researchers and the subjects that are being studied. These interpretations face the risk of being faulty and as such, it is important to try to minimize the flaws and bias of the study (Stake, 2010). Therefore, this thesis will triangulate the data by taking multiple approaches for data collection and analysis to increase confidence in the interpretations being made. Two approaches for data collection are adopted: a public document review on news articles covering environmental sustainability topics in the wind power industry, and a case study approach, containing interviews and participant observations from an established wind power OEM in the industry. Further details on the data collection process will be presented in section 4.3. All sources of data were systemically reviewed following a content analysis approach by being coded in the software program Nvivo, followed by an in-depth analysis of recognized and emergent themes. The public document review and case study data were coded using two separate coding frameworks accordingly. The coding frameworks are presented in Appendix B-E.

A **content-analysis** method is applied for data analysis to primary and secondary data in this thesis. First, it is applied to news articles of three independent online news journals. Content analysis has a long history (Guthrie & Abeysekera, 2006) and is a dominant research method in sustainability research of empirical nature (Arvidsson, 2018). Mayring's (2010) description of content analysis is described as a set of techniques for a systematic analysis of different kinds of texts addressing not only manifest content but also the themes, latent content, and core ideas found in texts (Drisko & Maschi, 2015). One focus of this study is to analyze public documents

in form of news articles to find how stakeholder perceptions of sustainability in the wind power industry have changed over time. This part of the study takes a primarily **descriptive** approach, utilizing qualitative data analysis for longitudinal representation. Broad critical analyses are not commonly the main purpose of qualitative content analysis (Drisko & Maschi, 2015), rather the public document review serves as a basis for contextualization that feeds into the next research phase, which takes a **single case study approach** to provide an in-depth analysis based on primary empirical evidence from interviews and observations.

This study follows the views of Yin (2014), who provides a twofold definition of a case study divided into *scope* and *features*. He defines the scope of a case study as "an empirical inquiry that investigates a contemporary phenomenon (the "case") in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (p.16). In line with this definition, this thesis seeks to study an incumbent firm (Vestas) in the context of stakeholder relationships and sustainability transitions. Especially the focus on sustainability transitions, given its relatively recent and rapid expansion in research (Köhler et al., 2019), can be viewed as a contemporary phenomenon. Yin further expands his definition as follows:

> A case study inquiry copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result benefits from the prior development of theoretical propositions to guide data collection and analysis (2014, p.17).

Indeed, this research copes with a distinct situation and the units of analysis are organizational strategic practices observed at multiple levels, including operational and strategic practices that involve sustainable activities and multiple stakeholders. Furthermore, the research method is guided by previous research in the fields of corporate sustainability, incumbency, and transition process. Findings from the case study are derived by contrasting the empirical observations with previous research and theories to understand and explain the relationship between sustainability practices and stakeholders' perception and involvement. Thus, this part of the research method is **explanatory**, i.e., the purpose of the case study is to explain how or why some conditions came to be (Yin, 2014).

Ultimately, the design of this study will allow to highlight the mechanisms and drivers of sustainability activities that are practiced by the company under study, and which are directly influenced by the interests of the involved stakeholders in the process.

4.3 Methods for data collection

This thesis draws on three different sources for data that have been purposefully selected: public documents, interviews, and participant observations. The use of multiple sources is typical for qualitative research and is important when developing a holistic picture of complex phenomena (Creswell & Creswell, 2018). In the first research phase, 49 news articles from three independent online news magazines were collected. In the second research phase, 7 semi-structured interviews with employees in the industry-leading wind OEM Vestas were conducted and triangulated with 7 recorded observations from the company. A full list of the articles can be found in Appendix F and the recorded observations in Appendix G.

1.1.1 Public documents review

The first phase of the research method applied in this thesis was a content analysis undertaken on online news articles. The content analysis sought to identify the dominant messages regarding sustainability that have been conveyed by wind industry stakeholders in the news in the last 5 years (2017-2021) i.e., the 'narrative'. In other words, the aim was to identify what the overall focus when it comes to sustainability in the wind power industry has been, how the narrative potentially has changed, and what voices (stakeholders) have been most present.

The 5 years between 2017-2021 were used when searching for documents. This scope is based on the sustainable development of Vestas as they have been the frontier in the industry, and before this period the focus has been rather static on staying compliant. In fact, in the earlier range of the timespan, 2017, only two out of the five companies had produced a sustainability report. Thus, the major transitions that are of interest for this study have occurred within the recent 5 years. To narrow down the scope but allow for an extended time horizon to be analyzed, three points in time (2017, 2019 & 2021) have been used as a point of reference. The news articles were selected from three online news magazines, namely: Recharge, Euronews, and BBC.

The reason for choosing Recharge is that it has a specific focus on the wind industry and offers specialized coverage for a specific audience, which are stakeholders operating close to the wind power industry. Euronews and BBC serve as sources of reference that are European based and that capture news and information that is conveyed to the general public, thus also providing perspectives on the public perception of sustainability in the wind industry. Additionally, the news websites are partly chosen based on their accessibility of articles.

The role of the news magazines is twofold. First, they provide a historical record of how issues within the industry are perceived and what motivates industry action. Secondly, the media and news actors are themselves stakeholders whose output both influences and are influenced by other actors within the industry (Hoffman, 1999). In Table 5 the total number of articles chosen for each year and news site is summarized.

The chosen articles are those that met the following four criteria: I) published in English, II) published in 2017, 2019, and 2021, III) had a direct link to the European wind industry, and IV) discussed environmental and sustainability issues.

Table 5 Total number of articles chosen for the document review, divided by year and online new magazine.

	2017	2019	2021	**Total**
BBC	3	5	5	**13**
Euronews	2	3	8	**13**
Recharge	6	6	11	**23**
Total	**11**	**14**	**24**	**49**

The list of articles chosen for every year and per news magazine does not claim to be an exhaustive representation of topics and stakeholders in the media, but the articles have been chosen depending on their relevance to environmental topics in the wind industry.

1.1.2 Interviews

According to Yin (2014), interviews are one of the most important sources of evidence in case studies as it is a mode of data collection that involves verbal information directly from a case study participant. Advantages of conducting interviews, apart from getting an in-depth understanding of the subject being studied, are that historical information can be provided by the participants and that it allows the researcher to control the line of questioning (Creswell & Creswell, 2018). The interviews in this study were held one-on-one either in person or virtually and followed a semi-structured form. Semi-structured interviews offer unique flexibility and were structured to address the dimensions of the research questions while also leaving room for adjusting or adding questions, following up on topics, and allowing the study participants to add new meaning to the topic of study (Galleta & Cross, 2013). As the thesis deals with understanding and explaining recent developments, in a novel context that includes longitudinal changes, semi-structured interviews were considered a suitable approach.

The participants are managers at Vestas, representing different departments and functions that have a direct link and first-hand experience with key stakeholders. As such the participants provide information from the internal company point of view while also serving as proxies for other stakeholder views. A total of 7 interviews were conducted, which are summarized in Table 6. As the interviews were semi-structured, the underlying principle of the conversation was to generate open-ended questions and responses. The questions were prepared based on previous research, the theoretical framework, and the public document review, upon which the participants were allowed to speak freely. See the full list of interview questions in Appendix A.

Table 6 Interview guideline overview.

Code for in-text reference	Interviewee role	Focus of the business unit	Duration
A	Director People & Culture (HR) Business Partnering	Sales & Construction	30 min
B	Cluster Lead, Senior Specialist	Advanced Structures	60 min
C	Senior Sales Manager	Sales SE	40min
D	Vice President, Head of Sustainability	Sustainability	60min
E	Senior Business Manager	Sales DK, FI, NO, IC & EE	40min
F	Sales Director	Sales DK, FI, NO, IC	50min
G	Environmental Officer	Processes, Management System & Performance, NCE	40min

4.3.1 Observations

A second part of the case study entailed making qualitative participant observations. Participant observations entail engaging and actively participating in the studied group's day-to-day affairs for an 'intense' period) to fully grasp phenomena, routines, and processes (Atkinson, 2015;

Emerson et al., 2011). Observations are useful as a complement to interviews as they can help capture data and understand aspects that are not necessarily articulated or noticed by interviewees. While participant observations allow for deeper insights it might however entail that the researcher is not being entirely neutral by actively interfering with the situations (Atkinson, 2015). The observations in this thesis took the form of field notes on activities and behaviors at the research site, in a setting where the role of the researcher is known. More explicitly the setting is in the researcher's role of 'researcher as an employee', undertaken overtly. This means that the researcher is one with the employees and that the role and intentions are known (Vinten, 1994). This allowed recording of information as it occurred, which served as a complementary source of data in the case study (Creswell & Creswell, 2018). The author of this thesis possesses a position in the company in which data could be captured from engaging in day-to-day routines and participating in informal conversations. The field notes were recorded in an unstructured way to capture spontaneous reactions, behaviors, and attitudes toward sustainability activities in the company or the industry. A total of 7 observations were recorded, some of which occurred at a specific point in time, while others were derived by continuously observing certain practices, attitudes, or phenomena.

4.4 Data analysis

In the data analysis process, this thesis applied a qualitative content analysis by using the software NVivo. The process was similar for data both from the public document review and the case study. Articles and transcripts were examined separately using a coding scheme based on the theoretical framework presented in chapter 3 while considering the research questions. This entails that a deductive approach was used predominately for the analysis, however, new codes could be added throughout the process as they unraveled, in an iterative manner. Thus, the approach was both a deductive and inductive process. Codes were revised, added, removed, combined, and clarified where needed. The initial and adapted (final) codes for the content analysis of public documents are provided in Appendix B & C. Similarly, a predetermined coding structure was set up for the analysis of the interview data, which was revised during the coding process (see Appendix D & E). Field notes that have been recorded through participatory observation in the data collection process were entered into the Nvivo software together with the interview data, using the same coding structure.
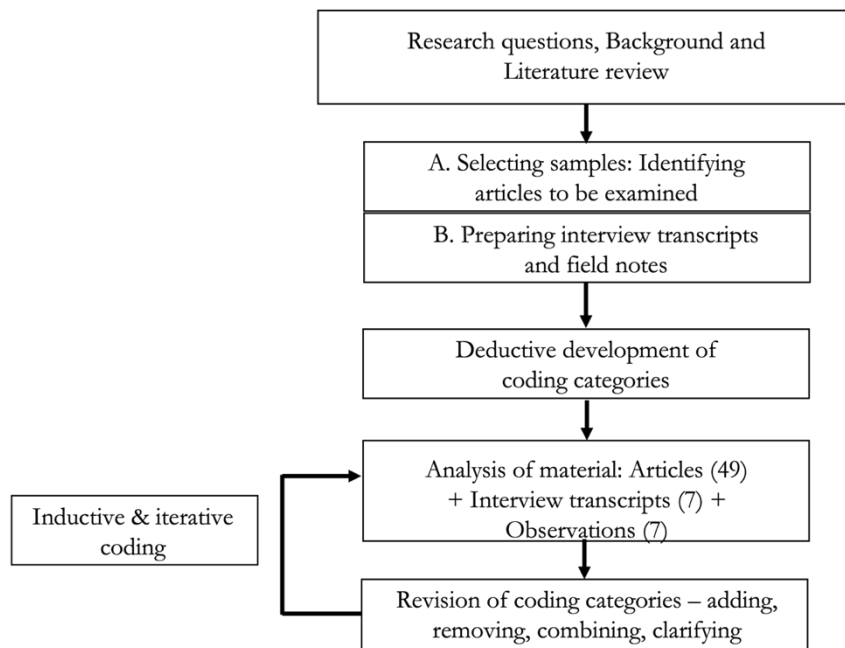

Figure 4-1 Qualitative content analysis process

Source: Illustration adapted to this thesis based on Nasir (2005).

4.5 Limitations

Some limitations of the method in this thesis are important to acknowledge and consider when justifying the results. First, the sample of articles does not aim or claim to be an exhaustive representation of stakeholder presence in the wind industry or its narrative. The websites are partly chosen based on their article accessibility. Other news sites were considered in the process but were neglected due to a too narrow geographical scope or if a paid subscription was required to access the articles. Furthermore, articles were selected based on a subjective screening process of reading the headlines and picking the articles that were considered to be of relevance. Including more or different news sites and articles in the data collection process could thus potentially lead to different results. However, triangulating results with interview data and observations provides a foundation for discussing any similarities and differences in the document review results and case study results. As news articles often provide a short summarized and thus, superficial view on topics, interviews can provide more in-depth knowledge about internal company mechanisms and processes. However, the purpose of media is to review society and actors in power, functioning as a gatekeeper of what information reaches society (Wallace, 2018) and thus have the power to be critical and influence public perception and reputation of companies portrayed in the media (Carroll & McCombs, 2003). Thus, news articles might provide a different critical lens than the industries and companies would convey about themselves.

Another limitation is regarding the relationship I as a researcher and the case company share, which might raise questions about conflict of interest and bias. I have been involved with the company as an employee before and during the thesis research period and have thus entered the research phase with an unavoidable bias and subjectivity about the case company. When I started working in the company, Vestas had established its sustainability department the same year and the sustainability strategy had just been implemented. The topic of this thesis thus directly descends from my interest in the company's recent developments. This comes from a personal place of pure curiosity and willingness to learn more about the company's transition process while also aspiring to bring insightful perspectives or knowledge back to the company. While my connection to the company on one hand might raise concerns about the trustworthiness of the data it has on the other hand opened the possibility to study a global industry-leading company from the inside, providing data from long-term participant observation and getting access to interviews with relevant employees in the company. Once I had received permission to proceed with the proposed research, I was assigned a contact person to discuss topic angles and to get the contact information of relevant and potential interview participants. However, the choice of topic, in the end, was my personal decision. In other words, Vestas has not signified any own agenda-setting or wish to control the content of the thesis. Accordingly, my connection to the company has thus given me a unique opportunity to get insider and in-depth information. However, as with any research, restricted information is respected and kept confidential. I am humble before the challenges and opportunities that my role both as a researcher and employee entails. I intend to be transparent and keep a critical mindset in the analysis of the data. I invite the reader to do the same while learning from this thesis, keeping the limitations, but also its strengths in mind while reading.

5 Findings and Analysis

This section presents and analyses the results from the qualitative content analysis conducted in the software Nvivo. Findings and analysis from the public document review are firstly presented to get an overview of industry trends. The following section provides a zoomed-in perspective, allowing an in-depth analysis of the case company to understand internal corporate aspects and its place in the industry. In total, the results are derived from 49 coded articles, 7 interviews with employees and managers in the case company, and 7 observations within the company that has been continuous throughout the research process. Information from coded articles is referenced as [News journal, Year (ID number)], the full list of articles can be found in Appendix G. Interviews are referenced as a letter A-G in square brackets (see also Table 6) and observations are referenced to as [O+ID number].

This chapter is structured as followed: Section 5.1 presents the results and analysis from the public document review, providing insight into the development of stakeholder constellations and narratives present in the public discourse over 5 years. Section 5.2 presents the results and analysis from interviews and observations with the case company, addressing topics related to corporate stakeholder constellations and narrative, drivers and ambition for sustainable transition, and corporate mechanisms and implications on the business.

5.1 Stakeholder constellations and narrative in the news

Data resulting from the news articles provided several insights on stakeholder narrative and constellations in the wind industry between the 3 points in time (2017, 2019 & 2021). Since the number of articles chosen for review differed between the years the results are presented in percentage of the total articles chosen in a specific year, to be able to compare differences and developments of present topics and stakeholders (This is illustrated in Figure 5-1 and 5-2).

The fact that there are fewer chosen articles that were considered relevant in 2017 (11) compared to 2019 (14) and followed by a significant increase in 2021(24) already hints that there has been an increasing focus on wind industry sustainability issues in the media since 2017. This is further strengthened by the results derived from what narrative in form of environmental topics has been mentioned in the articles across the years. The next two sections below provide a summary of the stakeholder and environmental topics detected in the articles, and the portion of articles from each year mentioning the topics.

5.1.1 Stakeholder presence

The presence of stakeholder groups is defined by the messenger(s) behind the article as well as any actors mentioned in the article content by its author. For example, an article by Euronews [2021(10)] is written in partnership with the European Commission, and another article by Recharge [2021(13)] is written by an employee at Vestas. However, the majority of articles are written by newspaper representatives that have been in contact with stakeholders to get primary information, or that are using secondary information to build content.

The stakeholder groups recorded in Table 5-1 are actors that had been deductively coded based on the theoretical framework and prior research and stakeholder groups that emerged from the coding of data that had a presence of significance. Some stakeholder groups have been neglected due to their low presence or have been combined with a larger stakeholder group. Therefore, employees and shareholders that are considered important stakeholder, yet has had little presence in the review is still considered, while other stakeholders that emerged (e.g., tourists) was disregarded as they had little presence and did not relate to the sustainability discussion.

The stakeholder group that stands out the most is policymakers. This makes up of local and national governments, international policymakers like the European Commission, and individual politicians. Although policymakers take up the largest total portion compared to other stakeholder groups throughout the years, there is a significant decrease in the portion between 2019 and 2021. The policymakers are often referred to or called out to in articles across all years to increase RE and wind energy in the policy mix [e.g., Euronews, 2017(2); Recharge, 2019(9)], or RE targets and goals are presented and followed up on by national governments and the EU [e.g., Recharge, 2019(12); Euronews, 2019(5); Euronews, 2021(10)]. Others urge local policymakers to protect the landscape, biodiversity, and local environment from the harm of wind turbines [e.g., BBC, 2017(2); BBC, 2019(6); Euronews, 2021(11)]. A difference that can be detected is that more articles in 2017 contain direct concerns and criticisms towards policymakers for discouraging RE or 'killing the wind power sector' [e.g., Euronews, 2017(1); Recharge, 2017(3)], while no such concerns can be detected in 2021. Instead, a new focus in 2021 articles concerns the dismantling and landfilling of turbine blades, where policymakers are called upon to implement landfill bans on blades [Euronews, 2021(11); Recharge, 2021(13)]. Thus, policymakers are referred to in a range of ways and are important stakeholders in the industry that is associated with both positive and negative aspects of wind power.
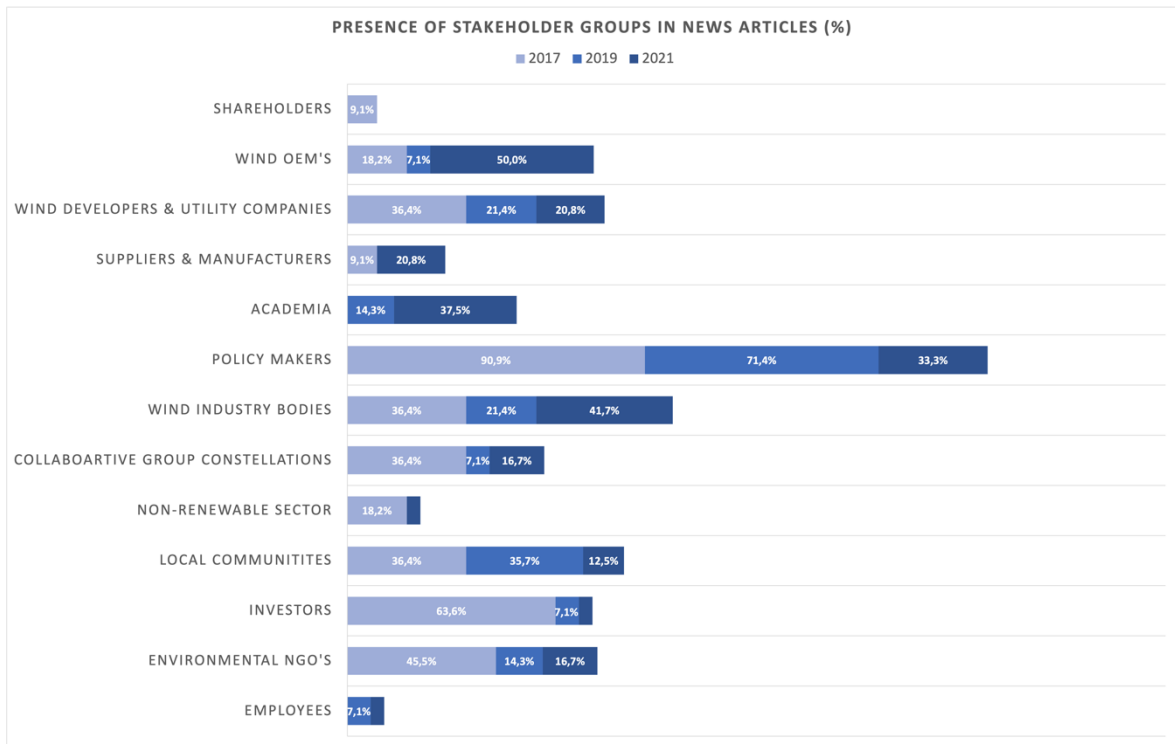

Figure 5-1 Presence of stakeholders in news articles 2017-2021 (% of total articles per year).

Other stakeholder groups that resulted in a decreasing trend from 2017-2021 are the presence of wind developers & utility companies (customers to wind OEMs), local communities, investors, and environmental NGOs. In contrast, the stakeholder groups that increased with time are academia (including scientists, researchers, and research institutes), industry suppliers & manufacturers, and wind OEMs. The remaining stakeholder groups, namely, collaborative cross-industry group constellations (e.g., RE100 and Electrification Alliance), non-renewable sector, shareholders, and employees did not point to any specific trends as they either did not make up a significant portion of the presence or had a relatively stable development throughout the years. Wind industry bodies are a stakeholder group that has maintained the highest presence while at the same time staying relatively stable over the years. Wind industry bodies include wind

advocates like Wind Europe, wind technology developers, and national wind associations. In other words, organizations and associations that advocate for the wind industry [e.g., in Recharge, 2017(4); Recharge, 2019(12); Euronews, 2021(11)]. Other stakeholders that do not necessarily exist merely to promote the development of wind energy, but that cooperate within the wind industry have been categorized as collaborative group constellations, e.g., circularity-focused technology firms & start-ups, broader RE initiatives like RE100, and cross-sector initiatives that work to solve sustainability issues in the RE industry. Further analysis of how the recorded stakeholders relate to environmental topics in the news is presented below.

5.1.2 Sustainability narrative

The top 5 topics that were mentioned by the most articles in 2017 were environmental policy (72,7%), and renewable energy supply & security (54,5%), followed by an equal portion between renewable energy transition, greenhouse gas emissions, and climate change (36,4%). The leading topics are in many articles linked together as environmental policy is often mentioned concerning both ensuring RE energy supply and security and promoting a RE transition to lower the global footprint [e.g., BBC, 2017(3); Euronews, 2017(1); Euronews, 2017(2)]. Stakeholders such as local communities, environmental NGOs, and wind developers are calling on governments and policymakers to implement policies that promote wind energy. An example is that the wind industry signed an open letter that called upon the Council of the European Union to not waver its commitment to the 2030 energy and climate goals [Recharge, 2017(6)], and environmental organizations in Germany and Poland that stresses the importance of the countries phasing out coal and shifting to renewable sources to decrease CO2 emissions [Euronews, 2017(1&2)]. Environmental policy is less present in articles in 2021 compared to previous years, however, what can be noted is a shift in narrative. In 2021, discussions on environmental policy were in 6 out of 7 articles related to stakeholders in Europe's wind industry calling upon governments and the EU to implement a ban on disposing of wind turbine blades in landfills [e.g Recharge, 2021(13 & 14); Euronews, 2021(11)].

Articles that address RE supply and transition are concerned with factors such as decreasing investment and financial support in green energy by policymakers in the EU [Recharge, 2017(3); BBC, 2017(3); BBC 2021(10)], concerns regarding if installing more wind power and other RE solutions will be enough to transition to a low-carbon economy [Rechgarge, 2017(2); Euronews 2021(13)], and concerns about the phase-out of coal to reach international commitment targets for climate change [Euronews, 2017(2); BBC, 2019(4)]. Despite a decrease in articles discussing RE supply and transition in 2019 and 2021 the narrative in this field remains similar throughout the years. These two topics can in one article from 2017 further be connected to the strategy topic. The article discusses strategies for increasing the share of RE in Europe as well as criticizing strategies adopted by oil&gas companies [Recharge, 2017(3)]. In 2019 no article had a clear connection to strategy while in 2021 it had a modest comeback, discussing from a circularity perspective and alternative materials for wind turbines (like wooden towers), for example how to reuse materials from wind turbine blades, scale up alternative processes, and the role of strategic partnerships in the development [e.g., Recharge, 2021(15, 18 & 19)].
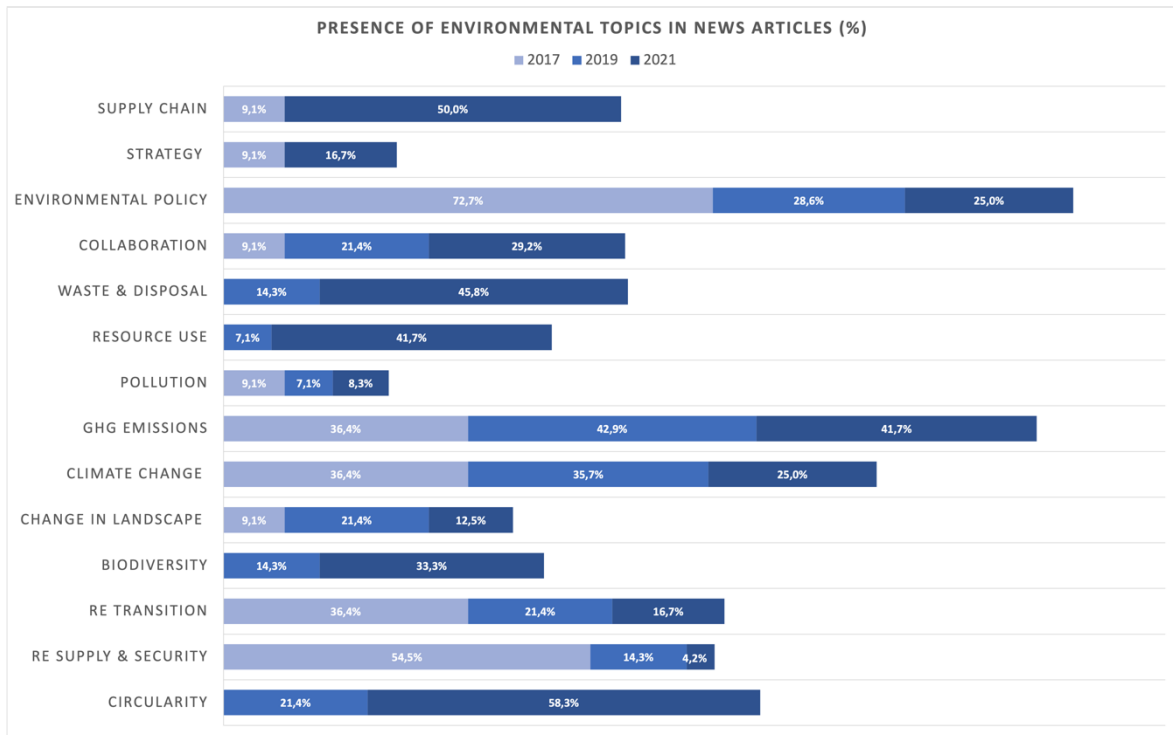
Figure 5-2 Presence of environmental topics in news articles 2017-2021 (% of total articles per year).

On another note, several environmental topics were not mentioned at all during 2017, including circularity topics, waste & disposal, resource use, and biodiversity. These all appeared in 2019 and boomed in 2021. Especially resource use, circularity, and waste & disposal had a significant increase of articles discussing the topics in 2021. A majority of the articles discussing these topics in 2019 and 2021 focused especially on the recyclability issue of blades and the fact that a vast number of turbines are expected to be decommissioned within the next 5 years and onwards, which will cause huge challenges in their end-of-life [e.g., Recharge, 2019(11); BBC, 2019(8); Euronews, 2021(10&11)]. Furthermore, the 2019 articles discussing circularity are concerned with the amount of waste that will be produced and how the recycling of composite materials will work in practice. Solutions at this point (2017) were still novel and in the early research phase. One case example is a company that has developed a process to recycle fiberglass from composites into small pellets that can be used by the construction industry [BBC, 2019(8)], and similarly, a research institute that is developing prototypes for recycling the fiberglass [Recharge, 2019(11)]. In 2021 the circularity discussion more than doubles in its presence, but the narrative has also had time to change since 2019. There are still concerns regarding the circularity aspect of the wind turbines, yet differently from 2019, solutions are for the first time presented and discussed, foremost by wind OEMs and developers. Wind OEM Siemens Gamesa got attention for having developed a blade that uses a new chemical structure that makes it possible to dissolve resin in the end-of-life process [Euronews, 2021(12)]. In the same year, Vestas developed what is described as a 'gamechanger' in recycling technology which claims to have tackled the tough composite material thermoset. Vestas also hope that the technology will be used in the wider industry in the future, both by customers and other OEM competitors [Recharge, 2021(16)].

A common denominator for articles discussing circularity is collaboration, which is also a topic that has increased with time. To solve a complex issue such as recycling of blades, which is an issue that the whole wind industry is facing, the approach seems to be a collaboration between foremost different industry bodies, investors, and academia. [Recharge, 2021(15)]. The head of sustainability at Vestas expresses in one article that "*Cross-sector collaboration is the only way to mature*

the recycling economy, bring down the cost of recycling pathways, and finally bring recycling methods into the realm of an attractive business case" [Recharge, 2021(13)].

Pollution and change in the landscape were two topics that remained stable throughout the studied years. The narrative in this case also remained unchanged. Only one article in 2017 and 2019 respectively, mentioned pollution explicitly. In both cases, it was discussed regarding its effects on health and its cause of premature deaths [Euronews, 2017(1) & Recharge, 2019(9)]. In 2021 two articles could be connected to air pollution, talking about the need to clean the air in European cities [Euronews, 2021(10)], and wind energy being a clean alternative to fossil fuels, which pollute the air [Euronews, 2021(7)]. The topic of change in the landscape could both in 2017 and 2019 be connected to opposition to wind farms by local communities and campaigners as they were considered to disturb the natural beauty, peace, and tranquility of the landscape [BBC, 2017(2); BBC, 2019(5); BBC, 2019(7); Recharge, 2019(7)]. In 2021 articles mentioning the change in landscape did it similarly because of a negative perception of the wind turbines being a blot on the landscape, and a threat to biodiversity [BBC, 2021(12)], however an addition regarding dismantled turbines and blades ending up in landfill or 'blade graveyards' disturbing the landscape is also mentioned [Euronews 2021(11)].

The wind industry supply chain as a topic increased significantly in 2021 from being almost non-existent in the previous years. One article in 2017 discussed how sustainability is becoming increasingly important in the corporate world and predicted that it will not take long before their value chains must follow and switch to RE to reduce their global footprint [Recharge, 2017(1)]. Fast forward to 2021 and this is no longer only a prediction. As stated in one article, the key to reducing the carbon footprint in the wind industry lies in the supply chain where around 75% of CO_2 emissions occur [Recharge, 2021(20)]. Many of the articles discussing the supply chain at this point are also related to circularity and recycling of blades: "*The last year has seen a raft of announcements from the wind supply chain of projects designed to tackle the blade issue*" [Recharge, 2021(14)].

5.2 Perspectives from a case company in the wind industry

Data resulting from the case study provides additional in-depth insights into corporate perception, the stakeholder landscape, and drivers and mechanisms for sustainability change. The case study brings more insights into some of the causes behind the changing trends on the industry level, as well as provides new internal corporate insights in responding to the stakeholder and narrative changes. To facilitate the analysis of narrative, drivers, and internal change processes, an overview of Vestas's main sustainably related events is reiterated and presented in a timeline in Figure 5-3.
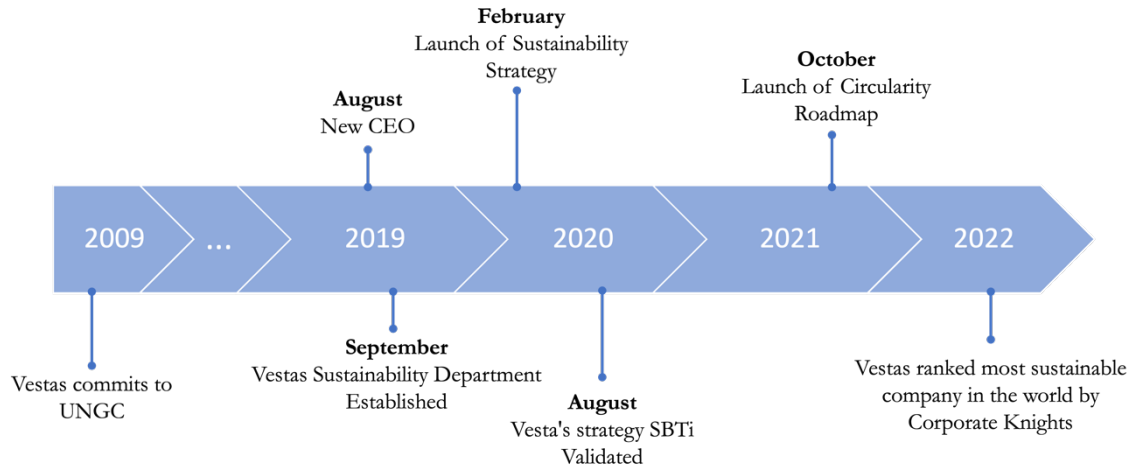
Figure 5-3 Timeline of Vestas' main sustainability events.

Source: Author's illustration.

5.2.1 Corporate narrative and stakeholder constellations

The interview participants have all started as employees at Vestas in the years between 2008-2018 and can thus give various insights on how sustainability has been perceived in the company before 2019 when the sustainability department and strategy was installed. Despite the 10-year time frame, there is a strong common consensus among all interview participants that sustainability had a very different meaning in the company before 2019. The consensus view is that internal stakeholders viewed Vestas as being inherently sustainable due to their core product being a means in the global renewable energy transition and thus contributing to the greater good of society, which was seen as enough [A-G]. As an example, this idea is explicitly expressed by two participants below:

> *"I think because we are suppliers of wind turbines that help mitigate climate change, we have always seen our role towards a more sustainable society in general so to say, so maybe we have taken it for granted that we do so much externally by installing zero CO2 producing electricity. So, the internal focus hasn't been as big as it is now, that we need to be sustainable in all internal operations as well"* [E].

> *"…we have maybe thought a bit highly of ourselves, that we install wind power turbines which after a few years have 'compensated' for the generation of fossil that was required to manufacture. Therefore, we are the good guys and why should we have a strategy when we are the good guys?"* [A]

This view seems to correspond to what can be established from the media narrative, where topics such as RE supply and transition were of big focus before 2019, while circularity, resource use, and waste were completely absent from the narrative. In the earlier stages sustainability was seen from a CSR aspect in the company [B] and a core focus has long been on safety [G], which had been driven very persistently by customers as a critical business area [E]. In recent years sustainability has grown to close in on similar importance, without losing focus on safety, and a dedicated sustainability department was introduced in 2019. That being said, there already existed certain standards given legal requirements and data capturing of water consumption, energy consumption, fuel consumption, and amount of hazardous and non-hazardous waste [D; G]. The company has also been doing LCA's on the turbines and sites for many years [B; G]. However, this was not something that was used for marketing purposes and there was no particular sustainability vision or ambition connected [D]. However, the early habit of data

capturing made it easier for the company to extend ambitions and set targets and KPIs for the improvement of the environmental aspects of the business.

The change seems to have started in 2018 when the company experienced increasing pressure from both internal and external stakeholders. Investors and shareholders started to approach the company with new questions and requirements due to their commitment to having 'responsible mandate', which means that they have a mission to place funding into businesses that have a clear sustainability focus. This attracted attention in the finance department and the CFO at the time realized that more needed to be done from a sustainability perspective. In 2019, still in the aftermath of an economic crisis in Europe, there was talk about the green recovery package from the EU, which could be one factor explaining the raised expectations coming also from customers, especially regarding lowering CO2 emissions from the wind industry, and the recyclability of the turbines [D]. Indeed, from observation of the company it is evident that customers are considered a powerful stakeholder group, and being able to respond to customer demands and provide value is of utmost importance [O1].

Although GHG emissions have inherently been a core focus for the company it has been addressed from an external viewpoint, that is, how the company can lower global emissions with their core product, and not as much focus on how to lower the carbon footprint of their operations [E]. This could explain why there has been a consistency in the GHG emissions and climate change topics in the news. The topics have been a natural part of the industry however the narrative has changed from an external environmental orientation to an internal environmental orientation. Additionally, with the new EU taxonomy, customers started to ask for more environmental data that they in turn had to deliver to their financiers [G]. External pressure also revealed itself in form of criticism of the industry and in resistance from local communities towards onshore wind turbines, where the arguments were centered around the environmental impact on landscape and biodiversity [F]. Organizations around the wind turbine industry started to investigate sustainability issues and use that as an argument to advocate against wind turbines, especially when it came to permits [B]. At the same time employees had also started to have higher expectations of the company, which is described to have been "*boiling below the surface*" for a while [A]. As described by a participant:

> *"It is probably a combination of what we ourselves want to achieve and also what demands our customers and the entire surroundings put on us (…) There are external desires of how we shall act as a business combined with how we want to profile ourselves, so I think that [the sustainability]consciousness has increased enormously"* [E]

Another event that pushed the development was the fact that a new CEO took office in the company in mid-2019, who was pushing for a sustainability agenda and made sure to speed up the implementation of the sustainability strategy by making it a 'must-win battle'. This made the transition to take speed much faster than was initially intended [D]. Indeed, commitment from top management is pointed out as critical for the company's sustainability development, including executives and especially the CEO due to the power this position holds in pushing and securing a sustainability focus and making it clear to the organization and stakeholders that sustainability is not something that can be sacrificed due to cost reasons [B]. These results provide suggest that anchoring sustainability at the top of the organizational hierarchy together with the pressure from employees boiling below the surface is a powerful combination for change in action, as confirmed by one respondent:

> *"I think for it to be a success, these two sides have to meet somewhere because the business and the requirements from executive management have to go hand in hand with the ideas and ideologies of the people working in the company, and if that doesn't meet, then you will not be a success."* [B]

From the interviews and considering the media review it thus seems evident that the key stakeholders that played a role in initiating the transition are investors & shareholders, customers, policymakers, employees, top managers, and social groups. Although shareholders did not result as a present stakeholder group from the media review, investors had a strong presence in 2017, which corresponds to what has been revealed from the interviews. As both shareholders and employees are internal company stakeholders, it is not surprising that these would be more appearing when interacting directly with the company, compared with what is addressed in the news.

After the sustainability strategy and circularity roadmap had been established other stakeholders such as academia, competitors and suppliers became more present in the discussion, which also is consistent with the results from the media review. Vestas may have been the first wind OEM on the market with a comprehensive sustainability strategy; however, competitors quickly accelerated their initiatives. In November 2021 General Electric Renewable Energy set the target to make "*competitive and sustainable zero-waste blades by 2030*" [Recharge, 2021(20)] and the same year Siemens Gamesa commits to "*zero-waste wind turbines by 2040 and recyclable blades by decade's end*" [Recharge, 2021(21)]. This has resulted in a completely different focus on sustainability in the industry today compared to before 2019, especially the focus on blade recycling has drastically increased. When it comes to the circularity and recycling of the turbines, academia has had an increasingly important role to play as universities have picked up on the circularity and environmental impact of materials and contributed to the development of new technologies that allow recycling materials in the blades [B]. This has had a huge impact on the development as expressed by one participant:

> "*I remember that 5-7 years ago it was a common perception that [recycling of blades] was mission impossible (…) it was established that the blades 'is what it is' and that there's no solution. That's about how it sounded*" [D]

This internal view of circularity is in line with the context on the industry level, as seen from the media review. Neither Vestas nor other industry stakeholders had picked up on and pushed for circularity until very recently, simply because this has been considered impracticable. However, new research and technology development has allowed us to debunk this conception, which can explain the rapid change in the narrative after 2017. Similarly, less CO_2 intense steel or 'green steel' has recently partaken focus in the case company. At the moment sufficient technology is lacking and the existing solutions are very expensive, however, there is a positive outlook that this will change as a big portion of the emitted CO_2 in the supply chain today comes from the production of steel [B; D]

When it comes to suppliers it seems that pressure from upward the supply chain has been limited, instead, since Vestas's sustainability strategy targets are based on all three SBTi scopes, Vestas and other OEMs are the ones putting external pressure on their suppliers [B; D]. One participant also raised that there is an increased focus on sustainability in the wind industry on news and social media platforms, which is an important source of communication for the company [F]. Indeed, wind OEMs have had an increasing presence in the studied news articles and the supply chain as a topic has had a tremendous increase.

5.2.2 Drivers and ambitions for corporate sustainability

Several drivers and internal ambitions were revealed from the case study regarding adopting advanced corporate sustainability. A first driver detected concerns **attracting investment** where sustainability is seen as an important factor to keep attaining investment from shareholders, banks, and the rest of the investor community [C]. In light of this, Vestas has also formed a sustainability bond that is linked to the sustainability strategy, which is a way for Vestas

to loan money from the market instead of banks to a more favorable rate, as long as they fulfill certain sustainability requirements that can be showcased to the market [D].

Another driver comes from a place where the company experienced that a transition toward advanced sustainability had become inevitable in order to legitimize their "seat at the table" in the industry [C]. Several of the interview participants bring this up from a **license-to-operate** perspective where the strategy is seen as a competitive necessity to last in the market, which entails responding to the internal and external pressures and living up to stakeholder requirements [B; C; E; F; G]. At the same, sustainability is an opportunity for **diversification and competitive advantage**, where the level of ambition and being first in the market with e.g., circularity and green steel solutions are important factors [D; B; G]. *"Sustainability has been a battleground where the big OEMs would like to differentiate themselves in the market"* [B]. There's an expectation that as sustainability becomes even more manifested in the industry it is going to be increasingly important for stakeholders to evaluate the different OEMs on sustainability, asking *"Is it a sustainability strategy or is it a good sustainability strategy? And then rank the suppliers out of out from there"* [F]. It is thus important that the company can differentiate itself in a way that provides added value to the customers [D]. However, it is not only independent OEMs that compete in the wind industry market but there is also the angle of the wind power industry competing against other energy sectors. One participant discusses the industry's history of struggling to compete with the fossil fuel industry in terms of cost. Although the wind turbine industry has a global footprint of its own, the first obstacle to overcome was to be competitive in the energy mix. Once this was the case, it became natural to investigate how the industry could become even better in terms of sustainability, as the wind power industry would be a big CO2 emitter in line with the fossil fuel industry.

> *"Something has triggered it, perhaps it was the next natural step for the wind turbine industry to differentiate themselves in a market where sustainability was more and more in focus and was something that we needed to address."* [B]

Another driver is regarding **employment branding, corporate reputation, and corporate culture**. How the company is perceived externally affects the type of people that seek opportunities in the company. If Vestas wants to attract the right talent, better perception and reputation will result in more options and the possibility to find employees that fit the brand [C; B]. As employees started to have higher expectations of sustainability in the company, managers also started to realize that this could be a way to attract new talents that value sustainability more than e.g., 20 years ago [D]. It is also about retaining talented and motivated employees. If the internal development takes a wrong turn or does not live up to employees' expectations, they are likely not going to stay in the company [C]. In fact, there seems to have been some frustration among the employees before the launch of the sustainability strategy, questioning why the company is not doing more [G]. Moreover, people who work at Vestas are likely there because they like to work in a company that has a positive impact on the environment. This internal ideology is important to intercept, to give people a chance to speak up but also for the organization to show that they are listening [B]. As described by one participant *"People need to feel that they have both a responsibility but also a mandate to make those decisions"* [P]. All interview participants are in unison that the launch of the strategy has been received as very positive and welcomed among employees [A-G]. Especially the announcement by Corporate Knights Global 100 ranking that Vestas is the most sustainable company in the world is seen as a reward for the hard work the company has been putting in lately. Moreover, the award has given the company an additional opportunity to market and position themselves to their customers [E], yet it has also caused some skepticism internally. Similarly, the launch of the sustainability strategy has been received very positively, while at the same time allowing employees to stay critical in areas where they feel that the company could do more [A; G; O4]. When talking to employees in the

office, some seems to be genuinely surprised about being rewarded as the most sustainable company, and that it was announced very soon after the launch of the strategy. This has placed the company in a position with increased responsibilities and pressure to live up to the new standards [O7; G]. In an industry where the actors are very dependent on their reputation and reliability, it is also important to be able to live up to the expectations, which always poses some risk [C]. Thus, the award is positive for the company image but when it comes to corporate reputation, **risk avoidance** is seen as a more critical factor, as pointed out by one participant:

> ”*Of course, it is positive if you can be the best in class, so to speak, but it is probably above all important not to excel in the other direction because then it can have negative consequences. The most important thing is that you do not stand out negatively*” [E].

Furthermore, there are expectations of more legal frameworks and compliance requirements coming into place in the future around sustainability and circularity issues, both from the EU and national governments. Transparency and disclosing of data are increasingly required which can be a challenge to apply if new sudden requirements are put in place in areas where data is limited. Therefore, a sustainability strategy can be a good source of applying transparency and staying ahead of upcoming framework standards, to avoid a heavy workload that takes a lot of time and resources to implement at a later stage [D; G].

5.2.3 Mechanisms and implications of developing a sustainability strategy

As the sustainability strategy and later the circularity roadmap was implemented, the company has had to administer several actions, processes, and habits to start driving the change that is required to meet the new goals and targets. What became evident from the interviews is that many stakeholders have new roles to play in the transition and that a big part of the strategy entails mediating this stakeholder landscape. At the same time new strategy processes, especially around circularity topics and green steel, are still a relatively new concept to industries, which requires special attention regarding organizational governance.

Mediating stakeholders

In general, it can be described that there is a game to play in the management between stakeholders. Vestas has contact with different stakeholders through various means of communication channels like in-person dialogues, calls, emails, media channels, webinars, conferences, reports, and announcements, to mention a few [B; C; D; E] As the sustainability strategy was framed, they did a materiality assessment to rank sustainability topics according to relevance and importance to the business and their stakeholders. On their website, they also gather information through surveys on what type of stakeholders are visiting and what information they are looking for [O2].

Vestas needs to navigate with customers to set common KPIs to get a 'demand climate' for their products, which can also be used internally in the company to stress the importance of sustainability [B]. It is however still unclear to the company and the interview participants how exactly a sustainability differentiation strategy can be used to add value to both the customers and the own business. While there is a common consensus that customer feedback about the new sustainability initiatives has been mainly positive, further interest from the customer has been limited. So far customers have not actively been asking follow-up questions or wanted to have further discussions on the topic [C; E; F]. There has however been some skepticism among certain customers, asking how Vestas is going to achieve all their targets [C], and concerns have been raised about increasing costs and who is going to pay for the new initiatives [B]. While the customers have some basic requirements in regards to the code of conduct, health & safety, and the environment, the sales department has still not been involved in any project where sustainability or circularity has been a criterion for decision-making when choosing between

wind OEMs. Cost of energy and other economic factors and 'hard facts' remains the conclusive criteria [E]. Indeed, one of the participants who have close contact with the customers often asks them about what they would be willing to pay for a more sustainable wind turbine, and the reply is that they are not willing to pay anything extra [B]. When having a conversation with some of the employees in the sales department at the office, one sales manager explicitly expresses these issues as being frustrating, however, there is hope that this will change in the coming years [O5]. A potential solution to this issue, which is raised by one participant, is that Vestas could do more to better differentiate and put a value on sustainability that can be conveyed to the customer's customer i.e., the end consumers and electricity users. This is a stakeholder that Vestas acknowledges that they could do much more to better address [B].

It is by this point also evident that the people of the company are important internal drivers for organizational change toward sustainability. However, Vestas is a big company, and they are implementing a significant change, thus some pushback from employees has been both expected and experienced. Thereof, there is also a lot of work involved in nudging collogues to pick up on the new changes in their daily hectic life [B]. Indeed, from observations, this ambition to spread sustainability knowledge to the whole organization and embed it in the culture can be seen in information campaigns and regular sustainability webinars to inform the employees about the strategy. The sessions are voluntary but have been increasingly popular with more people attending for every session, which always ends with a very interactive discussion based on questions and concerns from the participating employees [O6]. Furthermore, the nudging seems to have had an effect as sustainability has been observed to be increasingly discussed in day-to-day business between collogues e.g., internally in office conversations and in sharing of emails and externally through news articles and social media platforms [O3].

There has also been an increasing need to navigate between universities, authorities, NGOs, and other organizations working with R&D, especially when it comes to circularity developments. Knowledge is still limited around this topic and Vestas has seen a need to step in and discuss what can and cannot be done from a business perspective, to avoid requirements that are impossible to fulfill. Instead, Vestas want to help point the organizations in a direction that will support the industry and the development of new recycling technologies [B]. Furthermore, as this is an issue that belongs to the entire industry, Vestas also has a good connection with its competitors and are working together on certain areas to drive the development [C; D; B]: *"We actually have a very honest and open discussion about sustainability between competitors, at least the big OEMs"* [B]. An advantage of collaborating with competitors on circularity is that the big wind OEMs share many suppliers and by pushing for more sustainability upwards in the supply chain, they can exceed more influence as well as distribute the costs between different OEMs, and thus level the playing field. For smaller wind turbine companies this can be more difficult to achieve [B]. However, there is a fine balance when collaborating with competitors, since it on one hand is advantageous to work on technologies that can be commercialized and thus distribute costs across the value chain. On the other hand, Vestas wants to position itself in the market and offer added value to the same customers that other OEMs are competing for. For example, developing completely circular turbine blades is something that Vestas and other wind OEMs on the market compete on being the first one to deliver [D]. Other industries also have a role to play in the development and therefore Vestas is calling on cross-industry collaborations on circularity: *"it would be great if other industries also start to pick up on sustainable composites frames because that will also drive that development, and it would drive the value chain around recycling of composites"* [B].

It is further important to involve the suppliers in the process and point out why sustainability and circularity aspects are important. Vestas has been pushing requirements to disclose data on e.g., CO_2 emissions and waste, upward in the supply chain. The suppliers are expected to implement their own emission goals in SBTi scopes 1,2 and 3. So far, the response from

suppliers has been surprisingly positive, however, Vestas has a global supply network of between 6-7 thousand suppliers, and the level of sustainability maturity among the suppliers can vary a lot, which raises complexity. Currently, 50 so-called strategic suppliers have been targeted with commitment letters from Vestas. Some of them are very mature and have developed very ambitious sustainability strategies already, others need more guidance in getting on track [B; D].

The circular race: Governance and challenges

When developing the sustainability strategy, Vestas took the approach of setting the goals and targets first, before having a clear process of how it would be achieved. They knew they wanted to achieve zero-waste turbines, and to fulfill that ambition a dedicated circularity strategy was needed [B; D]. What can be understood, both from the narrative in the studied news articles in 2021 and the case study regarding circularity topics and recyclability of blades in the industry, is that it has evolved from being almost non-existent to becoming top on the agenda in less than 5 years. Moreover, regardless of the collaborative industry and cross-industry approach, there is simultaneously an ongoing race between different wind OEMs to find the best circularity solutions to introduce first on the market, which brings about certain challenges.

Organizational governance around cutting CO2 emissions has thus far a long corporate history, which is not the case for circularity issues. This means that Vestas is developing governance processes as they go along by e.g., searching for guidance from external social stakeholders like the Ellen MacArthur Foundation, NGOs, and volunteers, to be able to define what 'zero waste' means to the wind industry, how to value waste materials, and decide on the best technology use and processes. This is both an ongoing process and a complex issue as: "*It is not always intuitive what is actually the most environmentally friendly way to recycle materials*"[B]. A lot of questions need to be answered about how to evaluate the best way to approach recycling of the blades and how to push the development of R&D. Vestas is aware that mistakes might occur along the way, but this is seen as a natural part of the process, and it is stressed that Vestas should not be afraid of failing now and then [B]. One aspect that a participant points out as worrisome is that the industry has entered a turbulent period where margins have been affected by cost increases in transport and raw materials, which means certain priorities will have to be made in the coming years. The hope is that now that the company has picked up the speed on sustainability and circularity, which has previously been separated from the core business, it is even more crucial that it becomes truly embedded into the core of the business. Keeping a long-term focus will be necessary to avoid any down prioritization of sustainability and the development of circularity initiatives in times of financial instability [E].

6 Discussion

This chapter brings together and critically reflects on the main findings in this thesis to directly address the three research questions. In doing so, the significance and relevance of the results and how they relate to previous research and knowledge are explored while building the basis for the conclusions. Furthermore, the research method, data, and limitations are addressed and made explicit by discussing the methodological choices.

The thesis aims to contribute to more knowledge on the nexus between stakeholder pressure and the transition to advanced sustainability in corporate settings. The key focus of the research has been upon established firms in the wind industry, an industry that is intuitively linked to sustainability and, to the knowledge of this author, constitutes a field of research yet in need of more pluralization. Two main fields of research have been connected, namely stakeholder theory, management and salience, and corporate sustainability transition. An additional layer to the analytical framework was the concept of incumbency as the case study with Vestas allowed insights from a globally established wind energy company. The following research questions are addressed in this thesis:

RQ 1: How has the stakeholder narrative and constellations in the wind industry changed in the past 5 years?

RQ 2: How does the corporate perception of sustainability develop in relation to the stakeholder narrative?

RQ 3: How are established firms responding to and shaping this development through their corporate sustainability strategy?

First, RQ1 is answered to get an understanding of the specific research context that this thesis address, which is important to be able to answer the following two research questions, which seeks to make a novel contribution to research. However, there is still room to discuss several points from previous research regarding how they align with the results in this thesis. Next, RQ3 is answered to make direct connections between the changes and developments presented in RQ1 to the explicit strategic responses implemented by the case company. Lastly, RQ2 is answered to understand underlying patterns that can explain the connection made between RQ1 and RQ3. Here connection can be made that will directly address the research gap presented in section 1.2.

6.1 Findings, significance, and relevance

When comparing content in the academic literature review with the empirical results it becomes evident that some of the main claims in the previous research correspond with the results in this thesis. In line with the literature, the findings have shown not only that there indeed exist different social contracts with stakeholders that need to be maintained accordingly (Deegan & Blomquist, 2006), but that these can differ vastly and in turn affect how a firm's internal sustainability consciousness develops, what strategic decisions the business responds with, and what implications this entails. However, the evidence gathered in this study supports the view that different stakeholder groups require different mediating approaches. There is a striking underlying and common view across stakeholders regarding expectations on how sustainability should develop in the industry.

RQ 1: How has the stakeholder narrative and constellations in the wind industry changed in the past 5 years?

After exploring wind industry stakeholders from two main sources of data; the document review, which provided a secondary-external perspective, and the case study, which provided a

primary-internal perspective, some general claims from the literature can be confirmed. It becomes clear that stakeholder attributes, and the power of influence they entail, are flexible and not held at a steady state (Mitchell, et al., 1997; Darnall et al., 2010). What can be seen from the empirical results is that although stakeholder pressure started to gain momentum in 2018 a significant turning point appeared in 2019, where the focus on sustainability significantly shifted in the industry through isomorphic characteristics. Before this turning point, some of the key stakeholders that were mostly involved with the core business were investors and shareholders, customers (wind developers & utility companies), policymakers, and social groups. From the perspective of Baumgartner & Ebner's (2010) four stages of sustainability strategy, the industry as a whole could be considered to be at a low-level maturity, following risk mitigation and elements of legitimating strategy, as the focus was foremost on staying compliant. As the global sustainability agenda developed and more pressure and requirements started appearing from the EU and national governments, pressure started to intensify not only from the regular stakeholders but also from other stakeholders. Internally, expectations from employees and top management increased, and externally also from academia, competitors, and suppliers. Although it is difficult from the empirical evidence to determine exactly how the change in power, legitimacy, and urgency has changed for each independent stakeholder, especially as all three can be acquired to different degrees by the same stakeholder, it is evident that combined as a constellation unit there has been an increase in all three attributes. Perhaps the narrative that has changed the most is regarding the sense of urgency, explained by a change in perception capacity by managers (Gonzaléz-Benito & Gonzaléz-Benito, 2010) leading up to the determination and decisions to quickly accelerate the implementation of sustainability into the business strategy. In other words, the company reached a point where the stakeholder pressures could no longer be ignored. Indeed, there seems to have been dissatisfaction among stakeholders on the inadequate integration of sustainability expectations in the business, primarily from customers, in line with Silva et al (2019), and even more evidently from employees in the company.

Stakeholder claims on sustainability seem to have been similar across stakeholders, the consensus being that the company needed to address environmental issues further and lower CO2 emissions from internal operations. As more stakeholders joined and aligned on the same expectations, the urgency to respond also increased. Once it was acknowledged that recycling the wind turbine blades would be a future possibility, a development that academia has been playing a key role in driving, there has been a common understanding in the industry that this must be brought to the top of the agenda. Thus, the increasingly collaborative approach between business and academia has proven to be both imperative and valuable to meet other stakeholder expectations (Koushik, 2020). Furthermore, collaboration, in general, emerged as an important point of discussion, seen from a focus on narrative within the case company, between industry actors, as well as across industries. Not only customers have shown increasing interest in co-creating value (Prahalad & Ramaswamy, 2004), but from the results, there is a striking interest also between industry actors, including firms competing for the same customers, as well as across industries.

Bulgacov (2015) brought up an interesting aspect, particularly for this case, which was that external stakeholders play a crucial role in firms where sustainability issues are not historically part of the core business. Vestas and the wind industry can on one hand be considered to have had sustainability very close to their core business historically, since their core product is vital for a global energy transition toward renewable energy. Both internal and external stakeholders viewed Vestas as a company for sustainability for the big portion of the company's history, thus it could be argued that the above statement is not relevant in this context. On the other hand, as per the findings, sustainability was inherently a part of the core *technology,* but not part of the core business strategy and operations. This notion was eventually picked up on by stakeholders

and was used especially by social actors as an argument for lobbying against the wind industry. At this time expectations from external stakeholders and the internal business focus did not align, which harmed the business. At the same time, the positive outcomes of engaging with a diverse range of external stakeholders' interests, as outlined by several authors (Hart, 2007; Darnall et al., 2015) were being missed out on. Nonetheless, external stakeholders have proven to play a crucial role in bringing new perspectives and knowledge to the company, where customers indeed have a central role in putting pressure (Steen & Weaver, 2017). However, other external stakeholders, as well as internal stakeholders, have also played a central role in increasing pressure intensity (González-Benito & González-Benito, 2010). Thus, Vestas has not only 'followed the customer' but rather followed the emergent constellation narrative to re-align the corporate and stakeholder perception on sustainability. This is in contradiction to Bowen's (2002) perspective that incumbent companies i.e., large firms with 'deep pockets' have the ability to resist environmental change urged by stakeholders. Furthermore, Vestas has actively been taking control of the narrative by leading the development of the industry. With the first comprehensive sustainability strategy among the European wind OEMs, Vestas set the course for a new industry identity through both isomorphism and co-creation with competitors, collaboration with all stakeholders, but also by in turn putting pressure on their suppliers. The common industry strategy can thus be seen to have changed from being introverted/extroverted to reaching closer to the visionary maturity level (Baumgartner & Ebner, 2010). However, considering that the new sustainable development is still in an emergent stage, it remains to see if this change in the narrative will lead to the desired outcomes. That a sustainability strategy is portrayed as strong and holistic does not necessarily mean that the outcome is safeguarded, and the whole industry is currently facing multiple challenges that need to be overcome in order to reach the new targets and goals.

RQ 3: How are established firms responding to and shaping this development through their corporate sustainability strategy?

Two core concepts from previous research on sustainability and strategy are reactive and proactive corporate strategy approaches. RQ1 established and confirmed that internal and external stakeholders are fundamental in activating responses from businesses, however, RQ3 seeks to explore the underlying mechanisms and approaches that build and activate a firm to respond and implement a sustainability strategy to meet the stakeholders' expectations. These two strategy approaches are often contrasted in literature, meaning that a firm either adopts a reactive approach or a proactive approach depending on factors such as the environmental orientation of the firm (Banerjee et al., 2003), what type of stakeholders are putting pressure on the firm (Henriques & Sadorsky, 1999), and what perception managers have toward sustainability, e.g., if it is regarded as an opportunity or threat, or the main corporate driver is social legitimacy in contrast to diversification (e.g., Darnall et al., 2010; Bulgacov et. al, 2015). The empirical data suggests that these distinctions are not as clear-cut in practice as previous research suggests and that both strategies may in fact overlap and coexist. From the empirical data, it is clear that stakeholders had been building up expectations and pressure to a point in which it could no longer be ignored by the case company. This in turn threatened the social legitimacy and reputation of the company, which forced a reaction. However, the expectations seem to have been generic in that the company was expected to do more for the environment, without perhaps demanding specific requirements or actions, except for certain basic requirements coming from customers. However, in the process of reacting to stakeholder pressure and managers recognizing that a change was needed, the company also made an active decision to adopt a more proactive approach by going beyond expectations and requirements, seeing sustainability as an opportunity for differentiation, and remaining an industry-leading company also in terms of sustainability. Some literature suggests that regulatory stakeholder is associated with environmental reactivity, whereas community (social) stakeholders are

associated with environmental reactivity (Henriques & Sadorsky 1999). From the empirical results in this thesis, it is difficult to state a direct relationship between specific stakeholders and a proactive or reactive strategy process. What can be seen is that in a stakeholder landscape where an increasingly growing constellation group shares increasingly similar environmental expectations of a company, stakeholders that are prone to cause both reactive and proactive responses are likely to be present. Following the literature that finds a positive relationship between incumbent firms and proactive environmental engagement (e.g., Steen & Weaver, 2017; Turnheim & Sovakool, 2020), the empirical evidence suggests that a firm will take steps out of its locked-in regime when the value of proactively engaging in a tactical sustainability transition is recognized. Furthermore, the findings show that especially managers and executives have a crucial role to play in the event of moving from a reactive state to taking proactive measures. If internal decision-makers had not recognized added value from implementing advanced sustainability initiatives, and merely viewed it as a threat and added cost for the company, there is reason to believe that the company would have stayed in a reactive state, or at least that the transition would not have been as rapid as it was. As the change in sustainability perception is regarded to have come at a late stage according to the empirical evidence, this point to the capacity that incumbent firms do possess some power to resist change, until the joint stakeholder landscape has built enough pressure that it would be a threat to the business to ignore. However, when the decision has been made to change, being an incumbent firm can prove to be very efficient for the development of changing the status quo and engaging in proactive environmental actions. Another perspective on this phenomenon is provided by Gonzaléz-Benito & Gonzaléz-Benito (2010), their findings support that being the final producing company in the supply chain entails higher pressure intensity from external stakeholders to push sustainability upstream in the supply chain. For the case company to be able to achieve its sustainability targets and satisfy external stakeholders, there is a need to put pressure and push these expectations also to their first-tier suppliers and further up in the supply chain. While different suppliers possess varied levels of sustainability maturity, some that already have developed a high level of consciousness, a large burden indeed seems to fall on the final producing company to address stakeholder expectations, both upward and downwards the supply chain.

Darnall et al., (2010) give several examples of proactive environmental practices that a firm may undertake e.g., implementing environmental policies, using benchmarking, establishing environmental performance goals, disclosing information publicly, and training and engaging employees in ways to improve the environment, which are actions that have also been undertaken by the case company. However, merely listing actions that can be considered proactive is limited as it might exclude other types of engagement, therefore the author's general definition of proactive environmental practices, based on Hart (2005) is relevant for the next point of discussion; "*intangible managerial innovations and routines that require organizational commitments towards improving the natural environment and which are not required by law*" (Darnall, et al., 2010, p.1090). One striking finding from the data that fits this definition but that is not brought up as an example of proactive engagement is regarding the development of new governance structures and frameworks. The decision to incorporate a circular approach to EoL and waste management can be argued to be a very apparent proactive approach since this requires the company to both define new concepts that relate to their sustainability goals, such as the 'zero-waste turbine', and to innovate new routines and structures of doing business internally and across the supply chain. To achieve this, the empirical evidence points to the importance of collaboration to solve industry-wide challenges. While providing added value to customers is a competitive field, solving complex and common issues that affect the wider industry, especially when many suppliers are shared between competitors, a collaborative approach is required. Thus, innovation around sustainability and circularity governance, industry collaboration, and cross-

industry collaborations are important additions in distinguishing proactive environmental practices.

RQ2: How does the corporate perception of sustainability develop in relation to the stakeholder narrative?

This research question seeks to address underlying drivers and mechanisms that affect the corporate perception, i.e., explanations for how and why a company finds value in transitioning to a more advanced sustainability strategy. In doing so, this question seeks to pluralize research on contingencies that explain the effects of stakeholder pressures, what it is that really drives an organization to develop a reactive or proactive strategy or both. It is already evident that stakeholder pressure is an important, if not the most important driver to cause a reaction from the company. However, stakeholder pressure is just the first layer of driving mechanisms. To understand why it is important for the company to respond to perceived pressure and expectations, it is valuable to understand what a company might gain from implementing a comprehensive sustainability strategy, or what it might lose if stakeholder expectations are not answered properly.

6.1.1 Risk avoidance contra added value

The empirically identified drivers for implementing a sustainability strategy that could be detected are the following: avoid risk, attract investment, enhance corporate reputation, employment branding, and corporate culture, stay ahead of policy changes, uphold social license to operate, and gain competitive advantage (differentiation). Most of these drivers are in line with what can be found in previous literature to motivate companies to implement sustainability. What can also be detected from the findings is that risk avoidance and added value are not inherent drivers by themselves but rather two drivers on opposite sides of a spectrum that permeate some of the other drivers. For example, the case company found that staying ahead of legal requirements on one hand decreases the risk of potential penalties associated with upcoming policy changes as these might take time and resources to implement. This is in line with Henriques & Sadorsky (1996). On the other hand, the findings also point out an advantage to staying updated on legal requirements that will affect especially customers since new requirements falling on customers might require actors upward the supply chain to adapt as well, even if these actors are not directly targeted by the policy. Thus, there is value in staying updated on legal requirements as it avoids future risk, while also putting the company in a leading position.

As per the findings, the case company recognized that there was a misalignment in expectations from employees and the sustainability implementation in the company. By addressing this gap, the company can lower the risk of losing talented employees in the company. It can also be used for attracting new talents that identify with the new approach and that can contribute to driving the development and manifest sustainability as a natural part of the core business. When it comes to attracting investment, it is more straightforward. An increasing number of investors have expectations of them that encourage or require investment to go to firms that fulfill certain ESG requirements. There is thus both a risk involved with not fulfilling the requirements, to miss out on capital, and there is an increasing chance of attracting investment with more advanced sustainability implementation.

Risk and value can also be associated with corporate reputation, as seen both from the findings and previous literature (Pucheva, 2008; Silva et al., 2019). As discussed in RQ1, the lack of sufficient sustainability implementation can be utilized by stakeholders to criticize and advocate against the industry, which can be seen as a threat to the corporate image. The findings point to the notion that avoiding the risk of a negative reputation is valued higher than having the best

reputation in the industry (or the world), at least by employees. Getting outstanding recognition in terms of sustainability might on one hand be positive for the external corporate image, thus adding value to being perceived as a sustainability pioneer in the industry. However, it also leads to added pressure to deliver on the commitments, and it might cause skepticism among internal and external stakeholders if this development is too rapid. Hence, there might also be some risk associated with pushing the corporate sustainability image very intensely and reinforcing a misalignment between stakeholders' perception of the company's sustainability maturity and the image that is portrayed externally.

It can thus be argued that different drivers can be motivated on one hand by the view of risk avoidance, or the same driver can be motivated by value-adding motives. This is not necessarily an either-or situation but can be motivated by both sides of the spectrum simultaneously, or some drivers tend to be motivated more by risk avoidance and others by value-adding matters. The perception capacity of managers to view stakeholder pressure requirements on sustainability as risks that need to be mitigated or as opportunities for added value is stated to have an impact on strategy approaches (Darnall et al., 2010; Gonzaléz-Benito & Gonzaléz-Benito, 2010). However, the findings show that management does not necessarily share only one view in a company, instead, there are different views among managers in the same company. Some are more prone to respond to risk avoidance motivation and others are more to value-adding approaches. That different views are present is perhaps not surprising when discussing a large and global corporation, yet previous literature tends to assume that managers in a firm share the same perception capacity that then leads to either a reactive or proactive strategy approach. Recognizing that the corotate perception of sustainability might be motivated by risk-avoiding factors as well as value-adding factors also further strengthens the point that both reactive and proactive strategies might take place at the same time in a company.

6.1.2 'License to operate' contra diversification

Previous literature discusses drivers for corporate sustainability both in terms of social license to operate and as added value in opportunity for diversification to customers (e.g., González-Benito & González-Benito, 2010; Steen & Weaver, 2017; Pucheva, 2008). From a theoretical perspective, the difference might seem straightforward, and striving to maintain a license to operate is associated with a lower maturity level of sustainability, compared to striving for differentiation and innovation (Baumgartner & Ebner). This thesis would argue that this distinction is not as evident in reality, at least in the infancy of going through a sustainability transition. The case study findings showed that there has been a lot of both external and internal pressure that has been crucial for the sustainability transition to take place. However, it is not entirely clear or concretized what the stakeholder requirements are. Different stakeholder groups, as well as different actors within the same stakeholder group, have very dispersed maturity levels of sustainability, which makes mediating the stakeholder landscape a complex task that in some cases brings about contradictory signals. Management and employees working closely with sustainability in the case company have the perception that the customers are strongly pushing for sustainability requirements and that it is increasingly becoming a prerequisite in tenders, asking to raise the level of ambition, set targets, and disclose more data to be able to showcase a sustainability strategy with goals and targets. This in turn implies that it would influence the choice of OEM suppliers for a wind turbine project. However, the findings also show, especially from the sales perspective, that customers do not at this stage value sustainability to the degree in which it has a decisive factor over other, especially economic, aspects. Currently, an ambitious sustainability profile is not something that gives a competitive advantage in the sales phase when it comes to being picked as a preferred supplier, instead, cost remains the main decisive factor. Keeping in mind that the change in perception from stakeholders and the company is still very recent, the added value of sustainability remains on a discussion level as something that 'comes up' in conversations with customers, yet it is merely

something that is appreciated by customers and in practice does not play a crucial role when it comes to investment decisions. The opportunity for diversification seems to lie in the development of circularity technologies, structures, and governance frameworks. Porter & Van der Linde (1995) associated being an environmental leader with an internal competitive advantage and indeed, circularity has become a business area in the industry with both collaborative approaches but also an area of competition where being first on the market to offer new recycling technologies are perceived by OEMs as a gateway to competitive advantage. Also finding solutions for less CO_2 intense steel production or 'green steel' is regarded as a potential option to offer to customers at a price premium, however, the same issue remains that it is unclear today what customers are willing to pay for it. Hence, the suggestion in previous research of a positive relationship between well-managed stakeholder relationships and financial performance (e.g., Freeman, 1987; Bulgacov et al., 2015; Darnall et al., 2010) can neither be confirmed nor neglected at this point.

Regarding future directions, the empirical data suggest that the uptake of sustainability and circularity issues will continue to develop. The hope is that sustainability will become an opportunity for a competing advantage in tenders and in the sales phase, which would drive the development further. It is no exaggeration that the wind industry has taken a significant step by implementing ambitious sustainability strategies and targets and is showing proactive actions. Moreover, the early development phase has pointed to several reasons to believe that finding the desired sustainability path is complex and involves both reactive and proactive actions, which are grounded both in risk avoidance and strive for competitive advantage.

6.2 Methodology reflections and limitations

This section discusses the methodological and theoretical choices in terms of legitimacy, generalizability, and limitations. The research design was influenced by two main characteristics of the research problem: First, the undergoing sustainability transition in the European wind power industry is new and unexplored. Second, research at the intersection of stakeholder theory and ST in established firms is sparse, particularly research that focuses on firms and industries that are historically and inherently linked with environmental sustainability. Following this, the research design in this thesis applied a public (news) document review and a case-based approach to collect empirical data I) on the wider industry's stakeholders' views and the development in sustainability perception, and II) from a pioneer in the wind power industry currently undergoing a sustainable transition. This was analyzed from the points of stakeholder narrative and constellations, corporate drivers and ambition for sustainability, and internal mechanisms and implications following the implementation of a sustainability strategy.

The findings were primarily synthesized to pluralize research in the nexus of stakeholder, corporate sustainability transition, and incumbency literature; address the research gap surrounding contingencies between stakeholder pressure and corporate responses; build a foundation for future research. Regarding the **theoretical and conceptual choices,** stakeholder theory was at the core of the thesis, considering stakeholders being the common and permeated focus. Stakeholder theory has been embedded in corporate strategy and manager's thinking since Freeman published his widely recognized book in 1984. However, the theory has been criticized on several points e.g., for being vague and too broad, and Freeman's definition is not accepted universally by other stakeholder researchers (Mitchell, 1997). Therefore, a broader take on stakeholder theory, including additional perspectives on stakeholder salience and management, that has been developed after Freeman, was also included in the theoretical framework. Similarly, when it comes to conceptual choices on sustainability transition, this was also kept relatively broad, yet keeping an emphasis on literature that connected sustainable transition with stakeholder literature, to stay focused on the core aspects of the thesis. Other research fields and theories connected to ST could be detected in the review

of literature, which could have been applicable in this type of research as well. Literature on institutional theory, the multi-level perspective (MLP), and socio-technical regimes was commonly connected to ST (e.g., Smith et al., 2005; Darnall et al., 2010; Steen & Weaver, 2017) yet since this thesis focuses more on the corporate transitional perspectives, and less on broad societal regime disruptions, this particular perspective was deemed outside of the scope. However, MLP could very well be a foundation for further research. Lastly, an additional theoretical lens on incumbency was applied, as the role of incumbent firms in sustainable transformation has been widely debated in the literature, and the case company provided an opportunity to add perspectives to that debate. However, the focus on incumbency takes up a relatively small part of the analysis and the thesis could have benefitted by allowing this perspective more space. The suitability of the conceptual framework can be justified by a high degree of overlap in patterns and concepts with the empirical results.

The empirical evidence can also provide insights for practitioners in established companies that are experiencing increased pressure intensity by stakeholders to advance sustainability practices. The findings may help mediate stakeholder relationships and manage transitional characteristics in similar industries. The research design was restricted to reflect a specific industry, which is favorable to generating specific results. However, it could be seen as a limitation in terms of **generalizability** as it might be difficult to distinguish what part of the results are specific to the industry or case company and thus cannot be applied in other contexts, especially when it comes to internal drivers, ambitions, mechanisms, and implications that are linked to specific industry stakeholder relationships. That being said, having a distinct case context can provide more delineation to other cases, making comparisons more straightforward. As the purpose of this thesis was to pluralize knowledge by investigating a less researched industry, based on the specific conceptual framework, it was deemed necessary and appropriate to apply this scope. Moreover, generalization is inherently limited in qualitative research (Gibbs, 2007) and the value lies in the distinct descriptions and themes developed in the specific context (Creswell & Creswell, 2018). Thus, while some generalizations are made in the concluding remarks, especially regarding implications for practitioners, the thesis takes active caution not to proclaim that findings a universally represented.

Another potential limitation to researching a specific case could also be the risk of having limited access to interviewees to collect sufficient data. This risk was deemed as small as the author of this thesis had an established connection to the case company. This did not guarantee access to interviewees but was assuredly an advantage. Both the document review and the case study worked as a proxy for stakeholder views and the thesis could have gained from having interviews also with external stakeholders, to get a first-hand perspective. This could have deepened the understanding of the relationship between the case company and its stakeholders, especially on points regarding stakeholder perception and collaboration within and across the industry. Yet, the research aim, questions, and method were designed to address the internal corporate perspective, thus it was considered more valuable to restrict interviews within the company, and **triangulate** data using a second method, the public document review.

Another limitation that should be made explicit is the use and focus of 'sustainability' as a concept. Although this thesis talks about sustainability as a multifaceted concept, the main focus is on environmental aspects and substantially less on the social dimension. As previously discussed, the wind power industry is deep-rooted in the discussions surrounding global environmental impacts such as GHG emissions and climate change, as well as the local environment such as landscape and biodiversity. This point of view tends to inherently focus more on the environmental narrative over the social sustainability aspects. This does not mean that the social perspective is not important, nor does it mean that this is neglected by the case company and the industry, but this thesis deliberately decided to limit the scope to

environmental and circular aspects as this is a renewed focus on the case company and industry. Social aspects regarding safety, equality, diversity and local community initiatives have historically been a part of the business e.g., by committing to the UN Global Compact in 2009.

Concerning **validity,** this thesis has applied several of the validity procedures presented by Creswell & Creswell (2018) to improve the accuracy of the findings. It has used *triangulation* in data sources, applying for a public document review from three independent news journals, interviews with participants in different functions, locations, and organizational hierarchies, as well as participant observations. Second, *research bias* has been made explicit by discussing the author's role as a researcher and employee in the case company. In connection with this point, the author has also been able to spend *prolonged time* in the field, which is associated with more accurate findings. The thesis has also aimed to provide *rich descriptions* of the findings by e.g., providing detailed descriptions and different perspectives in the analysis. Lastly, *peer debriefing* by supervisors and peers has been applied regularly throughout the research process, who would review and ask questions about the content. However, the results could have benefited from a larger sample size in all methodological approaches. Including more news journals could have yielded a more comprehensive industry picture. Interviews across more corporate functions, also outside the office setting including e.g., service technicians could have provided a more nuanced picture. Lastly, more observations could have been recorded considering the author's access to continuous participation in the company, however, this also poses a confidential risk, thus the number of observations that could be shared was kept restricted to respect the company's intellectual property.

Regarding the result's **reliability,** qualitative research emphasizes mostly the ability to repeat the methodological approaches, rather than replicating the results in another study (Yin, 2014). As qualitative methods are prone to variation in data collection and analysis (Walliman, 2006) this thesis has adopted two of the qualitative reliability procedures suggested by Gibbs (2007) to increase consistency in the research: Interview *transcript checks* have been made to make sure they do not contain obvious mistakes, and clear definitions of codes were developed in the coding process and then compared with the data to not drift in the definitions. This required an iterative approach to cross-check that data had been coded rightfully. Additionally, to keep consistency in the interviews, keeping in mind that a semi-structured approach was used, interviewees were given the same background information and questions at the beginning of the interviews. The use of semi-structured interviews compared to structured interviews could potentially have led to less reliable results, yet the semi-structured approach was deemed to be more adequate to get richer, in-depth data. Qualitative data content was then systemically analyzed in the software program Nvivo.

In terms of overall **legitimacy,** the research questions were built upon the specific problem definition and identified research gap. All three questions were intentionally built to be highly open-ended considering that a relatively new and understudied context was being researched, and open-ended results were thus desirable. An alternative could have been to ask more pointed questions e.g., 'what drives the corporate sustainability perception on sustainability to develop?' or 'what are the challenges and opportunities of implementing a sustainability strategy?'. These types of questions could have provided more clear-cut answers, however, keeping broader questions allowed more room for different aspects to come to light and elucidate the most relevant and interesting results. Pointed research questions could potentially be more useful in future research by zooming in on some of the results that appeared in this thesis. Indeed, further research would be beneficial to build further understanding, for example regarding where and how value can be tangibly created in a sustainability strategy to wind industry stakeholders, or by looking more closely at the industry and cross-industry collaboration that has emerged.

7 Conclusion

This thesis aimed to contribute and pluralize existing knowledge at the conceptual intersection of stakeholder theory, sustainable transition, and incumbency, applied in the European wind industry context. In doing so, explanations of how stakeholder pressure can shape sustainable transitions and broaden corporate sustainability strategies in established firms that operate in inherent environmentally-focused industries could be highlighted. This includes addressing contingencies that explain corporate responses as an effect on stakeholder pressure, which is an area that has thus far experienced limited research, especially from a renewable sector perspective like the wind power industry. For this purpose, empirical qualitative data consisting of 49 news articles, 7 interviews, and 7 participatory observations were collected and analyzed through qualitative content analysis in the software Nvivo, followed by further in-depth analysis to answer the following research questions:

RQ 1: How has the stakeholder narrative and constellations in the wind industry changed in the past 5 years?

RQ 2: How does the corporate perception of sustainability develop in relation to the stakeholder narrative?

RQ 3: How are established firms responding to and shaping this development through their corporate sustainability strategy?

The empirical evidence shows that in the context of a wind OEM firm in the European wind power industry, stakeholder constellations and their sustainability perspective affect how the firm's internal sustainability consciousness develops, what strategic decisions the business responds with, and what implications this entail. Furthermore, these stakeholder relationships need to be maintained according to their differences and similarities in sustainability perception and maturity, yet there is also an underlying and shared view across stakeholders regarding expectations on how sustainability should develop in the industry, that could be addressed on a common front.

The first research question (RQ1) can be answered as follows: There has been a common alignment in the perception of sustainability across the wind power industry and its stakeholders for a major part of the industry's history. The consensus has been that the manufacturing and installation of wind turbines are inherently linked to promoting environmental sustainability globally, and concerns regarding broader ESG issues have been limited. Within the past 5 years, along with the development of an increased global focus on environmental sustainability, new policy implementation from the EU and national governments, and ESG requirements coming from investors, the stakeholder perception of sustainability has matured, causing misalignment in expectations and sustainability output by wind OEMs. As enough stakeholder pressure had been built, a turning point came in 2018-2019 when a corporate response was inevitable and the process of realigning on stakeholder expectations became a priority for Vestas, with the entire industry following shortly after. This realignment is still in its initial phase and is an ongoing process.

The second research question (RQ2) enfolded underlying drivers that motivated the case company to mature and align its perception, beyond merely experiencing increasing stakeholder pressure. The main identified drivers were attracting investment, enhancing corporate reputation, enhancing employment branding and corporate culture, staying ahead of policy changes, upholding social license to operate, and gaining competitive advantage. Drivers can also be concluded to be motivated by, on one side of a spectrum risk avoidance, and on the other side of that spectrum added value to the company and stakeholders. Some drivers lean

more, some less, toward one side of the spectrum and may thus overlap. Similarly, there is not a clear cut between underlying motivational drivers when it comes to competitive advantage contra social license to operate as there are conflicting views from stakeholders regarding the perceived value and true value of implementing a sustainability strategy. The reason for overlapping motivations on either side of the spectrum can further be manifested by the notion that different managers that have varied views coexisting in the same company generate a more complex view on corporate drivers than suggest in previous literature. Thus, drivers are not motivated by 'either or' but rather a combination of both spectrums.

The third and last research question (RQ3) can be concluded in this manner: First, following the combination of different motivations underlying corporate drivers, both reactive and proactive environmental strategies can overlap and coexist when the corporate sustainability transition takes place. This is a pluralized perspective to existing research that tends to distinctly divide the two strategies. Second, the findings show that especially top managers and executives have a crucial role to play in the event of moving from merely a reactive state to adding proactive measures, as they pertain power to mobilize transitions quickly. Lastly, collaboration and governance innovation are important additional constituents of proactive engagement that have shown to be interdependent and increasingly important mechanisms when shaping the sustainability strategy and future outlook in the industry.

7.1 Implications and recommendations for practitioners

The main practitioner audience of this research are I) firms in other RE sectors, especially the solar PV sector, II) established manufacturing companies in other industries that experience increased stakeholder pressure or are in the early stages of going through a corporate sustainability transition, and III) managers in these companies and industries. Considering the established close relationship between managers' sustainability perception and maturity, and strategic responses in sustainability transitions, some general highlights and recommendations will be provided that are relevant for all three identified practitioners. The experience of increased pressure intensity from stakeholders is an indication that there is currently a misalignment between expectations and output on sustainability commitment in a firm or industry. This gap is associated with the risk of affecting the corporate and industry reputation negatively. If this misalignment is recognized and the calls for a reaction are urgent, or further pressure intensity wants to be proactively mitigated, there are some suggestions and highlights based on the findings in this thesis that should be considered when exploring grounds for realignment and sustainability advancement.

First, companies going through a transition can predict to avoid risk and gain value from a positive corporate image. It also allows the company to better retain and gain skilled and sustainably driven employees in the workforce. This seems to be especially important in a company that is inherently linked with sustainability, as employees for this reason will associate and expect the company to verily be the sustainability advocate it purports to be. However, caution should be applied when pushing sustainability image strongly and suddenly as both internal and external perceptions of the company might not have developed at the same pace, or not have been accepted as genuine yet. If employees have been recognizing for a long time that the company has been lacking sufficient sustainability focus and has thus not recognized the company as being inherently sustainable, it might take time to trust and accept the company's new intention as authentic, which can cause criticism and questions of legitimacy in the meantime. It will take time for the company to be able to show improvements in the actions undertaken and to show advancement toward meeting the goals and targets. An important approach to ratify proactive engagement and drive the development needed to achieve targets is through stakeholder collaboration within and across industries. This is especially important

for technological development that can decrease CO2 emissions in the supply chain and foster circular approaches. Furthermore, to this point, it is difficult to identify from the empirical findings where direct economic value can be obtained as the development is still premature. However, industry collaboration can help distribute the costs across the value chain, and advancing sustainability commitments is also increasingly advantageous in attracting investment.

7.2 Recommendations for further research

This thesis has drawn upon literature on the intersection of stakeholder theory, corporate sustainable transition, and incumbent firms, and the findings have provided several contributions to pluralize previous research. First, stakeholder perception and corporate responses can be seen as a continuous balancing act of misalignment and realignment in corporate and stakeholder perception of sustainability. In line with previous literature, the stage of misalignment can be associated with reactive responses from the affected firm. However, the empirical evidence suggests that both reactive and proactive strategy approaches can coexist and that this can be based on motivations coexisting on a spectrum of risk avoidant contra value adding drivers, or license to operate contra competitive advantage. These concepts tend to be distinctly separated in prior literature, while this thesis suggests that strategy approaches and motivational drivers are not bound to be either or. Furthermore, this thesis also supports a positive relationship between responsive corporate sustainability transition and incumbency, which is a research area that has divided researchers into viewing incumbent firms either as 'villains' or crucial social actors for change. While having established the theoretical contributions of this thesis, further research is required. Similar research could be applied in other RE sectors, especially in the solar PV industry as many attributes are shared with the wind power industry in terms of being inherently linked with environmental sustainability, facing similar issues regarding lowering CO2 emissions in the supply chains, handling increasing waste streams, and improve circular approaches. Findings would allow to compare cases and identify best practices, and possibly open for broader cross-industry collaboration.

Furthermore, previous research also suggests that having well-managed stakeholder relationships and environmentally proactive business practices are associated with better financial performance. However, since the research context in this thesis contained a case company that is still in its emergent stage of implementing new business practices, several uncertainties around the above suggestions arose from the findings. This poses questions regarding who will bear the associated costs and where in the supply chain value can be made explicit, as currently, no stakeholder wants to bear the cost, nor are customers generally willing to pay a premium for a sustainability profile. Thus, when the current sustainability transition has matured more in the industry and costs, economic gains, and non-economic values have become more apparent to the business and industry, this type of research could contribute to strengthened motivations and drivers for firms to adopt and advance sustainability practices.

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Appendix

7.3 Appendix A – List of Interview questions

- For how long have you worked at Vestas?
- What is your role in the company?

1. When you first started at Vestas, how would you describe the perception and attitude towards sustainability then?

    a. How has it changed and developed over the years?
    b. Have you noticed any changing trends at the industry level?
    c. Have you noticed any changes in the influence and presence of different stakeholders?

2. The sustainability strategy was published in 2020 – what do you see as the most important driving forces and events leading up to this?

    a. Were there any internal changes or management decisions involved?
    b. What external factors has had an influence?

3. What are the underlying internal ambitions for Vestas in implementing a sustainability strategy?

4. Circular approaches have recently become a major topic at Vestas and a circularity roadmap was recently implemented. Why do you think this ended up on the agenda?

5. How has the sustainability strategy affected how the organization is conducting its business?

6. How do you think Vestas's stakeholders have contributed and influenced the sustainability strategy?

7. How can stakeholders communicate their expectations and views on sustainability in the company?

8. What has been the response from stakeholders after the sustainability strategy and the circular roadmap was launched?

9. What real or potential challenges do you think Vestas may face when it comes to relationships with stakeholders and sustainability in the company?

7.4 Appendix B – Initial document review coding framework

Environmental integrity – What environmental issues are discussed?
Biodiversity
Carbon footprint
Climate change
Pollution
Recycle
Redistribute
Refurbish
Remanufacture
Repair
Resource efficiency
Reuse
Waste management

Governance – What governance issues are discussed?
Strategy
Supply chain

Stakeholders – What voices are present in the news?
Customers
Employees
Investors
Media
Policymakers
Shareholders
Social groups
Suppliers and manufacturers
Wind OEM's

7.5 Appendix C – Final document review coding framework

Energy

> RE supply & security
> RE transition

Environmental integrity – What environmental issues are discussed?

> Biodiversity
> Change in landscape
> Circularity
> Climate change
> GHG emissions
> Material use
> Pollution
> Waste & disposal

Governance – What governance issues are discussed?

> Collaboration
> Environmental policy
> Strategy
> Supply chain

Stakeholders – What voices are present in the news?

> Academia
> Collaborative group constellations
> Employees
> Environmental NGO's
> Investors
> Local communities
> Non-renewable sector
> Policymakers
> Suppliers and manufacturers
> Wind developers & utility companies
> Wind industry bodies
> Wind OEM's

7.6 Appendix D – Initial interview coding structure

Challenges & Opportunities
      Challenges
      Opportunities

Corporate strategy
      Pro-active
      Reactive

Drivers and ambitions for Sustainable Transition
      Avoid risk
      Corporate reputation
      Competitive advantage
      License to operate

Incumbency attributes

Mechanisms for Sustainable Transition
      Bottom-up
      Co-creation
      Collaboration
      Isomorphism
      Stakeholder pressure
      Top-down

Stakeholders
      Academia
      Competitors
      Customers
      Employees
      Environmental regulators
      Investors
      Managers
      Media
      Shareholders
      Social groups
      Suppliers

Sustainability Narrative
      Current perception
      Old perception

7.7 Appendix E – Initial interview coding structure

Challenges & Opportunities
      Challenges
      Opportunities

Corporate strategy
      Pro-active
      Reactive

Drivers and ambitions for Sustainable Transition
      Avoid risk
      Attract investment
      Corporate culture
      Corporate reputation
      Differentiation and competitive advantage
      Employment branding
      License to operate
      Readiness for policy changes

Incumbency attributes

Mechanisms for Sustainable Transition
      Bottom-up
      Co-creation
      Collaboration
      Governance
      Isomorphism
      Stakeholder pressure
      Top-down

Stakeholders
      Academia
      Competitors
      Customers
      Employees
      Environmental regulators
      Investors
      Managers
      Media
      Shareholders
      Social groups
      Suppliers

Sustainability Narrative
      Current perception and new sustainability initiatives
      Future outlooks
      Previous perceptions and implemented sustainability initiatives

7.8 Appendix F – Observation coding and notetaking

ID	Date	Observation type	Notes & Thoughts
O1	N/A	Continuous observation	Customers seem to be the primary stakeholder that employees engage with in sales & construction and that have a significant influence on the company.
O2	February 28, 2022	Vestas's website	Vestas uses a survey on their website to gather information on what type o stakeholders are visiting and what information they are looking for.
O3	N/A	Continuous observation	Sustainability is increasingly discussed in day-to-day conversations. Also, informative emails and news articles on the topic are often shared and encouraged internally with the teams.
O4	March 17, 2022	Employee online platforms	Went through comments from employees on sustainability related information that has been distributed. What could be observed is a lot of positive response to the sustainability strategy and circularity roadmap, but also questions coming up on other areas where Vestas could contribute more.
O5	April 8, 2022	Lunch conversation	It seems like Vestas ambitious sustainability commitments are welcomed and applauded by stakeholders but so far it has not resulted in any advantages in becoming a preferred supplier. ESG issues are increasingly part of tender requirements, but so far having an advanced sustainability strategy gains no advantage over economic aspects (i.e., cost is still the main factor but sustainability is 'appreciated'). This is experienced as a bit frustrating by sales department. Hoping this will weigh heavier in tenders in the future.

O6	October 27, 2021	Internal sustainability webinars	Ambition to spread sustainability knowledge to the whole organization and embed it in the culture. Regular sustainability webinars, since the strategy was implemented, to inform the employees about the strategy (although voluntary sessions). The webinars have been increasingly popular with more people attending for every session.
	December 14, 2021		
	February 3, 2022		
	February 17, 2022		
O7	April 27, 2022	Office conversation	Employees are a bit skeptical about Vestas being announced as the world's most sustainable company – Can that really be true? How are they measuring this? Etc.

7.9 Appendix G – List of News Articles in document review

In-reference ID	Source:
[BBC, 2017(1)]	BBC News. (2017, June 5). 'Extraordinary' month for Scottish renewable energy. https://www.bbc.com/news/uk-scotland-40149604
[BBC, 2017(2)]	BBC News. (2017, April 27). Llandegley beauty spot wind farm rejected by Powys council. https://www.bbc.com/news/uk-wales-mid-wales-39722881
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[BBC, 2019(4)]	Harrabin, R. (2019, June 21). Clean electricity overtaking fossil fuels in Britain. *BBC News.* https://www.bbc.com/news/science-environment-48711649
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[BBC, 2019(6)]	Keane, K. (2019, September 6). Radar study into wind farm impact on sea birds off Aberdeen coast. *BBC.* https://www.bbc.com/news/uk-scotland-north-east-orkney-shetland-49594699
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[Euronews, 2017(2)]	Euronews. (2017, November 3). Germany's renewable revolution: Can clean energy stand alone in a coal dependent nation? https://www.euronews.com/2017/11/03/germany-s-renewable-revolution-can-clean-energy-stand-alone-in-a-coal-dependent

[Euronews, 2019(3)]	Gomez, J. (2019, March 12). Rethinking recycling: cracking the problem of composite materials. *Euronews*. https://www.euronews.com/next/2019/03/11/rethinking-recycling-cracking-the-problem-of-composite-materials
[Euronews, 2019(4)]	Frost, R. (2019, August 21). Young people call for more green jobs in the UK on Earth Overshoot day. *Euronews*. https://www.euronews.com/green/2020/08/21/young-people-call-for-more-green-jobs-in-the-uk-on-earth-overshoot-day
[Euronews, 2019(5)]	Von der Brelie, H. (2019, April 12). Positive energy: Danish island leads renewable revolution. *Euronews*. https://www.euronews.com/my-europe/2019/04/12/positive-energy-danish-island-leads-renewable-revolution
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[Euronews, 2021(9)]	Euronews. (2021, March 25). Fishermen and wind farms must learn to coexist, says MEP. https://www.euronews.com/2021/03/17/fishermen-and-wind-farms-must-learn-to-coexist-says-mep
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