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Collaboration for Sustainability

A Qualitative Study of the Objectives, Enablers and Barriers for Collaborations Entered with Regard to Sustainability

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Abstract

There are 17 Sustainable Development Goals set to be achieved by 2030, and business collaboration is emphasized as important in achieving these goals. Business actors are encouraged to collaborate and they themselves consider collaboration as necessary and acknowledge the potential gains. However, studies show that collaboration can be challenging and only a small number of businesses who have entered into sustainability collaborations consider them to be successful. The purpose of this thesis is to provide insight into what characterizes sustainability collaborations, how companies can succeed with such collaborations and increase their sustainability impact through these collaborations.

This thesis is based on a multiple case study, using qualitative data collection. The main cases in this study are Norsk Gjenvinning, Heldal Eiendom, REMA 1000 and NCE Seafood Innovation Cluster. We have interviewed respondents from each of these companies as well as several of their collaborating partners. In total, 17 companies and one researcher from the University of Bergen contributed to this thesis. Through the interviews, we identified what characterizes sustainability collaborations, what motives companies have to enter such collaborations and how collaborating partners can facilitate different success factors to successfully increase their sustainability impact through the collaboration. We find that sustainability collaborations are characterized by (1) addressing real, pressing and business-related sustainability problems; (2) the partners having sustainability integrated in overall company strategy; (3) a long-term perspective; (4) cross-sector relationships, and; (5) early trust-based relationships. The findings provide empirical evidence to suggest that companies can benefit from both competency- and legitimacy-oriented motives, but that the former is likely to create greater environmental and financial success. We find that sustainability collaborations and related initiatives are largely internally driven and motivated by exploiting business opportunities, gaining access to valuable competencies and technologies and asserting themselves in competition. Furthermore, we find that the success factors – personal relations, competence building, governance and control, and internal and external conditions – are of significance to the success of the partnership. By managing and maintaining these success factors over time, companies can create motivation and ensure that all involved parties are committed to remain in the collaboration and realize its sustainability goals.

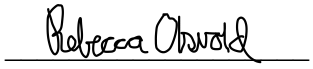
Acknowledgements

This master's thesis is a final assignment after five years of studies in economics and administration and is written within the major Strategy and Management at the Norwegian School of Economics (NHH). The subject of this Master Thesis is collaboration for sustainability. This topic is a result of our shared interest in how business and sustainability can be reconciled and create valuable outcomes. This interest has grown especially in the last two years through various subjects at NHH. Through the study, we have gained knowledge about how companies can succeed in implementing sustainability initiatives through collaboration and create valuable outcomes for their own business, their partners, society and environment. We hope that the reader is also left with increased knowledge, and perhaps even increased interest in the phenomenon that is sustainability collaboration.

Firstly, we would like to express gratitude towards our supervisor Gunnar S. Eskeland for good advice and input, as well as constructive guidance. We have greatly valued your contributions and appreciate the collaboration over the past six months.

Furthermore, we would like to sincerely thank all respondents for participating. You brought us valuable insights and rich information and enabled us to incorporate primary data into our thesis. We are grateful for your commitment. We especially want to thank the main companies, Norsk Gjenvinning, Heldal Eiendom, REMA 1000 and NCE Seafood Innovation for putting us in touch with their partners quickly. Also, we would like to mention that we greatly appreciate that the companies who received increased workload as a result of Covid-19 nevertheless chose to prioritize an interview with us.

Lastly, we thank family and friends who have been great conversation partners and have supported us throughout the process of writing the Master Thesis.



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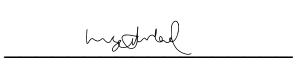

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1. Introduction

1.1 Rationale and actualization

UN Global Compact is a global network for corporate social responsibility initiatives. This network has developed ten principles for responsible business to provide guidance on how companies should ensure responsible operations in human rights, working life, environment and anti-corruption (UN Global Compact, 2019). More than 150 Norwegian companies have signed that they will follow these principles, which indicates that sustainability is a high priority in Norwegian business (Regjeringen, 2018). Nevertheless, a report by PWC shows that few Norwegian companies have integrated sustainability in their business strategy. Companies that prioritize sustainability, set specific goals and measure results, experience higher and more stable growth, and higher profitability compared to other companies. Among the 100 largest Norwegian companies, PWC finds that the turnover of the companies that prioritize specific sustainability areas has grown faster in the last five years (PWC, 2019).

Sustainability is important for business as it affects economic activities. Geopolitical and environmental risks affect the markets and economic stability. As resources become scarce due to climate change, the risks and costs for resources increase. Furthermore, owners, investors, customers, employees and other stakeholders expect that business will be part of the solution to local and global challenges (PWC, 2019). These stakeholders also expect transparency and openness, and demand that products and services are made more sustainable. If companies do not meet these expectations, they become less attractive (Jørgensen & Pedersen, 2018)

Several studies show that it is possible to align sustainability and profitability, and that improving sustainability performance can lead to a competitive advantage (Eccles, Ioannou & Serafeim, 2014; Nidumolu, Prahalad & Rangaswami, 2009; Khan, Serafeim & Yoon, 2015). A study by Eccles et al. (2014) shows strong evidence for the connection between sustainability and profitability and concludes high sustainability companies outperform low sustainability companies.

Solid cooperation within the business community is necessary if we are to achieve the 2030 agenda (Regjeringen, 2018; Eccles et al., 2014; Jørgensen & Pedersen, 2018; Insanic & Gadde, 2014; Vurro, Russo & Perrini, 2009). More and more companies collaborate and the number of collaborations between competitors increase (Dyer & Singh, 1998; Lin & Darnall, 2010; Gulati, 1998). According to Stibbe, Reid & Gilbert (2018) partnerships for sustainable development is highly necessary, but existing partnerships does not yet yield a sufficient impact on the SDGs. The authors argue the reason for this is that there are not enough of such partnerships, and that the ones that already exist are not delivering on their full potential. Furthermore, they state that it is challenging for companies to facilitate cross-sector collaborations.

The fact that companies stand to gain benefits from collaborating is widely accepted, but it is still fairly uncertain what kind of benefits can be achieved and what conditions must be present to achieve these benefits (Haugland, 1996). Despite companies' own desire to collaborate, several studies show that collaboration can be challenging (Kiron, Kruschwitz, Haanaes, Reeves, Fuisz-Kehrback & Kell, 2014; Kale, Dyer & Singh, 2001; Dyer, Kale & Singh, 2002; Stibbe et al., 2018; Russo & Cesarani, 2017; Goerzen & Beamish, 2005; Kogut, 1989). Kiron et al. (2014) conducted a survey with respondents from nearly 3800 companies, and 90% agreed that collaborations are needed for sustainability. However, only 47% of the respondents stated that their companies collaborate on sustainability, and of these only 61% assessed their sustainability collaborations as successful. When added together, this shows that less than 30% perceive their sustainability collaborations as successful. This illustrates that companies acknowledge the need to collaborate but may not know how to proceed or who they should partner with.

According to Jørgensen and Pedersen (2018) there is a need for more empirical research on collaboration for sustainability. Specifically, they mention that the alignment of objectives of the alliance partners and the leveraging of resources across organizational boundaries in a collaboration for sustainability, are subjects for future research. There is also a need for more qualitative research in this area as this research design is considered well suited to address sustainability issues (Jørgensen & Pedersen, 2018).

1.2 Research question and objectives

The purpose of this thesis is to contribute to filling the knowledge gap by providing exploratory empirical insights on collaboration for sustainability and increase the knowledge on what the success factors and barriers are regarding how to manage and preserve these collaborations.

«*How can companies succeed in sustainability collaborations, and how can such collaborations enable companies to increase their sustainability impact?*»

To further guide us in answering the research question, we will include some specific research objectives:

RO1: Identify the characteristics of sustainability collaboration.
RO2: Identify the motives for companies to enter into sustainability collaborations, and whether motive is decisive for success.
RO3: Identify the critical success factors and barriers for sustainability collaborations.
RO4: Identify how companies can facilitate success factors and manage barriers to increase the company's sustainability impact through sustainability collaborations.

By answering the research question and addressing the research objectives, the current study seeks to provide deeper insights on collaboration for sustainability and help companies better succeed in these partnerships.

1.3 Scope and delimitation

In order for the thesis to be feasible, reasonable delineations must be made on the scope of the study (Saunders, Lewis & Thornhill, 2012). The current study is limited to a sample of 17 companies and one researcher from UiB, which have implications for the generalizability of the findings (cf. section 4.3.2). This delimitation is made due to the limited time horizon of a master thesis (cf. section 4.1.3) and the methodological choices made in the study (cf. chapter 4). However, the sample in the current study is in line with the recommended sample size and can contribute to answering the research question in light of previous research (Saunders et al., 2012). The main unit of analysis is the business unit, and the 'cases' in this

case study are several different collaborations consisting of different companies, where each individual company, as well as each individual collaboration are deemed as a case of its own. We believe that the participating companies provide a wide basis for answering the research question as they represent multiple industries. Ideally, we would have kept collecting qualitative data until data is saturated (Saunders et al., 2012), but this is not feasible within the timeframe of a master thesis.

An unforeseen delimitation came as a result of the Covid-19 virus. There is already little research on the chosen topic, but due to the virus outbreak libraries were closed, which further restricted our access to curriculum books and other research. Thus, the theoretical basis is mainly formed on peer reviewed journals that are available online. This may have influenced the theoretical weight of the thesis, but we still believe that selected theory builds a sufficient theoretical basis. Finally, chapter 3 will account for the natural delimitations related to methodology, and chapter 7 will suggest avenues for further research beyond the aforementioned delimitations.

1.4 Clarification of consepts

Collaboration. There are several designations for the word collaboration, such as strategic alliance, network and partnership, which can all be viewed as general descriptions that express that companies cooperate (Haugland 1996; Johnson, Scholes & Whittington, 2008). During the literature review we will touch on all these concepts following what previous researchers have chosen to use. However, in the presentation and analysis of our findings we will use the term collaboration when describing the relation between companies. Collaboration as a concept is fairly neutral and gives no indication of the type of collaboration in question, neither in terms of what the collaboration includes nor the degree of formality. We consider this to be appropriate for our study as we seek to understand the nature of a collaboration entered with regard to sustainability, which is a form of collaboration that has received limited attention from researchers despite the increasing importance of the topic. Also, a neutral concept like collaboration will help avoid imposing constraints on the respondents during interviews.

Sustainability collaboration. In the context of this thesis, a collaboration for sustainability is a partnership between business actors that, at least to some extent, is entered with regard to

solving sustainability issues, while simultaneously aiming to maintain or increase the company's profitability.

Motive. Motive refers to the underlying motivation behind the collaboration. This can vary between companies and industries, and previous research has found that some motives are more central than others when entering traditional alliances (Haugland, 1996), engaging in sustainability work (Jørgensen & Pedersen, 2018) and entering alliances formed to address environmental issues (Lin & Darnall, 2010). We wish to examine what motives the companies in the current study have to enter into sustainability collaborations, and whether the underlying motive is decisive for success.

Success factors and barriers. Success factors and barriers can be defined in different ways, depending on what is being examined. In this case, critical success factors and barriers are factors that need to be managed during the collaboration and may be decisive for the success or failure of an alliance.

1.5 Structure of the thesis

The following chapter, chapter 2.0 Literature review, will elaborate on what sustainable business models and circular economy entail. Furthermore, this chapter will account for the theoretical framework that forms the basis of this thesis. Chapter 3 describes the construction of the conceptual model, which visualizes the research question and associated research objectives in light of presented theory. In this context we will also present our own assumptions and expectations of findings. The subsequent chapter will account for our choice of research design, strategy and methodology, as well as the strengths and weaknesses of our method. We will use a qualitative approach with an exploratory design. In chapter 5 we will present the findings from data collection and analysis, before we, in chapter 6, analyze and discuss the findings in light of relevant literature and theory. Each subchapter in the analysis in chapter 6 aims to address the four research objectives in order to answer the main research question. In chapter 7 we will firstly discuss the main findings of the study and explain theoretical and practical implications, before we present the study's limitations and give recommendations for further research. Finally, we will present the study's conclusion.

2. Literature review

The following chapter will present the literature review and account for the thesis' theoretical foundation. The theory will be structured into three main sections, including sustainable business, strategic alliances and sustainability, and success factors. All subchapters conclude with a discussion of the limitations in selected theory.

Subchapter *2.1 Sustainable business* will present theory on how companies can integrate sustainability into their core business and business model. The chapter will show how companies, through the way they create, deliver and capture value, can achieve a greater focus on the triple bottom line. The purpose of this chapter is also to provide insight into key concepts in companies' approaches to sustainability.

Subchapter *2.2 Strategic alliances and sustainability* will account for what strategic alliances are and that an increasing number of companies recognize alliances as an organizational form for acquiring and internalizing knowledge. The subchapter also accounts for the need to research alliances for sustainability. The purpose of this subchapter is threefold; (1) account for why firms invest in sustainability efforts; (2) provide insight into why strategic alliances are formed, and; (3) present motives companies have to enter into sustainability collaborations, according to Lin & Darnall (2010). The theory of Lin & Darnall (2010) argues that the underlying motive may be significant for alliances ability to achieve both environmental and economic improvements (Lin & Darnall, 2010). The rationale for including the first two parts is that it will supplement and substantiate the third part.

Subchapter *2.3 Success factors in strategic alliances* has its foundation in the fact that several studies indicate that the success rate associated with collaboration is low. Therefore, the purpose of this subchapter is to provide insight into the success factors and barriers associated with collaboration.

2.1 Sustainable business

Due to increased attention on sustainability problems, companies start to realize that they have to take responsibility for their actions in order to remain profitable (Jørgensen and Pedersen, 2018). Solving sustainability issues can be a source of business opportunities and

lead to a competitive advantage by changing the business model in a way that contributes to reducing own externalities, or helping improve others' footprint (Jørgensen & Pedersen, 2018). Sustainable business focuses on the triple bottom line; social, environmental and economic. Based on Lozano (2008) and O'higginz & Zsolani (2017), Jørgensen & Pedersen (2018) state sustainable business is about «*creating a harmonious and sustainable interaction between economy, society and the environment in which economic activity strengthens the social and environmental systems they exist within, rather than breaking them down»*. The authors elaborate and says this means that companies not only should attain financial and non-financial objectives, but also need to consider the social and environmental dimensions as companies are dependent on the society and environment, as well as their customers, employees, investors and other stakeholders (Jørgensen and Pedersen, 2018). The following subchapter will account for how companies can integrate sustainability in their core business and business models. Theory presented in this section is used to assess what constitutes and characterizes sustainable business. Furthermore, selected theory will contribute to a better understanding of how the collaborations investigated in this thesis operate to solve sustainability problems.

2.1.1 Circular business models

Due to the rising global population we use more resources which significantly affect the environment. Today, the world uses resources equivalent to 1,5 planets to support human activities (WWF, 2012). Business as usual is not an option to maintain a sustainable future, and there is a need for change in business model design (Bocken, Short, Rana & Evans, 2014). The business model describes how the firm creates, delivers and captures value (Jørgensen and Pedersen, 2018). The value proposition is how the firm creates value; the product or service offered. A sustainable business would provide ecological and/or social value in concert with economic value. Firms create value through activities, resources, partners and distribution channels. They can seize new business opportunities and new markets. Value capturing relates to the cost structure, i.e. how the company earns revenues (Bocken et al., 2014).

There is a growing focus on how to integrate sustainability into the business model, and a sustainable business model can be defined as «*a business model that creates competitive advantage through superior customer value and contributes to a sustainable development of*

the company and society» (Lüdeke-Freund, 2009). For companies to become more sustainable, they can make changes in how they capture, create and deliver value (Bocken et al., 2014).

The industrial revolution has led to major economic growth but is also a reason for today's sustainability problem because resources are used in an unsustainable way. The traditional linear economic model and value creation is wasteful as it is based on «take, make, dispose» in which goods are produced, sold, used and disposed of (Ellen MacArthur Foundation, 2015). The massive production and disposal have resulted in major environmental impact and global warming, and a shift towards a circular economy is necessary in order to reduce environmental impact. Circular economy entails closing the value chain and implementing a circular business model (Jørgensen and Pedersen, 2018). Ellen MacArthur Foundation (2015) describes a circular economy as «*restorative and regenerative by design*». Circularity aims to keep products and materials at a high level of utility and value (Ellen MacArthur Foundation, 2015). In a circular perspective waste does not exist, meaning that materials can be reused.

Business plays a key role in succeeding with the transition from today's linear economic model to a circular model (Jørgensen & Pedersen, 2018). However, companies cannot attain a circular economy alone. It requires companies to establish alliances in order to access each other's resources, knowledge and competencies. By identifying opportunities to create and distribute value along its value chain, companies can make it attractive for other firms to join the collaboration. However, attaining a circular business model requires large investments and willingness to open up the business model and let competitors look at internal processes, which can be challenging (Jørgensen & Pedersen, 2018).

2.1.2 Closed loops

Jørgensen & Pedersen (2018) discuss several responses to the environmental problem for a circular economy. First, the use of resources must be balanced to prevent exhaustion of the planet's resources. This is particularly true for non-renewable resources such as fossil fuels, minerals, metals and fish stocks. Furthermore, companies have a responsibility to produce goods and services that use less resources and facilitate reuse. This involves products that can be disassembled and reused (Bocken, de Pauw, Bakker & van der Grinten, 2016).

McDonough and Braungart (2009) suggest that one must upcycle resources, rather than downcycle, where the resources eventually become degraded and worthless. Upcycle means keeping products and materials at the highest quality level as possible, for the longest possible time (Jørgensen and Pedersen, 2018).

Braungart, Bondesen, Kälin & Gabler (2008) identify a difference in the resource flow pattern that characterizes linear and circular models. A linear approach of the development of products and systems is referred to as «cradle to grave», whereas a closed loop system is a «cradle to cradle» flow. In a closed loop system, materials can be recycled, and products can be reused. When resources are recycled, the post-use and production loop is closed. As illustrated in figure 1 below, there is a circular and linear approach for resource flows. In a circular flow, resources can be reused by recycling materials and resources. Reusing will extend the utilization period of the product. Product life extension can also be attained by designing long-life goods that can be repaired or has spare parts that can be replaced. In the figure, this is referred to as slowing of the cycle. In a linear approach, the product has an end time and circularity is not addressed. However, the product lifetime can be extended by designing long life goods with higher quality. Narrowing of the resource flow is aimed at using fewer resources per product, leading to resource efficiency. This approach does not influence the speed and does not include any repair or service. However, narrowing in a linear approach may lead to no result in terms of sustainability if companies are speeding up and are producing more because of resource efficiency (Bocken et. al, 2016).

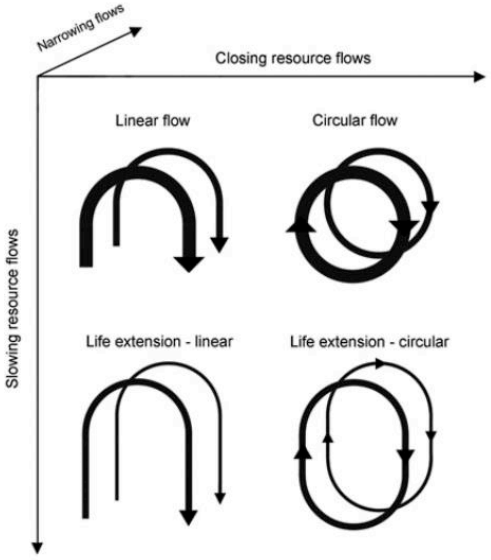

Figure 1: Linear and circular approaches for reducing resource use. *Source: Bocken et al. (2016, p. 309).*

2.1.3 Stakeholder theory, externalities and CSV

Milton Friedman's shareholder theory (1970) states that the only social responsibility businesses have is to increase its profits, and that corporations that engage in social responsibility will limit their profit and increase their costs (Freeman, 2010). Doing social responsibility initiatives is simply spending stakeholder money. Edward Freeman's stakeholder theory (1984) serves as a counter theory to Friedman's shareholder theory. Freeman argues that firms must identify overlapping interests between the company and its stakeholders and utilize the overlap in a way that benefits all parties (Jørgensen & Pedersen, 2018). In this perspective, stakeholders are any individual or group that influences the company's ability to achieve its goals, which means that these stakeholders are key to success. Through collaboration, companies can create greater value for employees, customers, suppliers and other stakeholders (Jørgensen & Pedersen, 2018).

The difference between Friedman and Freeman is their views of what makes business successful. Freeman's stakeholder theory involves that companies must take responsibility in reducing negative impact on society and environment. The stakeholder view and how stakeholders are affected by companies' operations can be linked to externalities. Companies play a major role in sustainability issues and must therefore consider their externalities (Jørgensen & Pedersen, 2018). Externalities refer to the consequences that occur due to a company's activities that would otherwise not occur if it did not exist. It is not the company who is directly affected by their own externalities, but rather the society and environment in which it operates. Business operations can lead to both positive and negative consequences. Positive externalities generate positive outcomes for the society and the environment, such as job creation, provision of services and products, and tax payments. Negative externalities contribute to creating sustainability issues, such as corruption, food waste, emissions and pollution, and exploitation of labor. Companies can either take responsibility for their own externalities, or they can see a potential in solving the problems of others. To become more sustainable, companies should shed more light by enhancing their positive externalities and cast less shadow by reducing their negative externalities (Jørgensen & Pedersen, 2018). All companies shed light and cast shadow through their operations, but the net effect should be positive (McDonough and Braungart, 2002).

In recent years, several companies have implemented corporate social responsibility (CSR) to address stakeholders' needs and reduce negative externalities. However, when companies address societal and environmental issues through CSR, these issues are viewed as peripheral and not as a part of the value creation and core of the company (Porter & Kramer, 2011; Jørgensen & Pedersen, 2018). Thus, CSR considers the relationship between profitability and responsibility as a trade-off, as sustainability efforts are viewed as costs and not as activities that can enhance profitability. This implies that companies recognize the sustainability problem, but they lack an overall framework for guiding the sustainability efforts. The result is that firms are missing out on customers' needs and are ignoring external influences determining long term success (Porter & Kramer, 2011).

Porter & Kramer (2011) claim the solution lies in the principle of creating shared value (CSV). CSV is a counter theory to CSR and involves addressing society's needs and finding a way of creating economic value that also creates value for society. Shared value is a new way to achieve economic success, through expanding the total pool of economic and social value. The shared value view will require new skills and knowledge, and the ability to collaborate across profit and non-profit boundaries. Also, governments must facilitate the creation of shared value by imposing regulations that enable this concept rather than limiting it. This can lead to innovation and global economic growth (Porter & Kramer, 2011).

The concept of creating shared value challenges the perspective where profitability and responsibility is viewed as a trade-off relationship. CSV involves finding new ways to capture, create and deliver value which benefits both the society and the firm. Firms can use better technology and find new operating methods that will reduce the use of resources and enhance process efficiency. In total, this can reduce cost, increase productivity and expand operating markets (Porter & Kramer, 2011). CSR involves companies implementing social initiatives as a response to external pressure. Therefore, CSR can be difficult to maintain in the long run as it focuses on a firm's reputation and has limited connections to the business performance. In contrast, CSV strives to create economic value by creating social value and is integral to profit maximization and competing (Porter & Kramer, 2011).

2.1.4 Limitations in selected theory on sustainable business

The theory presented provides an understanding of what characterizes and constitutes a sustainable business community. However, the selected theory has some weaknesses and has received criticism, which may weaken the basis for further analysis.

Korhonen, Honkasalo & Seppälä (2017) claim that the circular economy concept is superficial and lacks scientific research and critical analysis. However, ecological economy and eco-efficiency, such as recycling, shows scientific and theoretical support, but not under the circular economy term. Circular economy practice has been developed by practitioners like businesses and consultants, foundations and policy makers. Furthermore, the authors address challenges that need to be resolved for the circular economy in order to contribute to global net sustainability. These are limitations of environmental benefits of a circular economy and do not address economic and social aspects. The criticism is directed towards the fact that the circular economy should contribute to a positive global net sustainability, which is difficult. Today it is not realistic to obtain 100% renewable energy and recycling of materials. It is desirable, but still not realistic as approximately 75% of the energy production today is based on non-renewable sources. Also, cyclical systems do consume resources and create waste and emissions (Korhonen et. al, 2017). Nonetheless, circular economy theory provides opportunities for sustainability, and illustrates how businesses can take responsibility and implement sustainable business practices.

Regarding the stakeholder theory, several researchers have tried to contribute to an improvement of this theory after Freeman introduced it in 1984 (Key, 1999; Phillips, Freeman & Wicks, 2003; Lépineux, 2005; Fassin, 2012). However, the theory still falls victim to critique. According to some researchers, Freeman's approach to and definition of stakeholders appears to be somewhat vague and weak (Orts & Strudler, 2002; Lépineux, 2005; Fassin, 2012). According to Lépineux (2005), the theory might appear somewhat inconsistent precisely because so many have contributed to the theory.

Fassin (2012) claims the stakeholder theory assumes homogeneity among stakeholders, when in fact there are variations in both opinions and knowledge within a group of stakeholders. There are countless definitions of the term 'stakeholder', and it can be challenging for companies to assess which are the relevant stakeholders (Mitchell, Agle &

Wood, 1997; Phillips, 1997). Furthermore, stakeholder's interests are often different, and sometimes conflicting, and there is no consensus on how to balance these interests (Freeman, 2010; Mitchell et al., 1997). According to critics, the theory has failed to guide companies on how to prioritize between stakeholders (Phillips, 1997; Orts & Strudler, 2002; Lépineux, 2005). Each individual firm and manager must identify the gap, as well as the overlapping interests, between the company and its stakeholders. However, the stakeholder theory is claimed to create manager opportunism as the manager's assessment may be subjective when considering different stakeholders (Phillips et al., 2003). Despite the critique this theory receives, we find it useful in this thesis. This is because the theory emphasizes that companies have a responsibility beyond profitability, that is, on social and environmental dimensions as well. Furthermore, the theory states that companies can create value by identifying their stakeholders and preserving the stakeholder relationship.

CSV has received a lot of attention since it was first introduced by Porter and Kramer (2011). However, as it is a fairly new concept, the critics state that the theoretical conceptualization is vague and that there is a lack of empirical evidence on how to realize CSV (Wójcik, 2016; Crane, Palazzo, Spence & Matten, 2014). Dembek, Singh & Bhakoo (2015) suggest CSV is more of a managerial buzzword as there is no clear operationalization of the concept. Furthermore, they criticize the concept of not providing companies with any clear criteria for how to implement this type of value creation. Despite that CSV falls victim to critique, we consider the concept as relevant to the current study, as the theory behind the concept states that companies can best manage their negative externalities in collaboration with other companies (Porter & Kramer, 2011). The theory thus legitimates that collaboration is necessary to solve sustainability problems, that sustainability is compatible with profitability and that companies can gain a competitive advantage by integrating sustainability as part of their core business.

2.2 Strategic alliances and sustainability

Haugland (1996) states that strategic alliances occur when two or more companies combine resources and competencies to achieve goals that they cannot reach individually. Similarly, Johnson et al. (2008) define a strategic alliance as «*where two or more organisations share resources and activities to pursue a strategy*». The authors state that organizations need alliances to be able to manage the increasingly complex business environment they operate

in. Companies need access to new skills and competencies, as well as new markets, and these resources may be achieved easier through collaboration rather than ownership (Johnson et al., 2008). Dyer et al. (2001) state that forming strategic alliances is a fast and flexible way to gain access to the skills and capabilities of others, and that alliances serve as a tool for achieving a sustained competitive advantage. However, almost half of all strategic alliances fail (Dyer et al., 2001). Jacobsen & Thorsvik (2013) also state that establishing alliances is a sound strategy when trying to manage dynamic conditions. They describe strategic alliances as «*relatively stable collaborations, where the goal is to gain access to markets, knowledge and technology that are otherwise difficult to access for the single organization alone*» (Jacobsen & Thorsvik, 2013).

Lin & Darnall (2010), who mainly focus on strategic alliances entered to address complex environmental issues, define strategic alliances as «*short- or long-term voluntary collaborations between organizations involving exchange, sharing or codevelopment of products, technologies and services to pursue a common set of goals or to meet a critical business need*».

The common denominators for all the aforementioned definitions are that strategic alliances involve knowledge sharing and organizing of complementary resources in order to achieve a common goal and a possible competitive advantage that cannot be achieved individually. Furthermore, the formation of strategic alliances can occur from different motives, be organized in different forms, and they can span across vertical and horizontal boundaries (Gulati, 1998; Johnson et al., 2008; Haugland, 1996; Varadarajan & Cunningham, 1995).
Firms can enter collaborations upstream and downstream in their value chain, with their competitors and with knowledge partners (Jørgensen & Pedersen, 2018). The direction of the collaboration describes whether the collaboration is aimed at customers, suppliers, competitors or companies in other industries. Haugland (1996) distinguishes between four strategic directions: downstream alliances, upstream alliances, horizontal alliances and related/unrelated alliances. These are illustrated in figure 2 below.

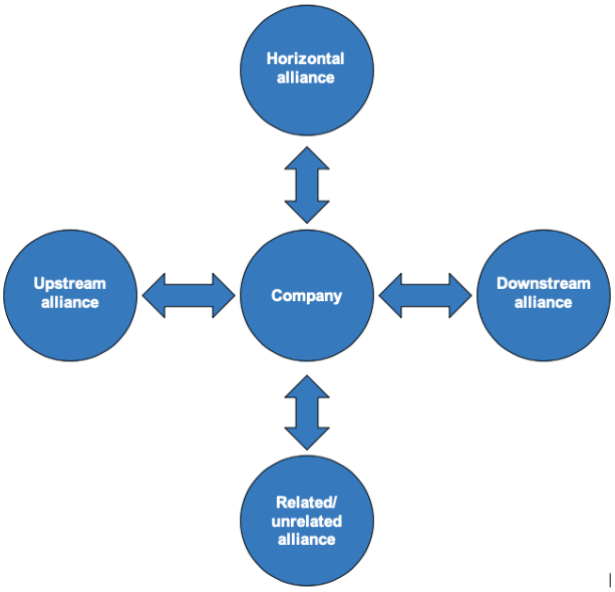

Figure 2: Direction of collaboration. *Source: Haugland (1996, p. 20)*

Collaboration with suppliers and customers, respectively termed upstream and downstream alliances, is referred to as vertical collaborations. The term horizontal alliance refers to collaboration with companies located at the same level in the value chain, such as competitors or potential competitors, or a similar company operating in another market. Collaboration can also be a tool in a diversification strategy, and related and unrelated alliances describe such collaborations. A related alliance is entered into to strengthen current operations, while an unrelated collaborative project entails investing in another industry (Haugland, 1996). The four main companies in the current thesis represent upstream, downstream and horizontal alliances. Heldal Eiendom and REMA1000 represent upstream alliances, Norsk Gjenvinning represent downstream alliances, and NCE Seafood Innovation represent horizontal alliances. Further elaboration on these alliances will be given in section *4.2 Presentation of cases*.

Alliance must be used as a strategic tool to further develop the business, which entails that the collaboration must be centered around strategically important areas (Haugland, 1996; Johnson et al., 2008). Some companies may be skeptical about such collaborations as they involve sharing valuable knowledge and competencies. However, the potential for success is greatest in the strategic areas, and collaboration therefore requires that businesses are willing to open up their business models to each other. This involves also giving potential competitors insight into the business model. The opportunity offered by collaboration in

combination with the challenge of transparency constitutes a paradox; businesses must be able to collaborate and compete at the same time (Jørgensen & Pedersen, 2018).

2.2.1 Motives for investing in sustainability efforts

Research indicates that stakeholders can evaluate sustainability actions differently based on whether the motive is interpreted as self-interested (Becker-Olsen, Cudmore & Hill, 2006; Sen & Bhattacharya, 2001; Hoffman, Yoeli & Nowak, 2015). Also, previous research shows that greenwashing behaviors and practices have a negative effect on companies' reputation and recruitment of talent (de Jong, Huluba & Beldad, 2019; Chen & Chang, 2013; Willnes & Jones, 2013; Davis-Peccound, Allen & Artabane, 2013). Greenwashing exists when there is discrepancy between a company's green claims and its actual sustainability performance (de Jong et al., 2019). It is a widespread assumption among companies that consumers will reward them for taking societal action. However, it has been found that consumers will evaluate the sincerity in companies' initiatives and reward or punish them based on how the initiatives are perceived (Becker-Olsen et al., 2006; Sen & Bhattacharya, 2001).

Becker-Olsen et al. (2006) distinguish between reactive and proactive social initiatives. Reactive initiatives are associated with companies engaging in societal initiatives as a reaction to consumer boycotts, NGO pressures, or other events that are considered as corporate crises. Proactive initiatives entail going beyond these crises and exceeding the expectations society has towards businesses. When companies' actions are perceived as proactive, i.e. exceed societal expectations, they are met with more positive attitudes from society. Becker-Olsen et al. (2006) found that consumers interpret companies' actions and make assumptions about motives depending on the context of the actions. If initiatives are perceived as reactive, corporate legitimacy and feelings of trust and honesty may decrease and the impression that the company acts in self-interest may increase. The authors conclude that companies must ensure that their external communications are carefully conducted so that consumers perceive initiatives as proactive and socially motivated.

The findings of Becker-Olsen et al. (2006) and Sen & Bhattacharya, (2001) illustrate that the motive behind sustainability efforts are of significance to the success of these efforts, particularly economic success. Based on these findings, it is reasonable to assume that the

motive behind sustainability collaborations are of significance to the success of the collaboration and its efforts.

Jørgensen & Pedersen (2015), examined what the motives are for companies to engage and invest in sustainability efforts. They found that companies mainly invest in sustainability efforts due to their own moral convictions and to enhance their own reputation and build legitimacy. This illustrates that companies have a two-sided awareness in the sense that they have both self-interested and moral justifications for investing in sustainability work. It is a widespread assumption among businesses that important stakeholders may pressure companies into sustainability work (Jørgensen & Pedernsen, 2015). However, the findings of Jørgensen & Pedersen (2015) show that companies are less motivated by external pressure, which may indicate that they recognize the potential gains of investing in sustainability and implement sustainability measures on their own initiative.

2.2.2 Motives for alliance formation

Businesses that collaborate can have very different motives for doing so (Gulati, 1998; Haugland, 1996; Varadarajan & Cunningham, 1995). Johnson et al. (2008) state that a frequent reason for companies to enter into alliances is to achieve interorganizational learning and to gain access to resources that the organization needs but does not possess internally.

A study conducted by Haugland (1996) found that motives for alliance formation are largely related to exploiting opportunities to gain better market position, both nationally and internationally, and to access technology and competence, rather than reducing risk and costs. This study indicates that companies seek a strategic collaboration that they assume will have a beneficial market effect, rather than entering into a partnership with a purely cost-reducing focus (Haugland, 1996). Similarly, Varadarajan & Cunningham (1995) state that the underlying motives companies have to enter strategic alliances can be broadly characterized as attempts to capitalize on opportunities for sales and/or profit growth.

Partners may have different reasons for forming an alliance, but their reasons need to be compatible (Haugland, 1996; Johnson et al., 2008). It is not possible to list all underlying motives for entering into strategic alliances. However, it is reasonable to say that companies,

at an overall level, are motivated by the possible competitive advantage that lies in the combination of complementary resources (Johnson et al., 2008; Varadarajan & Cunningham, 1995; Haugland, 1996; Dyer & Singh, 1998; Gulati, 1998; Jacobsen & Thorsvik, 2013; Whipple & Frankel, 2000). Dyer & Singh (1998) claim that there is a rareness of potential partners and emphasize the importance of being a first (or at least an early) mover in order to identify partners that possess these complementary resources and relational capabilities before competing firms partner with them.

Lin & Darnall (2010) call attention to alliances formed to address complex environmental issues, and claim it is important to understand what motives companies have for collaborating for sustainability as this may affect the financial and environmental outcome of the collaborations' activities (Lin & Darnall, 2010). Lin & Darnall (2010) suggest that strategic alliances are formed based on two different motives; (1) to enhance the firm's resources and capabilities, or (2) to address institutional pressure and enhance their external credibility. There are variations in these motivations, which led the authors to develop a continuum of strategic alliances with competency-oriented alliances at one end, and legitimacy-oriented alliances at the other (Lin & Darnall, 2010). Whether firms participate in a competency- or a legitimacy-oriented strategic alliance, depends largely on what societal or business issue they are confronted with. Lin & Darnall (2010) argue that the type of issue confronting businesses may shift over time, and that participation in alliances therefore is not static, but rather dynamic as businesses will try to adapt to new contexts.

2.2.2.1 Competency-oriented motives

Lin & Darnall (2010) argue that the resource-based view fails to acknowledge that the opportunities for creating a sustained competitive advantage lies in the access to other organisations' resources, not the internal resources of the firm. By forming strategic alliances, companies can combine their resources and thereby develop valuable competencies (Lin & Darnall, 2010). Lin & Darnall (2010) term strategic alliances that stem from resource-based motivations as «*competency-oriented alliances*». These alliances seek specialized skills, knowledge and competencies, and are characterized by decentralization and social complexity, as well as by being knowledge-based.

There is a lot of uncertainty associated with sustainability issues, and in this context, companies must be able to assess and interpret ambiguous information. Effective routines for

organizational learning and knowledge sharing across the alliance partners can help the companies involved to develop, acquire, and utilize knowledge-based capabilities. By securing a flow of information among the participants, the companies are able to interpret both new and existing information. This form of higher-order learning across participating companies gives the alliance the ability to create continuous environmental innovation, which in turn can lead to a lasting competitive advantage (Lin & Darnall, 2010). Higher-order learning can enable the collaborating companies to replace unsustainable technologies through technological innovations that account for the environment. By doing so, both product and business model innovation is within reach (Lin & Darnall, 2010).

2.2.2.2 Legitimacy-oriented motives

To define legitimacy-oriented alliances, Lin & Darnall (2010) draw on literature from the institutional theory which entails that companies are exposed to external pressure from regulators, industries and society by having to comply with rules, norms and values to achieve social legitimacy and ensure their own survival. This external pressure leads companies to form alliances (Lin & Darnall, 2010). Lin & Darnall (2010) term strategic alliances that stem from institutional pressure as «*legitimacy-oriented alliances*». Regardless of where the external pressure comes from, institutional pressure contributes to companies forming strategic alliances to maintain or enhance their social legitimacy. By giving in to this pressure, the alliance partners can improve their reputation and gain access to new markets, which in turn can contribute to a competitive advantage by increasing the chances of survival and improving the market position (Lin & Darnall, 2010). The primary driver in the formation of legitimacy-oriented alliances is achieving external credibility (Lin & Darnall, 2010).

External regulatory pressure means that businesses are influenced by government policies and must therefore comply with legal laws and regulations. Companies are required to adhere to these policies, and it can have major consequences in the form of penalties or loss of reputation if the companies do not comply with these rules. External pressure from markets involves that companies in the same industry are exposed to social pressure to collaborate on specific environmental problems. The demands of society also create institutional pressure on companies. The societal pressure stems from increased awareness and concern for the environment, and individuals and environmental organizations can have a great influence on businesses. To cope with external pressure, companies can work

together to explore and develop new technology to ensure legitimate operations in their industry. By collaborating on such projects, alliance partners will share the investments and associated risks, and can potentially reap great benefits (Lin & Darnall, 2010).

2.2.2.3 Relationship between alliance motivation and environmental strategy

Like Becker et al. (2006), Lin & Darnall (2010) distinguish between reactive and proactive environmental measures, and say alliances adopt either a reactive or proactive environmental strategy. A reactive environmental strategy involves responding to pollution and waste after it has been created instead of eliminating waste before it has been produced (Lin & Darnall, 2010). An example of such practice is converting waste into electricity as the waste is used after it has been produced. A reactive strategy is usually a response to environmental regulations and stakeholder pressure and requires investments in technology which can enhance waste management. The goal of this strategy is to mitigate the negative environmental impact of the firms.

A proactive environmental strategy involves adopting a future-oriented perspective by trying to predict future regulations and social trends. Such a strategy seeks to design processes and products that prevent negative environmental impact (Lin & Darnall, 2010). Examples of proactive strategies are pollution prevention, product stewardship and clean technology.

Type of proactive strategy	**Measures**
Pollution prevention	Reduces waste and pollution before it is produced through substitution of materials, recycling and process innovation. Focuses on effective use of natural resources, as well as generating products with fewer harmful components, and minimizing environmental emissions. Firms operating a pollution prevention will be able to improve packaging, recycle and reuse.
Product stewardship	Involves enhancing a firm's existing products by examining internal processes and external actors who are involved in a product's lifecycle. Firms who adopt product stewardship analyze the entire life cycle of a product, by assessing the raw materials, production processes, product use and product disposal. Firms operating a product stewardship strategy will be able to achieve closed loops.
Clean technology	Refers to radical innovations rather than incremental improvements in products and processes. Firms operating a clean technology strategy will be able to implement disruptive technology like biomimicry and renewable energy.

Table 1: Examples of proactive strategies. *Source: Lin & Darnall (2010, p. 241)*

Lin & Darnall (2010) suggest that competency-oriented alliances typically are associated with more proactive environmental strategies, which they apply to innovate and exceed social expectations, and are therefore expected to produce meaningful environmental

improvements. By contrast, legitimacy-oriented alliances are associated with less proactive environmental strategies as they seek to meet social demands and achieve external credibility (Lin & Darnall, 2010). Whereas the legitimacy-oriented alliances focus on incremental process innovation, the competency-oriented alliances create innovations which provoke changes to business models, products and markets (Lin & Darnall, 2010). The investments and risks associated with proactive environmental strategies may discourage companies to adopt such an approach. However, there are benefits to the proactive strategy in the long run. Participating in a heterogenous competency-oriented alliance can lead to higher-order learning, and this form of organizational learning can help companies in becoming more proactive. Through combination of complementary resources and knowledge sharing, the companies involved can acquire knowledge about the long-term benefits, secure management commitment and employee involvement, and build an internal commitment towards a proactive strategy. This way, competency-oriented alliances are expected to have a meaningful impact on the environment. Legitimacy-oriented alliances may also influence the environment in a positive way, but the progress is still incremental (Lin & Darnall, 2010).

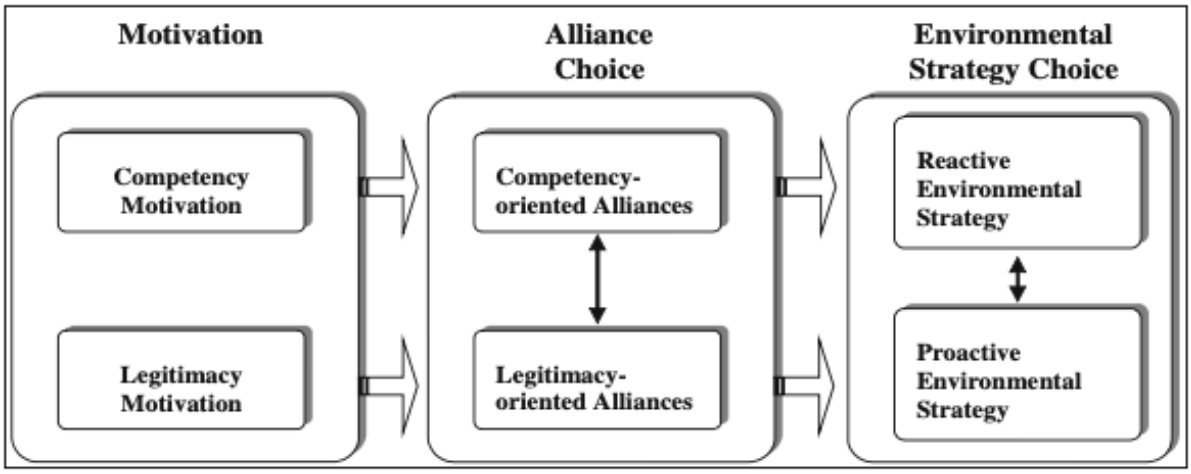

Figure 3: Relationship between firms' motivation to participate in a strategic alliance and subsequent choice of environmental strategy. *Source: Lin & Darnall (2010).*

The figure above illustrates the connections between all concepts that have been discussed. The motivation for entering into an alliance determines what type of alliance the firm chooses, that is a competency- or legitimacy-oriented alliance. As aforementioned, the participation in alliances is not static, but rather dynamic, depending on the particular social or business need confronting the firms. Finally, the figure illustrates that choice of alliance is predominantly associated with a particular environmental strategy which ranges from reactive to proactive (Lin & Darnall, 2010).

As a final note to this subchapter, a line can be drawn between competency- vs. legitimacy-oriented motives and CSV vs. CSR. According to the CSV perspective, firms are driven internally which means they are proactive. On the other hand, companies focusing on CSR are externally driven, meaning they are reactive. Thus, firms applying the CSV perspective are internally and economically motivated to address sustainability issues, whereas firms applying the CSR perspective address these issues as a result of external pressure (Porter & Kramer, 2011; Wójcik, 2016; Becker-Olsen et al., 2006).

2.2.3 Limitations in selected theory on strategic alliances

An apparent limitation to this subchapter is the lack of empirical research on alliances for sustainability (Jørgensen & Pedersen, 2018; Kiron et al., 2014; Insanic & Gadde, 2014). Much of the theoretical foundation of this section is based on the theory presented by Lin and Darnall (2010). Although they call attention to alliances formed to address sustainability issues, they mainly focus on one aspect of sustainability, namely the environmental aspect. As such, it can be considered a weakness that they do not weigh the social aspect equally heavily. However, it is considered a strength for the remainder of the thesis that Lin & Darnall (2010) present a theory that addresses what motives companies have for engaging in sustainability collaboration and what consequences motives have for economic and environmental impact.

2.3 Important success factors in strategic alliances

According to researchers, it has previously been devoted more attention to the desired outcome, rather than the development of the collaboration and what makes it work (Lin & Darnall, 2010; Dyer et al., 2001). As previously mentioned, there is limited research on strategic alliances formed to address sustainability issues, and the conditions that must be present in order to succeed with such collaborations (Jørgensen & Pedersen, 2018; Kiron et al., 2014; Insanic & Gadde, 2014). The success of a collaboration can be influenced by several factors, including how motivated, committed and able the partners are to make progress in the collaboration. To better illustrate which conditions should be present, we have chosen to consider various factors associated with alliance success. We have grouped these success factors into the following four categories: personal relations, competence building, governance and control, and internal and external conditions. In this context,

success factors are defined as various factors in a strategic alliance that affect the parties' desire and ability to realize the goals of the collaboration. The success factors discussed are based on several contributions from various researchers who have studied strategic alliances (e.g. Johnson et al., 2008; Haugland, 1996; Das & Teng, 2001; Collins & Hitt, 2006; Dyer & Singh, 1998; Berlie, 2010; Kiron et al., 2014). The factors identified by Berlie (2010) and Kiron et al. (2014) are directly linked to sustainability collaborations between companies and NGOs.

Personal relations	**Competence building**	**Governance and control**	**Internal and external conditions**
Competence based trust	Knowledge-sharing	Clear, realistic goals and clarity of roles and responsibilities	Internal credibility and external legitimacy
Character based trust	Transparency and clear communication	Informal self-enforcing safeguards	Internal commitment and motivation
Mutual relation-specific investments and mutual benefits		Expectation clarification and regular assessments	Flexibility and ability to evolve
		Managerial support	

Table 2: Four main categories of success factors. *Source: Haugland, 1996; Dyer & Singh, 1998; Johnson et al., 2008; Berlie, 2010; Kale, et al., 2001; Das & Teng, 2001; Whipple & Frankel, 2000; Hoffman & Schlosser, 2001; Sherer, 2003; Russo & Cesarani, 2017; Barnes, Lynham, Kalberg & Leung, 2016; Collins & Hitt, 2006; Kiron et al. (2014)*

It is important to emphasize that the four categories are dependent of each other, as the presence or absence of one factor can enable or impede the presence of another. Also, the list is not exhaustive, but based on previous research on the subject. After accounting for the success factors, the subchapter will give a presentation of the barriers related to strategic alliances.

2.3.1 Personal relations

Personal relations refer to trust, respect and development of a strong relationship. Trust in the context of strategic alliances can be described as the confidence the parties have in each other to act responsibly and favorably towards the alliance, rather than destructive, although this cannot be guaranteed (Johnson et al., 2008). Trust among partners and quality of the alliance relationship is highly important and is often deemed as more important than the physical resources in an alliance (Johnson et al., 2008; Haugland, 1996; Berlie, 2010; Sherer,

2003). Trust is especially important as the partners relinquish some control when collaborating and are mutually dependent (Das & Teng, 2001; Haugland, 1996).

Trust is considered to be twofold as it can be competence based or character based. The former means that each partner trusts that the other has the resources and expertise required to deliver in its areas, whereas the latter means that the partners are compatible regarding integrity, openness and discretion, and that they trust each other's motives (Johnson et al., 2008; Whipple & Frankel, 2000; Das & Teng, 2001).

Trust is an intangible factor and helps the partners understand each other and respect variations in viewpoints (Berlie, 2010), and if trust is absent it can easily lead to failure (Haugland, 1996; Kiron et al., 2014). Trust must be managed and maintained in an alliance (Johnson et al., 2008), and to facilitate trust, the partners must develop a hospitable environment that fosters confidence among the partners. Trust often arises through close interaction at the individual level between the partners (Kale et al., 2001), and openness, transparency and clear communication facilitate trust (Berlie, 2010), as well as frequent communication and meetings (Collins & Hitt, 2006). Establishing trust can enable knowledge sharing (Das & Teng, 2001).

To establish a strong relationship, partners must be willing to make relation-specific investments in the collaboration (Haugland, 1996; Dyer & Singh, 1998). This entails that both partners must invest time, competency and capital. Furthermore, there should be a balance between the partners so that each of them contributes equally to the total resource amount (Haugland, 1996). This balance can be challenging and there must be an alignment of the incentives that encourage the partners to be transparent and to transfer knowledge and discourage free riding. Such incentives can be both formal financial incentives and informal norms of reciprocity (Dyer & Singh, 1998). Relation-specific investment signals that the collaboration is a priority and creates stronger ties between the collaborating partners.

2.3.2 Competence building

Successful collaboration requires frequent and efficient information exchange to succeed (Vurro et al. 2009; Collins & Hitt, 2006; Haugland, 1996; Berlie, 2010; Johnson et al., 2008;

Dyer & Singh, 1998; Kiron et al., 2014). Only by sharing knowledge, the partners will be able to coordinate their activities and leverage their complementary resources and capabilities in order to gain benefits from the collaboration (Dyer & Singh, 1998; Haugland, 1996). Also, knowledge sharing can enhance companies' ability to become more sustainable and to implement sustainability measures (Barnes et al., 2016).

It is unfortunate to withhold information in a partnership as it signals distrust (Haugland, 1996). Knowledge sharing includes exchange of organizational know-how which otherwise would not be shared between organizations. This is the type of knowledge that is tacit, complex and difficult to imitate and transfer, and companies may be skeptical to share this with others. However, this is the most valuable type of knowledge if transferred (Dyer & Singh, 1998). The ability to recognize and assimilate valuable knowledge from a particular alliance partner demands that the alliance partners implement interfirm processes that facilitate both identification and transfer of valuable know-how across firm boundaries (Dyer & Singh, 1998). Often, this ability is gradually developed in an informal manner through interaction across partners (Kiron et al., 2014; Dyer & Singh, 1998; Collins & Hitt, 2006; Vurro et al. 2009). Knowledge sharing, learning and experimentation are considered success factors to realize alliance potential, but also benefits of themselves (Johnson et al., 2008).

2.3.3 Governance and control

Governance and control refer to different mechanisms that facilitate predictable behavior from the partners and ensure that all involved parties act according to collaboration intents (Russo & Cesarani, 2017). Several factors influence this; managerial support, clear goals and roles, safeguards, expectation clarification, and regular assessments.

Support from top management is important in order for the alliance to maintain a strategic foundation throughout the relationship (Berlie, 2010). In addition, the role of management is essential in establishing the changes in culture and practice resulting from the alliance, as well as establishing and sustaining a strong and even relationship to the partner (Kiron et al., 2014; Hoffman & Schlosser, 2001; Johnson et al., 2008). Furthermore, alliance needs clear goals, effective governance and organizational arrangements that coordinate the activities across collaborating firms (Johnson et al. 2008). It is also necessary to clarify roles and

responsibilities as authority must be decentralized to those who manage the alliance to secure flexibility and ability to develop (Berlie, 2010).

The safeguard of the alliance is important to consider. Dyer & Singh (1998) distinguish between two types of safeguards used by alliance partners. The first is third-party enforcement agreements like legal contracts, which control opportunism. The second is self-enforcing agreements which involve safeguards that allow the alliance partners to self-enforce, as no third-party will be involved to determine if a violation has taken place. Dyer & Singh (1998) suggest that self-enforcing safeguards are more effective than third-party enforcement mechanisms. They argue that the former minimizes transaction costs through low or no contracting costs, lower monitoring costs as it relies on self-monitoring, and creates stronger incentives for value-creating initiatives. Furthermore, Dyer & Singh (1998) suggest that informal self-enforced safeguards (e.g. trust, reciprocity) increase the potential for a competitive advantage more than the formal self-enforced safeguards (e.g. financial investments). Their reasoning is that marginal costs are lower and that informal safeguards are more difficult to imitate as they are social constructs and unique to the relationship. On the other hand, informal safeguards require time to develop through repeated interaction, and they carry the risk of opportunistic behavior. For this reason, informal safeguards may need to be supplemented with more formal safeguards, such as contracts, in order to fully safeguard the alliance partners (Dyer & Singh, 1998).

Alliances are often formed to manage dynamic and complex conditions (Johnson et al. 2008). The complex environment requires continuous assessment of the alliance's performance in order to succeed (Russo & Cesarani, 2017; Berlie, 2010; Das & Teng 2001). Kale et al. (2001) analyzed 1572 alliances and found that alliances who conducted regular assessments of goal achievement to a greater extent succeeded. Regular assessments enable partners to determine whether adjustments are needed to ensure better performance. Due to the complexity of the conditions in which alliances operate, it is also likely that the parties' expectations evolve as the alliance develops (Johnson et al., 2008). Whether the expectations diverge or remain compatible can be decisive for whether the alliance disintegrates or continues. As the expectations may vary among the partners, it is crucial to manage these expectations at the outset and as the alliance evolves (Johnson et al., 2008).

2.3.4 Internal and external conditions

The aforementioned success factors affect several factors in this category. It is necessary that the partners have internal credibility, i.e. are credible to each other (Berlie, 2010). Through establishing character-based trust, internal credibility can be achieved (Johnson et al., 2008). External legitimacy entails that the alliance must be credible for its stakeholders (Berlie, 2010). To achieve external legitimacy, companies should conduct proactive external communications so that stakeholders perceive their actions as socially motivated (Becker-Olsen et al., 2006).

Alliances need the ability to evolve to not disintegrate (Johnson et al., 2008; Berlie, 2010). Therefore, the alliance must be able to adapt to changes in dynamic environments in order to evolve. Alliances with specific goals are found to be more flexible because the partners have a clear and common understanding of what they want to achieve and can therefore make better assessments regarding the relevance of new changes (Berlie, 2010). Furthermore, regular evaluation of performance helps the alliance to learn from previous experience and to improve future performance, thus enhancing flexibility and decision making.

In order to secure motivation and commitment on lower levels of the organization, top management has to visibly support the collaboration, decentralize authority and involve employees in the collaboration (Berlie, 2010). However, job seekers are attracted to companies who prioritize sustainability and are found to disfavor greenwashing behaviors (Willnes & Jones, 2013). This may indicate that the very sustainability collaboration creates motivation and commitment amongst employees.

2.3.5 Barriers

There are several barriers that prevent companies from becoming more environmentally proactive, and strategic alliances can help overcome these challenges (Lin & Darnall, 2010). However, there are challenges associated with managing strategic alliances as well. According to Berlie (2010), failure is a consequence of not being able to apply the success factors. Additional failure factors are opportunistic behavior in one or more partners, or resistance from one or more partners. The latter is especially critical if the resistance is rooted at the top level (Berlie, 2010).

Haugland (1996, p. 108) also presents some pitfalls that can explain why collaborations fail. Firstly, the collaboration can be too complex. This is especially a challenge when neither company has previous experience with each other. In such cases the collaborating partners have little knowledge about each other and know little about how to jointly solve problems. Thus, collaboration should initially be limited to something manageable, and then complexity may increase over time. Another pitfall is lack of mutual adaptability. All parties involved must be willing to make adjustments along the way and adapt as circumstances change. Furthermore, imbalance in the collaboration can be a pitfall leading to failure. In this context, imbalance refers to situations where there may be different interests among the companies in order to drive the cooperation forward, or that the parties contribute to a different extent with resources and expertise. To avoid this, collaborating partners should strive for long-term balance and reciprocity. This leads to the next pitfall which is the risk that one partner feels exploited. It is important that both parties feel secure and that there is a balanced distribution of costs and benefits. The final pitfall is lack of dynamics and development. In order to succeed, both parties must be willing to put in efforts to develop the collaboration, otherwise it may disintegrate (Haugland, 1996).

2.3.6 Limitations in selected theory on success factors

It is impossible to give an exhaustive list of all success factors and challenges associated with collaboration, as these may vary between different collaborations and industries (Haugland, 1996). However, we believe that the identified success factors account for a large part of what elements must be present and managed in order to succeed with sustainability collaborations.

This thesis aims to broaden the understanding of what sustainability collaboration is and how businesses can succeed in such collaboration. Although the theoretical foundation is based on theory with other focus areas, there are clear similarities in presented theory and what Berlie (2010) and Kiron et al., (2014) find in their limited research on sustainability collaborations. They find that trust, knowledge sharing, commitment, and external legitimacy, as well as evaluation and control, are decisive for collaboration success. It is necessary to point out that these studies are centered on the alliance relationship between corporations and NGOs. As we study alliances consisting of different companies, these findings may not be directly transferable to our study. However, we consider it appropriate

to include these success factors as it is reasonable to assume that they will be relevant despite the absence of NGOs due to the overlap with other presented success factors.

2.4 Summary of literature review

Firstly, presented theory has accounted for how companies can integrate sustainability into their business model, and how sustainable business operations can lead to increased profitability (Bocken et al., 2014). The importance of circularity, closed value chains and stakeholders, as well as the importance of taking responsibility for negative externalities, has been explained. Business collaboration is emphasized as important for solving sustainability issues (Eccles et al., 2014; Insanic & Gadde 2013; Jørgensen & Pedersen 2018; Vurro et al., 2009). By engaging in cross-sector collaboration, companies can enable a circular economy and closed value chains (Ellen MacArthur Foundation, 2015; Vurro et al., 2009).

Second, selected theory has accounted for the motive to enter into alliances. Presented theory shows that motives are largely related to gaining access to the resources of other companies (Varadarajan & Cunningham, 1995; Haugland, 1996; Dyer & Singh, 1998; Gulati, 1998; Jacobsen & Thorsvik, 2013). According to Lin & Darnall (2010) alliances will achieve the most meaningful environmental impact when entering with competency-motivation and thus manage to adopt a proactive strategy.

Finally, the literature review has provided an overview of success factors related to how companies should manage collaboration and ensure constant adaptation and development. This is essential as the environment in which the companies operate is complex and dynamic (Haugland, 1996). Trust is considered one of the most important factors for companies to succeed in collaboration (Johnson et al., 2008; Berlie, 2010). Trust is often established through close communication at the individual level and must be managed and maintained throughout the alliance relationship (Kale et al., 2001).

3. Conceptual model

Based on the literature review and the identified categories of motives and success factors, we have developed a conceptual model, as shown in figure 4. The model visualizes the research question and related research objectives and shows the connection between these and the theory chapter. The conceptual model shows what conditions we expect to exist and will form the foundation for the presentation of findings in Chapter 5, and further analysis in Chapter 6.

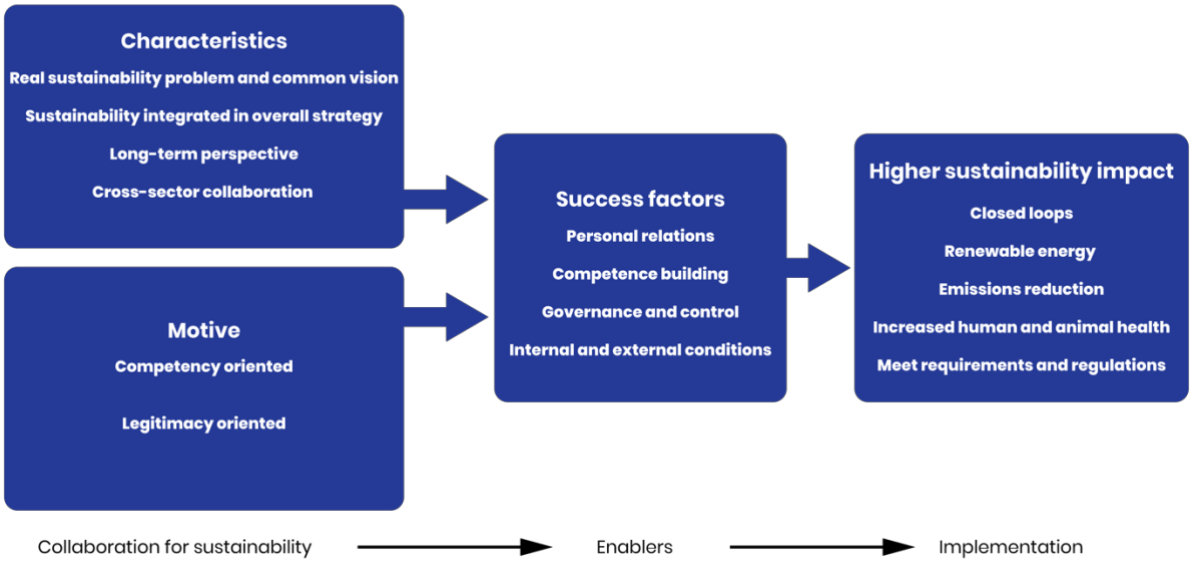

Figure 4: Conceptual model

The conceptual model is divided into four categories; (1) characteristics of sustainability collaborations; (2) motive for collaboration; (3) success factors, and; (4) increased sustainability impact resulting from the collaboration. The various categories consist of underlying variables, where some of the variables consist of concepts derived from the theory chapter. The assumption is that the presence of the variables has an influence on the categories in the model and further influence on the final result of the collaboration. The characteristics of sustainability collaboration and the motive behind the collaboration are what constitutes a collaboration for sustainability. In order to answer the research question at hand, it seems reasonable to first establish what characterizes sustainability collaborations. If these characteristics and the sustainability related motives are present, we assume that these reinforce the success factors that are important for the result of the collaboration. If companies are able to apply the success factors, they will be able to eliminate several barriers. Furthermore, applying the success factors can enable companies to create an

increased sustainability impact. The following subchapters will further justify our assumptions and explain the significance of each category and its underlying variables.

3.1 Characteristics of sustainability collaborations

In the model, characteristics of sustainability collaboration are based on assumptions about what factors need to be present to be able to describe a collaboration as sustainability related. Although there is limited research on what constitutes a collaboration for sustainability, we find it reasonable to include these variables as they are part of what constitutes sustainable business (Porter & Kramer, 2011; Jørgensen & Pedersen, 2018; Eccles et al., 2014). The variables within the category are real sustainability issue and common vision, sustainability integrated in overall strategy, long-term perspective, and cross-sector collaboration. These characteristics could very well be considered success factors; however, we opt to consider these as attributes describing sustainability collaborations as they have been found to characterize sustainable companies (Jørgensen & Pedersen, 2018).

Firstly, the assumption is that partners seeking a sustainability collaboration unite around a real and pressing sustainability problem, which is also business related for all parties. This assumption is based on previous research showing that greenwashing behaviors and practices have a negative effect on companies' reputation and recruitment of talent (de Jong et al., 2019; Chen & Chang, 2013; Willnes & Jones, 2013). Our assumption is that companies cannot engage in any problems, but that they must unite around and prioritize challenges that are real, pressing and closely linked to their own business. Furthermore, the partners must share a common vision to help solve the real sustainability issue confronting them. The sustainability problem may well be comprehensive and must be concretized into a clear, realistic goal that the partners have the ability to solve. The need to define a concrete goal is considered a success factor and will be discussed in subchapter 3.3.

Furthermore, it is assumed that sustainability is integrated in the overall strategy of all involved partners. This enables the companies to make sure that societal and environmental issues are viewed as part of the core business, and not as peripheral issues, thus securing that the alliance has a strategic foundation (Haugland, 1996; Johnson et al., 2008). Furthermore, it can help the companies prioritize the pressing and business relevant issues (Porter & Kramer, 2011, p. 6; Jørgensen & Pedersen, 2018, p. 137).

Next, it is assumed that partners in a sustainability collaboration have a long-term perspective. This is based on the fact that sustainability issues are complex and require long-term efforts to solve. The transition towards circularity and sustainability is time consuming (Jørgensen & Pedersen, 2018), and sustainable companies have longer time-horizons than less sustainable companies (Eccles et al., 2014). The assumption is that collaborations for sustainability can't be entered with a short-term perspective under any circumstances due to the magnitude and complexity of sustainability problems. Thus, the long-term perspective must be established upon formation.

Finally, it is assumed that sustainability collaboration is characterized by being cross-sectoral. This is based on the fact that no single company or industry can solve these challenges alone, and the need for companies to recognize this. The need for cross-sector collaboration may be even more pressing when dealing with complex and unknown challenges within sustainability than challenges related to more traditional business needs (Jørgensen & Pedersen, 2018; Ellen MacArthur Foundation, 2015).

As mentioned initially, the variables in this category are assumptions based on what constitutes sustainable business, as there is no literature explicitly stating what constitutes sustainability collaborations. We would like to emphasize that these are variables we expect to find support for, but the interview subjects' responses can both eliminate some of the aforementioned variables and elucidate additional variables that are not covered in the model. However, we believe that the variables form the basis for which elements must be present in order to characterize a partnership as sustainability collaboration.

3.2 Motives to enter into sustainability collaborations

Based on the literature review, we found it useful to categorize the identified motives into competency-oriented and legitimacy-oriented motives, following Lin and Darnall (2010), as these authors specifically focus on collaborations for sustainability issues. However, the two main groups of motives are supplemented with contributions from Haugland (1996), Varadarajan and Cunningham (1995) and Johnson et al. (2008) on what the motives are for businesses to enter into traditional alliances. The table is also supplemented with motives companies have to engage in sustainability efforts in general (Jørgensen & Pedersen, 2015).

Competency-oriented motives	Legitimacy-oriented motives
Access to new technologies/competencies	Improve reputation/Build legitimacy
Attract/retain employees	External pressure
Improve customer offering	Moral convictions
Exploit business opportunities	Adapt to public regulation
Access to new markets	Expectation of public regulation
Access to international opportunities	Adapt to competition
Reduce cost	Get ahead of competition
Avoid resource scarcity	Reduce risk

Table 3: Competency- and legitimacy-oriented motives. *Source: Haugland, 1996; Jørgensen & Pedersen, 2015; Varadarajan & Cunningham, 1995; Johnson et al., 2008*

The competency-oriented motives are associated with business opportunities and product development, as well as access to resources, knowledge and technology. The legitimacy-oriented motives are associated with an internal sense of obligation, competitiveness and stakeholder pressure (Lin & Darnall, 2010). Lin and Darnall (2010) claim that competency-oriented alliances are expected to produce meaningful environmental improvements, as these alliances seek to exceed social expectations. By contrast, legitimacy-oriented alliances seek to meet social demands and achieve external credibility and are therefore expected to generate a lower degree of meaningful environmental impact (Lin & Darnall, 2010). Companies will most likely participate in both types of alliances depending on what issue they seek to solve with different collaborative partners (Lin & Darnall, 2010). Lin and Darnall (2010) suggest that both types of alliances can create meaningful environmental improvements, but to a different degree. Therefore, we believe that both motives can generate positive outcomes, but that there should be an overweight in competency-oriented motives in order to implement proactive measures and best succeed with sustainability collaborations.

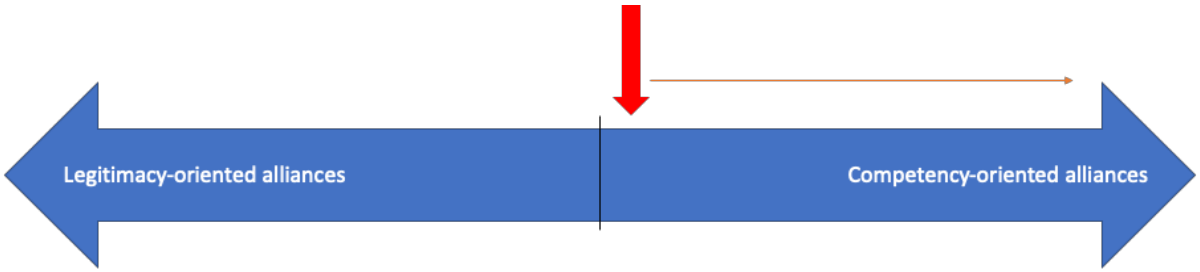

Figure 5: Illustration of optimal motive

3.3 Success factors

The variables in this category are the four main groups of identified success factors; personal relations, competence building, governance and control, and internal and external conditions.

The first main success factor is personal relations, which will be of significance to the relationship between the partners and affect how the companies work together. We expect that both competence-based and character-based trust is highly important in collaborations for sustainability, as companies may enter into partnerships with companies from industries which they are unfamiliar with. It will be crucial that the parties can rely on each other in terms of competence to deliver on their respective tasks, as well as in terms of integrity, honesty and motive. It is also assumed that trust will build a foundation for knowledge sharing. Finally, relation-specific investments are expected to strengthen the partnership, and all parties need to contribute equally over time on all investments, so that all are morally and financially committed to the alliance.

Knowledge sharing is a relation-specific investment that enables common competence building which is of significance to the success of the collaboration. We expect that knowledge sharing is important in order to ensure flexibility and the ability to evolve. In sustainability collaborations, it may take time to create results, and in some periods, there will be greater progress than others. Therefore, we assume that it is important to be open and informative about the development of the collaboration, in order to create a commitment to the collaboration even in periods where results are lacking. Knowledge sharing enables the combination of complementary resources, which is the main activity that makes it possible to realize the collaboration.

The next variable is governance and control. Managerial support is expected to have an impact on the strategic foundation of the alliance, as well as the motivation and commitment on lower levels of the company. It is also expected that clear and realistic goals, as well as clarity of roles and responsibilities, are important factors. However, it is reasonable to assume that the path to the goal is quite unclear in sustainability collaborations, as companies are dealing with challenges that are complex and unknown. Another aspect of governance is what kind of safeguard controls the relationship and opportunistic behavior. It is assumed that informal self-enforcing safeguards are more effective than formal self-

enforcing safeguards and third-party agreements as informal safeguards are expected to strengthen the personal relationship. Finally, we assume that regular assessments are important in order to facilitate progress, and that expectation clarifications need to be made at the outset and managed as the alliance evolves.

The final variable, internal and external conditions, reflects internal capabilities and external factors that can influence success. We expect external legitimacy to be highly important in sustainability collaborations as research shows that customers judge companies based on their sustainability efforts, which may be decisive for their external legitimacy (Becker-Olsen, et al., 2006). Furthermore, we assume that sustainability collaborations require commitment and motivation on all levels in each of the organizations involved in order to create a meaningful sustainability impact. However, we also expect that sustainability efforts have a motivational effect on employees. Finally, alliances need the ability to evolve to not disintegrate. Therefore, the alliance must be flexible and be able to adapt to changes in dynamic environments. Sustainability is still fairly unknown ground, which may indicate that companies must be especially flexible as new information arises and technology develops.

3.4 Higher sustainability impact

In the category «higher sustainability impact», we have chosen to use the variables closed loops, renewable energy, emissions reduction, increased human and animal health, and meet requirements and regulations. The variables represent various measures that collaborations for sustainability can implement, to integrate sustainability into their business operations, by generating positive economic, social and environmental impact (Bocken et al., 2014). Also, the variables in this category provide a general description of the sustainability purposes of the different collaborations highlighted in the current study. The measures described are proactive, with the exception of meeting requirements and regulations which is reactive. The others are thus associated with more proactive environmental strategies (Lin & Darnall, 2010). Our assumption is that these measures will be implemented better and more rapidly by entering into partnerships that emphasize and facilitate personal relationships, competence building, governance and control, and internal and external conditions. This assumption is based on previous research suggesting that these success factors can lead to desirable outcomes for the environment, which in turn can give the collaboration a greater

sustainability impact (Berlie, 2010; Barnes et al., 2016; Lin & Darnall, 2010). In addition to facilitating the success factors, we assume, based on Lin & Darnall's (2010) arguments, that competency-oriented alliances are more able to implement proactive measures (cf. section 3.2). The model below illustrates the assumptions we make regarding how businesses can best achieve increased sustainability impact.

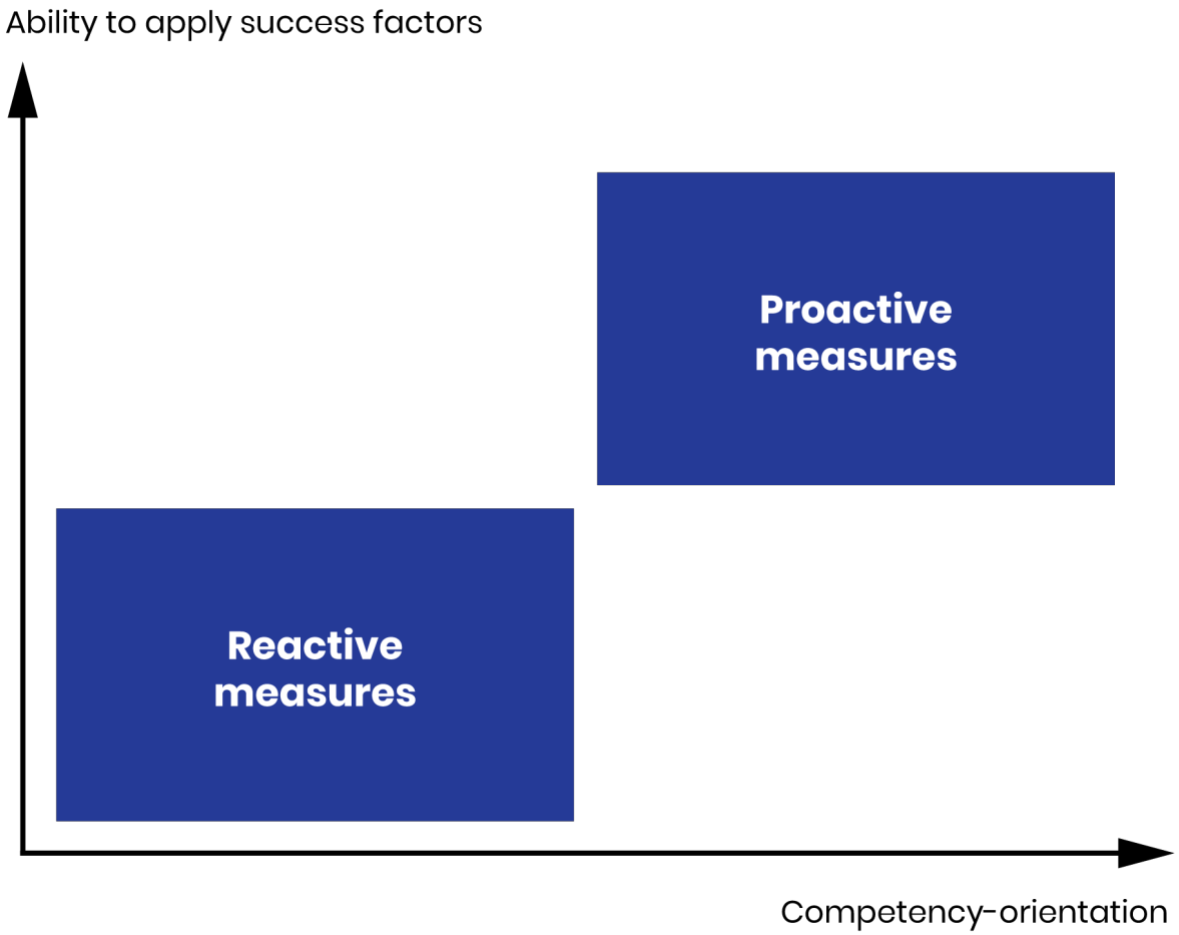

Figure 6: Self-developed model of achievement of increased sustainability impact

4. Methodology

This chapter will give an account for the choice of research design and strategy, as well as methodology for data collection and analysis. The section concludes with an assessment of the research's validity and reliability, and finally some ethical considerations. With regard to the nature of the research problem, it is natural with a qualitative design. We want to collect individual information about companies' experience with collaboration in the context of sustainability. This leads us to an inductive approach as we seek to observe and record information about a phenomenon and develop a theoretical description of this phenomenon (Saunders et al., 2015). We want to find trends and patterns in the data material and will therefore conduct in-depth interviews to investigate how the companies perceive these collaborations, and what the companies identify as critical success factors and barriers to manage and preserve these collaborations.

We started collecting empirical data in week 11. We conducted three face-to-face in-depth interviews during this week, and all three were with companies operating in the aquaculture industry. According to the plan, we were to conduct as many of the interviews as possible by sitting physically with the respondents. Unfortunately, this was the same week as restrictions were imposed by the government due to the Covid-19 virus. The virus had several consequences for the thesis as we had to deal with the restrictions in the collection of empirics. Among other things, it was challenging getting in contact with companies and respondents, and unfortunately some respondents who had initially agreed to contribute had to withdraw. This meant that we had to seek other respondents. Furthermore, some respondents were quarantined, almost all were assigned to home offices and some respondents were working in industries that were given increased workload when the restrictions were introduced. As a consequence, the remaining 15 interviews were conducted via telephone or video call. The plan was to conduct all interviews in March, but several respondents had to postpone the interviews until the end of April due to increased workload resulting from the virus. Initially, several respondents also invited us to their facilities so that we could observe their processes and get a better understanding of their sustainability work. Unfortunately, this was not carried out due to the virus. Furthermore, the restrictions following the Covid-19 virus had consequences for the collection of existing theory and state of the art literature. As libraries closed, we lost the opportunity to retrieve curriculum books

and additional literature. As a result, much of the literature had to be found digitally. Most curriculum books are not available online, and those that are available are often earlier editions. This may be decisive for the theoretical weight of the thesis, but we feel confident, however, that the peer reviewed journals we have chosen to use along with earlier editions of books provide an adequate theoretical basis.

4.1 Research design and method

Research design is a general plan for the execution of the research project. There are various types of designs, including exploratory, descriptive and explanatory. Which design to choose depends largely on the nature of the research problem. If the research problem has a high degree of structure, the researcher ought to use descriptive or explanatory design. However, with a comprehensive and unstructured research problem, it is most expedient to use exploratory design. Which design to choose also depends on how much researchers already know about the subject. Descriptive or explanatory design is preferred when more empirical research exists, whereas exploratory design is useful if research is insufficient (Saunders et al., 2015).

The current research problem is relatively comprehensive and unstructured, and the research on this topic is limited despite the increasing relevance. It is still uncertain what characterizes and constitutes sustainability collaborations, what the success factors and challenges to such collaborations are, as well as how these collaborations can enable companies to increase their sustainability impact. Based on this reasoning and the fact that we don't have a clear view of what connections may exist, it is natural and appropriate with an exploratory design. Such a design poses a risk in the sense that it does not always generate new insights, but some researchers argue that this is a contribution of its own (Saunders et al., 2015). On the other hand, an exploratory design is advantageous when seeking to clarify the understanding of an issue, problem or phenomenon, and it gives us the opportunity to gain in-depth knowledge on the subject. Another advantage of this design is that it is flexible and adaptable to changes that may occur during the project (Saunders et al., 2015). However, this requires that we, as researchers, are willing to change directions if the results of new data suggest we change our course.

4.1.1 Research approach

There are different approaches for a research project, and a distinction is made between inductive and deductive approaches. An inductive approach entails that the researcher observes and records information about a phenomenon and develops a theoretical explanation as the data are collected and analyzed. This way the researcher moves from the specific to the general. Deductive approach is the opposite. Such an approach moves from the general to the specific by first examining existing theory and subsequently testing whether this can be shown in reality (Saunders et al., 2015). This study will have an inductive approach which is suitable for the exploratory research problem.

Furthermore, the choice of exploratory design and inductive approach indicates a qualitative approach rather than a quantitative. The reason for this, is that a qualitative method is appropriate when trying to interpret and develop a theory, rather than to measure and test a theory quantitatively (Gripsrud, Olsson & Silkoset, 2010). Qualitative analysis can thus be more complex and is perceived to be less objective. As a consequence, the scientist must strive to maintain objectivity throughout the research project (Saunders et al., 2015). We will return to this implication in the subchapter about validity. The advantage of a qualitative approach is that it allows the researcher to seek depth, which is highly necessary for us in order to answer the research problem. Finally, a qualitative approach is more flexible and adaptable than a quantitative approach, and this is an advantage with regard to the exploratory research problem (Saunders et al., 2015).

4.1.2 Research strategy

The research strategy is a more detailed plan for how we intend to answer the specific research question (Saunders et al., 2015). There are several different research strategies, and for this study we opted for a case study, which we will justify in the following. A case study is a comprehensive and detailed study of a phenomenon where the objective is to gain insight and to understand the phenomenon in its real-life context (Saunders et al., 2015). With an exploratory research design and an inductive and qualitative approach, case study is well suited as a research strategy as it leads to rich empirical descriptions and development of theory. The phenomenon we wish to study is collaboration with regard to solving sustainability issues in Norwegian business operations. The ‘cases’ in this case study are

several different collaborations consisting of different companies, where each individual company, as well as each individual collaboration are deemed as a case of its own.

We want to compare the different collaborations and companies to bring out similarities and differences within each case and to create a more holistic view of this type of collaboration. Several observations of the same phenomenon are called multiple case studies, and we find it appropriate to choose such a study (as opposed to a single case) as it provides a better basis for explaining across contexts (Saunders et al., 2015). The disadvantage of multiple case studies compared to single cases is that the latter achieves a larger amount of information and a richer background. Nevertheless, we consider a multiple case study to be more useful as we assume that the findings can be replicated across the cases. This is consistent with Saunders et al. (2015) who emphasize that a multiple case design is advantageous when similar findings are expected as it is designed to generate literal replication. Also, to be able to answer the research question at hand it is crucial to look at multiple cases to create a basis for comparison. A multiple case study helps to emphasize and confirm theoretical constructions and to create compelling and holistic results. Furthermore, we are working with a multiple embedded case study as the respondents represent different companies and collaborations, which means there are several units of analysis (Saunders et al., 2015). The disadvantage of using a case study is that it is time consuming and thereby limits the number of respondents (Saunders et al., 2015), but we believe the strengths of this research strategy outweigh the weaknesses in the current study.

4.1.3 Time horizon

One of the characteristics of multiple case studies is that they are limited in time and space. To delimitate in space the analysis will be conducted on an organizational level and is limited to the collaborating companies. Research can take place with different time horizons. If the phenomenon is studied at a particular time, i.e. the phenomenon is measured at one point in time, it is called cross-sectional study. On the other hand, if the phenomenon is investigated several times to study evolution over time, it is a longitudinal time horizon. The time horizon for the current study is limited as the research will be conducted during the course of one semester. Due to this time constraint we are unable to study the phenomenon over time. Instead, we will study reflections and attitudes toward the collaborations at a given point in time and will thus be conducting a cross-sectional study (Saunders et al.,

2015). This may be a limitation in the research project, but it can be interesting to use our findings in a longitudinal study at a later time.

4.2 Presentation of cases

To be able to answer the research question, we investigated several companies who collaborate for sustainability. The main companies are Norsk Gjenvinning, Heldal Eiendom, Rema 1000 and NCE Seafood Innovation Cluster, and we study all of them as well as several of their collaborative partners. These cases represent collaborations between business actors. It is advantageous that the main companies all represent different industries, respectively the waste and recycling industry, construction industry, grocery industry, and aquaculture industry. We have conducted 18 interviews with 20 respondents. We believe that this creates depth for the thesis. Also, the companies illustrate collaborations across multiple industries, which gives a wide perspective. In addition to interviewing the representatives from the business market, we decided it would be valuable to get the perspective of a scientist to achieve greater breadth. Therefore, we also interviewed a professor from the University of Bergen (UiB). The following subchapters will present the four main companies and give a shorter introduction to each of their collaborating partners. Appendix 1 provides a more detailed overview of all the partners of the main companies. This section will conclude with a table illustrating all collaborations, as well as the purpose of each collaboration.

4.2.1 Norsk Gjenvinning

Today's disposal puts pressure on natural resources and generates large amounts of waste. In 2018, the EU adopted new waste regulations in which percentage of material recycling for household and business is set to be 65% by 2035. The waste management industry has increased its turnover from 10M NOK in 2003 to 25M NOK in 2019 (Norsk Gjenvinning, 2019). The substantial growth is partly due to the increasing amount of waste, as well as better resource utilization of the waste. Norsk Gjenvinning is Norway's largest supplier of recycling and environmental services. Their vision is «there is no more garbage», and they believe waste is the solution to the future resource problem. The company handles 1,76M tons of waste for 44,000 customers yearly. Norsk Gjenvinning works both upstream and downstream with their players and several of their downstream collaborations are represented in the current study. A circular economy demands engagement along the value

chain and Norsk Gjenvinning plays a major role in contributing to a circular economy through recycling. The company works with several industries, sectors and businesses to manage waste to make new resources. Norsk Gjenvinning has entered into collaborations with Jernia, OBOS, Norgips and AF-Gruppen to create new recycling solutions. Norsk Gjenvinning contributes to a circular economy through their collaborations; they supply Norgips with gypsum that otherwise would end up in the landfill; they assist AF-Gruppen in pursuing their goal of sorting 100% of their materials; they contribute to increased material recycling for OBOS' construction sites; they recycle the metal, porcelain and ceramic which Jernia collects from their customers.

4.2.2 Heldal Eiendom

Heldal Eiendom is a construction company located in Bergen. Their vision is to be the best developer in the city, and they emphasize that they are not just building houses, but new homes and living environments. Heldal Eiendom is responsible for the entire value chain in construction, from the assessment of the site to the handover to the customer. If cities are to be a sustainable place of residence and work for people in the future, it is important to consider how houses are built and how cities are designed. Therefore, developers play an important role in the transition to a more sustainable future.

Heldal Eiendom collaborates with BKK, Eaton and Meny Netthandel to create the «the home of tomorrow», which entails that homes will be more self-sufficient, digitized and sustainable. BKK and Eaton supply solar panels and battery solutions, respectively, to be used as sustainable components for energy usage in Heldal Eiendom's buildings. BKK provides solar panels which can produce energy during the day, and Eaton provides batteries which can store this energy during the day when most people are at work so that the residents can use this energy in the evening when they get home. By doing this, the energy is produced and stored locally. Meny Netthandel, hereafter referred to as Meny, collaborates with Heldal Eiendom to deliver food for «the home of tomorrow». The long-term goal is to ensure that customers can conduct easy ordering of groceries from anywhere and at any time and pick them up either in the living community's own cooling room, or at a pickup point in the neighborhood. By doing so, car traffic and emissions are reduced, and in addition, the everyday life of many people, especially toddler families and the elderly, is simplified.

4.2.3 REMA 1000

The grocery industry is an important player in connection with sustainable development. Among other things, the grocery industry can affect the amount of food waste, recycling, quality of life for animals, environmental impacts of mass production, and public health. REMA 1000, hereafter referred to as REMA, is Norway's leading grocery chain and one of the country's strongest brands. In many ways, REMA is a global player as their value chain extends through many countries. REMA has chosen to term its sustainability work as «responsibility». In its responsibility report, REMA defines responsibility as «*our work with the environment, health, working life and responsible trade*».

REMA collaborates with Kolonihagen and Norsk Kylling and has ownership interests in both companies. However, all three companies emphasize that the business relationship is regarded and treated as a collaboration. The purpose of the collaboration with Kolonihagen is to offer more organic and sustainable products. REMA had a desire to achieve a greater ecological commitment as part of developing the range of products in a more sustainable direction. This collaboration had a sustainability profile at the outset. By contrast, the collaboration with Norsk Kylling has been more of a journey where goals, solutions and sustainability have evolved along the way. In 2012, some negative aspects of Norsk Kylling's operation were revealed. Among other things, Norsk Kylling had violated various environmental regulations and laws. In 2012, they started an extensive operation to move towards sustainability. The operation was very costly, but the company quickly achieved good results due to its focus on responsibility and integrity in all contexts. Then, in 2016, Norsk Kylling won Miljøfyrtårn of the year due to the significant changes in their operations. When the collaboration between REMA and Norsk Kylling started, it was not intended to improve animal welfare; this goal grew through their sustainability operations. Today, the collaboration has achieved major changes in human and animal welfare.

4.2.4 NCE Seafood Innovation Cluster

NCE Seafood Innovation operates in a cluster with 57 partners. The Seafood Innovation Cluster is a world leading cluster with members representing the world seafood value chain. Their role is to coordinate and foster strategic collaboration with all stakeholders, find new partnerships and facilitate collaboration processes and activities. The company's vision is to enable sustainable growth and their mission is building an ecosystem for growth and

competitiveness in Norwegian Seafood (NCE Seafood Innovation, 2020). The cluster has three business areas including knowledge, innovation and entrepreneurship, and commercialization. The cluster provides knowledge to support sustainable development, aiming for a future oriented knowledge base, knowledge sharing and talent attraction. As for innovation, they seek to secure sustainable seafood production, ensure faster adoption of new technology and explore new growth areas in seafood. Members of the cluster can take part in these value-creating business opportunities and benefit from being in a global hotspot for attraction and economic growth (NCE Seafood Innovation, 2020).

Of the companies we have interviewed, Bremnes Seashore and Algaepro are members of the cluster and the University of Bergen is a R&D partner. Bremnes Seashore is one of Norway's leading suppliers of farmed salmon, whereas Algaepro is a startup firm. BIR is not a member of the cluster; they are collaborating with Algaepro to handle food waste and become circular. Algaepro produces microalgae based on the circular economy with waste heat and CO2. Currently, Algaepro is in the research phase, working with networking, agreements and partnerships. The firm is soon ready to start production together with BIR. CO2BIO was part of the cluster before their partners withdrew from the project due to lack of financial progress. As such, CO2BIO has no collaborating partners today, however we wanted to interview the company in order to gain insight and knowledge about their previous collaborations and the reason for why it disintegrated.

4.2.5 Overview of collaborations

Collaborating partner	Company	Purpose of collaboration
Norsk Gjenvinning	OBOS	Develop new materials based on recycled construction waste
	Jernia	Work towards a circular business model. Sustainable waste management; porcelain and ceramics
	Norgips	Increase the amount of recycled gypsum, contribute to more efficient waste management at construction sites and general reduction of waste
	AF Gruppen	Achieve 100% requirements for sorting waste at construction sites
Heldal Eiendom	Eaton	Provide batteries as a sustainable component for energy usage in buildings
	BKK	Provide solar cells as a sustainable component for energy usage in buildings
	Meny Netthandel	Online grocery shopping and home delivery
Rema 1000	Norsk Kylling	Contribute to animal welfare and to public health by offering affordable, healthy, organic and sustainable products.
	Kolonihagen	Product development, and contribute to public health by offering affordable, healthy, organic and sustainable products.
NCE Seafood Innovation Cluster	Bremnes Seashore	Members of NCE Seafood Innovation. Aqua Cloud project for improving the industry's challenges with sea lice
	BIR	No food waste by 2023 forcing BIR to collaborate with Algaepro: Converting food waste into larvae and microalgae production.
	Algaepro	Collaboration with BIR: From food waste to microalgae production. Startup at NCE Seafood Innovation
	CO2BIO	Currently no collaborations. R&D. Previously funded by NCE Seafood Innovation
UiB Scientist	Represents researchers' perspective on sustainable business	

Table 4: Overview of collaborations

4.3 Data collection

The following section will account for how data collection has been conducted and will explain and justify our choice of in-depth interviews as the qualitative method. Furthermore, we will account for the thesis' sample companies. This section concludes with an explanation of the research procedure, and how we reached out to the respondents.

4.3.1 Qualitative data collection

We have collected both primary and secondary data in order to answer the research question. Secondary data is an effective way of gathering information that already exists. At the same time, the validity may be lower because the information is collected for other analysis purposes (Gripsrud et al., 2010). The collected secondary data are primarily peer-reviewed journals due to the limited access to curriculum books because of the Covid-19 virus. Based on a review of these journals, as well as the books we were able to access, we uncovered a gap in the literature. We wanted to investigate this gap further by collecting primary data through individual in-depth interviews. Such interviews are well suited when the objective of the research is to gain deeper understanding of a subject, and when individual experiences, opinions, attitudes and thoughts are of relevance. This generates individual information and excludes group influence (Gripsrud et al., 2010).

There are different types of interviews, and a distinction is made between the degree of structure in the interview. At one extreme are structured interviews where all respondents are asked the same standardized questions without room for supplementary or follow-up questions. At the other end of the scale are unstructured interviews where the questions are non-standard, and the interaction is more like a conversation than a formal interview. Due to the exploratory nature of the current study, the interviews are fairly unstructured to facilitate additional information sharing from the respondents. Thus, we conducted semi-structured interviews. This ensured a certain degree of structure as to create a solid foundation for comparison of cases, and also the opportunity to ask follow-up questions. In addition, the respondents were allowed to contribute with additional relevant information, and their answers guided us further in the research. Semi-structured interviews are well suited with case study as the research strategy and are consistent with previous choices of design and approach (Saunders, et al., 2015).

To give the interview some degree of structure we prepared an interview guide prior to the data collection. The interview guide provides a list of the subjects and key questions we wanted to uncover to be able to answer the research question (Appendix 2). We highlighted the questions that were of greatest significance in case there would appear a situation in which we had to prioritize. The purpose of the interview guide was to provide us with a framework that would ensure progress and minimal diversion from the topic, but the actual interviews were characterized by flexible interaction and open dialogue.

In addition to the questions in the interview guide we included a list of motives for collaboration where each motive was to be judged on a Likert scale from 1 (very low importance) to 7 (very high importance). See Appendix 3 for this list. Although a Likert scale is normally used in quantitative studies, we considered it appropriate to use it as a tool in our qualitative study to create a better basis for comparison with existing theory. Also, the respondents' opinions are subjective, and therefore it is reasonable to say that the current study is essentially qualitative.

4.3.2 Sample

The quality of the current study is affected by the sample and what contribution each respondent provided. Thus, there was a specific purpose behind our selected interview subjects. It was required that the respondent had a central role in the collaboration and sufficient knowledge about the parties involved, as well as knowledge about the themes represented in the research question and objectives.

In-depth interviews are both time and cost consuming because each respondent is interviewed individually. Many researchers state that one should keep collecting qualitative data until data is saturated, but Saunders et al. (2015) recommend that researchers undertake between 5 and 30 in-depth interviews with interview subjects that are relevant for the subject in question. We conducted interviews with 20 respondents from 18 different companies. Due to the limited number of respondents the findings cannot be generalized to the population on statistical grounds. On the other hand, the results can be analyzed and interpreted for further analysis. Also, the results can contribute to answering the research question at hand (Gripsrud et al., 2010; Saunders, et al., 2015). The table below lists all represented companies and the respondents' field of expertise, as well as the collaborating partner

company. In accordance with NSD's guidelines, we opted to present the respondents' field of expertise instead of their position in the firm, as the information presented in the thesis should not be traceable to the individual respondents.

Company	Field of expertise	Collaborating partner
OBOS	Sustainability and environment	Norsk Gjenvinning
Norgips	Management	
Jernia	Management	
AF Gruppen	Purchasing and sustainability	
Eaton	Electronics	Heldal Eiendom
BKK	Local energy solutions	
Meny Netthandel	Management	
Norsk Kylling	Management	Rema 1000
Kolonihagen	Innovation and development	
Bremnes Seashore	Management, innovation and R&D	Seafood Innovation Cluster
BIR	Research & Development	
Algaepro	Management and sustainability	
CO2BIO	Management and sustainability	
UiB Scientist	Scientist	Represents the researchers' perspective on business.

Table 5: Respondents

4.3.3 Research procedure

Prior to the interviews we spent a great amount of time collecting secondary data on the topic of collaboration and sustainability. Furthermore, we read and collected information about the different companies and their sustainability strategy and goals. We reached out to all respondents via email, asking them to participate. The times we were in doubt about who to contact we contacted the press representative and asked to be referred to the appropriate individual. All the main companies were eager to contribute and assisted us in establishing contact with their collaborative partners.

All interview requests were sent via email, and most emails were sent in late February. As previously mentioned, all interviews were requested to be conducted during March, but as a consequence of the Covid-19 virus several respondents had to postpone the interview until

late April. The respondents were allowed to set the date and time of the interview. In addition to requesting participation, the email included background information on the study to encourage the recipient to partake (Appendix 4). After the initial acceptance to participate, the respondents received the interview guide along with a document which clarified the central theoretical concepts used in the interview guide (Appendix 5). This contributed to securing construct validity, which is discussed in section 4.5.2. In addition, the respondents received an information letter about the processing and storage of data, in accordance with NSD's guidelines (Appendix 6). At the bottom of this document there was a declaration of consent which all respondents were asked to sign.

In-depth interviews can be conducted face-to-face, via telephone, video conversation or email. Initially, we planned to conduct face-to-face interviews, but also to adjust to the preference of the respondent both in terms of how the interview was conducted and what language they preferred, that is Norwegian or English. However, nearly all interviews had to be conducted via telephone or video conversation due to the Covid-19 virus. Fortunately, we were able to conduct three interviews face-to-face prior to the outbreak. Of the remaining interviews, only two were conducted by telephone, and the rest via Skype or Teams. We preferred video conversation to telephone as we were able to better note the non-verbal communication. The interviews conducted by telephone were a consequence of the respondents' preferences or technical problems by video conversation.

All interviews started by us introducing ourselves and confirming the respondents' anonymity and how collected data would be confidentially stored. Following this we asked for the respondents' permission to audio-record the interview for the purpose of transcribing and minimizing the risk of misunderstandings or wrongful interpretations. Finally, the respondents were informed about their possibility to review their own statements and suggest corrections if necessary. We then proceeded by following the questions from the interview guide. All interviews were audio-recorded, and this made it possible for us to be observant during the interview by listening intently and observing the non-verbal communication. Another advantage of recording is that all data is registered, making the analysis of higher quality.

After each interview we transcribed the data as soon as possible both to secure reasonable progress according to our time horizon and that we had a vivid memory of the interview.

Transcribing raw data is the first step in the analysis process (Saunders et al., 2015), and will be covered in section 4.4 Data analysis. After transcribing, we summarized a draft of the findings from each interview which we sent to the respondents for approval. They had five days to suggest alterations. Once approved, the findings were prepared for analysis. See appendix 9 for an example of approved summarized draft.

4.4 Data analysis

The following section will explain the analysis process of transcribing and conducting a content analysis.

4.4.1 Transcribing

In the process of transcribing data, the focus is on the individual respondent and the most important findings from each interview. All data material must be transcribed to ensure that no valuable information is lost. This is a challenging task as spoken language is very different from written language. As individuals have a tendency to start a new sentence before finishing the previous statement, researchers sometimes need to consider what was said and how the statement was made (Saunders et al., 2015). In addition to what emerges verbally and the tone by which it was said, the researcher should note the context in which the interview took place, who was present, and whether interruptions occurred (Saunders et al., 2015).

We made a conscious choice of transcribing each interview as it was completed to make sure that we had a clear memory of what was said and other conditions that might have been of significance. This enabled us to comment on the individual interviews to explain the context of the statement when sentences were unclear or incomplete. We transcribed the interviews separately in the interest of securing progress in relation to our time horizon. However, we reviewed all transcribed interviews together to make sure that our interpretations were consistent.

4.4.2 Content analysis

Given the extensive transcribing process, it is common to be left with a large amount of information when using qualitative research methods (Saunders et al., 2015). This amount of

data must be reduced to include only relevant information for the research. We used a content analysis to achieve this, which is a technique that codes and categorizes qualitative data in order to analyze them quantitatively (Saunders et al., 2015).

When working with a content analysis, all relevant information from each transcribed interview is grouped into predetermined categories (Saunders et al., 2015). There are eight categories used in the current study: Sustainability (strategy, motive, purpose), Collaboration, Success factors, Barriers, Characteristics of sustainable collaboration, Laws and regulations, Competitive advantage, and Reflections. We made one document per interview with the intention of summarizing the most important findings from each interview into the different categories. We reviewed each interview and marked the statements according to which category they belonged to. Finally, we copied the statements into a separate document to place the statement in its rightful category, and thus securing a more holistic view of our findings from each interview. By doing so, we were able to find patterns and connections in the data material, and to highlight the differences between the respondents. Appendix 7 shows an example of how we worked with the content analysis through the aforementioned categories. When the categorization of data was completed, we started the analysis.

4.5 Credibility of findings

This section will discuss the credibility of our findings with regard to the reliability and validity of our research. Also, we will account for how we attempted to prevent threats to both during the research project.

4.5.1 Reliability and threats to reliability

Reliability refers to reliable data collection and analysis. There is a distinction made between internal and external reliability, where the former refers to ensuring consistency through a research project (Saunders et al., 2015). To achieve this, we were both present during the interviews and we analyzed data together. This way we could assess to what extent we agreed on the interpretation of the data.

External reliability refers to whether data collection techniques and analytical procedures would produce the same result if they were performed again or if they were replicated and

tested by others (Saunders et al., 2015). The criterion of external reliability is difficult to fulfill in qualitative research. Through the qualitative approach we seek to make sense of the socially constructed meanings expressed by the respondents at the point in time of which we conduct the case study (Saunders et al., 2015). The behaviors and attitudes of the respondents will change over time, and it is highly likely that the results would be different if we were to conduct the same study at a later time. The current research project is not meant to be replicated and reliability must be measured in other ways, for example by letting other researchers assess whether the results are reliable given the data found. It is also important for reliability that the choice of research design and approach is clear, and that the procedure is carefully described. We believe that we deliver in a satisfactory manner in this regard.

The reliability of the data depends on how they were collected and analyzed. As researchers we had to be aware of the sources of errors, and we were therefore attentive to the interview subject and the context of the interview, as well as our own role as interviewers. There are mainly four different conditions that threaten the reliability of the research; participant error and participant bias, and researcher error and researcher bias. In the following we will account for these threats to reliability, starting with participant error and bias.

Participant error is any factor that has a negative impact on the participants performance (Saunders et al., 2015). This threat to reliability can occur if the respondents don't feel safe in the surroundings of the interview and therefore feel compelled to give dishonest answers or to restrict their answers. In order to ensure a safe environment, we made sure that the interview took place in the respondents' respective offices or in a closed meeting room, although via video conversation. By doing so, we eliminated interruptions and avoided that the respondents could be overheard by colleagues and thus give dishonest answers. To establish trust, we started each interview by introducing ourselves and our background, as well as repeating the purpose of the study to make sure we had a common understanding with the respondent. Additionally, we confirmed once again that all information the respondent provided us with would be anonymized, and we got a final approval for audio recording. We are under the impression that all respondents felt they were in a safe environment.

Participant bias refers to any factor which causes a false response (Saunders et al., 2015). This threat to reliability may occur if the respondents give their answers based on what they think we want to hear, rather than what they actually mean. We were aware that what we

said during the interview, as well as our tone and body language, could induce a false response. Also, we spent a lot of time working on the interview guide to reduce the possibility of leading questions.

Researcher error is any factor which alters the researcher's interpretation, whereas researcher bias refers to any factor which causes bias in the researcher's recording of the respondents' statements and answers (Saunders et al., 2015). This is a threat to reliability that occurs if we as researchers wrongfully record and/or interpret the respondents answers. We used audio recording during all interviews which contributed to a more correct data collection and analysis. By recording the interviews, we could devote our attention to the respondent, and we made sure that all information was registered. If we were to take notes during the interview, we could easily lose focus on the respondent and miss important information. The audio recording made it possible to ask follow-up questions and thus securing a better understanding of the respondents' answers.

As previously stated, it is normal to be left with a large amount of data when using qualitative research methods (Saunders et al., 2015). This was also the case in the current study, and with a qualitative approach the analysis depends largely on our interpretation of the collected data. Knowing this, we strived to keep an open mind during the analysis and to avoid biases that would cause us to unconsciously interpret answers incorrectly. Also, we gave the respondents the opportunity to review the findings from their interviews and to suggest alterations. By doing so, we reduced the threat of researcher error and bias as the respondents could point to interpretations that might be incorrect. On the other hand, this could also threaten the study's reliability as the respondents may have altered some interpretations to benefit themselves or their company and respective collaborations.

To strengthen the reliability, we have also conducted the interviews and the analysis together. By doing so, we could use each other as a control in how we interpret the answers. Due to limited time we chose to transcribe the interviews separately. However, we reviewed all transcribed interviews together shortly after the interview was conducted to make sure that we agreed on the interpretations. We stored all audio recordings until we submitted the thesis, which made it possible to listen to them again when there was uncertainty regarding the interpretations.

As initially stated, it can be challenging to satisfy the requirements for reliability in qualitative studies. However, we believe that our efforts in preventing the aforementioned threats strengthen the current study's reliability.

4.5.2 Validity and threats to validity

Validity refers to how accurate the analysis is, as well as the generalizability of findings (Saunders et al., 2015). In our assessment of the study's validity we will discuss the following types of validity which may be relevant for a case study: external validity, construct validity and content validity.

Internal validity entails establishing a causal relationship and is thus more relevant to studies that are subject to causal analysis (Saunders et al., 2015). External validity refers to whether the results are possible to generalize (Saunders et al., 2015), that is if the results of this study apply only to the respondents or if they apply to all sustainability collaborations. Several conditions threaten the external validity in the current study. There is a limited number of respondents, and the respondents may not be representative for the population in question. Also, we are performing a cross-sectional study, as the limited time horizon makes a longitudinal study difficult. This is a threat to external validity as we study the phenomenon at one particular point in time, and thus our findings may not apply at a later time. A multiple case study is not a sufficient basis for generalizing, but it is argued that case studies can be used as building blocks for theory development (Gripsrud et al., 2010; Saunders, et al., 2015). As the respondents represent different industries, we believe that our findings make a useful contribution to the topic of collaboration for sustainability and that the results can be transferred to similar contexts.

Content validity entails that we needed to clarify the content in the questions asked to make sure that the questions provide adequate coverage for the research problem (Saunders et al., 2015). In order to make sure that we had sufficient knowledge about the topic, we spent a lot of time studying previous research. By doing so, we were able to design the interview guide in a way that the questions properly investigated the research question. Semi-structured interviews can reach a high level of validity if they are carefully conducted through precisely formulated questions which adequately covers the research problem, and by examining the answers from multiple perspectives (Saunders et al., 2015).

Construct validity refers to whether the study actually measures what was intended to be measured (Saunders et al., 2015). Construct validity requires that all concepts are operationalized, as it is crucial that the respondents understand the terms used during the interview. To secure the construct validity with regard to operationalization of concepts, we sent the interview guide to the respondents prior to the interview, along with a document clarifying central concepts. This allowed the respondents to reflect upon the subject and to raise questions or concerns before the interview. Also, the respondents are of different academic backgrounds and have different conceptual understanding, so it was important that all theoretical concepts were defined. Giving each respondent the same description of the different concepts also facilitated common understanding across respondents. To be successful in measuring what we wanted to measure, we had to examine whether there was a connection between the respondents' reality perception, data collection and our interpretation. By asking control and follow-up questions, we made sure that the respondents understood the theoretical terms used and that our interpretation was in line with the respondents' perception of reality. Also, during the analysis we controlled that our interpretations were consistent.

4.6 Ethical conserns

It is important to be aware of the ethical challenges that may occur during a research project. There are many reasons for this, and some of the arguments are that the research can be sited at a later time, that the researchers reputation is affected by ethics, and that the resources contributing to the research must be put to good use as they could have been utilized in a different way. Research ethics refer to the standards of behavior that are meant to guide researchers in their conduct in relation to the rights of those who directly contribute to the study, and those who are indirectly affected by it (Saunders et al., 2015). To meet the responsibility that resides with us as researchers, we created some guidelines which we have followed during the project. We sought to give the respondents the same type of information and a sufficient amount of information, and to behave equally in the presence of each respondent.

In the collection of data, we processed personal data such as name, telephone number, email and organizational affiliation. To make sure that the study treated personal data in line with the General Data Protection Regulation which came into force in Norway in July 2018, we

reported the study to the Norwegian Centre for Research Data (NSD). By reporting the study to NSD, we learnt how personal data should be processed, which enabled us to preserve the respondents' rights during the study.

Prior to the interviews, we provided the respondents with a declaration which stated that participation was voluntary, that they could withdraw at any time and that no sensitive information would be made public. The interview guide was also sent to all respondents prior to the interview. By doing so, the respondents were granted some time to reflect upon the questions and we could avoid forcing them to discuss subjects they were uncomfortable with. Furthermore, we informed the respondents about the use and storage of data. We used audio recording with permission from the interview subjects, and the respondents were informed that the recordings would be deleted by submission deadline. In the current study all respondents are anonymized both to preserve their privacy and because the nature of the thesis does not require that we name the respondents as the companies in question are of higher relevance. Finally, as this is a qualitative study, we informed the participants that data would be interpreted in a subjective manner, but that our choice of data collection and analysis techniques would help us in achieving a more objective perspective throughout the project. After the interviews were transcribed, we summarized the findings from each interview which we sent to the respective respondents for review (Appendix 7). This way they were given the opportunity to correct and approve our interpretation.

5. Discussion of findings

The following chapter will present findings from our interviews, and the purpose of this chapter is to give the reader an overview of the findings which is the basis for our analysis in chapter 6. The main findings will be presented according to the categories and variables from the conceptual model. All of the information presented in the following chapter emerged from the interviews and, therefore, no secondary sources will be cited. The interviews are conducted with representatives from each company, and the statements made by representatives will be presented under the company name. We emphasize that the representatives' opinions are presented and not necessarily the companies' opinions. The contributions of the UiB scientist are only discussed in relevant contexts. When interviewing the scientist, some questions from the interview guide were omitted for methodological reasons, as some questions would require speculative answers. We have interviewed two respondents from Heldal Eiendom and BIR, and one respondent from each of the other companies. Figure X below illustrates the four main companies and their collaborating partners.

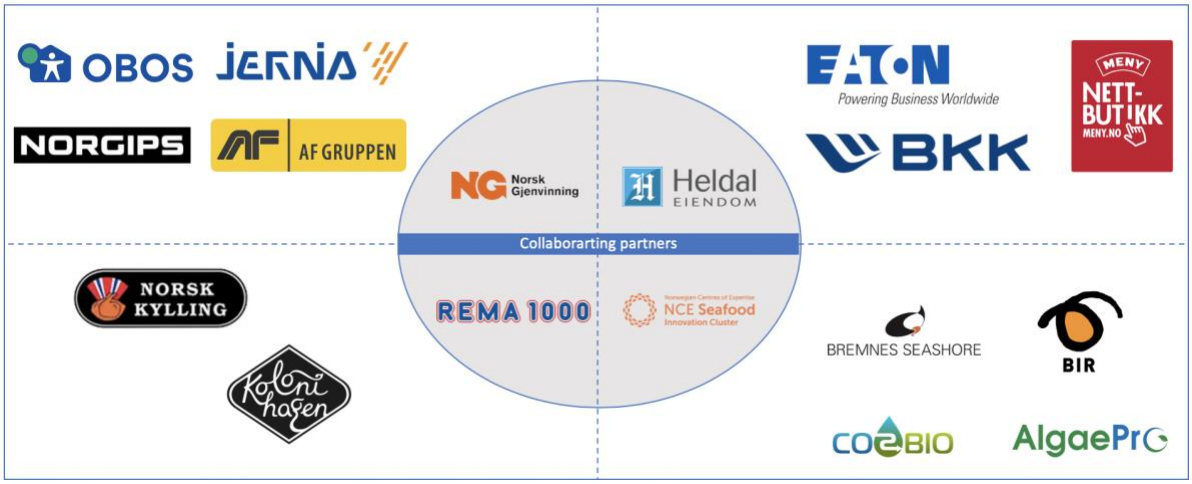

Figure 7: Illustration of collaborating partners

5.1 Characteristics of sustainability collaborations

The following subchapter will account for the characteristics of sustainability collaboration. The variables within this category are; (1) real sustainability problem and common vision; (2) sustainability integrated in overall strategy; (3) long-term perspective, and; (4) cross-sector collaboration. As presented in chapter 3, the variables are based on assumptions about

which factors need to be present to be able to characterize a collaboration as sustainable, and the assumptions are made based on what constitutes sustainable business (Porter & Kramer, 2011; Jørgensen & Pedersen, 2018; Eccles et al., 2014). Furthermore, the variables reflect previous research showing the negative effect greenwashing has on companies through decreased reputation and less talented job applicants (de Jong, Huluba & Beldad, 2019; Chen & Chang, 2013; Willnes & Jones, 2013). The variables will be presented in the next four subchapters.

5.1.1 Address a real sustainability problem and share a common vision

According to the respondents, sustainability collaboration exists when the partners share a common goal to help solve a real and business relevant sustainability problem, which they are in a position to influence. Their interests must be coherent so that they have a collaborative foundation. The respondents believe that when entering into new sustainability collaborations, open and honest communication between the parties is important. This entails openness about the purpose and intention of the collaboration, as well as what the parties wish to achieve. In order to have a meaningful impact and affect the triple bottom line, greenwashing is not an option.

All collaborations in the current study address highly relevant sustainability issues. To exemplify, BIR has tons of nutritional waste which is a pressing sustainability problem which they themselves cannot solve. Having identified this problem, BIR found a partner in Algaepro who can help solve the issue and simultaneously make a profit. Similarly, Algaepro needed an investor and industrial partner who was focused on sustainability and had a problem they could solve. The remaining collaborations and what sustainability challenges they seek to solve will be further discussed in section 6.4.1.

5.1.2 Sustainability integrated in overall strategy

All the main companies in the study highlight the importance of having corporate social responsibility and responsible operations as part of the company's overall strategy. Furthermore, the respondents state that it must be trustworthy, which means that businesses must exhibit sustainability through their actions to actually make a difference.

Norsk Gjenvinning practices sustainability through their business model and it is manifested in their core business. Heldal integrates sustainability into its business model by assessing and utilizing sustainable components and elements in its traditional operations throughout the value chain. REMA incorporates sustainability by producing affordable, healthy, organic and sustainable products, and by being dedicated to responsibly produce and sell their goods. The very business goal of Seafood Innovation is to enable sustainable seafood and growth.

All companies besides Kolonihagen report that they work towards written sustainability goals, such as the UN Sustainable Development Goals. Kolonihagen claims it is not necessary for them to state such sustainability goals on paper due to their high commitment.

> *«We have sustainability anchored at the core of the company and sustainability is in the "DNA" of the employees. The most important thing for Kolonihagen is to constantly ask questions like 'how can we do this better, what can we do, are there better solutions, what happens if …'. These questions are quite natural to ask in Kolonihagen, and we think about sustainability in all activities».* (Kolonihagen about sustainability strategy, 2020)

Thus, all companies have sustainability as an integral part of their business strategy and believe this is a prerequisite that must be present with all parties in order for the collaboration to be defined as a sustainability collaboration.

5.1.3 Long-term perspective

Having a long-term perspective is considered a characteristic of sustainability collaborations by all companies. This is because it is time consuming to generate profits, and due to the comprehensive research, development and investments that are required. The respondents state that solving sustainability challenges often involves exploring new areas that require innovation, which involves large investments where the outcome may be uncertain. Innovation processes require that the collaborating partners are patient, dedicated and willing to invest. Furthermore, the respondents state that all parties must be committed to operating profitably. Before entering collaborations, they need to consider whether it will contribute to profitability as well as sustainability. There is consensus among the respondents that profitability and sustainability are compatible, but that it often takes time to see return on

investments related to sustainability. This is especially true for a startup company like Algaepro, as they work with new technology and time-consuming development.

Bremnes Seashore says that sustainability investments are often more expensive at the outset, which means that it may not be profitable in the short term. To exemplify, the respondent points to their own investment in electric boats. The boat itself is expensive, but in the long run they see a positive return on the investment through decreased fuel costs and increased job satisfaction for employees due to less noise outside the offices. According to several respondents, it is highly likely that sustainability collaboration is not profitable in the short term, but rather in the longer term. It is important that all involved parties are open and honest about this, as well as accepting of this.

5.1.4 Cross-sector collaborations

All respondents report that sustainability collaborations are more often than not cross-sectoral. One industry cannot solve all problems itself; knowledge must be shared across industries. The respondents claim that in order to make a real difference, businesses must seek partners outside their own sector. By collaborating with players in different sectors and environments, businesses can access knowledge and R&D which is required to contribute to sustainable development. Furthermore, all the main companies consider the entire value chain when assessing sustainable solutions. The respondents also experience that some of their sustainability collaborations have led to new industry connections that would not otherwise have been explored with traditional collaborations. The respondent from Eaton says the collaboration with Heldal Eiendom is especially strong as they have direct contact with the developer in the construction industry, rather than going via the developer's electricians, which would be the traditional approach. According to the respondent, the developers are more forward looking in terms of sustainable and innovative solutions, making the collaboration strong and contributing for sustainability.

> «*Sustainability collaboration involves new industry connections because knowledge must be shared across industries to deal with the sustainability issues we face*» (Heldal Eiendom about cross-sector collaboration, 2020)

Bremnes Seashore says it is challenging figuring out how far down the value chain they should go to ensure that their affiliates also practice sustainability collaborations. Bremnes

seeks cluster collaboration to access knowledge and information about which companies are able to solve their problems. Seafood Innovation Cluster works to solve problems in an entire industry in Norway through cross-sector collaborations. CO2BIO highlights the importance of collaborating with researchers to access insight and knowledge about sustainability. According to the respondent, companies are less willing to share their technology development, while researchers are eager to share. Jernia also emphasizes the importance of collaborating with research communities, and collaborates with several environmental organizations themselves, such as Green Point, Miljøfyrtårn and Zero, to gain alliances and expertise. BIR points out that in order to achieve a circular economy, cross-sector collaboration is required. When collaborations form across industries, knowledge sharing is increasingly important, which will be further discussed in section 5.2.3.

5.2 Motives to enter sustainability collaborations

The interviews revealed that all of the companies either have a competency-oriented motivation behind the collaboration, or a mix of competency- and legitimacy-oriented motives. Most of the companies characterize their collaboration as competency-oriented. In the following, we will discuss the companies' motives for entering into their sustainability collaborations, and the findings will be presented according to each of the main companies.

5.2.1 Norsk Gjenvinning: Competency-oriented motives

Norsk Gjenvinning works to utilize waste resources, and the respondent states that sustainability is thus an integral part of the business model. The respondent from Norsk Gjenvinning experiences that those who approach them with a desire to collaborate want to be an industry leader related to sustainability. The collaborating companies describe Norsk Gjenvinning as forward-looking and innovative. Through collaboration with Norsk Gjenvinning, the companies want to conserve resources and contribute to the circular economy. They state that Norsk Gjenvinning contributes with insight, knowledge, research and ideas, and that they challenge their partners.

Norsk Gjenvinning emphasizes that the collaborations with AF-gruppen, Jernia, Norgips and OBOS are innovation projects and activities that are performed alongside daily operations. Norsk Gjenvinning considers their innovation and sustainability projects as mainly

competency-oriented. This is because the projects require considerable professional knowledge, expertise and networks that Norsk Gjenvinning does not possess internally.

«*Together with actors such as these partners, we gain access to important expertise, and we are able to work with different aspects of the value chain, which we would otherwise not be able to include in the transition towards a circular value chain*»
(Norsk Gjenvinning about their partners, 2020)

The partners state both competency-oriented motives and legitimacy-oriented motives for their collaborations with Norsk Gjenvinning. However, AF-gruppen and Jernia clearly state that the ongoing projects are competency-driven, and that Norsk Gjenvinning contributes with knowledge that they themselves do not have available in-house.

«*Because sustainability and circularity entail entirely new ways of doing things, we are completely dependent on gathering insights*»
(Jernia about competency-oriented motives, 2020).

In line with their collaborative partners, Norsk Gjenvinning says that there will always be some external factors that influence which collaborations can be established, and that authorities play an important role. When companies receive orders from the authorities, they are more willing to collaborate because they are given an additional motivational factor.

5.2.2 Heldal Eiendom: Competency-oriented motives

Heldal Eiendom wish to contribute to change in a traditional industry, and their desire is to acquire more knowledge through collaborating in order to deliver sustainable homes to buyers. The motivation for entering into collaborations with BKK, Meny and Eaton is that the companies are safe and stable, and thus long-term partners. By this, Heldal Eiendom means that the partners are confident in the knowledge they bring into the collaborations, which allows Heldal to rely on them. Heldal Eiendom is a relatively small actor and depends on security in its business relationships.

The collaborative companies all describe Heldal Eiendom as a strong partner. To illustrate, the respondent from Eaton states that the motive for entering into collaboration with Heldal Eiendom is that they have a great influence in the real estate market. The respondent states that, although the collaboration is not directly relevant to Eaton's core business, they receive

major marketing gains. In addition, the respondent says that on a personal level it is very fun to work with Heldal Eiendom.

Heldal Eiendom characterizes the collaborations with BKK, Eaton and Meny as clearly competency-oriented, although they acknowledge that also achievement of external legitimacy is motivating. The respondents are conscious of branding and the positive impact of sustainability initiatives on their reputation, but the main focus of the collaborations is to make a real contribution to sustainability by building competence to create innovations. Similar statements are made by their partners, and Eaton in particular can relate to the legitimacy-oriented motives, as marketing was one of the initial motivations for entering into a partnership with Heldal Eiendom.

The respondents from Heldal Eiendom state that most of their collaborations in general are competency-oriented, and that they strongly prioritize competence and knowledge base when choosing their partners. This is also the case with BKK, Eaton and Meny, who all characterize most of their collaborations as competency-oriented.

«*We also have several collaborative arenas with other partners that many would previously call suppliers and customers. It's a great way to emphasize the focus on exchange of knowledge and expertise, that we now more clearly refer to each other as collaborative partners*» (BKK about collaborations in general, 2020).

5.2.3 REMA 1000: Competency-oriented motives

REMA has several motives for engaging in sustainability work. First, sustainability is an opportunity for differentiation in the market. Second, implemented sustainable measures, such as reductions in emissions, energy savings and the establishment of environmental stores, generate bottom-line results in the form of cost reduction. The motivation is also customer-focused with regard to customer preferences, and in addition they have a desire to stay ahead of any regulations. Finally, sustainability is firmly rooted at the top of the company and are based on a genuine desire to act responsibly. The respondent emphasizes that REMA strives to do more than what is expected of them, they seek to exceed social expectations.

The respondents from Norsk Kylling and Kolonihagen share REMA's motivation for sustainability and mention that sustainability collaborations can contribute to a competitive

advantage through improved reputation and economy. However, all three companies also believe that more and more sustainability measures are now regarded as hygiene factors. Thus, the respondents mention that a further motivation is that they have no choice. Kolonihagen emphasizes that companies will be lagging behind if they do not partake in the changes that are required, and that customers will stop buying their products if the motivation in the company is only greenwashing, as this will become apparent to customers at some point.

«*Eventually, people will not be impressed when companies cut plastic consumption but will rather take it for granted. Many of the measures that enable companies to differentiate today are likely to become hygiene factors in the future, and the list of hygiene factors continues to grow*» (REMA about sustainability measures, 2020).

In order to offer more sustainable products, REMA wanted to access the valuable expertise of Kolonihagen as they have been practicing ecology for a long time. Both parties consider this collaboration to be competency-oriented, as it is centered around knowledge sharing and product development. By contrast, the collaboration with Norsk Kylling started in many ways as a result of external pressure, as the company had to make a complete turnaround to ensure compliance with various environmental regulations. The partners consider the collaboration as a journey and believe the collaboration has developed to become clearly competency-oriented. REMA emphasizes that there are of course some legitimacy-oriented motivations behind both collaborations, especially with regard to customers. Nevertheless, the respondent states that this is not motivation in terms of gaining acceptance, but rather in fulfilling customer wishes and preferences, and thus operate profitably.

5.2.4 Seafood Innovation Cluster: Competency- & legitimacy-oriented motives

Seafood Innovation differs from the other main companies in that they are a cluster whose overall business objective is to increase sustainability in the aquaculture industry. Their role is to coordinate strategic alliances across members of the cluster. Sustainability work is the very foundation of Seafood Innovation Cluster.

The respondent from Seafood Innovation states that the company is concerned about partners having the right motives for collaboration and sustainability. The respondent fully believes that motive and purpose of collaboration is crucial to the success of the cluster and the

sustainability goals they seek to achieve. Seafood Innovation only enters into projects or collaborations that have a clear sustainability profile. Affiliates must address a real problem or offer a solution that changes how the industry works in its entirety. The respondent informs that Seafood Innovation has received inquiries from companies that want to make commercial contact with others in the cluster and use them as a marketing platform. These companies are not allowed to cross the threshold because it would destroy the credibility of the cluster.

The member companies state that membership is attractive because they gain access to knowledge and the ability to develop in the field of circular economy. Also, the member companies mention that such clusters may have the best chance of creating the greatest advances in several sustainability aspects, such as waste, fish feed, fish farming and plastics.

«In order to gain access to knowledge, we seek cluster collaboration and business collaboration to obtain references on who are the best at solving our challenges. Cluster collaboration facilitates communication with people who understand the industry» (Bremnes Seashore about collaborations, 2020)

The projects in Seafood Innovation reflect the needs of the members at all times. The respondent from Seafood Innovation is under the impression that the collaborations in the cluster are mainly legitimacy-oriented, and that the pressure comes from external factors such as authorities and society. However, the respondent mentions that another strong driving force is the industry's desire and need to develop technology and methods to ensure sustainability, legitimacy and further growth. These statements are confirmed by the member companies who state they have both competency- and legitimacy-oriented motives for their collaborations through the cluster. Mainly, competency-oriented motives are related to gaining access to competencies that the companies themselves do not possess. Legitimacy-oriented motives are related to pressure from authorities and society to make the aquaculture industry more sustainable. Thus, the companies wish to build legitimacy. Furthermore, it is also a motive to be ahead of government regulations.

The collaboration between Algeapro and BIR has quickly evolved to become highly competency-oriented, but originally had a legitimacy-oriented motive as BIR faced institutional pressure from the municipality to find a solution to handle food waste. Algaepro states that companies often have to feel a pressure for collaborations to initially form.

However, the respondent emphasizes that most partners then see a need for stronger competence and take a more active position on sustainability. In collaboration with Algaepro, BIR goes beyond regulations and tries to find new alternative solutions where the alternative cost is lower.

5.2.5 Motive as determinant for success

The main companies and their partners all believe that motivation for collaboration is crucial to the financial and environmental success, as it is easy to be exposed if sustainability is not rooted in the company core. The respondents' view is that a collaboration will not generate the same benefits if the motivation is purely commercial and the goal is simply to achieve the "green stamp". The respondents clarify that financial motivation must be present, but there must also be a deeper motivation in the form of a desire to contribute to real change. Also, the respondents find that prioritizing implementation of sustainability measures is often profitable. The respondents perceive that companies with a motive characterized by moral convictions and not just financial incentives, dare to invest more, take greater risks and are willing to make major changes to achieve their goals. If the motive is not justified beyond self-interests, it is easy to fall into the greenwashing trap.

All respondents agree that there must be financial motivation in addition to the desire to contribute to change in order to create environmental impact. Economic sustainability needs to be the fundament in all collaborations. The respondent from Algaepro distinguishes between what motives need to be present in order to achieve economic and environmental success:

«*For profitability, it may actually be enough to achieve the green stamp, rather than having a great real desire to contribute to something bigger. However, if the company only aims to be greener, it does not help the environment. The focus must be something that gives a decisive effect, a measurable goal*»
(Algaepro about motive as determinant for success, 2020).

Furthermore, the respondents believe the company’s motivation must be credible in order to make the employees believe in the intention and work to achieve it. The respondents state that the motive influences the parties' commitment, as well as interest in investing time and money in sustainable solutions and projects. They mention that companies that are required to implement sustainability measures, but lack the genuine interest, often seek the cheapest

solutions, which are often not the best ones. These actors usually seek to achieve compliance with requirements they are demanded to follow. As an example, the respondent from BKK mentions developers' need to adapt to TEK17. The respondent says that this can also lead to beneficial solutions, but that the enthusiasm will not be as high, and the progress will be incremental.

5.3 Success factors and barriers

The following subchapter will account for how the respondents perceive the success factors within the categories personal relations, competency building, governance and control, and internal and external conditions. The section concludes with a presentation of the barriers associated with sustainability collaboration.

5.3.1 Personal relations

All main companies consider mutual trust, both competence- and character-based, as a critical success factor, and it is apparent that trust exists in these collaborations. The respondents feel that sustainability problems are so complex that no single company can solve them, and therefore believe that all parties are motivated to participate in the collaborations, as joint efforts are needed to develop solutions. The respondents are of the opinion that such motivation has been important for the trust relationship. Trust is based on a sincere commitment from both parties, and willingness to solve the problems. According to the respondents, trust allows processes to move faster as the parties can trust each other to make decisions.

The respondent from Norsk Gjenvinning considers personal relations as crucial in order to make sustainability collaboration work. Similar statements are made by their partners who emphasize passion and drive as crucial for success, as sustainability collaborations require above average commitment to achieve results.

Heldal Eiendom emphasizes strong personal relationships; they perceive their collaborating partners as dedicated and believe that personal chemistry strengthens the collaboration. The respondents emphasize that the relationship must be trust-based from the start, due to the partners limited knowledge about each other's industries and operations.

«We do not have a sufficient knowledge base to evaluate sustainability partners on a par with traditional partners. Thus, the collaboration is more trust-based. Trust is always important in collaboration, but sustainability collaboration requires trust earlier in the process and a higher level of trust as both parties are entering unknown territory». (Heldal about trust, 2020)

The collaboration between Heldal Eiendom and Eaton is largely based on trust. The respondent in Eaton agrees that mutual trust and openness is critical for success and informs that there is no written agreement between the parties. An oral agreement exists that the companies should avail each other and conduct good business practice. By contrast, the respondent from Norsk Gjenvinning highlights the importance of establishing formal agreements with partners to provide security and reduce risk during projects, as well as clarifying intentions about time horizon and volumes.

According to the respondent, REMA is largely dependent on trust with their suppliers, as their value chain reaches across countries. This entails that REMA is not able to monitor every activity the suppliers carry out. Their partner, Kolonihagen, shares this vision and highlights the human aspect of collaboration as unique for sustainability collaborations. The respondent clarifies that sustainability collaboration does not necessarily require closer interaction than traditional collaboration, but rather that close communication is a natural result of sustainability collaboration because the partners share a deeper purpose. According to the respondent, this will forge a different relationship, and as a consequence, the collaboration will become closer. The strength of the relationship will make it easier to stay together when facing adversity.

Finally, the scientist from UiB emphasizes generosity and openness as important when collaborating for solving sustainability issues. The respondent recognizes Norwegians as generous and open to sharing information and knowledge between companies because it is part of the social capital. The Norwegian society is characterized by patriotism and solidarity, social contracts and reciprocity. Furthermore, the respondent says this is especially applicable to the western part of Norway.

5.3.2 Competence building

All respondents recognize knowledge sharing as crucial for building competence between collaborating partners and attain a successful collaboration. Several respondents perceive

that their sustainability partners are more willing to share knowledge than their traditional partners. They assume this is because sustainability acts as a door opener, because the relationship is more trust-based and because the parties, upon entering, have recognized that joint efforts are needed. Furthermore, it emerges from the interviews that the respondents believe that sustainability collaborations require more knowledge sharing than traditional collaborations. Their rationale is that, in sustainability collaborations, the parties often have less knowledge about each other, and innovation and exploration are required, whereas in traditional collaboration much knowledge already exists due to past experience.

Norgips reports that the company has strict rules for allowing other companies to gain access to information. This is reported as a challenge, as extensive knowledge sharing and transparency in production and technology is necessary in order to solve sustainability issues. Both BKK and OBOS believe it is necessary and valuable to work with competing companies on sustainability issues and emphasize the importance of sharing knowledge in such business relationships as well. Similar statements are made by the companies in the aquaculture industry. Several competing companies are members of NCE Seafood Innovation and collaborate on sustainability issues.

«*It's important not to be afraid of sharing knowledge. We collaborate with our competitors as well, which is a great pleasure and a source of inspiration for us*». (BKK about knowledge sharing, 2020)

5.3.3 Governance and control

Seafood Innovation and CO2BIO report that people involved in the collaboration need to have specific roles and be aware of their area of responsibility. The parties must know what they contribute to and what they bring into the collaboration. Seafood Innovation has experienced that a project failed precisely because of unclear roles.

«*A project manager failure occurred as the project manager responsibility was unclearly distributed between the project manager and the project administrator. As a result, participants were not summoned to meetings and tasks were not completed*». (Seafood Innovation about role clarification, 2020)

Several companies point to the role of top management as a success factor. The respondents from REMA and Norsk Gjenvinning emphasize the importance of having a mandate from the top of the organization in order to implement major sustainability projects. Norsk

Gjenvinning argues that employees need to have power to execute and that the top management is capable of forming a team that manages to ensure progress, which is especially important for innovation projects and sustainability issues. This is consistent with the opinion of their partners, Norgips, Norsk Kylling and Kolonihagen, who say that focus on sustainability must be rooted in top management to create change in the organization. According to Kolonihagen, it is absolutely necessary to have a passionate leader with a driving force to implement new solutions.

All respondents state that sustainability must be integrated into the overall strategy, and thus the sustainability partnerships have a strategic foundation by contributing to the core activities and to achieving sustainability goals. Furthermore, all companies emphasize the importance of clear, realistic goals. However, several respondents mention that the goal may be unclear when dealing with complex sustainability issues. Several of the collaborations illustrate this, for example that the goal of increasing animal welfare emerged through joint sustainability work between REMA and Norsk Kylling. Lastly, the respondents believe that it is important to clarify the expectations of all parties in advance and have a clear collaboration agreement. Heldal Eiendom and Eaton are the only ones to state that they use informal self-enforcing agreements. They feel that such safeguards strengthen the collaboration. The remaining companies use formal self-enforcing safeguards and third-party enforcement and consider this as reasonable.

5.3.4 Internal and external conditions

All companies believe that the collaborating partners must be credible to each other. According to the respondents, this credibility depends on the character-based trust, that is, the parties must believe each other to have integrity and credible motives. Furthermore, the companies are committed to establishing external legitimacy. The respondents believe that real measures must be communicated to stakeholders in an honest and credible way in order to succeed, and that they must prove sustainability through actions. The respondents believe that a lack of external legitimacy in connection with sustainability can lead to poor reputation, which can result in loss of customers.

All respondents report that commitment and motivation throughout the organization is important to develop and implement sustainability solutions. However, the respondents state

that the very focus on solving sustainability issues creates commitment and dedication in the organization, making employees motivated. Norsk Gjenvinning says it is easier to create commitment to projects that are centered around sustainability rather than traditional issues. This is because sustainability creates an engagement which makes it more fun to work together, despite the fact that they address major challenges. As a result, they experience more motivated employees, which is a great benefit in itself. BIR reports that their research on algae with Algaepro has created tremendous engagement among the BIR-employees. The respondent says that the employees spend their spare time researching and reading about environmental change. By contrast, Norgips states that sustainability creates commitment and motivation, but that it does not apply throughout the organization. Some employees are skeptical towards investing in sustainable solutions, while others believe the company cannot maintain competitiveness without these investments.

When recruiting, several of the companies experience that graduates want to work in sustainable companies. The respondents report that employees are a lot more concerned about sustainability today and want to work in an organization that cares about the society and the environment. This is reported by all the main companies as an important factor for attracting employees when recruiting. BIR and Norsk Kylling previously struggled to acquire talent, but today, after shifting towards a more sustainable strategy, they see a completely different level of expertise in their applicants. AF-gruppen has experienced a significant increase in applicants in recent years, especially among engineers. Jernia says their employees are proud to be part of a company who prioritizes sustainability and states that they are very committed to their daily work. The firm receives emails and messages from employees through Motimate with suggestions for improvements and ideas on environmental measures.

Finally, according to the respondents, sustainability collaborations are typically dynamic and evolve over time. This requires the collaborating partners to keep up with development, manage change and adapt goals and strategy.

5.3.5 Barriers

The companies describe current regulations as old-fashioned and see these as hindrances for innovation and more rapid sustainable development. For instance, Heldal Eiendom is held

back by laws and regulations in the construction industry. As an example, the respondents point out that it is difficult to practice reuse in buildings. This is because laws and regulations say that only new components are to be used in buildings. It is possible to use recycled materials, but it is very demanding as it requires retrieval of dispositions and several application processes. They claim there is a need for change in Plan- og Bygningsloven in order to make it easy to use recycled materials. The respondents highlight that this challenge is related to the materials that are permanently inserted into the building. Developers are free to use whatever loose components they want, such as the battery solution they have developed with Eaton. Thus, the companies call for updated regulations that pave the way for more sustainable development.

Furthermore, several companies believe that the authorities can be tougher in their legislation and want the government to put more pressure on business. The respondents believe that regulations can create opportunities for innovation as new requirements help push industries forward, which can have a motivational effect on companies.

Some respondents consider the financial aspect as a challenge to the collaboration, as sustainable solutions often have an added cost. The respondents from Heldal Eiendom state that their buildings are in many ways ahead of their time, and that the sustainable solutions are often expensive. The company must cover these costs as the customers do not currently cover them. In the longer term, Heldal Eiendom sees that direct financial gains can be generated as more consumers become aware of the benefits of sustainable solutions and become more willing to pay. The remaining companies share this view and believe sustainability efforts are profitable in a long-term perspective, although not currently generating a large profit.

Several respondents state that it can be challenging to assess potential sustainability partners, and often more challenging than assessing traditional ones. The reason for this is that the sustainability partners come from entirely different industries and that the companies therefore do not have an adequate knowledge base to assess these partners on par with the traditional partners with which they usually collaborate. This finding is more applicable to the formation phase of a sustainability collaboration, but although the focus of this thesis is centered on how to manage an established relationship, this is still a noteworthy finding.

Finally, several respondents mention that impatience due to the long-term perspective can be challenging. People are eager to see return on investment, and the companies are faced with the challenge of creating an organizational recognition that sustainability work takes time. It is important to communicate the long-term perspective and clarify expectations in advance.

5.4 Higher sustainability impact

This subchapter will account for how the companies facilitate success. The companies in the current study point to various changes in their own company as a result of the collaborations. Several of the companies have experienced rapid progress in the projects and praise each other's decision-making processes and skills. The concrete sustainability achievements resulting from the different collaborations will be presented and further discussed in subchapter 6.4. All companies work hard to facilitate the success factors to overcome the barriers. All the main companies state that they are actively engaged and have regular meetings with their collaborative partners, preferably physical meetings. Furthermore, the companies form teams of people with strong people skills and different professional competencies. This facilitates both trust building and knowledge sharing. In meetings, the respondents clarify that the issues they are facing are unknown, that there is great room for input and that all suggestions are welcomed. This contributes to the feeling of security, which in turn increases knowledge sharing and creativity, and thus the participants perform better.

«*The trust required in this type of business relationship is better built through physical meetings, as body language, mimicry, radiance and the like affect trust building and relationships*».
(Heldal Eiendom about building trust, 2020).

The respondents believe the combination of formal and informal meetings facilitate trust building. Jernia highlights that they have a stronger social bond with Norsk Gjenvinning than with their traditional business partners, as they spend more time with Norsk Gjenvinning, and arrange both dinners and meetings with them. According to the respondent, there is more passion in sustainability collaborations, and it requires more social interaction compared to traditional collaborations.

The main companies emphasize that they strive to be open with their partners. The respondent from Norsk Gjenvinning says that they are open in their communication and open to mistakes and feedback. Heldal Eiendom is always honest about their dependence on the other party and their knowledge, and at the same time elaborates on how they plan to deliver on their part. To build trust, both Norsk Gjenvinning and Heldal Eiendom refer to previous achievements. Both companies emphasize that it is easier to build trust when one can point to concrete evidence that the company is able to execute. Furthermore, the respondent from Norsk Gjenvinning states that they facilitate credibility with their partners by assessing and engaging in their entire value chain.

Seafood Innovation informs that a large part of the job is to keep the member companies interested and to give them a feeling of added value through their membership. Seafood Innovation ensures this by engaging and involving the companies in the projects and by giving them close follow-up through meetings and various forums. In addition, Seafood Innovation fronts its partners via Twitter, and clearly shows that they work for them. To facilitate knowledge sharing and competence building, Seafood Innovation coordinates activities and has executive forums, partner meetings and frequent lectures.

To ensure success, the main companies outline a path to reach the goals. Seafood Innovation in particular focuses on governance and control. On projects, the company always has management groups, working groups and resource groups. The respondent states they must find a broad mandate to accommodate everyone, but with clear boundaries so that the roles are clear. Norsk Gjenvinning and REMA say that they facilitate internal credibility and external legitimacy by ensuring that sustainability is firmly rooted in top management. The influence of top management is also used to create employee motivation, but the companies also have forums where the employees can contribute input and ideas. The respondent from Seafood Innovation perceives the company as dynamic, claiming that its small size and decentralized structure makes them more agile which is an advantage for the ability to adapt. To ensure flexibility and adaptability, they constantly review their strategy.

To cope with the challenge of assessing potential sustainability partners, the companies make evaluations based on multiple factors such as quality, reputation, compatibility, long-term perspective, accounting, knowledge base, motivation, and whether potential partners are self-driving.

All the main companies state that they practice both a reactive and a proactive environmental strategy, and that this varies with the challenges they face. The companies believe that both strategies can create environmental and financial success. Norsk Gjenvinning and REMA emphasize that they are leaning towards a proactive strategy in most partnerships. The respondent from REMA points out that the company is proactive in areas such as animal welfare, packaging and palm oil, but says that they are more reactive in areas that are further away from the company's core activities. The respondent claims it is easier to be proactive in areas that are closely linked to the core business.

«*In my view, a mature company or industry will need to have both strategies active in its further development where certain aspects of environmental impact will be legacy from past technology and legal rules. New products or methods need to focus differently and be proactive*».
(NCE Seafood Innovation about environmental strategy, 2020)

The collaborative partners make similar statements about how they facilitate success. Specifically, they mention physical meetings, transparency, active engagement through forums, top management influence, certification requirements, establishing mandate, establishing long-term perspective, common language, close follow-up through various resources, expectations clarification and formation of a concrete implementation plan. By facilitating success in the aforementioned ways, the collaborations have been able to start development of new sustainable solutions and most have already achieved implementation of sustainability measures. Thus, increased sustainability has been achieved, but profitability is not so great for everyone yet. However, all companies are under the impression that sustainability and profitability are compatible and expect the measures to generate direct profitability in the future. To date, the measures are, for most, indirectly profitable through marketing, branding and reputation.

6. Analysis

This chapter will link presented theory to our findings from the various collaborations. The analysis will, like the main findings, be presented according to the conceptual model, and the four research objectives of the thesis will be addressed through the following subchapters of the analysis. Each sub-chapter will provide a sub-conclusion which forms the foundation for the conclusion of the thesis.

6.1 Characteristics of sustainability collaborations

In this subchapter we will discuss the first research objective: «*Identify the characteristics of sustainability collaboration»*. Our assumptions about what characterizes sustainability collaborations will be discussed in light of our findings and relevant literature.

6.1.1 Address a real sustainability problem and share common vision

First, we assumed that sustainability collaborations are characterized by addressing real sustainability problems. This assumption is consistent with our findings. All respondents agree that the problem must be real, business relevant to all parties, and preferably pressing rather than simplistic. Furthermore, the partners must have a genuine desire to solve the problem and to create a positive outcome. All respondents agree that collaborations cannot be characterized as sustainable if the parties only are in pursuit of the green stamp. This is not enough if they are to contribute, make an actual societal or environmental impact and reap financial benefits through such impacts. This is in line with what is true for implementation of sustainability measures in companies, according to de Jong et al. (2019) and Chen & Chang (2013).

6.1.2 Sustainability integrated in overall strategy

Following, we assumed that sustainability must be an integrated part of the overall strategy of the companies involved. We found that all companies have integrated sustainability into their strategy and consider this as a prerequisite in order to characterize a collaboration as sustainable. By focusing on sustainability in the overall strategy, the collaboration has a strategic foundation and real sustainability impacts can be achieved. This supports Haugland's (1996) claim, namely that the potential for success is greatest in strategic areas.

Furthermore, the respondents inform that they evaluate each other on whether sustainability is represented in the strategy, and several of the companies report that all projects and collaborations they join must include sustainability elements. This way, they manage to identify and solve sustainability issues that are relevant for their core activities. This supports the arguments of Porter & Kramer (2011) and Jørgensen & Pedersen (2018) who state that when sustainability is part of the business strategy, companies are better able to prioritize the most pressing societal and environmental issues, and to treat them as part of their value creation, rather than peripheral issues.

6.1.3 Long-term perspective

The assumption that sustainability collaborations are characterized by having a long-term perspective is confirmed in our findings. The respondents claim this is because sustainable solutions require significant investments and are often time consuming, supporting the arguments of Jørgensen & Pedersen (2018). The findings illustrate that it is necessary for the parties to have a longer time horizon and be patient before they expect to see a return on investment. This is because the investments are more complex and time consuming, as the challenges to be solved are very comprehensive. This is an important attribute of sustainability collaboration, and the findings illustrate the importance of the parties' understanding of this. Sustainability investments are more often than not expensive and demand much time, which entails that economic gains are more likely to happen in a long-term perspective, rather than short-term.

6.1.4 Cross-sector collaboration

Finally, we assumed that cross-sector collaboration characterizes sustainability collaborations as this is necessary to address sustainability issues. As stated in the findings, the companies realize they cannot solve all sustainability challenges themselves and are seeking outside their industry to establish collaborations. They seek affiliation with other companies, researchers and environmental organizations to gain important knowledge to be better equipped for sustainable development. The findings reveal that for traditional business collaboration, the path is often more familiar and shaped, and they do not always have the same urgent need to acquire knowledge. This supports the argument of Jørgensen & Pedersen (2018), saying that when sustainability is part of the equation it is perhaps even more important to form partnerships across industries as the complexity of the problems

requires complex expertise and technology. In addition, the scientist from UiB says it may be easier to share information if the companies cover completely different roles and market areas. If the companies are working towards exactly the same customer segment, there is a greater risk of rivalry, making it more difficult to share knowledge. Thus, getting to know completely different sectors can contribute to creative input. The findings also indicate that sustainability issues forge new industry connections which can greatly contribute to creating a difference and an impact that would not otherwise exist. Industries that do not normally collaborate find that they have complementary resources that can be utilized to achieve sustainability goals. Even if the outcome of the collaboration does not lead to a comprehensive social or environmental benefit, it does still contribute to knowledge and information sharing and to creating awareness about sustainability issues which may not occur through traditional collaborations. This is a great gain in itself. Furthermore, the respondents believe that even more industries need to collaborate and that companies must collaborate with more non-traditional partners to create the greatest possible sustainable development.

6.1.5 Sub-conclusion characteristics

This sub-conclusion will address research objective 1: «*Identify the characteristics of sustainability collaboration»*. Our assumptions about sustainability collaboration are to a large extent consistent with our findings. In order to characterize a partnership as a sustainability collaboration, the partners must (1) address real, pressing sustainability problems that are business related, (2) have sustainability integrated in overall strategy, (3) have a long-term perspective, (4) collaborate across sectors. The findings also indicate that sustainability collaborations will increasingly require new industry connections and that unconventional partners are increasingly important in order to achieve sustainability impact.

6.2 Motives to enter into sustainability collaborations

The purpose of this subchapter is to address the second research objective: «*Identify the motives for companies to enter into sustainability collaborations, and whether motive acts as a determinant for success*». In the following, we will therefore consider which motives are most important and the significance of their presence, as well as whether motives are important for the implementation of sustainability measures and success.

6.2.1 Discussion of motives

The table and chart below show the respondents' overall assessment of the various motivational factors for entering sustainability collaborations, rated on a scale from lowest motivation (1) to highest motivation (7).

Competency-oriented motives	1-7	Legitimacy-oriented motives	1-7
Exploit business opportunities	6,29	Get ahead of competition	5,82
Access to new technologies/competencies	5,88	Adapt to competition	5,65
Attract/retain employees	5,25	Improve reputation/Build legitimacy	5,47
Improve customer offering	5,24	Moral convictions	5,12
Access to new markets	5,20	Reduce risk	4,94
Avoid resource scarcity	5,18	Expectation of public regulation	4,82
Reduce costs	4,06	External pressure	4,81
Access to international opportunities	3,82	Adapt to public regulation	4,29

Table 6: Motives to enter into collaborations for sustainability

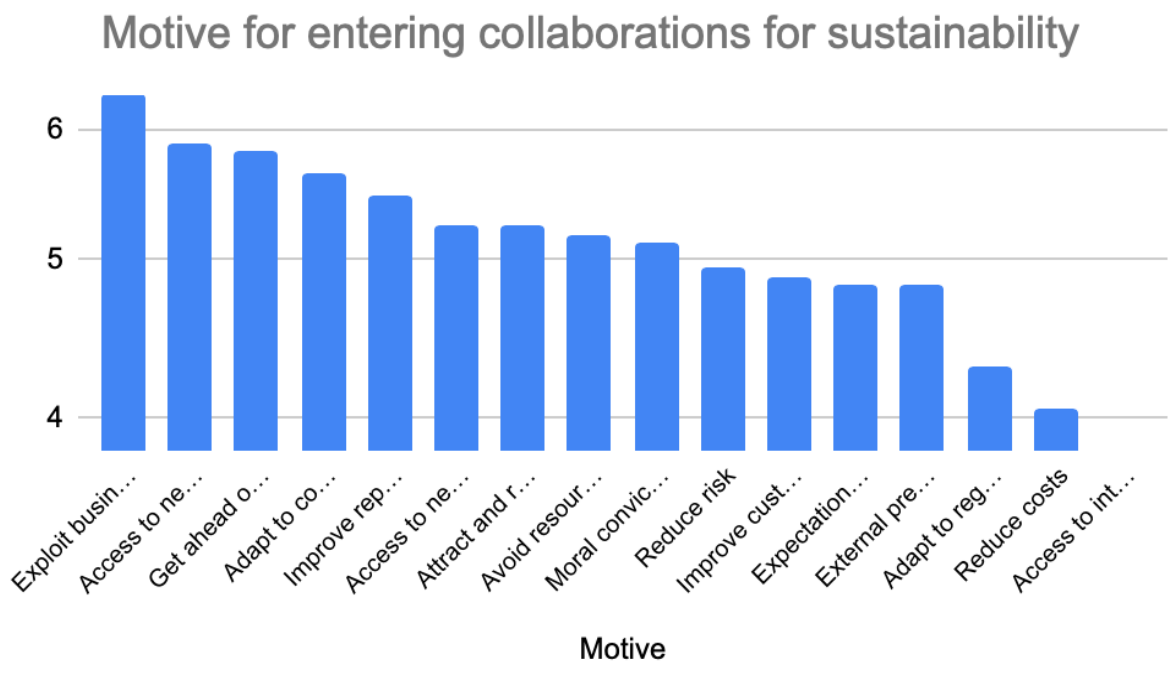

Figure 8: Motives to enter into collaborations for sustainability

It is evident in the models that the respondents consider that the four most motivating factors are the chance to exploit business opportunities, gain access to new technology and

competency, get ahead of competitors and adapt to the competition. The first two are competency-oriented and are considered as the most motivating factors. The latter two motives are legitimacy-oriented and relate to the competitive situation.

Overall, many of the factors are considered highly motivating, as an average score above 5.00 must be considered as high. The motives that score higher than 5.00 illustrate a certain balance between competency- and legitimacy-oriented motives, and it is clear that the companies have both self-interested, social and moral motives for engaging in sustainability collaboration. This is in line with what Jørgensen & Pedersen (2015) finds, namely that companies have both self-interested and moral justifications for engaging in sustainability work. Although there is a certain balance between competency- and legitimacy-oriented motives, the former dominates among the respondents.

The motives that are rated below 5.00 on the scale can in this case be considered less important. Reduction in costs and risk is lower on the scale, providing support for Haugland's (1996) results regarding motives for entering into traditional business collaborations. Haugland's (1996) results illustrate that motives are mainly centered around exploiting opportunities to assert oneself in the market and to access technology and competence, rather than reducing risk and costs.

Furthermore, external pressure is considered relatively low as a motivational factor. This is in line with the findings of Jørgensen & Pedersen (2015) regarding motives for investing in sustainability initiatives. Nevertheless, several of the companies in the current study believe that external pressure is positive in relation to sustainability collaboration, and their reasoning is that companies are more likely to enter into such collaborations if they are exposed to some kind of pressure. This indicates that the companies themselves are not necessarily very motivated by external pressure, but that they experience that institutional pressure provides incentives to initiate sustainability collaborations, which can further develop to become more competency-oriented. This was the case with Algaepro and BIR, as well as REMA and Norsk Kylling.

Furthermore, government regulations are also deemed as a weaker motive. However, it is interesting that the companies have a proactive attitude towards regulations, as expectations of future regulations are more motivating than adapting to existing regulations. Several of

the companies claim that regulations are currently lagging behind in terms of opportunities for sustainable development, and state that they themselves go beyond the legislation. Thus, it is not perceived as difficult to be in line with existing legislation, but the results indicate that the respondents still believe that the legislation will impose more restrictions in the future to ensure sustainable development. Finally, very few companies have an underlying motive for using sustainability collaboration as part of a process towards international markets. This differs from Haugland's (1996) results with regard to traditional business collaborations, where almost 30% stated this as an important motive. This indicates that sustainability collaboration has a more national foundation, and that sustainability is not necessarily a focus that provides an advantage when entering international markets.

In the following, we will focus on the top three motives in each category according to the table, which are also the six motives that are considered the most central overall.

6.2.2 Competency-oriented motives

The top three motives within the competency-orientation are exploiting business opportunities, gaining access to technology and competence, and attracting and retaining employees.

The results of Jørgensen and Pedersen (2015) show that moral convictions, building legitimacy, becoming more attractive to customers and improving reputation are the main motives for investing in sustainability initiatives. Our results show that these motives are also relevant when entering into sustainability collaborations, but that exploiting business opportunities and gaining access to new technology and competence are more motivating. This indicates that individual sustainability initiatives are more externally driven and motivated by identity and reputation, while sustainability collaboration and related initiatives are more internally driven and motivated by exploiting opportunities and gaining competence by combining complementary resources and thus asserting themselves in competition.

Also, the respondents are motivated by the effect sustainability collaborations and associated initiatives have on employees, both existing and potential. All the main companies, as well as several of their collaborative partners, state that initiatives and projects associated with

sustainability create more engagement and enthusiasm amongst employees. This is because employees have the opportunity to provide inputs and ideas. This will result in an internal cohesion within the company to work towards a common goal. This indicates that a focus on sustainability has a self-reinforcing effect in that the focus itself creates motivation among employees and that motivated employees work purposefully towards sustainability. Furthermore, the respondents report that employees are much more concerned about sustainability today compared to a few years ago. Thus, all the main companies believe that their sustainability collaborations are important for attracting employees when recruiting. This is in line with previous research which shows that talented workers evaluate the societal and environmental performance of potential employers and are attracted to sustainable organizations (Willnes & Jones, 2013; Davis-Peccound et al., 2013).

6.2.3 Legitimacy-oriented motives

The top three motives within the legitimacy-orientation are getting ahead of competition, adapting to competition, and improving reputation and building legitimacy.

The competitive situation is judged to be the most important legitimacy-oriented motive. Several respondents claim that, in Norway, sustainability initiatives will become hygiene factors in the future, and that several initiatives already are considered hygiene factors, such as safe work environments and prohibiting child labor. However, the results show that competitiveness is considered as one of the most motivating factors overall which indicates that sustainability is still considered a competitive element that can be differentiated on.

Previous research has pointed out that sustainability can contribute to first-mover advantages (Lüdeke-Freund, 2009; Jørgensen & Pedersen, 2018). The respondents from Heldal Eiendom mention that entering into sustainability collaborations at an early stage is an advantage because there can potentially be a shortage of solid and suitable sustainability partners as more companies enter into such collaborations. By securing solid partners and relationships now, it is highly likely that these partners will serve Heldal Eiendom before serving anyone else. This is in line Dyer & Singh (1998) who point out the importance of being an early mover in order to identify partners that possess compatible resources before competing firms partner with them.

The respondents are also highly motivated to enter into sustainability collaborations to improve their reputation and build legitimacy. These motives can be considered more self-interested (Jørgensen & Pedersen, 2015). Some might argue that the desire to exploit business opportunities and to access technology and competence is also self-interested, but in line with Lin & Darnall's (2010) definition of competency-oriented alliances, these are motives that enable businesses to innovate and exceed society's expectations. Based on this, these competency-oriented motives are not considered directly self-interested. The findings illustrate that the companies are trying to reconcile self-interested and other-interested considerations when entering into sustainability collaborations.

6.2.4 Motive as determinant for success

The findings of Becker-Olsen et al. (2006) and Sen and Bhattacharya (2001) illustrate that the motive behind sustainability efforts are of significance to the success of these efforts, particularly economic success. Based on these findings, we assumed that the motive behind sustainability collaborations are of significance to the success of the collaboration and its efforts. Our findings confirm this assumption.

It is evident that collaborations at an overall level are highly motivated by the possible competitive advantage that that resides in the heterogeneous resources that can be combined based on the findings in the current study, as well as in previous research (Johnson et al., 2008; Varadarajan & Cunningham, 1995; Haugland, 1996; Dyer & Singh, 1998). However, competency-oriented motives may be particularly important when entering into sustainability collaborations, as previous research shows that motives behind social and environmental initiatives are important to the company's legitimacy; if self-interested and reactive sustainability initiatives are implemented, this can undermine the legitimacy of the alliance (Becker-Olsen et al., 2006; Berlie, 2010; Hoffman et al., 2015). Furthermore, several of the respondents claim competency-oriented motives provoke more powerful action and thus a greater sustainability impact, supporting Lin & Darnall (2010) who claim competency-oriented alliances are expected to have a more meaningful environmental impact. However, legitimacy-oriented motives pressure companies that would not otherwise have formed alliances to do so. This can create incremental improvements to society and the environment, and therefore legitimacy-oriented alliances are also valuable (Lin & Darnall, 2010). The findings provide empirical evidence to suggest that companies can benefit from

both legitimacy- and competency-oriented motives, but that the latter is likely to create greater environmental and financial success.

6.2.5 Sub-conclusion motives

The purpose of this section was to address research objective 2: «*Identify the motives for companies to enter into sustainability collaborations, and whether motive acts as a determinant for success*». The results show that exploiting business opportunities, gaining access to technology and competency, and the competitive situation are the companies' main motives for entering into sustainability collaborations. Other central motives are attracting and retaining employees, improving reputation and building legitimacy. Both competency- and legitimacy-oriented motives are considered as central, but the results show that competency-oriented motives dominate. Thus, the collaborations can be characterized as competency-oriented (Lin & Darnall, 2010). The companies believe the motive behind sustainability collaboration is determinant for success. It is apparent that the companies are not looking to greenwash, but actually want to make a difference that benefits both the collaborating partners, the environment and the society. In conclusion, the motive must be credible towards partners and stakeholders and should be mainly competency-oriented in order to achieve the highest financial and sustainable impact, which confirms the findings of previous research (Becker-Olsen et al., 2006; Berlie, 2010; Lin & Darnall, 2010).

6.3 Success factors and barriers

In this subchapter, we will address the following research objective: «*Identify the critical success factors and barriers for sustainability collaborations».* We will discuss each of the main categories of success factors in light of existing theory. Furthermore, the subchapter will provide a discussion of the barriers associated with sustainability collaborations.

6.3.1 Personal relations

According to theory, trust is considered as one of the most important factors for collaboration success (Johnson et al., 2008; Kale et al., 2001; Berlie, 2010; Das & Teng, 2001; Whipple & Frankel, 2000; Hoffman & Schlosser, 2001; Sherer, 2003). Openness, clear communication and transparency form the basis for building trust between collaborating partners (Berlie, 2010). The findings show that trust is fundamental in

sustainability collaborations, and that trust is important earlier in the relationship. Furthermore, the interviews reveal that the companies want to work together to increase their understanding of sustainable business operations and emphasize that they are dependent on each other to solve sustainability issues. In this light, there may be a theoretical basis to claim that trust between the actors already exists when entering into the collaboration, since the companies are mutually dependent on each other. Early trust-based relationships are assumed to be unique for sustainability collaboration, because the parties feel a commitment to one another, already when entering into the collaboration. Trust is the basis of the relationship between the companies, and the findings show that trust is based on a sincere commitment and engagement, and a willingness to act on these issues. Nevertheless, it is important to follow up and maintain the relationship, as highlighted by Berlie (2010).

Furthermore, several respondents explicitly state that personal characteristics are of great importance to the project and its success. Although the respondents believe it is important to have confidence in the competence of the other party, they also consider character-based trust, i.e. the motive and integrity of the other party, as decisive for success. This is in line with Johnson et al. (2008), Whipple & Frankel (2000) and Das & Teng (2001) who all claim that trust is twofold and that both types of trust affect the alliance relationship and success.

Haugland (1996) and Dyer & Singh (1998) point out that companies must be willing to make relation-specific investments, which includes investing competence, as well as time and money. Furthermore, all parties must contribute equally. Several respondents mention that relation-specific investments are necessary, and that such investments help to build confidence. For example, Norsk Gjenvinning is often required to make relation-specific investments in order to achieve sustainability goals with their partners. This is because Norsk Gjenvinning is responsible for establishing the facilities where recycling and associated activities are to be performed for different partners. At a later stage, the partners pay for Norsk Gjenvinning's services, and a balance of investment is established. Given that Norsk Gjenvinning more often than not makes the initial investment, it is reasonable that the respondent deems formal agreements that provide security and reduce risk as important. The respondents state the relation-specific investments contribute to creating trust and commitment. This supports the arguments presented by Dyer & Singh (1998), namely that such investments create stronger ties between the partners and facilitate a long-term relationship.

The findings show that also the aquaculture companies make relation-specific investments with their partners. BIR has invested in a facility to manage food waste that Algaepro can utilize and benefit from, and Bremnes Seashore adapt their investments to what their partners need. Relation-specific investments will apply to all collaborations, but as the findings indicate, sustainability collaborations require more time and resources from both parties.

Finally, good personal relations and mutual respect are considered as success factors for collaborations between NGO's and businesses (Berlie, 2010). Indeed, this applies to all types of collaborations, but it is evident in the findings that mere focus on sustainability can strengthen the relationship by creating an even stronger commitment. This is in line with Berlie (2010) who says that intangible factors help the parties to understand and respect each other's views.

6.3.2 Competence-building

Porter and Kramer (2011) emphasize that companies will benefit from sharing knowledge, skills and resources with others. To succeed, partners must frequently exchange knowledge and information (Vurro et al. 2009; Haugland, 1996; Berlie, 2010; Johnson et al., 2008; Dyer & Singh, 1998).

Knowledge sharing is widely considered as a success factor for collaborations (Haugland, 1996; Russo & Cesarani, 2017). Berlie (2019) does not explicitly state knowledge sharing in her overview of success factors related to sustainability collaborations, but it is reasonable to assume that this factor is implicitly accounted for through openness, transparency, clear communication and regular assessments. The findings show that knowledge sharing is highly important in sustainability collaborations, and several companies claim that more knowledge sharing is required and that parties are more open and willing to share in such collaborations. In traditional collaboration, the parties have a lot of knowledge from previous experiences, and they have a form of template for how to proceed. Collaborations for sustainability entail working with non-traditional partners and managing complex issues. The companies state that they become interdependent to a larger extent and that a higher level of knowledge exchange is required. This seems to be common to all collaborations and industries in the current study. We choose to consider this finding in light of Jørgensen & Pedersen's (2018) argument saying that sustainability collaboration requires cross-sector

collaboration, which can be interpreted as the need for a broader knowledge base to solve sustainability issues and a need for more extensive knowledge sharing.

6.3.3 Governance and control

In sustainability collaborations, the parties unite around comprehensive problems. These problems must be narrowed down and concretized into something that the partners can solve. The companies have extensive long-term sustainability goals, but all respondents say that achievement of these goals require several smaller goals along the way and a long-term mindset. The respondents state that clear goals are definitely a success factor, in line with Haugland (1996), Berlie (2010), and Whipple & Frankel (2000). However, several of the respondents say that the path to reaching the goal can be unclear when dealing with complex and unknown sustainability issues. The clear goal provides direction and enables the companies to assess the relevance of any changes that may occur, which facilitates flexibility (Berlie, 2010). Thus, the goal is important to define in order to act flexible and adaptable, which allows for the path to be concretized along the way and creates dynamism and evolution.

Managerial support is identified as a success factor by several researchers (e.g. Berlie, 2010; Whipple & Frankel, 2000; Hoffman & Schlosser, 2001; Sherer, 2003). This is supported by our findings as the respondents' report that the top management plays an important role in order to make decisions, create commitment and implement sustainability measures. The findings indicate that it is not enough for top management to adopt sustainability initiatives. They must visibly promote and live the message through their leadership role. According to the respondents, support for sustainability will be influenced by the culture of the organization, and in this case the role of the leader is central. This supports the arguments of Berlie (2010) that management has the ability to change the culture and create a commitment to sustainability.

The findings show that the aquaculture companies in particular consider clear roles and responsibilities as important due to past failure resulting from unclear distribution of responsibilities. This will largely be the case for all types of collaboration, but the respondents claim that it is particularly important for sustainability collaborations as the path

to the goal is often unclear and therefore decisions must be decentralized in order to ensure the necessary level of flexibility, supporting Berlie (2010).

Finally, the findings show successful use of both self-enforcing safeguards and third-party agreements, which means that the former is not necessarily more effective. Safeguards will be further discussed in chapter 6.4 in relation to how the companies facilitate success.

6.3.4 Internal and external conditions

Shareholder theory states that the only social responsibility businesses have is to increase its profits, and that corporations that engage in social responsibility will limit their profit and increase their costs (Freeman, 2010). The findings indicate that whether the collaboration is sustainability related or not, profitability is regardless an important prerequisite for doing business. All companies emphasize the importance of economic sustainability, and they do not enter into alliances that cannot contribute financially. However, they are of the opinion that social responsibility will not limit their profit and increase their costs. The solutions are expensive, but the respondents see the indirect effect on profit through increased reputation and legitimacy and believe that the solutions will have a direct effect on the bottom line in a long-term perspective. Their belief is that sustainability and profitability can be aligned. The companies have integrated sustainability into their strategy and see a value in solving social and environmental challenges. Thus, Freeman's stakeholder theory is more in line with what the companies report. They try to find overlapping interests, in order to create value for all parties involved, including external stakeholders. This helps increase their external legitimacy.

Similar to shareholder theory, CSR considers the relationship between profitability and responsibility as a trade-off, as sustainability efforts are viewed as costs and not as activities that can enhance profitability (Porter & Kramer, 2011). By contrast, CSV strives to create economic value by creating social value and is integral to profit maximization (Porter & Kramer, 2011). Thus, the concept of CSV is more appropriate for our findings, as the companies report that they map their stakeholders' interests and goals so that they coincide. Furthermore, the shared value view will require new skills and knowledge, and the ability to collaborate across profit and non-profit boundaries. The findings show that the companies seek knowledge outside their own environment, from other companies, competitors, clusters,

researchers and environmental organizations. The findings support the arguments of Porter & Kramer (2011), as they show that sustainability and profitability can be unified, and that companies should strive for CSV rather than CSR to make a meaningful impact.

Finally, the findings show that sustainability work creates engagement among employees in the organization which leads to increased motivation. Jernia even claims that the passion and drive of the partnership is unique to sustainability collaborations. Engaged employees who are dedicated and involved in projects with other actors show positive attitudes towards sustainability collaborations.

6.3.5 Barriers

As previously established, there are few studies on success factors and barriers for sustainability collaborations. However, the findings provide support for Haugland's (1996) key pitfalls related to collaboration: complexity of the collaboration, lack of mutual adaptability, imbalance in the collaboration, risk that parties are exploited and lack of dynamics and development.

The complexity of the collaboration can be challenging when the parties have little experience with each other (Haugland, 1996). The respondents state that they often have little knowledge of the companies with which they form sustainability collaborations and that it is challenging to assess potential partners. They describe it as more difficult to evaluate this type of partner than traditional partners. Thus, there may be a theoretical basis to claim that a high degree of complexity is a greater barrier to sustainability collaborations, as companies have more knowledge about and experience with the traditional partners they usually work with. Furthermore, this lack of knowledge about each other confirms the need for early establishment of trust. Adaptability is considered highly important by the respondents. Their reasoning is that sustainability collaborations are centered around complex problems, where the solution is not necessarily defined, and technology is continuously developing. Imbalance is not explicitly identified as a barrier by the respondents, but they emphasize reciprocity and a balance in contributions to avoid exploitation, which essentially can be interpreted in the way that imbalance creates challenges. Finally, all parties must be willing to make an effort to secure development. As previously stated, we find theoretical basis to claim that the parties in a sustainability

collaboration feel a commitment already when entering into the collaboration. As a result, this barrier may be less applicable to sustainability collaborations.

Overall, the respondents report that challenges and failures are a result of not applying the success factors (Berlie, 2010). In addition to finding support for Haugland's (1996) barriers, the interviews revealed some additional barriers: laws and regulations, financial aspects and impatience.

Legislation is said to be outdated and is perceived as inhibiting sustainable development. Even though several of the industries face strict environmental regulations, they still call for both updated and new regulations, which confirms that they are currently ahead. It appears as though the companies consider regulations as opportunities rather than barriers. For instance, Norsk Gjenvinning is positive to EUs new regulations called The European Green Deal which sets requirements for sorting and thus facilitates a circular economy. Such demands require changes to be made, contribute to new opportunities and solutions, and lay a foundation for existing corporations. As such, Norsk Gjenvinning sees a potential economic outcome for their operations. New regulations contribute to innovation and the formation of new collaborations which previously would have been more challenging to form due to the lack of incentives and rules.

The time horizon also represents an important barrier as people quickly become eager to see results. The financial aspect is connected to this. The interviewees themselves are aware of how time-consuming it is to develop sustainable solutions and that profitability must be expected in the long and not short term. Their challenge is to gain recognition for this in the rest of the organization. It is pervasive in the findings that profitability is a prerequisite in order to form the collaboration. The findings show that the parties must identify an opportunity to create profit and say that sustainability measures will not be developed and implemented if the measures aren't financially sound. Thus, economic sustainability is vital to achieve environmental and social impact, and a prerequisite for sustainability collaborations to form. However, as the collaborating partners perform sustainability work, we can claim that the companies see a financial gain by entering into sustainability collaborations.

6.3.6 Sub-conclusion success factors

This sub-conclusion aims to address research objective 3: «*Identify the critical success factors and barriers for sustainability collaborations».* The findings confirm that of previous research by confirming the need to establish personal relations, competence building, governance and control, and internal and external conditions. Trust is highlighted as the most important success factor, and the findings indicate that trust is established upon formation of the partnership due to the partners motivation, commitment and mutual dependency. As such, the early trust-based relationship is identified as unique to sustainability collaborations. The success factors are central in sustainability collaborations to secure that all parties are committed to remain in the partnership and realize the goals. However, the success factors must be managed over time to enable collaboration success. How the companies facilitate success will be discussed in the next subchapter. Finally, the companies confirm the barriers identified by previous research, but they highlight additional barriers associated with sustainability collaborations related to time horizon, profitability, ability to evaluate potential partners and old-fashioned laws and regulations.

6.4 Higher sustainability impact

The purpose of this subchapter is to address the final research objective: «*Identify how companies can facilitate success factors and manage barriers to increase the company's sustainability impact through sustainability collaborations*». First, this subchapter will present which measures are under development and which have been implemented through the various collaborations. Subsequently, an analysis will be conducted of how the companies are facilitating the success factors to be able to implement these sustainability measures.

6.4.1 Sustainability measures within collaborations

6.4.1.1 Norsk Gjenvinning: Closed loops and circularity

The sustainability efforts of Norsk Gjenvinning and their partners mainly contribute to the circular economy and closed loops. Norsk Gjenvinning is an active driver for manufacturers to use recycled materials, to use long-life products that are repairable and reusable, and at the end of their cycles, are recyclable. It is fair to say that Norsk Gjenvinning, through their collaborations, practice a proactive product stewardship strategy by assessing the entire life

cycle of a product from raw materials all the way to disposal (Lin & Darnall, 2010). According to Lin & Darnall (2010), this is one of the strategies which create the most meaningful environmental impact. Jernia collaborates with Norsk Gjenvinning on a swap deal for metal, porcelain and ceramic pans. Jernia collects used products from customers and delivers the material to Norsk Gjenvinning for recycling. Through this collaboration, the product lifecycle is extended, and products are not disposed of. The collaboration with Norgips entails that Norsk Gjenvinning receives gypsum from construction sites, breaks it down and makes gypsum powder. This gypsum powder is sold to Norgips, and Norgips states that this powder has the same price and quality as alternative products, in addition to being produced in a sustainable way. AF-gruppen collaborates with Norsk Gjenvinning in order to achieve a 100% sorting rate at the construction site, by installing containers for all types of waste, so that no materials are mixed in residual waste containers. The efforts implemented with Norgips and AF-gruppen illustrate that Norsk Gjenvinning and their partners contribute to a circular economy as materials are broken down, recycled and used as inputs in other processes (Bocken et al., 2014).

6.4.1.2 Heldal Eiendom: Renewable energy, circularity and emissions reducstion

The collaborations Heldal Eiendom has with BKK, Eaton and Meny contribute to renewable energy, circular flows and emissions reduction. Together with its partners, Heldal Eiendom develops and implements completely new solutions using existing technology. These collaborations are characterized by a more proactive strategy, as product reuse and renewable energy are considered proactive measures (Lin & Darnall, 2010). The solar panels provided by BKK made Heldal Eiendom one of the first developers in Norway to put solar panels on the roofs and facades of homes. The battery solution Eaton provides is developed using old electric car batteries. The car manufacturer takes old batteries out of the cars, dismantles them, and sends them to Eaton. Eaton then assembles them in their batteries, and the batteries are placed in Heldal Eiendom's building. The solutions developed with BKK and Eaton involve renewable energy. Also, the battery solution contributes to a circular flow as these batteries get a prolonged life cycle (Bocken et al., 2014). Meny is considered one of the early movers with regard to online grocery shopping, as this industry is still relatively new in Norway. The cooling room and home delivery solution Meny and Heldal Eiendom have already implemented on one of their projects is the first of its kind in Bergen for a private joint property. This contributes to sustainability by reducing transport as there is a common delivery and pick-up point so that customers don't drive their own cars to different

stores. The goal of NorgesGruppen is to have all-electric transport during 2022, and thus the emissions resulting from transport from the stores to the pick-up points will also diminish over time.

6.4.1.3 REMA 1000: Increased human and animal health

The collaborations REMA has with Kolonihagen and Norsk Kylling mainly contribute to increased human and animal health. REMA and Kolonihagen have a common vision to help the Norwegian people eat healthier. Kolonihagen has knowledge about ecology, and REMA is a national actor which enables wide distribution across the country. The collaboration with Norsk Kylling is highly focused on animal welfare. Norsk Kylling has slow-growing chickens, which means there is less density in the barn and that the chickens are healthier and live completely different lives than earlier. In this way, Norsk Kylling can use fewer chickens and other resources to create the same amount of meat. Through the collaboration with Norsk Kylling, REMA gained control over the entire value chain for white meat and the partners are working together specifically to improve the value chain. Thus, REMA and their partners practice a proactive strategy, more specifically product stewardship (Lin & Darnall, 2010). Common for both collaborations, is the desire to maintain the price at a reasonable level. In this way, sustainable products are available to most people, and the companies thus achieve their goal of creating an improvement for as many people as possible so that the improvement has a great impact. As such, the collaborations are important tools in order to achieve something bigger.

6.4.1.4 Seafood Innovation: Closed loops and increased human and animal health

Seafood Innovation contributes with knowledge and coordinates the member companies to help them achieve their goals through the cluster. Collaborations within the cluster contribute to closed loops, emissions reduction and increased human and animal health. The projects in Seafood Innovation reflect the needs of the members at all times. Thus, the findings indicate that Seafood Innovation more often engages in reactive strategies, compared to the other main companies, as their purpose is to assist their members in any sustainability challenges they may face. Still, they are often involved in projects that have a proactive strategy. Bremnes Seashore contributes to and partakes in different projects within the cluster. Amongst other things, Bremnes Seashore is involved in a project which addresses the challenges of sea lice and fish health. Bremnes Seashore and other member companies contribute with knowledge and data, and Seafood Innovation brings on

knowledge and technology, and coordinates and organizes the project. BIR and Algaepro collaborate to ensure that food waste stays within its cycle, so that it doesn't turn into waste. The technology and plants for production are in place, but the project is currently at the research stage, and thus there are fewer concrete changes to show for. However, if they succeed, this will entail great progress in waste management and circular economy in Norway. The project of CO2BIO also has great potential. The pilot plant worked as intended and through the project different types of algae were tested in fish feed and they worked on optimizing the production process. The tests showed good results for the test feed and its effect on the fish. However, the economic analysis showed that it is currently not profitable to operate algae production in Norway, based on current prices for the alternative which is soy-based commodity. CO2BIO is now considering other methods for obtaining an improved algae with greater productivity that may be more profitable for production in Norway. At least 3-5 years of R&D activity must be expected. Given the time frame, aquaculture shareholders have recently chosen to retire as owners of the company. The time horizon was too long as it might take 10 years before it could become an industrial product that is profitable. Despite the setbacks, CO2BIO is still working on the project, which, when implemented, has the potential to greatly increase human and fish health and to contribute to closed loops (Bocken et al., 2014).

6.4.2 Facilitating success

As all the presented solutions and efforts illustrate, the main companies and their partners go beyond what is expected of them and seek to exceed social demands. These solutions would not be possible without trust, knowledge sharing, combination of complementary resources and effective governance. It takes great effort from all actors in a collaboration to make it work (Jørgensen & Pedersen, 2018). It is therefore important that both the main companies and their collaborative partners facilitate the presence of the success factors. Again, it is important to emphasize that the success factors discussed above are not independent of each other, but rather connected in the sense that presence of one success factor can enable another (Berlie, 2010; Johnson et al., 2008). As such, the various success factors will be discussed simultaneously in the following, and as will the different collaborations and companies.

6.4.2.1 Safeguards

The scientist from UiB and the respondent from Eaton point out that there is something special about trust in Norwegian business. This is in line with previous research showing that Norwegian culture is characterized by trust at an overall level (Kleven, 2016). However, the respondent from Eaton claims there is a cultural difference between business in Eastern and Western Norway. The respondent's experience is that collaborations in Eastern Norway involve agreements with a formal touch, since written legal contracts are used, and often lawyers. Western Norway has a more informal approach in the sense that the parties choose to trust each other and promise to avail the collaboration in a sensible way. It is difficult to find literature that support this statement, but the researcher at UiB also mentions that Westerners are strongly patriotic and solidaristic. To exemplify, the respondent from Eaton points to the fact that there is no written agreement with Heldal Eiendom. Their agreement is based on a handshake, good business practices and trust, while nearly all the collaborations Eaton has in Eastern Norway are associated with legal contracts. The respondent says oral agreements are positive as they are effective, allow for creativity and create higher trust between the parties. However, the majority of the respondents' state that there is a written contract for the collaboration. As such, the findings in this study does not confirm that informal self-enforcing safeguards are better at preserving the relationship.

6.4.2.2 Physical meetings and frequent communication

As stated in the previous subchapter, it is critical to establish trust between alliance partners in order to achieve success (Johnson et al., 2008; Kale et al., 2001; Berlie, 2010; Das & Teng, 2001; Whipple & Frankel, 2000; Hoffman & Schlosser, 2001; Sherer, 2003). Trust is especially important for success as the partners are mutually dependent (Das & Teng 2001). Trust must be built up and maintained in an alliance and is often established through close individual interaction between alliance partners (Kale et al., 2001). The respondents state that close interaction, although necessary, is not sufficient. They emphasize that the interaction should also be physical and personal in order to achieve both character-based and competence-based trust. Furthermore, the combination of formal meetings, such as partner meetings and lecture seminars, and informal meetings, such as dinners, is described as important for trust building as the partners are allowed to acquire knowledge jointly and at the same time become familiar on a personal level.

In addition to physical meetings, the frequency of the communication and meetings is important for trust building (Collins & Hitt, 2006; Vurro et al. 2009). The findings show that there are several similarities between the respondents, which are said to be of importance to the trust relationship. The respondents describe that there is a common goal, agreement and desire to work together to solve sustainability problems, and that this has created trust between the partners. Furthermore, the respondents state that they have regular meetings, ensure that the other party is followed up by several professional resources, ensure expectations clarifications and review the strategy along the way. This is in line with Collins and Hitt (2006) who describe that frequent communication is necessary to develop mutual trust. Common goals and desires are believed to form the basis for frequent communication.

6.4.2.3 Teams with mixed comptencies and room for discussion

If trust is high between the alliance partners, they will be more willing to share information and knowledge (Das & Teng, 2001). Barnes et al. (2016) explain that knowledge sharing can enable companies to become more sustainable and to implement sustainability measures. In meetings, the respondents state that the issues they are facing are unknown, that there is great room for input and that all suggestions are welcomed. This strengthens the character-based trust which increases knowledge sharing and creativity (Das & Teng, 2001). Furthermore, the respondents state that the companies form teams of people with strong people skills and different professional competencies. This facilitates both trust building and knowledge sharing, and it is apparent that trust and the feeling of security strengthens knowledge sharing within the collaborations.

6.4.2.4 Common sustainability dialect

It is important that there is a balance in the knowledge sharing - not necessarily at all times, but the partners should strive to provide equal contributions over time (Haugland, 1996; Johnson et al., 2008; Dyer & Singh, 1998). Heldal Eiendom perceives there is a balance in their relationships, and states that they contribute with knowledge about the construction market and how their partners can use this market, while the partners contribute with knowledge and technology on how to implement the various solutions. Their partner, BKK, has an interesting approach to facilitate professional discussions. They try to «break down» technical terminology, including changing traditional measuring units. Instead of talking about complex concepts such as kilowatt hours from solar cells, they use units such as the number of kilometers of an electric car or the number of saved CO2 tons. In this way, BKK

creates a new way of talking about concepts that can be difficult for the other party to comprehend. By doing so, the terms become more understandable and business relevant for their partners, which enhances knowledge sharing. This approach to knowledge sharing supports Kiron et al. (2014) who says that knowledge sharing includes the ability to explain complex concepts in simpler terms and establishing a common sustainability dialect.

6.4.2.5 Top level commitment and proactive external communications

Collaborations need internal and external credibility and lower level commitment in order to succeed. The companies achieve credibility to their partners through establishing trust in the aforementioned ways. Furthermore, in line with Berlie (2010) and Hoffman & Schlosser (2001), Norsk Gjenvinning and REMA say that they facilitate credibility to their partners, legitimacy to their stakeholders and employee motivation through strong commitment at the top level. Both companies have a proactive mindset and move in a proactive direction, which is reflected in the companies' communication towards stakeholders. In line with Becker-Olsen et al. (2006) the companies feel that honest, credible and proactive communications create external legitimacy, and say that they prove sustainability through actions. To further facilitate moving in a proactive direction, Norsk Gjenvinning and REMA state that they place demands on their suppliers and actively focus on and work throughout their value chain.

6.4.2.6 Clear mandate and formation of management, working and resource groups

The respondent from Seafood Innovation especially stresses that clarity of roles is determining for the success of an alliance. The respondent refers to the project that failed due to the unclear distribution of responsibility between the project manager and the project administrator. The project disintegrated as meetings and assignments were not completed. This supports the findings of Hoffman & Schlosser (2001) who found that definition of roles proves decisive for collaboration success. To avoid similar situations, Seafood Innovation forms management groups, working groups and resource groups and creates a mandate which clarifies responsibilities. Norsk Gjenvinning also emphasizes that a mandate from top management facilitates defined responsibilities and the formation of a progress plan. This is in line with Berlie (2010) who states that it is necessary to decentralize authority to those who manage the alliance to ensure flexibility and ability to develop.

6.4.3 Sub-conclusion sustainability impact

The final sub-conclusion will address research question 4: «*Identify how companies can facilitate success factors and manage barriers to increase the company's sustainability impact through sustainability collaborations*». All collaborations have sustainability measures that are under development or that have been implemented. These measures would not be possible to implement unless the partners facilitate the success factors, as these will enable continuous progress and goal attainment over time, and in the long-term help solve sustainability problems. It is recommended to arrange for frequent, physical meetings, both formal and informal, as it has a positive effect on the trust relationship and can affect knowledge sharing and whether the partners feel a long-term commitment to remain in the sustainability collaboration. Also, it is preferred that the collaborating teams consist of people with high people skills and different competencies. Whether self-enforcing safeguards or third-party enforcements is to be preferred as the framework for the collaboration cannot be concluded, as the study illustrates examples of both mechanisms working. Furthermore, it is highly important that managers visibly support sustainability and promote the message throughout the company. Top management is best equipped to give mandates, delegate responsibility in a sensible way and create dedicated teams and employee engagement. This contributes to role clarity, which in turn helps to ensure progress and further commitment, as well as flexibility and ability to evolve. Finally, it is recommended that sustainability efforts are communicated to stakeholders in a proactive manner in order to build external legitimacy. This includes showing concrete evidence of sustainability measures through actions.

An interesting question is whether the measures implemented today are of greatest benefit to the companies or to the stakeholders. Several of the companies' state that the solutions are currently not directly profitable, although the measures have an indirect impact on profitability through publicity. This study has no basis for assessing the extent to which the implemented solutions improve society and the environment relative to profitability, but it is concluded that the measures have a general positive effect on the triple bottom line.

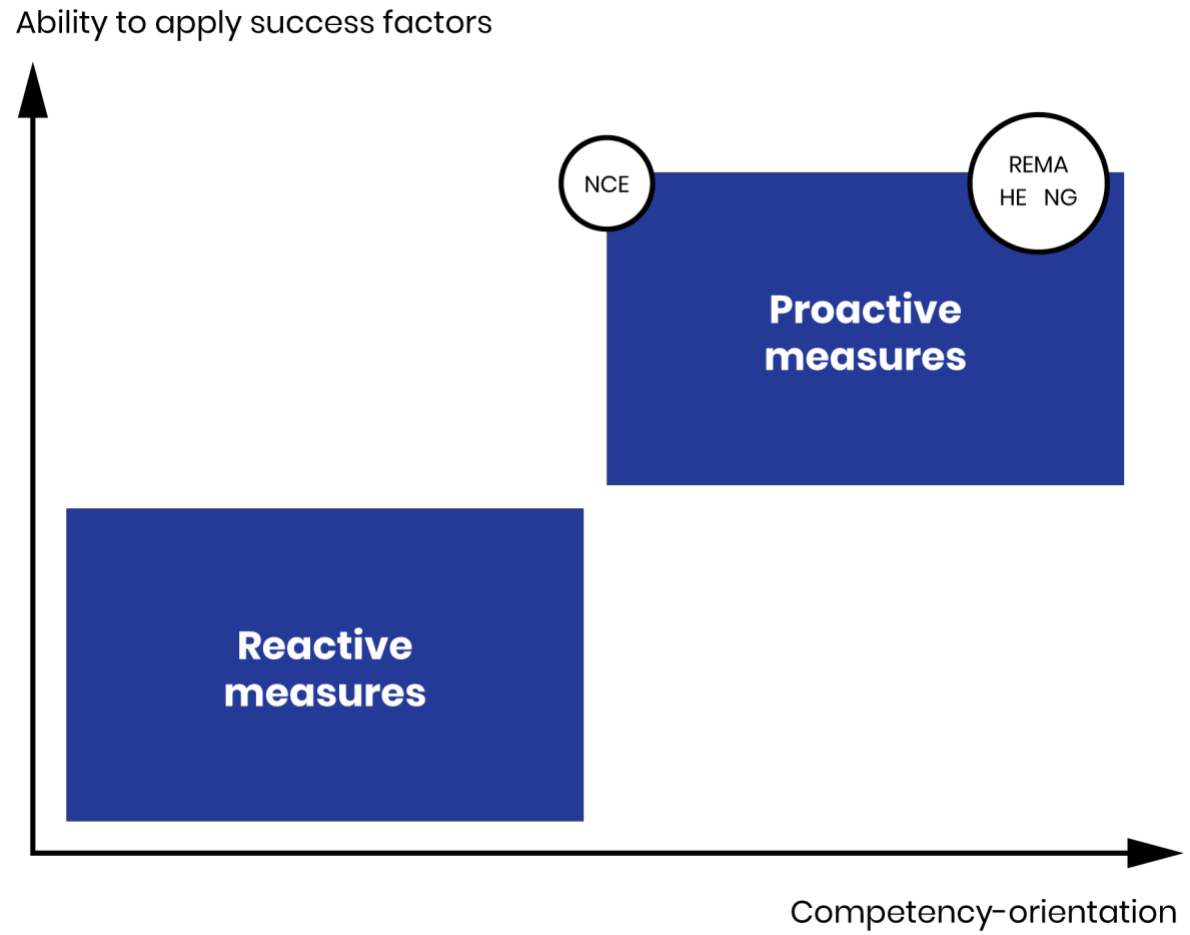

Figure 9: Sustainability impact in main companies

The figure above illustrates that the findings support Lin & Darnall's (2010) assumption that competency-oriented alliances are associated with proactive strategies. We have no basis for concluding which of the main companies are the most proactive, relatively speaking, but we can conclude that all have implemented proactive measures. However, it may be reasonable to assume that NCE Seafood Innovation is more often engaged in purely legitimacy-oriented alliances as their business model is aimed at meeting members' needs, which entails that NCE will more often encounter companies seeking help to meet regulations, i.e. implement reactive measures, compared to the other main companies. Nevertheless, the findings indicate that all companies achieve proactive measures by facilitating the success factors. The results indicate that both the ability to facilitate the success factors and the underlying motive is important in order to achieve meaningful outcomes, but that the former is more decisive for success than the latter. The implementation of the proactive measures reflects that sustainability is internalized in and across the companies rather than reflecting actions related to greenwashing.

7. Discussion and implications

This chapter will first explain the main findings of the study, before the theoretical and practical implications of the study are presented. Subsequently, the study's limitations and suggestions for further research are presented. Finally, the chapter will give a conclusion on the thesis' research question.

7.1 Discussion of main findings

Research on collaboration for sustainability is limited. The purpose of this thesis has therefore been to investigate what sustainability collaboration is and what conditions must be present for it to succeed, and thus make companies more equipped to solve sustainability problems. To gain insight into this, we have based our research on four main companies, Norsk Gjenvinning, Heldal Eiendom, REMA 1000 and NCE Seafood Innovation, and researched several of their cross-sector collaborations. Through these findings, we have identified several aspects that appear to be unique to sustainability collaboration. Through the study, we have gained an understanding of sustainability collaboration in general, and we have formed a basis for answering the research question:

«*How can companies succeed in sustainability collaborations, and how can such collaborations enable companies to increase their sustainability impact?*»

Through the sub-chapters of the analysis we have addressed four research objectives that form the basis for answering the research question. We have identified that the most important reasons for the creation of sustainability collaboration are the desire to exploit business opportunities and to gain access to expertise and technology that does not exist internally in the businesses.

Sustainability collaborations have several characteristics. First, such collaborations address a real, pressing, and business-related sustainability issue and all parties involved have sustainability integrated into the overall company strategy. Long-term perspective and cross-sector collaboration are also confirmed as attributes of sustainability collaboration. Sustainability issues are time-consuming, costly and far too complex for one industry to

handle alone. Finally, early establishment of trust and the level of trust necessary is highlighted as unique for sustainability collaboration. We chose to consider trust as a success factor, but the findings reveal that trust is also a characteristic of sustainability collaborations. A higher level of trust is required, and it is required earlier in the process due to the parties' limited knowledge of each other and the magnitude of the problems they face.

Furthermore, we have found that trust will already exist upon formation of sustainability collaborations, because of the parties' genuine desire and motivation to contribute, as well as their acknowledgement that they are unable to make their business sustainable alone. This is a good starting point for knowledge sharing and facilitates that the partners can develop knowledge that enables the implementation of sustainability measures. However, we have identified that trust and other success factors must be further facilitated and maintained in the collaboration, in order for knowledge development to continue.

We have found that by establishing conditions that create motivation and commitment to remain in the partnership over a longer period of time, companies will be more likely to succeed. This will be of importance to whether companies are able to solve sustainability problems and will be particularly important in sustainability collaboration as the problems they address are comprehensive and complex. Thus, it may take years before such collaborations can show concrete improvements and results. Different phases of sustainability collaboration may be characterized by minimal goal attainment, and as a consequence, motivation and commitment can be reduced. If there is insufficient focus on maintaining the success factors, the collaboration can be dissolved before the potential of the collaboration is realized.

We have identified that the underlying motive is important in order to achieve meaningful outcomes. However, the ability to apply the success factors are of greater significance. Thus, meaningful sustainability outcomes can be achieved through both competency- and legitimacy-oriented alliances, but the latter will have a more incremental progress.

Based on the discussion above, sustainability collaborations have unique characteristics and have the potential to make businesses more sustainable. However, sustainability collaborations are demanding, as the measures the companies aim to implement in many cases require costly and time-consuming restructuring.

7.2 Theoretical implications

This master's thesis provides support for previous research on sustainability collaborations, and how to create the most meaningful impact for society, environment and economy. It was difficult to use existing theory to find out exactly what characterizes sustainability collaborations. However, through the in-depth interviews, we have confirmed our assumptions which we formed based on what characterizes sustainable businesses. In addition, the findings reveal that there is an increasing need for new industry connections and that the relationship between the partners must be trust-based from the start due to the lack of knowledge about each other's industries. Based on the confirmed and identified characteristics, this master's thesis extends the theory of sustainability collaboration.

Furthermore, we find that both competency- and legitimacy-oriented motives are central, but that the former dominates. The top three motives within the competency-orientation are exploiting business opportunities, gaining access to technology and competence, and attracting and retaining employees. The top three motives within the legitimacy-orientation are getting ahead of competition, adapting to competition, and improving reputation and building legitimacy. Overall, many motives were deemed as highly important, and this master's thesis find that companies have both self-interested, social and moral justifications for entering sustainability collaborations, supporting the findings of Jørgensen & Pedersen (2015). Also, the thesis provides support for Lin & Darnall's (2010) theory about the effect of motivation on sustainability impact. We find that the motive behind sustainability collaboration is significant to success. The partners must perceive each other's motives as credible, and the motive must be credible towards stakeholders. Furthermore, the motive should be mainly competency-oriented in order to achieve the highest financial and sustainable impact, which confirms the findings of previous research (Becker-Olsen et al., 2006; Berlie, 2010; Lin & Darnall, 2010). However, we also find that external pressure, although not deemed as a highly motivating factor, is perceived as positive as it can contribute to the formation of more sustainability collaborations. In addition, we find that authorities can be tougher in their legislation and should place more pressure on business to accelerate sustainable development.

We find that nearly all success factors within the main categories (personal relations, competence building, governance and control, and internal and external conditions) are

determining for success. We do not find support for Dyer & Singh (1998) who claim informal self-enforcing agreements are most effective as safeguards for the collaboration. We find that collaborations using such safeguards have successfully implemented sustainability measures, but that third-party agreements are also effective. To be able to increase their sustainability impact, the companies must facilitate the success factors in order to avoid the barriers. We find that trust is highly important, and that frequent and close communication facilitate trust, in line with Kale et al. (2001), Collins & Hitt (2006) and Vurro et al. (2009). However, we find that it is not enough with close interaction, it needs to be physical and personal as well. Trust and physical meetings facilitate knowledge sharing, which supports the arguments of Das & Teng (2001). Furthermore, we find that developing a common sustainability language and assembling a team of people with high people skills and different competencies increase and improve knowledge sharing. Also, the findings support previous research in that managerial commitment is highly decisive for success as top management influence motivation on lower levels and the internal and external credibility of the collaboration (e.g. Berlie, 2010; Whipple & Frankel, 2000; Hoffman & Schlosser; 2001; Johnson et al., 2008). Finally, proactive communications towards stakeholders and implementation of proactive measures are considered to facilitate external legitimacy. This is in line with Becker-Olsen et al. (2006), who find that customers often are skeptical towards sustainability efforts and evaluate companies based on the degree to which they perceive their motive as self-interested.

7.3 Practical implications

Sustainability has become a high priority in the Norwegian business sector in recent years, and more and more companies are now investing strategically in sustainable business, as highlighted initially in the master's thesis. Companies today enter into sustainability collaborations to actively take responsibility, and to meet the demands of government, society and customers. Through collaboration, companies gain access to each other's expertise and can combine their resources to meet sustainable development. However, it has been found that many sustainability collaborations fail, despite the fact that companies recognize the need for collaboration. This study provides an understanding of what sustainability collaboration is, what factors are crucial to success, and how companies can leverage these factors to succeed with the collaboration and increase their sustainability impact. Thus, the thesis can be valuable for companies that want to initiate sustainability

collaborations, and for those who are already part of such a collaboration, as the study provides insight into how to realize the potential of the collaboration.

7.4 Limitations and suggestions for further research

The results of this study should be interpreted with caution, as there are limitations that may affect its transferability to similar contexts. The study is based on qualitative interviews, and the results we have presented are based on self-reported data. Because the findings are based on individual respondents' attitudes and perceptions of a phenomenon, transferability is limited. However, we interviewed 20 respondents from 18 different companies, which is in line with the recommended sample size (Saunders et al., 2012). Therefore, we argue that the thesis can be of value to other companies collaborating for sustainability. This argument is based on the fact that the findings in this study show that the respondents' perceptions are consistent across companies and industries.

Another challenge of self-reported data is that we have to assume that the respondents tell the truth. It is fair to say that the topic of this thesis is quite sensitive and may be subject to an opportunity to glorify one's own business. We have attempted to facilitate the respondents to feel secure in the interview situation by creating a safe environment around the interview, as discussed in subchapter 4.5.1. We are of the opinion that the respondents felt safe and, therefore, told the truth during the interviews. We are under the impression that their openness about the more self-interested and somewhat cynical aspects of sustainability testifies to their honesty. Finally, self-reported data requires that the respondents have insight into, and knowledge of the matters being discussed. We have interviewed respondents who have a central role in the collaborations, and we feel confident that they possess the insight and knowledge needed to answer our questions.

It may be a limitation that the various collaborations in the thesis consist of companies from the business community. For future research, it could be interesting to shed light on similar research problems in the context of government, non-governmental organizations and advocacy groups. It would be interesting to see if the results of this study are transferable to such a context. It is recommended that further research investigate this in order to achieve greater breadth in the knowledge of sustainability collaboration.

Furthermore, we mainly interviewed respondents with the same specialized field (management and sustainability). This may have impaired our understanding of the processes that are in place to facilitate the success factors and then implement sustainability measures in the companies. Future research can do in-depth studies on such processes by, for example, interviewing process managers and process owners in companies.

Finally, we urge researchers to investigate the formation phase of sustainability collaborations. The current thesis focuses on how to manage established alliances, but the findings indicate that it is difficult to assess potential sustainability partners because the parties typically come from different industries and have little knowledge of each other. Such an angle can enable more companies to enter into sustainability collaborations.

7.5 Conclusion

In conclusion, a collaboration for sustainability is characterized by (1) the real, pressing sustainability problems they address, (2) sustainability being rooted in the overall strategy, (3) the scope and time horizon, (4) the cross-sector relationships, as well as (5) the relationship of trust. Several companies are choosing to enter into sustainability collaborations to gain access to knowledge about sustainable business operations. To a large extent, the companies seek each other due to a lack of knowledge and recognition that they cannot solve the complex problems alone. As a result, we conclude that trust exists naturally at alliance formation, but that trust must be maintained through facilitation of different success factors. In order to succeed in a sustainability collaboration, it is concluded that the success factors personal relations, competence building, management and control, as well as internal and external conditions, must be present and maintained. These are essential to create a lasting commitment and motivation to remain in the collaboration. The combination of underlying motives for engaging in sustainability collaboration and the ability to apply the success factors has been identified to be decisive for the success of sustainability collaboration, as they are important for what sustainability measures are implemented. It is recommended that companies primarily build on competency-oriented motives when entering into sustainability collaborations, as these provide the basis for implementing proactive sustainability measures, which are the most meaningful for the environment, society and profitability.

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Appendixes

Appendix 1: Company overview

NORSK GJENVINNING	
Jernia	Jernia AS is a holding-, marketing- and distribution company for hardware, tools, paints, grills, household items, kitchenware and interiors. Jernia's goal is minimal climate footprint and contribute to more sustainable development, and help customers choose more sustainable solutions. Their strategy is rooted in the UN sustainability goals 12 and 13 about responsible consumption and production and stopping climate change. Within these two goals, Jernia wants to make a difference.
AF Gruppen	AF Gruppen is a leading entrepreneurial and industrial group divided into units and operating in several business areas. AF Gruppen strives to be an industry leader in environmental solutions by having good expertise in environment and energy. They have proprietary technology that helps to clean, recycle and reuse scarce resources. This allows them to clean and recover 80% of the masses that would otherwise end up on landfill. Furthermore, they offer energy-efficient solutions for building and environmentally friendly removal of offshore installations.
OBOS	OBOS has activities in housing development, banking, insurance, real estate, management, consulting, commercial real estate and digital services. OBOS 'main business area is housing development. Residential buildings in Norway, Sweden and Denmark are grouped in the Housing Development Division.
Norgips	Norgips produces and sells plasterboard. The company has made a strategic choice to actively contribute to a greener construction industry in Norway. Their goal is to contribute to the development of technology and industrial processes, which in the long run will ensure a more sustainable society. In order to deliver on the ambitious sustainability goals, they have sought alliances and decided to partner with Norsk Gjenvinning. The aim of the collaboration is to increase the proportion of recycled gypsum in the plasterboard, as well as contribute to a much more efficient waste management at construction sites and lead to a general reduction of waste.
HELDAL EIENDOM	
BKK	BKK has collaborated with Heldal Eiendom for two years. BKK is a large group with many companies. The respondent we interviewed works in BKK Varme and represents the part of BKK that works with distributed energy production. BKK works in the renewable energy

	industry and is an important part of the solution when society aims to reduce greenhouse gas emissions. BKK wants to create a sustainable future that is renewable, electric and digital. BKK has a goal of growing within the core business of hydroelectric power and power grids, supplying comprehensive energy solutions to customers, and becoming the largest in Norway in electrification. BKK wants to work to ensure that hydroelectric power and power grids remain relevant and competitive in combination with other technologies.
Eaton	The collaboration between Heldal Eiendom and Eaton started several years ago, but it is only in the last year that they have started working on sustainability and battery solutions together. Eaton is an international company and is a major player in the electricity market. Eaton's operations span different areas (aircraft components, data centers, food production, water purification, rail lines, etc.), but in Norway, Eaton's main focus is commercial buildings and housing. Eaton aims for entire cities to work, and their basic idea is that everything people do is powered by some kind of energy. The challenge Eaton has taken on is that everything in this package should work together, that is, all infrastructure in a city should work optimally. Thus, Eaton seeks to create a symbiosis in its entirety. Eaton is seeking to be a supplier of renewable resources.
Meny Netthandel	Meny Netthandel has been in a collaboration with Heldal Eiendom for about a year. Meny is a grocery chain in NorgesGruppen. was formed as an activity Meny can perform alongside its core activity, which is grocery shopping as of today. Meny wanted to launch e-commerce and home delivery to be ready for the day when the "catch up effect" came, and that day has now come - in particular, the share of e-commerce has increased due to the outbreak of Covid-19.
REMA1000	
Norsk Kylling	Norsk Kylling was founded in the early 90's and began delivery to REMA in the mid 90's. In collaboration with REMA, major sustainability changes were made in the period 2012 - 2016. Norsk Kylling aims to achieve the world's best food value chain and to set a new standard for responsible, efficient and innovative production through a green value chain and thus ensure that customers receive products of the highest quality, at the lowest price in the market. Norsk Kylling focuses on responsible sustainable development with a green foundation in animal welfare, the environment, social responsibility and value management.
Kolonihagen	For over 12 years, Kolonihagen has been supplying organic produce, and has started a bakery, restaurant and brewery. They refer to themselves as a food and expertise house, and today they use their knowledge to develop their own product line at REMA. Kolonihagen always chooses products that are produced in accordance with nature, in a sustainable and ethical way. The colony garden refers to this as good taste with good

	conscience.
NCE SEAFOOD INNOVATION CLUSTER	
CO2BIO	CO2BIO was established in 2010. CO2Bio AS will develop a sustainable, bio-based omega-3 production based on the use of CO2 and algae. By using algae strains from the marine environment in Norway and growing these on land, it gives a sustainable solution that does not destroy the marine value chain.
Bremnes	Bremnes Seashore is one of Norway's leading suppliers of farmed salmon. The company handles the entire production chain for salmon. They have a goal that their activities should have the least impact on the external environment. Their production must be sustainable, and this is achieved through strategies and action plans for environmental protection. The strategy is designed for the entire value chain and focuses on clean ocean, animal and fish health, they care for people and the local environment. The products they produce shall be sustainable and of high quality. Bremnes Seashore relies on collaboration with suppliers to achieve sustainability along the entire value chain, where everyone has a shared responsibility for finding solutions together.
Algaepro	Algaepro is a startup firm with 4 employees. Algaepro is part of a greentech grouping. Greentech Innovators is the main company that mainly works with circular economy and waste management issues such as turning waste into value. These can be resources such as fertilizers that can be further used in algae production. The other part of the group is the subsidiary Algaepro, which produces microalgae based on the circular economy with waste heat and CO2. They are working to produce sustainable biomass that can be used for various inputs.
BIR	BIR is one of Norway's largest waste management companies and is responsible for the waste management of over 356 600 inhabitants in BIR's seven owner municipalities. The company also offers waste solutions for business. BIR is committed to improving their environmental performance in the areas of work environment, waste management, energy consumption, procurement and transport.

Appendix 2: Interview guide

Practical questions (answered via mail in order to save time during interview):

1. How long have you worked in company X?
2. What is your formal position in the firm and what does it entail?
3. What is your role in relation to the firm’s sustainability efforts and associated collaborations?

Prior to the interview:

- Kindly thank the respondent for his/her participation
- Give a short presentation of ourselves
- Give a short presentation of the study and inform about the interview process
- Ask for permission to record the respondent, and clarify that it will be deleted
- Ask for permission to quote without anonymity
- Inform about anonymity and confidentiality

Sustainability strategy and collaboration for sustainability:

1. Do you have any collaborations that you would characterize as sustainability collaborations, or that have been entered into to solve sustainability issues?
    a. Can you describe what elements must be present for sustainability collaboration to exist, i.e. what constitutes sustainability collaboration?
2. What is your firm's overall sustainability strategy, and what sustainable development goals are you currently working on?
3. How do you work to implement sustainability at the core of the business model and throughout the entire value chain?
4. Do you set a specific time frame for each collaboration, and is this time frame different in your traditional vs. your sustainability-related collaborations?
5. Does your company have a reactive or proactive environmental strategy?

Motive for sustainability:

1. What is the motive for focusing on sustainability in the company?
2. How does laws and regulations impact (your choice of) business collaborations for sustainability?

Regarding the specific collaboration in question:

1. Why did you partner with company X, rather than other providers?
2. How relevant is the collaboration to the company's core business?
3. What is the underlying motive to enter into collaboration with X?
4. Is the collaboration with X competency-oriented or legitimacy-oriented?

Reflections on sustainability and collaboration:

1. In what way would you say that collaborations with regard to sustainability issues are different from traditional business collaborations? (e.g. relationship, communication, profitability, time spent, knowledge sharing, trust, etc.)
2. In what way do you believe that a sustainable business collaboration can contribute to a competitive advantage?
3. What considerations do you have to make when entering into a collaboration for sustainability?

Success factors and barriers related to collaboration for sustainability:

1. Do you believe that the motive for sustainability - and motive for working together to solve sustainability issues - is crucial to success (both economic and environmental success)?
2. What do you believe are the most critical success factors in making sustainability collaboration work?
    a. How do you ensure that the aforementioned success factors are present?
3. Have the sustainable collaborations affected the firm's profitability in a different way than traditional collaborations?
4. What challenges/barriers do you face when entering into sustainability collaborations?
    a. How do you handle the challenges of sustainability collaboration?

Appendix 3: Ranking of motives on Likert scale

Motive to enter sustainability collaboration	**Likert scale 1 - 7**
Access to new markets	
Access to new technology/competency	
Access to international opportunities	
Improve customer offering	
Exploit business opportunities	
Adapt to competition	
Get ahead of competition	
Reduce costs	
Reduce risk	
Avoid resource scarcity	
Adapt to regulation	
Expectation of regulation	
External pressure	
Improve reputation/build legitimacy	
Moral convictions	
Attract and retain employees	

Appendix 4: Background information on the study

Hei,

vi er to studenter på 25 år som skal skrive masteroppgave ved Norges Handelshøyskole våren 2020. Vi går hovedprofilen strategi og ledelse, og har støtteprofil i økonomisk styring. Vi engasjerer oss for tema innen bærekraft og lønnsomhet, og vi skriver om hvordan samarbeid inngått for å løse bærekraftsproblemer skiller seg fra tradisjonelle forretningssamarbeid. Herunder undersøker vi hva som er suksessfaktorene og barrierene med hensyn til å skape et bærekraftig forretningssamarbeid, og hvordan selskaper bør legge til rette for og håndtere disse.

Vi arbeider med følgende problemstilling: «*How can companies succeed in sustainability collaborations, and how can such collaborations enable companies to increase their sustainability impact?»*

En av grunnen til at dette er en interessant problemstilling er at det finnes lite empirisk forskning innenfor emnet. For å besvare problemstillingen ønsker vi å komme i kontakt med bedrifter som har inngått samarbeid for å bidra til å løse bærekraftsproblemer. Vi har allerede vært i kontakt med Norsk Gjenvinning, som, sammen med noen av sine samarbeidspartnere, ønsker å bidra i vår masteroppgave. Vi ønsker imidlertid flere bidragsytere for å sikre tilstrekkelig datainnsamling for å besvare problemstillingen, og vi er veldig interessert i *X* på grunn av de bærekraftsinitiativene dere gjør i samarbeid med andre. Vi håper derfor at dere i har lyst og anledning til å la dere intervjue, og at dere kan gi forslag til hvilke av deres samarbeidspartnere det kan være aktuelt å intervjue i tillegg. Vi ønsker opptil 4 samarbeidspartnere dersom mulig. Vi tar gjerne direkte kontakt med de bedriftene dere foreslår.

Som det fremgår av problemstillingen vil vi skrive masteroppgaven på engelsk, men vi kan gjennomføre intervjuer både på norsk og engelsk, alt etter intervjuobjektets preferanse. Vi ønsker å intervjue én til to personer som er direkte involvert i bærekraftssamarbeidet dere har med andre bedrifter. Intervjuet vil vare mellom 45-60 minutter, og vi kan gjennomføre intervjuet ansikt til ansikt, over telefon eller via videosamtale. Her vil vi tilpasse oss intervjuobjektets preferanse. Vi ønsker å gjennomføre alle intervjuer i løpet av mars, men vi har forståelse for at dere har begrenset med kapasitet, og vi er derfor fleksibel dersom dere ønsker å gjennomføre intervjuet på et annet tidspunkt. Intervjuobjektet vil selvsagt anonymiseres, og all informasjon vil holdes konfidensielt.

Vi håper problemstillingen vekker deres interesse og at dere vil ta dere tid til å bidra. Ta gjerne kontakt dersom dere ønsker ytterligere informasjon om oppgaven.

Vi ser frem til å høre fra dere! Dere kan også ta kontakt med oss på telefon, 918 79 902 (Lise) eller 957 61 637 (Rebecca).

Vennlig hilsen
Lise Herland og Rebecca Olsvold

Appendix 5: Clarification of concepts

Bærekraftig forretningsvirksomhet: Dette innebærer at økonomisk aktivitet bør styrke, fremfor å svekke, samfunnet og miljøet. Bærekraftige forretningsmodeller er stand til å sikre at selskapet oppnår gode resultater på de tre bunnlinjene – den økonomiske, den sosiale og den miljømessige.

Bærekraftssamarbeid: Et slikt partnerskap er et samarbeid som er inngått både for å bidra til å løse bærekraftsproblemer og for å opprettholde eller øke lønnsomheten i selskapet. For å gjøre forretningsmodellen mer bærekraftig og for å realisere fordelene ved en sirkulær økonomi, hevdes det at det er nødvendig med slike samarbeid. Videre hevdes det at det kreves endringer i selskapets økosystem, det vil si nettverket av tilknyttede aktører; leverandører, distributører, kunder, konkurrenter, samarbeidspartnere og offentlige etater.

Kompetanse- og legitimitetsorienterte allianser: Førstnevnte er samarbeid som inngås fordi man søker spesialiserte ferdigheter, kunnskap og kompetanse, og kjennetegnes ved desentralisering og sosial kompleksitet, samt at disse samarbeidene er kunnskapsbaserte. Samarbeidene søker kompetansebygging. Legitimitetsorienterte er allianser som formes som

et svar på institusjonelt press. Det eksterne presset kan komme fra politikere eller fra samfunnet generelt. Uavhengig av hvor presset kommer fra, kan dette presset bidra til at selskaper former samarbeid for å opprettholde eller forbedre sin sosiale legitimitet.

Proaktiv og reaktiv miljøstrategi: Har selskapet en reaktiv strategi vil det respondere på forurensning og avfall etter at det har blitt skapt fremfor å eliminere avfall før det har blitt produsert. Et eksempel på slik praksis er å konvertere avfall til nye produkter gjennom resirkulering. Målet med en slik strategi er å *minske* den negative miljøeffekten selskapet har. En proaktiv strategi innebærer at selskapet har et fremtidsrettet perspektiv i den forstand at det forsøker å forutsi fremtidige reguleringer og sosiale trender. Målet med en slik strategi er å designe prosesser og produkter som *forhindrer* negative miljøeffekter. Eksempler på proaktive strategier er forurensningsforebygging (pollution prevention), produktforvaltning (product stewardship), og ren teknologi (clean technology*). Se forklaring på hver av disse under dersom du ønsker det.*

Forurensningsforebygging reduserer avfall og forurensing før det produseres gjennom substitusjon av materialer, resirkulering og prosessinnovasjon. Mens den reaktive strategien bruker «end-of-pipe» kontrollteknologi, fokuserer forurensningsforebygging på effektiv bruk av naturressurser, samt å generere produkter med færre skadelige komponenter, og minimere miljøutslipp.

Produktforvaltning innebærer å styrke et firmas eksisterende produkter, både ved å undersøke interne prosesser, og ved å se på eksterne aktører som er involvert i et produkts livssyklus, som kunder og andre organisasjoner. Bedrifter som vedtar produktforvaltning analyserer hele livssyklusen til et produkt, ved å vurdere råvarene, produksjonsprosessene, produktbruk og hva som skjer når produktet ikke lenger er i bruk.

Ren teknologi refererer til radikale innovasjoner fremfor inkrementelle forbedringer i produkter og prosesser. Disse radikale innovasjonene inkluderer disruptiv teknologi som selskapene er i stand til å utvikle gjennom samarbeid med ukonvensjonelle interessenter som forbrukere, miljøgrupper og andre selskaper. Ved å danne slike samarbeid kan selskaper få ny kompetanse, kunnskap og innsikt som gjør dem i stand til å innovere.

Appendix 6: NSD guidelines, information letter and declaration of consent

I forbindelse med vår mastergrad ved Norges Handelshøyskole, skal vi skrive en avsluttende masteroppgave innenfor fagområdet strategi og ledelse. Etter avtale på mail, har du takket ja til å delta i vårt forskningsprosjekt hvor formålet er å undersøke samarbeid inngått for å løse bærekraftsproblemer, herunder hvilke formål bedrifter har for å inngå denne typen samarbeid, og hva som er suksessfaktorene og barrierene med hensyn til å skape forretningssamarbeid for bærekraft. I dette skrivet gir vi deg informasjon om hva deltakelse vil innebære for deg.

Hva innebærer det for deg å delta?
Vi skal gjennomføre en kvalitativ studie ved hjelp av individuelle dybdeintervjuer. For å sikre tilstrekkelig datainnsamling ønsker vi å intervjue én sentral person fra hver bedrift som er direkte involvert i de aktuelle samarbeidene som studeres. Intervjuet vil vare mellom 45-

60 minutter, og vi kan gjennomføre intervjuet ansikt til ansikt, over telefon eller via videosamtale. Som det fremgår av tittelen vil masteroppgaven skrives på engelsk, men vi kan gjennomføre intervjuet både på norsk og engelsk. Dine preferanser styrer hvordan intervjuet avholdes og hvilket språk som benyttes.

Spørsmålene vil omhandle dine erfaringer og opplevelser med forretningssamarbeid, både tradisjonelle og de som er rettet mot bærekraftsproblemer. All informasjon vedrørende deg som person vil holdes konfidensielt. Data som benyttes i prosjektet vil kun være den informasjonen som fremkommer under intervjuet.

Vi ønsker å ta lydopptak av intervjuet da det frigjør vår oppmerksomhet under selve intervjuet slik at vi kan etablere en god dialog og ha mulighet for å stille oppfølgingsspørsmål. Vi vil også transkribere (omdanne råmateriale fra lydfil til fulltekst) intervjuene for videre analyse, og lydopptaket gjør oss i stand til å gjengi den informasjonen du gir oss på en korrekt måte. Lydopptakene vil slettes senest 01.06.2020 ved innlevering av masteroppgaven. All annen informasjon du deler med oss vil også slettes innen denne datoen, dvs. navn, mail og telefonnummer.

Vi vil presisere at deltakelse er frivillig. Selv om du allerede har takket ja kan du når som helst trekke ditt samtykke uten at det får noen konsekvenser for deg. All informasjon om deg vil i så fall bli anonymisert.

Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger
Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket. Utenom oss er det kun vår veileder, Gunnar Eskeland, som vil ha tilgang til de opplysningene du gir oss.

For å sikre at ingen uvedkommende får tilgang til dine personopplysninger, vil navn og kontaktopplysninger erstattes med en kode som lagres på en egen navneliste adskilt fra øvrige data. Lydopptaket vil plasseres i en mappe med passordbeskyttelse og navnet på filen vil være en kode slik at kilden er anonym.

Når den endelige masteroppgaven publiseres vil du som deltaker ikke kunne spores/identifiseres. Vi vil oppgi ditt fagområde (dvs. ikke stilling) og navn på bedriftene som er involvert i samarbeidet. Ditt personlige bidrag vil ellers anonymiseres.

Hva skjer med opplysningene dine når vi avslutter forskningsprosjektet?
Alle opplysninger slettes når prosjektet avsluttes/oppgaven er godkjent, noe som etter planen er 01.06.20. Dette inkluderer lydopptak, email korrespondanser, navn, telefonnummer og eventuelle andre opplysninger du har gitt oss underveis i prosjektet.

Dine rettigheter
Så lenge du kan identifiseres i datamaterialet, har du rett til:

- innsyn i hvilke personopplysninger som er registrert om deg, og å få utlevert en kopi av opplysningene,
- å få rettet personopplysninger om deg,
- å få slettet personopplysninger om deg, og
- å sende klage til Datatilsynet om behandlingen av dine personopplysninger.

I etterkant av intervjuene vil vi lage et sammendrag med funn fra hvert intervju. Du vil få tilgang til ditt sammendrag slik at du kan godkjenne egne utsagn og korrigere eventuelle misoppfatninger. Vi vil endre dette sammendraget etter ditt ønske slik at du står inne for de opplysningene du har gitt oss og er fornøyd med fremstillingen av funnene.

Hva gir oss rett til å behandle personopplysninger om deg?
Vi behandler opplysninger om deg basert på ditt samtykke.

På oppdrag fra Norges Handelshøyskole har NSD – Norsk senter for forskningsdata AS – vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

Hvor kan jeg finne ut mer?
Hvis du har spørsmål til studien, eller ønsker å benytte deg av dine rettigheter, ta kontakt med:

- Lise Herland. Mail: liseherland@gmail.com. Telefon: 918 79 902
- Rebecca Olsvold. Mail: rebecca.olsvold@hotmail.com. Telefon: 957 61 637
- Gunnar S. Eskeland (veileder). Mail: gunnar.eskeland@nhh.no. Telefon: 55 95 96 99

Hvis du har spørsmål knyttet til NSD sin vurdering av prosjektet, kan du ta kontakt med:

- NSD – Norsk senter for forskningsdata AS på epost (personverntjenester@nsd.no) eller på telefon: 55 58 21 17.

Samtykkeerklæring
Jeg har mottatt og forstått informasjon om prosjektet «Collaboration for Sustainability», og har fått anledning til å stille spørsmål. Jeg samtykker til:

- å delta i intervjuer ansikt til ansikt, over telefon eller via videosamtale.
- at intervjuet tas opp, men at lydopptak slettes innen 01.06.20
- at personopplysninger anonymiseres, men at fagområde og selskapsnavn fremkommer i oppgaven
- at personopplysninger lagres til og med prosjektslutt 01.06.20

For å bekrefte/avkrefte ditt samtykke kan du svare på mailen informasjonsskrivet og samtykkeerklæringen blir sendt fra (liseherland@gmail.com / rebecca.olsvold@hotmail.com).

Med vennlig hilsen
Lise Herland og Rebecca Olsvold

Appendix 7: Example of content analysis

Company: Heldal Eiendom	
Category	**Statement**
Sustainability (strategy, motive,	The company's sustainability strategy is to be a driving force in the industry by utilizing existing technology to create new solutions with sustainable elements that can be delivered to their customers. Heldal

purpose)	Eiendom is responsible for the entire value chain in construction, from the assessment of the site to the handover to the customer. The company integrates sustainability in its business model by assessing and utilizing sustainable components and elements in their traditional operations throughout the value chain. The company works with the UN's sustainability goals and touches on several of them, including No. 7 Affordable and clean energy, No. 8 Decent work and economic growth, No. 9 Industry, innovation and infrastructure, No. 11 Sustainable cities and communities, No. 12 Responsible consumption and production, and No. 17 Partnerships for the goals. The motive for focusing on sustainability in the company is the desire to contribute to change in a traditional industry, as well as to acquire more knowledge. In addition, the respondents say that the company builds more than "housing only"; they build homes and living environments. The respondents believe that use of sustainable components in buildings not only contribute to positive environmental outcomes, but also to positive social effects by creating a simpler and better everyday life for the residents. The driving forces for sustainability are thus heart for the residents, the desire for knowledge and the desire to do something different. Profitability is not currently a driving force as the solutions are expensive and do not generate direct financial profitability. However, the respondents see the indirect effect on profitability through branding and publicity. In the longer term, they also see that direct financial gains can be generated as more consumers become more aware of the benefits of sustainable solutions, and thus more willing to pay. The respondents also mention that they want to act as a driver for sustainability so that they put pressure on other, and often greater, players in the industry. To achieve this, Heldal Eiendom is trying, among other things, to raise awareness among its customers about sustainable solutions, so that over time consumers will place higher demands on other players in the industry. Regarding environmental strategy, the respondent states that the company has some of both, but that today they are more reactive than proactive.
Collaboration	The collaborations are project-based, but the same actors are used in each project, so the collaborations always have a long-term perspective. The respondents define the collaborations they have with BKK, Meny and Eaton as sustainability collaboration. By this, they mean that sustainability collaboration involves new industry connections because knowledge must be shared across industries to deal with the sustainability issues we face. Heldal Eiendom's sustainability partners operate in completely different industries and possess a completely different knowledge, and therefore the respondents believe that these are unconventional collaborations. Heldal Eiendom is dependent on the knowledge their partners possess in order to deliver on the sustainability measures they wish to implement. In addition, the respondents emphasize that these partners also have sustainability in their focus area, and that this strengthens the collaboration. The respondents state that sustainability

	collaboration exists when there is a common goal of helping to solve a real sustainability problem. The collaborations are competency-oriented rather than legitimacy-oriented. The respondents are aware of branding and the positive impact of sustainability initiatives on their reputation, but the main focus of the collaborations is to make a real contribution to sustainability by building competence with others to create innovations. The motivation for entering into collaboration with BKK, Meny and Eaton is that the companies are safe and stable, and thus long-term partners. In addition, Heldal Eiendom feels that the partners have quick decision-making processes, which is not given when entering into collaboration with major players. This enables the collaborations and creates efficiency. The respondents state that they consider potential partners based on several factors. The partners must be safe and predictable. By this, they mean that the partners must be confident in the knowledge they bring, so that Heldal Eiendom also can feel confident that the partners possess the knowledge they need and thus can rely on them. Heldal Eiendom is a smaller player and relies on feeling secure in its business relationships. Furthermore, the respondents inform that quality trumps price when choosing a partner. Affiliates must be responsible for the product or service they provide, and what they deliver must be of high quality. This has as much to do with the security of Heldal's customers as Heldal Eiendom's own security. It is important for the company that the housing works for the residents at all times. The partners must also be solid in the sense that their accounts must be in order. In addition, potential partners should be forward-looking. The respondents perceive it as more challenging to assess potential sustainability partners compared to traditional partners. The reason for this is that the sustainability partners come from other industries and that Heldal Eiendom therefore does not have a sufficient knowledge base to evaluate these partners on a par with the traditional partners. Thus, the sustainability collaborations are more trust-based. The respondents state that sustainability collaboration differs from traditional business collaboration in that the collaboration takes place across industries and thus creates new industry connections. In addition, the respondents emphasize that knowledge sharing is different because one has a different approach and a different focus. The focus is not only on the traditional issues that arise in connection with construction projects, but also on the new components that can be integrated into traditional construction to make it more sustainable. This requires a different level of knowledge sharing. In traditional collaborations, both parties have a lot of previous knowledge, and there is a template and an expectation on both sides about how to collaborate. In sustainability collaboration, much is unknown, and the parties must form the road

	together. Thus, the partners become interdependent in a different way and much more exchange of knowledge is required. The respondents feel that there is a balance in the knowledge sharing they engage in with their partners. Heldal Eiendom contributes with knowledge about their market and how their partners can use this market, while the partners contribute knowledge about how the solutions can be implemented. The meetings with the partners are physical to the extent that it is possible. Heldal Eiendom wants to be present where they are to contribute and believes that knowledge sharing is far better in physical meetings than in virtual meetings. In addition, the respondents mention that the trust required in such business relationships is easier to build up in physical meetings. They say the reason for this is that body language, mimicry, radiance and the like. affects trust building and relationships. The respondents consider the collaborations with Meny, BKK and Eaton as clearly competence-oriented, but with some legitimacy-oriented motive. Furthermore, the respondent states that most collaborations are turned towards competency-oriented when Heldal chooses who they want to join the team.
Success factors	The respondents believe that the motive for the collaboration is crucial to the collaboration's financial and environmental success. The parties must have the same motive for the collaboration. Although the underlying motive may differ, it must be fairly unified. The respondents say that of course everyone must have the motive of making money, but that the motive must also be that they want to contribute to a change. The respondents mention that security and trust are the two decisive success factors in making sustainability collaboration work, and that expectation clarification is important as this facilitates both security and trust. The respondents say that it is crucial to have expectations clarified in advance of what to expect from the collaboration on both sides. Both parties must be honest about whether they are able to deliver or not. Heldal Eiendom is always honest about how dependent they are on the other party and their knowledge, and at the same time they elaborate on how they will deliver on their end. Another way they facilitate security and trust is by emphasizing in meetings that the issues they are facing are "unplowed ground" and that all suggestions are welcomed. This contributes to the feeling of security, which in turn increases knowledge sharing and creativity, and thus the participants deliver better. The respondents emphasize that the relationship must be trust-based rather quickly. Incremental change is mentioned as a further success factor. The respondents mention that one does not have to think big, but that it is advantageous to start small. The collaborations with BKK, Meny and Eaton have cost more money than traditional collaborations. On the other hand, Heldal Eiendom has

	received branding without additional cost. Several different media channels have become interested in the solutions Heldal Eiendom develops together with its partners and has published this on different platforms. This has been free marketing and pure publicity for Heldal Eiendom and their partners. The respondents say it is clear that these solutions cost money now, but it generates brand building, which can ultimately deliver the money on the bottom line. But as of today, the solutions are more profitable in branding than in finance.
Barriers/ challenges	The respondents mention that it can be a challenge to create a mutual belief that everyone will follow through. Furthermore, the respondents point out the financial aspect as a challenge for both parties, since sustainable solutions often have an added cost. The respondents state that Heldal Eiendom is in many ways ahead of its time on its buildings and that the sustainable solutions are often expensive. Customers cannot pay for this extra cost. In one project, Heldal Eiendom received Enova support, and they emphasize that they could not install the sustainability elements they wanted without this support. On the other hand, Heldal Eiendom states that they will never build a building that does not have sustainability elements in it. The respondents specify that they have embarked on a sustainable journey and their intention is to complete it. Although the solutions are expensive, the prices are now decreasing. As an example, batteries are expensive today as the demand is low, but as demand increases, prices will go down. Only in the last two years has there been a reduction in the price of the batteries. Another challenge that is highlighted is that some sustainable solutions are not well thought out and that Heldal Eiendom therefore does not want to go further into the solutions. To give a simple picture of what they mean, the respondents cite the example of phone chargers and car chargers. Different manufacturers are doing different things, and thus no universal solutions are generated. The respondents point out that there are generally too few universal carriers that make it easy to use the solutions. The respondents say that manufacturers should not only think about themselves, but rather shift their focus more towards the end user. Heldal Eiendom has always thought for the end user and wants everything to work smoothly. Despite the aforementioned challenges, the respondents emphasize that they do not focus on challenges, but rather view the challenges as opportunities and always have a solution-oriented approach.
Characteristics of sustainability collaboration	The respondents believe that the prerequisite for sustainability collaboration to exist is that there must be a real problem and a real desire to solve it. The respondents' view is that a collaboration will not generate the same gains if the motivation lies on the commercial side and in the "green stamp". As the respondents see it, it is no longer a sustainability collaboration when this is the motivation. The respondents emphasize that financial motivation must of course be present, but there must also be a

	deeper motivation in the form of a desire to contribute to real change. Furthermore, the respondents emphasize that trust is always important in a collaboration, but that sustainability collaboration requires trust earlier in the process and a higher level of trust as both parties are in unknown terrain.
Laws and regulations	The respondents cite the role of the authorities, and in particular Plan- og Bygningsloven, as a further challenge. The sustainability work of Heldal Eiendom is held back by laws and regulations in the construction industry. As an example, the respondents point out that it is difficult to use sustainable building elements in the form of reuse. This is because laws and regulations say that only new components are to be used in building. It is possible to use recycled materials, but it is very demanding as you have to get dispositions and you have to go through several application processes. Thus, much must be changed in Plan- og Bygningsloven in order to make it easy to use recycled materials. The respondents point out that this challenge is related to the materials that are permanently inserted into the building. Developers are free to use whatever loose components they want, such as the battery solution they have developed with Eaton. Heldal Eiendom also has to go through an extensive application process when installing the solar panels, which are set up in collaboration with BKK. The reason for this is that solar cells are facade related. This is also something that to some extent inhibits the building process because application processes are time consuming. The respondents conclude that the regulations are very challenging when trying to be forward-looking and sustainable.
Competitive advantage	Respondents believe that sustainability can contribute to a competitive advantage through better reputation. In addition, they emphasize that the authorities will gradually come up with more requirements for sustainable business activities. By taking the initiative for sustainable solutions before the requirements come, they create a competitive advantage over others in the industry that move later. It gives a first mover advantage because Heldal Eiendom has already entered into solid collaborations, has found advantages and disadvantages, and has learned what works and what does not. The respondents mention that entering into sustainability collaborations at an early stage is an advantage because there can potentially be a shortage of solid sustainability partners as more companies enter into such collaboration. By securing solid partners and good relationships now, it is highly likely that the partners will serve Heldal Eiendom before serving anyone else. However, the respondents point out that many more factors that are of importance to the competition may emerge, so they do not take the advantage for granted. They are constantly watching.
General reflections	The respondents believe that many actors abstain from sustainability initiatives because the initiatives are not big enough or because the initiatives do not give them enough results on the bottom line. Heldal Eiendom, for its part, thinks that you can always do something, and that taking smaller steps in a sustainable direction will make a big long-term

	difference. In addition, Heldal sees the indirect effect on the bottom line, as well as the long-term direct effect on profitability. Furthermore, the respondents assume that many do not allow the introduction of sustainability measures because it is easier to continue the traditional practice. Finally, the respondents mention that those who only seek the "green stamp" and the commercial side of sustainability are likely to fall through eventually. There must be a real problem to be solved, a real thought behind the sustainability initiatives and a genuine desire to solve the problem. The respondents emphasize the personal relationship they have with their partners. They believe that the people they work with are dedicated to their focus area and feel that personal chemistry strengthens the collaboration.

Appendix 8: NSD approval and permission

NSD sin vurdering

Prosjekttittel

Collaboration for Sustainability - a Qualitative Study of the Objectives, Enablers and Barriers for Collaborations Entered with Regard to Sustainability

Referansenummer

793355

Registrert

03.03.2020 av Lise Herland - Lise.Herland@student.nhh.no

Behandlingsansvarlig institusjon

Norges Handelshøyskole / Institutt for strategi og ledelse

Prosjektansvarlig (vitenskapelig ansatt/veileder eller stipendiat)

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Type prosjekt

Studentprosjekt, masterstudium

Kontaktinformasjon, student

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Prosjektperiode

03.03.2020 - 01.06.2020

Status

04.03.2020 - Vurdert

Vurdering (1)

04.03.2020 - Vurdert

Det er vår vurdering at behandlingen av personopplysninger i prosjektet vil være i samsvar med personvernlovgivningen så fremt den gjennomføres i tråd med det som er dokumentert i meldeskjemaet

04.03.2020 med vedlegg, samt i meldingsdialogen mellom innmelder og NSD. Behandlingen kan starte.

MELD VESENTLIGE ENDRINGER
Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til NSD ved å oppdatere meldeskjemaet. Før du melder inn en endring, oppfordrer vi deg til å lese om hvilke type endringer det er nødvendig å melde:
https://nsd.no/personvernombud/meld_prosjekt/meld_endringer.html

Du må vente på svar fra NSD før endringen gjennomføres.

TYPE OPPLYSNINGER OG VARIGHET
Prosjektet vil behandle alminnelige kategorier av personopplysninger frem til 01.06.2020.

LOVLIG GRUNNLAG
Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 og 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse som kan dokumenteres, og som den registrerte kan trekke tilbake. Lovlig grunnlag for behandlingen vil dermed være den registrertes samtykke, jf. personvernforordningen art. 6 nr. 1 bokstav a.

PERSONVERNPRINSIPPER
NSD vurderer at den planlagte behandlingen av personopplysninger vil følge prinsippene i personvernforordningen om:

- lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at de registrerte får tilfredsstillende informasjon om og samtykker til behandlingen
- formålsbegrensning (art. 5.1 b), ved at personopplysninger samles inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke viderebehandles til nye uforenlige formål
- dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet
- lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lengre enn nødvendig for å oppfylle formålet

DE REGISTRERTES RETTIGHETER
Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: åpenhet (art. 12), informasjon (art. 13), innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18), underretning (art. 19), dataportabilitet (art. 20).

NSD vurderer at informasjonen som de registrerte vil motta oppfyller lovens krav til form og innhold, jf. art. 12.1 og art. 13.

Vi minner om at hvis en registrert tar kontakt om sine rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned.

FØLG DIN INSTITUSJONS RETNINGSLINJER
NSD legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1. f) og sikkerhet (art. 32).

For å forsikre dere om at kravene oppfylles, må dere følge interne retningslinjer og eventuelt rådføre dere med behandlingsansvarlig institusjon.

OPPFØLGING AV PROSJEKTET
NSD vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

Lykke til med prosjektet!

Kontaktperson hos NSD: Tore Andre Kjetland Fjeldsbø
Tlf. Personverntjenester: 55 58 21 17 (tast 1)

Appendix 9: Example of approved interview summary

[redacted]
til Rebecca, meg

Takk for oversendt sammendrag.

Det ser bra ut. Dere har klart å fange essensen av det jeg forsøkte å formidle :)

Lykke til med resten av prosjektet.

Hilsen [redacted]