

# **The role of the cooperative model as a collaboration facilitator in the circular economy**

MSC thesis Sustainable Business and Innovation Sciences  
Research internship at Commown

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# Abstract

Advancing from a linear economy to a circular economy (CE) requires organizations to collaborate across organizational boundaries. In particular for the implementation of Circular Business Models (CBMs), it is crucial for stakeholders to collaborate together along the whole value chain to implement circular strategies such as reverse logistics. Social enterprises can provide an innovative and unique approach to the CE, provided they also advance the social dimension of the CE. Particularly cooperatives incorporate promising and unique capabilities in their democratic governance structure that could foster collaboration. Accordingly, this research aims to identify strategies deployed by cooperatives to foster collaborations for implementing CBMs. It follows a multiple case study research design including ten cooperatives implementing CBMs in Europe. This research used qualitative data retrieved through 142 archival data sources, 28 interviews and three months of participant observation in the context of an academic internship at the cooperative Commown.

The results show that three types of strategies deployed by cooperatives are essential in facilitating collaborations for implementing CBMs: 1) Cooperatives can *align interests* by collaborating with like-minded companies, especially other cooperatives. Additionally, particular attributes of the horizontal governance structure of the cooperative proved to be instrumental in increasing alignment of stakeholder interests. 2) The social values and profit constraints of cooperatives can increase trust and *foster resource complementarity* with commercial corporations. Furthermore, the cooperative network can help to attract new consumers and mobilize financial resources. Moreover, the cooperative model has the capability to create a mutual economic interest and can stimulate collaboration between different types of stakeholders with complementary tasks and or activities. 3) Lastly, the cooperative can *mobilize social networks* by improving (informal) relations, providing a shared cooperative culture and by (often) operating on a local scale.

In addition, two main barriers obstructing collaborations for CBM implementation relating to cooperatives are identified: 1) *Resource constraints* because of lack of cognitive legitimacy and higher costs of collective decision-making. 2) *Misalignment of interests* because of goal discrepancy or lack of engagement from collaboration partners. Lastly, two striking findings emerged suggesting further theoretical and practical implications. First, the ambivalent role of participation in the cooperative governance structure and its capability to foster collaboration challenges current literature on participation in cooperatives. Second, this thesis highlights the potential of the cooperative network for fostering collaboration for CBM implementation. These results offer novel insights for CE literature and practitioners looking to structure collaboration for CBM implementation.

**Keywords:** Circular Economy, Circular Business models, collaboration, cooperatives, collaboration strategies, collaboration facilitator, governance model for collaboration, Social Enterprises, democratic governance,

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## Executive summary



Current studies highlight the relevance of collaboration for Circular Economy (CE) practices, especially for the creation of Circular Business models (CBMs). When implementing a CBM, it is crucial for actors to collaborate and innovate together to increase resource or material efficiency, create value from residual resources, and implement circular processes such as reverse logistics and take-back management systems. However, implementing collaboration and collaborative activities is a complex and difficult process. Social enterprises (SEs) are organizations that provide services or goods with the main aim to make a social impact. While different models of SEs can be distinguished, the particular characteristics of the cooperative (democratic governance structure, profit gap, social objective) provide promising and unique capabilities which can facilitate collaboration for CBM implementation. Despite the potential relevance of the cooperative model there is limited scientific research linking these models and collaboration in the context of the CE. This study aimed to address this gap by identifying strategies that facilitate the collaborations cooperatives engage in to create CBMs. The cooperative [Commown](#) was particularly interested in exploring this research gap. This cooperative aims to contribute to a more sustainable use of electronics by providing a product-service system for electronics. Moreover, it solely offers ecologically, repairable and ethically designed electronic devices and aims to extend the product lifetime for as long as possible (e.g. Fairphones). Commown implements the CBM “Access and performance” in combination with CBM “Classic long life” and CBM “Extending product value”.

Interview and archival data obtained by this research was extended with participant research executed at Commown. The two main questions posed by this research were: (1) Which strategies that cooperatives deploy stimulate collaboration for circular business model implementation? and (2) Which of these strategies does Commown engage in? Regarding the first question, empirical findings show three strategies are most essential to foster collaboration for CBM implementation: 1) Cooperatives can *align interests* by collaborating with companies with a similar philosophy, especially other cooperatives. Additionally, particular attributes of the horizontal governance structure (publicly available membership agreement, equal rights, platform for cooperation and profit distribution) of the cooperative proved to be instrumental in increasing alignment of stakeholder interests.

2) The social values and profit constraints of cooperatives can increase trust and *foster resource complementarity* with commercial corporations. Subsequently, the cooperative network can help to attract new consumers and mobilize financial resources. Moreover, the cooperative model has the capability to create a mutual economic interest and can stimulate collaboration between different types of stakeholders with complementary tasks and or activities.

3) Lastly, the cooperative model can *mobilize social networks* by improving (informal) relations, providing a shared cooperative culture and by (often) operating on a local scale.

In addition, two main barriers obstructing collaborations for CBM implementation and particularly relating to cooperatives emerged from the data:

- 1) *Resource constraints* because of lack of cognitive legitimacy and higher costs of collective decision-making.
- 2) *Misalignment of interests* when social values of the cooperative and collaborating partner did not align or when there was a lack of commitment from members and/or collaboration partners. These go beyond the questions and were not demanded by Commown, but can help in providing additional insights that contribute to answers for question two.

In relation to the second research question, the collaboration strategy *aligning interests* is particularly relevant for Commown. By engaging in this strategy, cooperatives can foster collaborations with consumers. Collaboration with consumers is critical to enable consistent product returns and to apply product life extension strategies (e.g. reuse, repair, refurbishing or remanufacturing) needed for the CBM “Extending product value”. By materializing the horizontal governance structure through equal voting rights and cooperative membership, the cooperative could increase the extent to which consumers and members experienced a feeling of ownership and transparency. This improved involvement of consumers, care of products and consumer take-back for repair. Moreover, consumers are involved intensively and for a longer amount of time when purchasing a service instead of a product from the “Access and performance model”. The horizontal and profit constrained governance structure of the cooperative increased trust and was experienced as a more ethical way to provide the CBM “Access and performance model”, hence it reduces the risk of locking the consumer in an unfair overpriced leasing structure. Additionally, Commown engages in *aligning interests* by successfully collaborating with other cooperatives sharing the same political ambitions. Commown experienced these collaborations as more efficient, considering they share the same cooperative working approach and values. This helps in overcoming the barrier misalignment of interests which could potentially hinder collaboration.

Furthermore, Commown successfully deploys the strategy *resource complementarity*. The cooperative partners’ perception of the just and correct procedures of the cooperative offered resource complementarity with commercial corporations and helped in gaining trust and moral legitimacy. For this reason, producers of Commown even indicated that they would put more effort in the collaboration and marketing, despite their volume still being small. Additionally, Commown successfully demonstrates how collaborations with the cooperative network Licoornes help to attract new consumers and mobilize financial resources for new collaborations. For example, a complementary product offer with cooperative Telecoop (a Telecom provider) and joint communication campaigns to increase knowledge of the cooperative model. The latter can also help in overcoming the barrier *lack of cognitive legitimacy*. However, Commown could increasingly deploy the strategy *mobilizing social networks*. Membership participation could be increased to improve the shared cooperative culture and increase (new) collaborations. Although membership participation was not found to be fundamental in increasing trust between members and cooperative, it could mainly help in stimulating (new) collaborations between members. Nonetheless, when increasing member participation is crucial, Commown considers the divergent interest between members and collaboration partners to reduce the identified barrier *cost of collective decision-making*. Therefore, Commown could investigate the role of participation in the cooperative and its capability to foster (new) collaboration.

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# 1. Introduction

The current linear economy is characterized by a take-make-waste model, which depletes planet resources and increases waste streams. This over-use of scarce resources stimulated by increasing consumption rates accelerates social and environmental problems, such as pollution and social inequities (Stahel, 2016). Advocates of the circular economy (CE) argue for its potential to create a new economic system where economic, social and environmental value all are integrated equally. The CE can be achieved by replacing the end-of-life concept with reducing, reusing, recycling and recovering materials in consumption and production processes (Kirchherr et al., 2017).

Organizations play a crucial role in a transition to a CE, as they radically need to redesign the way they create, deliver and capture value by changing their current business model (BM) into a circular business model (CBM) (Antikainen & Valkokari, 2016; Nußholz, 2017). The transition to the CE does not only require organizational efforts, but rather a systemic approach. Specifically, for CBM implementation actors need to collaborate and innovate together to increase resource or material efficiency, create value from residual resources, and implement circular processes such as reverse logistics and take-back management systems (De Angelis et al., 2018; Fehrer & Wieland, 2021; Jonker et al., 2017; Mishra et al., 2019). This means that actors from all over the value chain need to align interests, motivation and expectations (Brown et al., 2019; Brown et al., 2020).

However, implementing these collaborations and collaborative activities is a complex and difficult process. A lack of a collaborative culture often stemming from a lack of trust between organizations is stressed in CE literature (Brown et al., 2019; Jaeger & Upadhyay, 2020; Mishra et al., 2019; Schraven et al., 2019). In this case, trust is defined as perceiving an organization as credible and competent to achieve its objectives (Brown et al., 2019; Greenberg, 2014). When trust is missing, partners are reluctant to work closely together or participate in any risk-taking activity (Huxham, 2003; Tschannen-Moran, 2001).

So-called social enterprises (SEs) encompass unique features that can facilitate collaboration in the CE. SEs are organizations that provide services or goods with the main aim to make a social impact (Defourny et al., 2021; Rizos et al., 2015; Stratan, 2017;). The number of SEs is growing worldwide and particularly in Europe (Defourny & Nyssens, 2008; Defourny & Nyssens, 2013). Several studies argue that SEs encourage collaboration instead of competition with other organizations (Lyon, 2012; Trivedi & Stokols, 2011; Waddock & Post, 1991). Their focus extends beyond their own organizational boundaries, as their main objective is to create social value within and outside their organization instead of striving for economic benefits for their own organization.. Hence, they foster trust, collaboration, creation of knowledge and social networks (Lyon, 2012; Trivedi & Stokols, 2011; Waddock & Post, 1991).

While different models of SEs can be distinguished, the cooperative model is a particularly promising model for facilitating collaboration (Defourny & Nyssens, 2013). A cooperative is an organizational model characterized by democratic control by members-users rather than external investors. Cooperative members unite voluntarily to meet their common economic, social, cultural, and environmental needs and aspirations. All members get a share of the profits and decide democratically on (future) organizational decisions. In particular, multiple scholars argue that the democratic governance structure of the cooperative enables it to significantly foster trust between members and external partners (Barton, 1989; Coalition Circular Accounting, 2020; Sabatini et al., 2014).

The research gap this study addresses is threefold. First, most CE-related approaches and literature focus on the environmental and economic dimension of sustainability. A more balanced integration of the social dimension is crucial to achieve a truly sustainable economic system (Mies & Gold, 2021; Padilla-Rivera et al., 2020). Previous studies have stressed the relevance of the social and institutional dimension for societal transitions to a CE (Moreau et al., 2017). SEs address these dimensions and can provide an innovative and unique approach to the CE (Stratan, 2017). However, there is limited scientific research specifically relating to SEs and collaboration in the context of the CE (Stratan, 2017).

Second, research regarding CBM implementation predominantly focuses on the capabilities of single organizations (Brown et al., 2021; Köhler et al., 2022). Although scholars emphasize that collaboration is essential for implementing CBMs, only a limited number of studies explore factors stimulating or hindering the development of collaborations (Brown et al., 2020; Hina et al., 2022). A necessary first step is thus to identify and gain a better understanding of the factors that promote effective collaboration for CBM implementation (Köhler et al., 2022).

Third, some studies argue that SEs and, in particular, cooperatives can deploy promising and unique capabilities that facilitate collaboration (Defourny & Nyssens, 2013). Despite the potential of cooperatives, no studies have explored its specific characteristics in relation to collaboration for CBM implementation. More specifically, it has not been explored if particular characteristics of cooperatives can foster the collaborations needed for CBM implementation. This study aims to address the above research gaps by answering the following research question:

*“Which strategies that cooperatives engage in stimulate collaboration for circular business model implementation?”*

This research strives to contribute to the scientific literature by identifying strategies enabling collaboration deployed by cooperatives for CBM creation. It explores features specific to cooperatives, their potential and capacity to foster collaboration in the CE. Moreover, it adds to the current debate around CBM literature by exploring different strategies for collaboration needed for specific CBM creation (Fehrer & Wieland, 2021). By doing so, this research connects previously separate streams on CE literature and strategic management literature. Additionally, this research substantiates the role and importance of the social dimension in CE; a dimension often neglected in the current academic debate concerning CE (Mies & Gold, 2021; Padilla-Rivera et al., 2020). Furthermore, this research generates further insights for business practitioners interested to structure collaboration for CBM creation. It provides insights on how the cooperative can facilitate collaboration in the CE and shows examples for different collaboration strategies particularly needed for CBM creation.

This thesis is structured as follows: it starts with the theoretical framework that delineates propositions and a conceptual model based on literature on CBMs, collaboration and cooperatives. Secondly, the methodology elaborates on the research design. Subsequently, the results of the research are presented. Thereafter, the approach and results of this research are critically discussed, compared with current literature and its contributions and practical recommendations are substantiated. Lastly, the conclusions and practical recommendations are presented.

## 2. Theoretical framework

Drawing on strategic management and CE literature, this section starts with defining and relating the core concepts: CBMs, collaboration (types and driving factors) and the main characteristics of the cooperative. The gained theoretical insights provide the foundation for this research summarizing the different types and factors driving collaboration, which cooperatives could possibly deploy for CBM creation.

### 2.1 Circular Business Models and Value Chains

CBM literature has increased significantly over the past five years (Fehrer & Wieland, 2021). This literature integrates the perspective of two different research fields, combining the business model concept from strategic management literature and circular strategies concept from CE literature (Nußholz, 2017). The majority of the literature on this topic defines CBMs as holistic tools that refer to how organizations create, capture and deliver value by optimizing material loops (Fehrer & Wieland, 2021; Nußholz, 2017). Multiple typologies of CBMs have been proposed in the literature (e.g. Bakker et al., 2014; Bocken et al., 2016; Moreno et al., 2016; Nußholz, 2017). This research focuses on the typology proposed by Bocken et al. (2016) (Table 1), as this typology encompasses a holistic perspective by including how CBMs relate to the value chain (Bocken et al., 2016; Nußholz, 2017). This typology also fits the CBMs developed by the cooperatives analyzed in the empirical part of this research. In line with the typology proposed by Bocken et al. (2016), this research will include a value chain perspective while examining different strategies for collaboration.

**Table**

**1**

*Different CBM types based on Bocken et al. (2016).*

<i>CBM type</i>	<i>Description</i>	<i>Example</i>
Access and performance model	Provides services or capabilities (access and performance) to satisfy user/consumer needs. There is no need for ownership of own physical products.	<u>Blablacar</u> : Offering Sharing of car rides as a service.
Extending product value	Focuses on capturing residual value of products by applying product life extension strategies such as reuse, repair, refurbishing or remanufacturing.	<u>Backmarket</u> : Selling repaired and refurbished electronics.
Classic long life model	Assures a long-product life by designing it for durability and making the product repairable and reusable in the long run.	<u>Fairphone</u> : Modular phone build for longevity.
Encourage sufficiency	Aims to reduce end-user consumption by designing products that last and offering repair services. Moreover, it uses a non-consumerist approach to sales and promotion.	<u>Patagonia</u> : Encouraging sufficiency with “Don’t buy this jacket campaign.”
Extending resource value	Captures the value of materials and resources formerly labeled as “waste” at the product level.	<u>InterFace Net-WorksTM</u> : Creating carpets from fishing nets waste.

Industrial symbiosis	Focuses on process-oriented solutions to capture value from otherwise “wasted” resources at the process and manufacturing level.	<u>Guitang Group</u> : Sugar producer in China sharing waste energy and waste material in a symbiotic manner.
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Within CE literature there is consensus that collaboration is crucial for successful CBM implementation (Antikainen & Valkokari, 2016; Blomsma et al., 2019; Brown et al., 2018; Brown et al., 2019; Fehrer & Wieland, 2021; Hina et al., 2022; Lewandowski, 2016). In comparison to traditional linear BMs, adoption of most CBM types requires higher involvement of a wider set of stakeholders and increased collaboration (Antikainen & Valkokari, 2016; Lewandowski, 2016). For example, to ‘extend product value’ (table 1), intensive collaborations between consumers and suppliers, retailers, logistics companies, collection and deposit points are necessary to enable consistent product returns to effectively implement product life extension strategies (e.g. reuse, repair or remanufacturing) (Bocken et al., 2016). These close collaborations between buyer and supplier can improve waste management. This can increase the availability of resources by capturing the value of materials and resources formerly labeled as “waste” (Hina et al., 2022).

A crucial reason why collaborations are needed in the CE is because not (only) individual businesses need to become circular, but entire value chains. As Suchek et al. (2021) argue, all actors along the value chain need to be involved to advance CE practices. A new way of organizing is required internally within the organization and externally in the value chain (Brown et al., 2021; Geissdoerfer et al., 2018). Collaboration between actors along the value chain is a crucial component of these closed-loop value chains (Hina et al., 2022). These collaborations can close the loop of material flows within the value chain, capture opportunities to recycle materials and enable remanufacturing and repairs (Kalmykova et al., 2018; Pavel, 2018; Mishra et al., 2019).

However, the lack of a collaborative culture, low levels of trust and transparency between partners is regularly mentioned as a barrier to more circular value chains (Brown et al., 2019; Hina et al. 2022; Mishra et al., 2019; Schraven et al., 2019). For example, without trust it is often difficult or costly to exchange the necessary information of material and energy flows needed for ‘Industrial Symbiosis’ (Bocken et al., 2016; Jaeger & Upadhyay, 2020). To illustrate, the Guitang Group (table 1) demonstrates that the presence of trust is one of the critical forces stimulating ‘Industrial Symbiosis’. In this example, trust is fostered by the unique community-centric cultural norm. This formation of trust stimulated sharing of information and led to the development of further symbiotic relationships between the Guitang Group and other producers (Shi & Chertow, 2017).

## 2.2 Collaborations: Definition, Types and drivers

Collaboration is an ambiguous term that has been defined in many ways in the strategic management literature (Brown et al., 2021; Gray, 1985). In this thesis, collaboration is defined by high levels of interdependence and stable, long-term relations (Keast & Mandell, 2014). In these relations, responsibilities, resources, information, activities and/or capabilities are shared between two or more actors. Both actors are mutually accountable for risks or rewards. Collaboration goes beyond sharing resources or information, as actors serve a mutual goal or purpose. This goal cannot be realized by individual organizations (Brown et al., 2021; Bryson et al., 2015; Keast & Mandell, 2014; Mattessich & Monsey, 1992; Wood & Gray, 1991).

### **2.2.1 Types of Collaboration**

Collaboration occurs across different dimensions. A first relevant distinction is between internal and external collaboration. Collaboration is necessary within (internal) and outside (external) the organizational boundaries (De Angelis et al., 2018). An example of internal collaboration is cross-functional collaboration. This addresses the integration of different functions and diverse knowledge sources within an organization (Melander, 2018). External collaboration in turn, can broaden an organization's network and create new knowledge by involving new actors (Melander, 2018). External collaboration is commonly divided into two main dimensions: (1) vertical collaboration between consumers (organizations and individuals) and suppliers; and (2) horizontal collaboration between competitors or cross-sector partners (Brown et al., 2021; Saenz et al., 2015). Stratan (2017) suggests to include the stakeholder perspective when analyzing collaboration for SEs implementing a CBM. Following this perspective key stakeholders involved in these collaborations include consumers, suppliers, employees, community beneficiaries and key partnerships. A key question is how to mobilize and align these multiple and diverse stakeholders for collaboration. All stakeholders need to recognise collaborative advantages, innovation potential and serve a mutual goal or purpose. One where they can orchestrate knowledge or create new value. A necessary first step is to identify the factors that drive collaborations (Köhler et al., 2022; Suchek et al., 2021).

### **2.2.2 Factors driving Collaboration**

Below, factors that can influence the likelihood of collaboration or can help to overcome barriers for collaboration derived from literature are presented. Limited literature focuses specifically on factors influencing collaboration in the CE or for implementing CBMs. Therefore, this section extends this literature with strategic management literature and economic literature (e.g. resource-based view, relational view, network theory, transactions costs, entrepreneurship, institutional theory, social embeddedness and economic geography theory).

- **Transactional efficiency and alignment**

Alignment of collaboration partners followed by increased transactional efficiency represent a first factor that can foster collaborations. This can be deduced from literature on transaction costs. Extant literature stresses the importance of transaction costs to the organization of economic activity and, in particular, for collaboration between actors (Haaskjold et al., 2019; Madhok, 1998; Williamson, 1987). Additionally, literature emphasizes that alignment of preferences and interests can stimulate collaboration. When people considerably diverge in interests and objectives, it can cause slow decision-making, result in inefficient decisions and thus increase the cost of collective decision-making (Chaddad & Iliopoulos, 2013). By contrast, people who share essential social, cultural or economic characteristics may be more willing to collaborate with each other. Sharing these interests can increase the predictability of interactions and stimulate trust (Poteete & Ostrom, 2004). Below the different factors increasing alignment of collaboration partners and reducing transaction costs are described.

First, Jin and Wang (2021) emphasize in their study how shared control and equal responsibility stimulates the collaboration. When partners are mutually dependent on each other it can overcome barriers for collaboration such as knowledge transfer. Correspondingly, a successful governance structure can align collaboration partners: when mitigating the risk of opportunism, it can

reduce the cost of collective decision-making and acquire the greatest cost efficiency (Madhok, 1998; Williamson, 1987). Subsequently, a governance structure characterized by equality is horizontal: people operate on the same level and have equivalent status and power. This kind of governance structure facilitates open dialogue and exchanges of information. When actors are provided with equal information and power, trust between actors increases and transaction costs decreases (Kasperson et al., 1992; Madhok, 1998; Williamson, 1987). This is especially important to stimulate collaboration needed for the effective implementation of CBMs (Hina et al., 2022; Suchek et al., 2021).

Third, a high degree of goal alignment between collaboration partners is needed to lower decision-making costs and stimulate collaboration, especially in the CE context (Köhler et al., 2022). Brown et al. (2018) refer to this idea as goal congruence, where the overall success of collaboration and goal alignment assures that collaborative parties meet their own individual goals. Goal congruence can increase by implementing efficient voting systems (Chaddad & Iliopoulos, 2013). Correspondingly, when people have voluntarily agreed to form a group or become a member, it can help to define expectations and a common goal (Axelrod, 1997).

Lastly, institutional relatedness between organizations increases homogeneity between collaborating actors. Sharing the same organizational background, increases alignment between collaboration partners and could potentially reduce transaction costs. In management studies Peng et al. (2005) defines institutional relatedness as the “degree of informal embeddedness with the dominant institutions in the environment that confer resources and legitimacy (to organisations)” (p. 623). It means that similar organizations can leverage institutional capabilities when active in the same region (Punt et al., 2022). Resources and legitimacy gained by these institutional capabilities could foster collaborations.

- **Complementary capabilities and resources**

Complementary capabilities and resources represent a second factor that can drive collaboration. This can be derived from literature on the resource-based view and relational view. The resource-based view takes on a dynamic capabilities perspective, focusing on the organization and organizational resources. When organization resources are rare, inimitable, non substitutable and valuable, an organization can acquire a sustained competitive advantage (Barney, 2001). Additionally, dynamic capabilities (firm processes that enable organizations to adapt to changing environments) are needed to successfully implement a CBM (Köhler et al., 2022). According to Teece (2007) strong dynamic capabilities can be created through collaboration with other organizations. The relational view of Dyer and Singh (1998) extends on the resource-based view and even suggests that “competitive advantage is the relationship between firms” (Dyer & Singh, 1998, p. 660). This research draws on literature applying both theories to explain why complementary capabilities and resources foster collaboration and to identify potential driving factors.

First, according to the resource-based view, valuable resources are heterogeneously dispersed across organizations. These kinds of rare, inimitable and non-substitutable resources cannot easily be purchased or developed internally. Thus, resource complementarity provides a rationale for collaborations between these organizations (Barney, 2001; Jin & Wang, 2021). By combining complementary capabilities and resources collaborating partners can generate potential synergies, new opportunities and reduce costs of internally developing needed resources. However, realizing and capturing the value of complementary resources and capabilities can be challenging. Successful exchange depends on effective coordination, communication and a certain degree of relational embeddedness (Harrison et al., 2001; Jin & Wang, 2021).

Second, in a recent study, Köhler et al. (2022) used the relational view to explore the potential of interorganizational collaborations aimed at achieving CE practices. According to this study, critical resources and key capabilities are embedded into interorganizational collaborative relationships. These collaborations can generate “relational rents”, which are specific advantages a single firm can not generate on its own (Dyer & Singh, 1998). When collaboration partners recognize the value of these “relational rents”, it can increase the willingness for the collaboration (Köhler et al., 2022). This can be achieved when the collaboration is managed by effective governance mechanisms that enhance key capabilities such as trust (Gold et al., 2010; Köhler et al., 2022).

An important mechanism to achieve ‘relational rents’ are complementary capabilities and resources. When resources and capabilities contrast in certain key aspects but together create more value than when deployed alone, these can be considered complementary (Jin & Wang, 2021). For CBM implementation in particular, the creation of shared value from combining these complementary capabilities and resources is an important driver for collaboration and the most essential one for achieving ‘relational rents’ (Brown et al., 2018; Dora, 2019; Dyer et al., 2018; Köhler et al., 2022). Lastly, when the governance structure of an organization can mobilize resources such as legitimacy it helps to justify the collaboration (Huybrechts & Nicholls, 2013). For example, cognitive legitimacy can be created when the organizational activities are perceived as desirable, because they match pre-constructed beliefs about how ways of organizing work. Additionally, moral legitimacy can be gained when organizational activities are perceived as morally just and correct (Suchman, 1995). The institutional perspective argues that legitimacy can provide critical social resources and combining these with complementary resources can drive collaborations. Legitimacy is especially essential for new or small organizations, such as often the case for organizations implementing CBMs (Lin et al., 2009).

- **Social networks**

Literature on social networks can provide a third factor stimulating collaboration. Following Czernek-Marszałek’s (2020) arguments, economic decisions, such as collaborative alliances, are influenced by the social networks in which collaborating actors operate. These social networks are regularly defined and discussed as the concept of social embeddedness in scientific research (Beritelli, 2011; Walker, Kogut, & Shan, 1997). In contrast to sociological approaches that mainly focus on norms and values, research on social embeddedness focuses on how interpersonal relationships are critical for actor decisions and actions (Czernek-Marszałek, 2020). Within this literature, social networks can be seen as a mode of governance. These networks are characterized by informal social relations between members influenced by social context such as history of the relation. The strength of these relations is affected by a combination of emotional intensity, trust, time and reciprocity (Czernek-Marszałek, 2020). Below factors influencing the development of social networks and its relevance for collaboration are specified.

First, Beckert (2009) underlines the relevance of network structures for the development of trust between collaborating actors. A shared history or contact with positive past experiences decreases risk of opportunistic behavior, increases trust and the likelihood for collaboration. This way networks can improve information exchanges and collaborations. Beckert (2009) suggests emergent or different institutional forms may open new opportunities to create new networks. Additionally, Dufays and Huybrechts (2014) underline how entrepreneurs can create new opportunities by bridging unconnected subparts of the social network.

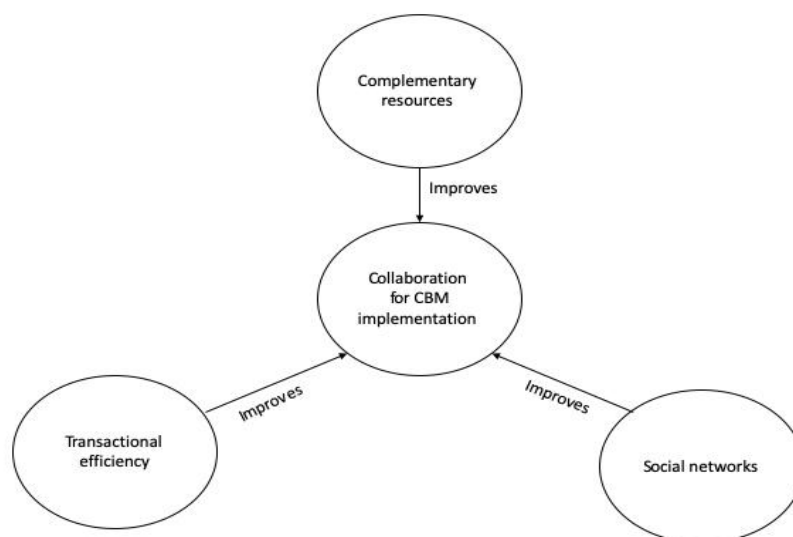
Second, a shared local culture based on common shared practices and rules increases trust and simplifies communication. This minimizes uncertainty and opportunism between local actors, while efficiency of transactions and transfer of knowledge and skills increases. This encourages collective learning and drives collaboration (Boschma, 2005). The complex nature of CBMs especially requires inter-firm collaborations to be interdependent, where sharing of knowledge is crucial. A culture of knowledge and skill sharing among individuals improves these collaborative relationships (Brown et al., 2018; Dora, 2019; Hina et al., 2022).

Lastly, when networks or social relations share a connection apart from the collaborative relationship, such as a geographical location, it can provide a foundation for communication and trust potentially improving the collaboration (Mattesich & Monsey, 1992). The relevance of local supply chain relationships and geographic proximity is especially highlighted in relation to collaboration for CBM creation (Hina et al., 2022; Urbinati et al., 2021). Geographic proximity can improve cross-chain waste management by identifying potential waste streams that can function as input for other supply chains in the vicinity (Dora, 2019; Hina et al., 2022; Urbinati et al., 2021). Moreover, geographic proximity can improve reverse logistics by lowering transportation costs and reducing complexities in logistics management (Hina et al., 2022; Urbinati et al., 2021).

### 2.3 Conceptual framework

This research derived three main factors stimulating collaboration, particularly relevant for circularity or CBM implementation, from literature. These factors are complementary capabilities and resources, transactional efficiency and social networks. It is probable that different factors stimulating collaboration are particularly relevant for different types of CBMs (Table 1). The conceptual framework below (Figure 1) demonstrates an overview of main factors (including linkages) stimulating collaboration derived from theory.

**Figure 1.**  
*Conceptual framework of research.*





## 2.4 The Cooperative Model

The social objective and unique features of SEs equips them with specific capabilities suited to foster and facilitate collaboration (Lyon, 2012; Trivedi & Stokols, 2011; Waddock & Post, 1991). Cooperatives are a particular type of social enterprise. There are different types of cooperatives, i.e. the consumer/user cooperative (controlled by consumers), producer cooperative (controlled by suppliers/producers) and multi-stakeholder cooperative (controlled by consumers and producers) (Spear, 2000). The cooperative model is characterized by four defining attributes:

First, united by the membership agreement all cooperative members voluntarily strive towards a common goal and provide resources and knowledge. The membership agreement outlines the rights and responsibilities of each individual member and specifies the obligations of the cooperative to those members (Spear, 2000). This way the cooperative can align expectations of its members and establish similar interests decreasing the costs of collective decision-making (Hansmann, 1999). Additionally, the membership agreements provide flexibility regarding terms of entry and exit for cooperative members (Schulze et al., 2021; Spear, 2000).

Second, Profits are constrained according to the cooperative principles<sup>1</sup>. Surplus profit is distributed to the cooperative members. Profit return to members are key, generating less incentive for cooperatives to exploit surplus profits and to participate in 'opportunistic behavior'. Additionally, The collective governance structure seeks to address the needs of the whole community by relying on the cooperative values as listed by the International Cooperative Alliance<sup>2</sup>. These social values and concern for community stimulates cooperatives to go beyond classical standards for social responsibility (Novkovic, 2008; Spear, 2000). This increases trust between collaborating actors and can become a competitive advantage (Defourny & Nyssens, 2013; Spear, 2000).

Third, the cooperative is characterized by its horizontal and participative governance structure. All members of the cooperative have a vote and share in the cooperative and it is democratically controlled by members-users rather than external investors. Enabling all members to receive a share of the profits and vote on the organization's future creates an incentive for participation (Barton, 1989). This way members directly contribute to the success of the cooperative, improving engagement and involving the members more than when they are shareholders (Coalition Circular Accounting, 2020; Barton, 1989; Fiore et al., 2020). In addition, research has shown that the horizontal and participative governance structure of the cooperative model supports the development of trust among members and collaborating actors. Accordingly, research by Sabatini et al. (2014) suggests that cooperatives are a type of enterprise significantly fostering trust among employees and to other stakeholders. More specifically, recent data on Italian cooperatives demonstrated that being employed in a cooperative increased the social trust of employees by 36.9% compared to private enterprises, 47.5% compared to public enterprises and 48.1% compared to self-employment (Sabatini et al., 2014).

Lastly, cooperative members are often local community residents. They benefit from local suppliers, since supporting local businesses will generate long term positive economic and social impact for the whole community. Thus, cooperatives often operate at a local scale (Zeuli & Deller,

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<sup>1</sup> The cooperative principles as drafted by the International Cooperative Alliance (ICA) are the following: Voluntary and Open Membership, Democratic Member Control, Member Economic Participation, Autonomy and Independence, Education, Training, and Information, Cooperation among Cooperatives, Concern for Community (ICA, 1995).

<sup>2</sup> "Cooperatives are established on the values of democracy, self-help, equality, self-responsibility, equity, and solidarity. Traditionally, cooperative members follow the ethical values of social responsibility, openness, honesty and caring for others." (ICA, 1995)

2007). Above characteristics of the cooperative resonate particularly strongly with the factors driving collaboration highlighted in 2.2.2, making cooperatives potential good candidates for strengthening collaborations in the CE. This is what we are going to test in the empirical part of this thesis.

### 3. Methodology

This section starts with explaining the multiple-case study research design. Subsequently, sampling criteria for case selection, data collection and data analysis are substantiated. Furthermore, it discusses how validity and reliability of this research ensures research quality. Lastly, it specifies the ethical considerations taken into account for executing this research.

#### 3.1 Research design

The aim of this research is to identify the strategies that cooperatives develop to foster collaboration for CBM creation. The geographical scope of the research is the European Union, improving data availability given the researcher's (fieldwork) location. The study follows a qualitative and multiple case study research design, since these are effective methods for underexplored and complex research topics (Bryman, 2012). This is fitting, concerning the novelty of CBM research especially in relation to collaboration and the cooperative structure (Brown et al., 2020). Moreover, case study research allows for an in-depth empirical understanding of a particular research objective (Bryman, 2012). The use of multiple cases allows for wider exploration of research questions by exploring several cases of empirical evidence (Eisenhardt & Graebner, 2007). This approach can be used for both theory generation and theory testing (Bryman, 2012). The research follows an abductive approach. Through logical reasoning, abductive research integrates existing theory with new findings of case study research. This method is often applied to explore (new) forms of organizations in sustainability studies (Zucchella et al., 2019). Hence, it is particularly effective to understand new or unknown practices (Richardson & Kramer, 2006).

#### 3.2 Case selection

Typically for qualitative research, this research employs purposeful sampling. Purposeful sampling requires the research to specify the criteria for inclusion or exclusion of cases. This can be achieved by criterion sampling. With this kind of sampling cases are selected on particular predefined criteria (Bryman, 2012). Given the research question, selected cases need to (1) be a cooperative, (2) implement a CBM, (3) operate in the European Union. Next to criterion sampling, qualitative research requires a strategic sampling approach. Selected cases need to differ on key characteristics applicable to the research question to ensure variety (Bryman, 2012). Therefore, this research includes the criterion (4) variety of cases in sector, country, type of cooperative (see 2.4) and CBM (see table 1). After these criteria, a first initial of 21 cooperatives have been selected and approached for participation in this research. Furthermore, to ensure quality of data, cases are selected on (5) data availability and (6) willingness to participate (and of its partners/actors in the network). By fulfilling these final sampling criteria a final total of ten cooperatives were selected. Main characteristics of these cooperatives are given in table 2, a more elaborate description of the cooperatives can be found in appendix 8.1.

**Table 2.**

*Selected cooperatives and corresponding criteria.*

<i>Cooperative name</i>	<i>Country</i>	<i>Sector</i>	<i>CBM</i>	<i>Type of cooperative</i>	<i>Years active</i>
-------------------------	----------------	---------------	------------	----------------------------	---------------------

<a href="#">Commown</a>	France (&Germany)	Electronics	Access and performance model Classic long life model Extending product value	Multi-stakeholder	4 (2018)
<a href="#">Telecoop</a>	France	Telecom	Encourage sufficiency Classic long life model	Multi-stakeholder	2 (2020)
<a href="#">Intelligentfood</a>	Netherlands	Food	Extending product value Extending resource value	Multi-stakeholder	4 (2018)
<a href="#">PolyStyreneLoop Cooperative</a>	Netherlands	Plastics	Extending resource value	Producer	5 (2017)
<a href="#">The Sonian Wood Coop</a>	Belgium	Wood	Industrial symbiosis	Multi-stakeholder	3 (2019)
<a href="#">Inero</a>	Belgium	Water	Industrial symbiosis Extending resource value	Producer	3 (2019)
<a href="#">BEES</a>	Belgium	Food retail	Encourage sufficiency	Consumer	5 (2017)
<a href="#">Odin</a>	Netherlands	Food retail	Encourage sufficiency	Consumer	39 (1983)
<a href="#">Reware</a>	Italy	Electronics	Extending product value	Producer	9 (2013)
<a href="#">Staramaki</a>	Greece	Consumer products	Extending resource value	Producer	3 (2019)

### 3.3 Data collection

Data collection consists of multiple data sources, which is common for a case study research design (Yin, 2003). First, a desk research was conducted. This generated an initial general understanding on collaborations by cooperative cases. Especially desk research can be helpful here in providing a reliable basis of the research (Bryman, 2012). Data was collected through an analysis of archival data. Databases used were Google Search and Nexis uni, search terms included names of the selected cooperatives and key concepts, i.e., collaboration, circularity and CBM type. First, the focus was on gaining a further understanding of the cooperative and its CBM by analyzing available websites, videos, gray literature and slides of the cooperative (see table 3). Second, archival data was analyzed to find relevant partners and collaborations that the cooperative engaged in to implement its CBM.

Subsequently, this research includes a three month organizational ethnography. The researcher collected data at cooperative Commown from mid March to June 2022 in the form of an academic internship. Researcher work consisted of a wide variety of tasks, including event and workshop preparation, writing project proposals, volunteer recruitment, English translation (slides, site, flyer) and promotion (writing blogs and event networking). As part of the internship the researcher participated in 7 (cooperative and circular) events and 21 meetings. These activities enabled specific access to relevant internal (background) information and conversations about collaborations with and within the cooperative. Organizational ethnography considers the setting in which social relations take place; it enables a deeper understanding of how organizations are socially constructed and can thus provide relevant knowledge about collaboration, as social construct, in the

context of cooperatives (Ybema et al., 2009). Moreover, this field experience enhanced an in-depth empirical understanding of the cooperative and its practices. It provided the researcher with access to information “beyond the social front that informants present to strangers in their everyday lives” (Moeran, 2009, p. 148). In this case, participant research was especially useful to test if found results also correspond within the cooperative daily setting (Bryman, 2012).

Additionally, a total of 28 semi-structured interviews were conducted with experts, the cooperatives and with external partners. Potential types of partners were pre-identified from literature (2.2.1) and ranged from suppliers, consumers, members to (key) alliance partners. For guidance of interviews, interview guides were used (8.3.1, 8.3.2 and 8.3.3 Appendix). This improves comparability of results between selected cases, while still leaving room for interviewees to answer freely (Gioia et al., 2013). As research progressed, the interview guide was continuously adapted based on interviewee responses. When data from desk research, participant research or answers to previous questions were already sufficient to answer (follow-up) questions, these questions were removed. Vice versa when this data highlighted potential relevant pathways for (follow-up) questions, these were added. For instance, when *decision-making time* was frequently mentioned as a barrier for collaboration this was added as a specific follow-up question.

Moreover, leading questions and theoretical concepts were avoided to stimulate the emergence of new concepts. Additionally, researchers aimed to use comprehensible language for participants (Gioia et al., 2013). For example, theoretical terms such as ‘geographical proximity’ were avoided and to explore if this was a potential driving factor for collaboration questions like: “How did the location of collaboration partners influence the collaboration?” were included.

During the interviews, first the assumed type of CBM was tested by asking questions about main business activities. Subsequently, potential strategies fostering collaborations within interviewed cooperatives were explored. Lastly, it was identified whether and which characteristics of interviewed cooperatives particularly help in creating these collaborations.

First, two interviews were conducted with experts in the field of cooperatives, collaboration and/or CE (table 4). These interviews were used to test assumptions of theoretical framework and test the interview guide (Bogner et al., 2009). Expert interviews took an average of 37.5 minutes per interview. Subsequently, 16 interviews were conducted with core stakeholders within the cooperative and 10 interviews with cooperative partners (e.g. producers, consumers, members or other collaboration partners) (table 4). It was aimed to mainly speak to founders (10) and people fulfilling higher positions in the organization (8). All interviewees are considered as “knowledgeable agents”, seeming they are aware of organizational processes and competent to explain their behavior (Gioia et al., 2013). Per case an average of three interviews has been conducted. When partners were collaborating with multiple cooperatives, questions were asked for both cooperatives. Interviews with the core stakeholders within the cooperative took an average 55 minutes. Interviews with cooperative partners took an average 39 minutes. The interviews combined represent a total of 1392 minutes. An overview of all interviews, their role and cooperative/organization is depicted in table 4.

The data collection lasted until no new additional insights were found and theoretical saturation was reached (Pandit, 1996). All interviews were recorded (for which permission was asked) and transcribed to decrease potential data flaws (Bryman, 2012). A summary of data collection is given in table 3.

**Table 3.***Data collection summary*

<i>Data source</i>	<i>Quantity</i>
Public websites	Number: 21
Articles	Number: 101 articles
Powerpoint slides	Number: 9 Slides: 218
Videos	Number: 11 Minutes: 43.18
Events	7 visited
Meetings	21 attended
Interviews	Number: 28 Minutes: 1392

**Table 4.***Selected interviewees, role and corresponding cooperative.*

<i>Respondent</i>	<i>Role</i>	<i>Organization</i>
R1	Expert	OECD
R2	Expert	IESEG school of management
R3	Cooperative employee (head of German market)	Commown
R4	Cooperative co-founder	Commown
R5	Cooperative co-founder	Commown
R6	Cooperative co-founder	Telecoop
R7	Cooperative founder	Sonian Wood Cooperative
R8	Cooperative partner	<i>Collaborating cooperative:</i> Sonian Wood Cooperative  <i>Partner organization:</i> V+ architects
R9	Cooperative member	<i>Member of cooperative:</i> Sonian Wood Cooperative

		<i>Partner organization</i> :Urban Ecology Centre Brussels
R10	Cooperative founder	PolyStyreneLoop Cooperative
R11	Cooperative employee (head of productions)	PolyStyreneLoop Cooperative
R12	Cooperative partner	<i>Collaborating cooperative</i> PolyStyreneLoop Cooperative  <i>Partner organization</i> :Kingspan Unidek
R13	Cooperative founder	IntelligentFood
R14	Cooperative partner	<i>Collaborating cooperative:</i> IntelligentFood  <i>Partner organization:</i> Circle Economy
R15	Cooperative president/head of cooperative	Odin
R16	Cooperative partner (producer)	<i>Producer of cooperative:</i> Odin
R17	Cooperative partner (consumer/member)	<i>Member of cooperative:</i> Odin
R18	Cooperative member of the board	BEES
R19	Cooperative consumer/member	<i>Member of cooperative:</i> Commown
R20	Cooperative partner	<i>Collaborating cooperative:</i> Inero  <i>Partner organization:</i> Vlakwa
R21	Cooperative co-founder	Inero
R22	Cooperative partner (head of collective cooperative network)	<i>Collaborating cooperative:</i> Commown and Telecoop  <i>Partner organization:</i> Licoornes
R23	Cooperative head of employees	BEES
R24	Cooperative employee (head of consumer services)	Telecoop

R25	Cooperative partner (producer)	<i>Collaborating cooperative:</i> Commown and Telecoop  <i>Partner organization:</i> Fairphone
R26	Cooperative founder	Staramaki
R27	Cooperative employee	Staramaki
R28	Cooperative co-founder	Reware

### 3.4 Data analysis

This research followed a systematic coding process to ensure qualitative rigor of data analysis (Gioia et al., 2013; Pandit, 1996). Data analysis followed the methodology proposed by Gioia et al. (2013). This analysis consists of three main phases and is visualized in figure 2. In each phase, the level of analytical generalization progressively developed. First, the analysis of data focused on observing informant terms found from desk research, field notes and interviews of cooperative cases (1). Following an open coding process, a first total of 563 open codes were created. At the beginning, the researcher categorized codes on CBM type (Table 1), cooperative characteristics and factors improving collaboration. However, during the analysis researcher noticed that elements of the data concerned barriers for collaboration. Accordingly, barriers for collaboration were added to the coding process. Subsequently, following an axial coding process, linkages between data were created and codes were re-arranged. This iterative process of comparison created a final set of 26 first-order codes.

Second, these first-order codes were compared and aggregated into second-order themes (2). This process of contrasting and comparing first-order and second-order codes occurred iteratively. This iterative coding process aimed to discover new concepts.

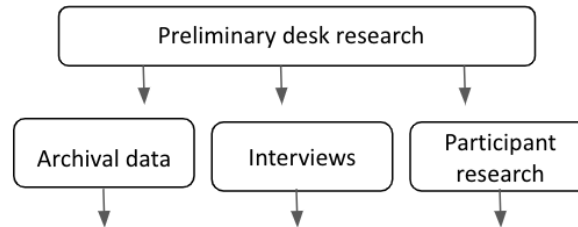
In the last step, similarities between second-order themes were refined and aggregated into third-order dimensions (3). When coding of new concepts led to theoretical saturation, possibilities were explored to aggregate second-order themes into main theoretical dimensions (Gioia et al., 2013). In particular, this research focused on how each cooperative deployed strategies related to collaboration for CBM implementation. Once empirical themes were constructed, a theoretical lens was used to understand what collaboration strategies were implicated per empirical theme and what characteristics of the cooperative have an impact on these strategies. Additionally, characteristics of the cooperative influencing the collaboration were coded under characteristics found from literature (section 2.3). Moreover, the research found corresponding relations among these theoretical dimensions (Gioia et al., 2013). It identified correlations between cooperative cases, type of cooperative, CBMs and factors driving collaboration from literature. The research made use of coding software NVivo, to keep track of categories, identify the origin of texts and eventually analyze the data (Bryman, 2012; Pandit, 1996). Figure 3 depicts the first-order codes, second-order concepts and aggregate dimensions (cooperative strategies for collaboration). Figure 4 depicts the first-order codes, second-order concepts and aggregate dimensions (obstacles for collaboration).



**Figure 2.**

Data collection and analysis process

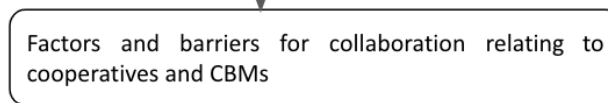
**I data collection**



**II data analysis**

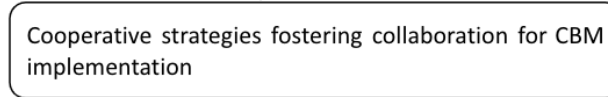
*First-order codes (informant terms)*

**(1)**



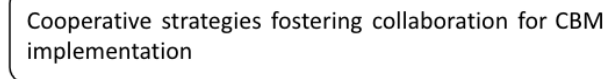
*Second-order constructs (informant terms)*

**(2)**



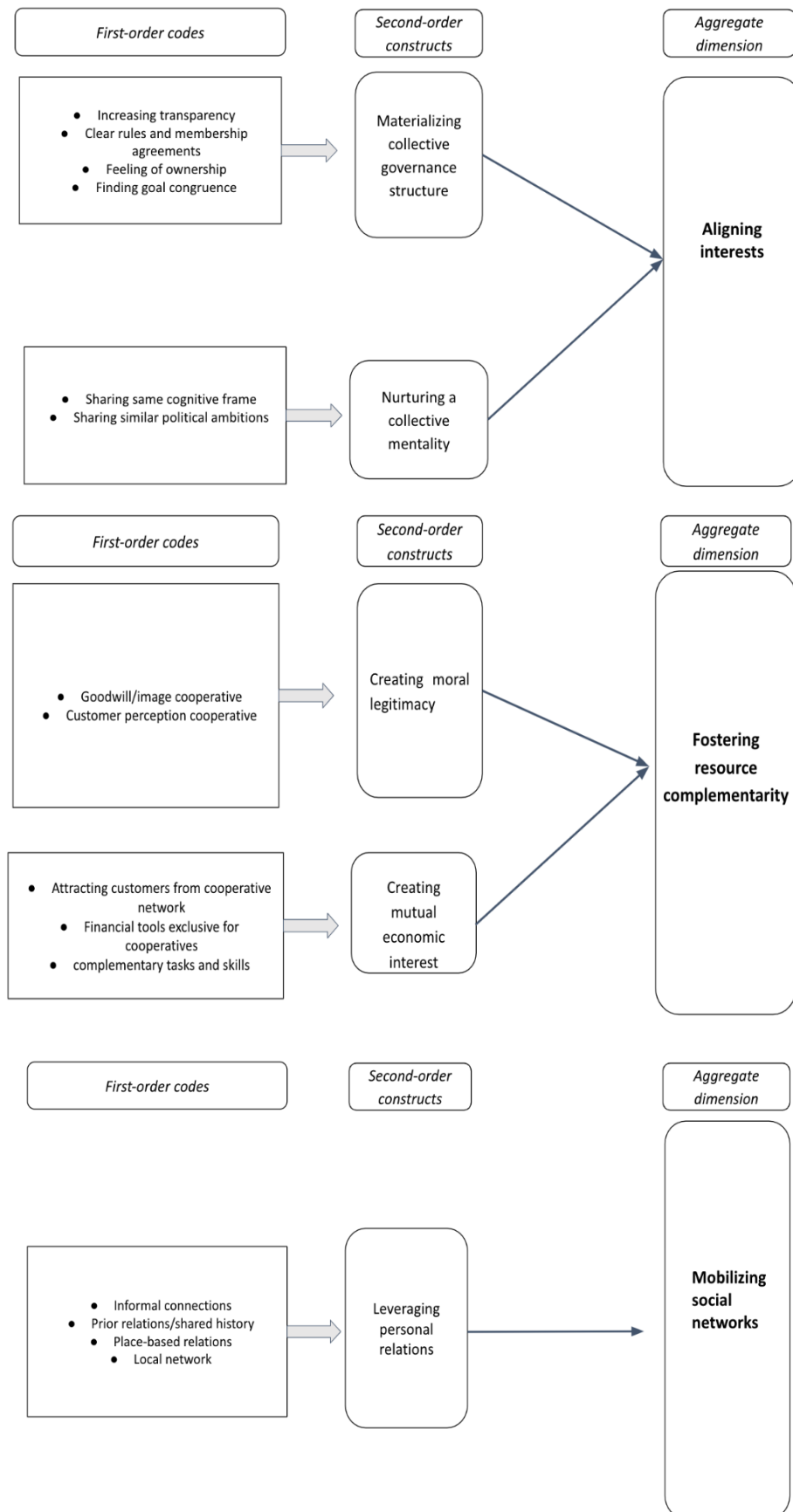
*Aggregate dimensions (Theory framed)*

**(3)**



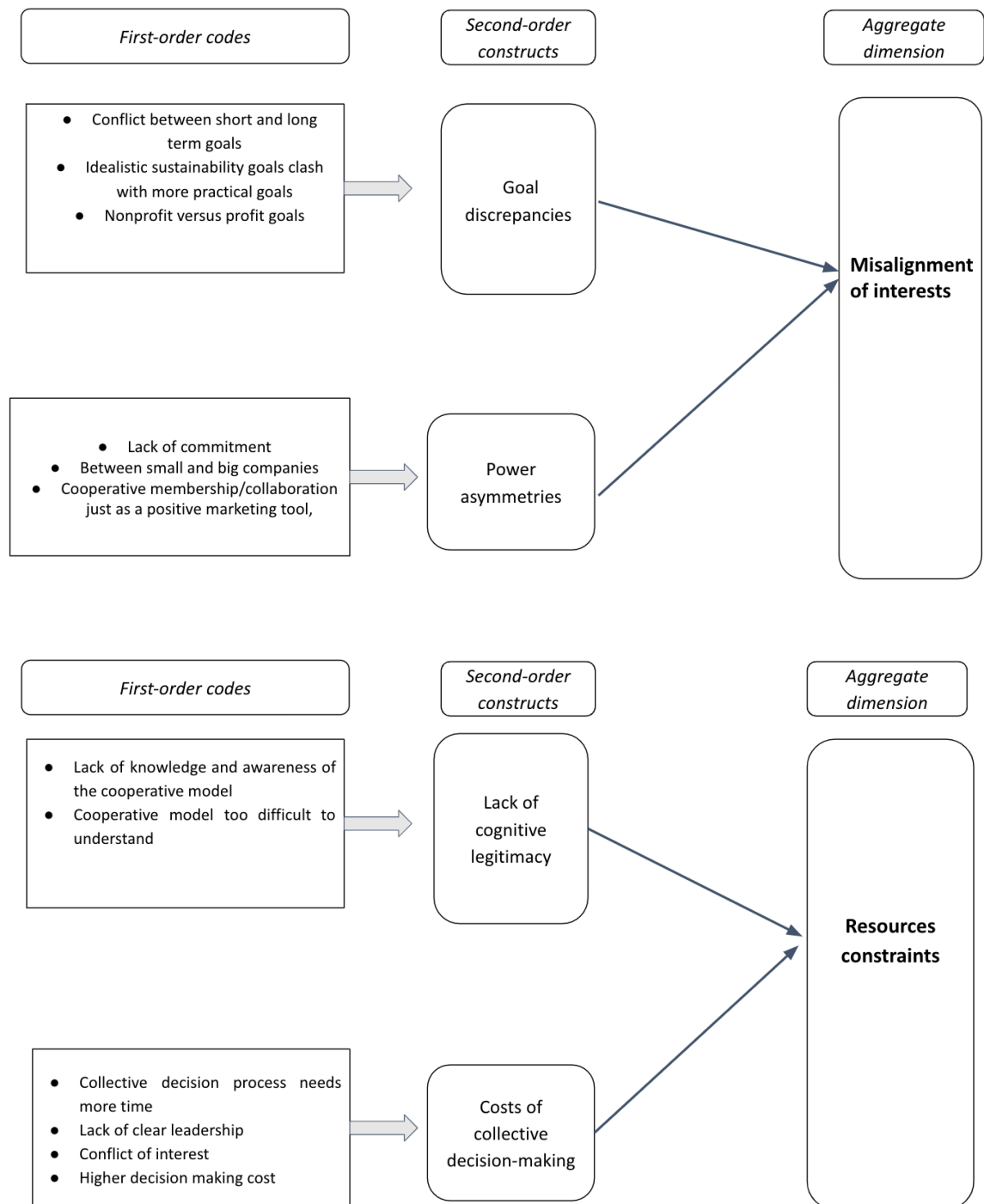
**Figure 3.**

*Data structure: collaboration strategies deployed by cooperatives*



**Figure 4.**

*Data structure: barriers for collaboration particular related to cooperatives*



### **3.5 Validity, reliability and ethical Considerations**

Research quality is assured by ensuring research reliability and (ecological) validity. Reliability can be obtained when research is replicable and consistent (Bryman, 2012). This research follows an elaborate sampling approach (3.1.1), and explicit procedures for data collection (3.2) and analysis (3.3). These research steps are rigorously reported above, increasing transparency and thus the replicability of the research (Bryman, 2012; Pandit, 1996). Validity can be obtained when subjective interpretation of data is minimized. Therefore, this research relies on multiple different data sources (archival data, participant research and interview data) (Yin, 2003). Furthermore, pre-identification of factors stimulating collaboration from theory ensures a higher congruence in empirical findings (Bryman, 2012). Before data collection, an expert interview is conducted to test found dimensions of collaboration in the theory section. Expert interviews are proven to be helpful in refining research instruments (Bogner et al., 2009). Moreover, feedback of experts on the developed interview guide improved the quality. In addition, transcription of data decreased potential data flaws (e.g. hearing mistakes, misinterpretation of statements), since the transcribing process double checked the data and obvious flaws could be detected (Bryman, 2012). These measures decrease subjectivity of research and improve validity (Yin, 2003). Lastly, ecological validity tests if findings are applicable to research subjects' natural settings. This is often to be found stronger in qualitative research, especially regarding participant observation and therefore chosen to form part of the data collection. Additionally, the semi-structured and less directive interview approach chosen for this research increases ecological validity (Bryman, 2012).

Potential ethical problems during data collection and analysis are highly considered by following Bryman's (2012) ethical principles in social research. Selected cases and interviewees are notified about the aim of the research. Upon start of the interview, interviewees are informed and asked for oral consent to record the interview (Appendix 6.3). Names of the interviewees are anonymised within the whole research to protect interviewee privacy.

## 4. Results

This section outlines the most essential strategies cooperatives engage in to foster collaborations for CBM implementation. Subsequently, barriers that hinder collaboration for CBM implementation particularly relevant for cooperatives are discussed.

### 4.1. Strategies facilitating collaborations

This section discusses the most relevant strategies that emerged from the interviews, archival data and participant observation. These strategies specifically facilitate collaborations that cooperatives engage in to implement CBMs. Identified strategies are grouped into three aggregate dimensions: *aligning interests*, *fostering resource complementarity* and *mobilizing social networks*. These dimensions are briefly explained and illustrated by discussing related subdimensions and influencing factors in the section below. When explicit links are found between the different collaboration strategies and specific CBMs or types of cooperatives, these are elaborated upon. Lastly, Table 5 provides an overview of identified collaboration strategies.

#### 4.1.1 Aligning interests

The first strategy cooperatives engage in to foster collaboration for CBM implementation is *aligning interests*. The cooperative model allows for an alignment of the interests of different stakeholders. In line with the arguments of the Coalition Circular Accounting report (2020), specific attributes of the cooperative (e.g. horizontal governance structure, profit cap and share, social values) can enable the cooperative to connect different parties, resources and to align different interests. According to respondents this was an essential strategy to stimulate collaboration. This strategy became apparent through two main activities cooperatives engaged in: (1) Nurturing a collective mentality and (2) Materializing a horizontal governance structure.

##### 4.1.1.1 Nurturing a collective mentality

Respondents illustrated how the cooperative model increased alignment with collaboration partners by nurturing a collective mentality. This way, less friction was created and transaction costs were lowered, making the collaboration more successful (Madhok, 1998). Two activities enabled by the cooperative were essential in nurturing a collective mentality: *Sharing the same cognitive frame* and *sharing political ambitions*.

- Sharing the same cognitive frame

Ten cooperative representatives clearly expressed that they favor external collaborations with other cooperatives (R3; R4; R5; R6; R15; R18; R23; R24; R26; R28). In these collaborations, knowledge of the cooperative model was already present and understanding between cooperatives was found to be higher compared to collaboration with other organizational forms. This increased trust and saved time in comparison to collaboration with non-cooperatives.

Moreover, cooperatives share the same working approach, values and mindset. These are characterized by taking a “*collective interest perspective*” and go beyond the interest of the individual (R5). As one co-founder of the cooperative noted: “*It helps when you are a cooperative and you go to see another cooperative. The discussion will directly go according to the cooperative mindset and in a*

*transparent way.*” (interview 5). Sharing these core characteristics increased openness and willingness for new external collaborations. This helped in facilitating (new) collaborations: *“With the cooperatives it's easier to discuss with them to find agreements and to develop programs together”* (interview 18). As an illustration, the “Licoornes” network is an alliance made solely among cooperatives (Licoornes, 2022). The aim of the Licoornes network is to promote a radical new economic model offering sustainable and ethical alternatives to current consumption in seven consumer good industries: energy, food, electronics, telecommunications, clothes, finance and transportation. The cooperatives <sup>3</sup> in the Licoornes network believe their cooperative model is needed to radically change the current economic model and together they can do this better (Licoornes, 2022).

- Sharing political ambitions

Another reason for external collaboration between cooperatives that emerged from the interviews were shared political ambitions of the cooperatives. Nine cooperative representatives emphasized the activist-minded nature of cooperatives, strengthened by their anti-capitalistic values (R4; R5; R6; R15; R22; R23; R26; R27; R28). Shared political ambitions can be a reason why they collaborate, as emphasized by the coordinator of the Licoornes network: *“Our deeper dimension as a cooperative entrepreneur is to transform society. And if we do it together and provide a quite comprehensive economic system, it will go faster and stronger”* (interview 22).

Concretely, these political ambitions materialize in advocacy, lobbying and related political activities, which cooperatives engage in on the top of their regular activities to try to influence governmental decisions. For instance, two cooperatives belonging to the Licoornes network, Commown and Telecoop, started a collaboration to lobby in favor of digital sobriety (i.e. responsible use of internet and technology). As the co-founder of Telecoop indicates: *“...through Licoornes with Commown, I'm working on lobbying to make law regulations for digital sobriety, from a French perspective, but also from a European perspective”* (interview 6). A concrete example of lobby activities is helping with the establishment of a “repairability index”<sup>4</sup> on electronic devices in France. The lobbying for the repairability index was successful and the index was implemented for five product categories of electrical and electronic equipment in January 2021 in France (Mikolajczak, 2022).

In some cases, the political ambitions of the cooperative sparked collaborations with non-cooperative organizations. For example, Commown and Telecoop launched the Fairtec collective together with other (non-cooperative) organizations<sup>5</sup>. All share the same goal to change the current electronic industry into a more sustainable and responsible one (R3; R4; R5; R6; R24; R25). Sharing this goal together, they launched FairTec and explained: *“It was through this common ideology that we created*

<sup>3</sup> Cooperatives in the Licoorne movement: *Enercoop* a 100% renewable energy supplier, *TeleCoop* a telecom operator encouraging data sobriety, *Mobicoop* a shared and solidarity-based mobility provider, *Commown* a hardware as a service model for eco-designed electronic devices, *CoopCircuits* a platform for buying and selling local products in a short circuit, *La Nef* a banking cooperative, *Citiz* a cooperative car-sharing network, *Railcoop* a pioneer in citizen railroading, *Label Emmaüs* an activist e-shop (Licoorne, 2022; Morlighem, 2022).

<sup>4</sup> The repairability index makes it obligatory for companies to provide clear information, followed by a score on the repairability of electrical and electronic products. This way consumers are stimulated to purchase a more repairable product and manufacturers are encouraged to advance their score by increasing product repairability (Mikolajczak, 2022).

<sup>5</sup> The FairTec collective organizations are: Fairphone, /e/OS, Commown, Telecoop, WeTell and the phone Co-op.

*FairTEC, a collective group of actors committed to digital sobriety. We are working together to offer credible and sustainable alternatives in order to create a paradigm shift*” (Fairtec, 2022). Within the FairTec collective, organizations promote each other's solution for responsible electronics. Together, the collective organizes joint communication campaigns, events and creates joint signed statements for lobby (e.g. on the EU open forum for feedback on repairability (Fairphone, 2021; Fairtec, 2022; R25).

It is important to note that not all cooperatives have political ambitions. Between interviewed cooperatives there seems to be a division in reasons why to choose the cooperative model. For some cooperatives the reason to choose the cooperative model was solely for practical reasons, for instance the founder of the PolyStyreneLoop Cooperative chose the cooperative model because: *“It was advice from the bank..the cooperative has one unique property which is excluded liability”* (interview 10). For others the motivation to choose the cooperative model was more political, for example the co-founder of Commown chose the cooperative form since he was convinced *“this was the best way to launch a company in the collective interest”* (interview 4).

#### 4.1.1.2 Materializing a horizontal governance structure

Certain attributes relating to the horizontal governance structure of the cooperative were put forward as essential tools to stimulate or improve alignment of stakeholders’ interests. Three of these attributes were most fundamental: *Increasing transparency, Creating a feeling of ownership and Finding goal congruence*. By realizing a horizontal governance structure it enables the cooperative to materialize these attributes, which can provide unique opportunities for collaboration.

- Increasing transparency

Interviews reveal that some specificities of the horizontal governance structure of the cooperative are instrumental in establishing clear initial rules and maintaining transparency, which were frequently mentioned as essential elements to improve collaboration and align stakeholders’ interests (R1; R2; R4; R5; R7; R8; R12; R13; R14; R15; R18; R15; R20; R21; R23; R25). In this case cooperative membership agreements and the feeling of transparency that the cooperative provides were particularly relevant.

First, when collaborative partners become members of the cooperative, the membership agreements can specify the details of the collaboration and assign responsibilities and liabilities. Especially the share and voting structure need to be *“straightforward”* and *“publicly available”* (R14). Clear and prior established membership agreements can help in resolving potential conflicts and increase alignment of stakeholders. For example, as one cooperative co-founder explained: *“At the last general assembly, some [members] were complaining, but then the board was quite clear. And said, Look, that’s how it works and we established these rules from the beginning. And then the discussion was stopped”* (interview 21).

Moreover, respondents indicated that the feeling of transparency that the horizontal governance structure created was more essential for collaborating actors as to actually participating in the cooperative. For instance, as one cooperative co-founder noted about members that have a share: *“...even for the ones that actually get a share. It’s not a driver. The true driver is transparency”* (interview 4). Collaboration partners mentioned having a share or participating in the cooperative as a positive point of the cooperative model and a reason to start the collaboration. However, it appeared

to be more the concept of the horizontal governance structure stimulating this and not the real wish to participate. Taking part in general assemblies, for instance, was often perceived more as a burden. Almost all collaboration partners (8) mentioned they had no time or interest for this (R8; R9; R12; R16; R17; R20; R22; R25). For them the fact that there was a collective governance structure in place was already enough. This ensured transparency and provided them with the opportunity to gain insights in the cooperative if necessary. Moreover, they trusted other members to look into the cooperative and assure good behavior, without feeling the need to participate themselves as one respondent noted:

*“I have shares in other kinds of cooperatives as well, but I never went to vote in the general assembly, which is stupid. But I feel okay about it. I have the opportunity to look inside the cooperative and to have impact. But I am confident with the cooperative and I am confident to trust the people who have the time to look into it.” (interview 22)*

Specifically when looking at collaborations with consumers, the governance structure of the cooperative model seems to be especially relevant for the CBM “Access and performance” in combination with CBM “Extending product value”. Consumers are involved intensively and for a longer amount of time when purchasing a service instead of a product from the “Access and performance” (Mostaghel & Chirumalla, 2021). Additionally, for the CBM “Extending product value” collaboration with the consumers is critical to enable consistent product returns and to apply product life extension strategies (e.g. reuse, repair, refurbishing or remanufacturing) (Bocken et al., 2016). Combining these two CBMs can be beneficial, considering the “Access and performance” can facilitate product returns for life extension strategies. Correspondingly, these strategies can lower cost. For example, the costs are lower within the “Access and performance” when lifetime of products is longer through e.g. repair (Commown, 2022).

However, to implement these CBMs successfully good consumer relations are crucial and it is essential to include the consumer. As the co-founder of a cooperative implementing both CBMs explains: *“Without including the consumers, it's really not ethical...if the consumers are not inside the cooperative, then all the leasing and hardware as a service models are just a way to get more money on the front from the consumers”* (interview 4). When operating in a for profit model a risk of this CBM is that it can potentially exploit consumers. For instance, if consumers rent devices, they can become dependent and vulnerable for potential price increases. In contrast, the horizontal and profit constrained structure of the cooperative model increases transparency, can provide lower prices and increase accessibility (Commown, 2022). This increases consumer trust and improves the collaboration, as a cooperative co-founder implementing this CBM (R4) explains:

*“...Because for consumers, you know that, with the cooperative if there is profit, it will be redistributed or the prices will lower or any other way. And as a consumer, if you don't trust it you can just check it. You can open all the details and get all the information and vote in the yearly shareholder meeting...”* (interview 4)

- Creating a feeling of ownership

Another attribute of the horizontal governance structure of cooperatives that improves collaboration is the capability to create a feeling of ownership, as indicated by eight respondents (R6; R7; R12; R15;



R20; R21; R22; R23). This increased the responsibility and involvement of each collaboration partner. Shared leadership could increase a feeling of ownership and improve external collaboration of cooperatives. Subsequently, cooperative membership and the horizontal governance structure of the cooperative facilitated a feeling of ownership and improved internal collaboration within the cooperative.

First, when leadership is shared between organizations and the feeling of ownership increases, it can stimulate the motivation of collaboration partners. An example here is the FairTec collaboration of cooperative Commown. This is a joint collaboration, however the organization which leads the collaboration from a project management perspective changes quarterly. The feeling of ownership this external collaboration created stimulated the FairTec partners to put time and resources in the collaboration on top of their regular work priorities (R4; R5; R6; R25).

Second, the specific governance structure of the cooperative can create a feeling of ownership and improve internal collaboration by providing the possibility to become a member of the cooperative. This way collaboration partners can become actual stakeholders who are involved in the cooperative, receive a share of the profits and take part in the decision-making. In addition to buying a share in the conventional way, the governance structure of the cooperative allows for investing in the cooperative in unique ways for example by contributing in labor or in-kind. Here the membership agreements are crucial, since these members do not contribute in the conventional way. It is therefore essential to specify their responsibilities and liabilities clearly (Coalition Circular Accounting, 2020; R13; R14).

This novel way of obtaining a share of the cooperative governance structure was particularly interesting for facilitating collaboration for implementing the CBMs “Extending product value” and “Extending resource value”. This structure allows to valorize residual resources that would be otherwise wasted. For instance, the cooperative Intelligentfood develops new food concepts from residual resources. Here it is possible for members to get a share when they contribute in labor or in-kind (e.g. residual resources) and it allows for vertical integration of stakeholders along the value chain (from supplier to consumer). By providing a share and membership, the cooperative was able to align interest and increase ownership of stakeholders along the value chain (Coalition Circular Accounting, 2020; R13; R14).

Furthermore, the horizontal governance structure of the cooperative is characterized by equality and an increased feeling of ownership. For example, the retail cooperative Odin looked for a way to share the responsibility for people and the environment (R15; R17). They found that the horizontal governance structure of the cooperative was most suitable in providing this responsibility and feeling of ownership. As cooperative Odin mentions about its members: *“So it's a little bit my shop, but it's also their shop...we share this feeling of ownership”* (interview 15). This social governance structure makes them unique compared to other biological or biodynamic supermarkets (Smit, 2020).

Additionally, the feeling of ownership stimulated trust within the cooperative, as a cooperative employee indicated: *“We do not have a boss...We are really independent and responsible, we trust each other.”* (interview 23). Overall a feeling of ownership generated a positive attitude towards the cooperative and improved internal collaboration, as a member of BEES a supermarket cooperative for consumers noted: *“It is sort of a feeling of ownership and CO-ownership. And if you go there, you will feel a completely different atmosphere than if you go to other bigger stores. For me, going to the BEES is a pleasure”* (interview 18). Additionally, BEES can provide lower prices when

cooperative members work at the cooperative. Working at the cooperative made the members more involved in the cooperative and more committed members in the long run (R15; R23). BEES cooperative explains this: *"...if they're here, they chose to be here, to be a member, they went to the information session, they have to buy a share, they have to come work once a month. So it's easier than random people, because they have to work and are more committed"* (interview 23).

Regarding CBM implementation, creating a feeling of ownership was especially relevant for cooperatives implementing the CBM "Access and performance" and/or the CBM "Encourage sufficiency". When consumers are members of the cooperative, they feel more ownership of the product of the cooperative. This improved consumer take-back for repair and end-user sufficiency as Telecoop, a telecom cooperative encouraging digital sobriety and limited use of data, explains: *"It's really about allowing people to figure out what their consumption is. And once they figure it out, it's helping them to reduce it"* (interview 6).

- Finding goal congruence

The third and last attribute of the horizontal governance structure of cooperatives that improves collaboration is its capability to create a common goal. The importance of having a common goal to establish a successful collaboration was frequently mentioned by all respondents. First when goals are aligned, the collaboration helps to fulfill goals of all involved organizations. Respondents explained that a common goal increased motivation to participate in the collaboration and improved compatibility of participating organizations. It helped to find goal congruence and establish responsibilities when goals were simple: *"...And then I think we had a really useful synopsis session, and feedback session, kind of like looking back at what we've achieved and what we want to achieve. And I think what helped is we really simplified the goals of what FairTec wanted to do in 2022"* (interview 25). Second, the cooperative has the ability to align stakeholders towards a common goal by providing a platform for cooperation and profit distribution (Coalition Circular Accounting, 2020). Especially when collaboration partners become members of the cooperative they have to agree on the same goal (R14). Concretely, it was often easier to achieve goal congruence within producer or consumer cooperatives. It was suggested this was the case because needs were more similar among these members (R7; R15; R20).

#### 4.1.2 Fostering resource complementarity

The second strategy cooperatives engage in to foster collaboration for CBM implementation is *fostering resource complementarity*. Through effectively combining resources organizations can create stronger collaborations (Harrison et al., 2001). The unique attributes of the cooperative model enabled access to specific complementary collaborations and resources. Main activities illustrating this strategy were respectively: (1) Creating moral legitimacy and (2) Creating mutual economic interest.

##### 4.1.2.1 Creating moral legitimacy

Respondents indicated how the perception of the cooperative model effectively stimulated certain collaborations. This was mainly influenced by one activity: *utilizing the image of the cooperative*.

- Utilizing the image of the cooperative

Cooperatives can foster resource complementarity by creating moral legitimacy through utilizing the image of the cooperative in two ways. The first way revolves around the positive image of the cooperative. Sixteen respondents indicated how the positive image of the cooperative increases willingness of non-cooperatives to collaborate (R4; R5; R6; R7; R9; R10; R11; R12; R13; R15; R17; R19; R23; R25; R26; R27). Cooperatives, especially when implementing CBMs, are founded on ethical values of social and sustainable responsibility which makes them complementary or antagonistic with commercial corporations (ICA, 1995; Schneiberg et al., 2008). Moreover, profits are constrained according to the cooperative principles, which are often defined by law. For instance, all nine cooperatives of the Licoornes network are *Sociétés coopératives d'intérêt collectif* (Scic), which means decisions are made on the principle of one person equals one vote and it is obligatory to reinject 57% of all profits back into the cooperative (Licoornes, 2022; Morlighem, 2022).

This positive image of the cooperative increased the willingness to collaborate with cooperatives, especially from commercial corporations. As one cooperative founder explains: *"capitalist companies are more willing to work with us, because we have a positive image and the collaboration creates goodwill for them."* (interview 7). When partners were intrinsically motivated by the goal and structure of the cooperative, they were willing to put more effort in the collaboration as in comparison to other collaborations. For two partners, the cooperatives implementing a CBM even served as inspiration (R14; R25):

*"We would put quite a lot of effort into marketing and the collaboration with [cooperative], despite their size, which is, you know, in comparison, very, very small, and also the volume that they were doing, you know, relatively small in comparison to what our other partners are doing. Still they were considered an important partner, because their business model and whole organizational structure was so different. And their business model really is the pinnacle of what should be a sustainable and responsible company, but more importantly they really show how to do the circular economy in Electronics."* (interview 25)

Second, the attributes of the cooperative governance structure increases trust. This was also considered a relevant attribute for collaboration partners not part of the cooperative. As one producer collaborating with a cooperative elaborated how the framework of the cooperative model increased the predictability of their interaction: *"...the cooperative model provides this framework as to how the organization should run and how it should grow. This framework keeps them in line with their mission"* (interview 25). This kind of predictability and the assurance that the cooperative needs to oblige to its values stimulated more trust (Poteete & Ostrom, 2004). Additionally, all interviewed consumers (3) mentioned this as an essential attribute of the cooperative, since the cooperative model ensured the product would stay *"...free from capitalistic exploitation"* (interview 19).

#### 4.1.2.2 Creating mutual economic interest

According to respondents, the cooperative model enables the ability to create mutual economic interest through combining complementary resources. This strategy consists of three main activities: *Mobilizing (financial) help between cooperatives, Attracting new consumers through the cooperative network and through fostering complementary tasks and skills.*

- Mobilizing (financial) help between cooperatives

Mobilizing (financial) help between cooperatives helps in creating a mutual economic interest, in particular between big and small cooperatives. Alignment of financial resources between complementary (big and small) cooperatives stimulated strategic external collaborations among these cooperatives. These collaborations between cooperatives are stimulated by financial resources exclusively intended for the cooperative network. For instance, respondents described financial tools exclusive for cooperatives such as seed funding or loans from other cooperatives (R2; R4; R5; R6; R17; R19; R22; R23). *“...what we do is that all cooperatives pay some fees to the network. And that is a pool one can use to finance other cooperatives and alliances. And I think this is really powerful. That's something you will not find with startups”* (interview 5). These financial tools exclusively for cooperatives can especially be useful for implementing new CBMs, which generally struggle with getting more traditional funding (Hina et al., 2022).

Complementarity between bigger and smaller cooperatives can especially stimulate collaborations between cooperatives. Despite their small starting size and limited resources, respondents indicated how more established and larger cooperatives often volunteer to help and collaborate with new and small cooperatives (R4; R5; R17; R23). For example, *“when Commown was just an idea and really nothing. We already had older and bigger cooperatives, that just say, Okay, how can we help you and we managed to have really meaningful financial help”* (interview 5). This way collaborations between cooperatives were especially beneficial for smaller or starting cooperatives. On the other hand, for bigger cooperatives and especially the ones that have been on the market for a long time, the collaboration provided a good way to emphasize their cooperative values and the ways they are working on system change in general (R6; R22). Here collaborations through the cooperative network helped in gaining financial resources. This was stimulated by the fact that they were both cooperatives and complementary in size and resources.

Regarding CBM implementation, the ability of cooperatives to mobilize financial help from the cooperative network could be especially helpful. Cooperatives implementing a CBM are still relatively new and alone they have too few consumers or members. The development of these cooperatives depends on their ability to create a wider network of interconnected cooperatives. For example by generating a mutual exchange through data interoperability where the different applications or products of cooperatives are connected and communicated in a coordinated way (Morlighem, 2022). This aligns with the goal of the cooperatives in the Licoornse network. The aim of the Licoornse network is to grow the cooperative weight in the economy by promoting and connecting cooperatives (and their products or applications). They believe this is possible and already signal a current growing trend of cooperatives and their network value in France. For example, in the last year, 203 new cooperatives have been created and their overall turnover (6.3 billion euros) has increased by 8%, according to the Confédération générale des Scop (Malet, 2022).

- Attracting new consumers through the cooperative network

Another activity that stimulates the creation of a mutual economic interest was attracting new consumers through the cooperative network. First, attracting new consumers through the cooperative network and generating value was a prominent motivation for cooperatives to collaborate (R3; R4;

R5; R6; R19; R22; R23; R24). Together, cooperatives can create bigger and more effective communication campaigns. This was the main reason why the Licoornes network was created: *“...just alone, we can't make ourselves heard. Together we have a little chance to be heard by a bit more people. So the main reason is to grow and acquire some new clients together”* (interview 22). Collaborations with the cooperative network helped to gain new consumers (R3; R4; R5; R6; R17; R19; R24). When consumers or members of a certain cooperative would see that their cooperative collaborates with other cooperatives, they would be more inclined to become a member of these other cooperatives. Moreover, many cooperative members were also members of other cooperatives. These members share the same mindset, have knowledge about the cooperative model and support this alternative way of doing business. The Licoornes network organizes joint communication campaigns and creates shared offers between the cooperatives. The co-founder of Telecoop elaborates in an interview for *Magazine decideurs*:

*“We are going to launch a major joint communication campaign in the second half of the year to highlight our differences and make ourselves visible to as many people as possible. We are also working on the development of common offers to promote our ecosystem (Morlighem, 2022)”*

For example the “how about a share campaign” motivates individuals and potential consumers to take part in a share of one or multiple cooperatives of the Licoornes network. The aim of the campaign is to raise more finance for the cooperatives. Individuals are stimulated to support this cooperative project for economic transformation by investing through the campaign in cooperative shares. The campaign is going on till 11th of July 2022. It already mobilized 78,979 people to contribute and raised €429,340 to invest in the new cooperative economy through buying cooperative shares (Licoornes, 2022).

Second, supplementary to these communication campaigns, complementary cooperatives collaborated together to create shared offers for consumers: *“If clients rent a smartphone at Commown and they use Telecoop as telecom provider, then they get a discounted price on both of the offers”* (interview 3). Both cooperatives elaborated in the interviews how their CBMs “Access and performance” and “Encourage sufficiency” were complementary and a good fit to do shared offers together. The reason why is illustrated by Telecoop (a telecom provider encouraging digital sobriety and limited use of data): *“...we don't want to sell phones so we propose to our consumer to not buy phones but to rent phones. Always for ecological reasons. So that's why it's just logic that we propose another cooperative solution from Commown”* (interview 24). Consequently, proposing this shared offer helped in attracting new consumers mainly from their shared cooperative network.

- Fostering complementary tasks and skills

The third and last activity cooperatives engaged in to create a mutual economic interest was fostering complementary tasks and skills. According to nine respondents, responsibility and commitment increased when collaboration partners divided different and complementary tasks and skills (R2; R3; R8; R13; R18; R20; R23; R24; R25). For example, a partner of cooperative Inero experienced the collaboration as very positive because everybody was *“really complementary”* and *“we all had our own tasks, everybody had their own specialty and expertise ”* (interview 20). Moreover, it helped in

successfully aligning the organizations for collaboration if all stakeholders along the value chain were integrated, as one respondent part of the FairTec collaboration noted: *“...we've got every different step of the mobile value chain. So that's the key point that we are really representative of everything that we can do. I would say that's very important to make things work”* (interview 25).

Specifically, the cooperative structure has the ability to vertically integrate stakeholders along the value chain. This way it can involve different types of stakeholders with complementary tasks and or activities. For instance the cooperative IntelligentFood owns no production facilities, has no logistic capacities or employs no chefs. It develops new food concepts from residual resources solely by connecting different stakeholders along the whole value chain. Members can contribute in labor, cash or in-kind. Intelligentfood orchestrates this process assuring the different stakeholders and ways of contribution are complementary (Coalition Circular Accounting, 2020; Intelligentfood, 2021). A partner of cooperative Intelligentfood explains how the complementarity of stakeholders in these kind of collaborations can be beneficial for all stakeholders involved:

*“...it was about 0.5% of the dough that they produce, which is basically nothing, but it's big enough for a smaller business model to still make use of this in a profitable way. And for the producer it didn't make sense, because they have huge machinery and basically starting the machine already costs more than making use of this waste. But for Intelligentfood the waste was still enough dough to really make cookies and the business model. That's the interesting thing, for everyone It was really just a benefit.”* (interview 14)

By becoming this “circular value chain director” a win-win situation can be created (Coalition Circular Accounting, 2020). Many respondents (15) indicated that this formed an essential reason for their collaboration (R2; R3; R4; R8; R9; R12; R13; R14; R15; R16; R20; R21; R22; R25; R26). When both parties mutually benefit from the collaboration, it increases trust. Cooperatives implementing a CBM focused on waste material, for example “extending resource value” or “industrial symbiosis”, can often especially benefit from this. As one partner of a cooperative implementing this CBM explains: *“...you need someone who feels responsible to identify surpluses of waste or labor and link these surpluses to each other. And that is why cooperatives as value chain directors can be the best model for these kinds of business models”* (interview 14). Moreover, since these cooperatives are working with waste streams, it often costs their collaborating party nothing. This party can remain focused on their core business, while the cooperative lifts the burden of the waste material. While in the meantime this improves the image for all parties involved. A cooperative co-founder implementing this CBM (R21) explains:

*“The collaboration was so successful, because everybody wins. X wins by boosting its image, recycling of waste water is a good marketing statement. The farmers have cheaper water and less work. The quality of the vegetables improves and X knows for sure it will always get its amount of vegetables. Nothing but positive, everybody wins.”* (interview 21)

#### 4.1.3 Mobilizing social networks

Lastly, the third strategy cooperatives engage in to foster collaboration for CBM implementation is *mobilizing social networks*. The cooperative model enables stakeholders to mobilize (local) social networks. Respondents indicated this as an essential strategy stimulating collaborations. Cooperatives have the ability to mobilize social networks through (1) leveraging personal relations.

#### 4.1.3.1 Leveraging personal relations

Respondents illustrated how the cooperative model can leverage personal relations. This way social networks could be mobilized and collaborations stimulated. According to the respondents two main factors were stimulating this: *creating informal connections and a shared history* and *adopting place-based relations*.

- Creating informal connections and a shared history

Many respondents (11) indicated that informal connections improved the collaboration (R2; R5; R7; R8; R9; R12; R15; R17; R20; R21; R23). Respondents explained how having a shared history improved the collaboration. Subsequently, respondents elaborated on how the governance structure of the cooperative can stimulate these personal relations by creating a shared cooperative culture.

First, a majority of the collaborations started, because there were already prior relations or contacts in place as one cooperative founder (R7) emphasizes: *“Most of the people that we work with, I knew before through research or other projects”*(interview 7). When having a shared history it was easier to establish contacts and create trust. This trust improved even more when relations were close. Sometimes having a close relationship was even given as the primary reason for their collaboration. For example one cooperative partner indicates: *“Why do we collaborate? Because I knew him already and we are close friends”* (interview 9). This is in line with Kegler et al. (2010) arguments stating personal networks and a history of collaboration are essential for potential future collaborations.

Second, the cooperative can create a shared cooperative culture. The governance structure facilitates regular meetings and members get to know each other better. One cooperative elaborates on the interaction between their members: *“We organized several informal meetings and I think in general, that's how the interaction improved”*(interview 21). Additionally, cooperative members can bring in their own network and close contacts into the cooperative. This can facilitate and stimulate collaborations for the cooperative, as the Sonian Wood Cooperative (R7) illustrates: *“A cooperative member was a carpenter. And he obviously had a lot of contacts in that area, like, you know, other carpenters and clients etc. he brought that into the cooperative”* (interview 7). This is especially relevant when each cooperative member has its own specific expertise and/or background and the members can be complementary.

Furthermore, this shared cooperative culture enabled the cooperative model to facilitate better connections between the members of the cooperative or collaboration partners. This way the governance structure of the cooperative can create new (informal) connections and new networks between members of the cooperative. Before their membership, members did not know each other. Six respondents indicated that when they became a member of the cooperative, it created a culture of trust and transparency. These connections even led to new, unexpected collaborations and business opportunities (R8; R12; R17; R20; R23; R21). A cooperative member (R12) illustrates this point:

*“I see that if you are part of a cooperative, it's so easy to open doors. And it's so easy to be transparent, and to be a little bit vulnerable in some ways. And this vulnerability opens doors and makes other companies in the cooperative talk with you about the issues that you have and try to look for solutions. That's what I*

*realized happened. It created trust. And even if I already knew [other cooperative member], I had no entrance over there. If it wasn't for the cooperative, I would really have to make use of my own network to get into there. That would also have made it more difficult for me to explain what the exact idea and the exact plan is. And now this was just a phone call and it was made a lot easier by being part of this cooperative.” (interview 12)*

- Adopting place-based relations

Place-based relations were frequently mentioned to improve personal relations, social embeddedness and collaboration according to 16 respondents (R2; R3; R4; R5; R7; R10; R11; R15; R18; R20; R21; R23; R24; R25; R26; R28). Respondents illustrated how a shared local culture improved the collaboration. Subsequently, respondents described how place-based relations were especially relevant in improving collaborations with producers and for implementing the CBM “industrial symbiosis”.

First, a shared local culture increased understanding between collaboration partners, it was easier to communicate (due to same language and cultural habits) and to align expectations. This improved the collaboration according to 12 respondents (R2; R3; R4; R5; R7; R10; R18; R21; R24; R25; R26; R28). Often a shared local culture made the collaboration more effective as one cooperative (R3) indicates: *“I think it's easier for us to collaborate with the French people, because we understand them better, you know, also on the cultural level” (interview 3).*

Second, many respondents (8) experienced collaborations with local producers as better compared to collaborations with non-local producers (R3; R7; R11; R15; R18; R19; R20; R23). This increased opportunities for contact and meeting physically as one cooperative founder (R7) emphasizes: *“I think it definitely helps to be able to go and see them and be able to, you know, go back and forth.” (interview 7).* Often there were not a lot of local producers in the area. This low amount made it easier to keep close contacts as one cooperative indicates: *“There are not so many local producers in the area, so we know them” (interview 18).* Moreover, local producers often shared the same cooperative ethical values of social and/or sustainable responsibility and corresponding with the values listed by the International Cooperative Alliance (ICA, 1995). Sharing the same values increased the willingness of cooperatives to put more effort in these collaborations and make exceptions with for example higher prices and an adjusted production planning. These collaboration efforts even extended to cooperatives borrowing money to their local suppliers. One cooperative employee (R23) illustrates this:

*“We help them and collaborate on production planning. For example, our vegetable supplies we plan together with them...So they can also invest a bit more because they have this safety. And we have a plan now, to borrow a supplier money to invest in a big machine. So instead of borrowing money from a bank they can borrow money from us. So they will have lower costs and the money stays in our circular economy. So the benefits we make can also help our suppliers.” (interview 23)*

Correspondingly, these extra efforts of the cooperatives increased the willingness of the producers for other (new) collaborations. These additional collaborations were often particularly relevant for the members of the cooperative. For instance, members can visit certain social activities at the supplier for free or get other discounts on products directly from the supplier. This was an effective way for



cooperatives to provide cheaper activities or products for their members. It increased accessibility for the members and emphasized the social aspect of the cooperative CBM as indicated by one cooperative employee (R23):

*“yesterday the members visited one of our suppliers, which is a bakery. Where they learned how to make bread. They do some activities, so they can see people and they can go out. Even if they don't have money, we can help them to socialize and give access to nice sustainable products.” (interview 23)*

Lastly, specifically regarding CBM implementation, the relevance of place-based and geographical close relations was most essential for the CBM “industrial symbiosis”. Geographical close relations can facilitate the identification of potential waste streams that can be used as input for other supply chains in the same area (Dora, 2019; Hina et al., 2022; Urbinati et al., 2021). Moreover, this CBM works with waste at the process and manufacturing level, which could often only be shared at local level to retain most value. For instance for a cooperative implementing this CBM, Inero, it was a requirement for members to be from the local environment. Inero re-uses waste water from a company processing frozen vegetables and delivers it to farmers in the area. This is done through a piping network of 23 kilometers covering 500 hectares. Outside this area it is not possible for farmers to participate (Inero, 2021; R20; R21).

#### 4.1.4 Overview of strategies facilitated by cooperatives for collaboration

Table 5 below provides an overview of strategies specifically facilitating collaborations that cooperatives engage in to implement CBMs. Explicit links found between the different collaboration strategies and specific CBMs are highlighted.

**Table 5.***Overview of strategies for collaboration*

Strategies for collaboration	Summary
<b>Aligning interests</b>	
<ul style="list-style-type: none"> <li>Nurturing a collective mentality</li> </ul>	Cooperative can work more effectively with other cooperatives by sharing the same working approach, values, mindset and (often) political ambitions.
<ul style="list-style-type: none"> <li>Materializing a horizontal governance structure</li> </ul>	The governance structure of cooperatives can provide a platform and guidelines for cooperation. This can increase transparency, a feeling of ownership and goal congruence.
<b>Fostering resource complementarity</b>	
<ul style="list-style-type: none"> <li>Creating moral legitimacy</li> </ul>	The social values and profit constraints of cooperatives can increase trust and offer resource complementarity with commercial corporations.
<ul style="list-style-type: none"> <li>Creating mutual economic interest.</li> </ul>	The cooperative network could help to attract new customers and mobilize financial resources, especially between complementary cooperatives. Additionally, the cooperative structure allows for involvement of different types of stakeholders with complementary tasks and or activities.
<b>Mobilizing social networks</b>	
<ul style="list-style-type: none"> <li>Leveraging personal relations</li> </ul>	The cooperative could improve (informal) relations by providing a shared cooperative culture and by (often) operating on a local scale.

## 4.2 Results: barriers to collaboration

When identifying strategies facilitating collaborations that cooperatives engage in to create CBMs, barriers obstructing these collaborations were put forward by respondents. These barriers particularly relate to cooperatives and are grouped into two dimensions: *resource constraints* and *misalignment of interests*. These barriers are briefly explained and illustrated by discussing related subdimensions in the section below. If possible suggestions from above strategies to overcome these barriers will be emphasized. Lastly, table 6 provides an overview of identified barriers.

### 4.2.1 Resource constraints

A high number of respondents mentioned resource constraints as an obstacle in establishing collaborations. A lack of resources was particularly experienced, which limited the formation or potential of collaborations. In the case of the cooperatives resource constraints were particularly experienced because of (1) Lack of cognitive legitimacy and (2) Costs of collective decision-making.

#### 4.2.1.1 Lack of cognitive legitimacy

The lack of knowledge and awareness of the cooperative model formed a critical obstacle in establishing collaborations (R3; R4; R5; R6; R17; R19; R24; R25). This decreased the willingness of potential partners to become a member and/or collaborate with the cooperatives. When partners were not aware of the cooperative form, they did not recognize the advantages for the collaboration, as one cooperative interviewee remarks: *"...if you have no idea what a cooperative is and how it works, actually then it doesn't have value for you"* (interview 4). Often the cooperative model was experienced as too difficult to understand by non-cooperatives, taking more time and resources to explain it. These kinds of inefficiencies increase the transaction costs and hinder the collaboration (Madhok, 1998). Additionally, the lack of knowledge of the cooperative model can make it more difficult to attract (external) funding for collaborations (R4). This was explained by the co-founder of one cooperative (R4): *"...if you have a very interested investor in the collaboration or cooperative, but they don't know how the cooperative works and they are not used to the specific tools, then in the end you weren't able to sign anything with them"* (interview 4).

However, the cooperative network can potentially increase knowledge of the cooperative format and improve potential new collaborations with cooperatives in the future. For example, The joint communication campaigns organized by the Licoornes network emphasize the cooperative model and demonstrate its feasibility: *"The Licoornes network should allow us to have more visibility, to demonstrate that our cooperative model works"* (Morlighem, 2022). This way the Licoornes network is a way to prove the cooperative model and to show together how they do business differently. Collaborating together in joint communication campaigns makes the cooperative message more solid. Additionally, this increases visibility and knowledge about the cooperative model. The co-founder of a cooperative part of the Licoornes network illustrates this:

*"... through what we are doing, together with the other cooperatives of the same network, we get people to know what a cooperative is. And what is the value? And why is it so interesting to be part of this new ecosystem? With Licoornes we believe that by collaborating together as cooperatives, we can get stronger communication, raise awareness and grow the cooperative weight in the economy."* (interview 4)

#### 4.2.1.2. Costs of collective decision-making

The participative and horizontal governance structure of the cooperative requires a longer decision taking time. Everybody has a vote and this collective decision process needs more time. Cooperative members would often wait on each other and refrain from making a decision, which hindered the decision making process. Eight respondents emphasized that the decision taking often was longer resulting in lack of time to establish successful collaboration (R1; R10; R11; R12; R18; R22; R23; R25). This especially occurred when there was a lack of clear leadership (R7; R10; R11; R22; R23). When cooperatives had defined leadership and ownership roles more clearly, for example by having a board or manager that made the day to day decisions, decision-making improved and was perceived as faster (R4; R5; R6; R7; R13; R15; R17; R24).

Moreover, the longer decision taking time was especially a problem in multi-stakeholder cooperatives. Consumers and producers often pursued different interests. This conflict of interest made it more difficult and needed more time to reach a collective decision. Five respondents wanted to prevent this and indicated this as the reason to only represent consumers or producers (R7; R9; R15; R20; R21).

Furthermore, the longer decision taking time of the cooperative structure increases the cost of decision-making. This hampers the collaboration process within the cooperative and with external partners as indicated by nine respondents (R3; R4; R5; R6; R8; R16; R22; R24; R25). Additionally, the cooperative's structure often made it easier to collect starting finance by gathering all member contributions. However, when more finance was needed, for example if the cooperative encountered problems, it was often found difficult to gather financial support from the members. These members already contributed and would often wait until other members contributed more as well. This was especially a problem in cooperatives implementing CBMs. These were relatively young and the new CBM structures were more likely to encounter problems, as emphasized by one cooperative founder (R10):

*"You have inevitable startup issues and then trying to find a million is extremely difficult when you have to ask 56 members with all the complex voting structure so it is very good in the beginning, but it did not work in the end." (interview 10)*

#### 4.2.2 Misalignment of interests

From the interviews, misalignment of interests emerged as a critical factor obstructing collaboration. When interests of collaboration partners are misaligned it is difficult to establish a successful collaboration. Respondents experienced a higher misalignment of interests as a result of (1) goal discrepancies and (2) power asymmetries.

##### 4.2.2.1 Goal discrepancies

When goals of collaborating partners did not align it often obstructed the collaboration. During the collaboration, five respondents experienced a conflict between short and long term goals (R2; R5; R8; R11; R12). Cooperatives driven by their social values prioritize long term sustainability goals over short term profits, as one cooperative indicated: "... the cooperative is a long term project because it cannot be bought by a bigger company...it is a project that won't leave the commons" (interview 5). When collaborating with short-term profit driven businesses this resulted in conflict of goals. Often at the start of the collaboration this was not a problem. However, when these businesses realized the implications of the long term perspective of the goals, they lost interest, commitment and even their

willingness to continue providing resources (R10;R11;R12). Moreover, sustainability goals of the cooperative sometimes clashed with more conventional goals of their collaboration partner. This made it sometimes even necessary to stop the collaboration (R8). This is especially the case for cooperatives implementing a CBM, where a long term vision is required to radically redesign current (economic) structures for implementing circular processes (R2; R5; R8; R11; R12). For example the Sonian Wood Cooperative solely working with waste and/or local wood cannot guarantee high amounts of stock wood available. One of the partners and consumers of Sonian Wood Cooperative tried to set-up a collaboration with the cooperative and a contractor. However, the partner explains how the planning of the project and goals of the contractor conflicted with the goals of the cooperative:

*“In the end the contractor does not care about the origin of the wood, let's say, it's the higher availability of the wood that was more important for them. Because there is a schedule, and for them the goal is to follow this schedule, and so forth. So, for [cooperative] it was quite difficult to answer this question. If I have a contractor who says in two weeks, we need this amount of wood. [cooperative] cannot assure that there will be wood in their stock. Since we wanted to take the waste wood. So for them, it was quite difficult. And so we say, okay, it's too difficult and stopped this part of the collaboration.”(interview 8)*

Even when collaborating with sustainable focused companies, there was found to be a difference in goals and values (R4; R5). Besides environmental values many cooperatives have anti-capitalistic, anti-growth and nonprofit values. Not all sustainable companies shared these values and some were still very profit focused. This could lead to conflict. The collaboration started on a basis of shared environmental values: *“You can find people that are really ecologists, but they believe you can find a solution in the capitalistic market, and that you can do green growth etc”* (interview 4). However, in the end they were not willing to go as far as most cooperatives, as one cooperative co-founder emphasizes:

*“...the core idea of the cooperative is to say that not only the cooperative itself, but also all the devices inside, they do not belong to the people that put the money in, but they belong to everybody, to all consumers, all manufacturers and so on. And you create a new kind of commons. And that's really against all capitalism. And it's very hard to convince them that this way can be dominant in the capitalist system.” (interview 4)*

#### 4.2.2.2 Lack of engagement

Lack of participation in the cooperative by members was a point seven of the ten cooperatives struggled with (R4; R5; R6; R7; R10; R11; R18; R24; R26; R28). For instance, the cooperative Commown experienced a lot of difficulties with member participation and even had to cancel general assemblies due to low member participation rates (R3; R4; R5). Additionally, most collaboration partners (8) indicated they had no interest or time to participate (R8; R9; R12; R16; R17; R20; R22; R25). Lastly, six respondents indicated how lack of participation made it difficult to create a shared cooperative culture and hindered collaboration. Explaining that to enable a shared cooperative culture, it is necessary for cooperative members to meet each other, participate in the cooperative and assemblies (R3; R4; R5; R6; R17; R24).

Moreover, lack of commitment was a major obstacle in the collaboration process according to five respondents (R4; R10; R11; R12; R17). Often when more resources were needed to make the collaboration successful, collaboration partners withdrew and the collaboration failed. This was especially the case for big companies (R4; R10; R11; R12). These companies often participated in these collaborations or became a member of the cooperative just to boost their image. These companies can use their cooperative membership as a positive marketing tool, while refraining from taking concrete actions. When actions were really needed, these companies were not committed to the collaboration. This increased in big cooperatives with a high number of members and especially when members have divergent interests. In line with Hansmann (1999) arguments this increased the cost of monitoring and collective decision-making. For instance, the divergent interest followed by the low commitment of members even caused the PolyStyreneLoop Cooperative to go into bankruptcy (R10; R11; R12). In a way the cooperative can be used as an excuse to avoid responsibilities or commitment, as the founder of the PolyStyreneLoop Cooperative Cooperative (R10) indicates:

*“You're more shielded. Like 50 members in a cooperative, you already have difficulties looking at all the logos [of companies that are members]. So you can say I participate, but nobody will really ask about your responsibilities. So in that way, you actually have lower commitment.”(interview 10)*

#### 4.2.3 Overview of barriers facilitated by cooperatives for collaboration

Table 6 below provides an overview of encountered barriers that cooperatives encountered during obstruct collaboration for CBM implementation. .

**Table 6.***Overview of barriers to collaboration*

Barriers for collaboration	Description
<b>Resource constraints</b>	
<ul style="list-style-type: none"><li>• Lack of cognitive legitimacy</li></ul>	There is a lack of knowledge and awareness about the cooperative model.
<ul style="list-style-type: none"><li>• Costs of collective decision-making</li></ul>	The participative and horizontal governance structure of the cooperative often requires a longer decision taking time. This increase the cost of collective decision-making.
<b>Misalignment of interests</b>	
<ul style="list-style-type: none"><li>• Goal discrepancies</li></ul>	Cooperatives driven by their social values and long term sustainability goals clashed with short term profit or growth goals of collaboration partner.
<ul style="list-style-type: none"><li>• Lack of engagement</li></ul>	Collaboration partner using the cooperative membership as a positive marketing tool, while refraining from taking concrete action.

## 5. Discussion

This section discusses the most interesting findings relating to collaboration strategies cooperatives engage in to implement CBMs. Findings are compared to the literature, emphasizing their empirical and theoretical relevance. Subsequently, this section critically discusses research limitations and avenues for future research are provided. Lastly, recommendations for cooperatives and business practitioners are given.

### 5.1 The cooperative as collaboration facilitator in the CE: reflection on results and theoretical implications

The empirical findings of this thesis extend the literature by identifying strategies cooperatives engage in to foster collaborations for implementing CBMs. The results underscore previous works highlighting the complexity of collaboration for CBM implementation (Brown et al., 2018; Jaeger & Upadhyay, 2020; Mishra et al., 2019). This study adds on literature on collaboration for CBM implementation by examining the potential role of cooperatives as collaboration facilitator in the CE. Concretely, the results grouped identified strategies for collaborations that cooperatives engage in to implement CBMs into three main dimensions: *aligning interests*, *fostering resource complementarity* and *mobilizing social networks*.

The identification of these collaboration strategies has implications for both cooperatives and business practitioners interested to structure collaboration for CBM implementation. Cooperatives can learn from these strategies by identifying which activities and capabilities they need to focus on to foster collaboration for CBM implementation. Business practitioners can learn from the cooperative collaboration strategies and implement aspects of these strategies to facilitate collaboration for CBM creation. Lastly, the empirical findings suggest several links with the literature on strategies for collaboration, cooperatives and CBMs. The sections below discuss the implications of key insights related to each dimension. These are followed by a discussion on the theoretical contributions of this qualitative research.

#### 5.1.1 Collaboration strategies for CBM implementation facilitated by cooperatives

The three main strategies cooperatives engage in to facilitate collaboration for CBM implementation are discussed below. Connections, implications and contributions of empirical findings to the current literature are critically discussed for each strategy. Additionally, collaboration strategies that are beneficial for specific CBMs are emphasized.

First, the empirical findings demonstrate how the horizontal governance structure of cooperatives can increase alignment of stakeholders and improve collaboration for CBM implementation (4.1.1). Alignment of collaboration partners improves by increasing transparency, creating a feeling of ownership and finding goal congruence. Concretely, the cooperative can provide a platform for profit distribution, establish clear rules and roles, organize general assemblies and capture membership agreements. This increases responsibility, involvement and motivation of collaboration partners (4.1.1.2). These outcomes echo the body of literature on SEs which states that particularly these kinds of organizations encourage (external) stakeholders to collectively take ownership (Hertel et al., 2019; Serres et al., 2022). This thesis adds on theoretical knowledge on SEs by demonstrating how the cooperative (as SE) can not only encourage collective ownership, but also apply it to foster collaboration for CBM implementation. Moreover, it contributes to literature on transaction costs by



showing how a horizontal governance structure (in this case of the cooperative) can indeed increase stakeholder alignment, lower transaction costs and thus improve collaboration (Kasperson et al., 1992; Madhok, 1998; Williamson, 1987) (2.2.2). Furthermore, this thesis highlights that collaboration with companies with a similar philosophy, for instance with other cooperatives, were perceived as more efficient, since the same working approach, values, mindset and (often) political ambitions were shared (4.1.1.1). These empirical findings correspond with Poteete and Ostrom (2004) arguments, stating how more homogeneity between collaborating actors can stimulate collaboration by increasing trust and reducing transaction costs.

Regarding CBM implementation, the empirical findings highlight how the horizontal governance structure of cooperatives can be especially relevant for collaboration needed to implement the CBM “Access and performance” (4.1.1.2). The horizontal and profit constrained structure is experienced as a more ethical way to provide this CBM, hence it reduces the risk of locking the consumer in an unfair overpriced leasing structure. Collaboration with consumers improves with the cooperative model, since it increases transparency and a feeling of ownership. Moreover, the cooperative model allows for lower prices, increasing accessibility and improving consumer take-back for repair. The latter proved to be beneficial for implementing collaboration for the CBMs “Extending product value” and “Encourage sufficiency”. This finding adds on current CE literature emphasizing the need for a tight relation with consumers to effectively implement CE practices. Current research studies the topic of consumer responsibility and other collaborative stakeholder responsibility models for implementing CBMs (Govindan & Hasanagic, 2018). The empirical findings of this research enrich CE literature by suggesting the cooperative as a model to facilitate the collaborative responsibility of consumers (Brown et al., 2018; Sudusinghe & Seuring, 2021).

Second, the empirical findings show how the cooperative model can foster resource complementarity, which helps improve collaborations for CBM implementation. The empirical findings demonstrate how the collaboration partner's perception of the just and correct procedures of the cooperative offers resource complementarity with commercial corporations (4.1.2.1). Moreover, prior literature stresses how combining complementary capabilities and resources is a relevant driver for collaboration and the most essential one for achieving ‘relational rents’ (Dyer et al., 2018; Köhler et al., 2022). Empirical findings of this research enrich this literature by suggesting the cooperative can increase involvement of different collaboration partners with complementary tasks and or activities. By providing a share of the profits and a vote on the cooperative's future, the cooperative has the capability to create a mutual economic interest and involve complementary partners (4.1.2.2).

Additionally, empirical findings contribute to literature by demonstrating how fostering resource complementarity through the cooperative model is relevant for improving collaborations for implementing CBMs “extending resource value” or “industrial symbiosis”. In these cases, results show that cooperatives can foster complementarity between collaboration partners and the cooperative by effectively identifying waste or labor surpluses in the value chain, while collaborating partners can remain focused on their core business (4.1.2.2).

Third, the empirical findings indicate how the cooperative model can enable stakeholders to mobilize (local) social networks and improve collaboration. By examining collaborations of cooperatives, the findings of this research add on previous stated arguments from Beckert (2009) and Dufays and Huybrechts (2014) (2.2.2). Empirical findings (4.1.3.1) suggest how the cooperative model can take the role of ‘entrepreneur’, as a different institutional form, and create new opportunities for value

creation by facilitating collaborations between stakeholders. The specific governance structure of the cooperative facilitates connections between members, who also bring their own network into the cooperative, mobilizing the social network of the cooperative. Moreover, the empirical findings of this research demonstrate how the governance structure of the cooperative can establish a shared history, create new (informal) connections and new networks between members of the cooperative by creating a shared cooperative culture (4.1.3.1). Additionally, The empirical findings echo Zeuli and Deller's (2007) arguments that cooperatives often operate at local scale (2.2.2). Coherent with Boschma's (2005) research, it was found that operating within a shared local culture increases trust and improves collaboration. This thesis extends on this research and shows this is also the case for cooperatives. Specifically the local scale proved to be beneficial for the collaborations with producers. Moreover, consistent with recent CBM literature, the empirical findings highlight how the relevance of geographical close relations was most essential for collaborations needed to implement the CBM "industrial symbiosis" (Hina et al., 2022; Urbinati et al., 2021) (2.2.2).

#### 5.1.2 The ambivalent role of participation in the cooperative governance structure

Some striking findings were encountered regarding the role of the cooperative governance structure and its capability to improve collaboration. Empirical findings indicate that participating in the democratic governance structure was not essential to stimulate trust (4.1.1.2). This challenges the current literature on cooperatives, which emphasizes how participation in the cooperative is crucial for collaboration, considering it can increase trust of members and collaborating actors (Spear, 2000).

The empirical findings show that the feeling of transparency that the governance structure provided was more essential in providing trust as to actually participating in the cooperative. Additionally, the participative and horizontal governance structure of the cooperative was even experienced as a barrier for collaboration, considering it requires a longer decision time and includes higher decision-making costs (4.2.1.2). Moreover, member participation and lack of engagement remains a big obstacle for many cooperatives and most cooperative partners had no time or interest to actively participate (4.1.1.2, 4.2.2.2). Members and collaboration partners did not feel the need to participate themselves and trusted other members would participate to assure good behavior of the cooperative (4.1.1.2). This shows that only the cooperative status can already act as a "signaling mechanism".

However, empirical findings also highlight that participating in the governance structure can potentially foster new collaborations by creating new (informal) connections between members of the cooperative and by creating a shared cooperative culture (4.1.3.1). These contrasting findings emphasize the ambivalent role of participation in the cooperative governance structure and its capability to foster collaboration. A possible explanation is that there seems to be a difference between representatives from cooperatives and interviewed collaboration partners (e.g. members, suppliers, collaboration partners). Although both acknowledge the difficulties regarding participation in the cooperative. Collaboration partners indicated being part of the cooperative without participating was already enough to foster trust and stimulate (new) collaborations (4.1.1.2). While representatives from cooperatives still saw the benefits of participation for improving informal connections and thus collaborations. Furthermore, empirical findings suggest the cooperative could organize participation more effectively to overcome barriers relating to participation, for example by defining leadership and ownership roles more clearly (4.2.1.2). This extends on Chaddad and Iliopoulos (2013) arguments, stating that collective decision-making cost can be reduced when managed by efficient voting systems.

### 5.1.3 Resource constraints and the potential role of the cooperative network

Lastly, it is important to note that the specific characteristics and ambitions of the cooperative sometimes also obstructed the collaboration when these were not aligned with the collaboration partners (4.2.1.1). Empirical findings show that particularly for cooperatives, a lack of cognitive legitimacy increases resource constraints and forms one of the main barriers for collaboration for cooperatives. Cooperatives do not represent a very well known or easily understandable organizational model. This constitutes a critical barrier for collaboration. When stakeholders do not know or understand the organizational form they are more likely to be hesitant to support the collaboration (4.2.1.1). This extends on Huybrechts and Nicholis' (2014) arguments stating cognitive legitimacy is the most problematic type of legitimacy for cooperatives.

However, the empirical findings also show how the cooperative network can stimulate creation of cognitive legitimacy for example by organizing joint communication campaigns, attracting new consumers and mobilizing financial resources (4.1.2.2). The results show how institutional relatedness between the cooperatives fosters this kind of legitimacy spillover, aligning to the findings of Punt et al. (2022)(2.2.2). Moreover, when cooperatives collaborate together it increases the chance to create the critical mass needed to raise the new industry's level of cognitive legitimacy (4.1.2). This finding contributes to prior literature stating that mutual support by cooperatives helps to create a positive image of cooperative activity and improves the overall climate for cooperatives (Huybrechts & Nicholis, 2013). In particular this could provide relevant opportunities for cooperatives that implement CBMs and operate in relatively new industries (Morlighem, 2022).

Moreover, the cooperative network helps to attract new consumers and mobilize financial resources. This finding corresponds with current literature highlighting how networks can help establish an interfirm competitive advantage. Combining resources and jointly developing dynamic capabilities increases the difficulty for competitors to achieve identical results (Gold et al., 2010; Köhler et al., 2022). This way the cooperative network could help in supporting collaborations for implementing CBMs, which generally struggle with getting more traditional funding (Hina et al., 2022). However, the role of the cooperative network is not discussed in current literature on collaboration strategies for implementing CBMs. This thesis contributes to current literature by underscoring how the cooperative could use its cooperative network as a strategy to improve collaboration for CBM implementation.

### 5.2 Research limitations

There are a few methodological limitations to this research. First, qualitative data collected in this study was analyzed by only one researcher. This increases the risk of subjective interpretation of data. Due to resource constraints it was not possible to include investor triangulation (Hancké, 2009). However, risk of subjectivity has been minimized by using the Gioia method and trying to stay as close to data as possible during the data analysis (section; Gioia et al., 2013). Moreover, the expert interviews provided feedback on the developed interview guide and helped refine the research instruments. This expert verification process decreased researcher subjectivity and enhanced validity of results (section; Bryman, 2012).

Second, the qualitative data partly exists of semi-structured interviews. This method is susceptible to social desirability bias, where respondents provide socially acceptable answers (Bryman, 2012; Yin, 2009). Nevertheless, by anonymizing the data this research tried to minimize bias during the interviews. Moreover, this research uses a combination of different data sources including

desk research and participant observation in addition to the interviews. These different data sources improved the validity of interviews, obtained data was verified by multiple data sources to achieve data triangulation. In particular, participant observation at a cooperative for three months improved ecological validity of data by testing if findings correspond within the cooperative daily setting (see section 3.; Bryman, 2012).

Thirdly, due to availability and research focus the number of interviews with respondents part of the cooperative (16) is relatively higher than with cooperative partners (10). This could form a positive biased image towards the cooperative, since it is more likely that respondents from the cooperative have a positive opinion about the cooperative role in its collaborations. However, construct validity was maximized by interviewing different types of actors involved in the collaboration with the cooperative (see section). Respondents were not only from the cooperative, but also include different collaboration partners, producers and consumers. A benefit of this approach is thus the inclusion of different perspectives of actors involved with the collaboration. Moreover, different actors were interviewed until theoretical saturation has been maximized within the available resources.

Lastly, eight out of the ten cases are located in West-Europe and two cases are located in South-Europe. This was due to a higher availability of cases (cooperatives implementing CBMs) in West-Europe. Including cases with other national contexts could provide different dynamics and outcomes. However, this thesis still aimed to enhance external validity by including cases with different organizational characteristics as explained in the methodology (3.2). Moreover, data collection lasted until no new additional insights were found and no particular differences have been found between the cases out of west or south europe.

### 5.3 Future research avenues

This research used elements of literature on transaction costs, the resource based view, social embeddedness, cooperatives and CBMs to identify potential factors stimulating collaboration for CBM implementation. By aggregating empirical findings with literature insights, it became clear that the combination of these literatures was relevant to identify strategies that cooperatives engage in to facilitate collaboration for CBM implementation. However, more research is needed extending on the findings of this thesis. Therefore, this thesis proposes several avenues for further research on the role of the cooperative as collaboration facilitator in the CE and in particular for CBM implementation.

First, currently there is limited scientific research linking the cooperative model and collaboration in the context of the CE (Stratan, 2017). Additionally, more studies that explore how to operationalise and implement collaborations in CE are needed (Brown et al., 2020). Empirical findings of this research identified strategies that cooperatives engage in to facilitate collaboration for CBM implementation. It is essential to build upon these results and conduct further research exploring the potential of the cooperative model for facilitating collaboration needed for CBM implementation. Studies can be conducted on several avenues addressing (methodological) limitations of this research. For example, by including different cooperative contexts such as other countries and other parts of the world. This is necessary to improve external validity and generalizability of the outcomes in other contexts (Bryman, 2012).

Second, interviewing not only representatives from cooperatives, but also collaboration partners from cooperatives (e.g. members, suppliers, collaboration partners) provided interesting insights that challenge the current literature on the relevance of participation in the cooperative for improving collaboration (5.1.2). Thus, further research building upon these results is recommended. Future research could evaluate the role of participation in the cooperative and its capacity to improve trust and collaboration. In this research it is crucial to incorporate not only the perspective from the cooperative, but also of its members. Moreover, It could investigate the potential of efficient voting systems, leadership and ownership roles to overcome the barrier of participation in the cooperative (5.1.2). Furthermore, future scholars could use stakeholder theory to get a better perspective of the stakeholders involved in the collaboration with cooperatives and their experiences (Dufays, 2016). Research in this direction is relevant, since including the perspective of collaboration partners already led to interesting (rival) insights about the cooperative and its capability to foster collaboration.

Third, this thesis identified an important research gap regarding the (potential) role of the cooperative network and its ability to foster collaboration for CBM implementation. The cooperative network could not only be relevant for fostering collaboration for CBM implementation, but also for other cooperative collaborations that operate in relatively new industries and struggle to get resources. Moreover, the cooperative network could potentially increase cognitive legitimacy, the most problematic type of legitimacy for cooperatives, and a critical barrier obstructing collaboration for CBM implementation (Huybrechts & Nicholls, 2013). Therefore, future research on the cooperative network is necessary to identify and evaluate its (further) potential. This research could make the cooperative network central, and for example interview consumers and/or citizens to test its capability to foster cognitive legitimacy (and subsequently collaboration).

Lastly, this research focused on collaboration strategies cooperatives engage in for CBM implementation. Additionally, During the interviews, several barriers for cooperatives facilitating collaboration for CBM implementation have emerged. Sometimes strategies of how to overcome these barriers were suggested. However, this was not the main focus of this research and barriers are thus less extensively explored in this research. It is essential for cooperatives to understand what barriers for collaboration they face to take appropriate action. Therefore, further research building upon found barriers, suggested on how to overcome these and centralizing these barriers from the beginning is needed.

Possible questions for such future research could therefore be:

Which stakeholders are crucial to facilitate collaborations that cooperatives engage in to create circular business models? How do members experience the participative governance structure of cooperatives? How can participation in the cooperative help in fostering collaboration? In what way can the cooperative network influence the creation of cognitive legitimacy for i.e. consumers? What are the barriers hindering the collaborations that cooperatives engage in to create circular business models and how can these be overcome?

#### 5.4 Recommendations and implications for practitioners

Business practitioners and cooperatives can learn from found cooperative collaboration strategies and implement aspects of this to facilitate collaboration for CBM creation. More specifically, this research provides the following practical recommendations:

- The horizontal governance structure of the cooperative can foster alignment of different collaboration partners. Cooperatives can exploit this characteristic by providing a platform for cooperation through establishing a common goal, distributing benefits/profits and clearly dividing (member) roles. However, potential increase in decision-making time and cost should be taken into account. This risk can be decreased by investing in efficient voting systems, clearly defined membership roles, having a separate board for day to day decisions and/or a cooperative solely focused on consumers/producers.
- Collaborations between cooperatives are recommended. These can be more effective, considering the similarities in knowledge, values and (political) ambitions.
- Currently, the lack of knowledge of the cooperative format is a critical barrier for collaboration with cooperatives. It is advised to promote the cooperative format, collaboration between single cooperatives and cooperative networks can be successful tools for this.
- The cooperative values and profit constraints can act as a "signaling mechanism" and increase trust among other stakeholders. This fosters resource complementarity with commercial corporations and improves opportunities for collaboration.
- The cooperative model can stimulate collaboration by having the capability to create a mutual economic interest and involving different types of stakeholders with complementary tasks and/or activities.
- It is recommended for cooperatives to collaborate with the cooperative network to attract new consumers and mobilize financial resources. Moreover, cooperatives together can jointly develop dynamic capabilities and combine resources fostering (new) collaborations.
- When ambitions or size of the cooperative does not align with the size of the collaboration partner it obstructs the collaboration. It is recommended to start collaborations with collaboration partners who share a similar philosophy and values.
- The cooperative can foster new collaborations by creating a shared cooperative culture and creating new (informal) connections and new networks between members of the cooperative. However, to achieve this it is recommended to increase member participation.
- The cooperative model can be especially relevant and is recommended for facilitating the collaborative responsibility of consumers, which is needed to implement the CBM "Access and performance" , "Extending product value" and "Encourage sufficiency".
- The cooperative model can be particularly relevant for improving collaborations for implementing CBMs "extending resource value" or "industrial symbiosis", by effectively identifying waste or labor surpluses in the value chain, while collaborating partners can remain focused on their core business.
- Geographical close relations and operating at a local scale are specifically recommended for implementing collaboration for the CBM "industrial symbiosis" and collaborations with producers.



## 6. Conclusion

Advancing from a linear economy to a CE requires organizations to collaborate across conventional internal and external boundaries and develop capabilities to operate on a system-wide basis (Köhler et al., 2022; Rajala et al., 2018). In particular for the implementation of CBMs, it is crucial for stakeholders to collaborate together along the whole value chain to implement circular strategies (Brown et al., 2021). Although scholars emphasize that collaboration is essential for implementing CBMs, only a limited number of studies explore factors stimulating or hindering the development of collaborations (Brown et al., 2020; Hina et al., 2022). Considering their core mission is a social one, a dimension often neglected in the CE, SEs can provide an innovative and unique approach to the CE. Previous studies argue that the democratic governance structure of cooperatives (a form of SE) could provide promising and unique capabilities for strategies fostering collaboration. However, there is limited scientific research linking these models and collaboration in the context of the CE (Stratan, 2017). Accordingly, to address above research gap the following main research question was posed:

*“Which strategies that cooperatives engage in stimulate collaboration for circular business model implementation?”*

To address the found research gap and answer the main research question, this research followed a multiple-case study research design including ten cooperatives implementing CBMs in Europe. It explored capabilities specific to cooperatives, their potential and capacity to foster collaboration in the CE. The results show that three types of strategies deployed by cooperatives are essential to facilitate collaborations for implementing CBMs: *Aligning interests*, *Fostering resource complementarity* and *Mobilizing social networks*.

First, cooperatives can align interests by collaborating with companies with a similar philosophy, for instance with other cooperatives. These collaborations were perceived as more efficient, considering knowledge of the cooperative format was already there. Additionally, the same working approach, values, mindset and (often) political ambitions were shared.

Furthermore, particular attributes of the horizontal governance structure of the cooperative proved to be instrumental in increasing alignment of stakeholder interests and improving collaboration. The cooperative model can increase transparency and trust by establishing clear rules and roles (through publicly available membership agreements) and offering the opportunity to join general assemblies. Additionally, shared leadership and equal rights facilitated by the horizontal governance structure improves a feeling of ownership and stimulated commitment of collaboration partners. Moreover, the cooperative model has the ability to align stakeholders towards a common goal by providing a platform for cooperation and profit distribution.

Second, the unique attributes of the cooperative model enabled access to specific complementary collaborations and resources. Cooperative partner's perception of the just and correct procedures of the cooperative offered resource complementarity with commercial corporations and helped in gaining trust and moral legitimacy. Additionally, the cooperative model can stimulate collaboration between different types of stakeholders with complementary tasks or activities. By providing a share of the profits and a vote on the cooperative's future, the cooperative can create a mutual economic interest and involve complementary partners. Furthermore, collaboration with the cooperative network can attract new consumers and mobilize financial resources. Together cooperatives can jointly develop dynamic capabilities and combine resources fostering (new)



collaborations.

Third, the cooperative model can enable stakeholders to create (local) social networks and improve collaborations. The attributes of the cooperative model can create a shared cooperative culture and establish a shared history. This generated trust and stimulated potential collaborations between members of the cooperative. Moreover, most cooperatives examined within this research operate on a local scale. This research suggests this also helps to improve personal relations, a shared local culture and improved collaboration (especially with producers). Moreover, most cooperatives examined within this research operate on a local scale. This research suggests this also helps to

Different collaboration strategies the cooperative engaged in proved to be particularly relevant for fostering collaboration for certain specific CBMs. The strategy *aligning interests* improved collaboration with the consumer. By materializing the horizontal governance structure of the cooperative this strategy increased a feeling of ownership of the consumers or members. This was especially useful to increase collaborative responsibility of the consumer and implement needed consumer collaboration for the CBMs “Extending product value” and “Encourage sufficiency”. Additionally, the horizontal and profit constrained structure of the cooperative increased trust and was experienced as a more ethical way to provide the CBM “Access and performance”, improving the collaboration with the consumer for implementing this CBM.

Moreover, the strategy *fostering resource complementarity* through the cooperative model can be especially relevant for improving collaborations for implementing CBMs “extending resource value” or “industrial symbiosis”. Cooperatives can foster complementarity between collaboration partners and the cooperative by effectively identifying waste or labor surpluses in the value chain, while collaborating partners can remain focused on their core business.

Lastly, the strategy *mobilizing social networks* was achieved by leveraging personal relations; these were often characterized by geographical close relations. When collaboration partners are located close to each other, it could facilitate the identification of potential useful waste streams. These can be used as input for other supply chains in the same area and thus stimulate needed collaborations for implementing the CBM “industrial symbiosis”.

While identifying collaboration strategies deployed by cooperatives to create CBMs, two additional barriers obstructing these collaborations and particularly relating to cooperatives were identified. First, resource constraints for collaborations with the cooperative were particularly experienced because of lack of cognitive legitimacy and costs of collective decision-making. Often the cooperative model was experienced as too difficult to understand by non-cooperatives. These kinds of inefficiencies increase the transaction costs and obstruct the collaboration. Moreover, the horizontal governance structure of the cooperative required a longer decision taking time. Especially, when cooperatives have too many members with divergent interests it increases the cost of monitoring and collective decision-making. The higher cost of collective decision-making, increased resource constraints and obstructed the collaboration.

Second, when interests of collaboration partners were misaligned it was difficult to establish a successful collaboration. This was mostly the case when social values of the cooperative and collaborating partner did not align. Moreover, cooperatives experienced a lack of commitment from members and collaboration partners.

The above findings contribute to CE literature by identifying strategies cooperatives engage in to foster collaborations for implementing CBMs. Moreover, explicit links between collaboration strategies and specific CBMs are illustrated. Additionally, barriers obstructing collaboration for CBM implementation and particularly relating to cooperatives were identified. Furthermore, these findings can provide inspiration for business practitioners looking to structure collaboration for (specific) CBM implementation. Likewise, cooperatives can reflect on strategies and barriers to improve their collaborations. In addition, two striking findings emerged from this thesis suggesting further theoretical and practical implications. First, the ambivalent role of participation in the cooperative governance structure and its capability to foster collaboration challenges current literature on participation in cooperatives. Second, the cooperative network can deliver potential promising pathways fostering collaboration for CBM implementation.

Overall, the findings show that specific capabilities of the cooperative model can indeed facilitate collaboration for CBM implementation. In particular, it became clear that the cooperative model can foster collaboration by aligning interests, fostering resource complementarity and mobilizing social networks. However, the attributes of the cooperative model can also potentially obstruct collaboration by increasing resource constraints and misalignment of interests. When applying the cooperative model these obstacles need to be taken into account.

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## 8. Appendix

### 8.1 Selected cooperatives and elaborate descriptions

<i>Cooperative name</i>	<i>Description</i>
Commown	The Commown cooperative provides phones, laptops and headsets as a service. It solely offers ecologically and ethically designed electronic devices (e.g. Fairphones) and aims to contribute to a more responsible and sustainable use of electronics.
Intelligentfood	The Intelligentfood cooperative develops new food concepts from residual resources by taking the role of circular value chain director. It connects different actors along the whole value chain, e.g. food companies willing to make better use of their residual resources with other professionals willing to contribute to the overall goal of eliminating food waste.
PolyStyreneLoop Cooperative	The PolyStyreneLoop cooperative aims to provide a closed-loop solution for the recycling of polystyrene (PS) insulation foam waste and the recovery of bromine. Currently, it focuses on demonstrating the feasibility of recently established large-scale demo plant.
The Sonian Wood Coop	The Sonian wood cooperative aims to organize the production of local high-quality wood in a local and sustainable manner. By collaborating with different actors along the whole value chain ensuring all steps are as sustainable, local and fair as possible.
BEES	BEES is a large-scale consumer cooperative. Its goal is to provide low-cost access to high quality, people-and-environmental friendly food. It does so by directly purchase from producers and letting cooperatives members participate in operational tasks.
Telecoop	Telecoop is a social and solidarity-based telecom operator. The cooperative aims to provide concrete solutions for digital sobriety. By only charging their subscribers for the mobile data they actually use and encouraging them to reduce their data usage. Moreover, it develops incentives to repair mobiles rather than replace them.
Inero	Inero is a water irrigation cooperative for farmers, it recycles and re-uses waste water from a company processing frozen vegetables and delivers it to farmers in the area.
Odin	Odin is a cooperative supermarket aiming to provide biological and biodynamic food products. They strive to reach 'no waste' in both potential

	waste of products and packaging material. Moreover, they promote biodiversity and sustainable agriculture through education and having their own farm plus apiculture.
Staramaki	Staramaki is a social cooperative where straws are produced from by-products from agricultural practices. They operate in a rural area where they benefit both the environment and their community, offering labor opportunities for vulnerable groups.
Reware	Reware is a social cooperative aiming to close the digital gap and prevent electronics, particularly computers, from becoming waste. They take computers from companies and refurbish them. A part of the profit Reware makes, the company who donated the computers can donate to a charity for CSR purposes.

## 8.2. interview guides

Interviews will be conducted with experts, stakeholders within the cooperative and with external cooperative partners. Therefore, three different interview guides are created.

### 8.2.1. interview guide cooperative

#### I. Opening

My name is Yana Mechielsen and I am a master student at Utrecht University. For my master thesis, I am conducting research about collaboration in the Circular Economy. Specifically, I am interested in the role cooperatives can play in this. This interview will last about an hour and everything you will tell us during this interview is strictly confidential. Finally, before we start, as stated in my email, the interview and data collected from this will be anonymous. This anonymous data will be obtained and stored for scientific purposes. As interviewee you have the right to see the research report afterwards. Do you grant permission to record this interview for internal use?

#### II. Question guide

	Topic	Question	Possible follow up questions/topics
1.	Intro	Could you please tell us a little more about yourself? Such as your name (for the recording), job description, educational background and career path?	
2.	CBM	Please describe the business model of the cooperative you work for.	<i>Optional if not mentioned, specify:</i> Is your primary approach to circularity through: - Providing services instead of physical products to satisfy consumer needs. -Extending product lifetime by e.g repair, reuse, refurbish. -Assuring a long productlife by designing for durability (repairable and reusable). -Encourage sufficiency by reducing end-consumption needs. -Extending resource value by capturing value of otherwise wasted resources. -Capturing resource value of otherwise wasted resources at industrial level.
3.	Cooperative	What do you consider the target group of your cooperative?	<i>Optional if not mentioned, specify:</i> -Consumer/user cooperative (controlled by consumers) -Producer cooperative (controlled by suppliers/producers)

			-Multi-stakeholder cooperative (controlled by consumers and producers)
4.	Cooperative	What was the reason to start the cooperative? Can you briefly elaborate on the history of the cooperative.	<p><i>Optional if not mentioned, specify:</i></p> <p>-Why did you specifically choose the cooperative model?</p> <p>-(depending on what they say) re-formulate and check e.g. choose it for financial reasons. Is that correct?</p> <p>-What was their first: circular idea or cooperative organizational type?</p>
5.	Cooperative	How do cooperative principles manifest in your governance structure?	<p><i>Optional if not mentioned, specify:</i></p> <p>-What does the voting structure look like?</p> <p>-How do you experience the decision-making process?</p> <p>-How do cooperative members participate?</p> <p>-What do the membership agreements look like?</p> <p>-In what way are profits distributed?</p> <p>-How do cooperative social values manifest in the governance structure?</p>
6.	Collaboration	I have read in X, about X collaboration. How and when did this collaboration happen?	<p>-Why did this collaboration happen?</p> <p>-How is this collaboration essential for implementing your CBM?</p> <p>-In what sequence did the collaboration happen? (what came first? Collaboration, CBM, cooperative)</p> <p>-Is the collaboration based on prior relations?</p> <p>-How would you describe the interaction/communication flow with these collaboration partners (for each main partner)?</p>
7.	Collaboration	Could you describe the driving factors that facilitated these collaborations?	<p><i>Optional if not mentioned, specify:</i></p> <p>-How did specific attributes of the cooperative organizational structure influence the collaboration?</p> <p>-How did specific characteristics of involved individuals influence the collaboration? e.g.</p>

			<p>common core values, mindset and goals.</p> <p>-How did the collaboration create new opportunities?</p> <p>-How did the location of collaboration partners influence the collaboration?</p> <p>-How did other factors outside the organization influence the collaboration?</p>
8.	Collaboration	Would you say that you share a common goal with the collaboration partner (for each main partner)? and in what way?	
9.	Collaboration	What would you consider the planned timeframe of this collaboration (short, medium, longterm) (for each main partner)?	
10.	Collaboration	Do any other essential collaborations come to mind, for example with consumers or producers, and particularly ones needed for implementing the sustainable/circular component of your business model?	<i>Optional if not mentioned, specify:</i> Same question as before (7, 8, 9)
11.	Collaboration	Would you say the cooperative model that you have adopted was beneficial to create these collaborations? If so, how?	<i>Optional if not mentioned, specify:</i> <p>-How did you experience the horizontal and participative governance structure in the collaboration?</p> <p>-How did membership agreements influence the collaboration?</p> <p>-How did the profit distribution structure contribute to the collaboration?</p> <p>-How did you experience the role of cooperative social values in the collaboration?</p>
12.	Collaboration	Were there any specific barriers influencing the collaboration? If so, how?	<i>Optional if not mentioned, specify:</i> <p>-How did you experience decision-making (time and cost) within the cooperative structure?</p> <p>-How did you experience misalignment of interests within the cooperative structure?</p>
13.	Outro	Is there anything you would like to still add regarding your experience with collaboration as a cooperative?	
14.	Outro	Do you have any last questions/thoughts?	

15.	Outro	Can I contact you if I need some kind of clarification on the interview later on?	
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### III. Closing

Thank you for your time and participation in our research. If you have questions or feedback later on do not hesitate to contact me via email.

## 8.2.2. interview guide cooperative partner

### I. Opening

My name is Yana Mechielsen and I am a master student at Utrecht University. For my master thesis, I am conducting research about collaboration in the Circular Economy. Specifically, I am interested in the role cooperatives can play in this. This interview will last about 30 minutes and everything you will tell us during this interview is strictly confidential. As stated in my email, the interview and data collected from this will be anonymous. This anonymous data will be obtained and stored for scientific purposes. As interviewee you have the right to see the research report afterwards. Do you grant permission to record this interview for internal use?

### II. Question guide

	Topic	Question	Possible follow up questions/topics
1.	Intro	Could you please tell us a little more about yourself? Such as your name (for the recording), job description, educational background and career path?	
2.	Intro	<i>(if applicable)</i> Could you tell us more about your organization?	
	collaboration	I have talked with <i>-insert cooperative-</i> about X collaboration. How did you experience the start of this collaboration?	<i>Optional if not mentioned, specify:</i> -How and why did this collaboration happen? -Is the collaboration based on prior relations? -How do you experience the interaction/communication flow with partner <i>-insert cooperative-</i>
	collaboration	Could you describe the driving factors that facilitated this collaboration?	<i>Optional if not mentioned, specify:</i> -How did specific attributes of the cooperative organizational structure influence the collaboration?



			<p>-How did specific characteristics of involved individuals influence the collaboration? e.g. common core values, mindset and goals.</p> <p>-How did the collaboration create new opportunities? -How did the location of collaboration partners influence the collaboration?</p> <p>-How did other factors outside the organization influence the collaboration?</p>
6.	collaboration	Would you say that you share a common goal with <i>-insert cooperative-</i> and in what way?	
7.	collaboration	What would you consider the planned timeframe of this collaboration (short, medium, longterm)?	
9.	Collaboration	Would you say that the cooperative model of <i>-insert cooperative-</i> was beneficial to create these collaborations? If so, how?	<p><i>Optional if not mentioned, specify:</i></p> <p>-Are you a member of the cooperative and why (not)?</p> <p>-[if member] Do you participate in the general assemblies and why (not)? Did this influence the collaboration?</p> <p>-How did membership agreements influence the collaboration?</p> <p>-How did the profit distribution structure influence the collaboration?</p> <p>-How did you experience the role of cooperative social values in the collaboration?</p>
10.	Collaboration	Were there any specific barriers influencing the collaboration with <i>-insert cooperative-</i> ? If so, how?	<p><i>Optional if not mentioned, specify:</i></p> <p>-How did you experience decisionmaking (time and cost) within the cooperative structure?</p> <p>-How did you experience misalignment of interests within the cooperative structure?</p>
11.	Outro	Is there anything you would like to still add regarding your experience with collaboration cooperative <i>-insert cooperative-</i> ?	
12.	Outro	Do you have any last questions/thoughts?	

13.	Outro	Can I contact you if I need some kind of clarification on the interview later on?	
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### III. Closing

Thank you for your time and participation in our research. If you have questions or feedback later on do not hesitate to contact me via email.

### 8.3.3. interview guide Expert

#### I. Opening

Thank you again for making time for this interview. My name is Yana Mechielsen and I am a master student at Utrecht University. For my master thesis, I am conducting research about collaboration in the Circular Economy. Specifically, I am interested in the role cooperatives can play in this. As you are an expert [adjust depending on expert], I am curious about your ideas on these issues to inform my research in a broad manner.

The purpose of this interview is exploratory. Hence I will ask open questions, which you can elaborate on and answer according to your own interpretation. The interview will take around 30 minutes. As stated in my email, the interview and data collected from this will be anonymous. This anonymous data will be obtained and stored for scientific purposes. As interviewee you have the right to see the research report afterwards. Could you please confirm again that you grant permission to record this interview for internal use?

#### II. Question guide

	Topic	Question	Possible follow up questions/topics
1.	Intro	Could you please tell us a little more about yourself? Such as your name (for the recording), job description, educational background and career path?	
2.	Intro	Can you explain how your work relates to the Circular Economy and in specific collaboration and/or cooperatives.	
3.	CBM	Your work involves circular business models. What do you understand/define as a circular business model?	<i>Optional if not mentioned, specify</i> :Is your primary approach to circularity through: - Providing services instead of physical products to satisfy consumer needs.

			<ul style="list-style-type: none"> <li>-Extending product lifetime by e.g. repair, reuse, refurbish.</li> <li>-Assuring a long productlife by designing for durability (repairable and reusable).</li> <li>-Encourage sufficiency by reducing end-consumption needs.</li> <li>-Extending resource value by capturing value of otherwise wasted resources.</li> <li>-Capturing resource value of otherwise wasted resources at industrial level.</li> </ul>
		As you know, several cooperatives are active in CE such as Intelligentfood and Sonian Wood Coop. What would you say are defining characteristics of the cooperative organization type?	<i>Optional if not mentioned, specify:</i> <ul style="list-style-type: none"> <li>-What does the voting structure and decision-making process look like?</li> <li>-How do cooperative members participate?</li> <li>-What do the membership agreements look like?</li> <li>-In what way are profits distributed?</li> <li>-How do cooperative social values manifest in the governance structure?</li> </ul>
4.	collaboration	As you know, collaborations are important for implementing circular business models. How would you describe the type of collaborations that are particular needed for implementing these?	
5.	collaboration	What in particular influences the quality of collaboration?	
6.	collaboration	Could you describe main strategies stimulating collaborations in particular in relation to Circular Business Models?	<i>Optional if not mentioned, specify:</i> <ul style="list-style-type: none"> <li>-In what way do factors outside the organization influence the collaboration?</li> <li>-Does it help if the collaboration is local or closeby?</li> <li>-Are there specific attributes of the cooperative organizational structure influencing the collaboration?</li> <li>-Are there specific characteristics of individuals involved in the collaboration from influence? e.g. common core values and goals, leadership skills.</li> </ul>

7.	collabo ration	What would you consider the planned timeframe of this collaboration (short, medium, longterm)?	
8..	Collab oration	Could you describe the driving factors that facilitated this collaboration?	<i>Optional if not mentioned, specify:</i> -How can specific attributes of the cooperative organizational structure influence the collaboration? -How can specific characteristics of involved individuals influence the collaboration? e.g. common core values, mindset and goals. -How can the collaboration create new opportunities? -How can the location influence the collaboration? -How can other factors outside the organization influence the collaboration?
9.	Collab oration	Would you say the cooperative model is beneficial to create collaborations needed for circular business model implementation? If so, how?	<i>Optional if not mentioned, specify:</i> -How can the horizontal and participative governance structure influence the collaboration? -How can membership agreements influence the collaboration? -How can the profit distribution structure contribute to the collaboration? -How can cooperative social values influence the collaboration?
10	Collab oration	Are there any specific barriers influencing the collaboration specifically for cooperatives implementing CBMs? If so, how?	<i>Optional if not mentioned, specify:</i> -How can decision-making (time and cost) influence the collaboration? -How can misalignment of interests influence the collaboration?
11	Outro	Is there anything you would like to still add regarding your experience with collaboration cooperative -insert cooperative- ?	
12	Outro	Do you have any last questions/thoughts?	
13	Outro	Can I contact you if I need some kind of clarification on the interview later on?	

### **III. Closing**

Thank you for your time and participation in our research. If you have questions or feedback later on do not hesitate to contact me via email.

## **8.4. Informed consent questions**

Upon conducting the interview, each interviewee was informed about the data collection procedure and asked for permission regarding the following matters:

- As stated in my email, the interview and data collected from this will be anonymous. This anonymous data will be obtained and stored for scientific purposes. As interviewee you have the right to see the research report afterwards.
- Do you grant permission to record this interview for internal use?