Interorganizational Collaboration towards Sustainability

Value Creation Processes by the Example of the NextWave Initiative

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Abstract
This thesis aims to provide insights on how private-sector inter-organizational collaboration creates interaction and synergistic value towards sustainability. Value propositions are directed towards individuals, organizations and society at large. To achieve this purpose, an explorative, in-depth case study on the NextWave initiative is conducted to address the sustainability challenge of marine plastic pollution. An abductive research approach is applied, matching main theories of both private-sector partnerships and value co-creation with empirical data gathered through semi-structured interviews with NextWave members. The study looks at individual as well as collaborative activities leading to the co-creation of interaction and synergistic value. It is further analyzed, how these created values lead to external system change towards sustainability. Key findings are limited to the case of NextWave as the intent of the study is an initial exploration of the topic. The data leads the authors to an affirmative conclusion, delivering a number of activity and process examples that foster collaboration and promote interaction and synergistic value. That, in turn, allows for system change and a more sustainable development. Therefore, this thesis makes valuable contributions to the theoretical knowledge of collaboration and value creation. Additionally, a conceptual and analytical framework based on contemporary literature contributes to the body of knowledge as well as allows practical application.

Keywords: Value co-creation, inter-organizational collaboration, private-sector partnerships, sustainable value, interaction value, synergistic value
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1 Introduction

Issues of a global scale are near to impossible to address if encountered individually (Bryson, Crosby & Stone, 2006; Gray & Stites, 2013; Le Pennc & Raufflet, 2016; Xanthos & Walker, 2017). The United Nations have set out a number of goals to address such complex issues in their global, survey-based sustainable development goals (SDGs) in an attempt to provide guidance for change makers from all sectors (United Nations, 2015). While each of the 17 goals addresses a specific area of interest, the last one brings actors from all areas together by addressing partnership for the goals. This reflects what academics, policy makers, and businesses alike see as a crucial part in working successfully towards a more sustainable direction: collaboration (Bryson, Crosby & Stone, 2006; Mathieu et al., 2008; Gray & Stites, 2013; Le Pennc & Raufflet, 2016a). Proactively encouraging the co-creation of sustainable value is more and more seen as a value proposition to multiple stakeholders (Bryson, Crosby & Stone, 2006; Austin & Seitanidi, 2012a; Austin & Seitanidi, 2012b).

Inter-organizational collaboration addressing sustainability challenges has been the subject of many academic discussions to this day, whether within or across sectors (Gray & Stites, 2013). Businesses increasingly form partnerships – even with competitors – in an effort to improve their sustainability performance through the co-creation of value (DiVito & Sharma 2016; Austin & Seitanidi 2012a). However, research has been focused largely on identifying key success factors for co-creating value and on measuring created value (Rai 2016; Austin & Seitanidi 2012a), generating a need to learn more about value creation processes (Austin & Seitanidi, 2012a; Austin & Seitanidi, 2012b; Rai, 2016). This is particularly the case for types of value created through the partnership and their linkages, which raises opportunities for additional research in the collaboration field (Aarikka-Stenroos & Jaakkola, 2012; Austin & Seitanidi, 2012a; Le Pennc & Raufflet, 2016; Rai, 2016).

The authors of this thesis intend to scrutinize how collaborative interfirm working groups in the private sector address sustainability issues whilst creating value. Plastic pollution as a global sustainability threat is the set frame (Section 1.1) for the two theoretical concepts of collaboration and value creation (Section 1.2). The combined topics are approached by a case study that allows the authors to reflect on the co-creation processes of value in a working group of highest relevance, the NextWave initiative. The case for the need of such research is made by arguing in terms of its contextual composition in the next section.

1.1 Marine Plastic Pollution: A Global Sustainability Challenge

With consumerism and globalization on the rise for decades and no indications for a change of tendency, our society is now exposed to resource dilemmas that were caused in the process (Blackmore, 2007). Actors from all sectors are required to question their resource-based activities and their effects on the ecosystem to address these dilemmas (Blackmore, 2007). A central issue in this context is pollution of the marine environment through plastics (Blackmore, 2007; Wang et al., 2016).

Our society produces extensive amounts of plastics, especially in the context of packaging and single-use applications (Wang et al., 2016). While the durable, lightweight and cheap properties of plastics are highly convenient in everyday use, value recovery and recycling is a difficult process, resulting in plastics being discarded in landfills (Wang et al., 2016) or contaminating the marine environments (Xanthos & Walker 2017; Wang et al. 2016). As a consequence, global marine plastic pollution and the endangerment of life below water has become a severe area of concern (Cressey, 2016).
It has reached the point, where “the marine environment is unlikely to return to the condition it was in before the plastic era (Vince & Hardesty, 2017, p. 123). These circumstances make marine plastic pollution one of the most multi-layered and urgent sustainability challenges that our society is facing. Therefore, it is an ideal example of a complex sustainability issue to be addressed in the frame of this research.

1.2 Value Creation in Inter-Organizational Collaboration – A Potential Solution to Global Sustainability Threats?

Private companies are perceived to be part of the problem, but also part of the solution when it comes to sustainability challenges (Kramer & Porter, 2011). In the context of marine plastic pollution, the private sector takes a central position as the majority of the nearly 280 million tons of plastic produced annually is sourced by companies (Shaw & Sahni, 2014; Sigler, 2014). This circumstance increases the responsibility of the private sector and stresses the importance of corporate decisions made in relation to the use of resources, supply chain management and product design (Sigler, 2014).

At this point, the problem of marine plastic pollution is acknowledged across industries, but companies’ engagement in approaching it diverges greatly (Cavanagh & Waluda, 2018). An increasing number of companies addresses plastic pollution within their Corporate Social Responsibility (CSR) strategy. Often their focus lies on short-term measures to avoid a negative brand image related to unsustainable packaging and technologies (Vince & Hardesty, 2017). However, researchers stress that in order to make a long-lasting, positive impact, approaches should focus on the source-reduction of plastic rather than short-term clean-up projects (Wang et al., 2016a; Vince and Hardesty, 2017; Xanthos & Walker, 2017a; Cavanagh & Waluda, 2018). Cavanagh and Waluda (2018) highlight, that re-thinking the linear use of resources and taking collective action is necessary in order to effectively address marine plastic pollution and move towards a circularity of resources.

Private companies are in a powerful position to drive change. The willingness to engage in collaboration with other private companies to address SDGs has been steadily increasing in the past years (Austin & Seitanidi, 2012a). This is based on the reasoning that combining individual forces facilitates compounded impact (Sigler, 2014). Nonetheless, the central justification for engaging in partnerships is value creation individually and value co-creation through collaborative processes, whether the value is of economic, social or environmental nature (Austin & Seitanidi, 2012a). Different processes and activities lead to different types of value; different types of value carry different potentials to initiate external system change (Hart & Milstein, 2003; Austin & Seitanidi, 2012a). Those values that carry greatest potential towards sustainability, interaction value and synergistic value, are the most complex to generate and require an external focus, long-term orientation, and a proactive, collaborative approach. Therefore, the processes of value creation in the context of collaboration towards sustainability, particularly concerning the reduction of marine plastic pollution, needs exploring. Cavanagh and Waluda (2018) stress, that academic contributions are of great importance in the context of finding solutions to the problem. They state that private sector initiatives to reduce marine plastic pollution must be “industry-led, but science-informed” (Cavanagh and Waluda, 2018, p.12), which supports the intention of this work to explore value creation processes towards sustainability in the context of private-sector collaborations.
1.3 Research Problem

Much research has been conducted on inter-organizational collaboration addressing sustainability challenges (Bryson, Crosby & Stone, 2006; Sharma & Kearins, 2011; Austin & Seitanidi, 2012a; Austin & Seitanidi, 2012b; Gray & Stites, 2013; Liu et al., 2014), especially in regards to motivations and key success factors (Le Pennec & Raufflet, 2016). Value creation has been recognized as the main driver for a private organizations to engage in collaborative activities (Le Pennec & Raufflet, 2016). However, a more in-depth exploration on collaboration towards sustainability, documenting specific pathways of value creation as well as their nature and processes, provides a research avenue that would benefit of further exploration, particularly in the form of field-based research (Austin & Seitanidi, 2012a; Le Pennec & Raufflet, 2016).

The identification of value processes in a voluntarily built working group with members of different sizes across industries therefore aims to provide distinct insights from an exemplary collaboration proactively addressing marine plastic pollution at the source. The contribution of this thesis is represented by investigating the mentioned process of value creation in a case-based manner. Generated insights can be beneficial for both the academic community as well as the private sector seeking to expand their social responsibility performance.

1.4 Purpose

The objective of this explorative case study is to expand the knowledge on how private-sector inter-organizational collaboration creates interaction and synergistic value towards sustainability. This includes value for individuals, organizations and society at large.

1.5 Research Questions

How does private-sector inter-organizational collaboration create interaction and synergistic value towards sustainability?

a. What activities of a working group contribute to the co-creation of interaction and synergistic value?

b. How can interaction and synergistic value created in a private-private collaboration address sustainability challenges?

1.6 Research Structure

This paper is organized in six chapters with several sections. First, the introduction shall give an overview on the contextual background of the study while linking it with the research problem, aim and questions. Then, the theoretical background is presented, connecting the themes of private-sector collaboration as the basis and value-creation towards sustainability as the objective while reflecting on their individual relevance and interrelation. The third chapter presents the research design in detail, including methodology, research method and research quality. In sequence, empirical findings are laid out and evaluated in chapter four. The next chapter provides room for discussion of the findings in a theoretical as well as a practical manner. Finally, conclusions of the study are drawn and potentials for future study avenues addressed.
2 Theoretical Background

This chapter will elaborate on the theoretical concepts and the analytical frameworks this case study is based on. Although the main focus of the research lies on the co-creation of interaction and synergistic value towards sustainability, it is necessary to first discuss academic research on inter-organizational collaboration in the private sector, as it provides the base for value co-creation processes. Therefore, leading up to the main topic of value co-creation, theoretical concepts of inter-organizational collaboration that have been tied to creating value towards sustainability are introduced (section 2.1). Afterwards, academic research on the concept of value and on the processes of value co-creation towards sustainability are discussed in more detail (section 2.2).

2.1 Inter-Organizational Collaboration

Inter-organizational collaboration is perceived to be an efficient approach to address the most complex challenges found within our society (Le Pennec & Raufflet, 2016). Especially when addressing transboundary global issues, collaboration between various actors can function as a driver towards sustainable development (Le Pennec & Raufflet, 2016). Many private companies see potential in building partnerships to expand their positive impact in the context of their CSR initiatives (Le Pennec & Raufflet, 2016). Through engaging in collaborative activities, they seek to accelerate learning processes and improve both their organizational and sustainability performance (Lesser & Storck, 2001; Christ, Burritt & Varsei, 2017).

From an academic perspective, there is a growing interest in researching different forms of partnerships – within and across sectors (Gray & Stites, 2013). Findings from a sustainability perspective conclude that forming partnerships is a very promising approach as it enables organizations to combine their resources, capabilities, and knowledge and thereby addresses problems that cannot be solved by singular actors (Gray & Stites, 2013). In relation to partnership research towards sustainable development, there has been a significant increase in literature on cross-sector partnerships between private companies and NGOs in the past years (Gray & Stites, 2013). When it comes to research on private-sector partnerships, Dodourova (2009) points out that the focus largely lies on joint ventures and strategic alliances and there is a need to address other types of interfirm partnerships. However, inter-organizational collaboration is a multifaceted phenomenon that can vary a lot as firms organize themselves to tap synergies and create value (Dodourova, 2009). Before presenting two alternative forms of inter-organizational collaboration that can be tied to value creation towards sustainability, it is necessary to define the terminology describing inter-organizational forms.

The terms cooperation and collaboration are commonly used in academic literature to describe co-working processes of organizations to achieve common goals (Mizrahi, Rosenthal & Ivery, 2013). Although they are sometimes used synonymously, they represent different kinds of organizational relationships (Mizrahi, Rosenthal & Ivery, 2013). Cooperation is defined as the most basic form of companies working together and involves sharing information to support each other’s activities (Mizrahi, Rosenthal & Ivery, 2013). Collaboration describes a deeper form of co-working and “occurs when participants develop common strategies to achieve jointly determined goals while maintaining their organization’s autonomy” (Mizrahi, Rosenthal & Ivery, 2013 p. 284).

The latter applies to the studied case – NextWave member-companies follow a collaborative approach to achieve the common sustainability goal of integrating ocean-bound plastics into their supply chains and thereby reducing marine plastic pollution (NextWave, 2018b). Following the abductive research
approach further described in chapter 3, theories on private-sector inter-organizational collaboration were reviewed to match the character of the working group. In the following, two concepts of inter-organizational collaboration are presented that are suitable for analyzing the case and that were tied to sustainability in academic literature.

2.1.1 Competitor Collaboration Towards Sustainability

Competitor collaboration towards sustainability was one of the theories that were reviewed in the iterative process of matching observations from data collection with theoretical concepts. Especially the Competitor Collaboration Grid (figure 1), a tool developed by DiVito and Sharma (2016), emerged as a fruitful source and helped designing the conceptual framework (figure 8) that builds the base for answering the posed research questions in relation to the case.

Competitor collaboration developed from the concept of coopetition, which describes “the simultaneous use of competitive and cooperative business strategies” (Christ et al. 2017, p. 1030). Through building coopetitive relationships, competing companies work together to “collectively enhance performance by sharing resources and committing to common goals in certain domains (e.g. product-market or value-chain activities)” (Luo 2007, p. 129). The newly emerged concept of sustainability-related coopetition between companies broadens the scope of conventional coopetition and puts a special focus on environmental and social aspects (Luo, 2007; DiVito, 2016a; DiVito & Sharma, 2016; Christ, Burritt & Varsei, 2017). Luo (2007) specifies, that coopetition involves the simultaneous process of cooperating in certain aspects while competing in others (Luo, 2007).

Competitor collaboration implies a deeper form of working together and is characterized as both the most complex type of inter-organizational collaboration but also as the most promising approach to achieve radical innovations (DiVito, 2016b). Throughout this thesis, competitor collaboration towards sustainability is defined as follows:

Collaborations that include two or more firms (including NGOs, trade associations but must also include commercial for-profit organizations) that sell similar products and/or services in the same market, or that source raw materials and inputs from the same suppliers, that work together in a formalized and structured manner to set and achieve collective goals that aim to improve sustainable impact [...] and create mutual and reciprocal benefits for all the collaborators and other stakeholders (DiVito, 2016, p. 7).

This broader definition of competitor collaboration towards sustainability by DiVito (2016) is the most suitable in relation to the case as it enables focusing on a partnership, which is primarily formed by private-sector businesses but may also include a NGO that acts as a facilitator and encourages corporate members to collaborate.

Partners face a number of inherent tensions in collaboration structures and processes that are rarely resolvable but require adequate management throughout the process (DiVito, 2016). It is suggested that a successful competitor collaboration is characterized by power balance between parties, mutual objectives, and complementary needs (Christ, Burritt and Varsei, 2017). Relational conditions such as prior common experience and shared values have a significant influence on the collaborative performance and thereby the desired outcomes (DiVito, 2016).

DiVito and Sharma (2016) developed the Competitor Collaboration Grid framework shown in figure 1, a tool for analyzing private-sector competitor collaboration towards sustainability. They differ four types of collaboration as well as four tension fields that influence them (DiVito & Sharma, 2016). The informal-formal axis shows the degree of formality in place, but is in this research not addressed as the focus lies on member interactions and collaborative structures fostering the co-creation of value.
(DiVito & Sharma, 2016). The cooperation-competition axis depicts the two tension fields, common vs private interests as well as interdependence vs independence, in the context of the collaboration (DiVito, 2016). It more specifically indicates if collaborating firms have similar goals, if they are willing to share information and implement changes (cooperation) or if they pursue their own interest and are hesitant to do so (competition) (DiVito & Sharma, 2016).

In the frame of this research, especially the cooperation-competition axis is of interest as competitiveness within collaborative partnerships can imply opportunism or free riding and thereby hinder establishing and pursuing of collective goals towards sustainability (DiVito & Sharma, 2016). In the setting of a competitor collaboration, companies are required to place themselves on the cooperation-collaboration continuum and find common ground when balancing out each other’s interests (DiVito & Sharma, 2016). Aligning with collective goals and sharing knowledge to collectively address sustainability issues is of crucial importance in this context (DiVito & Sharma, 2016). However, companies decide individually how much and which kind of knowledge they are willing to share within the collaboration (DiVito & Sharma, 2016).

Therefore, member-engagement within partnerships can vary a lot which consequently affects the amount of resources such as time, effort and money that businesses allocate to the partnership (DiVito & Sharma, 2016). Another aspect that influences the implementation of collective decisions in the individual company is the company size. As the sustainability issues faced by larger and smaller firms can differ, the option is suggested that larger firms with more resources for implementation carry out some of the solutions and assist smaller firms in the process (DiVito & Sharma, 2016).

2.1.2 Communities of Practice Towards Sustainability

Research on Communities of Practice (CoPs) represents another theoretical approach of looking at inter-organizational collaboration. More specifically, it can be seen as an approach to facilitate collective learning (Reed et al., 2014). Wenger, Trayner, and de Laat (2011) define CoPs as partnerships among people who “find it useful to learn from and with each other about a particular domain, […] use each other’s experience of practice as a learning resource [and] join forces in making sense of and addressing challenges they face individually or collectively” (Wenger, Trayner & de Laat 2011, p. 7). They distinguish a CoP from a social network by the development of a shared identity around a topic of interest or a common challenge which emphasizes collective intention “to steward a domain of knowledge and to sustain learning about it” (Wenger et al. 2011, p. 7). Lesser and Storck (2001) additionally stress the regularity of engagement. Furthermore, they highlight that CoPs not only benefit their individual members but also create value for the organization as a whole through developing social capital (Lesser & Storck, 2001). The latter is generated by fostering relationships within the CoP, building trust as well as a sense of obligation and creating a common language and context between the members (Lesser & Storck, 2001).

Engagement of the members and their desire to learn how to improve their practice is of great importance in order to create value through the community (Reed et al., 2014). In reciprocal processes participants interact, share, and co-create new knowledge that they are able to implement in their work.
The type of learning within CoP can be categorized as social learning which implies developing a shared understanding that goes beyond individuals and manifests within a wider social unit or CoP (Reed et al. 2014).

Blackmore (2017) highlights, that especially when addressing environmental issues, deeper interactions among interdependent stakeholders are necessary in order to create change on a local as well as an institutional level. Social learning can in this context be an efficient approach for initiation. A basic requirement for this is the members commitment to engage in mutual learning processes that are not based on instructions but on the co-creation of knowledge (Blackmore, 2007). Blackmore (2017) furthermore elaborates on the importance of what concerted action as a result of social learning. This kind of action involves a number of stakeholders that take different roles to support the emergence of certain sustainability outcomes (Blackmore, 2007). Moving beyond the talk and focusing on implementing gained knowledge is key to creating a positive impact and social change (Blackmore, 2007).

As elaborated in this chapter, a growing number of private-sector businesses chooses to collaborate with other companies to enhance their sustainability performance and increase their impact through collective efforts (Lesser & Storck, 2001; Gray & Stites, 2013; Le Penec & Raufflet, 2016; Christ, Burritt & Varsei, 2017). The theories introduced for better understanding of the concept of collaboration is visually condensed to the first part of the conceptual framework (figure 2). It includes the competitor collaboration grid towards sustainability and is engrained by the prerequisites of CoPs.

![Figure 2: Level 1 of the Conceptual Framework: Collaboration Towards Sustainability (own illustration based on Divito & Sharma (2016))](image)

While there are various incentives for companies to engage in partnerships, the fundamental raison d’être of collaboration is value creation (Le Penec et al., 2016). When looking into the co-creation of interaction and synergistic value towards sustainability, the mentioned theories on collaboration therefore have to be considered. The theoretical backgrounds for this shall be discussed in the following section.

2.2 Collaborative Value Creation

Before drawing direct connections from collaboration to value creation, the concept of value needs to be elaborated theoretically. First, the development of the understanding of value will be reviewed briefly. Then, the concept of sustainable value by Hart and Milstein (2003) (section 2.2.1) followed the main theoretical framework of the Collaboration Continuum by Austin and Seitaniidi (2012a, 2012b) will be presented and the implications for this study set forth (section 2.2.2).
2.2.1 Sustainable Value

Over the course of its development, value in private organizations has been largely influenced by its context. One constant about value creation, however, is its position as the “assumed central occupation of practitioners” (Wheeler, Colbert & Freeman, 2003, p. 2). An earlier value perspective has been coined above all by Friedman (1970) as exclusively economic, limiting it on profit generation for shareholders. This narrow definition of value in financial terms has been subject of strong critique (Harris & Freeman, 2008; Porter & Kramer, 2011), mainly due to two factors: (1) the unanticipated impacts that the dynamic economic expansion has put on the social and ecological environment and (2) the need to move towards the satisfaction of as many stakeholders as possible rather than a shareholder’s need exclusively (van Griethuysen, 2010).

Due to this criticism, the status quo of value as purely economic has been challenged and theories and frameworks have been developed that include social welfare in the value concept. One example of such more inclusive typecast of value is shared value (Porter & Kramer, 2011). This concept includes the duality of value through practices and policies that improve an organizations competitiveness all the while enhancing the social conditions of its environment. Emerson (2003) on the other hand sets an emphasis on the maximization of total returns of both economic and social value in his definition of blended value at a corporate and sectoral level. In close relation to this, Wheeler et al. (2003) add a third dimension by focusing the primacy of businesses as anchored in the triple bottom line, giving sustainable value an economic, environmental and a social dimension. Other authors support this trend of a more holistic perception of value (Hart & Milstein, 2003; Wenger, Trayner & de Laat, 2011).

Hart and Milstein (2003) identified the multifaceted challenges that correlate with sustainable development as it is often associated with liabilities for the organization. To divert from this train of thought toward seeing sustainable development as an opportunity instead, Hart and Milstein (2003) designed a sustainable value framework linking sustainability efforts directly with the creation of shareholder value. That in turn is sustainable value: “shareholder wealth that simultaneously drives us toward a more sustainable world” (Hart & Milstein, 2003, p. 65). The framework consists of four quadrants in a matrix dependent on the scales of time (today and tomorrow) and scope (internal and external).

According to the framework, firms can create sustainable value mainly in four ways: pollution reduction and prevention, increased transparency and stakeholder integration through product stewardship, disruptive innovations leading to cleaner technologies and the creation of inclusive wealth via a long-term and external sustainability vision. By exploiting opportunities in all of the quadrants simultaneously, organizations can create a balance that allows for the creation of sustainable value (Hart & Milstein, 2003).

Hart and Milstein’s (2003) framework provides a basis for assessment of organizations. Within the scope of this paper it will be applied to assess the collaborations’ contribution in each quadrant based on their collaborative processes. This framework is integrated into the second level of the conceptual framework (figure 4) by including the three spectra of focus, orientation and approach.
2.2.2 Collaborative Value Creation Towards Sustainability

Previous research has been conducted on factors and processes of collaboration that lead to value creation; in other words the creation of collaborative value (Le Pennec & Raufflet, 2016). However, there is a need to further investigate which type of value is co-created in the different stages of collaboration, particularly when it comes to value for sustainability (Austin & Seitanidi, 2012a; Le Pennec & Raufflet, 2016).

The overarching umbrella of collaborative value can be defined “as the transitory and enduring benefits relative to the costs that are generated due to the interaction of the collaborators and that accrue to organizations, individuals, and society” (Austin & Seitanidi, 2012a, p. 728). This collaborative value is created either in sole creation by one of the partnering entities or in co-creation by joint activities from at least two of the collaborating parties. According to Austin and Seitanidi (2012a), those means to value creation constitute the two ends of a Value Creation Spectrum. With the Value Creation Spectrum the intensity of value sources and value types can be assessed against the level of collaboration (Austin & Seitanidi, 2012a).

The Value Creation Spectrum, however, is only one of the spectra that can be identified as relevant for collaboration processes. The collaboration continuum entails a number of spectra that can be used to categorize collaborative value creation processes. It contains four stages: philanthropic (unilateral resource transfer), transactional (reciprocal exchange of resources), integrative (co-creation of value) and transformational collaboration (co-creating transformative change at the societal level). Austin and Seitanidi (2012a) suggest that greater value is created when a collaboration moves across all stages of the value creation spectrum from individual to collective value creation.

Using a continuum to categorize value creation processes recognizes both the dynamic and multifaceted character of collaborations. They do not move from one stage to another sequentially – decisions, actions and inactions define the movement along the continuum. While certain characteristics can be categorized as belonging to one stage, other traits can belong to another (Austin & Seitanidi, 2012a). This dynamic approach to value creation is supported by Wenger et al. (2011) as they refer to five cycles of value creation, each bringing forth an according set of value. In coherence to Austin and Seitanidi (2012a), Wenger et al. (2011) stress the non-hierarchical and non-linear nature
of the cycle or stages. The crucial difference between the two frameworks is that for Wenger et al. (2011), each cycle brings about an identified set of value whereas according to the Collaborative Value Creation Framework, different values can be created simultaneously at different stages, attributing more agility to the Value Creation Framework (Austin & Seitenidi, 2012a; Austin & Seitenidi, 2012b).

Connecting collaboration stages to types of values, several frameworks can be found that categorize varying numbers of value types (Wheeler, Colbert & Freeman, 2003b; Wenger, Trayner & de Laat, 2011; Austin & Seitenidi, 2012b; Rai, 2016). Of these, the Collaborative Value Creation Framework, specifically the Collaboration Continuum, by Austin and Seitenidi (2012a, 2012b) will build the primary framework basis for this case study due to its agile characteristics. It categorizes four different types of value that are described as follows. **Associational value** is accumulated by the mere exchange of two organizations. **Transferred resource value**, is classified as the value one partner receives through the exchange of both tangible and intangible resources. Depending on the type of asset, the weight of value changes and is either depreciable or non-depreciable. **Interaction value** describes the first value type that relies on co-creation. It entails intangible assets such as reputation, social capital and knowledge that are both requirement for- and result of the collaboration (Austin & Seitenidi, 2012a). Additionally, “it is in the integrative stage that interaction value emerges as a more significant benefit derived from the closer and richer interrelations between partners” (Austin & Seitenidi, 2012, p. 743). Interaction value is thereby the first of the four types that moves from transactional engagement to relational engagement (Austin & Seitenidi, 2012a) which provides more prospering conditions for value co-creation (Bowen, Newenham-Kahindi & Herremans, 2010). The final value type, **synergistic value**, describes the benefits that come from combined efforts that lead to accomplishments that extent the mere sum of its part. Here the focus is set on the reciprocal effects that the generation of social and environmental value has on economic value and vice versa, with innovation being one of the main drivers (Austin & Seitenidi, 2012a).

While any value can be created on every level, collaboration requiring transactional engagement is more likely to produce associational value and transferred resource value (left part of the spectrum). On the other hand, collaboration requiring relational engagement has much higher potential to result in interaction and synergistic value (located on the right side of the spectrum) (Austin & Seitenidi, 2012a). Figure 7 gives an overview of included spectra in the conceptual framework of this work:
In figure 7, the third level of the conceptual framework, some of the original continua of the Collaborative Value Framework by Austin and Seitanidi were left out as they were considered as less profound as others and a testing of all would have extended the research scope of this paper. Those continua namely are: magnitude of resources, trust, internal change, managerial complexity and innovation. These choices have been made as the spectra would either tap too far into contextual, facilitating factors (trust), did not meet the focus of this research (internal change) or would have had an equitable impact on all members (managerial complexity and magnitude of resources). The spectrum of interaction level (infrequent to intensive) was adjusted from its original format due to the pivotal role interaction value plays in this research. For the same reason the spectrum co-creation of value marks the center of the framework.

Although the framework is depicted for public-private collaborations, it serves as a promising basis to assign co-creation processes within private-private collaboration as none of the continua are exclusively representing characteristics only applicable to public-private partnerships. Austin and Seitanidi (2012b) argue that through the “multiple levels [of] the framework [it] is compatible with assessing any type of social, environmental, or economic problem and the interrelationships over any time frame” (Austin & Seitanidi, 2012b:956), leaving the option for an application on private-private collaboration open to the test.

Other authors refer to value co-creation towards sustainability in business networks within a supply chain network (Aarikka-Stenroos & Jaakkola, 2012; Lacoste, 2016) or co-creation with the customers and users (Ramaswamy, 2009). However, due to irrelevance to this paper, these kind of co-creation values will not be addressed throughout. For the sake of full inclusion, this paper will follow the principal idea of Wheeler et al. (2003) when looking at the scope of what value entails. Hence, by definition, value throughout this paper will refer to economic, social and environmental value as a holistic approach. To balance between being holistic and precise, the authors chose to adopt Austin and Seitanidi (2012a, 2012b) understanding of four value types and the understanding of Rai (2016) in regards to a distinction of collective value, collaborative private value and competitive private value as a categorization. Co-creation and collaborative value creation will be used as synonyms within this paper.

2.3 The Interplay of Private-Sector Collaboration and Sustainable Value Creation

In order to combine the explained theories of inter-organizational collaboration, that is theories on competitor collaboration and CoPs with the theories of the creation of sustainable and collaborative value – all focused on sustainable development – a conceptual framework shall help putting the number of pieces together. The framework is derived from components of the mentioned theories but primarily based on the Collaborative Value Creation Framework from Austin and Seitanidi (2012a), as it assists best in answering the posed research questions. Each component has a specific function as introduced individually in the previous subsections. Theories on private-sector collaboration towards sustainability frame the value creation continuum (Le Pennec and Raufflet, 2016). Focusing on the most relevant components of all theories assists in the purpose of answering the research questions in a manner that guides the research and frames its analysis.
Following the abductive research approach (further described in chapter 3), an iterative process of matching theories and empirical data led to the development of the value co-creation towards sustainability framework (figure 8). The framework was conceptualized based on the presented theories on inter-organizational collaboration and value creation towards sustainability. The first level of the framework (figure 2), integrated at the bottom of figure 8, shows inter-organizational collaboration as the contextual setting. Specifically, it reflects the Cooperation-Competition axis of Divito and Sharma’s (2016) Competitor Collaboration Grid introduced in section 2.1.1 and depicted in figure 1 (DiVito & Sharma 2016). As the arrows in the framework indicate, the behavior of companies within the collaboration and thereby their position on the continuum is dynamic and underlies change. Businesses can be cooperative in some aspects of the collaboration towards sustainability and competitive in others – resulting in a constant movement along the continua. Depending on the resulting kind of partnership, cooperative or competitive, a specific setting for value creation processes is provided. This results in a tendency to foster either sole value creation or collective value creation (Divito & Sharma, 2016).

The concepts of sustainable and collaborative value are embedded in the theories of inter-organizational collaboration as they are ultimately resulting from the collaboration. They represent the second level of the framework. As previously mentioned, the Collaborative Value Creation Framework by Austin and Seitanidi (2012b) lays the framework’s foundation. Selected fields of the Collaboration Continuum are integrated and build the integral part of the conceptual framework. Other concepts are adjusted to this format of several continua as explained individually in prior sections.
Using this framework provides guidance to answering the research question of “how does private-sector inter-organizational collaboration co-create interaction and synergistic value towards sustainability?” as well as both sub-questions.
3 Research Design

In the following, the research plan and the reasoning behind its design is presented in detail. Initially, the methodology and research strategy provide an overview of the theoretical underpinning of the study (section 3.1). Subsequently, the method and case are presented, followed by the processes of collection and analysis (section 3.2). Finally, research quality is argued for (section 3.3).

3.1 Methodology and Research Strategy

Attending to this study’s research questions requires a structured design and a conceivable approach (Blaikie, 2010). As opposed to theory testing or theory building deductively or inductively (Bonoma, 1985; Parkhe, 1993), the abductive approach reflects the strategy of theory development in this study. This strategy is applied more and more in social sciences, particularly when case studies are employed (Blaikie, 2010; Perry, 2000; Dubois et al., 2002). Aiming to describe and understand the social interactions of the actors, tacit, mutual everyday knowledge, and symbolic meanings are sought for to convey intentions of the subjects’ actions (Blaikie, 2010). For this study that means inquiring the actor’s interpretations and meanings of interactions; aspects that remain unaddressed in the inductive and deductive approach (Blaikie, 2010). These aspects are crucial for explorative case studies treating phenomena as interpretive as the creation of value in collaborations (Dubois & Gadde, 2002). The abductive approach delivers diverse insights due to its continuous movement between the empirical world and theory. This expands the understanding of both (Dubois & Gadde, 2002). The iterative processes allow for adjustments across all stages. The authors could integrate unanticipated paths addressed during different phases of data collection and adjust the research design, e.g. in the data collection strategy. This is necessary as any anticipation of results can only be made speculatively in the beginning and emerge throughout the development of the study (Blaikie, 2010).

Using an emergent research strategy like the abductive approach asks for the ontological assumption, the view of reality, of an idealist that sees realities as representations created by human minds. The perceived perspectives of the external world can vary across all participants. Hence, all contributions need to be individually translated and interpreted into technical language based on theoretical elaborations. This is pursued under consideration of the epistemological assumption of constructionism (Blaikie, 2010; Perry, 2000). The researchers therefore view the reality of knowledge as the outcome of the subjects’ encounters, contexts, and cultural backgrounds. Consequently, the results are interpreted as relevant but varying discoveries that are not necessarily permanent nor broadly generalizable (Blaikie, 2010). These epistemological and ontological assumptions are recommended for an abductive approach and are promising grounds for the method of case study as results are strongly objective to every member of collaboration and reflect their personal, current and past experiences within and outside of their collaboration (Blaikie, 2010).

This research design is applied through the research method explained below to address the research question of “how does private-sector inter-organizational collaboration create interaction and synergistic value towards sustainability?”. To address both counterparts of the research questions – those being (1) activities creating value and (2) the value created addressing sustainability challenges – in-depth individually, the research question is split into two parts that read as follows: “What activities of a working group contribute to the co-creation of interaction and synergistic value?” and “How can interaction and synergistic value created in a private-private collaboration address sustainability challenges?”.
3.2 Research Method

This study explores collaboration and value creation towards sustainability in the context of private-sector efforts to address marine plastic pollution as a global sustainability threat. A qualitative research design is used, complementary to the exploratory nature of the study (Creswell, 2014). Following an emergent approach, data is collected and analyzed in order to create a holistic picture of the facets and processes playing a role in the studied phenomenon – the co-creation of interaction and synergistic value in the setting of private-sector partnerships towards sustainability (Creswell, 2014). The collection of empirical data in a “natural setting sensitive to the people and places under study” (Creswell & Poth, 2018, p. 175) paves the way for an in-depth analysis revealing the activities and processes fostering the co-creation of value towards sustainability.

The qualitative approach is very sensitive to contextual factors and thereby suits the research purpose, as the analysis of interaction and synergistic value requires careful consideration of the setting in which processes take place (Creswell & Poth, 2018). Private-sector inter-organizational collaborations towards sustainability are dynamic and fairly unique in the way they work together to co-create value (Austin & Seitanidi, 2012a). In order to thoroughly examine these practices that stem from a deeper level of collaboration, a single, in-depth case study on the Next Wave initiative is conducted, allowing a detailed analysis of the phenomenon. By specifically focusing on the aspect of value co-creation in the course of the research, the case can be characterized as narrow in scope (Creswell & Poth, 2018).

The NextWave initiative as the case under study reflects a contemporary bounded system that is being observed at a specific place within a certain timeframe (Creswell & Poth, 2018). The qualitative inquiry intends to provide answers to the posed research questions as well as detailed descriptions and emerging themes in the specific context of the NextWave initiative (Creswell, 2014). The qualitative findings are therefore not intended to be used for broad generalization, but they may be generalizable to similar social phenomena or cases and thereby benefit future research (George & Bennett, 2005).

Following the abductive approach introduced in section 3.1, theory was initially reviewed and then refined throughout the empirical research process in an ongoing learning loop (Spens & Kovács, 2006). This process of systematic combining implies an iterative process of data collection and theory matching that leads to understanding the studied phenomenon more deeply (Spens & Kovács, 2006). In the course of the case study on value creation processes towards sustainability, data was collected through semi-structured interviews with NextWave members (section 3.2.3). Based on insights gained throughout the data collection process, the theoretical base (Chapter 2) was adjusted in accordance to the abductive approach chosen.

3.2.1 Selection of the Case

A pre-defined set of criteria guided the selection process of the case which is used to analyze the co-creation of interaction and synergistic value towards sustainability within private-sector collaborations. Table 1 gives an overview of the criteria that were decisive in the selection of the case.
Table 1: Selection Criteria of The Case of a Private Sector Initiative

<table>
<thead>
<tr>
<th>Member engagement</th>
<th>Voluntary commitment of participating businesses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Involvement of member companies from different industries</td>
</tr>
<tr>
<td></td>
<td>Member companies operate on the global market</td>
</tr>
<tr>
<td>Value creation strategy</td>
<td>Proactive approach in addressing the sustainability problem</td>
</tr>
<tr>
<td></td>
<td>Focus on tackling the problem at the source</td>
</tr>
<tr>
<td></td>
<td>Clear goals towards creating a long-term, positive impact</td>
</tr>
<tr>
<td></td>
<td>Open source approach to enable others</td>
</tr>
<tr>
<td></td>
<td>Global as well as local measures are taken</td>
</tr>
</tbody>
</table>

The mentioned criteria were established in order to identify an initiative that matches the complex and interconnected character of the sustainability challenge of marine plastic pollution, which requires a holistic and collaborative approach of various actors on a local as well as global level (Vince & Hardesty, 2017; Xanthos & Walker, 2017). Based on these criteria, the Next Wave initiative was chosen due to its wide reach through connecting geographically dispersed companies from different industries to collaborate synergistically across their networks. In the context of analyzing value creation processes towards sustainability, NextWave stood out based on its clear, long term goals and set strategies on how to address the problem of marine plastic pollution whilst creating benefits for a broad range of stakeholders. The initiative follows a source-reduction approach, which from a scientific perspective is perceived as more effective than clean-up projects since they aim at reducing harm to the environment long-term (Vince & Hardesty, 2017). The working group was established based on the members’ aspirations to drive change and reflects a strong focus on the shared sustainability goal and not on individual economic interests (NextWave, 2018b). The strong founding principles of the working group as well as their targeted approach on how to make a positive impact on a local and global level through collaboration supported choosing NextWave for analyzing underlying value creation processes.

3.2.2 The NextWave Initiative
The NextWave initiative was convened by Dell and The Lonely Whale Foundation – an incubator for green ideas to protect the world’s oceans (Dell, 2018). Together, they plan to create “the first cross-industry, commercial-scale, global ocean bound plastics supply chain” (NextWave, 2018b). This open-source initiative brings consumer-focused manufacturers together in a collaborative effort to integrate ocean-bound materials into their products (Dell, 2018). Members voluntarily commit to identifying possibilities to reduce source plastic in their operations and supply chains (Dell, 2018). Their common goal is keeping more than three million pounds of plastic and nylon from entering the ocean in the next five years (Dell, 2018).

It is supported by scientists and other advocates working with ocean plastics to align the open source supply chain infrastructure with both the NextWave goals as well as global social and environmental standards (NextWave, 2018b). The businesses collect plastics from waterways and coastal areas, aiming to recycle them before they can affect marine environments (Dell, 2018). After the collection, the plastics are refined and sometimes mixed with other recycled plastics to ensure that impurities do not affect the quality or chemical composition of the end product (Dell, 2018).

Next to Dell, current NextWave members are the multinational companies General Motors, Herman Miller, Humanscale, TREK Bicycle and Interface plus the two small companies Bureo and Van de Sant (NextWave, 2018a). Apart from the Dutch company Van de Sant, all businesses lead from North America (VanDeSant, 2018). Herman Miller, Humanscale and Van de Sant are manufacturers of
furniture. All other companies operate in different industries such as automotive, flooring, and leisure (Bureo, 2018; GM Green, 2018; Interface, 2018; Trek, 2018).

Especially the two small companies Bureo and Van de Sant both already base their value proposition on recycled materials (Bureo, 2018; VanDeSant, 2018). Bureo solely uses recycled fishing nets from coastal zones as a resource and Van de Sant manufactures high-end furniture with frames being made entirely from plastic waste gathered from both land and oceans (Bureo, 2018; VanDeSant, 2018). The company Interface has highly circular structures in place and works actively to improve circularity even further (Interface, 2018). Their efforts in the NextWave initiative are therefore aligned with their core business. Others incorporate NextWave in their CSR actions. Centrality to the core of the business may vary and is subject to change (Bureo, 2018; Dell, 2018; GM Green, 2018; Humanscale, 2018; Interface, 2018; Miller, 2018; Trek, 2018; VanDeSant, 2018).

3.2.3 Data Collection and Analysis
This section provides an understanding of approaches taken and procedures followed in the process of data collection and data analysis. Theoretically argued for and tested, they shall provide opportunity for replication of the study.

3.2.3.1 Data collection process
The data collection process followed the intent of creating a purposeful sample of data on collaborative structures and value creation processes within the NextWave initiative in order to gather information needed to answer the posed research questions (Creswell & Poth, 2018).

After the selection of the case, NextWave member companies were quickly identified but it was anticipated that finding actively engaged representatives in the NextWave initiative could be problematic due to the large size and geographical dispersion of most of the companies. Gaining access to the data has therefore been one of the primary concerns for the authors and was thoroughly considered in the planning of the data collection process. Consequently, time played a very important role and companies were contacted in early stages of the research to allow sufficient time for response. Alongside persisting efforts via multiple access points, the Lonely Whale Foundation substantially facilitated the process of getting in touch with NextWave members for data collection purposes. Data collection activities in the form of semi-structured interviews were then conducted over a time span of two months, the activities will now be further elaborated on.

3.2.3.2 Semi-structured interviews
Semi-structured interviews with NextWave members were conducted as the data source. In-depth interviews are most suitable to answer posed research questions as they provide detailed information and deep insights from the participants’ point of view (Guest, Namey & Mitchell, 2013). This is important, when considering that interaction and synergistic value stem from close interrelations between partners and entail intangible value assets (Austin & Seitanidi, 2012a). To surface tacit understandings of co-created value types, interview participants need to be able to elaborate on what they perceive as relevant. Therefore, the semi-structured style of interviewing, although guided by the interviewers, creates a conversational atmosphere and allows to explore brought up topics more deeply through follow-up questions (Guest, Namey & Mitchell, 2013; Creswell & Poth, 2018).

The design of the interview guide (Appendix B) is based on the conceptual framework (Figure 8), which reflects the theories on inter-organizational collaboration and value co-creation (Chapter 2). A broad introduction question posed in the beginning of the interview helps all participants to ease into the conversation and topic. The first set of questions on inter-organizational collaboration within the NextWave initiative aims at mapping a detailed picture of how members work together. The focus
hereby lies on receiving extensive information on collaboration structures and processes which possibly contribute to the co-creation of interaction and synergistic value. Specifically, the questions are directed towards identifying: the types of resources that members bring into the collaboration, how these are combined through collective activities, and which practical as well as strategic benefits members see in their common efforts. Building up on that, questions on value creation aimed at understanding how value is perceived within the collaboration and which activities are thought to create value towards sustainability.

The interview guide has been adjusted throughout the data collection process due to various reasons. When interviewees showed difficulties in answering straight away, questions were formulated more precisely. As research focuses on analyzing value co-creation, the questions of both parts were reviewed after every interview regarding their contribution to collecting information that can be used to identify value types and processes. Answers were cross-checked with theories in an iterative process to assess if the chosen theories can be sufficiently connected to the emerging themes of the interviews. The development of the interview guide can be traced by comparing Appendix A and B.

The interview participants were chosen based on their engagement as company representatives within the NextWave initiative. They had varying higher-level positions within the companies but mostly worked in leading positions in the sustainability department, material sciences or innovation. Prior to the interview, participants were informed in detail about the purpose of the study as well as the general topics that would be touched upon during the interview. The communication per email in this phase had the intention of building rapport with the research participants as well as providing them with information needed on confidentiality, use of data and expected benefits, so they feel comfortable pursuing the interview (Creswell & Poth, 2018). A total of eight interviews was conducted in the time frame of June to August 2018. Every interview lasted between 30-60 minutes, a full overview is given in table 2. Before conducting the interview, verbal consent of the participants was obtained regarding recording the conversation for analysis purposes. They were furthermore assured confidential treatment of the data as well as anonymization of their personal details within the research.

Due to geographic circumstances, all interviews were conducted via video chat or call and transcribed to enable analysis. The interviews were conducted in English and, except for two out of eight, were conducted by both researchers together. After completing the interview, transcripts were sent to the participants for the possibility to review them for accuracy. All participants have been given alias’ to ensure anonymity which are used throughout. Field notes have been collected during the interviews and reviewed after to be included in the analysis later.
Table 2: Data Collection Overview – Semi-Structured Interviews

<table>
<thead>
<tr>
<th>Date</th>
<th>Medium</th>
<th>Alias</th>
<th>Position</th>
<th>Industry</th>
<th>Company-size</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.06.2018</td>
<td>Video chat</td>
<td>Andy</td>
<td>CEO &amp; Founder</td>
<td>Furniture</td>
<td>SME</td>
<td></td>
</tr>
<tr>
<td>24.07.2018</td>
<td>Call</td>
<td>Brian</td>
<td>Innovation Partner</td>
<td>Flooring</td>
<td>MNC</td>
<td></td>
</tr>
<tr>
<td>24.07.2018</td>
<td>Call</td>
<td>Chris</td>
<td>Director of Workplace Strategies</td>
<td>Furniture</td>
<td>MNC</td>
<td></td>
</tr>
<tr>
<td>30.07.2018</td>
<td>Video chat</td>
<td>Diana</td>
<td>Executive Director</td>
<td>Environment</td>
<td>SME</td>
<td></td>
</tr>
<tr>
<td>31.07.2018</td>
<td>Call</td>
<td>Evan</td>
<td>Director Procurement, Packaging Engineering</td>
<td>Technology</td>
<td>MNC</td>
<td></td>
</tr>
<tr>
<td>31.07.2018</td>
<td>Call</td>
<td>Finn</td>
<td>CEO, Co-Founder</td>
<td>Leisure/</td>
<td>SME</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sporting goods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>03.08.2018</td>
<td>Call</td>
<td>Grace</td>
<td>Project Manager, Sustainability Department</td>
<td>Automotive</td>
<td>MNC</td>
<td></td>
</tr>
<tr>
<td>07.08.2018</td>
<td>Call</td>
<td>Hilda</td>
<td>Core Team Leader, Material Innovation Dep. Material Science Engineer</td>
<td>Furniture</td>
<td>MNC</td>
<td></td>
</tr>
</tbody>
</table>

3.2.3.3 Data Analysis

The process of content analysis followed in this work is threefold. It consists of data condensation, data display and the drawing and verifying of conclusions (Miles, Huberman & Saldaña, 2014). Some data condensation has already taken place during data collection processes, e.g. by setting the focus on certain spectra and designing the interview guide in iterative cycles. This procedure is not only in accordance to the abductive approach, it is also the recommended procedure to allow new and refined findings leading to higher quality results (Miles, Huberman & Saldaña, 2014). Further condensation takes place during revision of the collected data in its processed and transcribed format to allow for the necessary foundation of a quality analysis (Miles, Huberman & Saldaña, 2014).

3.2.3.4 Codes for analysis

The conceptual framework (Figure 8) served as a general structure throughout the coding process. Two cycle coding is pursued to deepen the analysis. The first coding cycle is more descriptive and a mix of inductive and deductive coding. In the initial review of the data, lean coding in accordance with the main categories of the conceptual framework allowed the researchers to keep an open mindset and observe emerging themes (Creswell & Poth, 2018). The initial short-list of codes helped identifying text passages which address Collaboration, Scope of activities, Interaction value, Synergistic value, Strategic Value, Types of Resources, Engagement, Innovation, Importance to Mission and External System Change. Both researches added short descriptions to the labels, capturing ideas developed during the reading process (Creswell & Poth, 2018).

In the second coding cycle, the code list was expanded while both researchers cross-checked the preliminary codes as well as added notes. Sub-codes to the overarching codes as well as additional themes that had emerged were included in the code book. Both researchers reviewed certain phrases collaboratively and engaged in discussions to establish common definitions of the codes and which led to the final code list with descriptions as depicted in appendix C. The computer-assisted data analysis tool NVivo supported the second analysis cycle by categorizing the data accordingly to the defined codes and providing the researchers with counts of occurrence within the textual data (Yin, 2006).
However, the output of the software is only used as additional support in the process of matching codes with textual data. The analysis’ core is developed through the analytic rationale of the researchers. Table 3 provides an overview of the structure around the most important codes in relation to the research questions – interaction and synergistic value.

<table>
<thead>
<tr>
<th>Table 3: Overview of Crucial Codes for Research Questions with Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interaction value</td>
</tr>
<tr>
<td>Communication</td>
</tr>
<tr>
<td>Knowledge</td>
</tr>
<tr>
<td>Social Capital</td>
</tr>
<tr>
<td>Transparency</td>
</tr>
<tr>
<td>Synergistic Value</td>
</tr>
<tr>
<td>Innovation</td>
</tr>
<tr>
<td>Learning</td>
</tr>
<tr>
<td>Societal Influence</td>
</tr>
</tbody>
</table>

In the coding process, themes emerged which could then be classified as activities leading up to the co-creation of interaction and synergistic value. *Innovation* was already part of the value creation spectrum and could be connected to the development of synergistic value. Other codes such as *Knowledge* and *Learning* are also components of the collaboration-competition spectrum within the conceptual framework and could be assigned to the creation of interaction and synergistic value. The codes *Communication, Social Capital* and *Transparency* emerged as a driver of interaction value and were therefore sub-categorized accordingly. Likewise, the emerging theme of *Societal Influence* could be connected to synergistic value.

The coding process led to the interpretation of meaningful patterns, themes and categories. The coding process and then abstracting out beyond the codes and themes enabled making sense of the data and built the core of the analysis. Ultimately, the iterative process of zooming in and out in the course of the analysis enabled answering the posed research questions. The findings made through the analysis process will be presented in detail in chapter four.

### 3.3 Research Quality

In order to make a valuable contribution to the existing body of knowledge on value creation processes in the context of inter-organizational collaboration towards sustainability, the validity and the reliability of the conducted case study have to be considered. Furthermore, ethical considerations throughout the research are elaborated on.

#### 3.3.1 Validity and Reliability

A variety of measures was taken to increase validity of the case study. There has been great awareness of possible biases and actions were taken to increase accuracy and trustworthiness of the findings (Miles, Huberman & Saldana, 2014). Reflections of the researchers’ role within the study aimed at reducing the inevitable research bias to a minimum. The researchers were conscious about their cultural background as well as English being their second language potentially influencing the
outcome of the study. The majority of interview partners were native English speakers and therefore, possible misunderstandings or misinterpretations related to that were considered.

As the case study was conducted by two researchers, the collection, coding and analysis of data was consistently cross-checked to make sure the possibility of personal biases interfering with the process was minimized (Creswell, 2014). In the context of the data collection process, the interview guide was presented to outsiders with no connections to the study. This measure ensured that the formulation of the questions was precise enough to get the information required to answer the research questions, but still provided room for the participants to elaborate on topics they wanted to highlight. Furthermore, the language bias was reduced by testing the interview guide beforehand and getting an external perspective on the way questions were understood. The accuracy review with all transcripts increased validity of the results.

A range of criteria was considered to increase credibility and authenticity of the study from the readers’ perspective. By including a detailed outline of used methods and procedures, the researchers provided full transparency about the activities undertaken in the process. Presenting the reasoning behind chosen methods enables readers to follow both their line of thought as well as the sequential structure of the research. The data was linked to prior emerging theories in a clear, coherent and systematic way to provide the reader with an accurate portrait of the social phenomenon under study. Triangulation among complementary methods as well as sources of data enhanced this aspect (Miles, Huberman & Saldaña, 2014).

Reliability was considered continuously to make sure the research is “stable over time and across researchers and methods” (Miles, Huberman & Saldaña, 2014, p. 312). The conceptual framework was used throughout the process of the data collection to maintain a clear and congruent connectedness to theory. As two researches were involved, inter-code agreement as well as data quality checks were made. The majority of interviews was conducted by both researchers and the few that were conducted by a single researcher were afterwards checked in detail by the other.

3.3.2 Ethical Considerations
To prevent ethical issues, particularly in the process of data collection as this is the process in which it comes to issues most frequently (Creswell & Poth, 2018), the purpose of the study has been openly posed to all participants. All participants have been informed about the anonymity of their statements prior to the interview and alias’ have been given in the case presentation and the analysis to respect their privacy. They have been given the opportunity to ask question and the option to refuse to give an answer. Questions have been posed openly and clearly to avoid an interpretation of deception. The retrieved data is checked upon by the interviewees personally before it is stored securely and will only be accessible to the authors and authorities if inquired for specifically for the purposes of validation (Creswell & Poth, 2018). During analysis, the two authors keep each other in check to avoid bias with certain participants that could lead to a disclosure of results that is only limited to positive results (Creswell & Poth, 2018). These considerations have already been made during the conceptualization of the interview guide by avoiding weighing questions in one direction and maintaining a neutral tone. Thereby the authors offer compliance to ethical considerations (Creswell & Poth, 2018).
4 Empirical Data and Findings

This chapter is structured into three main sections to present the findings in relevance to the two sub-questions which lead up to answering the main research question. First, the collaborative structures creating the environment that interaction and synergistic value stems from is analyzed (section 4.1). Second, it is presented which activities of NextWave result in the co-creation of interaction and synergistic value NextWave and how they address the sustainability challenge of marine plastic pollution (section 4.2). Building on this, conclusions on the interplay of the different components are drawn to analyze how private-sector inter-organizational collaboration creates interaction and synergistic value towards sustainability (section 4.3).

4.1 Case-Specific Collaborative Context

Before describing the various activities of the NextWave initiative and highlighting, in which way they favor the co-creation of interaction and synergistic value, it is necessary to map the collaborative structures as they largely influence ongoing value creation processes. Starting at the base of the conceptual framework, the contextual setting of the NextWave working group is characterized according to the Cooperation-Competition axis of DiVito and Sharma’s (2016b) Competitor Collaboration Grid (Figure 1) which enables to analyze private-sector partnerships towards sustainability (DiVito, 2016a). The theories on CoPs, presented in section 2.1.2, equally support the analysis as the NextWave structure matches the character of a CoP.

The conducted interviews with the NextWave members provide detailed insights in the collaborative structures within the working group and are analyzed for cooperative of competitive characteristics in the context of sustainability goals, knowledge sharing, social learning, openness for change, and resource allocation (DiVito, 2016a). Analyzing the contextual factors ultimately enables characterizing the collaboration as competitive or cooperative. The necessity of mapping collaborative structures stems out of the circumstance, that a cooperative environment is required to co-create interaction and synergistic value (Austin & Seitanidi, 2012a).

4.1.1 Sustainability Goals

The overarching theme, mentioned most frequently by the interview partners and therefore identifiable as the main driver of the cooperative nature within NextWave, is the presence of collective sustainability goals or, in line with the qualitative code book (Appendix C), the member’s aspirations to pursue external system change towards sustainability. Even though sustainability is differently integrated in each company – sometimes directly connected to the company’s core competencies and other times present in the form of sustainability departments or initiatives – the shared sustainability goal plays a unifying role within the collaboration. This stands in line with Luo’s specifications on cooperative relationships, which highlights that committing to common goals in certain domains is an important factor when striving to collectively enhance performance (Luo, 2007). The members’ commitment to shared sustainability goals as well as to common founding principles is also engrained in the NextWave charter: according to members, the ten principles regulate their interactions and makes sure all voices are heard equally (NextWave, 2018b).

The working group’s effort to address marine plastic pollution via the source-reduction approach of integrating ocean-bound plastics into corporate supply chains narrows the common focus and thereby makes the complex sustainability problem more tangible. The members show high commitment to increasing their impact through collaborative actions, as the following comment shows:
What makes the NextWave initiative really unique is that it’s a group of manufacturers that wants to sit at the table and participate and ruminate. NextWave is about collaborative action, it’s about finding a solution, implementing it and executing it, driving through results. So you know, we’re not just sitting at the table, talking about what crisis it is, what we should all do about it, we’re discussing concrete materialistic solutions and that’s huge, and I think that every organization that has joined NextWave is striving for results and they wouldn’t have joined if they did not want to be a part of the solution (Brian, call).

4.1.2 Knowledge Sharing

The cooperative character of the working group is also shown by the members’ willingness to share knowledge, even though some of the participants are competitors from the same industry. Based on the theories of Reed et al. (2014) and Lesser and Storck (2001), the participants’ extensive engagement in reciprocal knowledge sharing processes helps classifying the Next Wave working group as a CoP. One decisive factor in this context is the co-creation of knowledge during meetings and the subsequent implementation of this knowledge within Next Wave member companies.

The empirical data shows that the companies highly value knowledge sharing within the group but based on the protection of intellectual property when it comes to discussing technology and R&D issues, this continuum represents the greatest tension field within the collaboration. The members show awareness of this tension and admit to sometimes hold back certain information in order to protect the intellectual property of the company:

*there are a couple of participants in the organization, in the group that are within the same industry. [...] So, we are very protective of our IP’s and we have been somewhat reluctant to completely share well – really everything [...] you know even though what we’re working in is not even in direct competition with anything with them, but we feel we are just being protective of the project until we’re at a point where we feel comfortable publicly disclosing (Hilda, call).*

Despite hesitancy to share certain information due to the character of a competitor collaboration, member companies accept this tension and try to move past it: “I think the challenge is that every company has to draw the line on what they’re willing to share. The spirit of NextWave is to make sure that line is to share as much as possible” (Andy, video chat). This results in their effort to share as much as they can without violating company-internal non-disclosure agreements (Brian, call).

As elaborated in section 2.1.1, theories suggest that competitor collaborations face various inherent tensions that are rarely resolvable due to the complex character of this form of inter-organizational collaboration (DiVito, 2016b). However, these tensions do not necessarily interfere with neither establishing a well-functioning partnership nor reaching the desired outcomes as long as they are adequately managed throughout the collaborative processes (DiVito, 2016b). In the setting of the NextWave initiative, the possible interference of hesitancy in knowledge sharing due to competition was addressed early on through the collaborative establishment of founding principles. These function as guidelines that all members identify with and can refer back to in different situations. Members see them as a way to remove barriers, overcome competitiveness and go in-depth in their dialogues instead of keeping the conversation on a generic level (Finn, call).

The group wants to carry this spirit of openness and transparency also to their external environment and therefore follows an open source approach, meaning that instead of keeping their knowledge within NextWave they make it publicly available under the Creative Commons License (Brian, call). They base this choice on their commitment to the shared sustainability goal and the change they aspire to see externally:

*we don't mind if other companies mimic or other groups follow, we won't be able to be addressing this issue alone. So, nothing that we create is private and tucked away it's all out there for people to see and to be able to either use or hopefully a form of inspiration for their own projects and efforts (Brian, call).*
4.1.3 Social Learning

As previously mentioned, the NextWave setting reflects the structure of a CoP towards sustainability as characterized in section 2.1.2. Especially the working groups collective intention of deepening their knowledge around the use of waste plastics connects with Wenger et al.’s (2011) definition of a CoP. NextWave is centered around the shared goal of addressing the sustainability challenge of marine plastic pollution (all participants, video chats/calls). In this context, they aim at bringing expertise from various industries together to share knowledge on how to integrate ocean-bound plastic into products and thereby their corporate supply chain (all participants, video chats/calls). The latter reflects the shared domain of skills and techniques which according to Lesser and Storck (2001) shapes the learning activities of a CoP (Lesser & Storck, 2001). Through reciprocal knowledge-sharing processes and the development of a shared understanding of topics, social learning takes place (Reed et al. 2014). Social learning is also a component of the Competitor Collaboration Grid and thereby included in the conceptual framework (Section 2.3). It represents cooperative collaboration in the continuum as opposed to individual learning (DiVito, 2016b). In the case of NextWave, the group shares knowledge in order to collectively establish a supply web around ocean-bound plastic through connecting their individual supply chains (Brian, call). This collective approach reflects both cooperative behavior within the group and what Blackmore (2007) characterizes as concerted action indicating the implementation of co-created knowledge in order to address a shared sustainability goal. Next Wave members show a clear focus on taking action and implementing the outcomes of social learning processes, which according to Blackmore (2007) is a pre-requisite for co-creating value and driving change towards sustainability. The processes of knowledge sharing, a form of interaction value and social learning as well as an indicator for synergistic value, will be further elaborated in connection to NextWave activities in section 4.2.

4.1.4 Openness for Change

Another component of the continuum is openness for change, which reflects the members’ willingness to implement collective decisions in the individual organization (DiVito, 2016). In order to reach shared sustainability goals, a certain degree of interdependence between the members is required and firms focusing on private interests can possibly interfere with the implementation of collective decisions (DiVito, 2016). In the context of NextWave, all members stressed that the initiative is rather action-oriented and a special focus lies on finding concrete solutions to common issues that can be implemented in near future and actively contribute to reducing marine plastic pollution (all participants, call/video chat). As Blackmore (2007) pointed out, moving beyond the talk is essential for driving change towards sustainability.

One factor which facilitates the implementation of collective decisions that contribute to keeping ocean-bound plastics within the economy is some of the members’ expertise in this field. Several of the participating companies have years of experience in integrating waste plastics into their supply chains, giving them a valuable set of skills that can be shared on a practical level within the group (Diana, video chat). Therefore, members of the working group are in a position to implement practical solutions that have an immediate impact on their environment while strategically planning further steps that can upscale their actions and ultimately drive change:

This is the only initiative that is having real impact today. So, where others are still planning, they're studying, they're trying to figure out where they're going to put their infrastructure or how they're going to do it, these companies have been doing it for [...] years. So, it shows that you don't have to wait until 2020 to make a difference, you can make a difference in 2018 (Diana, video chat).
However, participants admitted that implementing changes can be a difficult process and is to a certain degree also connected to the size of the company (Andy, Chris, Hilda, Ilse, video chats/calls). While SME’s appear to be quite agile and hands on in relation to changes, it can take time to reach comprehensive, internal support in large corporations (Brian, Chris, Hilda, Ilse, call). Some members assert, that it is rather time consuming to reach consent from the top-level management in certain situations (Brian, Chris, Hilda, Ilse, call). In addition to that, the sustainability standpoint of corporate leaders can have a great influence on executing collective decisions made within the working group (Brian, Chris, Hilda, Ilse, call). Especially decisions connected with economic impacts such as higher production costs or research and development investments can initially cause hesitancy within the company and require adequate management (Hilda, Ilse, call). According to members’ experiences, support and openness to change can be enhanced when bringing the discussion from a short-term, practical level to a long-term, strategic perspective – stressing the possible future benefits to both the company as well as the environment (Hilda, Ilse, call). Conclusively, learning processes within the group as well as internal support from the organization are perceived to be crucial in order to stay agile and open to change:

Honestly, every company can do this. And as long as we just have the strength to do it, and the power and not be afraid that your company has to change. So, we learn from each other, but I noticed that everyone has also their own opinion. [...] And that’s why the learning process for everyone is still in the process of learning. But it’s very important that you have the whole company with you because a lot of people are still in this world thinking 'you know what, it’s all about the money'. But it’s not only about the money anymore (Andy, video chat).

4.1.5 Allocation of Resources

The last component of the continuum influencing private-sector competitor collaborations towards sustainability is the allocation of resources. Several researchers on competitor collaborations such as Luo (2007), DiVito (2016), and Christ et al. (2017) highlight the benefits of combining various types of resources within partnerships as it broadens the scope of individual members. The amount of resources that members invest into the partnership equally reflects their engagement (DiVito, 2016). The participants stressed, that the most valuable type of resource each member brings into the partnership is their expertise (all participants, video chats/calls). The members cover a wide ground – ranging from communication, marketing, and supply chain expertise to extensive knowledge in environmental, technical, and material innovation (all participants, video chats/calls). While they bring in multiple perspectives due to organizational differences such as industry and company size, they simultaneously overlap in their efforts in using recycled materials throughout their supply chains as well as minimizing their environmental impact (all participants, video chats/calls). Despite great organizational differences, members stress, that every company contributes what they are capable of and they only hold themselves accountable to the common goal:

I think all the member organizations are really good about not being egotistical about their involvement in Next Wave even though every manufacturer is at a different stage in their use case. Nobody says we’re leading the charge. [company name] doesn’t say, as the largest member we’re undoubtedly powering the most resources into this, Next Wave is really our baby. Nobody comes out and says that. Everybody is very altruistic about their involvement with Next Wave (Chris, call).

4.1.6 Cooperative Collaboration Towards Sustainability

The analyzed interviews reveal a cooperative collaboration towards sustainability – therefore, the initiative can be placed towards the right side of the continuum, which indicates rather high resource allocations, willingness to knowledge sharing, collective sustainability goals, openness to change and processes of social learning (figure 2). This finding is based on the members’ descriptions of the way
they interact, communicate, seek each other’s advice, and support their collaborative as well as individual actions.

In the frame of the collaboration, the members actively draw from their expertise and seem very engaged when it comes to investing time to support co-members with their knowledge (all participants, video chats/calls). Their communication is not restricted to official NextWave meetings, instead they created an open, collaborative environment which encourages a continuous dialogue (all participants, video chats/calls): “They are all connected to each other, they can pick up the phone at any time, they’re part of a little ecosystem now” (Diana, video chat). Members affirmed that they often use this possibility and invest time – reflecting another type of resource – to communicate with each other, give advice and exchange thoughts on ongoing processes they face in their daily operations (Evan, call). This continuum reflects through looking at resource allocations the engagement of members – analyzing if there is a common effort everyone participates in or if there are free-riders and opportunist among the group (DiVito, 2016). During conversations with the members, there were no statements about individualistic behavior, driven by private interests. Instead, through fostering relationships within the working group, members seem to have developed what a sense of obligation as well as a common language and context (Lesser and Storck, 2001). This relational base contributes to the contextual setting in which value creation activities take place. It manifests in statements such as the following, describing the working group as a “collaboration of like-minded companies [with] similar viewpoint[s]” (Evan, call).

Conclusively, the contextual setting for the creation of interaction and synergistic value is characterized by a cooperative collaboration towards sustainability. Group activities are driven by the shared sustainability goals of the working group which simultaneously unify the group and foster processes of knowledge sharing and social learning. The NextWave working group actively tries to confront and manage the complexity of a competitor collaboration towards sustainability in order to create an environment in which members are open to internal and external change and contribute to developing solutions as equals.

4.2 Collaborative Activities and Processes

The previous sections outline the characteristics of the collaboration NextWave and specifically highlight certain efforts members have installed that will qualify its contextual setting to move into the right spheres of the first level of the conceptual framework. As indicated by the framework, this provides a promising basis for co-creation in the integrative or transformational stage (Bowen, Newenham-Kahindi & Herremans, 2010; Austin & Seitanidi, 2012a, Austin & Seitanidi, 2012b). However, before being able to confirm this potential taken advantage of, the individual activities need to be assessed on their viability of creating sustainable (Section 4.2.1), interaction (Section 4.2.2), and synergistic value (Section 4.2.3). This will provide grounds to answer the first research question posed by the authors: What activities of a working group contribute to the co-creation of interaction and synergistic value?

A range of activities has been addressed during qualitative data collection. Some of them by all members whereas a few have only been mentioned by some or just one individual, each of which bringing particular insights into the study. The activity clusters that have been addressed are elaborated on in the next three sections from most to least named.

4.2.1 Processes Contributing to the Co-Creation of Sustainable Value

At the basis of any collaborative co-creation towards specific goals lie the framework activities that enable an exchange. All study participants pointed out the existence of set quarterly meetings (all
participants, call/video chat). The members are “sharing in the effort to host and cover the cost of gathering the group together” (Hilda, Ilse, call), although representatives of the Lonely Whale Foundation play a big role in the organization of the meetings. They hold “quarterly meetings with all members and facilitate a two-day process” (Diana, video chat) to go through where members stand and provide a platform for exchange to attain their primary purpose:

*To decrease the volume of plastic and nylon litter and waste before it enters the ocean the members of NextWave commit to demonstrating to other companies the commercial viability and advantages of integrating ocean-bound plastics into their supply chains in the context of heightened consumer, stakeholder, and policy-maker awareness of the environmental impacts of marine plastic (NextWave, 2018c).*

This set goal, framing all following activities, is in line with the concept of sustainable value by Hart and Milstein (2003) and, at the very basis, follows the strategy of pollution prevention. However, the platform they have created is extended to informants from outside the industry. By “bringing experts to the table [they] make sure that [everyone has] up to date information on the science and how it's moving” (Diana, video chat). Experts from fields of scientific research and environmental advocacy support the working group in their thought process (NextWave, 2018c; Diana, video chat). This enables the members to have discussions based on their individual expertise of inside the industry and merge it with the insights from outside the industry. Hence, this effort of stakeholder inclusion by invitation marks for the product stewardship strategy for the creation of sustainable value (Hart and Milstein, 2003).

Furthermore, the clean technology strategy is applied by developing the use cases that include ocean plastic: either in parts or fully, every member is working to introduce into their product portfolio (all participants, call/video chat). The use cases will be elaborated more in detail below. Having addressed three of the four strategies for the creation of sustainable value according to Hart and Milstein (2003), the final strategy left to be addressed is the sustainability vision. This sustainability vision is adhered to by a) the prior quoted excerpt of their primary purpose on the previous page (NextWave, 2018c) and b) by their explicit commitment to provide open source information:

*any company, it doesn’t matter if you’re a NextWave member or not, if you want to know what’s happening in Indonesia with the supply chain, we will take you there. We will take you there and we’ll show you. We will walk you through it. There’s no hidden agenda, there’s nothing confidential about it* (Diana, video chat)

The strong commitment to the working group offers them great strategic value. While the feasibility is not entirely determined yet and some members struggle more than others to reach economic sustainability with their use cases, the consumer pull is a strong indicator for economic value delivery (majority of participants, call/video chat). Employee engagement reaches new peaks (majority of participants, call/video chat) and investors can make more pointed decisions, seeing that the members are “well respected within the spheres” (Brian, call). Working together, they carry potential to strategically mitigate risks which also provides them with strong strategic value (Diana, Grace, call/video chat).

The group indicates their intent of creating a shared roadmap for both members and non-members to attend to the need of reducing ocean plastics while addressing social, environmental and economic sustainability aspects proactively and from a long-term perspective. As recommended in the literature, the initiative integrates efforts from all four quadrants of the Sustainable Value Framework by Hart and Milstein (2003) (figure 3) into their strategic procedure (Hart and Milstein, 2003). Therefore, the working group can be evaluated as creating sustainable value justifying for the allocation in the analytical framework (figure 9) at the far-right end, in the transformational stage.
4.2.2 Processes Contributing to the Co-Creation of Interaction Value

As to interaction value, the most emerging activities can be clustered to the following themes: knowledge sharing, transparency building, social capital exploitation and collective communication. These themes will be elaborated on sequentially:

As the authors noted in the previous section, the quarterly meetings of the working group provide the basis of the members’ interaction and have been mentioned coherently. Another remark that has found coherence in the interviews has been a structural element of the meetings that cuts directly into the activity of knowledge sharing. With knowledge being both a requirement and result of interaction value, knowledge sharing is a central and frequently addressed activity leading to the creation of interaction value (Austin & Seitanidi, 2012a). With knowledge being both a requirement and result of interaction value, knowledge sharing is a central and frequently addressed activity leading to the creation of interaction value (Austin & Seitanidi, 2012a). The activity mentioned most concerns the presentation of use cases (all participants, call/video chat). Each quarterly meeting “every manufacturer has an opportunity to present their use case” (Chris, call) – the use case being every members’ item that includes ocean bound plastic in its product or packaging – that they have either been working on prior to the establishment of the group or have started working on with becoming a member (Hilda, Ilse, call). The presentation process has been described as a dialogue more than a monologue, stating that “there is a lot of questions going back and forth and very often a use case presentation will wander off course a little bit because it’s a very organic process” (Chris, call). Information on progress, difficulties and opportunities are shared (all participants, call/video chat). These discussions go mainly in either the area of supply chains or processing of material (all participants, call/video chat). Therefore, the exchange can include technical expertise, contacts or cultural relational aspects. In line with the concepts of Reed et al. (2014) this highlights the need of reciprocal processes of knowledge sharing for the creation of new, common knowledge.

Integral to this exchange is that members “share with each other what works, what hasn’t worked, what avenue is worth pursuing and which might wind up in a dead end” (Chris, call). This is particularly valuable when considering that member companies are at different places in the inclusion of ocean plastic into their supply chain and products. Those with stronger experience can act “as a case study to show the other companies that this is possible, and that [they]’ve been able to do it at scale” (Evan, call) which provides technical knowledge and experience that can influence developments of other companies. This has been confirmed by other members, stating that “the lessons learned from the engineers from other companies who have already been working with this material” (Hilda, call) are of great value to them. Particularly when looking at material research, value through knowledge exceeds as pursued studies can be shared (Hilda, Ilse, call) as well as labs (Brian, call) where material tests can be conducted, and sample parts can be created in collaboration between several partners of all size (majority of participants, call/video chat). This adds to the benefits what DiVito and Sharma (2016) have pointed out on cooperative collaboration: not only do large companies assist small companies in their implementation processes, but also small companies provide essential insights by their innovative and agile means.

Next to the quarterly meetings, most interviewees mentioned exchanges outside of the scheduled meetings, either in conference calls with more or just certain members: “I’ve been on technical calls, as well as supply chain calls almost constantly since last summer” (Evan, call).

Many of the respondents saw a lot of potential in these exchanges. They were referred to as “the more interesting meetings, which is all kinds of calls and meetings between the members to make projects happen” (Brian, call) like the previously mentioned manufacturing of samples (Evan, call). This shows that the members are participating in an intensive interaction to exchange knowledge based on their individual expertise which is crucial for co-creation of value.
As previously mentioned, a great fraction of the information shared has been – as it could be anticipated in line with their primary purpose – in regard to supply chains. While information about how to interact with certain vendors in different environments (Chris, Evan, call) is aligned with the idea of knowledge as created interaction value, the exchange of contacts – whether vendors or others – provides the different members with access to an extended network and social capital. “Relationships [are] a big asset that we bring to these NextWave members” (Diana, video chat), which is another benefit that can be regarded as interaction value (Austin & Seitanidi, 2012b). Members can not only directly tap into the networks of other members, but also use the collective appearance of NextWave as a group at conferences or panel discussions (Brian, Chris, Diana, call/video chat) to compound their effect and create new social capital collectively (Austin & Seitanidi, 2012b). This is a great benefit for the individual companies strategically as well as for fulfillment the purpose and spreading into other industries.

Another requirement and result of interaction value is the ministration of transparency. All members signed agreements based on the charter they developed collaboratively which stresses transparency and its open source approach as two of their foundational principles. For once, the conversation about transparency is directed internally: “in the last meeting that we had, we had a big robust conversation about what does it really mean to be open source amongst each other? […] open source is critical work [in a] collaborative” (Diana, video chat). This shows that much of the conversation is still young and some meanings still have to be developed further, especially under consideration of earlier mentioned dynamics of the competitive situation. Nonetheless, transparency has been described as “one of the most important principles, it is honesty and integrity” (Chris, call) proving its importance for the working group internally. Hence, efforts are put into practice already, allowing for interaction value to emerge. This is equally valid for transparency directed outwards in their open source efforts as it gives the group credibility (Diana, video chat) and paves the way for stakeholders internally and equally to apply learnings more rapid and speeds up approval for their societal license to operate (Austin & Seitanidi, 2012b).

Finally, many activities in regard to communication have been identified in the empirical data. The group is “collaborating on that because the message of Next Wave members has to be consistent, clear and concise.” (Chris, call).

Much input on the communication is brought in by the facilitator to “make sure that they have really good talking points on the state of plastic pollution that would be approved by scientists and the NGOs working across the globe on the issue of plastic pollution. So, that they are really in alignment with the way in which the global community is really framing the issue in the operating committees.” (Diana, video chat). This creates interaction value as it positions the group and its members collectively. This positioning includes conferences (Brian, Diana, calls/video chat) as well as other public channels such as television (Chris, call). This reflects beneficially on all members: “Obviously, we’re not doing it purely for that reason, but I think it is, there is value in that – in kind of talking about it and being able to kind of say, like, we’ve taken a stance on this issue” (Hilda, Ilse, call).

4.2.3 Processes Contributing to the Co-Creation of Synergistic Value
Activities contributing to the creation of synergistic value could be broadly clustered into three themes, listed according to the relevance in the discourses: learning, societal influence and innovation.

Learning as a synergistic value can be seen as a direct result of successful knowledge sharing, an activity of interaction value creation which is enhanced by the setting of cooperative collaborations. It is recognized by the group as one of the most relevant results of their interaction (majority of participants, call/video chat). Learning is engrained in the very core of the working group as they state that they are “a group of private-industry manufacturers who are collaborating in a very open-source
Equally, the influence can be extended on whole societies (Chris, call). This statement implies the act of learning together and finding solutions for the addressed issue of marine plastic pollution collectively (all participants call/video chat). Therefore, they pursue strategic learning that aims to preserve combined knowledge in the long run, focusing on not just “handing the answers over [but rather] sharing process, protocol and methodology” (Chris, call).

An emphasis is set on the endurance of the learnings and a proactive approach on applying them: “it’s not just a meeting where ideas are shared, and people walk away and focus on their own thing” (Evan, call). The charter of principles is understood as “guardrails” (Finn, call) for this process: “you develop new solutions and new paths as a result of those principles and guidelines” (Evan, call). This commitment to common goals and pathways is in line with the concept of synergistic value that aims for accomplishments that bloom from combined efforts and can, therefore, extend the mere sum of its parts (Austin & Seitanidi, 2012b; Luo, 2007). Learnings are pushed even further by the members actively challenging themselves and each other (majority of participants, call/video chat). This has been reflected in many statements with an emphasis on being critical towards each other:

{Company name} makes the packaging, but it is not circular because the packaging is packaging material. So, I asked the question ‘But what do you do? Do you have some kind of return program?’ They said they’re working on it, but when the packaging is ending up in the ocean again is not really circular and even if they pick it up again, that’s not the way it’s supposed to be (Andy, video chat)

Being critical and challenging to enable social learning and to maximize results not only creates value internally but also increases the potential to externalize created value for the social good, which is a crucial part of synergistic value. This stands in line with Blackmore (2007), stressing that driving change requires deep interactions among interdependent stakeholders. Any learnings taken and published can potentially be applied by external entities as well, bringing more discarded resources back to the market, increasing its perception of value and then in a virtuous cycle leading to more social and environmental betterment (Austin & Seitanidi, 2012a; Austin & Seitanidi, 2012b).

All interviewees specifically mentioned the societal influence they are aiming to have to push progress in the bigger picture: “some people want to hear how much plastic we use, but that’s actually not the value. The value is that we do it. That we give an example, all of us. […] we are the starters and more people are welcome in creating this high value” (Andy, video chat). Equally, the compounded effect has been mentioned by all interviewees. Statements along the line of “more companies have greater pull than just one” (Grace, call) confirm the intentional influence the group seeks out to extent their societal influence while simultaneously reaping individual benefits, creating that virtuous cycle addressed in literature (Austin & Seitanidi, 2012b).

Although the working group consists of actors of the private sector, also other actors, such as academia (Andy, Brian, Evan, call/video chat) and NGOs (Brian, Diana, call/video chat), are influenced by their efforts creating a reciprocal effect of control and benefit:

We have a good kind of scientific and NGO group that we work with […] And I think for that group, they keep us on track […] [and] the benefit for them is NextWave and its members can become a kind of trusted reference within the corporate world to bounce ideas off (Brian, call)

Individuals can be addressed by this influence as well, as the purchase of use cases has the potential to empower consumers in their purchasing power (Chris, Diana, Finn, call/video chat) inspire people (Evan, call) and raise awareness to the issue (majority of participants, call/video chat).

Equally, the influence can be extended on whole societies:

having these case studies of companies that are actually working on supply chains together. And that would be like an example of: a couple of big companies go to Southeast Asia, evaluate a problem and they’re able to actually implement a supply chain, which I know has been discussed (Finn, call)
Activities as such can drive local economies in areas that can benefit of economic growth. This can potentially positively impact prosperity and quality of life as infrastructure increases, jobs are created, and the issue of plastic pollution is addressed at its roots (Brian, Evan, call). This potential to societal development will be more commented in the next section.

An acute driver of synergistic value as well as for learning and increased societal influence is innovation. Innovation has been the subject of a number of talking points in the interviews. Several types of innovation have been addressed: Product/material innovation, technology innovation as well as process innovation (majority of participants, call/video chat). While mostly activities that are visible externally have been addressed, also internal activities have been called for, such as the reduction and elimination of non-essential plastics across internal operations and supply chains which ultimately manifests the area of concern in the organizational culture (Diana, video chat). Again, the overarching theme of open source and information sharing has been echoed expressing that “the open source concept is the right way to go because it really allows us to leapfrog through this process of discovery and innovation” (Chris, call), all the while stressing the applicability in many industries on an operational basis:

We are trying to develop something that will also be helpful in other industries, to achieve that there is less packaging or that packaging is always returned (Andy, video chat)

as well as on a strategic basis:

instead of just looking at one single supply chain vertically and concentrate on your own business, this is a more collaborative effort. It’s more of a supply web rather than just a supply chain (Brian, call).

As disclosed in prior sections, the scope of activities is eminently broad and includes activities of practical, strategic and innovative nature. However, the focus area is narrowly set on developing supply chains to integrate ocean plastics. Taking manifold approaches from several viewpoints of different companies to one narrow focus area enables innovative approaches with large potential for entirely new forms of change as well as opportunity for organizational and systemic transformation (Austin & Seitanidi, 2012b). A similarly diversified range of resource types is applied in the working group: “we encourage every manufacturer to go deep and wide into their resources whether it’s a marketing resource or a manufacturing/facilities resource” (Chris, call). Next to the resources time and expertise that have been discussed in section 4.1, they also contribute with financial contributions: for once by co-financing the quarterly meetings (Hilda, Ilse, call) and also by a membership fee (Brian, call). The manifold activities and diversity of resources invested are already a sign of strong engagement, which has been confirmed in conversation with the interviewees: “everyone wants to do the same and everyone wants to deal with the same problem and find solutions together” (Andy, video chat). Considering all of the above and the context laid out in section 4.1, the activities create interaction and synergistic value, answering research question a. Also, taking earlier elaborations into account, they can be assessed as being at the integrative and transformative stage of the conceptual framework. That means the described conditions carry great potential for external system change – laying foundations to answer research question b.

4.3 Co-Creation of Value Towards Sustainability

External system change is the ultimate goal of value creation towards sustainability. Value then is, as explained in chapter 2, created not only for individual organizations but much rather for several stakeholders, including communities, societies and the natural environment (Hart & Milstein, 2003; Austin & Seitanidi, 2012a; Austin & Seitanidi, 2012b). Several activities that are addressing these relevant issues have already been introduced in the previous sections. Building on that, the following activities have been identified to carry the broadest influence on the external systems.
First, the novelty of the issue is addressed and answered for by their proactive and immediate actions for change (majority of participants, call/video chat). This action-oriented behavior requires rethinking the value of waste plastics externally but also internally. Particularly, this holds for the member companies that are still hesitant to include ocean plastics into their products for reasons of inexperience or misapprehension:

I think that that is [...] really going to help get us over that hump of thinking that [...] recycled plastics are inferior. Which is not necessarily that at all. And that they can be used at a cost competitive price, that it’s not always going to be a premium (Grace, call).

The group therefore serves as a role model and stimulates a change of practice through operational adjustments, such as “adding into the way that they think about vendor evaluation [by] adding a layer, which is: is it working to reduce plastic pollution?” (Diana, video chat). This and other knowledge and learnings of the group can be picked up by any inside and outside stakeholder thanks to the open source approach the group adheres to. This is emphasized as completely intentional (all participants, call/video chat) and altruistic (Chris, Evan, call) by the members, putting the collective benefit over their own:

it’s about making sure the group has a big impact as it can. It’s not easy because there are things where you would benefit from keeping some knowledge in-house for a couple of years or and selling it or licensing it. Yeah, but for the key aspects of NextWave, we’ve decided to open things up as much as we can (Brian, call).

Thanks to easy access to the process information that the working group provides, other groups and formations have the chance to mimic their efforts. At several points the potential of replication and expansion of the initiative has been stressed as it ultimately amplifies the effect and feeds the purpose of the initiative. However, NextWave members stress that for this to take place, decisions in favor of sustainability are required from organizational leaders as otherwise change will be utterly hard to achieve (majority of participants, call/video chat). Primarily, if organizational leaders experience a shift in sustainability understanding combined with greater demand of sustainable products and accept the feasibility of the processes, more replication and innovation can be expected:

it’s just also wanting to create that value. Because believe me, [company name] won’t stop only with its packaging. They will do more. And, that’s what everyone does. And if [other companies] realize that you can make money out of it then even [...] the financial director will say, hey, let’s jump on it (Andy, video chat).

Once the initiative is replicated or grown, whether it be by current members or in collaboration with new members that may enter soon (majority of participants, call/video chat) the group aims to expand their scope to include further infrastructure projects. Although the exact extension is still under discussion, further supply chains are potentially set up in other areas such as “Indonesia, Thailand, India, and the Philippines, Costa Rica, Chile” (Finn, call). This has been confirmed at several stages. The exact scope of certain projects of the group is still dependent on compromise:

We’re also looking to establish some supply chains in Southeast Asia. So we’re looking to collect in the same locations. And that’s maybe more difficult than it sounds because, for example, within networks, our partnerships, we tend to get to the most remote places, and difficult to reach, because there’s no waste management infrastructure. Whereas for some of the other members they would rather collect from just around the outside of the city because PET, LDPE, HDPE that might be easier to collect, an easier source. But then we can make it work over time. (Brian, call)

However, by being active in remote areas, the potential of direct societal influence is enhanced tremendously. Local communities can not only benefit by being included in the distribution network and by increasing the amount of work opportunities (Grace, call), potentially “helping them out of poverty” (Evan, call) and increasing their economic independence, but also benefit by the effects of cleaning up their own waters (Chris, call), setting up their own waste management systems (Evan, call) and diverting from hazardous chemicals (Chris, call). This has also been drawn back to the initial
purpose of technology, “to improve lives and also to improve the planet” (Evan, call) and the needs that future populations will have if current tendencies will continue as indicated (Evan, call). Also, “as you’re getting that scale and economics are positive, that allows for more applications” (Evan, call) which, again, indicates the groups commitment to expand their scope of activities in the future.

Another aspect for future development that has been pointed out on several occasions has been the philosophy of circular economies that has been and expressed by a number of participants (Andy, Diana, Evan, call/video chat). The theme of circular economies has been picked up by greater governmental entities such as the EU commission already for potential integration into current economies (European Commission, 2017). This reiterates the group’s proactive and long-term approach and the extent of change they aspire to.

Ultimately, the intention of external system change goes as far as aiming for the initiative to be terminal (Diana, Finn, Grace, call/video chat):

\[
\text{at next wave we talked very early on with the member companies about it. The short supply chains that we’re developing shouldn’t exist forever! [...] this is a stopgap measure. Maybe they exist for 10 years, and then we stop using them because infrastructure has caught up – because companies aren’t producing plastic that can’t be recycled all around the world (Diana, video chat).}
\]

This has been mentioned by several members, in one case going as far as claiming that the aspiration would be “removing that word [waste] in our lifetime” (Finn, call). This would frame the intent and validifies the extent of the impact on external system change as a great transformative shift in societies, cultures and individuals.

All stated activities were well within the scope of the initiative and ultimately have potential to make an impact on their common goal of external system change although approaches to value creation are diverse. By creating interaction and synergistic value, the members of the initiative focus on moving “beyond the talk” (Brian, call) which is supported by literature (Blackmore, 2007). Noting that certain members have been working collaboratively prior to the working group initiation (Finn, call) strengthens the performance of the group in effect (DiVito, 2016). A strong collaboration on a broad range of activities is particularly relevant when addressing environmental issues due to their complexity (Blackmore, 2007). The sustainability issue of marine plastic pollution can benefit greatly of efforts taken by the co-creation of interaction and synergistic value as described in detail in the analysis (Austin & Seitanidi, 2012a; Austin & Seitanidi, 2012b). Applying all findings on the analytical framework directly, one arrives at the following assessment:
What stands out most is the high level of engagement, the centrality of its mission to the organization, the range of resources injected in the working group with a strong priority of core competencies as well as their long-term orientation and proactive approach. Although innovation and strategic value are addressed in their activities, the extent of it is somewhat limited. This can be assumed to be the case due to the young age of the initiative and provides future potential to strengthen the working group further.

Although this analytical framework makes clear indications of where the collaboration stands in regards to the number of spectra, one must keep in mind at this point that all assessment is based on desk research and semi-structured interviews conducted by the authors that are undoubtedly unconnected to the working group. A more precise assessment would require internal assessments as well as process observations over an extended time period. Results of a self-assessment reflect temporary tendencies as a partnership’s position on each continuum is constantly influenced by contextual factors and underlies change.

5 Discussion

In the course of this chapter, the theoretical (Section 5.1) as well as practical contribution (Section 5.2) of this research to both academia and private-sector companies is discussed in detail. Furthermore, possibilities for future research based on this work are pointed out (Section 5.3).
5.1 Theoretical Discussion

This work responds to the need of developing a deeper understanding of value co-creation processes in the private sector which foster a transition towards sustainability. A special focus was set on interaction and synergistic value – both value types which are likely to lead to external system change. The existing body of research on private-sector partnerships largely focuses on key success factors for value co-creation as well as measuring created value (Austin & Seitaniä, 2012b; Rai, 2016). Through conducting a single-case study on NextWave, an in-depth analysis of interviews with members shed light on underlying value co-creation processes of the initiative. Value co-creation is embedded in collaborative activities so taking a holistic perspective allowed analyzing both the contextual setting and the activities enabling the co-creation of value.

Findings revealed, that the setting of a cooperative collaboration is required to move from sole creation to co-creation of value. The Next-Wave partnership involves competitors and companies of different sizes and thereby faces increased complexity simply by the nature of the collaboration. As the working group has formed just a year ago, it finds itself in the early stages of collaboration and hasn’t reached its full potential yet. Strong commitment to common sustainability goals functions as a driver for cooperativeness and engages members to collaborate.

The first research question focuses on activities which contribute to the co-creation of interaction and synergistic value. Findings revealed that NextWave members engage in manifold activities, each of them representing an essential component in value co-creation. However, two clusters connecting a variety of activities stood out: the role of knowledge sharing in creating interaction value and social learning in creating synergistic value. Other practical activities aligned with members’ core competencies are considered equally important but offer the potential for long-term value when members share experiences that they make in the process and collectively work on solutions.

Building on that, the second question asks how interaction and synergistic value created in private-sector collaborations address sustainability challenges. Findings confirm that both value types have great potential in matching the complexity of sustainability challenges and driving external system change. In the case of NextWave, the interplay of an action-oriented approach combined with the prioritization of shared sustainability goals when making collective, strategic decisions leads to the working group having a positive impact today with great likelihood of increasing in the future.

The overarching research question asks how private-sector inter-organizational collaboration creates interaction and synergistic value towards sustainability. The findings confirmed that value co-creation towards sustainability in the private sector relies on the interplay of multiple intertwined activities. The conceptual framework gives a comprehensive overview of all the components playing a role in co-creating value towards sustainability. It thereby contributes to both research and the private sector as it enables to assess all activities and processes which foster or hinder co-creation of sustainable value.

5.2 Practical Contribution

Findings can be beneficial for academics and businesses alike. This study provides a number of examples on how working groups or other formations with a character of CoPs can create interaction and synergistic value to extend more power on their local and global environment and create more beneficial environments for their communities. The fact that most members of NextWave come from different industries exemplifies its applicability for various companies. Therefore, impacts can be enhanced staggeringly.
In essence, this thesis works in line with the underlining objective of the open source initiative NextWave represent: creating awareness and knowledge that can be applied throughout industries in the private sector, giving companies the opportunity to add to their societal role of a provider of goods and services that are often directly connectable to the root cause of environmental degradation, by becoming a change maker towards sustainability.

As a facilitator, the analytical framework (Figure 9) can provide an overview on potential avenues of intervention for any company or CoP who seeks to implement sustainability activity that simultaneously adds value for themselves, society and the environment. Equally, the conceptual framework can provide guidance for an outsider to better understand the complexity of incorporating sustainability in businesses as it includes several steps that are based on collaboration and reach out into the co-creation of value, showing their interdependence and relevance for society.

5.3 Limitations to Research

As any other research, this stream has been subject to limitations. One of the constraints was the accessibility of the informants. With them being profit seeking organizations, time invested in giving answers during an interview must be limited. This comes in line with the issue of them being spread out globally, making information transfer dependent on technology which can have flaws. Also, while great effort has been put into including all member’s viewpoints, the inclusion of one or ideally more observations of the working group in one of their quarterly structured or other unstructured meetings would have provided an insight that cannot be replaced by other data. Unfortunately, due to the time constraint of the thesis this aspect could not have been included. Another time related limitation is the consideration of developments over time. With the studied case being a relatively young working group, certain aspects are only in its development and will have different implications in the future which give potential for both arising issues as well as for further opportunity for created value.

Although the researchers remained unbiased to the best of their ability, a limitation often encountered in qualitative research is the imperfect interpretation of the researchers due to their personal background and influences (Creswell & Poth, 2018). While the inclusion of two researchers limits the bias and increases objectivity, findings are to a certain extent still influenced by individual perceptions and interpretations of the researchers.

Another limitation can be seen in the language used to conduct the interviews, as although all interviewees were perfectly eloquent, for some (including the interviewers) English as the language of the interview is not their native tongue and may have had an impact on research quality.

A more thorough and lengthy case study would likely have omitted most, if not all, time related limitations. Other limitations like information sensitivity or researchers bias are greatly unpredictable. Limitations due to language barriers in this case are not profound enough to justify going through excessive efforts to avoid them. For other cases native speaking interviewers would rid the research of this limitation.
6 Conclusion

The objective of this research was to expand the knowledge on how private-sector inter-organizational collaboration creates interaction and synergistic value towards sustainability. The analysis was based on in-depth interviews with NextWave members, providing the researchers with valuable information to answer the posed research questions. A contribution to theory and practice was made by introducing a holistic process perspective on value co-creation towards sustainability to the case of NextWave addressing the sustainability challenge of marine plastic pollution.

This research argues, that sustainable value creation stemming from private-sector partnerships requires a cooperative environment and relies on manifold, interrelated activities driven by shared goals. Processes of knowledge sharing and social learning take an essential role throughout the collaboration, enabling both taking a long-term perspective and introducing tested solutions to different contexts or a broader scope. As a result, external system change is likely and positive impact can possibly be multiplied when taking an open source approach.

These key findings apply to the case of the NextWave initiative but have potential to be generalized to other cases with similar characteristics as the studied CoP. This work emphasizes that taking a process-perspective on value co-creation towards sustainability represents a worthwhile field of research that would largely benefit from further exploration.
References


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# Appendix

## Appendix A – Interview guide (initial version)

<table>
<thead>
<tr>
<th>Introduction questions</th>
<th>Aim for</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Can you briefly describe what the initiative NextWave means to your organization?</td>
<td>Motivation Opportunities</td>
</tr>
<tr>
<td>2. Why did you enter this working group?</td>
<td>3-4 min</td>
</tr>
<tr>
<td>Follow up: What opportunities did you see in engaging in this working group?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Collaboration process questions</th>
<th>4-6 min/Q (10-12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. How would you describe the collaboration structures within the working group? How can we picture a meeting of the working group? Can you walk us through it?</td>
<td>Types of resources/scope of activities</td>
</tr>
<tr>
<td><em>Follow up questions:</em> Do you have personal or virtual meetings? How are the meetings structured and who leads them?</td>
<td><em>Structure vs. processes?</em></td>
</tr>
<tr>
<td>4. What processes are involved in the collaboration? (looking out for philanthropic, transactional, integrative, transformational collaboration)</td>
<td>Scope of activities (co-creation value vs sole creation)/synergistic value</td>
</tr>
<tr>
<td><em>Follow up questions:</em> What kind of information or activities do you (not) share? (Open source)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Value questions – talk about benefits or value?</th>
<th>4-6 min/Q (20-30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. How do you personally define value?</td>
<td>Understanding</td>
</tr>
<tr>
<td>6. Is value something you talk about in the collaboration? How do you express it? Can you give us an example?</td>
<td>Strategic value/synergistic value</td>
</tr>
<tr>
<td>7. How do you seek value out of the collaboration? <em>Follow up questions:</em> Can you give a concrete example? (Testing on practical or strategic level) What role does innovation play?</td>
<td></td>
</tr>
<tr>
<td>8. How do other stakeholders benefit from the working group? <em>Follow up questions</em> on members, society, environment if not mentioned</td>
<td>External system change</td>
</tr>
<tr>
<td>9. What processes do you consider most valuable in terms of a transition towards sustainability?</td>
<td>Scope of act. / external system change</td>
</tr>
<tr>
<td>10. Imagine a moonshot – What is your collaboration vision for the working group?</td>
<td></td>
</tr>
<tr>
<td>11. Is there anything that you would like to stress that you feel is important for us to consider?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Extra if we feel that the information is not sufficient enough yet:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What meaningful activities did you participate in? What specific insights did you gain? What differences did activities in the working group make for your company in relation to business performance as well as sustainability performance?</td>
<td>Only if a lot of time is left and we feel it is appropriate</td>
</tr>
</tbody>
</table>

## Appendix B – Interview guide (final version)
<table>
<thead>
<tr>
<th>Introduction questions</th>
<th>Aim for</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Can you briefly describe NextWave and include what you think it is that makes it</td>
<td>Motivation</td>
</tr>
<tr>
<td>unique?</td>
<td>Opportunities</td>
</tr>
<tr>
<td>Follow up: what makes it sustainable? What do you do differently?</td>
<td>1-2 min</td>
</tr>
<tr>
<td>2. ONLY DELL AND LONELY WHALE: Why did you co-found this working group?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Collaboration process questions</th>
<th>4-6 min/Q (10-12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. How do you collaborate with other members of NextWave? How would you describe your</td>
<td>Types of resources/scope of activities</td>
</tr>
<tr>
<td>collaboration with other members of the working group?</td>
<td></td>
</tr>
<tr>
<td>Follow up: How are the meetings structured and who leads them? How often do you meet</td>
<td></td>
</tr>
<tr>
<td>More with some than with others?</td>
<td></td>
</tr>
<tr>
<td>4. What assets/resources do you bring into the collaboration? What do you get out of it?</td>
<td></td>
</tr>
<tr>
<td>5. In your common principles you say that you “consistently employ the principles of</td>
<td></td>
</tr>
<tr>
<td>a creative common approach both internally and externally by taking all actions</td>
<td>Types of resources/strategic value/innovation?</td>
</tr>
<tr>
<td>jointly.” What exactly does that mean in practice?</td>
<td>Scope of activities (co-creation value vs sole creation)/synergistic value</td>
</tr>
<tr>
<td>information or activities do you (not) share? (individual vs collective)</td>
<td></td>
</tr>
<tr>
<td>6. If time: In general, how do you incorporate the 10 common principles in the</td>
<td>Strategic value/interaction value/Synergistic Value</td>
</tr>
<tr>
<td>collaboration?</td>
<td></td>
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<tr>
<td>7. What kind of benefits do you see of the work activities you share on a practical</td>
<td></td>
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<tr>
<td>level? And how about on a strategic level?</td>
<td></td>
</tr>
<tr>
<td>8. How do other stakeholders benefit from the collaboration?</td>
<td></td>
</tr>
<tr>
<td>Follow up questions on members, society, environment if not mentioned</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Value questions</th>
<th>4-6 min/Q (20-30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. How do you define organizational value?</td>
<td>Understanding</td>
</tr>
<tr>
<td>10. How do you express value in the collaboration? (How do you talk about it?) Can you</td>
<td>Strategic value/synergistic value</td>
</tr>
<tr>
<td>give us an example? Money vs. competencies, time, innovation, reputation, cost,</td>
<td></td>
</tr>
<tr>
<td>change?</td>
<td>External system change</td>
</tr>
<tr>
<td>11. What activities do you consider most valuable in terms of a transition towards</td>
<td>Scope of act. / external system change</td>
</tr>
<tr>
<td>sustainability?</td>
<td></td>
</tr>
<tr>
<td>12. Imagine a moonshot – What is your vision for the working group?/How would you</td>
<td></td>
</tr>
<tr>
<td>like the collaboration to develop in the future?</td>
<td></td>
</tr>
<tr>
<td>13. Is there anything that you would like to stress that you feel is important for us</td>
<td></td>
</tr>
<tr>
<td>to consider?</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix C – Code book

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Data</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approach</strong></td>
<td>Activities are planned and implemented proactively or reactively.</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>Proactive</td>
<td>Activities reflecting proactiveness.</td>
<td>6</td>
<td>15</td>
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<tr>
<td>Reactive</td>
<td>Activities reflecting reactiveness.</td>
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<td>1</td>
</tr>
<tr>
<td><strong>Collaboration</strong></td>
<td>Focus on participation of members in collaborative activities.</td>
<td>8</td>
<td>106</td>
</tr>
<tr>
<td>Activities</td>
<td>Specific examples of collaborative activities in the working group.</td>
<td>8</td>
<td>66</td>
</tr>
<tr>
<td>Competitive</td>
<td>Decisions and activities are rather driven by individual, competitive intent.</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Cooperative</td>
<td>Decisions and activities are rather driven by individual, competitive intent.</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td><strong>Engagement</strong></td>
<td>Statements showing high or low engagement of members.</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td><strong>External System Change</strong></td>
<td>Concrete examples of how the collaboration can have an actual or potential impact on a change of current external systems in the long run.</td>
<td>8</td>
<td>60</td>
</tr>
<tr>
<td>Focus</td>
<td>Statements showing whether the focus is aligned inwards or outwards.</td>
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<td>1</td>
</tr>
<tr>
<td>External</td>
<td>Outward focus of activities and strategies.</td>
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<td>0</td>
</tr>
<tr>
<td>Internal</td>
<td>Inward focus of activities and strategies.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Importance to Mission</strong></td>
<td>References showing how close the alignment between the collaborations’ purpose and the member’s mission and leadership is.</td>
<td>8</td>
<td>33</td>
</tr>
<tr>
<td><strong>Interaction value</strong></td>
<td>Any activities that can be qualified as contributing to the creation of interaction value. Those are sub-coded according to the form of interaction value they can be assigned to.</td>
<td>8</td>
<td>58</td>
</tr>
<tr>
<td>Communication</td>
<td>Interaction value created in the form of external communication.</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Knowledge</td>
<td>Interaction value created through knowledge sharing.</td>
<td>8</td>
<td>28</td>
</tr>
<tr>
<td>Social Capital</td>
<td>Interaction value created in the form of social capital and access to network.</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Transparency</td>
<td>Interaction value created in the form of transparency and increased accountability, both internal and external.</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td><strong>Orientation</strong></td>
<td>Orientation of certain intents or activities is aimed at change in the short-run or the long-run.</td>
<td>7</td>
<td>11</td>
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<tr>
<td>Long-term</td>
<td>Activities that aim to drive long-term change.</td>
<td>6</td>
<td>9</td>
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<tr>
<td>Short-term</td>
<td>Activities with a short-term focus.</td>
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<td>2</td>
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<tr>
<td><strong>Scope of activities</strong></td>
<td>Orientation of certain intents or activities is aimed at change in the short-run or the long-run.</td>
<td>7</td>
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<tr>
<td><strong>Strategic value</strong></td>
<td>Orientation of certain intents or activities is aimed at change in the short-run or the long-run.</td>
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<td>44</td>
</tr>
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<td>Code</td>
<td>Description</td>
<td>Data</td>
<td>References</td>
</tr>
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<td>----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Synergistic Value</td>
<td>Any activities that can be qualified as contributing to the creation of synergistic value. Those are sub-coded according to the form of synergistic value they can be assigned to.</td>
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<td>79</td>
</tr>
<tr>
<td>Innovation</td>
<td>Synergistic value created in the form of product and process innovation.</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>Learning</td>
<td>Synergistic value created in the form of learning in the collaboration (social learning) This includes learning through actively challenging partnering members.</td>
<td>7</td>
<td>33</td>
</tr>
<tr>
<td>Societal Influence</td>
<td>Synergistic value created in the form of increased societal and political influence in sector and society due to partnership network.</td>
<td>8</td>
<td>26</td>
</tr>
<tr>
<td>Types of Resources</td>
<td>Different resources that have been brought into the collaboration by the different members.</td>
<td>7</td>
<td>15</td>
</tr>
</tbody>
</table>