Edited by
Johanna Kujala · Anna Heikkinen · Annika Blomberg

Stakeholder Engagement in a Sustainable Circular Economy

Theoretical and Practical Perspectives

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Foreword

The editors of this fine volume of essays rightfully suggest that the very idea of "circular economy" assumes a robust view of stakeholder engagement. Without cooperative agreements among stakeholders, how else could such "a more environmentally friendly and socially inclusive society" come about. If products and business models are to be "redesigned to minimize waste and increase the reuse of materials, the transition toward a sustainable circular economy requires collaboration and co-operation of various stakeholders at different fields of the society." The editors make the case that this is not a mere casual and voluntary connection but a deeper logical one.

If we are headed toward a transition to a more circular economy, the onus will be on companies to adjust and transform their business models so that they are aimed squarely at creating value for customers, suppliers, employees, communities, and financiers. However, such a robust view of stakeholder engagement is probably not enough. Executives have to figure out how stakeholders are interdependent so that more win-win-win strategies can be implemented that simultaneously create greener value for multiple groups. Understanding the intersection of stakeholder

relationships is not well understood in the literature, and this volume takes us a step forward as the editors have a clear "relationship view" of stakeholder theory. They suggest that we have to overcome the tendency to look transaction by transaction and instead adopt a view that stakeholders and companies are enmeshed in complex relationships. It is the very complexity of these relationships that makes green value creation possible.

The authors of the essays also rise to the occasion. From the careful untangling of the complexity of stakeholder relationships to the multiple case studies in several papers, the essays make a noted contribution to understanding how the circular economy can actually work. Papers on stakeholder engagement and multi-stakeholder partnerships all contribute to the growing literature on stakeholder theory. And, there is much more work to be done, both academic and practical work. Readers will be repaid many times over to tackle the difficult issues in the essays in this volume. We can only push humanity forward via inventing new vocabularies that let us live differently. This book is a substantial contribution to understanding both stakeholder theory and the circular economy.

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Outlining Stakeholder Engagement in a Sustainable Circular Economy

Anna Heikkinen, Johanna Kujala, and Annika Blomberg

Purpose of this Volume

A circular economy is considered one of the most pertinent solutions to major contemporary socioeconomic and environmental sustainability challenges, such as climate change, biodiversity loss and resource depletion (Ellen MacArthur Foundation, 2013; Geissdoerfer et al., 2017; Lieder & Rashid, 2016). The central objective of the circular economy is to conserve natural resources and use materials efficiently and sustainably, while achieving balance and harmony between the economy, the environment and society (Ghisellini et al., 2016; Korhonen et al., 2018a). Indeed, it has attracted increasing interest among scholars across disciplines as well as business practitioners, policymakers and other societal actors.

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It has become commonplace in both academia and practice to highlight the importance of stakeholders and stakeholder engagement in enabling a society-wide transition to a circular economy (e.g., Bocken et al., 2018; Buch et al., 2018; Ellen MacArthur Foundation, 2013; Mishra et al., 2019). The stakeholder engagement construct draws research attention to how and why organisations engage with various stakeholders and what kinds of outcomes this provides to the participants in these processes (Freeman et al., 2017; Kujala et al., 2022). While research has offered many promising starting points for understanding the role of stakeholders in the circular economy transition, we know less about what stakeholder engagement entails in a circular economy.

The purpose of this edited volume is to discuss the role and importance of stakeholder engagement in a sustainable circular economy from multiple theoretical and practical perspectives. We understand a sustainable circular economy to be a pathway to a more environmentally friendly and socially inclusive society. In turn, stakeholder engagement is an important tool to catalyse this journey. In our call for contributions for this volume, we invited scholars to submit chapters providing novel theoretical, methodological and practical insights into the intersection of stakeholder engagement and a sustainable circular economy. The chapters presented in this volume exceed our expectations in many ways. The contributions theorise on the connections between stakeholder engagement and a sustainable circular economy, offer novel concepts to broaden the discussion and raise critical questions that urgently necessitate more research and changes in current business and societal practices.

In this introductory chapter, we next describe our conceptual underpinnings. Then, we discuss five central ideas of the construct of stakeholder engagement in a sustainable circular economy, based on the chapters in this volume. After that, we present the structure of this volume and the individual chapters, concluding with suggestions for future research.

Conceptual Underpinnings

A Sustainable Circular Economy

A circular economy can be described as an economic "industrial system that is restorative or regenerative by intention and design" (Ellen MacArthur Foundation, 2013, p. 8). Geissdoerfer et al. (2017) expanded this definition, describing the model as a "regenerative system in which resource input and waste, emission and energy leakage are minimized by slowing, closing and narrowing material and energy loops. This can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing and recycling" (p. 766). Achieving a circular economy requires systemic, society-wide action from the micro to the macro levels. The required action encompasses transforming business models, ecosystems, industrial networks and policies as well as societal norms, beliefs and values (Chizaryfard et al., 2021; Lüdeke-Freund et al., 2019; Velenturf & Purnell, 2021).

While a circular economy is discussed as a promise for achieving a more sustainable society, the connection between sustainability and a circular economy remains vague both in research and practice (Geissdoerfer et al., 2017; Korhonen et al., 2018b; Reike et al., 2018). In this volume, our starting point is that a sustainable circular economy should be the goal of all circular economy action and research. If a circular economy does not align with sustainable development, it will not achieve its purpose (Marjamaa & Mäkelä, 2022; Velenturf & Purnell, 2021). In this volume, we build on the idea that in a sustainable circular economy, economic, social and ecological consequences for different stakeholders should be evaluated and considered contemporaneously and across generations while staying within global environmental limits in the long term. A sustainable circular economy is implemented through the actions of national and city governance, companies and other organisations and citizens; its promotion thus requires comprehensive collaboration across different societal levels (CICAT2025, n.d.).

Engaging Stakeholders in a Circular Economy

We build on stakeholder theory, where a stakeholder is defined as any group or individual that can affect or be affected by the objectives of an organisation (Freeman, 1984) or a focal issue (Roloff, 2008), such as transition to a circular economy. The focus of this volume is on stakeholder engagement (Greenwood, 2007; Kujala & Sachs, 2019), which refers to the aims, activities and impacts of stakeholder relations in a moral, strategic and/or pragmatic manner (Kujala et al., 2022).

Previous research has presented various findings on stakeholder roles and interests in a circular economy. For example, Marjamaa et al. (2021) examined stakeholders' joint sustainability interests; Geissdoerfer et al. (2017) stated that in a circular economy, governments, firms and NGOs play key roles as agents driving systemic change; and, more specifically, Govindan and Hasanagic (2018) highlighted that, when establishing circularity in supply chains, governments play an important part by promoting circularity through laws and policies sympathetic to the goal. However, to implement a circular economy on a large scale and initiate systemic change, the support of all stakeholders is vital (Lieder & Rashid, 2016).

Another pertinent perspective has focused on stakeholder collaboration and engagement in a circular economy. For instance, Buch et al. (2018) determined that stakeholder engagement is the key to a transition towards a circular economy, and Geissdoerfer et al. (2017) perceived collaboration between stakeholders as imperative to achieving circularity. Bocken et al. (2018) stated that in a circular economy, "stakeholders collaborate to maximize the value of products and materials, and contribute to minimizing the depletion of natural resources and create positive societal and environmental impact" (ibid., p. 81), while Mishra et al. (2019) revealed that the involvement of multiple stakeholders leads to a stronger circularity in supply chains in the context of developing countries. Gupta et al. (2019) concluded that managing stakeholder relationships is a critical success factor for circular economy implementation. Moreover, in addition to individual stakeholders acting as change agents, the processes connected with stakeholder engagement can also provide change agency and act as catalysts in sustainability transitions (Gonzalez-Porras et al., 2021).

The Construct of Stakeholder Engagement

While the chapters in this volume offer a wide variety of conceptualisations and approaches to the construct of stakeholder engagement, they also have many ideas in common. Based on the chapters, we can outline five central ideas of stakeholder engagement in a sustainable circular economy, as follows.

First, the idea of stakeholder engagement as a *relational* construct is shared by many chapters. For example, in Chapter 2, Albareda and Kimpimäki outline stakeholder engagement as a relational construct that allows businesses together with their stakeholders to build a shared understanding of a focal issue. Furthermore, they enlarge the relationship view from a dyadic to a collective, coalition-building approach to advance theorising on collective stakeholder action that enables the transformation from a linear to a circular economy. Along the same lines, in Chapter 5, Blomberg et al. examine relationships among key stakeholders seeking to promote circular economy transition and highlight stakeholders' various roles in the multi-stakeholder networks aiming for circular economy transition.

Second, stakeholder engagement is a *process*, not a one-time endeavour. The process approach to stakeholder engagement is highlighted in Chapter 7 by Kaipainen et al., who focus on understanding how engagement practices related to achieving circular economy goals in ecosystems unfold throughout the stakeholder engagement processes. Similarly, in Chapter 8, Re and Magnani focus on stakeholder engagement mechanisms, that is, the means and ways through which firms engage their stakeholders in the context of circular entrepreneurship. Stakeholder engagement mechanisms include, for example, the development of experimental circular projects by sharing knowledge and expertise and education about circular practices.

Third, the idea that stakeholder engagement is important for *joint value creation*, that is, creating value with and for stakeholders (Freeman et al., 2010), is prominent in many chapters. For example, in Chapter 3, Oberholzer and Sachs focus on circular stakeholder networks consisting of multiple relationships of interdependent actors aimed at stakeholder value creation. Moreover, in Chapter 9, Vikstedt and Rajala

examine value-creating relationships between stakeholders implementing a circular economy in institutionally hybrid settings.

Fourth, in the circular economy context, stakeholder engagement is closely related to *sustainability*, and the construct is seen as a tool to advance systemic sustainability transformation. For example, in Chapter 4, Eiselein et al. approach stakeholder engagement with the concept of sustainable partnerships, referring to the societal, temporal and inclusive aspects of sustainability change. Likewise, in Chapter 13, Salminen et al. examine circular economy stakeholders' perceptions of the connection between the circular economy and sustainability and use stakeholder engagement as one of the dimensions connecting circularity and sustainability.

Finally, we acknowledge that the *multidimensional* nature of stakeholder engagement needs attention. Stakeholder relationships need to be examined keeping in mind both the focal firm- and stakeholder-focused approaches as well as the positive and more contradictory aspects of stakeholder engagement. Traditionally, stakeholder engagement has been defined from the focal firm-focused viewpoint (Freeman, 1984). In this line of research, in Chapter 10, Harala et al. focus on coopetition and the special characteristics of competitors as stakeholders with the aim of analysing stakeholder engagement activities that are especially relevant in engaging competitors in circular economy collaboration. Recently, stakeholders' points of view have been increasingly highlighted in stakeholder engagement research, especially when the issues at hand are complex and demand high involvement from different parties. For example, in Chapter 6, Kujanpää and Pihkola examine the European waste management value chain with a group-based multi-criteria decision-making (MCDM) tool, which is an analytical and structured method that can be used to solve complex decision problems and facilitate the deliberation essential for issue-based stakeholder network building.

On the positive side of stakeholder engagement, in Chapter 11, Lehtimäki et al. argue that, although stakeholder engagement is often understood as a positive interaction, a deeper understanding of what creates the positive in stakeholder relationships is required. They build on a strength-based approach to examine what constitutes positive

and constructive stakeholder relationships at the individual, organisational and societal levels of stakeholder engagement. While stakeholder engagement is often seen as positive, recently increasing interest has been placed on the possible contradictions in stakeholder engagement. In Chapter 12, Galvão Lyra and Lehtimäki argue that stakeholders may have complex and contradictory interests. They direct attention to fringe stakeholders, that is, those with less power, voice and legitimacy than salient stakeholders or who question the pre-existing system and power structures and find disruptive and alternative ways to exert their influence. While this approach is not negative as such, it highlights the importance of a deeper understanding of marginalised and non-collaborative stakeholders and thereby the multidimensional nature of stakeholder engagement, especially in the context of sustainability.

Structure of this Volume

After this introductory section, Stakeholder Engagement in a Sustainable Circular Economy consists of four parts: Part I: Theoretical and Conceptual Starting Points; Part II: Multi-Stakeholder Participation and Collaboration; Part III: Value Creation Opportunities; and Part IV: Novel Approaches to Stakeholder Engagement.

Part I: Theoretical and Conceptual Starting Points

This part of the volume seeks to further the theoretical and conceptual understanding of stakeholder engagement in a sustainable circular economy. To begin, Albareda and Kimpimäki build on the literature on stakeholder engagement and the theory of collective action and discuss the idea of collective stakeholder action (CSA) in Chapter 2. In particular, they describe the evolution of the circular economy concept as a result of a process of collective stakeholder action. They see stakeholder engagement as a performative process that contributes to the contemporary, practice-oriented framing of the circular economy concept and

highlight the role of connecting and influencing stakeholders in the process.

In Chapter 3, Oberholzer and Sachs conduct a systematic literature review, integrating qualitative content analysis to untangle the complexity of stakeholder interactions in a circular economy. Based on their categorisation of the contents of stakeholder engagement, they conclude that pragmatic stakeholder engagement dominates the discussion, while attention should also be paid to moral and strategic stakeholder engagement to leverage the benefits. They call for stakeholder theory that encompasses planetary boundaries and see understanding stakeholder engagement in a circular economy as a necessary step.

In Chapter 4, Eiselein, Keygnaert and Brabant present the results of a literature review that includes a constant comparison analysis and identify three building blocks (vision, stakeholders and processes) and nine underlying mechanisms that are essential for developing sustainable partnerships for circular economies, as well as nine clusters of obstacles that can influence their development. They adopt a multi-actor, multi-level perspective and provide advice on how to develop long-term partnerships among stakeholders representing different sectors. Together, the chapters in Part I shed light on the complexity of stakeholder engagement in a circular economy and highlight its theoretical and conceptual underpinnings.

Part II: Multi-Stakeholder Participation and Collaboration

Part II contains empirical studies of how stakeholders representing different sectors collaborate or can be included in the development of the circular economy. It starts with an empirical examination of what kind of relationships exist among circular economy stakeholders and how the transition to a circular economy is accelerated through these relationships, authored by Blomberg, Kujala and Heikkinen in Chapter 5. Focusing on a multi-stakeholder network, they highlight the diversity of stakeholder relationships and argue for their importance in advancing the circular economy.

In Chapter 6, Kujanpää and Pihkola develop a participatory approach to support the management of interactive decision-making processes in waste management value chains. They acknowledge the complexity of decision-making in multi-stakeholder settings due to stakeholders' interdependencies and conflicting interests and suggest a decision-making procedure to facilitate assessment of the situations.

In Chapter 7, Kaipainen, Uusikartano, Aarikka-Stenroos, Harala, Alakerttula and Pohls focus on circular economy ecosystems and conceptualise four stakeholder engagement process archetypes to achieve circular economy goals based on an analysis of six ecosystem cases in Finland. The archetypes illustrate how stakeholders are engaged in different circular economy ecosystems, depending on the ecosystem structure and the alignment of stakeholder interests with the circular economy goal. They take a processual approach to stakeholder engagement and identify central stakeholder engagement practices that take place in the various phases of the process and highlight the dynamic and processual nature of stakeholder engagement.

Part III: Value Creation Opportunities

Part III considers stakeholder value creation in a circular economy. It shows how varied stakeholders are connected to each other, how these connections enable value creation and advance the circular economy as well as how multiple stakeholders' participation can be enhanced in the complex network of circular economy stakeholders.

In Chapter 8, Re and Magnani examine the underlying key stakeholder engagement mechanisms leading to value creation in the context of small and medium-sized enterprises (SMEs). They emphasise that finding the right stakeholders and gaining their commitment to a new, relatively unknown firm is not easy and takes time, but, at best, results in multidimensional value creation and long-lasting relationships that benefit the whole society.

In Chapter 9, Vikstedt and Rajala conduct a multiple case study to explore alignment and misalignment through value consolidation in multi-stakeholder collaborations. They find that several consolidation

mechanisms can be applied side by side and dynamically to align stakeholders' cognition, goals and practices. They conclude that it is not always necessary to aim for full alignment, but that partial alignment and even misalignment in stakeholder relationships can be used to enable value creation in multi-stakeholder collaborations.

In Chapter 10, Harala, Aarikka-Stenroos and Ritala examine the phenomenon of coopetition for a circular economy through an extensive multiple case study from various industries in Finland. They discuss how coopetition, defined as a simultaneously competitive and collaborative relationship between two or several horizontal actors, can contribute to a circular economy, concluding that these contributions require sufficient stakeholder engagement, including bringing different stakeholders together, connecting stakeholders and coordinating the collaboration. All three chapters address a particular question related to value creation in a circular economy and together enhance our understanding of how value is created in stakeholder relationships in a circular economy.

Part IV: Novel Approaches to Stakeholder Engagement

Part IV brings to the discussion novel approaches to studying stakeholder engagement in a circular economy. To start, in Chapter 11, Lehtimäki, Kujala and Thatchenkery bring forth the strength-based approach and examine how identifying and growing strengths and leveraging appreciative intelligence in stakeholder engagement bring to the surface opportunities that exist for sustainability transition and support effective implementation of change. They suggest that adopting a strength-based approach could open new opportunities for sustainability transition.

In Chapter 12, Galvão Lyra and Lehtimäki examine fringe stakeholders in the context of sustainability transitions and ask the important question of how to engage stakeholders who are not involved in creating a sustainable future or who even resist it. After reviewing the literature on sustainability transitions regarding how fringe stakeholders are accounted for, they present insights related to the theoretical framing,

research design and methodology in relation to marginalised and non-collaborative stakeholders whose voices are not easy to account for.

Finally, in Chapter 13, Salminen, Heikkinen and Kujala study how a circular economy and its linkage to sustainability are understood among key stakeholder groups promoting a circular economy in Finland and present a categorisation of a sustainable circular economy with three approaches: a business-centric circular economy, a systemic circular economy and a regenerative circular economy. They found that the business-centric circular economy and systemic circular economy dominate the discussion, while the regenerative circular economy is scarcely addressed. For the circular economy to become regenerative and realise its potential, they call for enhanced dialogue among stakeholders concerning the connection between the circular economy and sustainability. However, they conclude that "much needs to be done if we wish to achieve a regenerative circular economy". Together, these three chapters provide novel insights into how a sustainable circular future can be created by building on and capitalising on the strengths of all circular economy stakeholders.

Future Research Avenues

This volume presents 13 chapters with unique theoretical and practical contributions. We see this as just a beginning for research at the intersection of stakeholder engagement and the idea of a sustainable circular economy—albeit a necessary and insightful beginning. Much remains to be researched and transformed into practice, as we outline next.

The chapters in this volume offer multiple conceptual advances in understanding stakeholder engagement in sustainable circular economies. We call for more empirical research advancing the different theoretical and conceptual starting points to test and further develop these ideas. It is also important to broaden the perspective beyond a geographical and cultural Western focus by conducting theoretical and empirical research with non-Western approaches and empirical settings.

Considering marginalised and non-human stakeholders is another timely topic that requires attention, as discussed by Galvão Lyra and

Lehtimäki in this volume. For this purpose, new theoretical and methodological insights are needed, since current stakeholder engagement theorising is largely anthropocentric (Kujala et al., 2022). Novel insights can help theory to move towards knowing, learning and being *with* marginalised and non-human stakeholders (Kortetmäki et al., 2022). We can clearly see that the idea of a sustainable circular economy calls for novel ways of knowing and being. Biodiversity is an important topic that requires immediate attention. Future research should examine the connections between biodiversity and the circular economy.

Transition to a sustainable circular economy will require radical changes across society. It will create and intensify paradoxes and tensions in society. Stakeholder engagement research can consider how stakeholder participation both enables and hinders the required transition and what kinds of paradoxes emerge in the process.

Finally, we call for more research discussing new and even startling methodologies to study stakeholder engagement in sustainable circular economies. Such methods can include, for example, arts-based and creative methods, critical management studies-inspired methods, such as feminist, post-colonial or other postmodernist studies, futures research methods, methods sensitive to aesthetic, bodily and/or kinaesthetic ways of knowing and various kinds of interdisciplinary approaches.

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Part I

Theoretical and Conceptual Starting Points

2

How Did It Come to Be? Circular Economy as Collective Stakeholder Action

Laura Albareda and Jaan-Pauli Kimpimäki

Introduction

In recent years, scholars have increasingly studied the circular economy (CE) as a practice-based strategic phenomenon, examining how businesses and stakeholders participate in the transformation of the economic system towards a regenerative and restorative model aiming to both minimise waste and find more efficient ways to use materials and natural resources (Bocken & Ritala, 2022). CE seeks to transform the linear production, distribution, use and disposal processes that minimise energy, material inputs, waste and emissions by closing material and energy loops towards a zero-waste economy (Geissdoerfer et al., 2020).

Although the development of CE as a concept has involved a variety of scientific and conceptual approaches over the last 40 years, ranging from studies on ecological economics to industrial ecology, the widespread adoption of CE began in 2010 with the introduction of a practice-based

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approach primarily driven by the Ellen MacArthur Foundation (EMF). The founding of the EMF initiated a central process of stakeholder engagement, encouraging networks of businesses to experiment with CE and translating it into a more pragmatic business-driven language (Blomsma & Brennan, 2017; EMF, 2013a, 2013b). This process of engagement later attracted other influential stakeholders that facilitated further diffusion, such as the World Economic Forum (WEF), through which the EMF extended and legitimated its narratives regarding CE to mobilise large-scale systemic solutions across the private and public sectors (EMF, 2013a, 2013b; EMF & WEF, 2014).

In this chapter, our objective is to explain how the CE concept has been performatively developed, diffused and accelerated its adoption since 2010. To do so, we adopt the theoretical lens of stakeholder engagement (Greenwood, 2007; Kujala et al., 2022). Stakeholder engagement refers to the quality of the relationships that businesses have with stakeholders, allowing them to build a common understanding of a focal issue, such as joint value creation, or to promote joint interest and collaboration (Bridoux & Stoelhorst, 2016; Bundy et al., 2018; Kujala et al., 2016). This relational approach mainly focuses on the dyadic relationship between the focal firm and its stakeholders (Bosse et al., 2009; Bridoux & Stoelhorst, 2016) through which businesses drive and control stakeholder relationships (Harrison et al., 2010). Organisations exist within a complex network of intertwining stakeholder relationships (Rowley, 1997), resulting in stakeholder multiplicity (Neville & Menguc, 2006) or multi-stakeholder networks (Roloff, 2008). Although these views serve to explain how focal firms manage their stakeholder networks, they fall short of explaining how focal stakeholders proactively engage with companies to develop, diffuse and accelerate the adoption of issues, practices and processes central to them. In particular, CE development has been driven by focal stakeholders who were neither reformative nor radical activists (Den Hond & De Bakker, 2007) but instead opted for coalition building. Important questions to explain these developments remain unanswered, such as: *How do focal stakeholders collectively engage and develop coalitions of business actors to advance the development of CE?* And: *How have such engagement processes driven the development*

of institutional infrastructure, enabling the transformation from a linear economic system towards circularity?

We answer these questions with a process model, arguing that the development of CE has involved a distinct type of collective action based on relational engagement between focal stakeholder organisations building coalitions of collective business–stakeholder action. Collective action refers to how groups of individuals and organisations overcome self-interest by working together to build institutions and governance norms (Ostrom, 1990, 2014). Recently, Patala et al. (2022) showed that CE implementation requires businesses and stakeholders to cooperate and adjust mutual roles, build new protocols for sharing resources and foster collective agency. Research on collective action institutions over the past 30 years has shown how communities of users have ensured the sustainable use of common-pool resources by establishing complex design principles that govern these resources (Albareda & Sison, 2020; Stern, 2011).

In our analysis, we focus on the organisational narratives surrounding the concept of CE employed by two focal stakeholder organisations—the EMF and the WEF—and one public actor—the European Commission (EC). We regard stakeholder engagement as a performative process through which these focal stakeholders coalesced with businesses around a central issue (Roloff, 2008) and framed practice-oriented conceptions of CE, leveraging its further development (Marti & Gond, 2018). Performativity refers to an understanding of how theories and concepts describe a phenomenon and produce social reality (Callon, 1998; Ferraro et al., 2005). In other words, theoretical concepts are continuously modelled through relational business and stakeholder engagement through practical and distributed experimentation (Ferraro et al., 2015).

This chapter makes three primary contributions to the extant literature. First, we introduce and initiate the development of the concept of *collective stakeholder action* (CSA), defined as *a process in which focal stakeholders engage with businesses and policymakers, developing coalitions of collective action to legitimise shared issues and the construction of institutional infrastructure*. Second, we conceptually advance a stakeholder engagement-driven approach to building broader business–stakeholder coalitions for collective action (Ostrom, 1990; Stern, 2011) as a form of

CSA, contributing to the literature on stakeholder engagement (Freeman et al., 2017; Kujala et al., 2022). Third, we provide empirical evidence on the types of performative devices, effects and behaviours relating to the development of CE from an early science-based understanding towards a more widely diffused practical and business-driven phenomenon, contributing to the literature on the effective boundaries of performative theories (Ferraro et al., 2005; Marti & Gond, 2018).

Conceptual Background

Stakeholder Engagement

Stakeholder engagement has become a core topic in research on stakeholder theory (Greenwood, 2007). Kujala et al. (2022, p. 5) defined stakeholder engagement as a set of "processes and strategies that firms and other organisations implement in their stakeholder relations". Stakeholder engagement allows organisations to improve their positive moral impact on society and the economy, driving organisational legitimacy, responsible leadership and deliberative democracy; strategic and instrumental engagement based on the participation of stakeholders in business value creation, reciprocal economic advantage, resource contribution and firm economic and financial performance; and the pragmatic effect of problem solving (Kujala et al., 2022). Kujala et al. (2022) explored iterative and nonlinear activities and found a variety of one-way and two-way activities between an organisation and its stakeholders. These include dialogue, communication, negotiation, consultation, collaboration and joint decision-making (Greenwood, 2007; O'Riordan & Fairbrass, 2014). Stakeholder engagement is a core mechanism that businesses have adopted to explore novel concepts and practices in reciprocal business and stakeholder relationships (Freeman et al., 2017).

Most of these studies have examined how companies initiate engagement. In practice, we see that societal stakeholders often drive communication, dialogue and collaboration with networks of businesses. Studying how stakeholders relate to the firm, Roloff (2008) proposed a life cycle model of multi-stakeholder networks consisting of three stages: initiation

(deliberation and agreement), action (implementation and consolidation) and institutionalisation. Where Roloff (2008) mainly focused on organisational welfare and the issues of discussion in stakeholder networks, we focus on focal stakeholders engaging with businesses and policymakers towards building coalitions of collective action.

Bridoux and Stoelhorst (2022) noted that when businesses and stakeholders engage in joint value creation, focal firms might adopt one of two models of collective action governance. For instance, focal firms could take on a lead governance role, allowing stakeholders to make governance-related decisions. They could also take on a shared governance model in which they share power and decision-making relatively equally with stakeholders. These collective action models are largely reliant on a dyadic understanding between the business and the stakeholders, which explains joint value creation within the dyad. However, in doing so, they miss the crucial aspect of multiple firms engaging in networks of stakeholders (Patala et al., 2022).

Extending the research on stakeholder engagement and multiplicity, Freeman et al. (2017, pp. 4–9) proposed a framework for stakeholder engagement that included three primary dimensions: *(i)* analysing how firms and stakeholders create joint value and cope with complex challenges, including the establishment of common objectives as well as how interaction and cooperation are used to support collective learning, information sharing and trust building (Kujala et al., 2017); *(ii)* creating communication mechanisms and building stakeholder dialogue to facilitate the sharing of information and goals and *(iii)* learning about complex issues with stakeholders, using open-ended approaches to enhance collective goals and establishing mechanisms to help explore scientific knowledge (Heikkinen, 2017).

Stakeholder engagement enables managers to address challenges related to multiple meanings and interpretations of concepts. Managers also promote dialogue and discussion with stakeholders while emphasising commonalities and agreements on how to work towards shared goals (Mitchell et al., 2022). In this context, stakeholder engagement is a key process enabling businesses–stakeholder collective action, which we discuss next.

Institutions for Collective Action and Resource Governance

One of the primary approaches in collective action problem theory is to study how sets of individuals can achieve the governance of common-pool resources (Ostrom, 1990). We build on Ostrom's (1990, 2014) approach to institutions for collective action. Ostrom (1990) explained how individuals (common users and owners in local communities) organise rules for designing and building shared rules (collective action principles) to govern common-pool resources cooperatively. Ostrom (1990) studied settings in which local institutions emerged in different regions based on collective communication, negotiation, cooperation, conflict resolution and decision-making. She found that the emergence of these institutions was supported by local entrepreneurs bridging groups towards collective action (Ostrom, 1990). Her research revealed shared patterns of interactions between local groups of individuals who defined the following principles of collective action governance (Ostrom, 1990): they *(i)* negotiate concrete goals and define boundaries; *(ii)* define collective agreements through deliberation; *(iii)* drive deliberative and participatory decision-making processes; *(iv)* set up monitoring mechanisms; *(v)* establish sanctions for rule-breakers and *(vi)* create conflict resolution mechanisms. Local groups also *(vii)* require that public authorities recognise their proposals and *(viii)* move from local to nested solutions.

Subsequently, Dietz et al. (2003) and Stern (2011) broadened the framework of collective action in complex settings with common resources, including principles that enable multiple organisations to cope with the challenges associated with the governance of a planetary set of resources to engage in complex collective action. These principles include *(i)* investing in science and integrating scientific analysis in deliberations about collective solutions; *(ii)* promoting adaptation, learning and change; *(iii)* providing physical, technological and institutional infrastructures; *(iv)* providing necessary information and dealing with conflict and *(v)* inducing compliance with economic and financial incentives. An illustrative example of a complex institution for collective action is

the Global Partnership on Climate, Fisheries and Aquaculture, which governs climate action and marine biodiversity (Galaz et al., 2012).

In line with previous studies on the role of stakeholder legitimacy and influence in the development of public policymaking processes (Doh & Guay, 2006), the principles listed above illustrate how collective action can be achieved in complex settings (Albareda & Sison, 2020), such as collective action towards CE transformation. Importantly, it requires multiple organisations to work cooperatively and engage with stakeholder groups to influence policymakers and businesses and transform broader production and consumption systems (Patala et al., 2022). Such transformation requires collective action and the governance of shared resources (Patala et al., 2022) and the catalytic amplification of legitimacy and influence (Ansari et al., 2013).

Performativity and the Effects of Stakeholder Engagement on Collective Action

The final element of this conceptual background connects stakeholder engagement to collective action through the concept of performativity. Performativity is rooted in Austin's (1962) book *How to Do Things with Words*, which introduced the concept of "performative utterance", a statement with the power to assert its own implication. In organisation and management theory, this idea has been extended through several foundational tangents, inspiring a "performativity turn" in theory (Gond et al., 2016). Building on Austin's (1962) ideas of performative utterances and the previous work of Latour (1987), Callon (1998) introduced the "market thesis"—that is, the idea that the economy is partly a product of the study of economics rather than a passive form of studying it as an independent abstract idea of economics. The implication of Callon's (1998) thesis is that "economics performs the economy, creating the phenomena it describes" (p. 30).

Theories and concepts with such tendencies (i.e. constituting their own social realities) are typically considered to exhibit a form of "Barnesian" performativity (Mackenzie, 2006). In the economics context,

Mackenzie (2006, p. 30) explained how "an effect of the use in practice of an aspect of economics is to make economic processes more like their depiction by economics". A central component of this idea—as well as the moniker for this conceptualisation of performativity—originates from Barnes (1983), according to whom "knowledge includes a self-referential component" (p. 538). The takeaway for our research is that concepts tend to develop self-referentially by citing earlier versions of themselves.

In exploring these ideas further, Marti and Gond (2018) proposed a process model for the emergence of performative theories, complete with a set of boundary conditions. These conditions include "material devices, strength of initial backers, visibility of effects, counteracting behaviours, discontent with the status quo, and sense-giving by convinced actors" (Marti & Gond, 2018, p. 493). We refer to these boundary concepts throughout our analyses.

Research Design

In this section, we present our research design, which is based on an interpretative discourse analysis of organisational narratives (Vaara et al., 2016). We also explain our research setting, data collection and data analysis.

Interpretive Analysis of Organisational Narratives

Narrative studies assume that reality is socially constructed through storytelling, visualisation, documents, language and communication processes (Bansal et al., 2018). Vaara et al. (2016, p. 498) define organisational narratives as "temporal, discursive constructions that provide a means for individual, social and organizational sensemaking and sensegiving", noting that narratives carry "performative power" (Vaara et al., 2016, p. 499).

In this research, we study the development, diffusion and acceleration of the adoption of CE through focal stakeholders' and public

actors' organisational narratives as a temporal discursive construction that provides the means for understanding the development of new concepts and ideas, as well as their growing influence and legitimacy for other actors (Vaara et al., 2016). The two studied focal stakeholders, the EMF and the WEF—together with public actors such as EC—have articulated these narratives in various publicly available documents, visualisations and online sources. As a research method, interpretive analysis of organisational narratives is an appropriate means by which to understand the development of CE. We adopt an interpretative approach to organisational narratives based on the premise that "narratives are conceptualized as people's constructions of organisational phenomena" (Vaara et al., 2016, p. 503). This interpretative approach has been connected to sensemaking and organisational and institutional change, including the analysis of composite narratives. Composite narratives aim "to capture the collective meanings from a group of organisational members or organisations" (Vaara et al., 2016, p. 504). In this study, we construct and study a composite narrative of the three studied organisations surrounding the development of the CE concept.

Research Setting

Although theoretical antecedents to CE can be traced back to the 1960s (Blomsma & Brennan, 2017), we focus only on the latest decade of developments from 2010 to 2020. Selecting this timeframe was motivated by the inception of the EMF in 2010 and the publication of the EC's (2020) *A New Circular Economy Action Plan for a Cleaner and More Competitive Europe*. Beyond the EMF, our research setting focuses on two selected organisations (the WEF and the EC) due to their public impact and narratives (Mantere & Vaara, 2008), with their central roles in the diffusion and adoption of CE.

Data Collection

As the empirical basis for our analyses, we identified several data sources from the sample organisations. Appendix 2.1 lists the documentary data

gathered in the form of reports, web pages, visual documents, event reports and videos from publicly available archival sources between 2010 and 2020. The bracketed numbers in Appendix 2.1 reference the empirical evidence, which we refer to in the text using those numbered identifiers.

Analysis

Following Mantere and Vaara (2008), we adopted an exploratory approach to the narrative data. We codified and structured the data based on a grounded understanding of the CE concept that developed over time. Our analysis followed four primary stages.

First, we mapped the involvement of the three studied organisations, focusing on organisational documents to identify and explore organisational narratives (Vaara et al., 2016) concerning the development of CE. Next, we studied the organisational narratives independently of each other. We concentrated on the roles of different organisations and how they presented their stakeholder engagement in their own publications. We looked for linguistic expressions, such as metaphors of CE-related concepts and practices. Analysing these linguistic choices helped us understand the actions taken for CE development and the specific modalities of engagement for each organisation. In the third stage, we focused on the relational discourses between the studied organisations as a composite narrative. We then examined and codified the roles of the different organisations in the joint construction of the CE concept.

We then evaluated the narratives in reference to boundary conditions of performative theories (Marti & Gond, 2018), which provided us with an analytical frame of reference for considering the relevance and influence of the various types of narratives, linguistic influences, contexts and roles the various involved actors adopted in jointly constructing the CE concepts. Based on our analyses, we identified four sub-processes related to CSA, along with their performative effects, as well as the primary roles of the studied organisations summarised in Table 2.1.

Table 2.1 Data structure

Sub-processes	Performative effects	Organisations
Pragmatic translation	Engagement to disseminate the CE concept, translating complex scientific concepts as a practice-based narrative	EMF
Collective definition	Engagement to collectively define CE as business practices	EMF WEF
Amplification and legitimisation	Engagement to extend and amplify the CE concept to the broader private sector; governments that support legitimate practice-based CE concepts	EMF WEF EC
Building institutional infrastructure	Attracting the support of policymakers that create new policies, action plans and regulations	EC
Outcome		
Slack for experimentation	Promoting funding and investment to drive CE experimentation	Firms

Findings

Stakeholder Roles

Our analysis revealed two primary stakeholder roles: *(i)* connecting businesses and other actors in multiple coalitions and *(ii)* influencing the development of and experimentation with novel business practices related to CE (Kourula et al., 2019; Roloff, 2008). Connecting stakeholders are initiators who bring together groups of firms, and influential stakeholders function as levers for increased legitimacy. For instance, the EMF adopted a connecting stakeholder role in 2010, enabling the initiation of stakeholder-led engagement in the diffusion of CE concepts, narratives and practices while connecting business actors in a coalition to construct shared understandings and goals. After these initial steps, the WEF eventually took on an influencing role, leveraging the early momentum of the coalition to build further legitimacy. The WEF has played a key role in developing the CE concept and narrative as an influential stakeholder, amplifying and legitimising its use and exerting

pressure on public actors. We also see how the EC, as a public actor, set up policy targets and drove the creation of the institutional infrastructure necessary to spur widespread business experimentation with CE.

Sub-Processes

Pragmatic Translation

The first sub-process emerges via the dissemination of the CE concept and narrative promoted by the EMF's communications since the organisation's inception in 2010. The EMF engaged in discussions with businesses seeking to clarify its own understanding of CE, translating the earlier, more complex scientific concepts into a more practice-based narrative in the process, as seen on the EMF timeline [1].

The EMF documentation revealed how its material releases have resulted in changes in prior scientific vocabulary to a simpler, more accessible CE narrative. For instance, in August 2011, the EMF released the animation video *Rethinking Progress: The Circular Economy* [2], which, as of writing, had over 1.3 million views under the original release. Since 2010, the EMF has also run collaborative projects and biannual workshops with its members, exploring varied CE-based strategies, business models and solutions [3]. The EMF has openly shared information and learning resources on CE with its members, partners and the broader community ever since.

According to its website [3, 6], the EMF works with leading businesses and public actors to disseminate and accelerate CE by explicating and visualising the continuous flow of materials in a circular context. One of the many visual material devices was the release of a *butterfly diagram of CE* with a comprehensive material flow diagram [11, p. 24]. Due to the successful dissemination of the diagram, in 2017, the EMF also produced and released a video called the *Butterfly Diagram Animation* [5].

Since 2012, the EMF has set a goal to achieve CE transitions by attracting partners, businesses, scholars and policymakers through demonstration projects, events, insights and learning resources:

> To achieve the transition to a circular economy, we need to engage all parts of the system. This is why we work with businesses, international institutions, governments, cities, universities, non-governmental organisations, innovators, and many others. We create resources, publications and tools that help set effective policies, find new ways to do business and design better products […]. The goal is to build circular economy capacity, address common barriers to progress, understand the necessary enabling conditions, and pilot circular economy practices. [7]

In 2013, the EMF published the report *Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition* [11]. In this document, they presented earlier scientific concepts from major scholars such as Professor M. Brungart (cradle-to-cradle design), Professor Roland (environmental technology), Professor W. R. Stahel (industrial symbiosis and performance economy) and biologist J. Benyus (Biomimicry):

> Circular economy—schools of thought. The circular economy concept has deep-rooted origins and cannot be traced back to one single date or author. Its practical applications to modern economic systems and industrial processes, however, have gained momentum since the late 1970s as a result of the efforts of a small number of academics, thought-leaders, and businesses. The general concept has been refined and developed by the following schools of thought. Regenerative Design, Performance Economy, Cradle to Cradle, Industrial Ecology and Biomimicry. [11, pp. 26–27]

Based on these conceptions, the EMF has developed its own definition of CE:

> The concept of the circular economy refers to an industrial economy that is restorative by intention. It aims to enable effective flows of materials, energy, labour and information so that natural and social capital can be rebuilt. It seeks to reduce energy use per unit of output and accelerate the shift to renewable energy by design, treating everything in the economy as a valuable resource. [12, p. 26]

The EMF also used pioneering experiences to explain CE with examples, such as using the concept of cascading material circulations [11, p. 33]. On its website, the EMF provided case examples to attract companies to explore the potential of circular business models:

> In 1994, Ricoh established the Comet Circle™ as a catalyst for change. It expresses a comprehensive picture of how Ricoh can reduce its environmental impact, not only in its activities as a manufacturer and sales company, but also upstream and downstream—along the entire lifecycle of its products. [11, p. 29]

Collective Definition

The second identified sub-process arises from the EMF's engagement with businesses to collectively define CE as a business practice. The EMF engaged in a series of discussions with chief executive officers (CEOs), senior managers, board members and experts across a variety of countries, economies and industries [1, 3, 7]. These early negotiations involved balancing theory and practice, building an early joint understanding of the earlier largely theoretical frame of reference. To negotiate and translate these theoretical origins into practice, the early coalition drew on two otherwise disconnected knowledge frontiers: individually well-developed sets of earlier theoretical concepts and the myriad practicalities supporting or contrary to those ideas:

> Ellen travels the world on her journey of learning. The next four years saw Ellen meeting with experts across a variety of countries, economies, and industries to better understand our global approach to the way the economy uses resources. [1]

The EMF's early discussions with companies convinced the set of founding company partners (B&Q, BT/Cisco, National Grid and Renault) [11] to further invest in the foundation's mission, as evidenced by their continued involvement. These companies acted as "powerful and high-status initial backers" (Marti & Gond, 2018, p. 495) for the

foundation, driving the construction of CE as a practical business-applicable concept. Marti and Gond (2018) suggested that having high-status backers serves as a form of risk mitigation; strong backers encourage experimentation with concepts due to the reduced cost of failure, whereas without such backers, the costs of a failed experiment are significantly greater. Given this logic, the credibility of these initial backers may have given other firms and organisations beyond the coalition a broader licence to experiment, enabling failed experimenters to later avoid potential backlash by referring to those credible backers as an ex-post justification for experimenting with the concept.

After the EMF's launch, their initial efforts focused on stakeholder–business communication, education and collective learning. As part of these educational efforts, the foundation gathered and disseminated CE examples and case studies through its website [3, 7–9] and other publications [11–14]. Based on a series of interviews from *The Circular Economy Show* [9], the EMF prepared a collection of videos with representatives of its strategic partners, in which they discussed how pioneering companies innovate and the challenges they experience in scaling CE solutions. These videos functioned as *material devices*, making the concept accessible to wider audiences and increasing its *visibility* (Marti & Gond, 2018).

The main driver for collectively defining CE was the strong cooperation between the EMF and the WEF. After publishing the first CE report [11] in 2013, the EMF published a second report titled *Towards the Circular Economy: An Economic and Business Rationale for an Accelerated Transition* [12], emphasising the global opportunities arising from CE. In 2014, the EMF and the WEF jointly released a third consecutive report titled *Towards the Circular Economy: Accelerating the Scale-Up Across Global Supply Chains* [13]. The report was supported by several key strategic partners (e.g. Cisco, Renault-Nissan and Nestlé), containing hints regarding the ongoing efforts to collectively define CE as a tool for engaging business networks:

> This report with the World Economic Forum plays a crucial role in this market evolution by exploring how businesses can use the circular

> economy to drive arbitrage opportunities across complex, global supply chains. […] This report provides practical guidance on how businesses can address these leakage points to capture the value of the circular economy together with their partners—whether suppliers or wholesales/retailers—and consumers. [13, p. 3]

The collaboration between the EMF and the WEF continued with new joint publications on tangible and specialised issues through releases such as *The New Plastics Economy: Rethinking the Future of Plastics and Catalysing Action* [21]. Between these report releases, June 2013 saw a celebration of the first *Circular Economy 100 Summit* promoted by the EMF [10]. The event was based on a collaborative approach to defining best practices and roadmaps to transition from a linear model of production and consumption to a more regenerative circular model. According to the EMF website, the goal was to create mechanisms for collective problem solving, construct a repository of best practices for businesses engaging with CE and support actors in the private sector to scale up their CE capabilities. More than 30 companies participated, including industry and market leaders such as Unilever, Coca-Cola, H&M, Marks & Spencer and Vestas. The event also featured scholarly promoters of CE-related concepts, such as Michael Braungart and William McDonough.

Amplification and Legitimisation

The third sub-process involves the amplification and legitimisation of CE concept, narrative and practices at scale. The 2014-released joint EMF and WEF [13] report sparked broad policy and practitioner interest, utilising the earlier visuals and highlighting early support from initial backers as points of leverage to sell the utility of the concept to broader—mainly economically driven—interest groups. In parallel, the WEF hosted events with leaders from industry, governments, academia and civil society to discuss the challenge of scaling CE in the Davos Forums [13]. Several companies had also been previously involved in the WEF Sustainable Consumption Initiative from 2008 to 2012 [36]. According to the EMF–WEF [13, p. 4], the participants were inspired

by the EMF's work, "which has emphatically set out the trillion-dollar economic case for a circular economy". These discussions involved several public actors, such as the EC, national governments and the Brazilian National Development Bank, which they called on to "become first movers in scaling up the circular economy" [13, p. 4].

In December 2012, the EC adopted the *Manifesto for a Resource-Efficient Europe* [53], led by the EC but also supported by scientists, such as J. Rockström, and CEOs, such as P. Polman (Unilever), as well as the World Business Council for Sustainable Development. The manifesto brought CE concepts to the front and centre of European policymaking. The combination of the Davos report and the EC manifesto was a powerful tool for CE legitimation and sense-giving, driven by influential stakeholder organisations and leading to further CE adoption. Within only two years of the foundation's launch, the concept was brought to life in industries across the world through joint adoption by both companies and policymakers.

The EMF adopted a dual role, publishing different reports about the implementation of CE in Europe, such as *A Growth Within: A Circular Economy Vision for a Competitive Europe* [15] and *Achieving 'Growth Within': A €320-Billion Circular Economy Investment Opportunity Available to Europe up to 2025* [22].

A primary milestone towards building a collective action coalition around CE was the launching of the Platform for Accelerating the Circular Economy (PACE) [66]. In 2018, the EMF and the WEF, joined by the World Resources Institute, Philips, the United Nations Environment Programme and over 40 other partners, launched the PACE programme. In September 2019, PACE published the WEF white paper titled *The Next Frontier: Natural Resource Targets Shaping a Competitive Circular Economy Within Planetary Boundaries* [44]. In this document, the goal of the platform is stated as follows:

> This White Paper offers initial reflections on the need and opportunity for strengthened metrics and integrating comprehensive natural resources targets to both accelerate innovation and more effectively track progress towards a circular economy. Without undermining the complexity of this task, the goal is to spark debate between academics, governments and

> business on the scale and scope of action required to achieve a fully circular economy that operates within planetary boundaries. [44, p. 5]

Building Institutional Infrastructure

The fourth sub-process relates to policy frameworks and tools necessary to drive the implementation of new CE projects, resulting in supporting institutional infrastructure. In this sub-process, the focus is on the EC and its narratives, which are reflected in policy frameworks. The EC addressed the need for institutional infrastructure, elaborating on the financial and innovation support structures necessary for further transforming concrete business practices towards CE [56, 57, 62, 64].

In 2014, the EC published *Towards a Circular Economy: A Zero Waste Programme for Europe* [56]. This document established CE as a policy goal for facing current and future challenges related to the efficiency of natural resource use across a wide range of industrial fields while also considering the increasing insecurity of raw material supplies and growing concerns over climate change. The objective of the policy framework was to guide and support actors across Europe, including European Union (EU) member states, small- and medium-sized enterprises and large companies, providing them with incentives to move towards resource-efficient practices. The Commission highlighted the need to mobilise private investment and public funding instruments as incentives. The report also highlighted various actor roles and the challenges related to achieving the desired change:

> Existing infrastructure, business models and technology, together with established behaviour, keep economies 'locked-in' to the linear model. Companies may lack the information, confidence and capacity to move to circular economy solutions. The financial system often fails to provide for investment in efficiency improvements or innovative business models, which are perceived as more risky and complex, deterring many traditional investors. [56, p. 3]

In 2015, the EC published *Closing the Loop—An EU Action Plan for the Circular Economy* [57]. This plan used the EMF's report *Growth*

Within: A Circular Economy Vision for a Competitive Europe [15] as a guideline for the European action plan. The latter included measures for supporting and stimulating Europe's transition towards a CE, boosting the EU's global competitiveness, leveraging sustainable economic growth and creating new jobs. It highlighted the infrastructure and changes required to support CE concept and narratives in practice. These requirements encompassed production processes, including the reduction of primary raw material sourcing, resource use and waste generation throughout product life cycles. In turn, it was highlighted that consumption processes require a range of regulatory frameworks (e.g. ecolabels and product environmental footprints). The central proposal was to boost the market for secondary raw materials and water reuse, expanding raw material recycling to increase the security of supply within the EU. Finally, the action plan proposed launching EU-level funding programmes (e.g. Cohesion Policy, LIFE—the EU Programme for environment and climate action, COSME—the EU Programme for the competitiveness of enterprises and SMEs, the European Fund for Strategic Investment and the European Investment Bank). The action plan for CE [57] emphasised the goal of creating an institutional infrastructure:

> The action plan focusses on action at EU level with high added value. Making the circular economy a reality will however require long-term involvement at all levels, from Member States, regions and cities, to businesses and citizens. Member States are invited to play their full part in EU action, integrating and complementing it with national action. [57, p. 3]

In 2019, CE was again promoted with the launch of the *European Green Deal* [53], a new agenda for sustainable growth. The strategy consists of a set of policy initiatives and funding programs aiming for a carbon–neutral Europe by 2050. This desired transition aims to reduce the pressure on natural resources and create sustainable growth and jobs. Later developments followed: in March 2020, the commission adopted the *New Circular Economy Action Plan (CEAP)* [62] as part of

the Green Deal, and in July 2020, the EU enacted the *Next Generation EU Recovery Plan* [54] to support member state economies. All of these policy frameworks developed by the EU have been affected to some degree by the stakeholder engagement initiated by the EMF, which is the central connecting stakeholder, and its early adoption of commercial constituents.

Outcome: Enabling Experimentation

As a result of these four sub-processes, we identified the primary outcome of increased slack resources for business experimentation. Business experimentation is a primary focus in studies using performative theories (Marti & Gond, 2018) in which concepts are often characterised as having self-fulfilling if not entirely self-prophesying qualities. We find evidence of such performativity in the case of CE, arguing that increased experimentation today is based on the existence of CSA-enabled institutionalised funding programmes, which have enabled major businesses in Europe and elsewhere to experiment with funding to which they would not otherwise have had access, specifically regarding the use of CE as a driving force.

Large-scale business experimentation did not appear to factor into CE's main adoption trajectory in the early years of the concept's development (2010–2017). Over these early developmental years, mostly larger corporations already endowed with slack internal resources experimented with CE practices. In Europe, most of the later experimentation emerged via the implementation of new public funding and investment programmes—mainly promoted by the EC—and EU member states supported by the commission's directives or other funding instruments. For instance, in Finland, a major public transformation was driven by the publication of Finnish Innovation Fund, Sitra's *Roadmap to Circular Economy* in 2015 [67] and the implementation of a series of new national public funding instruments, which made CE a major goal for other public research and development funding agencies.

In 2017, the EC created the *Circular Economy Finance Support Platform* [52] to enhance the link between existing instruments and

potentially develop new financial instruments for CE, enabling small- and medium-sized enterprises, researchers and innovators to test CE concepts, tools and business models in publicly funded projects, providing companies with both rationales and incentives to participate in experimentation patterns. On this webpage, the EC explains how, from 2017 to 2020, the commission introduced several funding programmes to implement CE principles: the European Structural and Investment Funds, Horizon Europe (EU R&D programme "with a budget of €95.5 billion from 2021 to 2027"), Regional Policy support for CE and the LIFE programme. The EIB also finances and advises CE projects through the European Fund for Strategic Investments and the EU Finance for Innovators programme [52].

The importance of funding instruments from this public and private investment support was emphasised on the EU's website:

> Financing circular economy projects is not a trivial matter for investors, and both businesses and the financial sector hit difficult barriers. The main challenge facing promoters of the circular economy looking out to financing their projects, is the perception and assessment of risks. In 2017 the European Commission set up the Circular Economy Finance Support Platform, to enhance the link between existing instruments and potentially develop new financial instruments for circular economy projects. [52]

Discussion

In this section, we discuss the theoretical implications of CSA. Based on our findings, we have defined CSA as a process where focal stakeholders (firms or business organizations) engage with other businesses and policymakers (public actors), developing coalitions of collective action to legitimise shared issues and the construction of institutional infrastructure. The process model explores how connecting stakeholders enable the pragmatic translation of scientific concepts into practice and their collective deliberation and continuously revised definition. Further, influential stakeholders drive these concepts' amplification and legitimisation, while

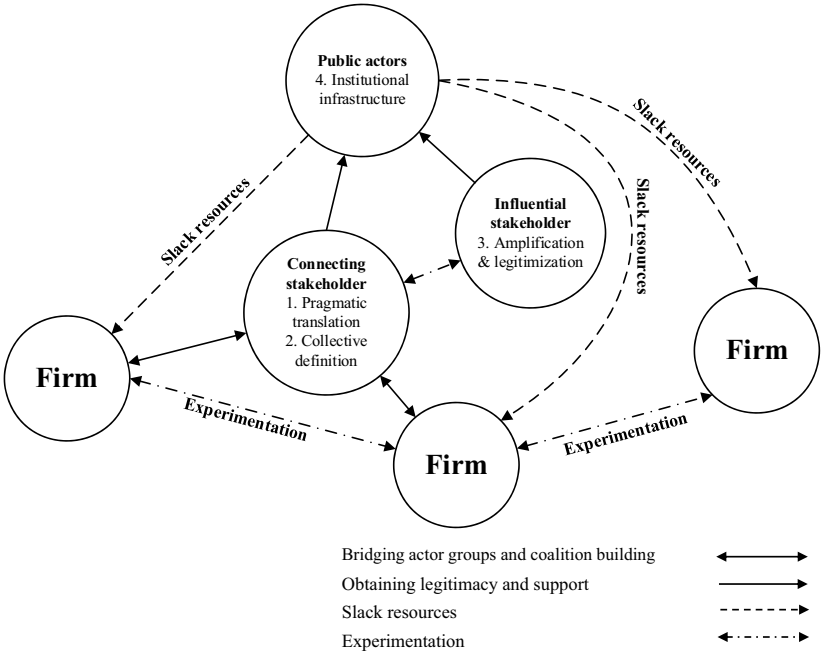

Fig. 2.1 Identified actor links in the collective stakeholder action process

influencing public actors that build supporting institutional infrastructure and facilitate slack resources. This process eventually leads to practical experimentation by business organizations. Figure 2.1 summarises the primary interactions between the categories of organisations involved across the identified sub-processes.

Theoretical Implications

This chapter makes three primary contributions to the literature. First, our conceptualisation of the CSA process advances research on collective action and institutional theory (Patala et al., 2022). Our approach differs from earlier collective action and institutional change models (Ansari et al., 2013) by focusing specifically on the role of stakeholders in initiating and cooperating with businesses to promote institutional change.

We have shown how such joint efforts are initiated by *focal stakeholders* bringing groups of firms together, rather than by *focal firms* bringing groups of stakeholders together. As the initiators, connecting stakeholders engage in dyadic and bidirectional relationships with other relevant actors: firms, influential stakeholders and public actors. Connecting stakeholders initiate CSA processes by building coalitions of diverse actors towards deliberation on concepts of interest and experimenting with alternative definitions until a resonant way of framing to attract further constituents is found. These early coalitions can later approach and convince influential stakeholders to join in the effort towards gaining further legitimacy and amplifying their reach. This distinction offers a fresh perspective on the study of collective action through the lens of stakeholder engagement (Kujala et al., 2022), intersecting and cross-pollinating theoretical perspectives (Bridoux & Stoelhorst, 2022; Roloff, 2008).

Second, we have identified two focal stakeholder roles necessary for driving institutional change: *building coalitions by connecting parties across sectors* and *creating institutional support as influential stakeholders*. Leaning on these roles, stakeholder engagement takes place across multiple levels and in several directions: firms engage primarily with connecting stakeholders, while connecting stakeholders engage with firms and other influential stakeholders. Early-stage coalitions seek to attract influential stakeholders who function as gatekeepers to the broader amplification and legitimisation of a central issue. Influential stakeholders joining early coalitions work to create future visions of shared issues and the expected changes they create. They leverage their institutional power and networks to further amplify and legitimise shared issues and concerns, exerting pressure on the public actors in charge of the policies required to effect institutional change. Engaging such influential stakeholders is instrumental to bringing public actors, governments and corporate actors together to facilitate the construction of institutional infrastructure enabling broader practical experimentation. Building such an institutional infrastructure has been recognised as an important enabling component of collective action, materialising, for instance, as the development of funding instruments (Dietz et al., 2003). For instance, some funding instruments initially developed for CE have

enabled firms beyond the early CSA coalition to access slack resources and experiment with otherwise unattainable R&D initiatives. Today, extended processes of experimentation with CE exist across a variety of industries (e.g. the construction, mobility and renewable energy sectors). These dynamics add an alternative viewpoint to prior analyses on the lead role and shared governance models (Bridoux & Stoelhorst, 2022), which also build on models of collective action.

Third, our analysis provides empirical evidence on the types of performative devices, effects and behaviours related to the development of CE from early science-based understandings towards a more practical and business-driven phenomenon as a collective deliberation process, contributing to the literature on the effective boundaries of performative theories (Ferraro et al., 2005; Marti & Gond, 2018). Such collective deliberation processes (Dietz et al., 2003; Stern, 2011) between key stakeholder groups (Freeman et al., 2017) involve dialogue and collective agreement on definitions between a focal stakeholder and the broader coalition (Kujala et al., 2022). Involving influential actors in collective efforts requires defining and refining early understandings with broader, more diverse sets of actors. Successful extension requires simplification, clear definitional guiding elements and rule-based deliberation (Ostrom, 1990; Stern, 2011). Research on cognitive complexity and framing suggests that complex understandings make acting difficult, whereas simpler understandings promote action due to fewer available alternative courses of action (Hahn et al., 2014; Wong et al., 2011). Educational simplification meant to increase accessibility may therefore have strong performative effects on concept adoption. We believe that simplification plays a key part in the later adoption of a concept by other interested actors, who may otherwise not have had access to similar material devices or to a sufficiently parsimonious framework for decision-making.

Limitations, Critiques and Future Research

While the simplistic framing of the CE concept early in the CSA subprocesses spurred its adoption and legitimisation, the same simplification has resulted in limitations in its usefulness. Although initially grounded

in scientific studies, the pragmatic translation of CE has simultaneously undermined the complexity underlying the science behind its origins. Studies have highlighted that those current conceptions of CE are, from a scientific perspective, a "collection of vague and separate ideas from several fields and semi-scientific concepts" (Korhonen et al., 2018, p. 37). A simplified initial framing may be an effective onboarding tool for mobilising a critical mass of collective resources and supporters to initiate a coalition-level effort. However, to employ the right tools over the long term, all involved organisations should remain wary of relying on such early simplifications in the later stages. Oversimplified definitions may lead to, for example, miscalibrated funding instruments, which could lead to financing solutions that end up solving either the wrong problem or, worse, no problem at all.

Our conception of CSA is context-specific, emerging from an investigation of the development of CE. We recognise that CSA might also arise from alternative starting points and need not be driven by the initial processes of pragmatic translation. Such alternative starting points are beyond the scope of this study, and this point of departure may well be a product of our empirical context. Future research could build on our conceptualisation following the first sub-process, critically applying the remaining sub-processes to the study of other issues where stakeholder engagement is already present.

Conclusion

In this chapter, we have advanced *collective stakeholder action* (CSA) as a concept interlinking two important bodies of literature: stakeholder engagement and institutions for collective action. Empirically, we have studied the narratives employed by three major organisations and their respective roles in engaging with businesses to enable increased industry experimentation with the concept of the CE. As a result, we distilled a basic process of CSA consisting of four sub-processes: *(i)* pragmatic translation, *(ii)* collective definition, *(iii)* amplification and legitimisation and *(iv)* building institutional infrastructure. Collectively, this

process results in increased slack resources for business experimentation. Our insights contribute to a deeper understanding of the varied connecting and influencing stakeholder roles played by distinct organisations as drivers of collective action and as central coalition builders around issues of concern. Connecting stakeholder roles are key to initiating CSA processes, while influencing stakeholders are necessary to ensure their successful completion. We have also provided an alternative viewpoint to the traditional study of stakeholder engagement. In contrast to the conventional view of firms as the central organisers of stakeholders, we suggest that stakeholders, rather than firms, can also act as focal organising forces.

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Appendix 2.1: Data Sources

The squared brackets indicate the reference numbers for each piece of empirical evidence gathered. The numbers within the brackets are used to refer to these items in the text.

Organisation	Webpages and videos	Publications
Ellen MacArthur Foundation (EMF)	[1] EMF webpage. (2017). *Timeline.* https://ellenmacarthurfoundation.org/about-us/timeline [2] EMF. (2011). *Ellen MacArthur Foundation YouTube. Explaining the circular economy and how society can re-think progress* | Animated Video Essay. https://www.youtube.com/watch?v=zCRKvDyyHml [3] EMF webpage. Our network. https://ellenmacarthurfoundation.org/network/overview [4] EMF webpage. (2011). *The butterfly diagram: Visualising the circular economy*. https://ellenmacarthurfoundation.org/circular-economy-diagram [5] EMF video. (2017). Butterfly diagram animation 10,849 views. April 7, 2017. https://www.youtube.com/watch?v=EqBivOsNtFg [6] EMF. (2015). *TED Talk—The surprising thing I learned sailing solo around the world*. Speaker Dame Ellen MacArthur. March 2015. https://www.ted.com/talks/dame_ellen_macarthur_the_surprising_thing_i_learned_sailing_solo_around_the_world?language=en	https://ellenmacarthurfoundation.org/publications [11] EMF. (2013a). *Towards the circular economy: An economic and business rationale for an accelerated transition* (Vol. 1) [12] EMF. (2013b). *Towards the circular economy: Opportunities for the consumer goods sector* (Vol. 2) [13] EMF–WEF. (2014). *Towards the circular economy: Accelerating the scale-up across global supply chains* (Vol. 3) [14] EMF. (2014). *A new dynamic: Effective business in a circular economy* [15] EMF. (2015). *A growth within: A circular economy vision for a competitive Europe* [16] EMF. (2015a). *Delivering the circular economy: A toolkit for policymakers* [17] EMF. (2015b). *Towards a circular economy: Business rationale for an accelerated transition* [18] EMF. (2016). *The new plastics economy. Rethinking the future of plastics* [19] EMF. (2016a). *Intelligent assets: Unlocking the circular economy potential* [20] EMF. (2016b). *Circular economy in India: Rethinking growth for long-term prosperity*

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Organisation	Webpages and videos	Publications
	[7] EMF webpage. About us: What we do. https://ellenmacarthurfoundation.org/about-us/what-we-do [8] EMF webpage. *Transforming business: The leading voices of the circular economy*. https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/transforming-business [9] EMF webpage. *The circular economy show*. https://ellenmacarthurfoundation.org/circular-economy-show/overview [10] *CE100 Annual Summit: Making the circular economy a reality*. https://mbapolymers.com/media/news-ce100-annual-summit-circular-economy/	[21] EMF–WEF. (2017). *The new plastics economy: Rethinking the future of plastics and catalysing action* [22] EMF. (2017a). *Achieving "growth" within. A €320-billion circular economy investment opportunity available to Europe up to 2025* [23] Webster, K. (2016). *The circular economy. A wealth of flows*. EMF. 2nd Edition [24] EMF. (2017). *Urban biocycles* [25] EMF. (2017a). *Cities in the circular economy: An initial exploration* [26] EMF. (2017b). *A new textiles economy* [27] EMF. (2017d). *Circular consumer electronics: An initial exploration* [28] EMF. (2018). *The circular economy opportunity for urban industrial innovation in China* [29] EMF. (2018a). *Artificial intelligence and the circular economy AI as a tool to accelerate the transition* [30] EMF. (2019). *Cities and circular economy for food* [31] EMF. (2019a). *Reuse rethinking packaging* [32] EMF. (2019b). *Completing the picture. How the circular economy tackles climate change*. Reprint 2021 [33] EMF. (2019c). *Financing the circular economy: Capturing the opportunity*

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Organisation	Webpages and videos	Publications
World Economic Forum (WEF)	Circular Economy Initiative. https://www.weforum.org/projects/circular-economy	[34] EMF. (2020). *The circular economy: A transformative Covid-19 recovery strategy. How policymakers can pave the way to a low carbon, prosperous future* [35] EMF. (2020a). *Upstream innovation: A guide to packaging solutions* [36] WEF. (2013). *Sustainable consumption: Stakeholder perspectives* [13] EMF–WEF. (2014). *Towards the circular economy: Accelerating the scale-up across global supply chains* (Vol. 3) [37] WEF. (2015). *Intelligent assets: Unlocking the circular economy potential* [38] WEF. (2016). *Project Mainstream Urban Biocycles*. In partnership with the EMF [39] WEF. (2016a). *Design and management for circularity—the case of paper* [40] WEF. (2016b). The new plastic economy rethinking the future of plastics [21] EMF–WEF. (2017). *The new plastics economy: Rethinking the future of plastics and catalysing action* [41] WEF. (2017a). *Shaping the future of production: Four contrasting perspectives 2030*. White paper. In collaboration with A.T. Kearney. March 2017

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Organisation	Webpages and videos	Publications
		[42] WEF. (2018). *Recovery of key metals in the electronics industry in the People's Republic of China: An opportunity in circularity*. White paper. January 2018. Created as part of the Platform for Accelerating the Circular Economy [43] WEF. (2018a). *Circular Economy in cities: Evolving the model for a sustainable urban future*. White paper. In collaboration with PwC [44] WEF. (2019). *The next frontier: Natural resource targets shaping a competitive circular economy within planetary boundaries*. White paper. In partnerships with International Resource Panel and PACE [45] WEF. (2019a). *Harnessing the fourth industrial revolution for the circular economy consumer electronics and plastics packaging*. White paper. In collaboration with Accenture Strategy. January 2019 [46] WEF. (2019b). *A new circular vision for electronic time for a global reboot*. In support of the UN e-waste coalition. In cooperation with PACE. January 2019 [47] WEF. (2020). *Forging ahead: A material roadmaps for the zero-carbon car*. Circular Cars Initiative Materials. In collaboration with McKinsey & Company. December 2020

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Organisation	Webpages and videos	Publications
		[48] WEF. (2020a). *Raising ambitions: A new roadmap for the automotive circular economy. Circular cars initiative and business models cluster*. In collaboration with Accenture Strategy. December 2020 [49] WEF. (2020b). *The road ahead: A policy research agenda for automotive circularity. Circular cars initiative and policy workstream*. December 2020 [50] WEF. (2020c). *Facilitating trade along circular electronics value chains*. White paper. September 2020 [51] WEF. (2020d). *Plastics, the circular economy and global trade*. White paper. July 2020
European Commission (EC)	[52] European Commission (EC) webpage. *Platform financing circular economy*. https://circulareconomy.europa.eu/platform/en/financing-circular-economy [53] European Commission (EC) webpage. *A European Green Deal*. https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en [54] European Commission (EC) webpage. *Next Generation Recovery Plan for Europe*. https://ec.europa.eu/info/strategy/recovery-plan-europe_en	[55] EC. (2012). *Manifesto for a resource-efficient Europe. Brussels*. December 17, 2012 [56] EC. (2014). *Towards a circular economy: A zero waste programme for Europe*. COM(2014) 398 final/2 [57] EC. (2015). *Closing the loop—An EU action plan for the circular economy*. COM (2015) 614 final [58] EC. (2015a). *Closing the loop—An EU action plan for the circular economy*. Annex. COM(2015) 614 final

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Organisation	Webpages and videos	Publications
		[59] EC. (2018). *A European strategy for plastics in a circular economy*. Brussels, 16.1.2018 COM(2018) 28 final
		[60] EC. (2018a). *A European strategy for plastics in a circular economy*. Annex. Brussels, 16.1.2018 COM(2018) 28 final
		[61] EC. (2019). *Report on the implementation of the Circular Economy Action Plan*. Brussels, 4.3.2019. COM(2019) 190 final
		[62] EC. (2019a). *Accelerating the transition to a circular economy. Improving access to finance for circular economy projects*. March 2019
		[63] EC. (2019b). *A circular economy for plastics. Insights from research and innovation to inform policy and funding decisions*. Brussels
		[64] EC. (2020). *A new circular economy action plan for a cleaner and more competitive Europe*. COM/2020/98 final
		[65] EC. (2020). *A new circular economy action plan for a cleaner and more competitive Europe*. Annex. COM/2020/98 final
Other	[66] Platform for Accelerating the Circular Economy (PACE). https://pacecircular.org/	[67] Sitra. (2015). *Finnish roadmap to a circular economy* (2016–2025). https://www.sitra.fi/en/projects/leading-the-cycle-finnish-road-map-to-a-circular-economy-2016-2025/

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3

Engaging Stakeholders in the Circular Economy: A Systematic Literature Review

Silvan Oberholzer and Sybille Sachs

Introduction

The degradation of Earth's natural environment and its ecological imbalance are increasing, and calls by academia, practitioners, the policy sphere, and social movements to transform business-as-usual have intensified (Martin et al., 2021; Whiteman et al., 2013). The traditional

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linear economy model involves a "take-make-sell-use-waste" mentality that has severely aggravated the state of the natural environment since its inception during the Industrial Revolution (Murray et al., 2017; Stahel, 2019). Harmonising nature and human activity requires sustainable production and consumption systems that value resources as finite goods (Gupta et al., 2019; Sauvé et al., 2016). As a regenerative system, the circular economy (CE) provides a comprehensive approach to value creation within the planetary boundaries—the safe, quantifiable operating space for human activity on Earth (Rockström et al., 2009; Suárez-Eiroa et al., 2019)—by respecting the natural regeneration rate of resources (Desing et al., 2020; Gladwin et al., 1995; Pearce & Turner, 1990).

CE aims at maximising the value and utility of resources along their life cycle through a collaborative approach (Andersen, 2007; Geissdoerfer et al., 2017; Korhonen, Honkasalo, et al., 2018). Stakeholder networks operating in a CE (hereafter, "circular stakeholder networks") provide insight into the collaborative action required for "greening" our mostly linear economy systems (e.g., Gupta et al., 2019; Manninen et al., 2018). We define stakeholder networks as sets of interdependent actors with multiple relationships aimed at stakeholder value creation associated with a decentralised, network-focused form of shared stakeholder governance (Bridoux & Stoelhorst, 2022; Roloff, 2008; Schneider & Sachs, 2017). Stakeholder value is the perceived utility of the value created by different stakeholder groups of an organisation or network, which can be economic, social, or in some cases, environmental (Garriga, 2014; Harrison & Wicks, 2013).

In relation to CE, stakeholder value creation requires heterogeneous stakeholders to be organised within networks with a high degree of interconnection and interaction, as compared to linear supply chains that lead from the supplier to the buyer (Bocken & Antikainen, 2019; Brown & Bajada, 2018; Moggi & Dameri, 2021). These networks allow their members to narrow, slow, and close resource and energy loops through sustainable business practices (Geissdoerfer et al., 2018; van Keulen & Kirchherr, 2021). For instance, Holcim, a leading global building material and construction aggregate company that is committed to CE, aims to increase its sustainability efforts through open innovation and "the

collaboration of a network of actors, outside any single organisation" (Holcim, n.d.).

Implementing CE requires a comprehensive understanding of stakeholder engagement in circular stakeholder networks. Several scholars identify stakeholder engagement-related mechanisms as a necessary condition for CE (e.g., Bocken & Antikainen, 2019; Geissdoerfer et al., 2017; Mishra et al., 2019). Moggi and Dameri (2021) highlight that stakeholder engagement influences the direction, effectiveness, and impact of CE. Brown and Bajada (2018) propose that engagement between stakeholders increases resource circularity within stakeholder networks in CE, resulting in enhanced sustainable value creation. However, little of the literature in management research has addressed stakeholder engagement in CE systematically (Merli et al., 2018). Our research provides knowledge about this construct, which deserves greater scholarly attention.

This chapter systematically analyses how the stakeholder engagement construct is addressed in management research on CE. The stakeholder engagement literature (e.g., Freeman et al., 2017; Greenwood, 2007; Kujala & Sachs, 2019) discusses mechanisms in stakeholder interactions that are relevant to sustainability contexts (e.g., Gonzalez-Porras et al., 2021; Sulkowski et al., 2018; Tapaninaho & Kujala, 2019). Beyond these contexts, stakeholder engagement is a rapidly evolving and dispersed field of academic interest (Freeman et al., 2017; Kujala et al., 2022).

In our review of top-tier management journal articles on CE, we apply Kujala and colleagues' (2022) analytical lens to stakeholder engagement, which is grounded in stakeholder theory. The latter argue that stakeholder engagement is best understood through aims, activities, and impacts associated with stakeholder interactions that embody moral, strategic, or pragmatic components (Kujala et al., 2022). This lens allows us to systematically address stakeholder engagement's complex and interconnected facets in relation to CE. Our analysis takes the form of a systematic literature review (Aguinis et al., 2018; Snyder, 2019) and qualitative content analysis (Mayring, 2000; Schreier, 2014).

Our chapter contributes in five ways to management research on CE, stakeholder theory, and the CE field. First, to the best of our knowledge, this is the first systematic literature review to clarify the

stakeholder engagement construct in CE. Second, we apply a comprehensive perspective to stakeholder interactions in CE that accounts for the complex interrelations in stakeholder networks beyond identifying the stakeholders who are involved. Third, in our analysis, we apply stakeholder theory in a corporate environmental sustainability context and hence follow scholars' call to research environmental sustainability issues in stakeholder engagement (Hörisch et al., 2020; Schaltegger et al., 2019). Fourth, we provide CE managers with an overview of stakeholder engagement to assist them in implementing CE in a coordinated way that drives synergies among stakeholders by following a stakeholder network logic. Finally, we indicate four avenues for future stakeholder engagement research in CE.

In the following section of the chapter, we introduce a stakeholder engagement perspective on CE and explain the analytical lens applied in this research. Subsequently, we outline the method underlying the research, before presenting the findings of the systematic literature review. We then discuss the results, their theoretical and managerial implications, and future research avenues before concluding the chapter.

A Stakeholder Engagement Perspective on CE

CE has gained momentum as an independent field of research (Merli et al., 2018; Sauvé et al., 2016). It has been thoroughly discussed from an engineering and natural science perspective with few (but increasing) links to the management literature, with the latter predominantly focusing on business model solutions (Govindan & Hasanagic, 2018; Korhonen, Nuur, et al., 2018). Management scholars call for embracing a managerial approach and a comprehensive stakeholder perspective to advance CE research (Geissdoerfer et al., 2017; Merli et al., 2018).

We follow this call and apply stakeholder theory—specifically, a stakeholder engagement perspective—to study CE (Freeman et al., 2010, 2017; Kujala et al., 2022). We understand stakeholder engagement as the activities (and related aims and impacts) that firms implement to engage stakeholders in jointly addressing challenging issues and creating value

(Greenwood, 2007; Kujala et al., 2022). We define effective stakeholder engagement in CE as salient and dynamic forms of stakeholder network interactions that result in sustainable stakeholder value creation.

The literature has discussed stakeholder engagement in the context of corporate sustainability. For instance, Gonzalez-Porras and colleagues (2021) highlight the collective agency and capabilities that result from stakeholders' collaborative relationships and interactions that bridge the gap between individual stakeholders to enhance sustainable production and consumption. Sulkowski and colleagues (2018) describe how the "shaking [of] stakeholders" by the focal firm—i.e., proactively interacting and initiating cooperation with stakeholder(s) (networks)—can foster corporate activity that has positive social and environmental impacts. Tapaninaho and Kujala (2019) identify an economic- and multiple-value (i.e., environmental, social, and/or economic value) perspective of stakeholder value creation in sustainability contexts that can have a focal firm or stakeholder orientation. This literature illustrates the relevance of understanding stakeholder interactions in corporate sustainability contexts such as CE.

Top-tier management literature on CE primarily discusses stakeholder engagement implicitly (e.g., Gandolfo & Lupi, 2021; Moggi & Dameri, 2021). Some CE research establishes links to stakeholder theory without explicitly addressing the stakeholder engagement construct. For instance, Govindan and Hasanagic (2018) apply a multi-perspective stakeholder framework grounded in stakeholder theory. They argue that governmental actors have the most significant positive impact concerning drivers, barriers, and practices related to CE implementation from a supply chain perspective (Govindan & Hasanagic, 2018). Gupta and colleagues (2019) follow a theoretically grounded stakeholder perspective and propose that sufficient consideration of CE stakeholders' interests and capabilities, through the facilitation of big data analytics, can help achieve shared sustainability goals through collaborative and coordinated association among all stakeholders. Chiappetta Jabbour et al.'s (2020) research draws on stakeholder theory and illustrates that stakeholders, and most significant shareholders, influence CE barriers and drivers (e.g., change consumer behaviour) in the context of institutional voids. Based on these initial insights, scholars call for more comprehensive research

on stakeholder engagement in CE (Ciliberto et al., 2021; Frishammar & Parida, 2019).

Kujala and colleagues (2022) apply a comprehensive stakeholder engagement lens that is structured around the contents of stakeholder engagement (i.e., aims, activities, and impacts) and its underlying components. The moral component of stakeholder engagement highlights stakeholder interactions associated with good intentions and/or reciprocal and voluntary relationships (Kujala et al., 2022). This underlies a multiple-value perspective that acknowledges "broader value creation purposes", including the environmental and social responsibilities of businesses in addition to economic value creation (Kujala et al., 2022; Tapaninaho & Kujala, 2019, p. 22). The strategic component of stakeholder engagement emphasises "instrumental [stakeholder] engagement and reciprocal economic advantages" (Kujala et al., 2022, p. 20). The strategic view of value creation, by focusing on economic value and business success, is firm-centric, whereas sustainability issues are treated subordinately (Kujala et al., 2022; Tapaninaho & Kujala, 2019). Finally, the pragmatic component of stakeholder engagement combines moral and strategic views of value creation. It relates to improving stakeholders' situations through practical solutions and joint value creation by considering wider stakeholder interests embedded in a specific context (Kujala et al., 2022). We apply this stakeholder engagement lens to identify stakeholder engagement patterns in CE.

Method

We conducted a systematic literature review in line with established procedures in business journals (Aguinis et al., 2018; Snyder, 2019). The method allowed us to systematically identify, synthesise, critically appraise, and categorise research findings from management literature on CE (Snyder, 2019). This literature stream has been fragmented yet has proliferated, characterised by the evolving nature of the CE concept (Geissdoerfer et al., 2017; Ghisellini et al., 2016). Thus, applying the systematic literature review method helped clarify how the stakeholder engagement construct is addressed in management research on CE.

Article Selection Procedure

Our research followed Aguinis and colleagues' (2018) recommended systematic article selection procedure (see Fig. 3.1). The principal goal in selecting the articles for our literature review was to systematically identify how management literature on CE addresses the stakeholder engagement construct. Therefore, we applied the Boolean search term "circular economy AND stakeholder". The search term "stakeholder" ensured the inclusion of stakeholder engagement-related terms in the sample (e.g., stakeholder management/integration/inclusion/participation/collaboration). We ran a full-text literature search in two major research databases: EBSCO Host and Web of Science. For this search, we defined a 15.5-year period, from 2006 to June 2021. This decision was based on the fact that CE in the management literature gained traction as a consolidated academic field in 2006, as illustrated in extensive literature reviews (Govindan & Hasanagic, 2018; Merli et al., 2018). Since then, the CE literature has grown, especially after Andersen's (2007) article provided one of the first scientific definitions of CE from an environmental economics and sustainability perspective (Ciliberto et al., 2021).

In addition, we limited the article search to 3-to-4*-rated journals from four selected fields of research in the CABS Academic Journal Guide List 2018—the valid edition at the time of searching. This ensured academic rigour and the adequate scope of the sample. First, we included the field of research "General Management, Ethics, Gender and Social Responsibility". The stakeholder engagement construct has been substantially developed in the literature on corporate social responsibility (CSR) (e.g., Sachs & Maurer, 2009; Strand & Freeman, 2015). Moreover, organisations frequently participate in circular activities as part of their strategic CSR (e.g., Del Baldo & D'Anghela, 2020; Esken et al., 2018). Second, we included the field "Regional Studies, Planning, and Environment" due to the interplay between business and the natural environment found with CE. Third, our search included journals from the field of "Strategy", as stakeholder engagement literature is frequently based on strategy research (e.g., Harrison et al., 2010;

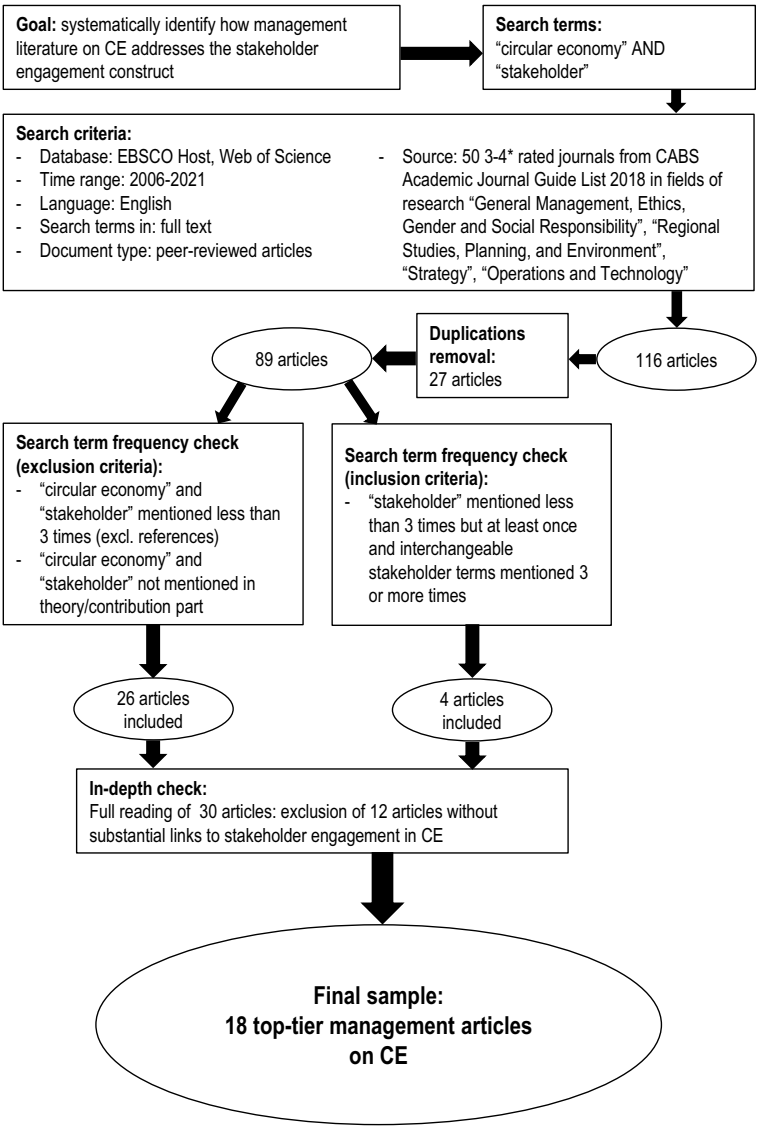

Fig. 3.1 Article selection procedure

Sachs & Rühli, 2011). Furthermore, CE research on strategic management has been increasing, emphasising business model innovation (e.g., Bocken & Antikainen, 2019; Geissdoerfer et al., 2018). Fourth, we included the topical field "Operations and Technology" as the CE management literature frequently addresses supply chain management that involves various stakeholder engagement practices (e.g., Geissdoerfer et al., 2018; Govindan & Hasanagic, 2018).

This first search yielded a preliminary sample of 89 journal articles—excluding 27 duplicates in the two databases—which we screened using the search terms. We excluded 59 articles that mentioned the search terms less than three times throughout the entire article and did not mention them in the theory and/or contribution section. In addition, we included four articles that mentioned "stakeholder" less than three times but at least once and included terms interchangeable with stakeholder three or more times. Thus, we ensured that the selected articles thoroughly discussed the topic under analysis. Next, the first author screened the preliminary sample of 30 articles in depth (i.e., by reading the articles in full) to identify substantial links to stakeholder engagement in CE. Substantial links were identified when articles addressed the CE construct beyond the terminology (e.g., analysed/addressed specific CE contexts, practices, or processes) and specifically addressed stakeholder interactions (e.g., stakeholder engagement aims, activities, and/or impacts). We excluded 12 articles that did not establish these essential links. Our final sample consisted of 18 English-language, top-tier, peer-reviewed management journal articles on CE (see "*" in the list of references).

Data Analysis Procedure

The data analysis procedure consisted of four steps (see Fig. 3.2), following the logic of qualitative content analysis (Mayring, 2000; Schreier, 2014). First, one author coded for the descriptive codes: article type, empirical type, year of publication, journal, industry focus, and CE phenomenon. Second, we derived and agreed on nine deductive codes associated with the stakeholder engagement lens

(Kujala et al., 2022) described before, allowing for systematic analysis and extracting essential information from the sample. The deductive codes included: moral/pragmatic/strategic stakeholder engagement aims, moral/pragmatic/strategic stakeholder engagement activities, and moral/pragmatic/strategic stakeholder engagement impacts. Third, the first author systematically coded the final sample following the open coding methodology by complementing the deductive codes of the stakeholder engagement lens with inductive, specific sub-codes associated with the CE context (Gioia et al., 2012; Mayring, 2000). To ensure the reliability and interpretive validity of the data, the two authors continuously validated the codebook and coded data together during the coding process. Finally, the first author categorised the data, subject to continuous validation of this process by the second author, to ensure interrater reliability with regard to the interpretation of results.

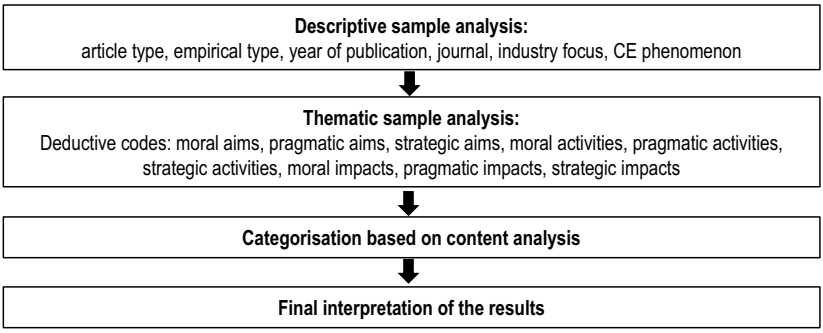

Fig. 3.2 Data analysis procedure

Findings

We present our findings here regarding the descriptives and include a section on stakeholder engagement patterns in CE.

Descriptives

Table 3.1 illustrates the descriptive codes we applied in our sample. The sample primarily consists of qualitative, especially case-study research, and hints at a lack of top-tier theoretical articles on stakeholder engagement in management research on CE. The articles derived from our search criteria were published from 2016 to 2021, indicating the increase in attention being paid to the topic of the intersection of CE with stakeholder engagement. We expect further scholarly interest in the management literature on CE in the coming years, given the theoretical and practical relevance of this intersection.

Table 3.1 Descriptive sample analysis

Descriptive code	Results
Article type	Empirical (12), review (4), theoretical (2)
Empirical type	Qualitative (12), quantitative (4), mixed-methods (2)
Year of publication	2016 (1), 2018 (3), 2019 (4), 2020 (3), 2021 (7)
Journal	Business Strategy and the Environment (10), California Management Review (3), International Journal of Production Research (2), Journal of Environmental Management (2), Supply Chain Management: An International Journal (1)
Industry focus	None (4), various (3; three or more industries), food & agriculture (3), textiles & fashion (3), packaging & paper (2), manufacturing & industry 4.0 (2), construction (1)
CE phenomenon	Supply chain management (5), circular business model (transformation) (4), Industry 4.0 (3), institutional CE regulation (2), corporate performance (1), stakeholder pressure (1), consumer relations (1), implementation strategies (1)

$n = 18$, Frequencies indicated in brackets

More than half of the analysed articles were published in the journal *Business Strategy and the Environment*. No publications exist in journals that deal with the field of business and society (e.g., *Business & Society, or Journal of Business Ethics*). The intersection has so far been researched predominantly in the environmental management literature.

The focal areas of the industries covered in the sample are diverse and address, in most instances, food and agriculture, textiles and fashion, or three or more industries at a time. The diversity of industries covered by the sample points to the potential for stakeholder engagement research in CE that can cross-validate findings from different contexts and explore new CE-industry contexts to complement and refine more generalisable findings.

The CE phenomena most prominently studied in the sample are supply chain management and circular business model (transformation). However, a comprehensive stakeholder engagement perspective that addresses the dynamics and interconnectedness of stakeholder interactions in CE is lacking.

Stakeholder Engagement Patterns in CE

From our sample we coded 122 stakeholder engagement activities and, where available, the related stakeholder engagement aims and impacts. Our analysis illustrates that stakeholder engagement patterns can be identified across the industries or CE phenomena addressed by stakeholder networks.

Most of the articles in the sample implicitly address stakeholder engagement; they deal with stakeholder interaction yet neither define this nor the stakeholder engagement construct. By applying a rigorous coding process we identified 24 categories of stakeholder engagement contents in relation to CE. Table 3.2 illustrates the categorisation that resulted from our literature review, as discussed in the following sections.

Table 3.2 Stakeholder engagement contents and components associated with CE

		Stakeholder engagement components		
		Moral	Strategic	Pragmatic
Stakeholder engagement contents	Aims	• Legitimising CE • Creating CE-positive mindsets and behaviour	• Enhancing corporate performance • Implementing CE • Aligning and supporting stakeholders to implement CE	• Increasing awareness and acceptance of CE • Establishing reciprocal and durable stakeholder relationships • Addressing sustainability concerns collaboratively
	Activities	• Creating shared values and CE-positive attitudes	• Accessing the resources required for a functioning CE • Orchestrating key stakeholder interactions • Innovating value-creation processes	• Awareness-raising and informing about CE and environmental responsibility • Examining relationships in circular stakeholder networks • Activating stakeholder participation • Strengthening/aligning stakeholders' CE expertise, capabilities, and relationships

(continued)

Table 3.2 (continued)

	Stakeholder engagement components		
	Moral	Strategic	Pragmatic
Impacts	• Common value approach that is implemented • Enhanced trust and sense of belonging	• Enhanced economic corporate performance • Strengthened sustainability performance	• Increased CE/environmental awareness and attitudes • Improvements in the quality of stakeholder relationships • Increased involvement of circular stakeholder network members • Co-created shared stakeholder value

Adapted from Kujala et al. (2022)

Moral Stakeholder Engagement

Aims. The moral aims of stakeholder engagement can include legitimate, trustful, fair, responsible, respectful, or sustainability-oriented stakeholder interaction; i.e., stakeholder engagement that aims at fostering morally desirable outcomes through a focus on stakeholder relationships (Kujala et al., 2022). Our analysis identified that moral stakeholder engagement aims in CE emphasise legitimising CE through active stakeholder involvement and creating the desired attitudes based on moral claims.

Stakeholder engagement that aims at *legitimising* CE refers to encouraging stakeholders to adopt common sustainability norms and behaviours that drive CE (e.g., recycling, or compensating negative externalities) (Brown & Bajada, 2018). Stakeholder interactions that actively involve incorporating stakeholders' needs and interests into CE activities can be aimed at increasing the legitimacy of CE (Massaro et al., 2021).

In addition, stakeholder engagement in CE aims at *creating CE-positive mindsets and behaviour*. Changing mindsets regarding the value of waste and effective responses to environmental challenges is a morally desirable goal of stakeholder interactions in CE (Zucchella & Previtali, 2019). These interactions further aim at triggering stakeholders' motivation to engage in CE for moral purposes, thus going beyond appeals to economic interests (Ki et al., 2021). Stakeholder interactions aimed at moving beyond a linear economic system can be a starting point for inducing CE-positive behavioural change through stakeholder engagement activities (Govindan & Hasanagic, 2018).

Activities. Moral stakeholder engagement activities are inclusive and focus on creating societally beneficial long-term partnerships (Kujala et al., 2022). Moral activities include considering stakeholders' interests, needs, and capabilities, empowering stakeholders, or taking into account silent and non-visible stakeholders (Kujala et al., 2022). Our analysis illustrates that moral stakeholder engagement activities in CE embrace *creating shared values and CE-positive attitudes*, emphasising the need for aligned stakeholder network values such as trust in addressing environmental challenges.

Creating shared social and environmental values among circular stakeholder networks is deemed a necessary collective activity for strengthening stakeholder collaboration. The risk of opportunistic stakeholder behaviour, which is high in CE due to the usually large number of heterogeneous stakeholders that are involved, can be reduced by the existence of shared values within circular stakeholder networks (Gandolfo & Lupi, 2021; Moggi & Dameri, 2021). Fostering positive individual and organisational attitudes and behaviours towards sustainability practices (e.g., recycling, repairing, or sharing products) can improve stakeholder collaboration in CE (Brown & Bajada, 2018; Ki et al., 2021). Essential characteristics of sustainable CE include trust, which stakeholders optimally create through consensus on what a CE network constitutes (Kazancoglu et al., 2021; Rajala et al., 2018).

Values and attitudes in circular stakeholder networks need to be aligned among stakeholders. This alignment implies a change in organisational culture (e.g., self-identity, operational logic) and the collaborative creation of a shared vision (Frishammar & Parida, 2019; Kazancoglu et al., 2021; Saha et al., 2021). For instance, the transformational leadership of circular stakeholder network orchestrators can disrupt long-held beliefs and mental schemes about the linear economy that contradict CE principles (Zucchella & Previtali, 2019). In addition, stakeholders who are willing to join a CE network are optimally motivated to show commitment and align with the network's values based on moral grounds (Moggi & Dameri, 2021). Consequently, beliefs about moral responsibility may lead stakeholders to rethink their value propositions and strategic goals, contributing to more effective CE (Ki et al., 2021; Moggi & Dameri, 2021).

Impacts. Moral stakeholder engagement impacts are related to strengthened stakeholder relationships and include enhanced shared responsibility, goodwill, trust, or fairness (Kujala et al., 2022). Moral impacts can consist of increased stakeholder value, social and environmental well-being, and giving voice to stakeholders (Kujala et al., 2022). We identified that moral stakeholder engagement impacts in CE emphasise enhanced stakeholder value creation through shared values and

strengthened bonds between stakeholders which safeguard circular stakeholder networks' morally grounded interest in addressing environmental and societal challenges.

A common value approach that is implemented across circular stakeholder networks, or a shared value-based vision, enhances stakeholder value creation (Gandolfo & Lupi, 2021; Moggi & Dameri, 2021). For instance, sourcing and building new partnerships based on social and environmental values can replace a linear customer-value-creation approach based on "best cost sourcing and pricing" and result in sustainable stakeholder value creation (Gandolfo & Lupi, 2021, p. 3304). Such a value-based approach can increase stakeholders' environmental consciousness (Zucchella & Previtali, 2019).

Enhanced trust and sense of belonging within circular stakeholder networks due to moral stakeholder engagement can strengthen the bonds between stakeholders and reinforce the network's boundaries (Moggi & Dameri, 2021; Zucchella & Previtali, 2019). For instance, Moggi and Dameri (2021) illustrate how a "shell-like" defence composed of inherent network interests pursued by all, including new members, strengthens stakeholders' sense of belonging to a CE network.

Strategic Stakeholder Engagement

Aims. Strategic stakeholder engagement aims relate to corporate performance-enhancing goals such as improving firm reputation and value creation, or safeguarding an organisation's economic survival (Kujala et al., 2022). Based on our findings, CE-related strategic stakeholder engagement aims emphasise improving environmental and economic performance through joint CE implementation based on coordinated and aligned stakeholder interests.

Enhancing corporate performance in CE includes the goal of jointly creating more effective production processes through strengthening professionalism and coordination across the circular stakeholder network (Batista et al., 2019). Stakeholder interactions that aim at accessing critical tangible and intangible resources as well as enhancing material resource and recycling value through circular innovation adoption can

contribute to improved corporate environmental and economic performance (Batista et al., 2019; Govindan & Hasanagic, 2018; Kazancoglu et al., 2021; Saha et al., 2021).

The strategic aim of *implementing CE* through stakeholder engagement encompasses the joint implementation of the CE principles (i.e., narrowing, slowing, and closing the loop) and ensuring an effective transition to CE through coordinating stakeholder value-creation processes (Aslam et al., 2020; Frishammar & Parida, 2019; Kazancoglu et al., 2021). The goal of promoting the growth of circular stakeholder networks goes hand in hand with that of increasing strategic advantages through joint CE implementation (Awan et al., 2021; Batista et al., 2019; Moggi & Dameri, 2021).

The aim of *aligning and supporting stakeholders to implement CE* through stakeholder engagement involves facilitating and developing collaboration between, and supporting, key stakeholders within and beyond industrial boundaries (Batista et al., 2019; Kazancoglu et al., 2021). The alignment of stakeholders through managing complementarities between CE network members allows for effective CE implementation (Zucchella & Previtali, 2019). A functional CE can be achieved through stakeholder engagement that is designed to reduce the likelihood of opportunistic stakeholder behaviour through aligned incentives across the circular stakeholder network (Frishammar & Parida, 2019).

Activities. Strategic stakeholder engagement activities focus on enhancing firm-centric outcomes. Such activities can include building top management's commitment to stakeholder engagement or informing stakeholders based on a firm-centric view (Kujala et al., 2022). Our analysis shows that strategic stakeholder engagement activities in CE embrace interactions associated with sharing stakeholder networks and optimising CE outcomes through network orchestration and joint innovation processes.

Accessing the resources required for a functioning CE is essential in circular stakeholder networks. In CE, stakeholders share and pool (in-) tangible resources and human capital within the CE network, such as infrastructure, technology, staff, data, or knowledge (Batista et al., 2019;

Brown & Bajada, 2018; Massaro et al., 2021; Moggi & Dameri, 2021; Rajala et al., 2018; Saha et al., 2021; Zucchella & Previtali, 2019). For instance, stakeholders acquire and share their expertise about circular value-creation processes and environmental sustainability management through CE-based skill training, mutual learning, and information-exchange events within coordinated stakeholder networks (Aslam et al., 2020; Farooque et al., 2019; Frishammar & Parida, 2019; Moggi & Dameri, 2021; Saha et al., 2021).

Stakeholders taking the role of orchestrators of circular stakeholder networks (*orchestrating key stakeholder interactions*) is defined as a relevant strategic activity. Orchestrators who balance individual stakeholders' needs with those of the entire stakeholder network can increase engagement and joint decision-making among network members (Batista et al., 2019; Moggi & Dameri, 2021; Zucchella & Previtali, 2019). Balancing stakeholder needs requires identifying, examining, and actively considering stakeholders' needs and roles in value-creation processes (Frishammar & Parida, 2019; Kortmann & Piller, 2016). Network orchestrators can actively bring stakeholders together and facilitate durable collaboration by sharing a vision across the CE network or acting as innovation champions (Zucchella & Previtali, 2019).

Innovating value-creation processes in CE as a form of joint stakeholder activity optimises stakeholder interactions and outcomes across the stakeholder network (Gandolfo & Lupi, 2021; Rajala et al., 2018). Stakeholder interactions can enhance a circular stakeholder network's value-creation, -delivery, and -capture processes through jointly innovated circular business models (Frishammar & Parida, 2019; Kazancoglu et al., 2021). For instance, integrating Industry 4.0 mechanisms such as the Internet of Things (IoT) into value-creation processes enables the creation of hyperconnected stakeholder networks that contain real-time information about value creation, delivery, and capture (Awan et al., 2021).

Impacts. The impacts of strategic stakeholder engagement focus on firm performance and include enhanced (eco-)efficiency, competitive advantage, innovation outcomes, reputation, and corporate autonomy (Kujala et al., 2022). In circular stakeholder networks, we identify that strategic stakeholder engagement impacts embrace greater efficiency and an increase in the effectiveness of value-creation processes, both economic and environmental, and better environmental performance through eco-innovation.

Enhanced economic corporate performance results from strengthened stakeholder engagement in circular stakeholder networks. This stakeholder engagement can result in more efficient and effective circular stakeholder network processes (e.g., increased innovation outputs) and hence increase competitive advantage (Alonso-Almeida et al., 2020; Awan et al., 2021; Kortmann & Piller, 2016; Moggi & Dameri, 2021; Zucchella & Previtali, 2019). For instance, continuous information exchange about production processes can improve stakeholders' understanding of how to optimise circular resource flows (Awan et al., 2021; Farooque et al., 2019; Massaro et al., 2021).

Furthermore, enhanced stakeholder engagement can lead to *strengthened sustainability performance* within circular stakeholder networks. Durable stakeholder interactions increase flows of recovered resources in value-creation processes, hence reduce waste and contribute to resource value maximisation (Awan et al., 2021; Batista et al., 2019; Brown & Bajada, 2018; Gandolfo & Lupi, 2021; Saha et al., 2021). Additionally, joint stakeholder value creation in CE can result in innovative sustainable solutions with a positive impact on the natural environment (Batista et al., 2019; Massaro et al., 2021). Finally, frequent stakeholder interactions ensure that environmental performance goals are met and optimised across the stakeholder network (Aslam et al., 2020; Kazancoglu et al., 2021; Massaro et al., 2021).

Pragmatic Stakeholder Engagement

Aims. Pragmatic stakeholder engagement aims include strengthening stakeholder relationships through enhanced collaboration, dialogue, or knowledge co-creation. Further, pragmatic stakeholder engagement seeks to achieve societal change through collaborative problem-solving (Kujala et al., 2022). Our research shows that the aims of pragmatic stakeholder engagement in CE highlight that sustainability concerns are best addressed collaboratively based on the motivation of capturing the synergies inherent in stakeholder networks.

The aim of *increasing awareness and acceptance of CE* embraces raising awareness of and sustaining long-term interest in CE and its principles. This ensures more proactive stakeholder behaviour regarding CE that collaboratively addresses environmental challenges (Batista et al., 2019; Farooque et al., 2019; Kazancoglu et al., 2021). Pragmatic stakeholder engagement in CE seeks to educate and actively engage stakeholders through building knowledge about CE and environmental challenges (Alonso-Almeida et al., 2020; Batista et al., 2019; Gandolfo & Lupi, 2021). It aims at "greening" corporate behaviour by overcoming misunderstandings about CE and related activities (Gandolfo & Lupi, 2021; Govindan & Hasanagic, 2018; Moggi & Dameri, 2021).

Moreover, pragmatic stakeholder engagement in CE aims at *establishing reciprocal and durable stakeholder relationships* (Gandolfo & Lupi, 2021; Kazancoglu et al., 2021). Therefore, stakeholder interactions in CE may seek to create positive synergies between stakeholders by bringing together their effort, skills, knowledge, and expertise in stakeholder value creation (Batista et al., 2019; Kortmann & Piller, 2016; Moggi & Dameri, 2021). Further, pragmatic stakeholder engagement seeks to increase alignment between differing stakeholder goals through active stakeholder involvement (incl. learning processes) in CE activities (Awan et al., 2021; Moggi & Dameri, 2021; Rajala et al., 2018). Finally, reciprocal stakeholder relationships depend on stakeholder engagement that seeks to build trust and enhance commitment within circular stakeholder networks to increase the potential of shared benefits (Gandolfo & Lupi, 2021; Rajala et al., 2018).

The aim of *addressing sustainability concerns collaboratively* entails shifting stakeholder engagement towards value co-creation activities through sometimes complex value-creation processes in CE (Awan et al., 2021). These pragmatic value co-creation activities are aimed at solving environmental, social, and economic problems through stakeholder collaboration (Brown & Bajada, 2018; Moggi & Dameri, 2021).

Activities. Pragmatic stakeholder engagement activities incorporate wider stakeholder interests by co-creating value, learning with and from stakeholders, and collaboratively tackling social and environmental challenges, among other ways (Kujala et al., 2022). Our results illustrate that pragmatic stakeholder engagement activities in CE embrace sensitising stakeholders to CE and identifying and complementing their strengths and resources in a proactive and aligned collaboration environment.

Awareness-raising and informing about CE and environmental responsibility through clear, credible, and relevant information that is accessible to all stakeholders is key to ensuring sustainable CE outcomes (Alonso-Almeida et al., 2020; Batista et al., 2019). Openly sharing information and results within the stakeholder network and beyond can foster stakeholder engagement through increasing transparency, trust, CE-relevant knowledge, and commitment to collaboration (Kazancoglu et al., 2021; Ki et al., 2021; Moggi & Dameri, 2021). Informing stakeholders about values linked to sustainability and respect for the natural environment allows prejudices about circular products to be countered, such as the perception of the lower quality of products made out of recycled material (Gandolfo & Lupi, 2021). Public communication campaigns, CE product labels, conferences, and education programmes are channels for increasing stakeholders' CE awareness and knowledge (Alonso-Almeida et al., 2020; Batista et al., 2019; Farooque et al., 2019; Govindan & Hasanagic, 2018; Kazancoglu et al., 2021).

Examining relationships in circular stakeholder networks includes identifying, understanding, and managing stakeholders and their interests, expectations, behaviours, roles, and power across the network (Awan et al., 2021; Massaro et al., 2021; Moggi & Dameri, 2021). Scrutiny of these dynamics allows stakeholder value-creation processes to be adopted by identifying key stakeholders and complementarities between stakeholders (Batista et al., 2019; Moggi & Dameri, 2021; Zucchella & Previtali, 2019). For instance, understanding the role of the orchestrators of circular stakeholder networks in facilitating stakeholder interaction can enhance mutual stakeholder value creation through increasing coordination and participation within circular stakeholder networks (Zucchella & Previtali, 2019).

Activating stakeholder participation in a proactive environment of engagement and collaboration in CE enables sustainable value co-creation for the stakeholder network and its members (Chiappetta Jabbour et al., 2020; Gandolfo & Lupi, 2021; Massaro et al., 2021; Zucchella & Previtali, 2019). Participative governance models in stakeholder networks (e.g., democratic governance bodies, incl. local communities) facilitate stakeholder participation in CE (Massaro et al., 2021; Moggi & Dameri, 2021). Incentivising stakeholders through "hard" aligned institutional initiatives (e.g., tax deductions or subsidies) or formal awards can ensure effective stakeholder participation too (Alonso-Almeida et al., 2020; Batista et al., 2019; Farooque et al., 2019; Frishammar & Parida, 2019; Moggi & Dameri, 2021). Ensuring the balanced distribution of profits, provision of technical support (e.g., recycling infrastructure), or collaboration platforms (e.g., innovation spaces that include competitors) may further incentivise participation in circular stakeholder networks (Awan et al., 2021; Kazancoglu et al., 2021; Kortmann & Piller, 2016).

Finally, *strengthening and/or aligning stakeholders' CE expertise, capabilities, and relationships* ensures durable stakeholder interaction for sustainable stakeholder value creation. Implementing an open communication culture within circular stakeholder networks (e.g., transparently communicating roles and responsibilities) sustains relationships and

creates trust and confidence among stakeholders through increasing transparency (Chiappetta Jabbour et al., 2020; Kazancoglu et al., 2021; Rajala et al., 2018; Zucchella & Previtali, 2019). Collectively creating circular solutions requires acquiring CE expertise and capabilities that can be developed or strengthened through multi-stakeholder engagement (Awan et al., 2021; Batista et al., 2019). Multi-stakeholder platforms serve as a starting point for building partnerships based on stakeholders' strengths and knowledge and for developing new value propositions that leverage mutually shared benefits across the stakeholder network (Batista et al., 2019; Gandolfo & Lupi, 2021).

Impacts. Pragmatic stakeholder engagement impacts may involve wider social and environmental benefits, the existence of a legitimated and shared vision among stakeholders, or the organisational justification of values, norms, and objectives (Kujala et al., 2022). Based on our analysis, pragmatic stakeholder engagement impacts in CE include an increase in stakeholder sensitivity to sustainability issues and an enhanced effectiveness of stakeholder interactions in proactive engagement environments, resulting in mutually beneficial stakeholder value co-creation.

Increased CE and/or environmental awareness and attitudes can result from stakeholder interactions within circular stakeholder networks that pursue the CE principles of striving for environmentally friendly production and consumption (Farooque et al., 2019; Kazancoglu et al., 2021; Moggi & Dameri, 2021). For instance, stakeholder engagement in CE can positively impact sensitivity concerning CE, respect for the natural environment, broader sustainability issues (e.g., the social need for a transition to a low-carbon world), and conscious consumption (Gandolfo & Lupi, 2021; Govindan & Hasanagic, 2018; Kazancoglu et al., 2021; Massaro et al., 2021). Consequently, stakeholders' acceptance of and positive attitudes towards circular solutions are strengthened; thus, the transition from linear towards circular production and consumption behaviour accelerates (Alonso-Almeida et al., 2020; Ki et al., 2021).

Moreover, *improvements in the quality of stakeholder relationships* result from mutually beneficial interactions within circular stakeholder

networks. Stakeholder relationships in CE can lead to enhanced communication and information exchange, reduced information asymmetry, and an increase in the understanding of circular stakeholder network contexts and needs (Kortmann & Piller, 2016; Moggi & Dameri, 2021; Zucchella & Previtali, 2019). Stakeholder network success, through the involvement of heterogeneous stakeholders (e.g., consumers) in stakeholder value-creation activities, enhances stakeholder interconnectedness and commitment, relationship-building, and stakeholder alignment within the network, and fosters the circular stakeholder network's operational legitimacy (Frishammar & Parida, 2019; Ki et al., 2021; Massaro et al., 2021; Rajala et al., 2018; Zucchella & Previtali, 2019).

The *increased involvement of circular stakeholder network members* that results from stakeholder engagement boosts successful CE adoption due to the nature of the CE principles (e.g., recycling, sharing, remanufacturing) (Chiappetta Jabbour et al., 2020; Zucchella & Previtali, 2019). Producing and consuming within the planetary boundaries by implementing CE requires a critical mass of participating stakeholders (Zucchella & Previtali, 2019). For instance, CE works effectively if consumers support it as "working consumers" who actively contribute to stakeholder value co-creation (Alonso-Almeida et al., 2020; Kortmann & Piller, 2016; Massaro et al., 2021).

Co-created shared stakeholder value in CE can result from complex, intertwined stakeholder relationships that pursue a mutual value-creation approach (Awan et al., 2021; Gandolfo & Lupi, 2021; Moggi & Dameri, 2021). Such stakeholder relationships take advantage of complementary activities within the circular stakeholder network to maximise co-created stakeholder value (Brown & Bajada, 2018; Kazancoglu et al., 2021). This mutually beneficial stakeholder value can result in long-term collaboration, safeguarding access to resources, circular business legitimacy, and hence sustainable and resilient business activity (Moggi & Dameri, 2021).

Discussion

Our findings emphasise the complexity and diversity of stakeholder interactions in CE. They reveal CE to be a dynamic and collaborative business environment (Gandolfo & Lupi, 2021; Zucchella & Previtali, 2019). The nature of this environment illustrates that societal grand challenges, such as the degradation of the natural environment, cannot be addressed in isolation and without coordination (George et al., 2016) but instead require heterogeneous stakeholders organised in networks. Sustainability transitions in the context of CE require stakeholders' shared responsibility and commitment to stakeholder engagement for stakeholder value co-creation (Govindan & Hasanagic, 2018; Gupta et al., 2019).

Our research shows that the stakeholder engagement lens (Kujala et al., 2022), which focuses on the components and contents of stakeholder engagement, is useful for analysing stakeholder interactions in CE. This analytical lens enabled us to derive the specificities of moral, pragmatic, and strategic stakeholder engagement in CE by classifying its aims, activities, and impacts. The emphasis on the latter is balanced in relation to the respective stakeholder engagement components. This may result from our focus on first identifying stakeholder engagement activities before analysing the related aims and impacts. Overall, our findings illustrate that management research on CE emphasises pragmatic and, to a lesser degree, strategic and moral stakeholder engagement. We interpret this finding as a consequence of the predominantly practitioner-led CE concept that has entered the management discipline (e.g., Ellen MacArthur Foundation, 2013; Stahel, 2019).

Based on our analysis, moral stakeholder engagement in CE is driven by aligned stakeholder network values and CE-positive attitudes. These values and attitudes are characterised by stakeholder interactions that decrease opportunistic behaviour and pursue shared sustainability norms based on moral claims. These interactions correspond with a moral stakeholder culture that involves treating all affected stakeholders with an attitude of "genuine 'care'" (Jones et al., 2007, p. 149). Shared sustainability norms, including the CE principles of narrowing, slowing, and

closing resource and energy loops, legitimate interactions aimed at co-creating stakeholder value in CE and can result in the strengthening of bonds between stakeholders. The stakeholder literature claims that communal sharing among stakeholders results in a close relationship capability (Jones et al., 2018).

Strategic stakeholder engagement in CE emphasises the innovative character of circular stakeholder networks (Geissdoerfer et al., 2017) and how stakeholders benefit from it. This kind of stakeholder engagement involves improvements in economic and environmental corporate performance as an outcome of a sustainable CE that fosters environmentally friendly and efficient production and consumption. Maximising resource value and producing innovative sustainable solutions, such as eco-innovation, depend on sharing and pooling resources within orchestrated circular stakeholder networks. These insights resonate with the sustainable business model literature that investigates which types of business models contribute to sustainable value creation, and how new partners in business networks are engaged (Ciulli & Kolk, 2019).

Pragmatic stakeholder engagement in CE activates inclusive stakeholder participation and emphasises the need to coordinate synergies in stakeholder networks, pointing to the relevance of leadership in addressing sustainability concerns. To address environmental challenges, stakeholder participation is activated through awareness-raising and promoting acceptance of CE, thus fostering environmental responsibility in human activity. Proactive and aligned collaboration environments ensure the effectiveness of stakeholder interactions organised in networks. The inclusiveness of various stakeholder interests around socioeconomic issues is known to foster collaborative and effective solutions (Jolibert & Wesselink, 2012; Kujala et al., 2022).

Theoretical Implications

The CE concept lacks a theoretical underpinning that explains stakeholder network interactions. Hence, our analysis, which applies stakeholder theory to assess stakeholder engagement in CE, contributes to scholars' efforts to ground the CE concept theoretically (Corvellec et al.,

2022; Korhonen, Nuur et al., 2018). Theoretically underpinning CE with one of the most well-established theories in management research, applied to the study of how stakeholders can collaboratively address sustainability challenges (Post et al., 2002; Schaltegger et al., 2019), also has implications for stakeholder theory itself.

Stakeholder theory has predominantly been based on a linear economy logic (e.g., Bundy et al., 2013; Jones et al., 2018) and has been criticised by numerous scholars for its environmental limitations (e.g., Clifton & Amran, 2011; Driscoll & Starik, 2004; Haigh & Griffiths, 2009). Applying stakeholder theory in the context of CE provides insights into stakeholder interactions for sustainable value creation, especially from a corporate environmental sustainability perspective, following the call of scholars to embrace environmental issues in stakeholder engagement (Hörisch et al., 2020; Schaltegger et al., 2019). This application may create the basis for a stakeholder theory that embraces the concept of the planetary boundaries by considering the values and needs of the natural environment and its constituents to collaboratively tackle environmental challenges.

In addition, our findings enhance the stakeholder network logic entailed in CE. This logic embraces stakeholder relationships as facilitating collaborative stakeholder value creation, including innovative solutions, around specific issues (Freeman et al., 2010, 2017; Post et al., 2002; Schneider & Sachs, 2017). For instance, shared norms, values, and aims increase relational trust and enhance internal network legitimacy, facilitating the sharing of resources and capabilities among stakeholders (Jones et al., 2018; Rühli et al., 2017). Our analysis illustrates the relevance of differentiating stakeholder engagement aims, activities, and impacts in stakeholder networks to account for the complexity of stakeholder engagement understood as a means of sustainable stakeholder value creation. Further, making sense of the stakeholder network logic in CE helps with moving beyond a linear economy approach (e.g., Priem et al., 2013; Schneider & Sachs, 2017) towards circular economy thinking.

Managerial Implications

Two managerial implications result from our research on stakeholder engagement in CE. First, we provide an overview for CE managers on stakeholder engagement that helps address the activities that contribute to sustainable CE and the related aims and impacts in a coordinated way. Coordinated stakeholder engagement in participative circular stakeholder networks avoids impairing CE system efficiency due to weak links among stakeholders in the resource loops (Gupta et al., 2019; Moggi & Dameri, 2021; Sauvé et al., 2016). Consequently, value is created for the network as a whole, including its stakeholders (Freudenreich et al., 2020; Moggi & Dameri, 2021). Depending on the situation and configuration of a CE business and its stakeholder network, managers can rely on one or a combination of the three stakeholder engagement components presented in our overview. The components can further help managers identify stakeholders' overall orientation towards stakeholder engagement in CE to balance synergies (Tantalo & Priem, 2016).

Second, by applying the underlying stakeholder network logic of our findings, managers can identify the often complex interrelations of stakeholder relationships in CE (Gupta et al., 2019; Manninen et al., 2018; Zucchella & Previtali, 2019). To leverage stakeholder engagement's effectiveness, managers and stakeholders need to consider the CE business as a stakeholder network. Diffusing the stakeholder network logic among stakeholders may increase their awareness of the shared benefits of coordination, network synergies, and durable stakeholder relationships based on trust, shared values, and reciprocity (Tapaninaho & Kujala, 2019).

Research Agenda

The stakeholder engagement construct in CE creates ample ground for future research. First, our results illustrate the positive connotations of addressing stakeholder engagement in CE in management research, as shown by the CE-related stakeholder engagement impacts, as discussed above. In contrast, knowledge of how stakeholder interactions may be misused in (disguised) opportunistic behaviour is equally relevant for

ensuring sustainable CE by preventing stakeholder value from being reduced. Analysing the "dark side" of stakeholder engagement in CE would help overcome the lack of research on managing conflicting stakeholder relationships within CE (Gandolfo & Lupi, 2021).

Second, the analysis of the identified stakeholder engagement patterns' underlying value perspectives, ranging from single-value perspectives (e.g., the ecocentric or economic perspective) to a multiple-value perspective that embraces environmental, social, and economic value (Tapaninaho & Kujala, 2019), deserves additional research. We especially encourage further research to consider ecocentric ethics to explore the underlying value perspectives of stakeholder engagement in circular stakeholder networks. The ecocentric perspective assumes that nature has intrinsic value "independent of human values and human consciousness" (Gladwin et al., 1995, p. 886). Analysis of this perspective may not only reveal to what degree CE underlies the ecocentric paradigm, as claimed by some scholars (e.g., Desing et al., 2020; Prieto-Sandoval et al., 2018), but also if and how the latter can contribute to addressing environmental challenges through circular stakeholder networks.

Third, our analysis points to the multiple-value perspective embodied in stakeholder engagement in CE, mainly illustrated by the resulting environmental and economic value. This perspective implies a broad understanding of stakeholders. It follows scholars' calls to recognise nonhuman nature stakeholders as they can influence organisations' actions and outcomes, just as human stakeholders can (e.g., Driscoll & Starik, 2004; Haigh & Griffiths, 2009; Kortetmäki et al., 2022; Kujala & Sachs, 2019; Waddock, 2011). However, our findings point to a lack of understanding of the role of the natural environment in stakeholder engagement in CE. We propose following Kujala and colleagues' (2022) call to include nonhuman nature stakeholders in stakeholder engagement in future research. CE is a relevant context for studying these stakeholders as circular stakeholder networks aim at sustaining the natural environment (i.e., minimising primary resource use, restoring the natural environment, or regenerating natural resources) and meeting related needs (i.e., sustaining human activity within the planetary boundaries) (Desing et al., 2020; Sauvé et al., 2016; Suárez-Eiroa et al., 2019).

Hence, explorative research may provide insight into how circular stakeholder networks (can) include nature as (a) nonhuman stakeholder when addressing environmental challenges.

Ultimately, we draw our insights from a small sample of top-tier journal articles at the intersection of stakeholder engagement and management research in CE. Later research may refine and validate our categorisation of stakeholder engagement in CE by systematically analysing practice-oriented CE literature (e.g., Lacy et al., 2020; Stahel, 2019) that implicitly or explicitly addresses stakeholder engagement. In addition, our chapter provides a starting point for case-study analyses of specific CE phenomena that involve studying stakeholder relationships in circular stakeholder networks comprehensively. Such research may apply a processual perspective to refine our stakeholder engagement categorisation.

Conclusion

Understanding stakeholder interactions within circular stakeholder networks is essential for creating sustainable production and consumption systems that help counter the degradation of the natural environment. Our literature review contributes to untangling the complexity of these interactions by categorising 24 contents of stakeholder engagement in CE according to their underlying components. Although pragmatic stakeholder engagement dominates our sample, researchers and managers should also assess circular stakeholder networks' moral and strategic stakeholder engagement to leverage stakeholder relationship synergies. The identified stakeholder engagement patterns emphasise the underlying stakeholder network logic and facilitate the identification of complex stakeholder interrelations in CE. Based on our findings, we call for explorative research that further clarifies the stakeholder engagement construct in CE and helps develop stakeholder theory that embraces the planetary boundaries. Further expanding the knowledge of stakeholder engagement in CE will support the process of shaping and optimising the aims, interactions, and outcomes of circular stakeholder

networks: namely, collaboratively addressing societal grand challenges such as climate change and biodiversity loss.

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4

Developing Sustainable Partnerships for Circular Economies: A Literature Review

Philippe Eiselein, Wim Keygnaert, and Karen Brabant

Introduction

To move towards more sustainable societies by 2050 (European Commission, 2019), there is a need for systemic innovation that allows organisations to evolve from linear to circular models (Anttonen et al., 2018). However, organisations often need to enter into partnerships to respond to their challenges and solve deeply ingrained societal issues, often referred to as wicked problems (Weber & Khademian, 2008). Due to technological and economic developments, it has become easier to engage with other stakeholders (Held, 2006), yet it is still unclear how to do this in activities related to circular economies (CEs). A circular economy (CE) represents a timely opportunity for a business to

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question its current mainstream, linear economic "take-make-consume-waste" approach (Niero & Rivera, 2018). This approach has been recognised as unsustainable from at least three different perspectives. First, it depletes limited, natural resources and pollutes the environment (Masi et al., 2017). Second, it strains a company operationally and financially (Ghisellini et al., 2016). And third, there is a growing awareness and expectation from various stakeholders who are increasingly putting pressure on businesses to take up their social and environmental responsibilities (Lieder & Rashid, 2016).

The CE has been identified as a promising approach to establishing more sustainable societies (Kirchherr et al., 2017). Essentially, the CE encourages closed flows or loops of materials (Yuan et al., 2008), recycling materials, superior design of products, systems, and business models (Hobson, 2016), and a system of interconnected stakeholders (Ellen MacArthur Foundation, 2012). The latter aspect requires specific attention to stakeholder relationships. As Mhatre et al. (2021, p. 199) pointed out, more research is needed to understand the "impact of stakeholder collaboration on the circular economy", which raises the need to better understand cross-sectoral relationships surrounding CEs (Galvao et al., 2019). Because of the relevance and potential that the CE represents, Brown et al. (2021) have also called for more research on collaborations, alliances, or partnerships amongst different stakeholders.

Through this literature review, we want to better understand how stakeholder engagement—i.e., "the activities and impacts of stakeholder relations in a moral, strategic or pragmatic manner" (Kujala et al., 2022, p. 1139)—may take place when stakeholders seek partners to address sustainability challenges. As different individuals, organisations, or groups may influence one another (Freeman, 1984), their activities are crucial in terms of strategies (Ramus & Vaccaro, 2017), as well as knowledge and innovation development (Mitchell et al., 2022). Stakeholders developing partnerships fit within the broader notion of stakeholder engagement (Sloan & Oliver, 2013). Therefore, we aim to answer the following research question: *How are sustainable partnerships developed for circular economies?*

We adopt the theoretical lens of the quintuple helix model (QHM) (Carayannis et al., 2021a), because it focuses on sustainability challenges,

and it provides a comprehensive understanding of university–industry–government–civil society relationships (within the environmental or natural boundaries of society). Bloom and Dees (2008, p. 47) explain that such an integrative framework is necessary, as the whole system of interacting "friends, foes, competitors…innocent bystanders…laws, policies, social norms, demographic trends, cultural institutions" needs to be understood if a societal change is to be substantiated.

Based on an inductive approach (Onwuegbuzie et al., 2012), we carry out a literature review and develop a clover model based on three building blocks that are important for developing sustainable partnerships within a CE: vision, stakeholders, processes. Each of these building blocks relies on various enabling mechanisms, i.e., fundamental elements needed for specific activities and impacts, for stakeholders to engage with one another. The building block "vision" relies on enablers such as stewardship philosophy, motivational drivers, and circular principles. The building block "stakeholders" relies on enablers such as role stipulations, partner activities, and partner capacities. The building block "process" relies on enablers such as procedural phases, managerial tools, and governance methods.

The literature also discusses a multitude of obstacles that may affect one or more building blocks. We discuss both the enablers and obstacles stakeholders encounter when engaging in sustainable partnerships for CEs. We respond to the recent calls for more insights into stakeholder relationships for CEs (Brown et al., 2021; Mhatre et al., 2021) by offering a more nuanced perspective of how the circular transition of society could occur.

The remainder of this chapter is structured as follows. First, we discuss partnerships in a CE, as well as the theoretical background of the QHM. Second, we present our methodological choices leading to the in-depth analyses of 59 peer-reviewed, high-impact journal articles. Third, we discuss our clover model and its underlying mechanisms and obstacles in more detail. Finally, we conclude with some discussion points, as well as managerial implications and future avenues of research.

Partnerships in a Circular Economy

The CE, which has been touted as a viable solution for more sustainable societies (Ibn-Mohammed et al., 2021), can be defined as an industrial economy that is "restorative and regenerative by intention and design, which aims to keep products, components, and materials at their highest utility and value at all times" (Ellen MacArthur Foundation, 2015, p. 7). Furthermore, the CE aims to introduce closed systems to reduce the dependency on new materials for production purposes (Genovese et al., 2017). As such, CE industries tend to focus on prolonging the life cycle of materials and goods, using fewer resources, or facilitating the development of new materials from old ones.

CE scholars traditionally focus on research and development efforts (Morawska-Jancelewicz, 2021), on training and teaching, on developing new technologies or companies, or on their third mission (Peris-Ortiz et al., 2016). Conversely, governments are known to facilitate CE development and implementation by acting in the more traditional roles of regulators and subsidy providers (Jia et al., 2020). However, recent publications suggest that a more systematic, inclusive, or holistic approach (Nogueira et al., 2019) is required for the CE to be effectively implemented (Govindan & Hasanagic, 2018).

Cross-sector collaborations refer to the engagement between "business, government and civil society – the three main societal sectors" (Selsky & Parker, 2005, p. 849). Although cross-sectoral collaborations have been noted as essential for tackling wicked problems that the CE aims to address in the long run (Fehrer & Wieland, 2021), not all collaborations automatically focus on sustainability issues, nor are they exclusively developed and maintained for the long term. Furthermore, cross-sector collaborations may occur between two sectors, (e.g., public–private, or non-profit and for-profit), but do not explicitly refer to multiple cross-sectoral partnerships (Babiak & Thibault, 2009). For this chapter, we chose to refer to stakeholder engagement across different sectors as sustainable partnerships for three reasons. First, we refer to sustainable partnerships in the societal sense, i.e., where partnerships aim to contribute to a more sustainable society by addressing social or environmental problems (Grunwald et al., 2022). Second, we refer to

sustainable partnerships in a timely sense, where collaborations are set up for the long term. Third, we refer to sustainable partnerships in the holistic or inclusive sense, as for societal transformation to succeed and be accepted, all relevant stakeholders must be engaged (Geissdoerfer et al., 2018).

Keeping this in mind, the definition of a "partnership" given by Wood and Gray (1991, p. 11) seems to be adequate, as we can also understand a sustainable partnership as being "a process that engages a group of autonomous stakeholders interested in a problem or issue in an interactive deliberation using shared rules, norms, and structures, to share information and/or take coordinated actions". Such partnerships demonstrate different purposes, such as developing a shared vision, designing a shared strategy, opening dialogues, or negotiating settlements (Gray & Purdy, 2018). Partnerships are often based around the intentional and voluntary interactions (linking or sharing of information, resources, activities, and capabilities) between two or more organisations (and the individuals involved) to achieve a common goal or purpose that could not be achieved individually (Wood & Gray, 1991). Even though the dynamics between different stakeholders is so crucial, the CE literature lacks clear insights. This is where the theoretical perspective of the QHM contributes.

Quintuple Helix Model

The QHM is considered to be a promising interdisciplinary and transdisciplinary framework (Carayannis & Campbell, 2021) for tackling sustainability challenges through societal change, "as it ties knowledge, innovation and the environment" together in one framework (Carayannis & Campbell, 2010, p. 42). It provides a comprehensive understanding of the relationships between different stakeholders and sectors, such as academia (universities or higher education institutes), state (government), industry (business), civil societal organisations (NGOs, citizens as customers, and other media-based and culture-based public organisations), and nature (natural or environmental boundaries).

It also facilitates knowledge, innovation, internal development, sustainable competitive advantages, and sustainable development (Peris-Ortiz et al., 2016). The interconnections between stakeholders represent an innovation system that can be found at the regional or national level (Carayannis & Campbell, 2021). The core of the QHM model demonstrates that cross-sectoral collaborations are built on essentially complex interactions and evolution processes (Carayannis et al., 2021a, 2021b). As Barcellos-Paula et al. (2021, p. 2) point out, every sector is associated with a helix, which "represents a knowledge subsystem that functions as a spiral, connecting with the other systems". Such systems may thus represent political (government), economic (industry), environmental (nature), social (civil society), or educational (academia) systems, with their subsequent political, economic, environmental, social, or knowledge capital (Carayannis et al., 2012).

Peris-Ortiz et al. (2016) have illustrated that at its core, the QHM focuses on the interactions that lead to the development (also sometimes referred to as creation or production), distribution, and application of knowledge (also sometimes referred to as innovation). Often, the QHM refers to the production of knowledge and innovation, especially in the context of specific social or environmental issues. Within such a framework, the classical role of universities and higher education institutions (HEIs) are to develop knowledge (creating or producing knowledge), whilst for businesses and industries, it is to apply and use knowledge (to innovate). Nevertheless, knowledge and innovation are not solely developed within one helix (i.e., academia), but also within other helices (governments or businesses). Furthermore, the QHM is founded on the notion that different knowledge and innovation modes coexist and co-evolve, both within and across helices, and that they rely on a process of mutual cross-learning (Carayannis & Rakhmatullin, 2014). In other words, the QHM focuses on developing and applying the societal exchange and transfer of sustainability knowledge from inside one subsystem to another.

Carayannis and Campbell (2010) contextualise the development and application of knowledge by integrating the helices of civil society (media and culture, consumers, and politics) as well as the natural environment (limited natural resources and environmental considerations). They

point out that the creation of knowledge and innovation should not be detached from a societal (social and environmental) perspective. Carayannis et al. (2021a, 2021b) argue that societal problems do not just represent challenges, but also drivers for creating knowledge and innovation. Carayannis et al. (2021a, 2021b, p. 8) state that the QHM refers to a "socio-ecological transition of society, economy, and democracy". Helices may engage with one another in various ways depending on their configurations (Etzkowitz & Leydesdorff, 2000). But at the core, the quintuple helix incorporates a cooperative nature between four sectors, resulting in an open knowledge and innovation system (Galvao et al., 2019). Various stakeholders may be co-responsible for the knowledge creation, production, diffusion, and application or usage phases. This variety may result in the emergence of an overlay of communications, networks, and organisations amongst the helices.

Such overlay may be productive, but also has the potential to lead to tensions between the different helices, which the QHM not only acknowledges, but also argues, may be beneficial to the system dynamics, thriving on the "perturbations and interactions among its subsystems" (Etzkowitz & Leydesdorff, 2000, p. 119). The subsystems or helices can benefit in a setting of co-evolution where mutual learning and a positive learning interaction take place, following the rationale of sustainable development. The QHM is therefore simultaneously interdisciplinary and transdisciplinary (Carayannis & Campbell, 2011).

Methodology

To examine how sustainable partnerships are developed for circular economies, we carried out a systematic literature review. The article selection and analysis process followed a typical systematic literature review process (Tranfield et al., 2003), which involves the phases of identification, eligibility, screening, and inclusion (Fig. 4.1).

In the first phase, we developed the following search string to look for relevant articles by screening their titles, abstracts, and keywords: "*circular econ**" *OR* "*circle economy*" *OR* "*circularity*" *AND* "*partners**" *OR* "*collab**" *OR* "*cooperat**" *OR* "*cross-sect**" *OR* "*intersect**". The

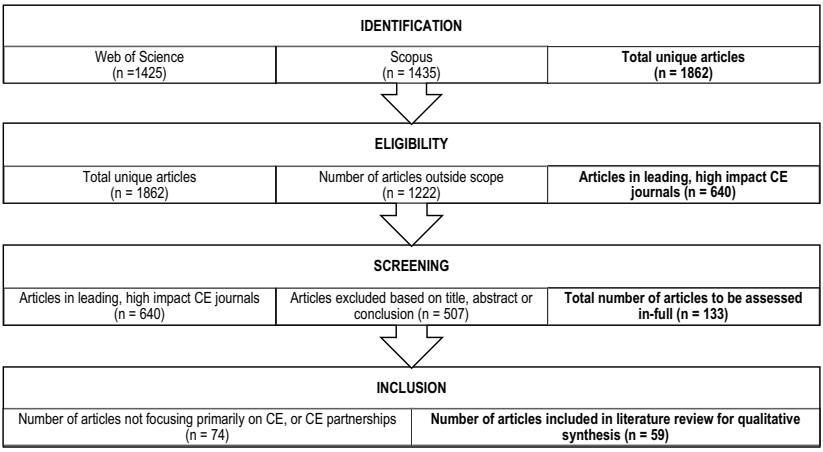

Fig. 4.1 Steps in the article selection process

term "circular economy" and its derivates, as well as "partnerships" and its derivates, were the central focus of this study, and are in line with previous literature reviews on the CE (Mhatre et al., 2021; Suchek et al., 2021). On various occasions between October 2021 and February 2022, we discussed our keyword selection with two panels comprised of academics, sustainability experts, and practitioners in the CE field. We excluded conference proceedings, books, book chapters or reviews, editorial material, trade journals, or paper reviews, as selecting peer-reviewed articles results in a considerable amount of relevant knowledge (Phillips et al., 2015). After removing duplicates, our initial literature search resulted in a total of 1862 unique articles.

In the second phase, we focused on the main CE publication channels (Sopjani et al., 2020), which include the journals of "Resources, Conservation and Recycling" (impact factor 10.204), "Journal of Cleaner Production" (with an impact factor of 9.297), and "Sustainability" (impact factor 3.251). During the peer-review sessions with the panels, experts recommended that we add the "Journal of Industrial Ecology" (impact factor 6.946) to the list of high-impact journals[1] to be screened.

[1] We considered journals as high-impact journals when they were ranked as highly regarded or better, following the Association of Business Schools Academic Journal Quality Guideline

Considering the relatively high-impact factors of all four journals, as well as the fact that 35% ($n = 640$) of all articles found during the first phase are published in these journals, they reflect the current situation in terms of theoretical and practitioner-oriented CE articles, and as such, are appropriate for this study.

In a third phase, these 640 articles were screened based on their titles, abstracts, and conclusion sections, and 133 articles were deemed to be potentially relevant. After a full-text assessment, we checked with the research team whether articles fitted within the scope of our definition and principles of sustainable partnerships, and whether these articles answered our main research question. We eventually found 59 articles fit for in-depth qualitative analysis. We excluded 74 articles that did not primarily discuss stakeholder relationships, actions, impacts, or partnerships within a CE context, or did not fit the scope of this literature review.

We used an inductive approach employing the constant comparison analysis (Onwuegbuzie et al., 2012): two co-authors first open-coded separately, then convened and discussed which keywords and concepts they attributed to 30 randomly selected papers over the course of a few weeks. This iterative refinement process continued until the coding process was crystallised, and disagreements were overcome. Once an agreement was reached, the main keywords were presented to the whole team of four researchers, and one of the authors further coded the remaining 29 articles. However, this author also frequently reconvened with the research team to discuss their findings in an iterative manner. The constant comparative analysis works by "systematically and inductively reducing source(s) to codes, then developing themes from the codes. These themes may become headings and subheadings…" (Onwuegbuzie et al., 2012, p. 12). In this manner, the literature review not only explored sub-categories (i.e., mechanisms) and categories (i.e., building blocks) for sustainable partnerships, but also the relationships

(Harzing, 2021). As such, both the "Resources, Conservation and Recycling", and "Journal of Cleaner Production" (with an impact factor of about 10) fall under the category of world elite or top journals. "Journal of Industrial Ecology" has a similar impact factor to journals that are highly regarded. The "Sustainability" journal, although having a lower impact factor score, was considered a high-impact journal because it is one of the main journal outlets for CE.

between the enablers and obstacles for sustainable partnerships within the CE. The constant comparative analysis provides a "structured process and an audit trail describing how findings moved from concrete to higher levels of abstraction" (Quick et al., 2003, p. 817). By continuously coding and categorising findings, we were able to illustrate what is currently known about the development of sustainable partnerships in CEs.

Results

This literature review presents three interconnected building blocks with nine underlying enabling mechanisms, as well as obstacles acting as interwoven mechanisms, that may influence the development of sustainable partnerships for CEs. Understanding not only what stimulates, but also what hinders sustainable partnerships, may contribute to developing adequate policy, strategy, and action recommendations for stakeholders within the quintuple framework. Figure 4.2 represents the combination of stimulating and hindering mechanisms (obstacles) that are identified in the literature.

Building Blocks for Developing Sustainability Partnerships for Circular Economies

Vision

Vision as a building block refers to the shared mindset or approach needed to achieve the long-term objectives for the CE that are common to all stakeholder partners. This building block consists of three underlying mechanisms: (1) stewardship philosophy, (2) motivational drivers, and (3) circular principles. The vision building block can be defined as an agreement on the CE principles, values, approaches, and end objectives that need to be achieved (Boldrini & Antheaume, 2021), and may be essential to developing a common language or reduce opportunistic behaviour and misalignment amongst stakeholders. Due to these shared

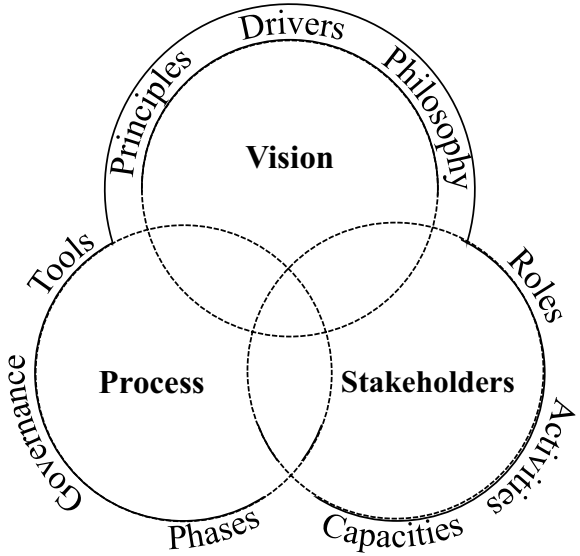

Fig. 4.2 Three building blocks and their underlying mechanisms with the black area referring to obstacles of sustainability partnerships for circular economies

objectives, organisations may gain access to a broader set of combined, shared, or pooled resources and competencies. Vision is potentially embodied through metaphors, words, or images, next to clear collective goals, rules, and leadership, as well as inspiration, direction, and motivation (Leising et al., 2018).

Stewardship philosophy. The first mechanism, the stewardship philosophy, underlines the idea that stakeholders are encouraged by strong social and empathy-based motivational drivers (Eiselein & Dentchev, 2020). It is primarily characterised by behaviours of collectivism and trustworthiness amongst stakeholders (Davis et al., 1997). The literature indirectly refers to the stewardship philosophy, through the specified importance of shared responsibilities (Witjes & Lozano, 2016), shared equipment (Ruggieri et al., 2016), common goals (Aid et al., 2017), and a shared set of long-term objectives (Franco, 2017), indicating the need for stakeholders to look beyond organisational boundaries.

Within the QHM framework, such a "long-term sustainable development vision of society" requires a co-creative vision and process to make sure stakeholders engage in developing a society in a "socially and environmentally responsible" manner (Galvao et al., 2019, p. 815). A shared vision, embodied and supported by different stakeholders, contributes to the coordinating strategies and operational plans, and translates vision and activities through synergetic efforts in a broader ecosystem of stakeholders (Carayannis & Campbell, 2021). Thus, a shared vision bridges different cultures from the five helices and streamlines the development and application of CE knowledge, even though it requires the assessment of the individual or common needs, opportunities, possibilities, strengths, and weaknesses of all five helices (Morawska-Jancelewicz, 2021).

Motivational drivers. The second mechanism, motivational drivers, examines the ethical and business reasons motivating stakeholders to (co)develop a circular vision. From an ethical point of view, the increasing world population, resource scarcity, and environmental pressures (Aid et al., 2017; Franco, 2017) may push organisations to adopt a sustainable vision for the future (Velenturf et al., 2018). From a business perspective, adopting a circular vision can reduce environmental impact (Scarpellini et al., 2020) and may optimise financial and human capital (Witjes & Lozano, 2016). It also allows for business innovation to thrive (Witjes & Lozano, 2016), as it also provides better access to markets, employees (Gray & Purdy, 2018), and expertise (Witjes & Lozano, 2016). Furthermore, it may help the reputation of an organisation (Aid et al., 2017), or gain legislative benefits (Ghisellini & Ulgiati, 2020). Governments, as well as organisations (such as NGOs, companies, multinationals, or circular entrepreneurs) may be motivated to partner with one another for legitimacy-, competency-, resource-, or society-oriented reasons (Gray & Purdy, 2018). In most cases, the collaborative processes in multi-stakeholder partnerships (Gray & Purdy, 2018) are intended to focus on mutual learning, gains, and support that can only be nurtured through a culture of cooperation and complementarity (Sousa-Zomer et al., 2018).

As such, stakeholders engage in symbiotic relationships (Yu et al., 2014b) with the intent of setting up efficient network dynamics

(Brown et al., 2021) and potential business-model-innovation stimuli (Brown et al., 2021). This refers directly to the knowledge production systems within the QHM framework (Carayannis et al., 2021a, 2021b), reflecting the characteristic of collectivism in a stewardship-style philosophy (Leising et al., 2018; Pesce et al., 2020).

Circular principles. The third mechanism, the circular principles, refers to the 10 R's presented by Campbell-Johnston et al. (2019), sometimes denominated as circular strategies. They discuss the principles or strategies of reducing, repairing, reusing, recovering, remanufacturing, recycling, repurposing, refurbishing, rethinking, and refusing. Even though circular strategies are essential for the CE transition, Pesce et al. (2020) pointed out that there is still much heterogeneity amongst various schools of thought on how these strategies are or should be implemented within companies and organisations. This implies that stakeholders do not necessarily share the same ideation of CE principles or quintuple systems. At the very least, this calls for attention, as stakeholders must be aligned around a common vision that is translated into their strategies and operational activities. From a QHM perspective, this indicates that the dynamics and channels amongst the different helices (Carayannis et al., 2021a, 2021b) need to be well defined. For this reason, the second building block we propose in our clover model focuses on the "stakeholders" within the quintuple framework.

Stakeholders

As a building block, "stakeholders" refers to the different helices from the QHM that come together as sustainable partners for CEs. The stakeholder building block consists of three underlying mechanisms: (1) role stipulation, (2) partner activities, and (3) partner capacities. With so many stakeholders engaging with one another, there is first a need to understand the potential roles each stakeholder can perform in co-developing and applying CE knowledge. Arsova et al. (2021) identified a long list of CE stakeholders: businesses, such as large corporations, private businesses, NGOs, and small and medium enterprises (SMEs), as well as HEIs (universities and high schools) and other knowledge

centers and educational institutions, hybrid organisations, circular or social enterprises, governments (local, regional, federal, national, and international) and consumers.

Role stipulation. First, regarding stakeholder roles, governments are expected to foster CEs, and act as coordinators (Velter et al., 2020; Yu et al., 2014a), as funders (Uusikartano et al., 2020), facilitators (Fischer & Pascucci, 2017; Yu et al., 2014a), enablers, or networkers (Sousa-Zomer et al., 2018). Companies are mainly discussed as pioneers (Ghisellini & Ulgiati, 2020) or innovators (Barrie et al., 2019), based on how they are described as being focused on product, process, or business-model innovation (Barrie et al., 2019; Uusikartano et al., 2021). Civil-society organisations (i.e., consumers) are the social licence providers, as they drive the demand and adopt CE products and services (Ruggieri et al., 2016; Sousa-Zomer et al., 2018). To a lesser extent, the literature discusses what academia can provide (Ghisellini & Ulgiati, 2020), but also makes several mentions of intermediary organisations, described as networkers, brokers or accelerators (Fischer & Pascucci, 2017; Ibn-Mohammed et al., 2021; Ruggieri et al., 2016), and process advisors (Brown et al., 2021).

Partner activities. Second, regarding partner activities, close to all stakeholders in the QHM have high expectations of governments. Considered to be one of the key players in addressing CE, stakeholders expect various CE collaboration stimulating activities and efforts from governments in terms of policy intervention (Aid et al., 2017; Alhawari et al., 2021), legislative harmonisation and support (Ghisellini & Ulgiati, 2020; Sousa-Zomer et al., 2018; Stumpf et al., 2021), development of standards (Fischer & Pascucci, 2017; Stumpf et al., 2021), regulations (Ruggieri et al., 2016), access to funding, or ease of administrative burdens (Stumpf et al., 2021).

A lot of attention is given to the industrial helix (mainly companies), which can implement circular interventions on their own organisational level by closing supply chains, managing adequately residual waste, extending product life cycles, or raising efficiency in resource usage (Aguilar-Hernandez et al., 2021). These circular interventions can be achieved by paying attention to key organisational elements such as chain coordination, contracting, and various internal and external financial

mechanisms (Fischer & Pascucci, 2017). Furthermore, companies may need to pay attention to the design of their implementation processes, take-back management, and recycling facets (Stumpf et al., 2021).

The literature on sustainable partnerships for CEs has mainly focused on how governments and industries may develop CE strategies (Carayannis & Campbell, 2010; Peris-Ortiz et al., 2016), indicating that there has been a tendency to focus on one or two helices (that may be dominating or guiding the other helices). Despite the QHM literature recognising and including academia as an important helix (Morawska-Jancelewicz, 2021) in sustainable partnerships for CEs, the literature indicates the roles of academia may not yet be well defined or fully explored (Carayannis & Campbell, 2021; Morawska-Jancelewicz, 2021).

Partner capacities. Third, stakeholders also need to acknowledge their capacity for sustainable partnerships. The majority of the European economy consists of SMEs. However, Rincón-Moreno et al. (2020) point out that SMEs can only share or manage limited resources through partnerships and that there are therefore capacity constraints in terms of resource flows in a quintuple setting. As such, achieving economies of scale for efficient CE strategies requires a community or network of partners to collaborate, both within and across sectors. For example, SMEs could benefit from the HEIs. HEIs are often described as educators (Brown et al., 2020, 2021), and advisors (Brown et al., 2020), and are often considered to be crucial for developing and distributing knowledge amongst governmental institutions as well as innovative companies. Furthermore, governments have been considered to be efficient stakeholders for nurturing partnerships, but are also known to encounter limitations when stimulating sustainable partnership development through policies and subsidies (Ghisellini & Ulgiati, 2020).

The literature does not always assign the same role to the same actor. Some actors, for example, governments, academia, and businesses, could easily be given multiple roles, either simultaneously or sequentially (Ruggieri et al., 2016; Sousa-Zomer et al., 2018; Yu et al., 2014a). Such ambiguities may reflect the capacity limitations of one organisation versus another, both within and across helices. Whilst stakeholders are expected to engage with one another, promoting shared expectations and learning (Barrie et al., 2019) that will eventually lead to various

organisational and societal benefits, the types of knowledge channels, as well as the cooperative nature between QHM stakeholders takes time to develop and adjust from organisational to system perspective (Galvao et al., 2019). At its core, the development of sustainable partnerships for a CE is essentially a process that needs to go through various phases and needs to be managed with the appropriate strategies and tools.

Process

The third building block, process, is connected to three underlying mechanisms: (1) the different procedural phases, (2) managerial tools, and (3) governance methods for developing sustainable partnerships in CEs.

Procedural phases. The literature review finds four models (Brown et al., 2021; Campbell-Johnston et al., 2019; Domenech et al., 2019; Leising et al., 2018) that represent the process for the development of sustainable partnerships in CE, which consists of three overall phases, namely initiation, implementation, and stabilisation. In the initiation phase, different helices set up new co-creative, collaborative processes between stakeholders (Leising et al., 2018). In essence, through open dialogue and discussions (Campbell-Johnston et al., 2019), a common philosophy and alignment of drivers and strategies needs to be explored to make sure stakeholders can engage with one another and agree on how knowledge needs to be developed and applied. Brown et al. (2021) refer to this as the status-quo phase where stakeholders are at the beginning of a transition period (i.e., from linear to circular economy). Doménech and Davies (2011) consider this phase to be an exploration of first collaboration opportunities and experiences, often in terms of simple transformation processes, setting in motion the first round of cooperation dynamics.

In the implementation phase, actual change is initiated (Campbell-Johnston et al., 2019), collaborations are formalised amongst stakeholders, and collective goals are pursued (Leising et al., 2018). In this phase, the circular vision, the underlying principles, and mutual understanding are translated into actual operations (Brown et al., 2021).

Doménech and Davies (2011) explain that new linkages and/or existing relationships can be further developed in this phase, as the constant interactions between different stakeholders build cooperative trust and routines.

The third overall phase is the stabilisation phase. Campbell-Johnston et al. (2019) considers this phase to take place when a new status quo has been reached and further facilitated by regulatory shaping and support. Brown et al. (2021) find that in this phase, documents and norms may be produced to more (in)formally define the interactions amongst stakeholders and see it as the phase where the responsibilities of the networks, as well as decision-making powers are divided and shared. Leising et al. (2018) consider this phase to be the moment where material flows are well established, and CE strategies are assured to be well implemented. Stabilisation phase is therefore more concerned with the overall procedure and formalisation for developing sustainable partnerships within a QHM framework.

Managerial tools. Different managerial tools for sustainable partnerships are discussed in the literature. Yu et al. (2014b) refers to the use of ICT tools, focusing on key performance indicators or progress measures. Brown et al. (2021) propose a design-thinking tool that may facilitate the decision-making process. Sousa-Zomer et al. (2018) also point out the rise and development of integrated managerial systems, which may facilitate brokers, networkers, or facilitators in their quest to guide the whole consortium of partners. Businesses, academics, or governments may also use different CE tools and models, such as the triple-layered business model canvas (Joyce & Paquin, 2016), stakeholder and value mapping (Brown et al., 2021), effectuation, design thinking, and lean experimentation (Brown et al., 2021), or the RCOV (resources, competences, organisational structure, value propositions) model proposed by Boldrini and Antheaume (2021).

Governance methods. We found only a few articles discussing the governance methods for managing the collaborations within sustainable partnerships (Witjes & Lozano, 2016). The governance methods may be helpful for stakeholders of each helix to know for their own use, but the literature focuses mainly on governments and brokers, such as associations, NGOs (Yu et al., 2014b), software companies, or tech developers

(Fischer & Pascucci, 2017), or any other intermediary organisation that is in multi-helix partnerships (Barrie et al., 2019). The primary purpose of governance methods is to make sure multiple helices or stakeholders are engaged (Witjes & Lozano, 2016), knowledge is being developed, and flows of knowledge, resources, and feedback are facilitated, resulting in innovative solutions (Ruggieri et al., 2016).

Stakeholders who would govern all five helices could take the initiative to set up informational activities, training and educational programs, workshops, conferences, seminars, forums (Witjes & Lozano, 2016), or thematic meetings (Aid et al., 2017), or develop certifications or validation programs (Sousa-Zomer et al., 2018). Each of these methods may result in a higher rate of inter-dependence for organisations (Yu et al., 2014b) that are collectively focused on creating economic and non-economic value (Boldrini & Antheaume, 2021) whilst also being characterised by systems thinking (Nogueira et al., 2019).

Obstacles of Sustainability Partnerships for Circular Economies

We found several obstacles that may influence the development of sustainable partnerships in CEs. According to Ghisellini and Ulgiati (2020), a misalignment of mindsets between stakeholders may pose an obstacle as it hinders the development of long-term, inclusive, cross-sectoral partnerships for a CE. Nogueira et al. (2019) even specify that besides a stewardship philosophy, systems thinking (or the lack thereof), is an important "mindset" obstacle.

Sousa-Zomer et al. (2018) explain there is also need for exemplary leadership, that has a long-term vision of sustainability. Leaders need to be able to show openness to change, an understanding of socio-cultural sensitivities (Ibn-Mohammed et al., 2021), and be apt enough to overcome soft barriers to behavioural or social changes (Campbell-Johnston et al., 2019; Sousa-Zomer et al., 2018). Essentially, developing partnerships remains an inter-individual phenomenon, and without the proper alignment, behaviours, and attitudes (Ibn-Mohammed et al., 2021).

Because of the right mindsets and thinking of individual stakeholders, potential distrust (Yu et al., 2014b) can be overcome, and specific or complementary roles can start to be developed and distributed across the collective group of partners in the QHM, allowing for the development, sharing, and application of sustainability knowledge (Carayannis & Campbell, 2010). Even if stakeholders are willing to cooperate and develop openly and collaboratively knowledge and innovations (Galvao et al., 2019), they still may be hindered due to a lack of engagement interest, time, or resources (Aid et al., 2017). Another obstacle may be attributed to a lack of interest or priority in circularity in terms of company culture (Sousa-Zomer et al., 2018).

The literature has paid a lot of attention towards governments in supporting and stimulating the CE (Arsova et al., 2021). It comes as no surprise that potential obstacles we found are related to laws, rules and norms (Ruggieri et al., 2016; Sousa-Zomer et al., 2018), policies (Arsova et al., 2021; Ghisellini & Ulgiati, 2020), and regulations set forth by governments (Ibn-Mohammed et al., 2021; Stumpf et al., 2021). In some cases, the level of complexity of administrative requirements, as well as the lack of standardisation and coordination of legislation, has had a significant impact on the collaborations between stakeholders. Furthermore, subsidies, taxation, and rights (Arsova et al., 2021; Fischer & Pascucci, 2017; Ruggieri et al., 2016; Sousa-Zomer et al., 2018) have also been pointed out as make-or-break mechanisms.

The potential need for business model adaptations to become more circular may hinder some stakeholders from either developing or entering into partnerships (Stumpf et al., 2021). Not only may this adaptation represent a risk in terms of cannibalisation, resource usage, or geographical dispersion (Sousa-Zomer et al., 2018), it could also require high amounts of investments (Aid et al., 2017; Ibn-Mohammed et al., 2021), and not all companies have the necessary capital available (Ghisellini & Ulgiati, 2020). Considering the niche nature of the CE (Campbell-Johnston et al., 2019), and its relatively complex market dynamics (Aguilar-Hernandez et al., 2021), some organisations may face market and operational obstacles. Additionally, the presence or lack of (technological) resources can furthermore influence an organisation's capacity to participate in sustainable partnerships.

Finally, in terms of process obstacles, the initiation phase may be characterised by certain stakeholders who face within their organisation risk aversion (Sousa-Zomer et al., 2018), or conflicts of interests (Sousa-Zomer et al., 2018) with other stakeholders. Ghisellini et al. (2016) explain that the lack of collaborative or enabling platforms may also form an obstacle, as those regions who have implemented them have benefited from stakeholder role distribution, collectivistic behaviour stimulation, balanced decision-making power distribution (Franco, 2017), or knowledge dissemination (Sousa-Zomer et al., 2018).

However, without strong customer demand for CE products and services, any of these efforts may seem futile (Lieder & Rashid, 2016; Ruggieri et al., 2016). As such, the development of sustainable partnerships for CEs needs to be truly inclusive, for long-term collaborative processes, a circular vision, business-model innovation, efficient network dynamics, and actor learning to come to fruition (Brown et al., 2021).

Discussion

Tackling sustainability challenges requires stakeholders to engage in complex and delicate processes, where a dynamic, systematic, or holistic perspective on achieving systemic change is crucial (Pesce et al., 2020). It requires furthermore a mind shift, as sustainable partnership development fundamentally builds on generating trust (Brown et al., 2020; Yu et al., 2014b) amongst stakeholders who may not speak the same language or be wary of one another's objectives and agendas. We aimed to use a literature review to answer the question of how sustainable partnerships are developed for CEs. Employing the quintuple helix framework as a theoretical lens, we analysed 59 articles, and proposed a clover model composed of three building blocks essential for stakeholder engagement in the CE: (1) vision, (2) stakeholders, and (3) processes. Within these building blocks, we identified nine enabling mechanisms, as well as nine clusters of obstacles (mentality, business model, markets, culture, resources, technology, networking, consumers, and rules) that may hinder the development of Sustainable partnerships in CEs. In what follows, we elaborate on how we have contributed to the literature, as

well as what future research avenues could be pursued based on our insights.

Brown et al. (2021) pointed out that most companies are inexperienced or reasonably new to the CE. They are not yet able to either develop or incorporate the CE in their business models, let alone incorporate sustainable partnerships. As such, gaining access to resources and materials, knowledge, experience, and expertise from a network, system or quintuple perspective could benefit both business and society. This study provides a comprehensive checklist as a method "to build strong, long-term partnerships" (Aid et al., 2017, p. 85). Furthermore, we answer the call for more insights that go beyond the organisational level of cross-sectoral partnerships (Brown et al., 2021) and provide more insights into the impacts of "relationships between various helices of economies, societies, and environments" (Galvao et al., 2019, p. 828). Additionally, following the examples of Brown and colleagues (2021) and Leising and colleagues (2018), this literature review contributes to a growing body of research on CE stakeholder relationships (Ozkan-Ozen et al., 2020; Sousa-Zomer et al., 2018). The theoretical contribution lies in the proposed building blocks, as well as the enabling and hindering mechanisms acting as ingredients to form a blueprint for sustainable partnership development in CEs. By taking on a transdisciplinary perspective (Carayannis & Campbell, 2021), the overview provided offers a systematic appreciation of sustainable partnerships, and points out the complexity of developing sustainable partnerships within a CE.

We contribute to the growing body of literature found at the intersection of CE and QHM literatures (Durán-Romero et al., 2020). We offer the means for those who manage or aim to coordinate CEs (i.e., incubators, governments, or even a joint-stakeholder collaboration) to identify potential sources of opportunities or conflicts, as well as reflections on current and future stakeholder engagement processes. Different stakeholders from various helices can evaluate the extent to which partnerships have been developing, and the extent to which their efforts have overlapped or remained separate. Therefore, it may encourage different societal stakeholders to look beyond their own perspectives and take on a more systemic, inclusive approach. This is relevant for theoretical discussions on how knowledge is developed, applied, and distributed,

and also for managers to understand how to set up CE principles and partnerships.

Additional insights through a more elaborate, systematic literature review could further complement or confirm the proposed model. The three building blocks identified provide a valuable starting point for future research efforts, especially for research methods other than literature reviews. For instance, Alhawari et al. (2021) called for more empirical research, and Pesce et al. (2020) for more quantitative research. Furthermore, we identified a lack of dynamic and network-centric perspectives in the literature. This suggests a need for a more holistic, longitudinal perspective when analysing the different mechanisms and building blocks of sustainable partnerships. As we found just four linear models for sustainable partnership development, the creation of a circular or iterative development model would seem to be the next logical and evolutionary step.

We suggest developing a contingency theory that would allow the literature to incorporate a more fine-grained analysis of the dynamics between the enabling and hindering mechanisms associated with different helices, in different phases of sustainable partnership development. This would allow for more efficient or optimised quintuple helix constellations for CEs to be developed. Besides our own suggestions, various calls for future research were present in the literature, mainly requesting more critical, organisational, and stakeholder-themed research.

Brown et al. (2021) called for more practice-based research in case studies, in order to avoid potential retrospective, subjective biases. Pesce et al. (2020) also required a more critical perspective on possible discrepancies between the actions, beliefs, and commitments of quintuple stakeholders towards CE and one another. Aid et al. (2017) called for more insights into shared values, activities, and objectives across different (circular) business models. Furthermore, Ghisellini and Ulgiati (2020) refer to various organisational characteristics that may influence the organisational capabilities to enter into sustainable partnerships. Pesce et al. (2020) also called for more research into CE strategies, how various quintuple stakeholders perceive them, and how they turn these strategies into practice and activities. Understanding how technology may influence the development of sustainable partnerships for CEs is

also of great interest for both research and practice (Aid et al., 2017; Campbell-Johnston et al., 2019; Ibn-Mohammed et al., 2021).

Alhawari et al. (2021) called for a better understanding of why some stakeholders are so much more important to or influential than others. Maruccia et al. (2020, p.10) called for more research into "multi-stakeholder compositions", and Türkeli et al. (2018) expect it to be fruitful to discuss stakeholder engagement for CEs at the international level rather than the local or regional level. Sumter et al. (2020) called for more research into the CE competencies of stakeholders. Finally, Arsova et al. (2021, p. 4916) called for more research to better understand the borders and barriers between "each stakeholder when engaging in CE activities". Stakeholders within the academia helix of the QHM are ideally positioned to contribute towards the development, dissemination, and application of knowledge for the CE, but insights are currently limited regarding their roles, involvement, and potential. Based on the various calls for future research previously mentioned, we think there is a need for this helix to further intensify their efforts in terms of community involvement and to look past their classical roles as researchers and educators.

Conclusion

Although collaborative efforts are vital for solving the myriad of sustainability issues our societies face, insights into how to develop such efforts across different sectors, including industries, academia, governments, and civil society organisations, are still nascent. Considering that each stakeholder has unique strengths, priorities, and ways of working, it is not a straightforward answer to developing complementary, long-lasting partnerships that span sectors and focus on joint efforts to eradicate wicked problems. Through this literature review, we developed a theoretical framework, which may serve as a community-building tool to unite and guide those stakeholders mentioned above towards a mutual understanding of the possibilities of sustainable partnerships and the challenges for CEs. We have identified three building blocks (vision, stakeholders, and processes), nine underlying enabling mechanisms, and nine clusters

of obstacles that can influence the development of sustainable partnerships in CEs. There is a significant challenge impeding the sustainability transformation of our society, which can be attributed to partnerships that are either developed ad hoc or face high rates of failure or conflict. This represents a waste of time, effort, and resources that our model may overcome by identifying and focusing on those enablers and obstacles that lay at the foundation of the development of a sustainable network of partner stakeholders for the circular economy.

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Part II

Multi-Stakeholder Participation and Collaboration

5

Multi-Stakeholder Networks in a Circular Economy Transition: A Typology of Stakeholder Relationships

Annika Blomberg, Johanna Kujala, and Anna Heikkinen

Introduction

The circular economy has gained significant interest in recent times, as it has been recognised as a promising solution to many environmental and socio-economic sustainability challenges (Geissdoerfer et al., 2017; Murray et al., 2017). By transforming input and output flows into a regenerative and restorative system of production and consumption, the circular economy is expected to revitalise economies while promoting environmental and social well-being (Calisto Friant et al., 2020). The circular economy is often conceptualised as the reuse, redesign and recycling of products and services with the objective of minimising waste and conserving materials by lengthening their life cycles (Murray et al., 2017).

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Transitioning to a circular economy requires the involvement of all actors in society (Ghisellini et al., 2016). Interest in effective and innovative multi-stakeholder networks is on the rise in relation to complex societal challenges such as the circular economy transition (Bäckstrand, 2006; Reypens et al., 2021; Selsky & Parker, 2005). Networks involving partners from different sectors are discussed using a variety of concepts: multi-stakeholder partnerships (Pinkse & Kolk, 2012), multi-stakeholder settings (Rühli et al., 2017), multi-sector interorganisational collaborations (Savage et al., 2010), multi-stakeholder issue networks (Saffer et al., 2018), social partnerships (Waddock, 1991), cross-sector partnerships (Selsky & Parker, 2005) and multi-stakeholder networks (Roloff, 2008).

In this study, networks or partnerships in which stakeholders from the public, private and third sectors of society collaborate to address societal challenges are studied under the label of *multi-stakeholder networks* (Roloff, 2008). We use this term because it directs the focus towards the forms of engagement between stakeholders who come together to address an issue too complex to be addressed effectively without collaboration (Roloff, 2008). In multi-stakeholder networks, collaboration has unique potential in that it combines different stakeholders' strengths and assets; however, it also entails tensions and challenges that differ from those arising within single-sector collaborative arrangements (Roloff, 2008; Savage et al., 2010).

This chapter examines the relationships among key stakeholders seeking to promote a circular economy transition. We ask the following research questions: (1) What kind of relationships are there among stakeholders who share an interest in promoting a circular economy? (2) How is the transition to a circular economy accelerated through these relationships? Theoretically, we build upon stakeholder theory (Freeman, 1984; Freeman et al., 2010), multi-stakeholder networks (Pinkse & Kolk, 2012; Roloff, 2008) and stakeholder engagement research (Kujala & Sachs, 2019; Kujala et al., 2022). Rather than the traditional, organisation-centred view of stakeholder engagement, this study adopts an issue-focused approach that examines a network of stakeholders who affect or are affected by an issue or problem (Pinkse & Kolk, 2012; Roloff, 2008)—in this case, a circular economy transition. Our

empirical material consists of 35 semi-structured interviews with circular economy stakeholders from private, public and third-sector organisations at local, regional and national levels in Finland, a country that has set the goal of becoming a global circular economy leader by 2025.

This study identifies four prevalent types of relationships in the multi-stakeholder network: (1) directive relationships, (2) mediative relationships, (3) collaborative relationships and (4) competitive relationships. The study contributes to research at the intersection of stakeholder engagement, multi-stakeholder networks and circular economy in the following ways: First, the findings shed light on the types of relationships that exist among key circular economy stakeholders and highlight how different relationships contribute to the circular economy transition. We show that directive relationships provide a foundation for the circular economy and mediative relationships are necessary for facilitating and coordinating network activities. Together, directive and mediative relationships enable and form a basis for the collaborative and competitive relationships central to the implementation of a circular economy. Second, this study confirms the important role of mediative relationships in the promotion of a circular economy, particularly in terms of networking, facilitating discussion and the alignment of views and coordinating circular activities. Thus, the study shows how circular economy stakeholders are connected and how these connections promote the circular economy.

Multi-Stakeholder Networks in a Circular Economy

A central reason for the popularity of circular economic thinking is that it represents a promising attempt to integrate economic prosperity with environmental and social sustainability and well-being (Murray et al., 2017). Although its exact definition and meaning are debated (Calisto Friant et al., 2020; Kirchherr et al., 2017), the circular economy is commonly seen as a way of balancing economic concerns with sustainable development (Ghisellini et al., 2016). The aim of a circular economy is to minimise waste, emissions and energy leakages through slowing and

closing the economy's input and output flows as well as material and energy loops (Geissdoerfer et al., 2017). In contrast to *linear economy* or even *steady state economy*, a circular economy operates according to the laws of nature and has the ultimate aim of decoupling economic prosperity and growth from resource consumption (Ghisellini et al., 2016).

While typical definitions of the circular economy have emphasised the three or four Rs (reduction, reuse, recycling and recovery), the focus in recent academic literature has shifted to a systemic view (Kirchherr et al., 2017). The systemic view highlights the need to enhance the performance of the whole system rather than merely of its components (Murray et al., 2017). It is also widely agreed that the circular economy necessitates transformations at all levels of society, from micro-level consumers and companies to macro-level actors such as nations and the EU (Ghisellini et al., 2016). At the national level, circularity necessitates the redesign of four systems: the industrial system, the infrastructural system (including transportation, communication, energy, water and recycling systems), the cultural framework and the social system (Ghisellini et al., 2016). Although there is disagreement as to who the key drivers of a circular economy are, researchers agree that the involvement of a broad range of stakeholders is necessary in order for the transition to a circular economy to actualise (Bocken et al., 2018; Geissdoerfer et al., 2017; Lieder & Rashid, 2016; Mishra et al., 2019). Moreover, Gonzalez-Porras et al. (2021) argue that in addition to individual stakeholders, stakeholder engagement and multi-stakeholder collaboration can act as agents of change in the circular economy transition.

Intermediary action is considered necessary in facilitating a systemic shift from the current linear economy to a circular one (Kivimaa et al., 2019). In sustainability transitions, mediating takes place between industries, sectors and stakeholders (Van Lente et al., 2003). Research shows that intermediary action can take a variety of forms and functions, although the following four forms are typical: facilitating learning and knowledge exchange, providing resources, brokering and supporting accountability and transparency (Kundurpi et al., 2021). In sustainability transitions, intermediaries also have systemic tasks such as articulating

options and demand, aligning actors and supporting learning (Van Lente et al., 2003). Arenas et al. (2013) even found that third-party facilitators may enable a shift from conflicting relationships to collaborative ones; in their study, the third actor was able to function as a bridging organisation or enabling structure and help organisations move from confrontation to collaboration.

The notions of issue-focused stakeholder approach and multi-stakeholder network are particularly relevant in the circular economy context. An issue-focused stakeholder approach is useful to understanding settings wherein three or more stakeholders collaborate to address a shared problem or an issue too complex or broad to be solved by individual organisations (Easter et al., 2022; Pinkse & Kolk, 2012; Roloff, 2008). In an issue-focused approach, a stakeholder can be defined as a 'group or individual who can affect or is affected by the approach to the issues addressed by the network' (Roloff, 2008, p. 38), which implies that the stakeholder network exists to address an issue concerning all network participants (Heikkinen, 2017). On the other hand, multi-stakeholder networks are often used in the context of trisector initiatives (including state actors, companies and civil society organisations) aiming to combine the assets and strengths of each organisation (Selsky & Parker, 2005). These organisations may differ in terms of their organisational cultures, objectives, operating styles and logics (Jamali & Keshishian, 2009), and they join the network for various reasons. Business-to-business relationships are usually formed to create new markets, products or technologies and business-to-non-profit relationships to increase favourable publicity, goodwill or awareness, or to promote a cause (Wymer & Samu, 2003). However, multi-stakeholder networks are initiated around complex and multi-layered societal challenges that extend beyond the capacity of single organisations or individual sectors (Easter et al., 2022; Pinkse & Kolk, 2012). These messes, meta-problems or grand challenges require multi-sector collaboration to find suitable solutions (Easter et al., 2022; Selsky & Parker, 2005). In multi-stakeholder networks, the partnering organisations contribute resources to addressing the focal issue while capitalising on the strengths and competencies of other partners (Bäckstrand, 2006; Jamali & Keshishian, 2009). Collaboration in a multi-stakeholder

network develops in stages, from initiation and negotiation of common approaches to the issue to concrete actions decided upon by the network, until the collaboration either institutionalises or runs its course (Heikkinen, 2017; Roloff, 2008).

Relationships in a Multi-Stakeholder Network

Relationships are the focus of many research streams such as network theory, supply chain, industrial marketing and industrial ecosystems literatures and stakeholder engagement research. While network theory and supply chain and industrial marketing and ecosystems research provide ample starting points for understanding established relationships in business-to-business industrial ecosystem contexts, stakeholder engagement research seeks also to acknowledge other kinds of relationships that can emerge among various stakeholders operating in the same context (Kujala et al., 2022).

It is noteworthy that the purpose and nature of a multi-stakeholder network provide unique characteristics to the relationships between network participants (Savage et al., 2010). First, when examining a multi-stakeholder network, the focus is set on the network, which consists of several stakeholders with separate, likely partly conflicting goals and ways of operating. Second, a multi-stakeholder network consists of a multiplicity of relationships ranging from formal and contractual to informal and personal ones. Third, the network is formed and maintained through social interaction; therefore, understanding the nature of this interaction is relevant to understanding the whole.

Recently, the literature on stakeholder engagement has shifted from analysing stakeholder attributes to analysing stakeholder relations (Freeman et al., 2017; Kujala & Sachs, 2019), and stakeholder engagement is currently understood as a relational process that emphasises stakeholder relationships (Kujala et al., 2022). Along these lines, Onkila (2011) recognises different types of stakeholder relationships and concludes that each type has different attributes and thus different requirements. Power-based relationships are one-sided relationships based on the power of one stakeholder over others, and are largely

characterised by the powerful stakeholder's demands and expectations. Conflicting relationships involve stakeholders with different demands, although, as the relationship is based on a somewhat equal distribution of power, the organisation only considers those demands that it finds legitimate. Collaborative relationships are characterised by continuous interaction, mutual trust and the acknowledgement of all stakeholders' interests. Onkila (2011) concludes that stakeholder relationships are socially constructed in human interaction, and thus variable. Consequently, stakeholder engagement should also vary according to the situation, issue and context. Kujala and Korhonen (2017) analysed the elements of value-creating stakeholder relationships. They argue that the relationship begins with identifying joint interests and common objectives, followed by developing an ability to collaborate by clarifying each partner's role and planning their actions. The ability to collaborate, along with clear roles and objectives for the collaboration, paves the way for a trusting and open relationship, the uniqueness and continuity of which is ensured by those very qualities. Myllykangas et al. (2010) identified six important characteristics of stakeholder relationships: (1) the history of the relationship, (2) the stakeholders' objectives, (3) interactions, (4) information sharing, (5) trust and (6) potential for learning. Myllykangas et al. (2010) argue that stakeholders gain and lose different attributes over time, thus changing the stakeholder salience positions. This indicates that stakeholder relationships are processual and dynamic by nature.

However, stakeholder relationships are usually studied from the perspective of one company or industry, which is an approach quite different from analysing relationships in a multi-stakeholder network. In a multi-stakeholder network, none of the participants are in control of the interactions or activities through which the relationships are formed and maintained, but all contribute to them equally (Heikkinen, 2017). The network's objectives and activities are negotiated among its participants, and they depend on the network's life stage (Roloff, 2008). While interest in researching multi-stakeholder networks has grown in recent years (e.g., de Bakker et al., 2019), there has been less interest in how stakeholders connect and interact, particularly in a circular economy context.

Empirical Material and Analysis

This chapter examines the circular economy in Finland, a country that has set the goal of becoming a global circular economy leader by 2025. The analysis focuses on relationships and activities among key circular economy stakeholders. We adopt a qualitative method and an inductive, data-driven approach. A qualitative approach is suitable to studying the complex phenomenon of relationships among circular economy stakeholders (Butterfield et al., 2004).

To generate empirical data for our study, we interviewed 35 stakeholders at local, regional and national levels in May–June, 2020. The interviewed stakeholders included representatives of private, public and third-sector organisations that promote the circular economy in Finland. The interviews were thematic and focused on considerations and practices related to the circular economy, collaboration concerning the circular economy and the future of the circular economy in Finland. The stakeholders were grouped in seven categories: companies (8 interviews), ministries (5), industry organisations (5), research, innovation and support organisations (6), regional actors (5), cities and municipalities (4) and other (1). The interviews were conducted in Finnish via Teams or Skype, tape-recorded, transcribed by a professional transcription service and analysed using Atlas software. The interviews varied in length from 45 to 110 minutes.

Data analysis proceeded as follows: First, all transcribed material was downloaded to Atlas.ti software. The initial coding process included the coding of all interview passages that included references to interactions or connections between individuals or organisations. This process resulted in 142 pages of coded interview material. The analytical process continued with an inductive analysis of the material, the aim of which was to identify similar patterns and differences between patterns (Graneheim et al., 2017).

During the inductive analysis, the involved stakeholders and the connections and interactions between stakeholders were identified. The connections and interactions were first thematised and then categorised into emergent categories (Butterfield et al., 2004). Then, each identified relationship type was analysed more carefully, and the categories were

revised and refined in several iterative rounds. The analysis focused on the activities through which the relationships were formed and maintained, the characteristics of the relationships and the expected benefits of the relationships.

Stakeholder Relationships in Catalysing a Circular Economy: A Typology of Relationships Among Circular Economy Stakeholders

Our analysis identified a typology of relationships among the circular economy stakeholders. The identified relationships are labelled *directive*, *mediative*, *collaborative* and *competitive* (Table 5.1). Each is formed and maintained through a set of activities and has defining characteristics and expected benefits.

Directive Relationships

The first type of relationship is labelled *directive*. These relationships are largely obligatory and often one-way in nature. In directive relationships, power is distributed unevenly and multiple stakeholders are dependent on one other stakeholder, such as a government or municipal authority. The relationships are often guided by formal procedures and institutionalised roles and responsibilities. We identified directive relationships between authorities, cities and municipalities, or ministries and all other types of stakeholders. We also identified two sub-types of directive relationships, that is, *regulating* and *steering* relationships, which differ in certain ways.

Regulating relationships are typically short, institutionalised relationships in which the interaction follows formal requirements and procedures. Activities in regulating relationships include applying for and providing funding, permits, infrastructure or other resources. Although regulating relationships are not typical examples of stakeholder relationships, they were found to be relevant in a multi-stakeholder setting, as

Table 5.1 Types of relationships among circular economy stakeholders

Type of relationship	Activities	Characteristics	Expected benefits	Stakeholders
Directive	**Regulating** Providing/applying for resources and permits Town planning Formulating policies and legislation **Steering** Giving feedback Commenting on proposals and strategies Participating in decision-making and strategy formulation	Obligatory One-way communication Formal communication One-way dependency	Enabling operating environment (e.g., infrastructure, policies, laws, decisions) Initiating and mobilising markets	Cities and municipalities Ministries Research, innovation and support organisations
Mediative	**Facilitating** Networking Resource and knowledge gathering Mapping and aligning interests and views **Coordinating** Coordinating a project or a network Coordinating an ecosystem Managing a platform Matching material streams	Voluntary Two-way/ multi-way communication Informal communication Low to high interdependency	Networks Partners Peer support Aligning interests Discussing views Learning Resources	Industry organisations Research, innovation and support organisations Regional actors Cities and municipalities

Type of relationship	Activities	Characteristics	Expected benefits	Stakeholders
Collaborative	**Advocating** Influencing attitudes and practices Educating and informing Gathering different views Forming a joint stance **Knowledge sharing** Discussing Sharing knowledge Learning from each other Consulting Acting as an expert **Partnering** Setting objectives Negotiating and planning actions Agreeing on tasks and responsibilities Solving problems together Co-creating Innovating	Voluntary Two-way/ multi-way communication High interdependency Relatively formal to informal	Resources Profit Learning Innovation Synergies Competitive advantage Shared value	All
Competitive	**Competing** Competing for resources Competing on the market	Unavoidable Low interdependency	Resources Profit Renewal	Companies Cities and municipalities

the development of the operational environment favourable to a circular economy often took place through regulating relationships:

> Everybody needs permits, construction permits, environmental permits and all kinds of permits. Many laws guide our operation, waste law and environmental law, etc., and we hope that decision-makers make wise decisions that enable our operation and support the circular economy. (Company 4)

> For instance, [a city] changed all cars and trucks it has to gas cars the other year. The city saw that here we create a market, and as a result, there were two distribution centres built. So, when the public sector creates these platforms, the private sector will follow. (Regional actor 3)

The public sector, especially cities, municipalities and regional actors, plays a crucial role in creating an operating environment that enables or accelerates the transition to a circular economy. This takes place through zoning for circular economy operations, providing platforms, developing the legislative and political environment and initiating markets for circular economy products and services. Although characterised by weak ties and a one-way flow of information, interactions through these relationships give authorities some indication of the needs, expectations and stances of other stakeholders. This information, however, often comes late and in a standard format. Therefore, to accelerate the transmission of other stakeholders' messages to authorities, stakeholders sometimes act first and only then deal with the necessary bureaucracy:

> I feel we, as the circular economy actors, need to unite as a front so that we get the authorities to commit to, to understand our view. Sometimes I feel the wheels of bureaucracy move so slowly that it is better for the circular economy actors to go forward with things, and adjust it after, in case the authorities disagree. (Company 7)

Regulating relationships were sometimes experienced as hindering or delaying the circular economy. As regulating relationships are coordinated and regulated by formal processes and official procedures, including bureaucracy, they were a source of frustration and sometimes

seen to hinder good efforts to promote a circular economy. A representative of an industry organisation describes an occasion in which they were disappointed with the authorities' decision:

> In this case, it was sad that although we have laws about advancing the circular economy, when we appealed to [a Ministry] and the Parliament to extend the permit from three years to five years, they rejected it. Three years is a too-short time to collect and refine the material and to productise and commercialise it. But they concluded that there is no need to change the legislation, which is horrible. The same people who are supposed to be advancing the circular economy. (Industry organisation 3)

Although formal procedures and processes are needed to ensure the proper functioning of the state, region or city and the fair treatment of all individuals and organisations, they were considered complex, time consuming and sometimes disappointing. To enable the participation of other stakeholders in decision- and policy-making and to receive information about other stakeholders' needs and concerns, authorities also interact with other stakeholders through less formal directive relationships.

Steering relationships include activities such as participating in policy formulation, planning, decision-making, strategy formulation or legislative work, or commenting on these. In steering relationships, authorities and decision-makers actively seek stakeholder participation through hearings, questionnaires or web-based discussions and through inviting comments on plans or proposals. Although the flow of communication is restricted to taking place at certain times and in specific instances, and although the authorities are in a more powerful position than the commenting or participating parties, asking for feedback and inviting other stakeholders to participate can be seen as a step towards more interactive and participative relationships:

> Typically, when we formulate a strategy, we hear stakeholders, research institutes, professional organisations and federations and nature preservation organisations. (Ministry 2)

> One of our tasks is collaboration with companies, from where we gain knowledge for our own operations and for developing our operation. Not only acquisitions, but also town planning, we learn what kind of issues we need to take into account. It is a dialogical process. (City and municipality 3)

The steering relationships identified in our study were two- or multi-way and included negotiating from diverse stances and consolidating conflicting interests. Therefore, they were characterised by a deeper level of engagement than regulating relationships. An example of a process that involved the participation and negotiation of various parties was the formulation of a government program, which actualised as a result of a long preparation process. An industry organisation representative describes the government program as follows:

> Let's say that there is nothing really negative from our viewpoint. Almost all the circular economy issues, investments and the like, are only positive. We did go through it really carefully and if there was something really horrible, we would know by now. (Industry organisation 7)

This quote illustrates that the stakeholders had a say in the process, although they did not know exactly what the final outcome would be. In steering relationships, stakeholders have a chance to comment on and influence decisions, policies and legislation, to name a few, although a single actor's influence is quite limited and restricted to specific instances. Thus, the outcome of negotiation is often a compromise or a consolidation of various views.

Despite the purpose of enabling the participation of a wide range of stakeholders, multi-stakeholder processes wherein diverse views are considered were more time consuming, and thus caused frustration and fear of losing momentum. A ministry representative describes this frustration as follows:

> And something that I can't understand is that we do something, plan something for a year. Every day I feel like I was Dracula standing behind the window with rubber teeth yelling 'couldn't we do something already?' (Ministry 3)

Although steering relationships enable the integration of other stakeholders' views into the decision-making process, the processes itself can be slow and ineffective. Thus, authorities need to balance between directive, one-way and institutionalised interactions and more participative, multi-way processes that engage multiple stakeholders. Despite having the downsides discussed above, interaction through directive relationships—both regulating and steering—is a necessary means for providing and developing an operating environment favourable to a circular economy.

Mediative Relationships

Mediative relationships are organised around an intermediary stakeholder, that is, a stakeholder who facilitates connections between organisations, industries and contexts. Mediative relationships connect stakeholders to other stakeholders, thus playing a central role in forming and maintaining multi-stakeholder networks. In the empirical material, we identified facilitating and coordinating relationships. Although both types are grounded in intermediary action, they present certain differences.

Facilitating relationships consist of activities such as facilitating networking within and across industries and sectors and organising events and other opportunities to meet and network with a range of stakeholders. Facilitating relationships include mapping and aligning interests between stakeholders, negotiating views, facilitating resource gathering and securing funding. Stakeholders engage in facilitating relationships to find the opportunities, resources and partners needed to increase the circularity of their operations. Facilitating relationships are also a means of collecting diverse views and knowledge:

> My task is to invite the group of people together and then we make coffee [laughs] and talk nice, and hope the actors find each other. (Regional actor 2)

> We started to initiate an environmental responsibility network for companies, and in a way, my idea is to get companies to understand that often

> if you make an environmental investment in your production, facilities or logistics, it often means also saving money. (City or municipality 2)

> We were involved in the process. Helping, advancing it. The collaboration that needs to be built towards the city and other companies that operate in the region. So, my work is very concrete, building networks and everyday life and connections and maintaining a dialogue and identifying needs. And giving information: 'You could call them, they might have a solution for you.' (Regional actor 3)

Facilitating relationships are often informal and characterised by weak ties. They sometimes connect a wide number of stakeholders across sectors and from multiple levels, thus having an important role in the forming and functioning of the multi-stakeholder network:

> When we take this systemic goal that we want to develop, we invite all to participate. Some operate more in the core, very concrete, make decisions; but also those in the outer circle who are loosely connected to it. We take everyone in to the core and try to keep everyone in. To avoid anyone hampering it. (Research, innovation and support organisation 6)

Coordinating relationships often involve fewer stakeholders than facilitating relationships, where the inclusion of several organisations is typical. Moreover, coordinating relationships require a higher level of involvement from the relevant parties than facilitating relationships. Coordinating relationships consist of activities aimed at building, creating and maintaining circular economy projects, ecosystems or platforms that enable co-operation or circular flows of materials, as well as coordinating projects, material flows and processes between organisations. A representative of a research, innovation and support organisation describes their and other stakeholders' activities in coordinating relationships:

> They [a company] have strategic objectives concerning transition to a circular economy, and one of the objectives was that a certain amount of material they use is recycled. They use sand in their processes, and the world is kind of running out of sand, and they needed the sand

> from somewhere. We found an organisation that produced sand waste; the waste was not homogenous, but the local ELY-centre [Centre for Economic Development, Transport and the Environment] searched for know-how and found someone who helped transform the waste into raw material. (Research, innovation and support organisation 5)

Coordinating relationships differ from facilitating relationships in that the intermediary stakeholder is typically more involved in the operation of a project, platform or ecosystem, while in facilitating relationships the intermediary is less involved and often represents a neutral party. Coordinating relationships, particularly those with a systemic, multi-sector and multi-level approach were regularly called for in our study, as coordination was identified as a necessary activity in promoting a circular economy.

Both types of mediative relationships are also initiated by and organised among stakeholders other than those that have an intermediary role in society (such as industry organisations, research, innovation and support organisations, and regional actors). Mediative relationships are typically organised around a neutral agent, whose contribution is needed to establish common ground and integrate differing views:

> In [the project], we had a neutral partner. Not completely impartial, but rather neutral. [The organisation] advanced it [the project] and everybody was able to influence it. We had a joint workshop, then more workshops and a lot of discussions, that is how we were able to clarify the joint message. (Company 4)

> We got [an industry organisation] involved and organised a virtual co-creation and innovation workshop that was directed to bigger cities and was about how the industry can survive the Corona crisis and what kind of innovative solutions there could be. We did it pro bono, we offered virtual facilitation and the content and those who were involved needed to commit to an innovation hackathon. (Company 3)

This applies to both facilitating and coordinating relationships and is considered an important means of facilitating participation and inclusion and getting stakeholders to commit to a shared goal.

Collaborative Relationships

Collaborative relationships involve two or more stakeholders who work together voluntarily towards a variety of joint aims. They are characterised by mutual dependency, strong ties, equality and two- or multi-way flows of communication, even dialogue. We identified three types of collaborative relationship: advocating, knowledge sharing and partnering. The mutual dependency and depth of involvement was lowest in advocating relationships and highest in partnering relationships.

Advocating relationships bring stakeholders together to negotiate and to influence attitudes, practices and ways of operating. Advocating relationships include activities such as gathering knowledge and different views, discussing, negotiating and forming a joint stance. They also involve educating and informing consumers, contractors, or decision-makers and lobbying or advocating an issue. The purpose is to drive a change in attitudes concerning the circular economy and to integrate circular economic thinking into the design of products, business models and processes and into everyday practices. The advocating relationships in our study were often temporary, the interaction varying from separate meetings to somewhat established groups. Advocating relationships are considered beneficial in terms of allowing important issues to be discussed, a variety of views to be presented and decisions made concerning how to proceed:

> In cooperation, we clarify our goal and message, and that is what we tell decision-makers and funders and everyone who can do something to advance it. (Company 4)

> I think the most central issue is to produce knowledge for people so that the message goes through. It has a huge influence. The message has to come in the right form and right way. We have, of course, paid attention to how people can be engaged and how we get the information to them, and how to get information from them. (Company 2)

Knowledge-sharing relationships emerged frequent from our material. They include activities such as discussing with other stakeholders, sharing

knowledge, learning from them, consulting or acting as an expert. Their central purpose is to share expertise and experiences, learn and discuss with other circular economy stakeholders. These knowledge-sharing relationships were mostly longer-term relationships consisting of two-way communication or even dialogue. They required trust and openness among collaborators, although they did not necessarily include sharing knowledge of core business ideas or other sensitive information.

> It all begins from trust and that everybody benefits from the collaboration. And open mind, too. Very open sharing of your knowledge and learning is needed, the need has come from companies, they need possibilities to share their know-how, so that everybody does not need to make the same mistakes. (Development, innovation and research organisation 5)

> And [a project], it has brought to me and to the whole region a lot of networks and knowledgeable people. It has twenty partners from all over Finland and from there we find people to talk about what they do and how. (Regional actor 2)

Partnering relationships are the third form of collaborative relationship. Partnering signifies commitment between two or more organisations that aim to achieve their objectives by combining their resources. Partnering relationships include activities such as setting objectives for collaboration, negotiating and determining actions to be taken and agreeing on the roles and distribution of work. Partnering takes place between many categories of stakeholders, between the public and private sectors, between different public sector organisations and, interestingly, also between competing companies. Partnering involves actors more deeply than advocating and knowledge sharing, and likewise involves access to partners' resources or capabilities that the organisation would not otherwise have. Partnering requires trust, openness, reciprocity and complementary resources, and is a frequent type of collaboration in the circular economy context. At best, partnering includes an element of co-creation and consists of activities aimed at problem-solving, innovation and co-creation. Partnering relationships are distinct from advocating

and knowledge sharing in that they deal with organisations' core capabilities and operations, and can thus generate collaborative advantage and shared value. Partnering relationships are synergistic and able to generate novelty or innovativeness.

> When you find a pioneer customer, who is a little better than us, but we have some unique viewpoint to add, collaborating with that kind of customer and partner is the most interesting. (Company 2)

> I think that in Finland, we have understood the importance of openness, and I am a great advocate of co-creation. It is not the easiest route, in co-creation all partners need to feel they can influence and they get something from it, and that the actors are all equal. It is challenging to get many parties to discuss an issue, at least nowadays when everyone is busy, but I see that, although it would be the hard way, the outcome is always better. (Company 4)

> We have tested different alternatives with [a company's] Gyro Gearloose, with synthetic fibres, with polypropylene, and we made a brilliant test patch. (Regional actor 1)

Partnering relations are the tightest form of collaboration and, at best, enable groups of organisations to expand the sum of their capacities. An interviewee describes a successful partnership:

> It has to have a right mix. Not too many people. It has to have a challenge. You know the program 'survivor', that you don't just tell everything you know and be wise like 'I learned in the scout that…' or 'When I was in the army…', but there is a shared challenge. It is shared; how the heck do we manage here in the woods, or where are we and how do we get home. In other words, the plane has crashed and we have to work together. And everybody brings their knowledge to solve the problem, instead of showing how wise they are. (Other organisation 1)

This kind of synergistic partnership, which can tackle difficult issues, was identified as a necessary form of collaboration. Although on a large scale this type of collaboration appeared to be more an ideal to strive

for than a reality, the data contained several examples of partnering relationships. All three types of collaborative relations were frequent in the data and were at the core of circular economy-related multi-stakeholder networks.

Competitive Relationships

There are various types of competition; however, the competition observed by our study was market competition and competition for scarce resources, such as funding. There were few references to competition, but enough to represent a fourth type of relationship. Competitive relations were considered to force stakeholders to rethink and renew their operations and to find their own specialisations. However, too much competition was considered negative. Interestingly, in reference to market competition, organisations that competed with one another were also shown to collaborate, as illustrated by the following:

> This form of collaboration is the most typical, in which all the partners that we collaborate with as providers are actually our competitors. The collaboration typically begins when we need a partner to win a competition. We call our competitors and ask who can collaborate with us to go forward with it. (Company 3)

> …It [new legislation] made it visible that this kind of platform already exists, some of them have run aground, but in fact we are competing with one, since [an organisation] launched their platform a week before us. But that's competition. And in fact, with them we talk more about collaboration than competition. (Development, innovation and research organisation 4)

While competitive relationships were identified in the material, they often existed between the same organisations that had collaborative relationships. In the circular economy context, the stakeholders in competitive relationships also interact and are involved with one another through some other type of relationship, often collaborative or mediative. Thus, these relationships can also be categorised as coopetition

(Bouncken et al., 2015). Although *competitive relationships* is the vaguest category, it reveals that there is also competition in the network of key circular economy stakeholders and that, in a circular economy context, competitive relationships often co-exist with other types of relationships.

Stakeholder Relationships and Their Roles in Accelerating the Circular Economy

In the multi-stakeholder network, stakeholders interact through different relationships that contribute to the acceleration of a circular economy in different ways. Although directive relationships are often obligatory, they are a central type of relationship between circular economy stakeholders, as it is through them that authorities regulate and steer the development of the operating environment. Through directive relationships with the authorities (particularly steering relationships), other stakeholders can influence infrastructural decisions, which can, in turn, allow or even motivate them to implement circular practices. Although directive relationships are formal, often one-way and sometimes experienced as frustrating, they are necessary to provide the foundation for other circular economy activities through suitable infrastructure and favourable legislative, political and market environments.

Mediative relationships are voluntary, often informal and serve a different purpose. Facilitating relationships connect stakeholders and facilitate broadening the network and finding suitable partners for various needs, while coordinating relationships enable forming tighter organisational networks such as ecosystems. Coordinating relationships in particular are imperative for the circular economy, as identifying and coordinating material streams and connecting stakeholders capable of enhancing the circularity of material and resource streams are processes that enable the implementation of a circular economy.

Collaborative relationships are at the core of circular economy implementation, as stakeholders from various sectors join resources to advocate the adoption of a circular economy, share their expertise and learn, and, eventually, innovate and co-create. Among the collaborating stakeholders, there are also those who compete. Although too much

competition may have negative consequences, some competition among stakeholders forces them to sharpen their specialisations, renew and improve their operations.

Figure 5.1 summarises the roles different types of relationships play in accelerating the circular economy. The relationships serve different purposes, thus contributing to the promotion of circular economy transition in a variety of ways.

The functioning of a multi-stakeholder network requires interactions through all types of relationships. Directive and mediative relationships are typically necessary for initiating collaborative and competitive relationships, as is illustrated by the following:

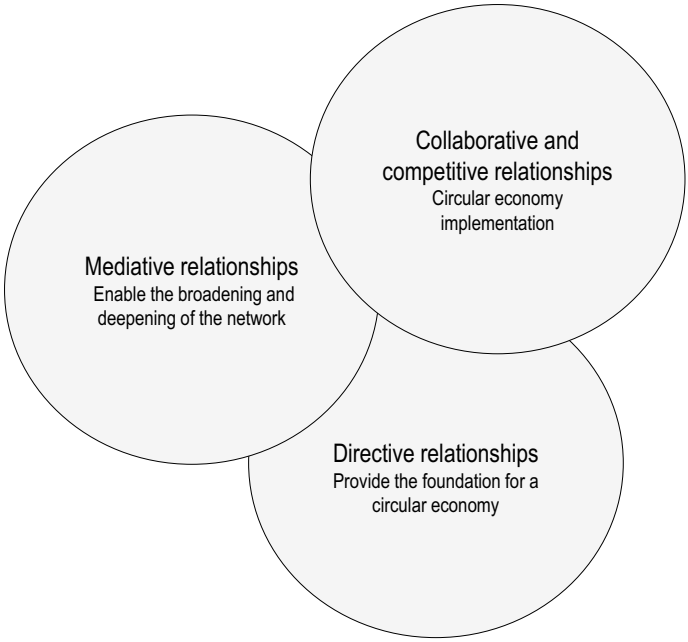

Fig. 5.1 Stakeholder relationships and their roles in accelerating the circular economy

> I think the municipal circular economy parks are a good example. There you cluster circular businesses. The municipality makes the town planning, possibly around an old waste incinerator, and then companies join, and one's side stream is another one's resource. And a municipal trade organisation supports and town planning is organised to support their needs. They call them innovation platforms, but it's not only about innovation, it is about financially viable business. (Industry organisation 6)

The above illustrates the variety of relationships through which the stakeholders interact in setting up a circular economy park. However, relationships also evolve over time. Interaction through directive relationships can turn into mediation, collaboration or competition, and mediative relationships can evolve into collaborative relationships, some of which develop into partnerships over time:

> There was a guy who had invented a logistics app and applied for funding. I pointed out that there were [a professional group] missing from the app. He said that they had not gone digital yet, so he could not reach them. Then a [member of the professional group] also applied for funding, for a different project, and I called him and said, 'this is all crap this application, I cannot fund you, but you know, they say that your industry does not even have websites'. --- Then he invited me to their Christmas party to give a speech. I went there and said, 'now that you have had your morning beer, I will talk straight to you'. I did not get far with my presentation when they started talking with each other, which is a good sign. Then there were angry questions and the third wave when they started asking 'how do we get money?' I hope this pushes them forward in the value network, that they find each other and can provide the needed services together. (Ministry 3)

Collaborative relationships may become competitive or vice versa, sometimes with the help of actions performed in mediative relationships (cf. Arenas et al., 2013). Thus, although the relationship categories appear simple and clear-cut, it should be noted that our typology is a simplification for the sake of presentation and comprehensibility, and the categories' boundaries are neither as simple nor as clear-cut as they seem.

Rather, the typology categorises the main relationships constituting the multi-stakeholder networks of key circular economy stakeholders and sheds light on how these relationships contribute to the circular economy.

Discussion

This study contributes to research at the intersection of stakeholder engagement, multi-stakeholder networks and circular economy by shedding light on the types of relationships that exist in the network of key circular economy stakeholders, and by highlighting how different relationships contribute to the circular economy transition. We found that directive relationships provide the foundation for a circular economy and that mediative relationships enable the broadening and deepening of the multi-stakeholder network. Directive and mediative relationships together lay the ground for the collaborative and competitive relationships that are central to implementing a circular economy.

The study also highlights the characteristics and benefits of the relationship types and the differences within a single type of relationship. For instance, to understand the nature and importance of directive relationships, it is useful to understand their two sub-types, that is, regulative and steering relationships. While many of the directive relationships are regulating, with a one-way flow of communication and dependency, there are also directive relationships that invite participation or even enable negotiation, here labelled steering relationships. Similarly, this study highlights that collaborative relationships vary from relatively loose, temporary interactions to close partnerships. Collaboration for advocacy refers to relationships with a shared purpose, although they are looser and often temporary. Knowledge sharing requires trust and closer engagement, while partnering is the tightest form of collaboration, wherein partners combine their resources and competences to create value together (Austin & Seitanidi, 2012; Myllykangas et al., 2010).

As a second contribution, this study highlights the central role of directive relationships in a multi-stakeholder network advancing a circular economy. Although relationships that are obligatory and based

on institutionalised roles and responsibilities are typically not the focus of stakeholder engagement literature, this study's findings highlight their importance. In addition to regulating and steering stakeholders' actions, directive relationships are a central means of influencing the political, legislative and infrastructural environments.

This study's third contribution is that it raises the fact that mediative relationships are often formed around various types of organisations, whereas previous studies have highlighted the role of intermediaries, that is, those actors who have been assigned to intermediary roles (Kivimaa et al., 2019; Van Lente et al., 2003). Mediating action has been found useful in transforming conflicting relationships into collaborative ones (Arenas et al., 2013). This study confirms the important role of mediative relationships in the promotion of a circular economy, particularly in terms of networking, facilitating discussion and aligning views, and providing resources (Kundurpi et al., 2021). Based on our findings, facilitating relationships are often oriented towards social interactions such as learning, sharing knowledge and connecting stakeholders, while coordinating relationships are more technical and contribute to establishing or maintaining value networks. Mediative relationships also contain what Van Lente et al. (2003) call relationships with a systemic approach, which contribute to articulating societal needs, involving many stakeholders and aligning various perspectives.

Fourth, our findings complement Kujala and Korhonen's (2017) findings in suggesting that mediative relationships have an important role in enabling stakeholders to identify joint interests and objectives, which is the first step in building value-creating stakeholder relationships. This study also confirms previous findings that the ability to collaborate as well as the establishment of clear roles and objectives are characteristic of collaborative relationships (ibid.). Additionally, this study complements previous findings (ibid.) by raising the fact that partnerships require complementary skills or resources, reciprocity and high levels of trust and openness in order to become synergistic and enable shared value creation.

To conclude, this study contributes to research on stakeholder engagement in the circular economy (Gonzalez-Porras et al., 2021; Marjamaa et al., 2021) by shedding light on how circular economy stakeholders are

connected and how these connections promote the circular economy. Each type of relationship has its role in accelerating the transition and, thus, is worthy of future study. Formulating a typology of relationships in a multi-stakeholder network has resulted in an overview of these relationships; by consequence, it has not been possible to pay attention to all the particularities, complexities and interdependencies that exist within the stakeholder network, which is a limitation of this chapter. This typology, then, is a simplification, and captures some shared characteristics of and differences between the relationships.

This chapter focuses on how different relationships accelerate the transition to a circular economy and, therefore, potential challenges and discrepancies in stakeholder relationships have not been discussed. This limitation points to a potential future research avenue, which is to explore, in particular, those issues in stakeholder relationships that may delay and hinder the adoption and implementation of a circular economy. Additionally, as the focus, here, has been on the typology of relationships among circular economy stakeholders, an analysis of the more specific content of relationships within one relationship type would provide a more fine-grained understanding of how the stakeholders are connected to one another. Similarly, it would be valuable to study the characteristics and activities of the stakeholders involved in the different types of relationships.

Moreover, as typical for case studies from one particular context, the context of this study is one of its limitations. Although Finland as one of the leading circular economy countries is an interesting context for research, the findings from this study cannot be directly applied to other contexts. Therefore, it would be important to study stakeholder relationships in other countries, similarly as in other empirical contexts, where stakeholders come together to promote a joint objective.

Conclusions

The aim of this chapter was to explore relationships among the key circular economy stakeholders in Finland and discuss how these relationships contribute to transitions towards a circular economy. We identified

four types of relationships that are directive, mediative, collaborative and competitive and discussed their purposes, characteristics and the activities through which they are maintained. Directive relationships provide a foundation for activities in the collaborative and competitive relationships, while mediative relationships are necessary to initiate and provide a ground for collaboration. Much of the core activities of the multi-stakeholder network take place in collaborative relationships, even in collaborative value networks consisting of several organisations. However, forming of collaborative relationships often requires interactions through other types of relationships, particularly mediating relationships and directive relationships. In addition, despite the shared interest in promoting the circular economy, the stakeholders do not only interact with each other in a collaborative manner, but also relationships based on competition and those based on directive roles and responsibilities exist. All the relationships contribute to the transitions to the circular economy, albeit in varying ways.

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6

Developing a Participatory Approach to Support Decision-Making in Waste Management

Lauri Kujanpää and Hanna Pihkola

Introduction

Despite ambitious policies and tightening recycling targets, waste management in Europe continues to face big challenges in a move towards a more resource-efficient and circular economy. In 2018, 37.9% of all waste streams that were treated in Europe were recycled, and 45.4% were either disposed of in landfills, incinerated without energy recovery, or disposed of otherwise (Eurostat, 2021). Although the share of treated and recycled waste has increased, and the amount of waste sent to landfills has decreased, the total amount of waste generated in Europe has not decreased. This increases the importance of waste collection. A collection network is essential for obtaining waste that is clean enough for recycling purposes (Laaksonen et al., 2018). Although waste collection has a limited ability to solve the waste problem as a whole, efficient collection enables resource savings and is necessary for achieving the recycling

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targets set out within the European Action Plan for Circular Economy (Tallentire & Steubing, 2020).

The waste management value chain is a multi-stakeholder network that consists of municipalities and other authorities (such as different city departments), policy makers at European, national and local levels, public and private waste management companies, transport companies and waste producers (companies, citizens), producer responsibility organisations, recyclers and users of recycled raw materials. Most of these actors are driven by the shared goal of achieving European waste recycling targets. As waste management and recycling value chains consist of several interlinked processes, co-operation between actors is necessary.

In a multi-stakeholder network, business and governmental institutions come together to find a common approach to an issue that affects them all (Roloff, 2008). According to Roloff (2008), actors of the network can work iteratively towards solving issues through deliberation. During deliberation, various interpretations and dimensions of the issues are discussed, and the stakeholders position themselves to learn the same language and, most importantly, form a shared understanding of the common goal of the network. Furthermore, alternative options to address the issue are defined, and decisions towards action are made during the deliberation phase (Roloff, 2008). Effective methods to manage stakeholder interaction during the deliberation phase are therefore needed.

This chapter presents an experimental testing of group-based multi-criteria decision-making (MCDM) method within the European waste management value chain. MCDM methods are structured, analytical methods that can be used to solve complex decision problems (Kiker et al., 2005). We propose and empirically test MCDM as a stakeholder engagement tool that could be used to facilitate the deliberation phase, which is essential for issue-based network building and management. The study is structured around two research questions:

1. What kind of needs related to stakeholder engagement exist in the studied multi-stakeholder waste management networks?
2. How can the methods of MCDM support the analysed multi-stakeholder network in facilitating the deliberation process?

We base our analysis on empirical data obtained from two workshops that were participated by 31 experts who worked with waste collection at the local or regional level and in producer responsibility organisations (PROs) around Europe. PROs take care of organising the mandatory collection and recycling of waste on behalf of product manufacturers. The motivation for the workshops was to create experience-based recommendations on how to solve persistent problems that cause poor performance in waste collection and recycling.

The first research question is addressed by analysing the findings from a decision-mapping workshop where the experts discussed typical processes, challenges, and actors involved in initiatives aiming to improve waste management at the local level. The second research question is addressed by applying the evaluation criteria proposed by Edelenbos and Klijn (2006) to the quality of discussions and the outcomes of a MCDM workshop.

The empirical findings from this study highlight that co-operation between actors in the waste management chain is considered important and necessary to improve recycling rates. Previous studies have shown how a lack of information, co-operation and knowledge exchange within the value chain is one of the bottlenecks currently hindering the move towards a more efficient recycling and circular economy (Bachér et al., 2018; de Jesus & Mendonça, 2018). However, waste management experts who participated in the study acknowledged co-operation as a challenging topic. The need for contributions from a wide group of actors calls for better ways to manage the interaction of the stakeholder process (Soltani et al., 2015) in the waste management network. Actually, how a stakeholder dialogue is managed or facilitated in a decision-making situation can have the most influence on whether the outcome of the discourse is reasonable or has an impact (Edelenbos & Klijn, 2006). Practical tools for managing stakeholder engagement during the decision-making process are required (Kujala & Sachs, 2019).

In the following sections, we start by presenting the theoretical framework of the MCDM methods and multi-stakeholder network processes and position our study in relation to stakeholder engagement. In the next section, the workshops and the applied participatory MCDM method are described. After that, the findings are presented in two distinct

subsections addressing the two research questions and the two workshop settings. The discussion and conclusions are presented in the two final sections of the chapter.

Theoretical Framework

We analyse our empirical MCDM approach against a theoretical framework that consists of the MCDM approach and selected frameworks from stakeholder engagement and multi-stakeholder networks literatures. This allows us to highlight similarities between the approaches and conceptualise the waste management value chain as an issue-based multi-stakeholder network. Furthermore, we aim to assess how well the tested MCDM method could support the analysed multi-stakeholder network in defining its goals and approaches and selecting appropriate action for increasing recycling rates.

Multi-Criteria Decision-Making (MCDM)

Developed since the 1970s, MCDM is a family of methods from the field of operations research designed to solve multifaceted and complex problems by decomposing them to manageable pieces and establishing the overall value, ranking, or trade-offs between alternative actions (Dyer & Sarin, 1979; Keeney & Raiffa, 1994; Köksalan et al., 2011). The methods commonly incorporate a definition of a goal, alternatives to choose from, and a set of evaluation criteria, which can be considered pre-requisites for informed decision-making (Fig. 6.1). Using MCDM, different dimensions, such as environmental and economic impacts that are important for the decision-making context, may be considered and evaluated one at a time. Applying the methods in group decision-making situations, opinions from several decision makers who possibly have different values and preferences can be collected and included in the decision. A widely used and perhaps best-known MCDM method is the analytical hierarchy process (AHP) presented by Saaty (1980).

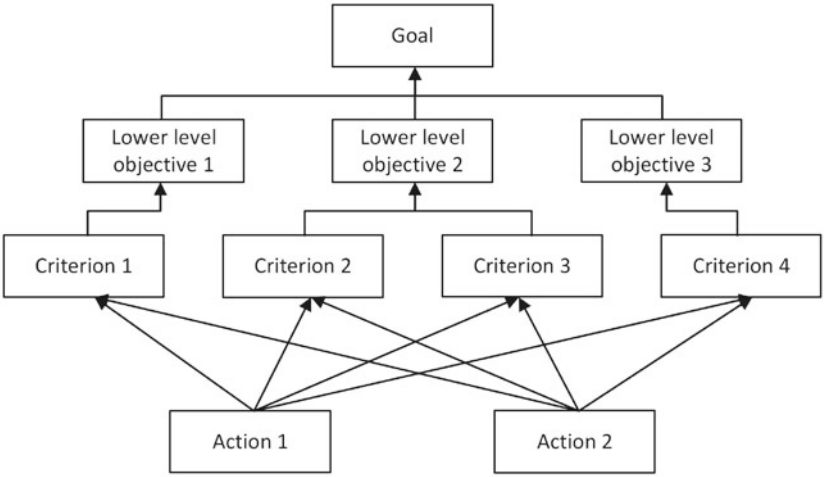

Fig. 6.1 An illustration of a decision problem in the form of a decision tree

The development and use of different kinds of decision support tools and modelling frameworks for the purposes of waste management have been a popular research topic in recent decades. In their review of available waste management models, Morrissey and Browne (2004) indicated that the first modelling studies date back to the 1970s. Whereas these optimisation studies considered issues such as vehicle route optimisation, recent studies aim at holistically evaluating the sustainability of alternative waste management strategies and cover different aspects of sustainability, sometimes also addressing stakeholder needs (Achillas et al., 2013; Morrissey & Browne, 2004).

The first actual MCDM studies related to the management of municipal solid waste were published in 1991 (Achillas et al., 2013). Recent reviews highlight how the use of MCDM methods in the context of waste management is becoming more popular, and the number of studies published in scientific journals is increasing (Achillas et al., 2013; Goulart Coelho et al., 2017; Soltani et al., 2015). This is most likely due to increasing interest in the sustainability of waste management, introduction of the circular economy concept, and the tightening regulatory demands related to recycling.

Although the development of quantitative models has been central to MCDM, mutual benefits from the inclusion of stakeholder management within MCDM approaches have been highlighted before (Banville et al., 1998). In their conceptual paper, Banville and colleagues (1998) proposed that both MCDM and stakeholder management aim at allowing the consideration of multiple points of view, and could thus significantly complement each other. Stakeholders can be involved in many ways within a MCDM approach. Although most studies somehow acknowledge the role of stakeholders in the MCDM process, it has not been very common to use stakeholders as active participants in the MCDM process but rather in a narrower role as input providers (Soltani et al., 2015).

Stakeholder Engagement in Multi-Stakeholder Networks

In this chapter, we define stakeholders as "those who are both affected by and affecting the problem, and are, at the same time, participating in the process of formulating and solving it," according to a definition proposed by Banville et al. (1998, p. 18). This definition is close to the one proposed by R. Edward Freeman, who defined stakeholders from the point of view of an organisation as "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Freeman, 2010, p. 46). Our focus is especially on stakeholders who participate in the process of waste management, address related problems and have a clear role in solving them. Our study was conducted in a multi-stakeholder setting using a problem-based approach, as defined by Rühli et al. (2017), based on the works by Hemmati (2002) and Gray and Stites (2013). From the point of view of stakeholder engagement literature, the focus of the study is on integrative stakeholder engagement (Kujala & Sachs, 2019), taking a problem focus rather than the point of view of individual organisations. The study had a strong pragmatic aim in promoting collaborative activities within the waste management value chain and thus promoting societal change (see Kujala et al., 2022). Both the research approach and the findings from the study are characterised

by context-dependent problem-solving and decision-making, which are typical for the pragmatic stakeholder engagement, as described by Kujala et al. (2022).

In this study, we experimentally tested and evaluated the use of MCDM workshops to support the deliberation phase in an issue-based multi-stakeholder network in the context of waste management. Previously, Heikkinen (2017) used the lifecycle of an issue-based network to analyse stakeholder co-operation and engagement in the context of climate change mitigation. Roloff (2008) described the lifecycle of an issue-based multi-stakeholder network in four phases: (1) initiation, (2) deliberation, (3) action and (4) institutionalisation or extinction, which are further described in Table 6.1.

Combining the Two Approaches

The generic process of applying MCDM for problem definition and evaluation seems highly compatible with the deliberation phase, including its purpose and challenges considering the dialogue, creation of mutual trust and establishing the legitimacy of the eventual decisions. The outline of the deliberation process is compared side by side with a participatory MCDM process in Table 6.1. As Roloff (2008) did not propose a method to facilitate deliberation, it is interesting to assess whether the interaction of the stakeholders could be efficiently structured and facilitated using MCDM methods.

In this study, we experimentally tested and evaluated the use of MCDM workshops to support the deliberation phase in an issue-based multi-stakeholder network in the context of waste management. Previously, Heikkinen (2017) used the lifecycle of an issue-based network to analyse stakeholder co-operation and engagement in the context of climate change mitigation. Roloff (2008) described the lifecycle of an issue-based multi-stakeholder network in four phases: (1) initiation, (2) deliberation, (3) action and (4) institutionalisation or extinction, which are further described in Table 6.1.

Using MCDM for stakeholder engagement to discuss, compare and generate solutions to a shared problem has many similarities with

Table 6.1 Positioning a participatory MCDM process in line with the main phases of an issue-based multi-stakeholder network by Roloff (2008)

1. Initiation of multi-stakeholder network: The network is formed around an issue that requires attention. There are initial discussions around the issue or a problem		
2. Deliberation	Deliberation process in issue-based multi-stakeholder networks:	A participatory MCDM process in the context of multi-stakeholder networks:
	Acquaintance phase: Stakeholders discuss their views and positions, learn common language and interpret the problem	Problem definition stage: The stakeholders form a shared understanding of the situation, including the roles and positions of the stakeholders and the state of the target issue. The group negotiates and agrees the structure of the problem: • Definition of the overall objective • Definition of lower-level objectives that describe different dimensions of the goal • Defining criteria that describe performance within each lower-level objective
	First agreement phase: Agreement on the problem definition, including goal definition	Data collection stage: The stakeholders agree either based on external assessment or as ad-lib judgement the: • Set and definitions of the alternative actions • Performances of the actions in each criterion

	Second agreement phase: Comparison of alternatives to select the approach for implementation	Decision-making stage: According to the applied MCDM method and facilitation, the stakeholders state and discuss their preferences affecting the results of the assessment. The main steps are: • Selection of MCDM method • Elicitation of stakeholders' preferences according to the selected MCDM method(s) • Ranking the alternatives according to the MCDM method. • Agreement on the best action(s)
3. Action: After implementation, the network may consolidate, reform or expand and return to deliberation of further actions		
4. Institutionalisation or extinction of the network		

the interactive decision-making as described by Edelenbos and Klijin (2006), who used network theory to conceptualise stakeholder management in interactive decision-making processes. Edelenbos and Klijin (2006) described interactive decision-making as an open procedure that attempts to incorporate the values and wishes of the participants in the solutions that are developed during the interactive process. From the network theory perspective, the interactive process includes the participation of actors who are tied to each other by dependency relations. The outcomes of the interaction are shaped by the management of the process and the complex games of influence and interaction between the actors. Based on our empirical experience, this description is applicable to the context of waste management, in which our experimental testing was conducted.

Research Design

The empirical data discussed and assessed in this chapter were collected from two expert workshops organised in 2019. During both workshops, the majority of time (of the two-hour sessions) was allotted for discussion and for collecting the views and arguments of the participants. Thus, the participants had a chance to learn from the responses of others, and exchange ideas of good practices. The authors of this chapter acted as facilitators in both workshops, and thus were actively involved in the analysed exercises. The research approach, applied methods and participants of the two workshops are presented in the next section and in Table 6.2. A description of collected and analysed data is also given in Table 6.2.

Workshop I: Mapping Decision-Making Processes for Developing Waste Management

The workshop I was organised in Thessaloniki and it focused on decision-making challenges in the context of waste management. Ten experts representing nine different European countries and regions

Table 6.2 Organised expert workshops, applied methods and collected data

Workshop date and place	Discussed waste streams	Applied methods	Aim of the workshop	Attendees
21.11.2019 Brussels	WEEE	MCDM: Pairwise comparisons using AHP and SWING weighing	Proposing and prioritising means & criteria for improving WEEE collection in two regions	21 WEEE Forum members from 10 countries
10.12.2019 Thessaloniki	PPW, CDW & WEEE	Decision-mapping + group discussions	Discussing typical decision-making processes, challenges and involved stakeholders in improvement initiatives	10 waste collection experts from 9 countries

(Belgium, Norway, the UK, Romania, Portugal, Spain, Italy, Greece, and Poland) participated in the workshop, and eight decision-making processes were presented and discussed.

The workshop included a decision-mapping exercise in which the participants drew maps about a decision-making process with which they were familiar. The presented decision-making processes included (for example):

- Reorganising the collection of municipal solid waste (MSW) and paper and packaging waste (PPW) and agreeing on the division of costs between the actors.
- Organising locations for urban composting to separate biowaste.
- Reorganising PPW collection to increase recycling rates.
- Introducing a new fee for collection and treatment of municipal waste.
- Establishing a new civic amenity site and organising the necessary infrastructure for waste collection, sorting and treatment.

The participants were asked to describe the main phases related to this decision process and to name the actors involved in each phase. They were also asked to describe the main challenges related to the process.

The results were gathered based on a mixed method that included the participants' observations, the drawings prepared by the participants and the discussion held during the workshop. The main findings from this workshop are discussed in the first subsection of the findings.

Workshop II: A Participatory MCDM Exercise

A participatory MCDM approach based on the analytic hierarchy process (AHP) (Saaty, 1980) was tested in a workshop in which experts discussed their ideas of actions to improve the collection of waste electrical and electronic equipment (WEEE). The workshop was organised in Brussels together with WEEE Forum, an international association representing 40 producer responsibility organisations. Participants in the workshop consisted of 21 WEEE Forum members from ten countries (France, Romania, UK, Portugal, Greece, Czech Republic, Malta, Norway, Luxembourg and Belgium).

There are large differences among existing collection systems and the amounts of WEEE currently collected for recycling in different regions. To create a meaningful discussion, two parallel groups were organised, and the participants were asked to take part in a group in which the local context seemed most familiar to them. The first group considered potential means for improving WEEE collection in a small city located in a rural area. The second group proposed options for improving WEEE collection in a large, densely populated city. Both regions had low collection rates in relation to average collection rates across the EU. Case descriptions were formulated based on information available in a public database describing over 200 existing European waste collection systems. No information other than the case region descriptions was available for the experts. Therefore, the proposed actions, evaluations and priorities were solely based on their individual expertise, judgement and interaction.

Both groups had two hours to complete the exercise. We recognised that the use of pairwise comparisons in the selected MCDM method would restrict the number of improvement options that could be discussed during the workshop, due to the amount of time that would be

needed for the comparisons (prioritising each option in relation to each criterion). Therefore, we planned that the participants would define 3–4 actions that they considered had the most potential to improve collection rates in their case region. Further, the participants defined a similar number of criteria that could be used to evaluate the importance and prioritise the proposed improvement actions.

AHP was chosen because the workshop was designed to act as a simulation of an early-stage assessment of improvement alternatives prior to the availability of comparable data on potential improvement options. In other words, the shared goal and best actions were intended to be created during the interaction. In addition to being among the most popular methods of multi-criteria decision-making, previous experience has shown how AHP was successful in promoting discussion between experts in the recycling value chain (Bachér et al., 2018). Upon agreeing on the set of improvement actions and the evaluation criteria, the groups were asked to make a round of pairwise comparisons using the AHP. In the pairwise comparisons, all the improvement actions were compared against each other, two at a time, in terms of how well they performed in each criterion. For example, option "Organising awareness raising campaigns" was compared against option "Increasing permanent bring-points," considering how much they would improve collection rates (criterion). The comparisons were made using the fundamental scale of AHP (Saaty, 1980), with a range of 1 (the options perform equally well) to 9 (one option performs extremely better than the other).

The voting was open, and the experts were asked to contest their arguments within the group during the voting. We devised the elicitation procedure so that the experts had to present their scores on a paper sign for others to see and react to. By doing so, the group also better shared, through discussion, their linguistic interpretations of the evaluation scale.

After pairwise comparisons of alternatives, the criteria weights were elicited. The criteria weights indicate the importance of each evaluation criterion, and they were used as factors together with the AHP results to calculate the final scores of the WEEE collection improvement options. The criteria weights depended on the individual preferences of the group members, but were possibly also influenced by the perceived differences in the reliability of the pairwise comparisons under the criteria. This

was incited by eliciting the criteria weights after pairwise comparisons in AHP. The criteria weights were elicited using the SWING method, as time constraints did not allow for carrying out pairwise comparisons between the criteria, according to the AHP method. In the SWING weighting method (Zardari et al., 2015), the experts/decision makers assign a value of 100 points to the most important criterion. Then, they give the next most important criterion an importance of equal or smaller than 100 points, the third most important criterion an importance equal or smaller than the second criterion, etc. This continues until they arrive at the least important criterion, which is assigned an importance equal to or higher than zero.

Discussions held during the workshop were recorded and transcribed. All the answers were implemented in a spreadsheet tool during the exercise to display the results to the participants. After the workshop, the qualitative data was analysed, considering the interaction between participants during the exercise, how actively the participants were involved, and whether they seemed content with the actual outcome of the MCDM and how the exercise was conducted.

To reflect upon the outcomes of our decision-making experiment, we adopted the framework used by Edelenbos and Klijn (2006). In their framework, the evaluation is based on actor contentment and enrichment of ideas, including the variety of created ideas and the influence of the ideas on the eventual concrete outcome. The assessment of perceived actor contentment is based on our interpretation of the satisfaction of the decision makers at the end of the session. We take into consideration any direct feedback received after the session and critique on the scores and priorities of the evaluated actions resulting from the MCDM. We analyse the variety of ideas during the stakeholder dialogue in terms of activity in the debate, differing views and ideas and finally did the stakeholders come up with solutions that were not mentioned during the briefing on the current status of the two case regions. Finally, we assess the influence of ideas based on how successful the groups were in establishing a clear priority order for the actions. The main findings from the decision-making workshop are discussed in the second subsection of the next section.

Findings

Waste Management Value Chain as an Issue-Based Multi-Stakeholder Network

During the decision-mapping exercise (Workshop I), European recycling targets were frequently mentioned as important drivers for implementing changes in existing waste collection systems. Consequently, increasing collection or recycling rates was among the main targets of the discussed decision-making processes. However, in addition to European legislation, other drivers, such as new ideas originating from local waste management companies, the citizens, or other local actors, were highlighted. For example, it was mentioned that the increased interest of citizens in improving waste sorting sometimes initiated the process of change or speeded up the planned changes.

The described decision-making processes involved several actors: municipal actors (different city departments), public and private waste management companies, ministries, local policy makers, PROs, NGOs, transport companies and citizens. For example, when trying to find a location for a new civic amenity site or sorting centre (to improve sorting and reduce landfilling), there is a need to find a suitable location that would be accepted by the different departments of the city, and by the nearby residents and companies. Issues related to the availability of the service (transport and logistics) need to be considered, and permits related to environment, health and safety have to be acquired. The availability of necessary trucks and other equipment must be ensured by discussing and negotiating with potential service providers and contractors.

According to the experts, the main challenges related to the decision-making processes discussed were:

- Understanding and defining the problem: How the problem should be addressed, what kind of options are available, and where/how to find all necessary information.

- Coordinating activities: Reaching consensus and 'speaking the same language' with different actors (including different municipal actors/authorities but also PROs, and private companies involved).
- Engaging with citizens and other actors related to the process.
- Implementing the decisions in practice and finding practical ways to monitor the performance.

Thus, many of the discussed challenges faced in the context of waste management were related to different phases of deliberation: the acquaintance phase and the first and second agreement phases. Although the goal of the network seemed to be common for many of the actors, the process was usually complicated by the fact that, in addition to the joint issue or problem, different actors have multiple other goals (such as optimising costs) that need to be negotiated during the process. There might also be conflicting regulations or unclear responsibilities between different city departments that could hinder the process.

The need for practical tools that could be used for facilitating and structuring different phases of the decision-making process and for engaging with stakeholders was highlighted during the workshop. Collecting feedback and reaching consensus between different actors were considered challenging and often laborious but important. The experts emphasised that a lot of time is spent getting the participants to speak the same language. This challenge is closely linked to the acquaintance or problem definition phase: how the different actors interpret the problem, what kind of changes would be required in the activities of each organisation, and who will need to pay the costs.

In a nutshell, the findings from the workshop illustrate in practice how an issue-based multi-stakeholder network should be formed when planning or implementing changes in waste collection. This is necessary, as proper functioning of the value chain and finding acceptable solutions require co-operation between several actors, including both public and private organisations and citizens. The length of the decision-making processes discussed during the workshop varied from months to years. Although the focus of the discussions was related to the deliberation phase, in most cases, the network should also continue its operation after the deliberation and action phases for the proper functioning of the

value chain and to achieve the original target of the network (reaching the European recycling targets). In an ideal case, the network would be institutionalised in one way or another for the purposes of monitoring the performance, and making further adjustments in order to ensure reaching the targets.

Structured MCDM Workshops as Practical Tools for Deliberation

Actor contentment. None of the participating experts expressed disagreeing opinions about the results of the decision-making exercise, that is, a priority order of ideas/actions to improve local WEEE collection. Such a level of consensus was not taken as granted, as there were contrasting views in the beginning when the set of alternative actions was proposed. For instance, one expert coming from a similar region as the small case city, who was very active in the discussion, criticised the inclusion of "awareness-raising campaigns" by stating such effort was outdated and inefficient use of funds, whereas other experts had a completely opposite view about the importance of such action. The debate continued when the action was pairwise compared with other actions regarding the criteria (i.e., the cost of WEEE collection, climate impacts, collection increase and increase in local employment and GDP).

The results eventually indicated that "awareness-raising campaigns" were among the four potential actions to improve the WEEE collection in the case region, but it had the lowest priority based on the criteria. This indicates that the applied approach can increase the legitimacy of the decision by allowing the stakeholders to present, discuss and contest individual viewpoints during the deliberation. This may indicate that the experts who believed in the impact of awareness-raising campaigns were sufficiently content that the action made it to the shortlist or that their estimate of the anticipated performance of such actions was lowered based on the negative feedback on the action. However, the expert who did not wish to shortlist such action may have been content that it was given the lowest priority in the end.

Other contrasting views were revealed during the pairwise comparisons of the actions, particularly concerning enforcement of better practices to avoid processing of WEEE through illegal channels. The experts presented opposite views when comparing an increase in permanent WEEE collection points against enforcement of better practices to avoid WEEE processing through illegal channels. Here the discussion revealed interdependencies between the actions, as enforcement of better practices might be inefficient without adequate number of WEEE collection points. When comparing the enforcement of better practices, which was interpreted as surveillance and required interventions by authorities, to "defined single channel regulated collection," the experts debated if some of the responses were based on experiences from conditions too dissimilar to the case region.

In the reported situation, sufficient deliberation and facilitation fostered a dialogue in which the disagreements were already processed during the phases of the MCDM prior to the ranking of the alternative actions, that is, during problem definition, definition of the set of alternative actions and when the stakeholders' preferences and judgement were elicited.

The outcomes were formed as a result of intensive and goal-oriented exchange of views, which likely fostered a shared acceptance of the results, which we (for lack of a better measure) take as an indication of actor contentment. The direct feedback received from the experts included statements regarding the intensity or exhaustiveness of the exercise but also positive statements about its usefulness. One participating expert indicated an intent to transfer and use the method in another setting.

Enrichment of ideas. During the intensive two-hour workshop, the participants became familiar with some basic ideas of the MCDM methodology and backed their views by the experiences of their own countries and regions, thus creating knowledge sharing. Individual contributions varied among workshop participants, and some of the participants took on a more active role in leading the discussion and asking questions from others. In particular, those with experience in WEEE management in circumstances reminiscent of the case region actively proposed solutions and commented on others' ideas. However,

as the method required each participant to give their answers to each question, everyone was given the opportunity to explain their choice. Arguments against and in support of the presented views were abundant. Further, there was a vivid discussion and exchange of experiences, turning the session into a dynamic learning activity for participants and facilitators. The topics of the discussions also revealed differences in the regional, legal and demographic contexts in which the experts were working.

The experts were very active in providing WEEE collection improvement ideas. The ideas were often based on the personal experiences of the experts, which although might indicate that the answers were biassed towards solutions and perceptions that were most familiar to the experts and less applicable to the case region, promoted knowledge exchange as the experts were from various countries and had their work histories in different regional contexts. The experts even accused each other of such a bias during one pairwise comparison. The experts assessed the status quo of the case region's WEEE collection, including the number and type of bring points, and proposed adjustments. The additional three improvement ideas in both groups were related to actions that were not touched upon in the initial description of the case region and were therefore not incremental changes to the collection system but completely new types of initiatives.

The two parallel groups working on the two case regions were successful in generating a set of ideas (about applicable improvement actions) that were sufficiently accepted by the group of experts, agreeing on a set of evaluation criteria and finally creating a priority order for the actions. In both groups, the experts were able to differentiate the potential performance of the actions according to the evaluation criteria. The final results showed a clear priority order for the actions based on their expected overall value. In addition to having a say on the problem definition, the experts were able to influence the opinions of their peers through argumentation, and there was an active exchange of views on the responses given on the evaluation scale. Due to the two-hour limitation of the duration of the dialogue, however, many of the debates were left open and unfinished. To sum, we believe the experts perceived that their ideas had a direct influence on the results, increasing the legitimacy

of the outcome, as reflected in a high level of agreement regarding the results.

Overall judgement. In the designed workshop setting, the AHP functioned as a method for contesting the individual ideas and views of the decision makers. The structure of the approach, from the definition of alternatives and criteria to pairwise comparisons and criteria weighing, was applied in practice without problems. However, it took some time before the participants understood the logic of the exercises. One of the challenges was that no screen was available during the discussion, and thus the participants could not see the evaluation matrix, as it was only included within the laptop of the facilitator, who inserted the answers within the matrix. However, the participants could see the answers of other persons when sharing the results (scores from 1 to 9) on a post-it note. This provoked many questions and discussions, especially when the opinions were very much divided. This also highlighted how, due to varying regional circumstances, the participants sometimes came up with very different prioritisations, which were also accepted after each participant presented their argument.

The workshop was characterised by lively conversations and assessments of ideas, which stayed quite well within the context of the case region. Initial difficulties in carrying out the pairwise comparisons were experienced, which was alleviated by improving the definitions of the criteria and practising the procedure. The focus of the process management changed multiple times during the workshop. The focus was first on keeping track of the ideas and conversation, then on ensuring the functionality of the criteria, and finally on the execution of the MCDM methodology.

The duration of the workshop was limited to two hours, which necessarily narrowed down the scope of the assessment. Based on the workshop experiences, it is possible to perform a simple MCDM in a rather short time slot. However, perhaps half a day would be a more suitable duration, as it would allow for some iterations during the exercise.

The pairwise comparisons of the proposed actions were difficult to initiate. The accurate definition of performance parameters, such as cost

per tonne of WEEE collected, often needed to be brought to the attention of the decision makers. The decision makers commented on the challenge of incorporating local situations, such as the scale of collection, into their estimates of the performances. In the end, we do not know the extent to which the decision makers' answers were based on intuition affected by fundamentally different local situations. In the context of waste management, practical decision-making is often affected by a lack of measured data related to created, collected and recycled amounts of different waste fractions. This is a particular challenge, especially in the case of WEEE, since significant amounts of old equipment have unknown fates.

Discussion

In this chapter, we have proposed and empirically tested a group-oriented MCDM approach to support interaction and deliberation in a multi-stakeholder network in the context of waste management. Our experimented approach bears resemblance to the proposed use of multi-criteria decision analysis for strategic decision-making by Montibeller and Franco (2010). Our findings highlight how decision-making in waste management value chains requires establishing an issue-based stakeholder network to reach consensus and find practical solutions for challenges related to both the collection and recycling of different waste fractions. This topic is particularly relevant in the context of waste management, as tackling the challenges related to waste prevention, collection and recycling is necessary for a move towards a circular economy and requires co-operation between various public and private stakeholders. Almost every region in Europe is currently facing these challenges.

We have further presented how the decision-making approach using MCDM has considerable similarity with the deliberation stage of an issue-based multi-stakeholder network, as described by Roloff (2008). Although Roloff (2008) provided an elaborated description of the stages and related challenges, practical solutions for managing and facilitating such processes were not proposed. Our work aims to complement the

literature on the management of such stakeholder processes by experimenting in practice on how MCDM workshops could provide structure to the deliberation stage, in which shared understanding should be created and best actions selected for implementation.

Edelenbos and Klijn (2006) showed how facilitation of a decision-making process may have significant impacts on the outcomes of the process. The terms "width" and "depth" of participation are used to describe how much actors are included and how much impact the actors are allowed to have on the decision-making process (Edelenbos & Klijn, 2006). In traditional MCDM studies, both the width and depth of participation may be limited to providing answers to pre-defined questions that are used for weighting the criteria and consequently for ranking the assessed alternatives in the order of preference. However, the participatory MCDM approach using the AHP method, as presented in this chapter, aims at increasing both the width and depth of participation while following a structure that ensures that the voice of each participant is included in the final decision.

Our findings support the idea that the structured and facilitated workshops promote both a shared understanding of the issue and a consensus on the appropriate actions to solve the issue. Moreover, they provide enrichment of ideas (Edelenbos & Klijn, 2006) by requiring all the attendees to participate in the dialogue. The process needs to be carefully designed and adapted to the case at hand to yield successful outcomes. The need for structured analysis may also feel burdensome for the participants. At worst, systematic pairwise comparisons can create a feeling of repetition and make the process look rigid. Although these problems were certainly encountered during our experiments, we were able to provide enrichment of ideas by flexible but reasonably formal (Edelenbos & Klijn, 2006) management of the expert dialogue.

There is room for further research and development of the methodologies, and there may be many adaptions of MCDM to support multi-stakeholder processes. Here, we have experimented with group-based MCDM in a single workshop (with two parallel groups) to demonstrate its potential to aid in the deliberation of goals and selection of appropriate actions. In reality, the approach might be adapted in sequences over the course of time or repeated iteratively in various stages of the deliberation.

Limitations of the Study

The experimental part of our study consists of discussions and interaction with European experts from the field of waste management. As an inherent quality of such research setting, the outcomes are case and context dependent. In addition, the composition of the group of participants affects the outcome. Our experiment did not yet include other stakeholders than those working with waste management. Conducting a similar exercise in a specific local context with a more heterogeneous group of stakeholders could reveal different kinds of challenges that might be related to conflicting interests of stakeholders, for example. More studies would be needed to understand better the potential challenges related to facilitating such a process.

Conclusions

Waste collection and recycling are essential processes in a move towards more circular use of resources. Necessary co-operation in waste management value chains can be enhanced by setting up an issue-based stakeholder network. Such a network can enable reaching consensus and finding practical solutions for challenges related to both the collection and recycling of different waste fractions. Based on the findings of our study, we conclude that participatory MCDM approach could be used as a tool for pragmatic stakeholder engagement, especially in situations when there is a need to prioritise actions or to reach consensus. Decision-making approach using MCDM has considerable similarity with the deliberation stage of an issue-based multi-stakeholder network. Structured and facilitated MCDM workshops can promote both a shared understanding of the issue and a consensus on the appropriate actions to solve the problem. Applying MCDM in practice requires careful planning and preparations, but the formal structure of MCDM ensures that the voice of each participant is included in the final decision.

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7

How to Engage Stakeholders in Circular Economy Ecosystems: The Process

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Introduction

Recently, stakeholder engagement has been proven to be necessary for a circular economy (CE) (Kujala et al., 2019; Marjamaa et al., 2021). A CE is a novel economic model that promotes sustainability principles by reducing the use of natural resources and waste generation (Ghisellini et al., 2016). Stakeholder engagement offers a useful lens for investigating how diverse stakeholders with differing interests can engage in CE goals (Kujala et al., 2019; Marjamaa et al., 2021; Salvioni & Almici, 2020). Although previous researchers on stakeholder engagement

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have investigated different engagement practices (Kujala & Sachs, 2019), theorisations and visualisations of how these practices are implemented over time in stakeholder engagement processes are scarce (see Lane & Devin, 2018) and conducted mainly in the field of environmental management and environmental policy research (Kujala et al., 2022). However, better understanding of stakeholder engagement processes, particularly in the CE context, is critical to effectively and strategically manage stakeholders, step-by-step, to achieve CE system-level goals. Understanding the necessary engagement practices and how they unfold throughout the stakeholder engagement process for achieving CE goals requires studying stakeholder engagement processes within and across specific industries, geographic areas, and contexts (Kujala & Sachs, 2019; Sloan, 2009; Sulkowski et al., 2018), and particularly in CE ecosystems owing to their systemic nature (Aarikka-Stenroos et al., 2021). Accordingly, our research objective was to investigate what kinds of processes engage stakeholders in a CE system-level goal in different CE ecosystems.

To understand how to manage stakeholders to achieve CE system-level goals, this chapter presents an ambitious effort to combine two complementary theoretical perspectives on stakeholder interactions: stakeholder engagement and ecosystem approach. First, stakeholder engagement refers to a process involving various practices that enhance understanding and alignment between a company and its stakeholders as they pursue common interests together (Andriof & Waddock, 2002; Kujala et al., 2019; Lees-Marshment et al., 2020). To highlight the process perspective, we explicitly discuss the stakeholder engagement process. Second, the ecosystem approach, a management research stream that considers business to be managed in evolving multi-actor systems, borrows the idea of biological ecosystems to examine the stakeholder interdependencies and interactions for a system-level goal in socio-technical settings, highlighting the co-evolutionary dynamics between stakeholders (see, e.g., Aarikka-Stenroos & Ritala, 2017; Aarikka-Stenroos et al., 2021; Thomas & Autio, 2020). Drawing from and merging stakeholder engagement and the ecosystem approach, we examined diverse stakeholders and their engagement in ecosystem settings. In particular, we are interested in CE ecosystems because increasing circularity of the system demands engaging diverse stakeholders that can affect or be affected by

the circular goal of a CE ecosystem, ranging from companies, industrial organisations, public and governmental organisations, universities, and non-profit organisations to consumer-citizen groups (Aarikka-Stenroos et al., 2021).

Stakeholder engagement processes in a CE often take place in complex CE ecosystem settings, in which, by definition, communities of hierarchically independent yet interdependent heterogeneous actors collectively pursue a sustainable system-level goal (Aarikka-Stenroos et al., 2021). With the ecosystem approach, we comprehensively capture the nuances of stakeholder engagement in practice beyond the dyadic or network settings (Freeman et al., 2017), where stakeholder engagement traditionally has been studied from the perspective of a focal organisation (see, e.g., Lane & Devin, 2018). The ecosystem approach completes the stakeholder engagement approach by highlighting the constant evolution, co-evolution, and dynamics in stakeholders' interdependencies between the complementary stakeholders and a system-level goal (Aarikka-Stenroos et al., 2021). The system-level goal is the overarching goal of the entire ecosystem, to which stakeholders contribute while their individual goals may be same, similar, or different to the system-level goal. A successful systemic change to CE goals requires considering and engaging diverse, complementary, and interdependent stakeholders. Therefore, adopting the ecosystem approach allows for building the understanding of the system in which such complementary actors pursue a CE system-level goal. Ecosystems can vary according to the present stakeholders, their relationships, and structures (Aarikka-Stenroos & Ritala, 2017), pointing to the need for differing stakeholder engagement processes. To apply the most effective stakeholder engagement processes in practice and thus develop CE ecosystems towards their CE system-level goals, it is crucial to uncover which CE ecosystem characteristics impact stakeholder engagement processes.

This chapter addresses the significant lack of case studies on the implementation of stakeholder engagement processes (Kujala & Sachs, 2019) by empirically investigating how stakeholders engage in a system-level goal in six Finnish CE ecosystems. Analysing each ecosystem's stakeholder engagement process unfolding through various practices at each

step of the process, we conceptualised four archetypes of the CE stakeholder engagement process. We propose a model that shows how these archetypes are present in different CE ecosystem settings, depending on the ecosystem structure and alignment of stakeholder interests with achieving the CE system-level goal. To stakeholder engagement research, we contribute empirically based insights into how stakeholder engagement processes unfold in complex systemic settings to achieve system-level goals (Blasco-Arcas et al., 2020; Kujala & Sachs, 2019; Lane & Devin, 2018). Our findings also add to ecosystem research, particularly ecosystem management and CE, with an understanding of ambiguous CE ecosystem characteristics and their impacts on the management and development of CE ecosystems (Aarikka-Stenroos et al., 2021). These insights provide practical advice on the appropriate actions in each step of the stakeholder engagement process to engage stakeholders in CE system-level goals in different CE ecosystems.

The chapter is structured as follows: After the introduction of the research gaps and objective, we shed light on the theoretical background of how the stakeholder engagement process is conceptualised and unfolds in CE ecosystem settings. Next, we explain how we conducted a multiple-case study to empirically examine the stakeholder engagement processes in six different CE ecosystems, present case-specific findings, and synthesise them as archetypes. Finally, we present the discussion, key contributions and limitations of this study, and future research suggestions.

The Stakeholder Engagement Process in CE Ecosystems

Stakeholder Engagement as a Process for Achieving a CE

Stakeholder engagement is considered a process that unfolds through specific steps (Andriof & Waddock, 2002; Greenwood, 2007; Johnston, 2010; Lane & Devin, 2018). Building on Lane and Devin's (2018)

conceptualisation of this process, we identified a stakeholder engagement process in the CE context with four steps, each involving various stakeholder engagement practices.

In the *first step*, stakeholder(s) already committed to the CE system-level goal must identify other stakeholders who could contribute to the ecosystem. Identifying relevant yet diverse stakeholders has been recognised as especially important for achieving circularity (Brown et al., 2021; Salvioni & Almici, 2020). Potential stakeholders must be prioritised and then selected on the basis of, for example, their power, legitimacy, urgency (Mitchell et al., 1997), or circularity-related competencies (Brown et al., 2021). We consider the antecedent context of stakeholder engagement to be the background of the engagement process (Lane & Devin, 2018) rather than the starting step of the process (Johnston, 2010).

The *second step* involves an initial round of one-way communication aimed at catching the selected stakeholders' attention and securing their interests in further engagement (Lane & Devin, 2018). In the CE context, secured interests can be diverse, including expectations based on economic, ecological, social, legal, and ethical aspects (Marjamaa et al., 2021). Only when stakeholders' attention is caught and their interests are secured can the process proceed to the *third step*: the engagement practices for one- and two-way interactions and stakeholder integration, often pursued through relationship development, communication, and learning with and from stakeholders (Kujala & Sachs, 2019; Sachs & Kujala, 2021). These key engagement practices take different forms. For example, communication between stakeholders can include informing, educating, and awareness raising (Sulkowski et al., 2018), so the stakeholders learn from the CE and each other (Brown et al., 2021; Pucci et al., 2020), potentially leading to mutual learning and enhancement of organisations' innovation capabilities for circularity (Brown et al., 2021; Pantano et al., 2020). These engagement practices do not necessarily unfold linearly, as they build integrative stakeholder engagement interdependently and interrelatedly (Kujala & Sachs, 2019; Lane & Devin, 2018). In the CE context, stakeholder engagement through relationship development, communication, and learning practices may promote the adoption and development of circular innovations, circular-oriented

decision-making, circular value capture models, co-creation, and diffusion of a sustainability culture via marketing and educational activities (Brown et al., 2021; Pucci et al., 2020). Moreover, a CE presents a particular need to focus on building long-term relationships with mutual trust and opportunities for solving problems and common CE issues (Brown et al., 2021; Kujala et al., 2019; Salvioni & Almici, 2020).

Finally, the stakeholder engagement process results in an outcome, such as control, collaboration, or co-determination (Lane & Devin, 2018; Sloan, 2009), which necessarily influences the antecedents and practices of future engagement processes (Johnston, 2010; Lane & Devin, 2018). In the *fourth step* of the stakeholder engagement process, the outcomes must be evaluated frequently (Lane & Devin, 2018) using evaluation measures (Johnston, 2010) because inter-stakeholder positions and strategic focuses can change over time (Preble, 2005). For example, stakeholders with marginal significance can become significant (Roloff, 2008) as their role changes from delivering and exchanging needed expertise and resources (Verbeke & Tung, 2013) to shaping industrial and institutional norms (Phillips & Ritala, 2019; Verbeke & Tung, 2013) towards achieving a CE. Applying practices specific to stakeholder engagement in the CE context may raise unsolved issues and even conflicts, which can be facilitated by collaboration, sharing of CE goals, and dissemination of CE-related knowledge (Kujala et al., 2019) in the stakeholder engagement process.

CE Ecosystems as a Setting for Stakeholder Engagement

In general, the ecosystem approach, viewed from the management research perspective, refers to complex systems of stakeholders, technologies, and institutions that develop in a co-evolutionary manner; the stakeholders of such an ecosystem can achieve a system level higher than any single stakeholder could deliver alone (Aarikka-Stenroos & Ritala, 2017). Ecosystems are also dynamic, emerging, evolving, and co-evolving as stakeholders and their interactions develop. Thus, in a

key characteristic of ecosystems, the *structure* can vary from a hub-centric setting (a hub organisation, hereinafter 'a hub', coordinates or actively aims to manage other stakeholders) to a horizontal setting (where stakeholders interact in a self-organising manner, and the agency of management is distributed among them). The agency of management can thus vary in ecosystem structures (Aarikka-Stenroos & Ritala, 2017; Autio et al., 2018). The *manageability* of ecosystems is a controversial issue. Some studies have suggested that ecosystems can be managed to some extent (e.g., Iansiti & Levien, 2004; Ritala et al., 2013), but others argue that the ecosystem is a self-organising construct (Basole, 2009; Clarysse et al., 2014). Therefore, the agency to engage stakeholders in the ecosystem setting and its management is assumed to vary according to the ecosystem structure. Accordingly, we consider the ecosystem structure to be a key characteristic differentiating ecosystems and indicating who engages stakeholders and who is engaged to achieve the *system-level goal*.

We specifically examined CE ecosystems where interdependent, complementary stakeholders pursue increased circularity as a system-level goal, particularly through recycling, reuse, or reduction. Stakeholders in CE ecosystems can jointly contribute to resource circularity, CE knowledge, or CE business and business models at regional, national, and global levels (Aarikka-Stenroos et al., 2021). Therefore, expanding from, for example, circular supply chains (Aarikka-Stenroos et al., 2022; Kaipainen et al., 2022), as another key characteristic of CE ecosystems, *diverse stakeholders* typically have a wide range of premises, interests, and goals in joining. Accordingly, stakeholders' alignment with achieving the CE system-level goal varies in different CE ecosystem settings (Harala et al., 2021; Ingstrup et al., 2021). To summarise, CE ecosystems are of more than one kind. Their stakeholder diversity, structures, goals, and manageability can vary, with potential implications for stakeholder engagement and related processes: who engages who and how.

Synthesis

Drawing on insights from stakeholder engagement and ecosystem management research, particularly within the CE context, we approach stakeholder engagement in a CE as a process that brings together stakeholders with diverse interests into CE ecosystems to address a CE system-level goal. Based on this approach, we applied a theory-based a priori framework to examine the stakeholder engagement process for a CE goal (Fig. 7.1).

In this framework, the diverse stakeholders in a CE ecosystem gradually come together and can contribute (directly or indirectly) to the achievement of a CE system-level goal (the upper arrow in Fig. 7.1) and accordingly advance their CE goal (Brown et al., 2021; Kujala et al., 2019; Salvioni & Almici, 2020). Regardless of the types of stakeholders involved, the stakeholder engagement process consists of four steps: (1) identifying, prioritising, and selecting key stakeholders; (2) reaching out to stakeholders and securing their interests; (3) integrating and interacting through the development of relationships, communication, and learning; and (4) evaluating the stakeholder engagement outcomes and process. In practice, we assume that these steps can unfold non-linearly (Lane & Devin, 2018). The cyclic nature of stakeholder engagement indicates that the process is repeated (Greenwood, 2007; Lane & Devin, 2018), so stakeholder engagement can consider both stakeholders that

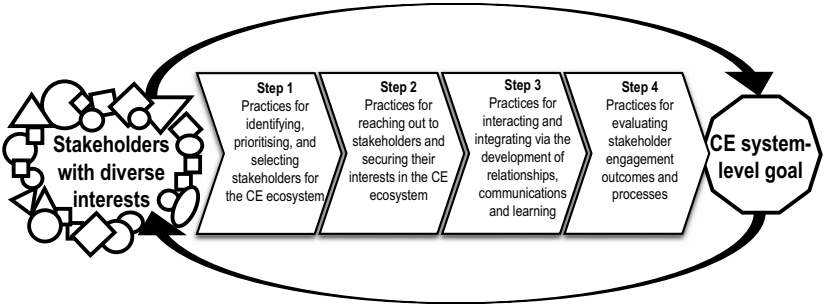

Fig. 7.1 A priori framework: Stakeholder engagement process for a CE system-level goal in ecosystem settings

are new and familiar with the CE ecosystem. The CE system-level goal can change during the stakeholder engagement process and affect the CE ecosystem structure and the stakeholder engagement process itself (the lower arrow in Fig. 7.1). Next, a more structured understanding of stakeholder engagement processes in a variety of CE ecosystems is pursued through an empirical investigation.

Methodology

Research Design and Case Selection

To explore what kinds of processes engage stakeholders in a CE system-level goal in different CE ecosystems, we applied a qualitative, multiple-case-study strategy. Empirical research on processes and cases is an established method to investigate stakeholder engagement (Sachs & Kujala, 2021) and provides empirical evidence of stakeholder engagement processes in a CE (Brown et al., 2021). A multiple-case study can help understand contextual differences and different patterns and reveal the interplay between the examined phenomenon and context (Aaboen et al., 2012), which, in this case, is the stakeholder engagement processes for achieving CE system-level goals in their varying empirical contexts of different CE ecosystems (Kujala & Sachs, 2019; Sloan, 2009; Sulkowski et al., 2018). Consequently, a multiple-case study enabled us to make cross-case comparisons while reducing the vulnerabilities regarding unexpected circumstances in the chosen cases (Yin, 2003). Furthermore, we applied a processual approach by investigating the sequence of the steps that unfolded in the stakeholder engagement processes for CE goals, to understand how these processes emerge and develop over time (Langley et al., 2013).

We utilised purposeful and theoretical maximum variation case sampling to select critical cases and capture common patterns, cutting across variations in the stakeholder engagement processes as they emerged while adapting to different conditions (Patton, 1990) in the varying CE ecosystems. Controlling for geographic variations, we selected Finnish cases based on their high system-level impacts on

achieving the national goal to become a CE model country by 2035 (Finnish Ministry of Environment, 2018). The case selection comprised of CE ecosystems with perceived variations in the features cited as potentially important for stakeholder engagement processes in the literature review. First, we considered ecosystems where diverse stakeholders have presumably differing interests (i.e., stakeholders from academia, industry, and government; Ingstrup et al., 2021) that are needed for a CE system-level goal to be materialised at the regional, national, and/or global levels (see Aarikka-Stenroos et al., 2021). We also ensured that our sampling was comprised of different ecosystem structures (Aarikka-Stenroos & Ritala, 2017; Autio et al., 2018), both hub-centric settings (cases A–C; Table 7.1) and self-organised CE ecosystems (cases D–F; Table 7.1), as we expected the structure to impact the emerging stakeholder engagement processes. On the basis of these criteria, we carefully selected six CE ecosystem cases on the regional (cases A and D), national (cases B, E, and F), and global levels (case C; Table 7.1). The chosen cases involved timely CE topics such as sustainable construction and urban development, food production and nutrients, and material circulation, which are featured prominently in European Union political discussions and the United Nations' Sustainable Development Goals (European Commission, 2020; Lafortune et al., 2021).

Data Gathering and Analysis

Five researchers conducted data gathering and analysis, of whom one was responsible for two cases and four were responsible for one case each. The primary data sources (Table 7.1), which were purposively sampled individual and group interviews and ethnographic observations from 2019 to 2021, were complemented by an extensive, multisource secondary data set, including websites, presentations, news releases, theses, reports, and other documents. For each case, the multisource data allowed data triangulation to gain an objective, accurate understanding of the stakeholder interactions within the examined CE ecosystems. Research quality was also ensured by careful data handling (e.g., tape-recording and transcribing the interviews and writing field notes during ethnographic

Table 7.1 Overview of cases and data sources

CE ecosystem case	Data sources (number of data sources)
Case A Publicly organised endeavour to manage a local by-product in a circular way	*Interviewed persons per organisation type*: public organisations (4), companies (14), and research organisations (2) *Observations and ethnographic follow-up*: visiting the area and interviewee facilities (5), attending a workshop discussion on the case (9), free-form discussion with key stakeholders (10), attending regular stakeholder meetings for ecosystem updates (c. 15) *Secondary data*: news articles (3), research reports (3), and seminar presentations by key stakeholders (10)
Case B Beverage packaging recycling	*Interviewed persons per organisation type*: companies (2), non-profit organisations (3), and industry associations (2) *Secondary data*: websites (6), presentations (2), news articles (4), and information booklets (3)
Case C Sustainable fast-food business	*Interviewed persons per organisation type*: focal company (1) and stakeholder companies (4) *Secondary data*: case company websites, news releases, Finnish Broadcasting Company news archive, trade journal articles, and newspaper articles (c. 150)
Case D Public–private collaboration for a shared good through industrial symbiosis	*Interviewed persons per organisation type*: public organisations (4), companies (2), and research organisations (1) *Secondary data*: websites and marketing videos (10), seminar presentations by key stakeholders (8), organisation reports (4), and theses and research reports (3)

(continued)

Table 7.1 (continued)

CE ecosystem case	Data sources (number of data sources)
Case E Nutrient recycling	*Interviewed persons per organisation type*: Public organisations (10), companies and business actors (10), organisations and unions (3), and research institutes and universities (5) *Observation and ethnographic follow-up*: attending workshops (3) and seminars and webinars (8) *Secondary data*: seminar and webinar presentations (4), research reports and publications (67), media data (company documents and brochures) (74), and acts and directives (2)
Case F Environmentally sustainable construction sector	*Interviewed persons per organisation type*: public organisations (4), companies (5), and research organisations (7) *Observation and ethnographic follow-up*: organising a national workshop for 40 experts (1), attending seminars (3), and attending workshops (3) *Secondary data*: seminar presentations (10), reports (4), and company and public organisation websites (10)

follow-ups). For highly different CE ecosystems, data had to be gathered with different methods and approaches. In general, for ecosystems with a distinctive hub, sufficient understanding could be built on data from the hub itself, supported and validated by stakeholder interviews and secondary data. Self-organised ecosystems required broader investigations through observations, workshops, and interviews with various stakeholders.

Following an abductive analysis approach not only enabled utilising a theoretical understanding of the steps and possible practices that would unfold in the stakeholder engagement processes (see Fig. 7.1) but also kept us open to new findings that emerged inductively from rich data

(Dubois & Gadde, 2002). To improve the quality of the findings, all six authors mutually validated the interpretations throughout the analysis process through careful researcher triangulation. The analysis was performed in three key steps. First, each case was analysed to identify the varying practices related to the stakeholder engagement and ecosystem characteristics based on the researchers' understanding of the retrospective data, real-time follow-ups, and visualisations of the CE ecosystems, as suggested by Phillips & Ritala (2019). The visualisations were made with the Kumu.io ecosystem software. In accordance with the ecosystem theory, the analysed CE ecosystem characteristics included the CE system-level goal, ecosystem boundaries, stakeholder diversity, and stakeholder interests. Second, we utilised the a priori framework (Fig. 7.1) to identify the stakeholder engagement practices in the cases and to structure and categorise them into different process steps. Two researchers carefully grouped and formulated the engagement practices for each engagement process step (Table 7.2). Third, the case-specific analyses were cross-analysed (Table 7.2). Based on the similarities and differences in the mapped stakeholder engagement processes, our analysis resulted in a model defining the stakeholder engagement processes by the ecosystem structure (hub-centric or self-organised) and stakeholder alignment with the CE system-level goal (aligned or non-aligned; Fig. 7.3). Finally, on the basis of the model and findings, we recognised and discussed four archetypes of stakeholder engagement processes with similar patterns in distinctive CE ecosystem settings. Next, we present the within-case analysis of the CE ecosystems, analyse the stakeholder engagement processes, and finally, conceptualise four stakeholder engagement archetypes in different CE ecosystems.

Findings

Case Analysis

Case A: Centrally Coordinated CE Ecosystem—Publicly Organised Regional Endeavour to Manage a Local By-Product in a Circular Way

In case A, a local Finnish city (Tampere) and other public organisations, companies, and research organisations explored how to solve a unique local environmental issue: 1.5 million m^3 of cellulose manufacturing by-product lying at the bottom of a lake (see also Uusikartano et al. 2022). The by-product limits the free-time usage of the lake and has unclear future environmental impacts, so the city that owns the area has an interest in building a CE ecosystem with a *system-level goal* of discovering any potential for by-product removal and the competencies needed to utilise this by-product in an economically affordable, environmentally friendly, and socially safe way. With a focus on this location-specific material, the ecosystem primarily includes stakeholders within the *boundaries* of the city region, but the city is openly calling for *diverse*, *interested* stakeholders (e.g., start-ups, established companies, and research organisations) beyond those boundaries: 'We [the city] have tried to find partners by actively telling and communicating in different projects that we are aiming for collaborators who want to promote a new kind of sustainable urbanisation' (Representative, local city). For academics and companies, finding a solution and achieving the CE goal could provide new knowledge and business opportunities.

Case B: Centrally Coordinated CE Ecosystem—National Beverage Packaging Recycling

In case B, the *system-level goal* of a non-profit (Suomen Palautuspakkaus Ltd., Palpa) and other stakeholders (beverage producers, trade, consumers, and material utilisers) is to build a deposit-based recycling ecosystem for beverage packaging in Finland. Although legislation guides

beverage packaging recycling, the brewery industry proactively initiated the ecosystem in the 1950s. Over time, the CE ecosystem has become a well-known national institution to which it is typically considered necessary to belong. The *ecosystem boundaries* are primarily national and industry-based (the brewery and retail industries). *Stakeholder diversity* consists of the brewery industry, retail industry, consumers, recycling and logistics operators, authorities, and industry associations. The major national companies in the brewery and retail industries own the hub through which they collaborate. Thus, the hub manages and supervises the recycling system and balances the *diverse coopetitive interests* of the brewery and retail industry stakeholders: 'Palpa's role is to be in charge of the return system's operational side and to keep the balance between the incentives of retail and brewery industries, to maintain the ecosystem as efficient as possible, as well as consumer-friendly' (Manager, brewery industry). Today, juice producers not covered by legislation also want to join the CE ecosystem to promote the CE.

Case C: Centrally Coordinated CE Ecosystem—Global Sustainable Fast-Food Business

In case C, a fast-food restaurant chain (Hesburger) and its value chain stakeholders have a *system-level goal* of increasing profitable and sustainable fast-food provision globally, specifically by fighting against the food and packaging wastes of the fast-food industry. To promote this system-level goal, the fast-food restaurant chain has acted as a hub for this CE ecosystem for over 40 years. The *ecosystem boundaries* are global; the Finland-based restaurant chain has more than 500 restaurants in nine European countries, and its supply chains have expanded globally. *Stakeholder diversity* consists mainly of traditional business-related stakeholders (e.g., suppliers, customers, and packaging companies that may be purely incentivised by profitability) and research partners and regulators aiming to create new sustainable solutions for local well-being. Despite these *differing interests*, these stakeholders have complementary expertise: 'Regarding particularly sustainability issues, we are experts in frying burgers, whereas our partners are experts, for example, in work

clothing. So, without them, we would not have been able to do those things [advancing the CE system-level goal], and we wouldn't have all these ideas without the partners' (Communications Manager, fast-food company).

Case D: Self-Organised CE Ecosystem—Regional Public–Private Collaboration for Shared Good

In case D, local companies facilitated by regional public organisations and research organisations pursue a *system-level goal* of enhancing local prosperity and public welfare through a regional industrial symbiosis (Envi Grow Park, Forssa, Finland). The ecosystem emerged organically as local public and private companies with various material flows (e.g., wood, glass, and biowaste) moved to a new landfill in the city. The ecosystem was later promoted by public organisations facilitating (e.g., funding, marketing, and consulting services) symbiotic material exchanges: 'I know very well the environmental-oriented companies in Finland, so I personally have had a lot of negotiations during the years that we have an excellent area in Forssa, [saying,] "Please come and build your company here," though it was not my job, rather a hobby' (Senior Manager, local waste management company). The *ecosystem boundaries* and stakeholder *diversity* have since broadened, and the already engaged stakeholders consider stakeholders elsewhere within the city's region potential for the CE ecosystem. Regarding the stakeholder *interests* in joining the ecosystem, companies see business opportunities, while public organisations see a way to promote sustainable local societal welfare.

Case E: Self-Organised CE Ecosystem—National Nutrient Recycling

In case E, a wide range of stakeholders have a CE *system-level goal* of recycling nutrients sustainably in a national setting in Finland. The *stakeholder diversity* in the ecosystem includes private and public stakeholders (e.g., farmers, biogas producers, municipal waste treatment, and various

interest groups) and research organisations and consumer-citizens. The *ecosystem boundaries* are national and generally formed around industrial and societal activities, with some regional differences. Only few stakeholders see in the CE an opportunity to shake up the status quo of nutrient recycling. Most stakeholders have other *interests* and priorities such as economic opportunities and sustainability, CE principles, nutrient self-sufficiency, safe waste management, and improved soil quality: 'I think that emphasising the multiple benefits has a big role… not just that the nutrients circulate, but it affects the soil's growing conditions positively, reduces nutrient runoffs to the Baltic Sea, brings economic value—that's huge, acknowledging all the stakeholders of the chain simultaneously' (Project Manager, non-profit).

Case F: Self-Organised CE Ecosystem—National Environmentally Sustainable Construction Sector

In case F, construction-sector ecosystem stakeholders pursue the *system-level goal* to decrease construction and demolition wastes and increase the industry's national recycling and recovery rates by exploring various subthemes such as wood, plastics, and demolition. Stakeholder engagement occurs within national *ecosystem boundaries*, where the preparation of material coordination, construction projects, and CE strategies, platforms, and roadmaps take place. Instead of a single hub, the goal is pursued through the distinct projects and value chains of the *diverse public and private stakeholders* such as construction companies, construction material manufacturers, cities, recycling companies, regulators, building users, and research organisations. Many projects, seminars, and organisations connect stakeholders to share information, collaborate, test, and promote the CE in different construction fields. Changing legislative standards force stakeholders to align their partly *varying interests*, some to gain competitive advantages in the changing industry and others only to meet the legal pressure. Some gain direct economic benefits by recycling construction waste, while others acquire brand and

image benefits from joining the CE ecosystem. However, 'it's not necessary that everybody knows what the CE is if the principles of the CE are followed in any case' (Circular Construction Workshop Participant).

Steps of the Stakeholder Engagement Processes

Moving from the analysis of the characteristics of the CE ecosystem cases, we utilised the a priori framework to analyse the steps of the stakeholder engagement process in each CE ecosystem (Fig. 7.1). Table 7.2 provides the key findings in detail. Overall, in each engagement process, we found that the steps apply to engaging both new and existing stakeholders.

On the basis of the analysis of the CE ecosystem cases, the stakeholder engagement process is typically defined by two key ecosystem characteristics: the CE *ecosystem structure* (*y*-axis) and the *alignment of stakeholder interests* with the CE system-level goal (*x*-axis). The latter refers to the extent stakeholders contribute to achieving the system-level goal, although their individual interests may differ and may not be shared. We propose that these two characteristics define the nature of the stakeholder engagement process for a CE goal. To categorise and visually present the examined cases according to these two key characteristics, they are placed in a framework (Fig. 7.2) that reveals distinct groupings of the cases, marked with partly overlapping circles in the framework.

Four Archetypes of the Stakeholder Engagement Processes for a CE System-Level Goal

Based on the detailed analysis of the stakeholder engagement processes in the six CE ecosystems, the case groups (Fig. 7.2) were further analysed to identify their commonalities and differences. The empirical analysis outcomes (Fig. 7.3) show that four archetypes characterise the stakeholder engagement processes in different CE ecosystem settings: Attracting Magnets, Sieve, Chain Reaction, and Rush Hour. These archetypes indicate which stakeholder engagement process is dominant in the management of various CE ecosystems. The archetypes are

Table 7.2 Stepwise analysis of the stakeholder engagement processes in the examined cases

	Steps in the stakeholder engagement processes for a sustainable CE goal in CE ecosystems			
	Step 1: Practices for identifying, prioritising, and selecting CE ecosystem stakeholders	Step 2: Practices for reaching out to stakeholders and securing their interests	Step 3: Practices for interacting and integrating through the development of relationships, communication, and learning	Step 4: Practices for evaluating stakeholder engagement outcomes and processes
Case A Centrally coordinated regional CE ecosystem: Publicly organised endeavour to manage a local by-product in a circular way	• The city identifies potential stakeholders by organising open seminars • The city educates potential stakeholders about achieving the CE goal • The city does not set any criteria limiting stakeholder selection	• The city and local research organisations organise open seminars and events to provide state-of-the-art knowledge about the CE goal and openly discuss and market the issue to attract companies • Research organisations approach and interview potential stakeholders • The city targets information sharing via local media and individuals attending related seminars and conferences	• The city encourages potential stakeholders to continue their pursuit of solutions by stating its commitment to finding common solutions • Companies pilot CE solutions together and create initial collaborations and partnerships to pilot and test their possible solutions • The city provides resources for pilots and orders studies by research organisations to develop and share information	• The city evaluates the feasibility of the developed CE solutions based on its public procurement criteria

(continued)

Table 7.2 (continued)

	Steps in the stakeholder engagement processes for a sustainable CE goal in CE ecosystems			
	Step 1: Practices for identifying, prioritising, and selecting CE ecosystem stakeholders	Step 2: Practices for reaching out to stakeholders and securing their interests	Step 3: Practices for interacting and integrating through the development of relationships, communication, and learning	Step 4: Practices for evaluating stakeholder engagement outcomes and processes
Case B Centrally coordinated national CE ecosystem: Beverage packaging recycling	• Stakeholders identify their potential CE ecosystem benefits and approach the hub to apply for ecosystem membership • The hub selects all stakeholders meeting the ecosystem's requirements	• The hub shares information about the ecosystem's benefits through versatile marketing and learning materials via its website and the media • The CE ecosystem is embedded in national institutions and culture, making it visible and self-evident to potential stakeholders	• The hub balances differing stakeholder interests in regular meetings between key stakeholders, some of whom own the hub • The hub mobilises all stakeholders in the co-development of the CE ecosystem • The hub builds trust among stakeholders by providing common guidelines • Stakeholders share confidential information (trade secrets and legal aspects) with the mutually trusted hub	• The hub collects operative information and shares it with, for example, the regional authority • The regional authority (based on the hub's reports) approves and enables fulfilling part of the stakeholders' interests (e.g., economic and tax exemptions)

	Steps in the stakeholder engagement processes for a sustainable CE goal in CE ecosystems			
	Step 1: Practices for identifying, prioritising, and selecting CE ecosystem stakeholders	Step 2: Practices for reaching out to stakeholders and securing their interests	Step 3: Practices for interacting and integrating through the development of relationships, communication, and learning	Step 4: Practices for evaluating stakeholder engagement outcomes and processes
Case C Centrally coordinated global CE ecosystem: Sustainable fast-food business	• The fast-food company (hub) identifies stakeholders that fit its operations and are needed for its value chains • The hub prioritises and selects potential stakeholders based on their sustainability requirements, long-term relationship potential, aligned values, and economic impacts	• The hub reaches prioritised stakeholders through joint research projects, industry associations, and broad marketing of solutions and values • The hub promotes the CE goal by stimulating general discussion and awareness of food sustainability in society	• The hub builds long-term relationships through mutual learning and initiation of circular stakeholder projects • The hub actively encourages individual stakeholder group representatives to share their CE ideas via a digital platform • The hub commits stakeholders with non-aligned interests by educating and disseminating information about CE practices	• The hub evaluates the outcomes based on its sustainability and economic criteria

(continued)

Table 7.2 (continued)

	Steps in the stakeholder engagement processes for a sustainable CE goal in CE ecosystems			
	Step 1: Practices for identifying, prioritising, and selecting CE ecosystem stakeholders	Step 2: Practices for reaching out to stakeholders and securing their interests	Step 3: Practices for interacting and integrating through the development of relationships, communication, and learning	Step 4: Practices for evaluating stakeholder engagement outcomes and processes
Case D Self-organised regional CE ecosystem: Public-private collaboration for a shared good	• Engaged companies utilise their contacts and knowledge to identify stakeholders with compatible resource flows • Public organisations identify potential stakeholders based on the known needs of the CE ecosystem	• Public organisations market the CE ecosystem's brand to the identified potential regional and national stakeholders • Engaged companies spread knowledge to potential stakeholders by word-of-mouth	• Stakeholders rely on their personal contacts, history, and mutual trust, organically deepening their circular collaboration • Public organisations regularly discuss with companies their issues, seeking solutions and resources to solve them (e.g., legal support and funding)	• Stakeholders evaluate the engagement process outcomes against their individual interests

	Steps in the stakeholder engagement processes for a sustainable CE goal in CE ecosystems			
	Step 1: Practices for identifying, prioritising, and selecting CE ecosystem stakeholders	Step 2: Practices for reaching out to stakeholders and securing their interests	Step 3: Practices for interacting and integrating through the development of relationships, communication, and learning	Step 4: Practices for evaluating stakeholder engagement outcomes and processes
Case E Self-organised national CE ecosystem: Nutrient recycling	• Interested individuals in stakeholder organisations: • Identify potential and known stakeholders • Prioritise and select stakeholders with CE goal-related operations (e.g., material processing)	• Forerunner organisations actively communicate the CE goal to their closest stakeholders; the communication proceeds in a snowball manner • Expert and authority organisations promote and justify the CE goal to all the potential stakeholders • Regional and national public experts and educational organisations share the latest development steps towards the CE goal to attract potential stakeholders (e.g., by organising various events)	• Facilitator organisations (e.g., interest groups, research organisations, ministries, and regional development organisations) initiate networking opportunities (e.g., seminars and workshops) • Facilitator organisations manifest the CE goal to companies, entrepreneurs, consumer-citizens, and each other through the promotion of CE goal agendas, roadmaps, and informative campaigns • Stakeholders involve each other in inclusive, direct, proactive two-way cross-sector dialogues, disseminating successful practices, user experience, and expert knowledge	• Research organisations, ministries, and interest groups review the development towards the CE goal • Other stakeholders evaluate the engagement process outcomes against their individual interests

(continued)

Table 7.2 (continued)

	Steps in the stakeholder engagement processes for a sustainable CE goal in CE ecosystems			
	Step 1: Practices for identifying, prioritising, and selecting CE ecosystem stakeholders	Step 2: Practices for reaching out to stakeholders and securing their interests	Step 3: Practices for interacting and integrating through the development of relationships, communication, and learning	Step 4: Practices for evaluating stakeholder engagement outcomes and processes
Case F Self-organised national CE ecosystem: Environmentally sustainable construction sector	• Facilitator organisations acquire knowledge about the stakeholders' needs • Engaged stakeholders identify potential stakeholders by organising seminars, meetings, projects, programmes, and other events	• Facilitator organisations inform and invite potential stakeholders to seminars and workshops promoting the CE goal • Facilitator organisations create platforms for potential stakeholders to come together and develop the ecosystem and its offerings • Legislative developments push stakeholders to collaboratively seek sustainable solutions (i.e., the CE goal)	• Stakeholders interact continuously through, for example, digital tools, platforms, seminars, joint projects, and co-development of CE solutions • Public organisations' procurement engages stakeholders in introducing CE solutions • Research and education organisations support stakeholders' ability to pursue CE goals by providing and disseminating CE knowledge • Stakeholders within the same value chains and/or projects learn from one another through co-development projects	• Project owners and stakeholders not involved in the projects evaluate each project according to their individual interests • Stakeholders compile strategies, reports, and publications, indicating CE development and engagement

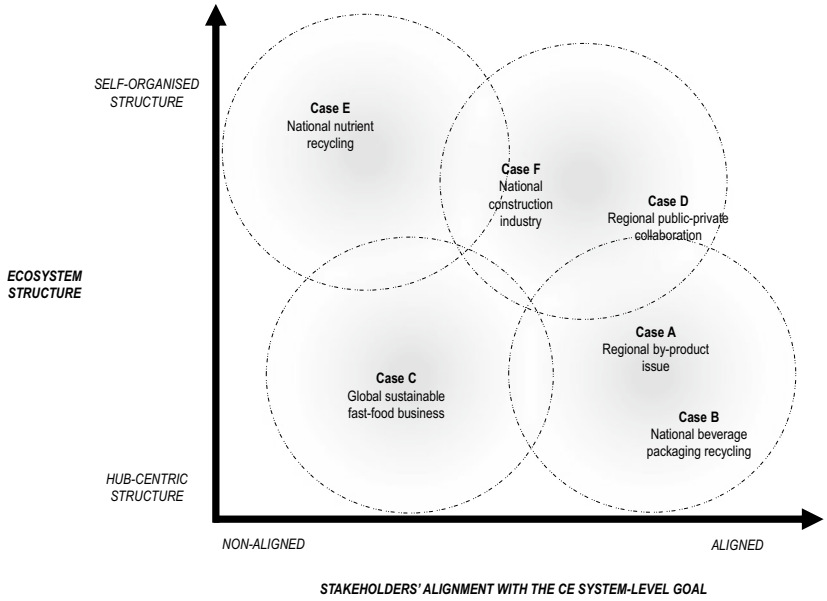

Fig. 7.2 A framework for mapping CE ecosystems with differing stakeholder engagement processes based on their ecosystem structure and stakeholders' alignment with the CE system-level goal

explained in the succeeding sections as follows: the stakeholder engagement process archetypes for hub-structured CE ecosystems with aligned (Attracting Magnets) or non-aligned stakeholder interests (Sieve) and the stakeholder engagement process archetypes for self-organised ecosystems consisting of stakeholders with interests aligned (Chain Reaction) or non-aligned (Rush Hour) with the CE system-level goal.

Attracting Magnets

The Attracting Magnets archetype describes the CE ecosystem that fundamentally consists of two aligned stakeholder groups that attract each other: a hub coordinating the existing CE ecosystem and new interested stakeholders. The hub creates and preserves a CE ecosystem that attracts new stakeholders to approach it to pursue the CE system-level

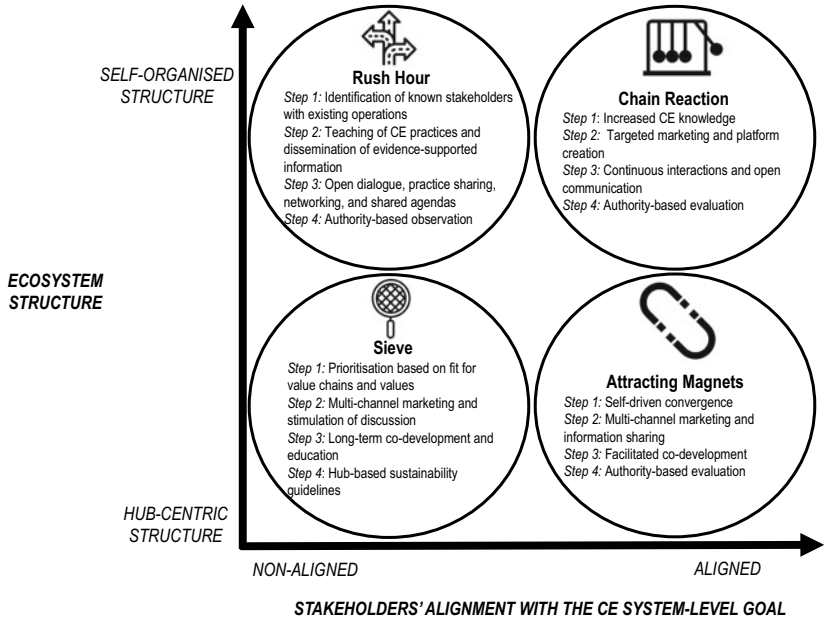

Fig. 7.3 Model of the archetypes of the stakeholder engagement processes in different CE ecosystems (*Note* While the archetype circles share similarities and overlap, they are clearly separated here for the sake of clarity)

goal (e.g., in case B, the hub facilitates coopetitive collaborations between the brewery and the retail industries). The hub, in turn, cannot reach the CE system-level goal alone and is therefore interested in new stakeholders (e.g., in case A, the city attracts companies to contribute to the environmental issue). Thus, the stakeholders share an interest and willingness to come together to advance the CE system-level goal.

In *step 1*, each stakeholder, encouraged by a broadly known CE system-level goal, recognises its potential to contribute and consequently converges with the hub. For example, new stakeholders can proactively approach the hub to join a well-known CE ecosystem to improve their visibility and image. In *step 2* (possibly overlapping with step 1), the hub reaches out to and supports the interests of potential stakeholders (who were either previously identified or approached the hub on their own) through marketing and by openly sharing information on the clearly

defined CE issue via multiple selected channels. To implement engagement in *step 3*, the trusted hub engages and supports stakeholders to co-develop CE solutions for the CE system-level goal by, for example, facilitating the necessary sharing of sensitive information. Finally, in *step 4*, stakeholders who play authoritative roles evaluate the compliance of the proposed solutions with the CE system-level goal as a prerequisite for the CE ecosystem to fulfil all the stakeholders' interests.

Sieve

In the Sieve archetype, the CE ecosystem forms around the operations of a single stakeholder that acts as a hub and handpicks ('Sieves') and approaches other stakeholders that fit the pursuit of the CE system-level goal. All stakeholders do not necessarily need to pursue the CE system-level goal, but their non-aligned interests do not impede achieving it (e.g., in case C, not all the customers and suppliers of the hub aim to create more sustainable fast food but nevertheless contribute indirectly to that goal).

In *step 1*, the stakeholder engagement process begins as the hub identifies potential stakeholders that fit its value chains and values. The hub prioritises stakeholders with perceived long-term potential for a relationship built on aligned values, trustworthiness, and economic impacts. In *step 2*, the hub actively promotes the CE system-level goal through multichannel marketing and the stimulation of broader societal discussions. In *step 3*, the hub encourages and educates stakeholders with diverse interests about awareness of the CE system-level goal (e.g., by offering new products with smaller environmental impacts) and initiates circular projects in long-term stakeholder relationships within the value chain. Finally, in *step 4*, the hub evaluates the stakeholder engagement outcomes against its own sustainability guidelines.

Chain Reaction

The Chain Reaction archetype emerges in a CE ecosystem setting that has no hub but consists of stakeholders with interests aligned with the

CE ecosystem, so engagement in the CE system-level goal happens organically in smaller stakeholder groups (e.g., in case F, the sustainability demands for the construction sector set by the value chain stakeholders are realised in independent construction projects). In a Chain Reaction, these smaller engagement endeavours lead to new ones, and the stakeholders become more aligned with the CE system-level goal (e.g., in case D, the local city engages in the CE ecosystem because it sees the ecosystem as useful for pursuing the CE system-level goal).

In *step 1*, after gaining increased knowledge of the CE requirements, facilitating organisations (e.g., regional- and national-level authorities) envision the CE system-level goal and the stakeholders needed to achieve it. The facilitating organisations identify potential stakeholders through, for example, seminars, meetings, and projects. In *step 2*, the facilitating organisations conduct targeted marketing and enable the stakeholders with the highest potential for the CE ecosystem to discover the ecosystem's benefits through platforms (i.e., physical/online venues for stakeholders to meet and communicate, such as workshops in case F). In *step 3*, the stakeholders continuously interact and openly communicate, often on a personal level, building trust and contributing to a feeling of a shared community. The CE ecosystem may consist of many separate sub-groups with their own engagement processes, but as the stakeholders become more aware of each other and how the CE ecosystem strengthens their capability to pursue the CE system-level goal, they become more motivated to engage in the CE ecosystem and create a shared pool of resources. In *step 4*, stakeholders—mainly public organisations with expert roles, authorities, and funding stakeholders—evaluate the engagement process outcomes situationally and individually, often using indicators from stakeholders' strategies, reports, publications, and statistics.

Rush Hour

The Rush Hour archetype models a CE ecosystem of stakeholders that have non-aligned interests and engage in the CE system-level goal in a self-organised manner (e.g., in case E, nutrient recycling involves

multiple sectors, from agriculture to biogas producers, that directly/indirectly pursue the CE system-level goal). No hub guides the stakeholders, and the traffic of different stakeholders may occasionally become jammed because of co-existing different directions, vehicles, and speed preferences (i.e., non-aligned, even controversial premises, interests, and goals). However, as multiple stakeholders move, various avenues for the CE ecosystem to pursue the CE system-level goal emerge, allowing stakeholders to drive in the same direction in a synchronised way, possibly reaching the highway (i.e., the CE system-level goal).

In *step 1*, interested individuals in the stakeholder organisations seek known stakeholders with the potential to address the CE system-level goal, particularly stakeholders who have existing operations related to the CE system-level goal and can join in responding to the goal, challenging the status quo. In *step 2*, expert and/or authority stakeholders justify the importance of the CE system-level goal and disseminate the necessary information to reach out to potential stakeholders. Simultaneously, forerunner stakeholders, who are the first to engage in the CE system-level goal, teach circular practices to encourage others, beginning with their closest existing contacts. In *step 3*, the facilitator stakeholders drive stakeholder engagement by initiating networking opportunities and agendas for achieving the CE system-level goal. Meanwhile, self-organised stakeholders voluntarily engage in inclusive, direct dialogue and practice sharing to address the CE system-level goal. In *step 4*, primarily national-level stakeholders review the development towards achieving the CE system-level goal, while other stakeholders evaluate the engagement process outcomes against their individual interests.

Discussion

In this chapter, we analysed what kinds of processes engage stakeholders in a CE system-level goal in different CE ecosystems. We uncovered empirically based, four-step stakeholder engagement processes with multiple practices in six carefully selected CE ecosystems. We also identified the key characteristics of CE ecosystems that determine how the

stakeholder engagement processes unfold: the ecosystem structure (hub-centric or self-organised) and the alignment of stakeholders' interests with the CE system-level goal (aligned or non-aligned). We conceptualised these findings into four archetypes describing how the stakeholder engagement processes in a CE can unfold in four steps, depending on the CE ecosystem's characteristics. Together, these findings, which constitute the main contributions of this research, emphasise how the CE ecosystem's structural aspects (the ecosystem structure and alignment of different interests) greatly affect the processes of engaging stakeholders in the CE and its system-level goal. Accordingly, this study makes several contributions to research on stakeholder engagement, ecosystem management, and the CE.

First, this research developed an understanding of stakeholder engagement in ecosystem settings. To stakeholder engagement research, the a priori framework (Fig. 7.1) and archetype model (Fig. 7.3) contribute an understanding of stakeholder engagement as a process for managing stakeholders in ecosystems, considering the interdependencies and co-evolution between the complementary stakeholders and their actions when pursuing a system-level goal (Aarikka-Stenroos et al., 2021). Analysing stakeholder engagement with the ecosystem approach goes beyond dyadic or networked settings (Blasco-Arcas et al., 2020) and enables uncovering the complexity of all interactions in one ecosystem between the involved stakeholders. Analysing stakeholder engagement in a CE ecosystem context also generates valuable new knowledge from the CE research perspective, as the systemic nature of a CE requires considering and engaging diverse complementary interdependent stakeholders (Aarikka-Stenroos et al., 2021).

Second, our findings contribute to the process perspective of stakeholder engagement research, which recognises the processual nature of stakeholder engagement (Greenwood, 2007; Johnston, 2010; Lane & Devin, 2018; Verbeke & Tung, 2013) but often neglects the identification and visualisation of the steps of this process in practice. By examining and mapping the process steps from six empirical CE ecosystem cases (Table 7.2) based on the a priori framework, we uncovered the steps of the stakeholder engagement processes, particularly for achieving CE system-level goals, building on Lane and Devin (2018):

(1) identifying, prioritising, and selecting key stakeholders; (2) reaching out to stakeholders and securing their interests; (3) integrating and interacting through the development of relationships, communication, and learning; and (4) evaluating stakeholder engagement outcomes and the process itself. For each step, particularly step 4, we found various empirical-based practices (Table 7.2) extending those recognised by Lane and Devin (2018). These findings from analysing CE ecosystems address the lack of an empirical understanding of stakeholder engagement processes based on case studies (Kujala & Sachs, 2019) and help to understand the differences among industries, geographic areas, and contexts (Kujala & Sachs, 2019; Sloan, 2009; Sulkowski et al., 2018). These insights spill over from stakeholder engagement to CE research by building an understanding of stakeholder engagement as a collaborative process that advances circular solutions (Brown et al., 2021), fostering systemic change towards building a CE.

Third, the findings from the six extensive CE ecosystems point to the key characteristics of CE ecosystems and the resulting stakeholder engagement processes conceptualised as archetypes (Fig. 7.3). These findings contribute to ecosystem research by showing that, to an extent, ecosystems can be managed by applying a stakeholder engagement process archetype depending on the alignment of stakeholder interests and the CE ecosystem structure. First, it seems that the clearer the CE system-level goal was for the stakeholders, the more aligned their interests were towards it, and the less sense-making was needed in the stakeholder engagement process. Second, the structural aspects of a CE ecosystem also appeared to affect the development of the stakeholder engagement process in a CE system-level goal. Self-organised ecosystem structures (Basole, 2009; Clarysse et al., 2014) seemed to organically evolve through the engagement of the closest known stakeholders, whereas in hub-centric ecosystems (Iansiti & Levien, 2004; Ritala et al., 2013), a hub can facilitate the engagement of a broader audience. These findings from the different types of CE ecosystems show how and by whom interactions among stakeholders can be initiated, coordinated, and managed in practice under different conditions (Aarikka-Stenroos et al., 2021). Within CE research, these findings strengthen the understanding that creating value in a CE is a systemic

challenge that no stakeholder can address alone (Kujala et al., 2019) and requires implementing different stakeholder engagement processes in ecosystem settings.

This study provides pragmatic contributions, aligned with the core of stakeholder engagement: applying the stakeholder theory in practice (Freeman et al., 2017). The findings support organisations and personnel, from business managers to public decision makers, to act during each step of the stakeholder engagement process to engage others or themselves in a CE. By identifying the key characteristics of the CE ecosystem (the ecosystem structure and the alignment of stakeholders' interests), organisations can learn its dominant stakeholder engagement process archetype (Fig. 7.3), understand their role in this process, and apply the typical stakeholder engagement practices for each process step to reach the CE goals in their CE ecosystem (Fig. 7.3). Thus, with the insights of this research, diverse types of organisations can learn how to contribute to a CE goal.

Although this extensive multiple-case study permits drawing analytical generalisations, it is limited to Finland, leaving room for investigations in other institutional contexts. Similarly, the archetypes are necessarily generalisations, and CE ecosystems may display characteristics not limited to a single archetype. Therefore, we suggest that future research explores the possible interlinks, overlaps, and dynamics between the proposed archetypes (Fig. 7.3). Addressing the archetypes as hybrid organisations (see e.g., Johanson & Vakkuri, 2018) presents another way of comparing and further investigating them. Furthermore, we consider the cases in snapshots of their current form, excluding considerations of whether some archetypes might be stable, and others temporary in the ecosystem development. We also do not consider the success of the cases at achieving CE system-level goals, so the archetypes may not represent the ideal models for developing stakeholder engagement processes in any given circumstances. Therefore, it would be beneficial to use global data sets to further test the archetypes, particularly their temporal and performance aspects. Finally, we emphasise the need to apply process and strategic management perspectives to investigate stakeholder engagement (Greenwood, 2007; Johnston, 2010; Lane & Devin, 2018; Verbeke &

Tung, 2013) and implement circularity (Brown et al., 2021; Kaipainen & Aarikka-Stenroos, 2021, 2022). The implementation of a CE requires more processual investigation at not only the ecosystem level, as examined in this chapter, but also at organisational and supply chain levels within the strategic development of organisations and ecosystems.

Conclusions

This chapter investigated what kinds of processes engage stakeholders in a CE system-level goal in different CE ecosystems. This was achieved by an ambitious effort to combine two complementary theoretical perspectives on stakeholder interactions: stakeholder engagement and the ecosystem approach. Combining them with CE research as theoretical background, we proceeded to abductively analyse the stakeholder engagement processes that unfolded step-by-step in the six carefully selected empirical CE ecosystems. We discovered and conceptualised four archetypes of the CE stakeholder engagement process: Attracting Magnets, Sieve, Chain Reaction, and Rush Hour. These archetypes are found in CE ecosystems depending on the ecosystem's structure, which varies from hub-centric to self-organised structures, and the alignment of stakeholders' different interests to the CE system-level goal.

After synthesising our findings, we created a model of the stakeholder engagement process archetypes in different CE ecosystems. The empirically based insights into how stakeholder engagement processes unfold to achieve system-level goals in complex ecosystem settings expand the current understanding from dyadic or networked settings of stakeholder engagement (Blasco-Arcas et al., 2020; Kujala & Sachs, 2019; Lane & Devin, 2018). Furthermore, our findings not only complement stakeholder engagement research with the much-needed empirical evidence of stakeholder engagement as a process (Andriof & Waddock, 2002; Greenwood, 2007; Johnston, 2010; Lane & Devin, 2018) within and across specific industries, geographic areas, and contexts (Kujala & Sachs, 2019; Sloan, 2009; Sulkowski et al., 2018). The findings also add to the research on ecosystem management and CE, as our findings build understanding of the characteristics, management, and development of CE

ecosystems (Aarikka-Stenroos et al., 2021). Finally, our insights provide practical advice to organisations and managers on the actions to take step-by-step when engaging stakeholders in emerging or established CE ecosystems.

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Part III

Value Creation Opportunities

8

Stakeholder Engagement Mechanisms and Value Creation in Circular Entrepreneurship

Beatrice Re and Giovanna Magnani

Introduction

The transition towards the circular economy—i.e., "an industrial economy that is restorative or regenerative by intention and design" (Ellen MacArthur Foundation, 2013, p. 14) is considered a viable solution to global environmental problems by both researchers and policymakers (Cristoni & Tonelli, 2018; Lieder & Rashid, 2016; OECD, 2018). Albeit worldwide firms are increasingly embracing the circular paradigm (Panwar & Niesten, 2022), it seems that economy-wide transformations in this direction still require time to be achieved (ibid.).

The academic literature unanimously recognises that implementing circular practices requires the action of both firms and other stakeholders (Aarikka-Stenroos et al., 2021; Bocken et al., 2018; Pucci

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et al., 2020). Indeed, stakeholders are considered "the ultimate sources of entrepreneurial opportunities for sustainability innovation" (Schaltegger & Wagner, 2011, p. 225), therefore they play a key role in developing circular practices as "they collaborate to maximise the value of products and materials and contribute to minimising the depletion of natural resources and create positive societal and environmental impact" (Bocken et al., 2018, p. 79). This is why the entrepreneurs embracing circular business models (CBMs) and establishing the so-called "born circular firms"—i.e., firms that "have been founded originally adhering to circular economy principles" (Zucchella & Urban, 2019, p. 91) as opposed to "growing circular firms"—are likely to establish high degrees of cooperation not solely with their customers, but also with diverse stakeholders along the supply chain (Urbinati et al., 2017).

Extant research found that organisations that succeed in building reciprocal trust with their stakeholders through mutual commitment can give rise to long-lasting relationships (e.g., Athanasopoulou, 2009; Beckers et al., 2017). Harrison and Wicks (2013) underline that the act of engaging stakeholders and creating value with and for them is critical for a firm to pursue sustained success.

Stakeholder engagement, which is defined as the "practices that the organisation undertakes to involve stakeholders in a positive manner in organisational activities" (Greenwood, 2007, pp. 317–318) is a key topic in management research. Greenwood (2007) and O'Riordan and Fairbrass (2014) use the term "stakeholder engagement activities" to refer to activities such as communication, collaboration, dialogue, and joint decision-making. Tapaninaho and Heikkinen (2022) refer to "joint value creation activities" to discuss how value is created in the case of circular economy business development. The literature employs a variety of alternative words to refer to stakeholder engagement practices/activities (Kujala et al., 2022), such as forms (Viglia et al., 2018), strategies (Herremans et al., 2016), and mechanisms (Pucci et al., 2020). Pucci et al. (2020) argue that "stakeholder engagement mechanisms" can be regarded as a series of mechanisms a firm with a proactive sustainable behaviour implements to engage its stakeholders in innovation and value creation.

We here opt for employing the term "mechanisms" to refer to those means and ways through which firms engage their stakeholders in the context of circular entrepreneurship, to synergistically find and/or implement ways to close, narrow, and slow resource loops. Some examples of these mechanisms could be, for instance, the development of experimental circular projects by sharing knowledge and expertise and the education about circular practices through communication activities.

Joint value creation is especially important to born circular firms since they aim to create value for multiple stakeholders' groups such as non-profit organisations and society at large (Bocken et al., 2013; Dahan et al., 2010), while at the same time focusing on non-financial forms of value, such as social and environmental value (Bocken et al., 2014; Boons & Lüdeke-Freund, 2013; Boons et al., 2013).

According to the degree of intensity, stakeholder engagement with a firm can assume different forms, from the lowest degree consisting in "remaining passive" to the highest degree of "empowerment" (Salvioni & Almici, 2020). A recent literature review about external stakeholders in the circular fashion (Ki et al., 2020) shows that the engagement of customers and government plays a key role in developing circular practices. Nonetheless, we still know little about the way the engaged stakeholders "make a circular post-consumption behaviour" (ibid., p. 2407): despite the importance of the topic for academics and practitioners alike, no studies have so far investigated stakeholder engagement mechanisms in the circular entrepreneurship context. This is even more evident in studies involving small and medium-sized enterprises (SMEs) (Dey et al., 2020). Moreover, limits and challenges of stakeholder engagement to promote circular practices still need to be fully acknowledged and explored. We argue it is fundamental to fill these research gaps since the transition towards the circular paradigm requires firms to involve multiple stakeholders and maintain an open dialogue with them (Salvioni & Almici, 2020).

The present chapter is devoted to contributing to filling this gap through a multiple case study research involving circular firms and their key stakeholders. We address the following research question: "What kind of engagement mechanisms do circular firms employ to engage

their stakeholders?" We also look at how these mechanisms lead to value creation. In doing so, we contribute to the emerging circular entrepreneurship literature (Cullen & De Angelis, 2021; Zucchella & Urban, 2019) as well as to the academic debate about stakeholder engagement in the circular entrepreneurship context (Salvioni & Almici, 2020).

This chapter is structured as follows. In the first part, we present the theoretical background that is based on the literature about stakeholder engagement and value creation, and we frame it in the circular entrepreneurship context. We then illustrate our research methodology consisting in a qualitative multiple case study research including circular SMEs and their stakeholders. Subsequently, we present our four case firms, we analyse the emerging dyadic engagement mechanisms towards their key stakeholders, and we develop a conceptual framework of stakeholder engagement mechanisms. Then, we also offer a critical discussion of some key limits and challenges that the stakeholders' engagement may have in creating value and promoting circular practices. Finally, we offer insights to practitioners, highlight the limitations of our work, and advance some avenues for future research.

Theoretical Background

Stakeholder Engagement

Within the stakeholder theory, stakeholders are defined as "those groups and individuals who can affect or be affected" by the actions connected to value creation (Freeman, 1984, p. 25). Their relationships with a focal business are seen as deeper than a transaction-oriented one since they aim for joint value creation (Freeman, 2010).

Stakeholder engagement is defined as a series of "practices the organisation undertakes to involve stakeholders in a positive manner in organisational activities" (Greenwood, 2007, p. 315), and as "processes of consultation, communication, dialogues, and exchange" (ibid., p. 322), and it requires firms to take into account their stakeholders' desires and capabilities (Noland & Phillips, 2010). Stakeholder engagement is

often associated with the concept of responsibility towards stakeholders: engaging stakeholders can indeed be a favourable practice as it allows knowledge capture and a way for social learning "where diverse stakeholders share a common forum, learn about each other's values, reflect upon their own values and create a shared vision and objectives" (Mathur et al., 2008, p. 601). However, as pointed out by Greenwood (2007), the concept of responsibility does not necessarily go hand in hand with stakeholder engagement, meaning that engaging stakeholders is not equivalent to treating them responsibly. In their model of stakeholder engagement and moral treatment, Greenwood (2007) distinguish four scenarios given by the different combinations of high/low stakeholder engagement and stakeholder agency, which is "a proxy for the responsible treatment of stakeholders" (ibid., p. 322).

Stakeholder Value Creation

Stakeholder value creation is the ability of an organisation to create long-lasting relationships with its stakeholders (Freeman et al., 2004). Creating value with and for stakeholders is of uttermost importance in sustainability-oriented business models (Freudenreich et al., 2020) since solving sustainability-related issues requires multi-stakeholder collaboration and sharing of expertise, skills, and appropriate resources (Hörisch et al., 2014). Scholars agree upon the fact that implementing successful circular business models being able to create durable value requires firms to engage multiple stakeholders through constant dialogue, involvement, and meeting of expectations (Bocken et al., 2018; Kujala et al., 2019; Mishra et al., 2019; Salvioni & Almici, 2020).

The concepts of value creation and value appropriation involving multiple stakeholders have been recently investigated by several authors (Bridoux & Stoelhorst, 2022; Garcia-Castro & Aguilera, 2015; Lepak et al., 2007; Tantalo & Priem, 2016; Volschenk et al., 2016), yet their notion of "value" somehow remains trapped in the search for economic gains while overlooking other dimensions such as the society and the environment (Harrison & Wicks, 2013). In a very broad view, "value" can be seen as "anything that has the potential to be of worth to

stakeholders" (ibid., pp. 100–101). Several efforts to develop a more comprehensive conceptualisation of "value" have been made by scholars at the intersection of business and society. For instance, influential discussions aimed at theorising an equilibrium among business, society, and the environment have been those rotating around the concept of triple bottom line value creation (Elkington, 2004), "blended/shared value" (Crane et al., 2014; Emerson, 2003; Porter & Kramer, 2011), and "strategic corporate social responsibility" (Baron, 2001; Daudigeos & Valiorgue, 2011; McWilliams & Siegel, 2011). Recently, Freudenreich et al. (2020) investigated the concept of value creation for sustainability through the stakeholder theory perspective. The authors support the idea that value creation processes in sustainability-oriented business models are not solely focused on economic value as the traditional ones but are also aimed at generating ecological and social outcomes for all the firms' stakeholders.

Instead of defining a very complex concept as "value", Kujala et al. (2019) opt to rather focus on value-creating stakeholder relationships and their characteristics. They develop a model called Stakeholder Value Creation (SVC) which presents three main attributes in value-creating stakeholder relationships, i.e., joint interests (supported by common history, shared experiences, and mutual objectives), ability to collaborate (based on understanding the importance of information sharing and on mutual commitment), and trust (which is also an outcome of a successful relationship). However, stakeholder relationships are not devoid of boundaries and scholarly criticism. It has been argued that they can harm the value capture of a firm, for instance, because a stakeholder may use its bargaining power for rent appropriation thus negatively impacting the firm's performance (Coff, 2010).

Since value creation means different outcomes for diverse stakeholders (Bocken et al., 2013; Schaltegger & Wagner, 2011), looking at the dyadic relationships between each firm and stakeholder allows getting a thorough understanding of the engagement activities in place between the actors involved. In the sustainability context, these dyadic interactions have been recently investigated by Pucci et al. (2020), who focus their study on a firm with a proactive sustainable behaviour and their engaged stakeholders along all its value chain. The authors argue

that stakeholder engagement requires several mechanisms that a firm can implement to motivate their stakeholders, and they unfold three mechanisms, i.e., co-creation, adoption/development, and exploitation/contamination. Furthermore, the framework developed by the authors focuses on stakeholder engagement mechanisms as "mechanisms through which a firm with a proactive sustainable behaviour engages its stakeholders in innovation development and value creation" (ibid., p. 366) and it shows some positive outcomes stemming from the engagement activities, namely value creation at different levels, i.e., firm, stakeholders, and local. We here aim to expand the empirical investigation of stakeholder engagement mechanisms in the specific context of circular entrepreneurship.

Stakeholder Engagement Mechanisms for Value Creation in Circular Entrepreneurship

Entrepreneurship can provide an effective answer to the current environmental crisis the world is facing (Global Footprint Network, 2020) by developing novel business models capable of creating value not solely for the ventures themselves and their stakeholders, but also for the planet and the whole society. By making a step forwards, circular entrepreneurs establish close relationships with their key stakeholders and at the same time they find market solutions to current environmental problems (Zucchella & Urban, 2019). Indeed, circular entrepreneurship, conceptualised as the *processes of exploration and exploitation of opportunities in the circular economy domain*, (ibid., p. 195) is conceived to narrow, slow, and close the resource loops since the firms' foundation and it can offer concrete solutions to shift towards a circular use of resources (ibid.).

In the context of circular entrepreneurship, stakeholder engagement is considered crucial in creating long-lasting relationships and successful business models (Salvioni & Almici, 2020), yet the stakeholder engagement mechanisms, as well as the dynamics of stakeholder value creation, are still in need of a thorough investigation (Tapaninaho & Kujala, 2019).

Circular entrepreneurs adopting CBMs since their foundation give rise to the above-defined "born circular firms" (Zucchella & Urban, 2019), which are opposed to "growing circular ventures"—i.e., firms that are in transition towards a CBM. Circular business models can be considered part of the broader group of sustainable business models, that consist in going beyond delivering a mere economic value and creating other forms of value (e.g., ecological and social) for a broader range of stakeholders (Bocken et al., 2013). Studies regarding CBMs have boomed during recent years. According to Mentink (2014), a CBM is a rationale of how an organisation creates, delivers, and captures value with and within closed material loops. Rosa et al. (2019) define CBMs as specific types of business models whereby "the conceptual logic for value creation is grounded on keeping the economic value embedded into products after their use and exploit it for new types of market offerings" (p. 2). Linder and Williander (2017) define a CBM as "a business model in which the conceptual logic of value creation is based on utilising the economic value retained in products after use in the production of new offerings". Henry et al. (2020) adopt the perspective of "born circular firms"—and, more specifically, of "circular start-ups"—and through an accurate analysis of 128 business models, they inductively propose a typology of CBMs which include five types: design-based, waste-based, platform-based, service-based, and nature-based.

In the present chapter, we adopt the classification of CBMs made by Lacy and Rutqvist (2015) which distinguish five archetypes of circular business models: circular supply chain, resource recovery, product life-extension, sharing platforms, products as-a-service (PSS). The first consists in employing renewable, recyclable, and/or biodegradable inputs into the supply chain. The second is based on the idea of taking materials that are commonly defined as waste and making new goods out of them. The product-life extension model aims at making long-lasting products or/and at increasing products life through upgrade and refurbishment, thus contrasting the planned obsolescence of most consumer goods. The sharing business model aims at increasing the use of otherwise idle goods, and finally, with the product as-a-service model companies retain the products' ownership and ask clients to pay for their use.

Delivering value through circular business models implies circular entrepreneurs look for expertise and skills from different stakeholders since finding and implementing solutions to narrow, slow, or close the resource loops along the value chains require the commitment of all the actors involved, either at the upstream, downstream, or both levels (Urbinati et al., 2017).

Methods

The present empirical work is devoted to illustrating the dyadic stakeholder engagement mechanisms between circular firms and their stakeholders and exploring how such mechanisms lead to value creation.

We adopt a qualitative case study methodology embracing the epistemological position of interpretivism and constructionism—appropriate for the context of joint value creation—as advanced by Stake (1995) since "most contemporary qualitative researchers hold that knowledge is constructed rather than discovered" (ibid., p. 99). With the aim to "understand the meaning or knowledge constructed by people" (Yazan & De Vasconcelos, 2016, p. 137), we inductively let our interviewees' narratives and collective case studies (Stake, 1995) unveil the stakeholder engagement mechanisms and outcome stemming from them.

Our data collection has been carried out between December 2020 and April 2021. To collect data, we departed from Sitra database (https://www.sitra.fi/en/), a widely known and used Finnish database of circular ventures, which reports 123 cases of circular firms founded in Finland, of which 65 can be classified as "born circular" according to the provided definition. We also found a few further cases on Sitra website. We opted for focusing on Finland since it is a European forerunner in the circular economy: in 2016, it has signed the world's first roadmap on circular economy and it is currently leading the way in the Nordics for circular transformation (SB Insight, 2019). Case studies were selected purposefully (Patton, 2015). We looked for SMEs, i.e., with less than 250 employees (EU recommendation 2003/361), having a CBM, and that can be regarded as "born circular firms" (Zucchella & Urban, 2019). We contacted 30 firms out of 65 by looking at the widest variety in terms

of industries and 4 of them were available for a semi-structured interview, therefore our sample is composed of 4 firms. Table 8.1 provides an overview of the selected case studies, highlighting the role of the interviewees, the engaged stakeholders, the number of employees, the operating industry, the CBM, the circular mission, and whether the firm operates in the B2B or B2C context.

We in-depth interviewed the founder or a knowledge informant (e.g., CEO, head of sustainability, head of R&D) per each case firm and the related key stakeholders that have been mentioned during the interview—except for Spinnova's and Kamupak's clients and Spinnova's supplier Suzano that have not been responsive. To overcome the lack of primary data related to the missing interviews, and to enrich them with more pieces of information, we triangulated the interviews with secondary data (companies' newsletters, online press releases, and social media pages) (Denzin, 1978; Stake, 1995). Our total number of interviews equals 12. We adopted semi-structured interview schemes—see the appendix—and we maintained high flexibility as for the notion of "progressive focusing" (Parlett & Hamilton, 1976), which is based on the assumption that "the course of the study cannot be charted in advance" (Stake, 1995, p. 22).

Each interview was conducted via Zoom (due to Covid-19 pandemic restrictions that prevented face-to-face meetings), lasted approximately one hour, and was recorded through an electronic device and then transcribed within the following 24 hours. We also opted for investigator triangulation, meaning that we had discussions about data interpretation within the research until we reached a shared agreement (ibid.). The data collection allowed gaining thick descriptions (Stake, 1995; Welch et al., 2011) of the stakeholder engagement mechanisms emerging from their narratives in the context of circular entrepreneurship. After reading the transcripts to become "intimately familiar with each case" (Eisenhardt, 1989, p. 540), we manually coded each single case study (Stake, 1995) according to two variables of interest, i.e., dyadic engagement mechanisms and output in terms of value creation. After performing the single case analyses, we undertook a cross-case analysis, aimed at recognising emerging patterns of stakeholder engagement mechanisms and value creation across the cases.

Table 8.1 Key facts and figures of the case studies

Circular firm	Engaged stakeholders	Interviewees name and role	Number of interviews	Number of employees	Industry	Circular business model	Circular mission	B2B/B2C
Spinnova	• Suzano (producer) • Bergans (customer, and partner) • Clients (B2C)	• Head of Communication, Spinnova • Designer, Bergans	2	40	Textile	Circular supply chain	"Our 'Why' is that we want to make the world a better place with our skills and experience of cellulose. We want to help fill the textile industry's sustainability deficit by offering the most sustainable fibre option available"	B2B
Kamupak	• Orthex (producer) • Cafeteria Silta (customer and partner) • Clients (B2C)	• Co-founder Kamupak • CEO Orthex • Restaurant Manager Silta	3	6	Service packaging	Product-as-a-service	"At Kamupak we are committed to downsize carbon footprints with You. Choose a loyal Kamu product and minimise waste created by disposable packages. Kamupak is a circular takeaway solution for grocery stores and restaurants"	B2B
Lovia	• Pelletteria Clio (producer and partner) • Kokkolan (supplier) • Clients	• Showroom and e-commerce Manager Lovia • Co-owner Clio • CEO Kokkolan • Client	4	6	Leather Accessories	Recovery/recycling	"Our mission is to create modern circularity–benchmarking the way nature works"	B2C

(continued)

Table 8.1 (continued)

Circular firm	Engaged stakeholders	Interviewees name and role	Number of interviews	Number of employees	Industry	Circular business model	Circular mission	B2B/B2C
Sulapac	• Lumene (customer and partner) • Quadpack (partner)	• Sustainability Director, Sulapac • Head of R&D and packaging, Lumene • Sustainability Specialist Quadpack	3	30	Cosmetics packaging	Circular supply chain	"Almost 300 million tons of plastic is being produced every year. A lot of that plastic is necessary to make useful things that last. But all too often, the plastic we use ends up in the wrong place. Right now, our oceans are filling up with plastic that degrade into smaller and smaller pieces of microplastics. If nothing changes, by 2050 there will be more plastic waste in our oceans than fish. Our oceans need a new wave of sustainable solutions"	B2B

Four Finnish Circular Firms and the Key Engagement Mechanisms with Their Stakeholders

Spinnova

Spinnova is a Finnish technological start-up founded in 2017 embracing the circular supply chain CBM. It aims to produce wood-based textile fibres that are completely free of chemicals, and it has the potential to revolutionise the textile industry. In the same year of its foundation, the world's largest wood pulp producer, the Brazilian company Suzano, contacted the firm since it was highly interested in finding and investing in innovative technologies to produce fibres more sustainably. Since 2017, the two firms have closely worked together for three years to understand how to produce an innovative and chemical-free fibre from softwood pulp. As explained by Spinnova's head of Communication:

> Suzano found us because it has a lot of innovation in their operations, and it was scouting for new technologies like other people in the world. So, they found us and invested in us in the summer of 2017, and we began to develop the microfibre and cellulose together.

Albeit being Suzano the actor that first expressed interest in partnering, the circular firm Spinnova has been very active in the engagement activities by sharing its knowledge, innovative mindset, and technology, as well as its commitment towards introducing a disruptively sustainable innovation in the textile industry. The tight relationship and strong commitment that have arisen led them to reach their common goal: to produce a sustainable fibre by using 99% less water than in the production of traditional cotton fibres. The partnership looks very solid and fruitful: the two firms have also established a joint venture to share both the R&D and the financial expenses, and they have just invested 2 million Euro to build the first commercial-scale production facility in Finland, which will open in 2022.

Before reaching the commercialisation phase, Spinnova has opened a pilot plant in Jyväskylä, Finland, to trial and test the new fibres in partnership with fabric and clothing manufacturers, such as Bergans, a high-quality sportswear clothing company. Again, it was the latter to contact Spinnova in 2019 since it was looking for sustainable fibres to make backpacks and it saw the potential that partnership could have had. Through an informal conversation, they realised to have common values and to share a strong commitment towards sustainability. As explained by our interviewee, Spinnova's head of Communication:

> Bergans is genuinely thereafter the same thing as we are, i.e., "making a better material foundation for the textile industry as our bedding in terms of sustainability and mitigating climate change". We were able to do things fast probably because it is a matter of a "cultural thing" that they just have. It is an agile company and a culture that they're really committed, and passionate about sustainability issues, so they have the will and the way of acting. All the brands we work with are early adopters, pioneers, they just they have a different mindset.

And reiterated by Bergans' designer:

> We immediately realised that we had common values, and mindsets, but especially companies' values were completely aligned. We had common ambition on how the industry needs to evolve, and we have a shared interest in pursuing these possibilities and we are open to experimentation. The relationship has been built on common trust and openness in the belief we are doing this together.

Spinnova organised a visit to its pilot plant to make Bergans aware of its technology, thus building trust and transparency. The firm saw Bergans as an excellent partner to understand and test the market and therefore engaged it through involvement in the experimentation project and the establishment of a continuous and reciprocal learning process. In only 6 months, the two firms launched a collection called the "collection of tomorrow" consisting of a limited edition of sustainable backpacks that the final clients could buy and then return to Bergans at end-of-life

to be recycled. The firm played a key role in helping Spinnova understand the market: Bergans deliberately asked for feedback from their pioneering clients to improve the backpacks' features and make a step towards circular practices.

Kamupak

Kamupak is a start-up founded in 2018 by three young entrepreneurs: Iida Miettinen, Karri Lehtonen, and Eero Heikkinen, and it offers a takeaway reusable packaging addressed to restaurants and grocery stores. The adopted CBM is the product-as-a-service: clients pay a 3-euro deposit for taking Kamupak, buy their takeaway food, and finally return the empty package to the restaurant/bar, which proceeds washing and reusing it.

To develop its reusable packaging, Kamupak contacted Orthex, a well-known large Finnish company producing household products and committed towards sustainable practices since the 1990s (e.g., use of a material made from industrial plastic waste). Kamupak engaged Orthex by asking it to refine together the circular business model, i.e., make decisions about the packaging size and materials (the idea was to produce a material coming from renewable sources thus causing less CO2 emissions than traditional materials for packaging) as well as about how the deposit system could work.

As stated by our interviewee, the co-founder of Kamupak:

> We are making with Orthex a pilot for new materials that could reduce the CO_2 emissions from the production, so we have some sort of testing at this stage. We need to experiment to find the material with a less life-cycle impact.

Kamupak engaged Orthex through sharing knowledge and expertise and constantly experimenting to find the best packaging solution suitable to the circular project.

Other key engaged stakeholders are the restaurants with whom Kamupak tested the product and service. As from our participant's narratives:

> We have had a close relationship with some of our restaurants to prototype our system, validate our functions, so we have had some of the restaurants with whom we operate in a collaborative sense through piloting.

One of these restaurants is Silta Cafeteria, a café located in Finland, which can be considered both a customer and a partner. Silta was among the first Kamupak customers and the engagement mechanisms consisted in its full involvement in the piloting phase to prototype the system. In this phase, the café tested the system and provided feedback to improve the service according to final clients' reactions and usage behaviour. For instance, Silta found out that clients were not using the application, which was rather employed mainly by the firm for statistical purposes about the product usage, and that clients were discouraged to adopt the service because of the lack of cash to pay the deposit while being at the cashier. From Kamupak's perspective, the engagement mechanisms with final customers result in value creation in terms of improvement of its product's features and experimenting and learning from their consumers' behaviours. The firm is now in the phase of implementing rewards systems towards their final customers and their customers' employees to further engage them in their mission of reducing plastic pollution caused by takeaway meal boxes.

Lovia

Lovia is a fashion firm founded in 2014 in Helsinki by the young designer Outi Korpilaakso by embracing the recovery business model in the specific form of upcycling, i.e., giving new value to materials that are either discarded, or are not being used anymore (Fletcher & Grose, 2012).

Inspired by circular principles, the business idea was to commercialise high-quality leather bags, accessories, and jewellery made through upcycling processes, i.e., using leftover materials to create new valuable products. In developing this circular business model, Lovia had to accurately find the proper stakeholders that would have been ready and committed to working differently, namely departing from low-value

materials and transforming them into high-quality products and accessories. Finding partners willing to embrace this circular mission has been a quite difficult journey, also because Lovia was looking for full transparency in every single step of the business process—as reported on its website—to establish transparent communication with its clients (B2C). Consequently, the search for stakeholders to become partners was based on "sustainability" and "transparency" criteria. As stated by our interviewee, Lovia's manager:

> Every time we look for a partner, we want to see that it is interested in sustainability. Someone does not want to collaborate with us because they don't want to be transparent.

In 2014, Lovia found a key stakeholder to produce the items, i.e., an Italian leatherwear, "Pelletteria Clio", whose owner Fulvio Galbiati has a long experience in working with leather and with luxury brands.

Lovia initially engaged Clio in its circular project by asking Fulvio to experiment with new materials (leftovers from other leather firms) and sharing knowledge and expertise with him. Lovia and Clio have progressively developed a strong trust and mutual understanding, two key features that made their relationship valuable and unique. As highlighted by our interviewee, Clio's co-owner:

> Lovia asks me suggestions regarding the use of materials; our relationship is based on trust, and I feel like I am an important partner.

Another key stakeholder is Kokkolan, a Finnish firm producing high-quality and ecological leather, which has been engaged by Lovia as a supplier. Kokkolan provides Lovia with leftovers of elk leather and considers Lovia as a "spotlight" in the transition towards circular practices. Kokkolan has been challenged in its production process: Lovia motivated it to improve the quality and extend the life cycle of the leather to make long-lasting bags and reduce the environmental impact caused by the production. Doing so, Lovia could obtain a durable material obtained from leather patches that were destined to the trash and it also contributed to improving Kokkolan's product thus representing

a motivator to take further steps towards a more sustainable production. Moreover, Kokkolan took advantage of Lovia's business philosophy based on transparency as it could gain further customers thanks to "free advertisement" made by Lovia.

Furthermore, Lovia constantly engages its B2C clients, which are at the heart of its decision-making process. It asks for feedback and insights after purchase, and it organises co-design events during which clients can design their bags that will subsequently be produced by the Italian manufacturer. These events in the showroom are very important moments to directly interact with clients also about the environmental issues linked to the item production, to hear about their experiences, and to promote education regarding circular practices.

As reported by Lovia's manager:

> We try to be as close as to customers as we can, we want to know what they think about the design, we want them to give us feedback. Every time we sell a bag or a piece of jewellery, we say that if there is any problem or if the customers feel like giving some inputs, we would love to hear from them and implement their suggestions. Based on some customers' feedback, we have changed some models, some details, it is an ongoing process. We also organised a co-design event/workshop: anyone could design its own bag.

These in-store events are very important to engage clients. Lovia seeks to develop a personal relationship with them. During these designing events, it asks the clients to create their personalised bags by choosing materials, colours, and patterns to create fully personalised items. The step forward in the engagement takes place with Clio's co-owner sending a video to the clients personally explaining all the performed production steps; doing so, the clients get the impression that the production phases are very close to them, and they feel like proper designers, and this strengthens the relationship with the brand.

As from the narratives of the interviewed client:

> I went to Lovia's showroom to attend a co-design event with a friend. We didn't decide in advance to buy a bag, but after we designed it, we realised how nice it was and how great and fun it has been the experience, and

> we loved the idea to buy something unique, so at the end we decided to buy the bag we designed.

Lovia is also developing a "care program", consisting in asking its clients to bring their bags back to be sent to its producer for repairing, thus contributing to educate and promote circular practices among its clients.

Sulapac

Sulapac is a company founded in 2016 by two biochemists, Suvi Haimi, and Laura Tirkkonen-Rajasalo who have patented innovative biodegradable granulates that are employed to make packaging for cosmetics. The CBM they adopted is circular supply chain (Lacy & Rutqvist, 2015). The firm is R&D-focused and it collaborates with research centres such as the Finnish VTT to constantly improve the recipe and the degree of sustainability of its material, as well as the "look and feel" of the final products. As stated by our interviewee, Sulapac's sustainability director:

> Sustainability is the core in everything we do, starting from the raw materials, then the manufacturing and also the end of life.

To implement its highly innovative material, Sulapac engages diverse stakeholders, first its producer and partner Quadpack, a global manufacturer producing packaging solutions for beauty brands, which was looking for alternatives to plastic and therefore committed to sustainability-oriented projects. As explained by our interviewee:

> We have as important partner Quadpack, big cosmetics jar manufacturing brand, and they also do marketing together with us, selling our jar. They made us more visible and credible towards companies and brands.

Quadpack has been selected as a partner in 2019 since it has the expertise to inject Sulapac's granulates into the cosmetics jars it produces, and it also has several brand partners that were potential buyers, and

this helped Sulapac in building brand awareness within the cosmetic industry. By leveraging on reciprocal knowledge, Sulapac and Quadpack have developed a unique offer that nobody has in the market, namely an entirely compostable product line called "Nordic Collection Jars" as well as new products that are constantly under development. Their mutual commitment and common goals are leading the partnership towards the expansion of Quadpack's Q-Line range (fully customisable) by using the Sulapac biodegradable materials.

Other important stakeholders that have been engaged by the firm are both B2B customers and final customers, having a key role in implementing Sulapac's business model. As in our respondent's narratives:

> With some customers we have kind of joint research initiative, meaning that they can influence the recipes that have been developed. Currently, we are developing take-back campaigns together with our customers so that for example when you have used your Sulapac jars, you can bring them back to the shop and it is collected by the value chain and then it will return into Sulapac granulates and then into new items, so it is a kind of reverse logistics, which is quite common in the circular economy.

The relationship with some B2B customers is so close that they are considered more as partners. For instance, the firm Lumene, a large Finnish cosmetic company, has been engaged by Sulapac from the very beginning (2016) to start experimenting whether the biodegradable granulate would have been applicable as packaging materials for beauty products, guaranteeing appropriate shelf life. After several trials, the two firms succeeded in developing a suitable recipe for cosmetics packaging. As regards B2C clients, they are involved in the circular mission since they are asked to bring the cosmetic packaging back to the shops to be reused and recycled. Doing so, the firm actively promotes the adoption of circular practices and educates its customers.

Discussion

The cross-case comparison among the four case studies allowed us to identify nine recurrent engagement mechanisms in relation to each stakeholder involved (i.e., producer, customer, and final client) as well as the resulting output in terms of value creation (see Table 8.2).

Regarding producers, the mechanisms we find in all the four firms are co-production of circular products/services, knowledge sharing, and involvement in experimentation. Co-production refers to the stakeholder involvement in the development of circular products/services in terms of features, design, and introduction of improvements. Knowledge sharing consists in exchanging technical notions, know-how, and expertise acquired over time to generate innovation. Involvement in experimentation refers to the joint process of trials, errors, and reciprocal learning, within the process of developing circular products/services. These three mentioned mechanisms allow continuous interactions between the involved actors, strengthening their bond and commitment to producing innovative circular solutions.

For what concerns customers, Spinnova, Kamupak, and Sulapac (the B2B firms) engage their customers through involvement in experimentation. Experimentation projects may take a variety of forms according to the product/service the circular firm is developing; for example, in the case of Spinnova experimenting consists in performing constant trials and tests to create innovative backpacks and anoraks from the wood-based fibre patented by the circular firm. Spinnova and Sulapac, the two firms introducing disruptive technologies, are also engaging customers in R&D activities, and this approach allowed them to move from having a patented technology to developing marketable products. In these cases, the role of partnering with B2B customers is crucial to perform research and learn from established brands that know the market and have long-term experience in a specific industry. Lovia, our sole B2C firm, engages a supplier instead, by motivating it to challenge its linear supply chain by showing it the path towards sustainable ways of thinking and producing.

Lastly, we find that Spinnova, Kamupak, and Sulapac engage their final clients (B2C) by involving them in the testing process of products/services, asking for feedback, and engaging them in reverse logistics

Table 8.2 Key engagement mechanisms and stemming value creation

Case firm	Dyadic engagement mechanisms	Value creation
Spinnova	**Producer/partner: Joint R&D, knowledge sharing, co-production** • Involvement in the production process • Sharing of knowledge and expertise •Involvement in R&D activities **Customer/partner: Involvement in experimenting, joint R&D** • Involvement in the fibre's experimentation project •Joint R&D activities and testing of an experimental backpack collection • Creation of trust and transparency **Clients (B2C): Testing, feedback, reverse logistics, education** • Asking to test the prototypes • Asking for feedback • Involvement in the take-back campaigns to bring the products back to the firm • Education about circular practices	**Eco-innovation, education for sustainability** • Development of a brand-new technology • Introduction of a disruptive sustainable technology in the textile industry • Education of customers concerning circular practices

Case firm	Dyadic engagement mechanisms	Value creation
Kamupak	**Producer/partner: Experimenting, knowledge sharing, co-production** • Involvement in the experimentation of new materials to reduce CO_2 emissions • Sharing of knowledge and expertise • Co-production of a reusable packaging **Customer/partner: Experimenting, prototyping, reward** • Involvement in the pilot phase • Prototyping the circular take-away solution • Reward system involving employees (under implementation) **Clients (B2C): Testing, feedback, education, reward** • Testing the prototypes • Asking feedback • Education about circular practices • Reward system (under implementation)	**Circular supply chain, reduction of plastic waste, education for sustainability** • Development of a reusable packaging for take-away meals • Education of customers concerning circular practices • Reduction of plastic pollution caused by take-away single-use plastic

(continued)

Table 8.2 (continued)

Case firm	Dyadic engagement mechanisms	Value creation
Lovia	**Producer/partner: Experimenting, knowledge sharing** • Involvement in the experimentation of the leather upcycling process • Sharing of knowledge and expertise to introduce a circular innovation in luxury **Supplier: Joint commitment in sustainable innovation, transparent and lean communication** • Challenge to reduce the environmental impact of the leather production and to extend its life cycle • Showing "new ways of doing things" and joint commitment to develop sustainable innovation • Full transparency in communication **Clients (B2C): Co-design, events, education** • Organisation of interactive events in the showroom where clients can design their own bags and accessories • Education through explanation of the circular production process • Making clients feel like designers • Care program (under implementation)	**Circular supply chain, avoiding waste, education for sustainability** • Introduction of an innovative upcycling process for manufacturing luxury products • Inspiration for other firms in starting the transition towards sustainability • Recovery of scrap materials • Education of customers about circular practices

Case firm	Dyadic engagement mechanisms	Value creation
Sulapac	**Producer/partner: Co-production, experimenting** • Co-production of a biodegradable demo-jar to be shown to customers and commercialisation of a co-branded collection • Experimenting to create circular value chains in the cosmetics packaging industry **Customer/partner: Experimenting, joint R&D** • Involvement in the experimentation of the biodegradable packaging material for beauty products •Joint R&D to create a biodegradable material suitable for cosmetics packaging **Clients (B2C): Education, reverse logistics** • Education about circular practices • Involvement in the take-back campaigns asking customers to bring the packaging back to recycle them	**Eco-innovation, tackling environmental issues, education for sustainability** • Development of innovative and biodegradable jars • Introduction of a disruptive sustainable technology in the cosmetics packaging industry • Solving the problem of microplastic caused by cosmetics packaging • Education of customers concerning circular practices

(take-back of products) thus also educating them with respect to circular practices. The testing phase allows the circular firm to either test the prototypes or to improve the product/service features according to the final clients' feedback. Clients are also educated about circular practices being asked to close the resource loop by bringing the products back to the firms (as in the cases of Spinnova and Sulapac)—thus taking part in reverse logistics—or adopting Kamupak's product-as-service circular business model. Likewise, Lovia educates its clients about circular practices (upcycling and repair) as an engagement mechanism, but it also organises in-store events to involve them in co-design workshops, thus making them feel like designers, and in implementing a "care program" for old bags, thus incentivising the reuse and repair of used items.

The value creation stemming from all the above-mentioned engagement mechanisms (for the dyads involved, for the clients as well as for the external context) is multifaceted since it does not concern only the economic sphere of value (i.e., commercialisation of the developed products/services), but it also includes the environmental and social spheres of value—as highlighted by Harrison and Wicks (2013). More in detail, regarding the environmental sphere, we find that the value creation is realised with the introduction of sustainable technologies, the reduction of plastic pollution caused by take-away single-use plastic, and the recovery of scrap materials. From the social point of view, the value creation consists mainly in educating customers about circular practices and gradually changing their consumption habits. Moreover, circular firms inspire other firms in starting the transition towards the circular economy, thus representing spotlights in this direction. Together, circular firms and their engaged stakeholders contribute to spreading a sustainability-oriented mindset within society at large.

Furthermore, our empirical investigation allows us to confirm that the three attributes identified by Kujala et al. (2019), i.e., trust, joint interests, and ability to collaborate are necessary to build solid relationships with stakeholders. According to our findings, we shall add to the Authors' model that a "shared sustainability-oriented mindset" is crucial to develop effective engagement mechanisms between circular firms and their key stakeholders. Vice versa, we do not encounter instances of harmful value appropriation due to unbalances in bargaining power,

as found by Coff (2010). Furthermore, in our cases, we find that the stakeholder engagement co-creation mechanism revealed by Pucci et al. (2020) occurs in the forms of the already explained co-production and co-design activities.

Figure 8.1 summarises our findings through a framework illustrating stakeholder engagement mechanisms and resulting value creation in circular entrepreneurship, as well as the limits and challenges that engagement mechanisms may present in promoting the transition towards circular practices.

With regard to the latter, our study reveals that finding the appropriate stakeholders is certainly not a simple task. Circular firms' willingness to challenge the *status quo* by transiting towards circular value chains and practices requires searching for those stakeholders that are prone

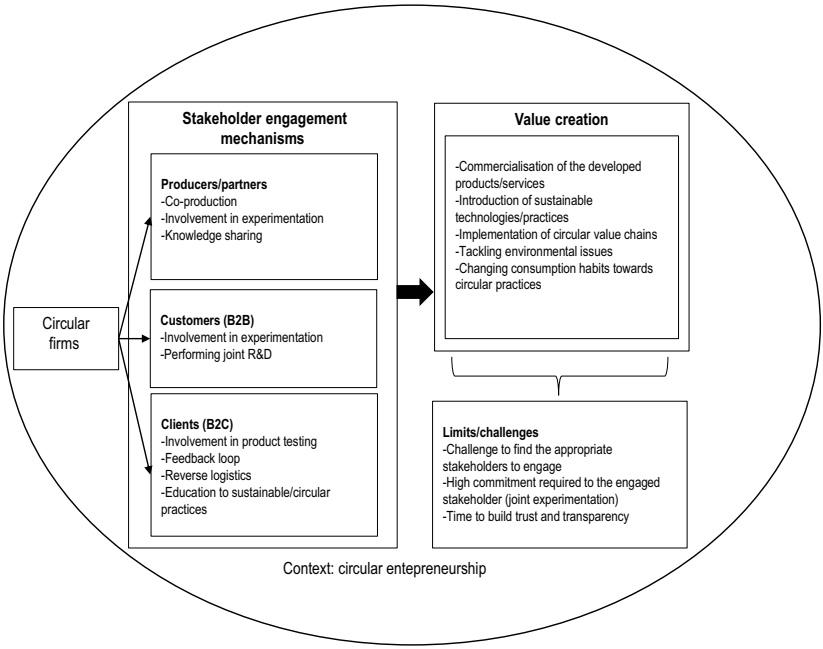

Fig. 8.1 Stakeholder engagement mechanisms and value creation in circular entrepreneurship

to experimentation, trials, errors, as well as keen to invest in finding alternative solutions.

Furthermore, circular firms tend to ask high commitment to the engaged stakeholders, either in terms of time and/or in terms of demanding activities, such as those concerning R&D and experimentation. This may prevent some actors to accept being engaged by a typically new-born firm without an established brand or a reputation on the market. Circular firms may more easily create partnerships and with those stakeholders showing a sustainability-orientation mindset since goals and values alignment is likely to represent a binding force within the dyadic relationship.

Lastly, it may take time to build strong trust and the full transparency that such rewarding relationships may require. This means circular firms might need to be compelling in explaining their circular mission to the stakeholders they wish to engage, to establish a real connection with them from the very beginning.

Conclusions

This chapter has investigated stakeholder engagement mechanisms implemented by four Finnish firms in the novel context of circular entrepreneurship. Despite being popular in management literature, stakeholder engagement lacks empirical studies in this context. We contribute to fill this gap by empirically investigating key stakeholder engagement mechanisms between a set of circular firms and each of their key stakeholders.

Our study has both theoretical and practical implications. From the theoretical perspective, our findings contribute to the academic debate about stakeholder engagement in the context of circular entrepreneurship (Cullen & De Angelis, 2021; Salvioni & Almici, 2020; Zucchella & Urban, 2019), by uncovering nine key engagement mechanisms underpinning dyadic relationships between circular firms and their stakeholders. We also provide a framework of stakeholder

engagement mechanisms and resulting value creation which acknowledges a multifaceted conceptualisation of value creation and includes the environmental and social perspectives.

From the managerial perspective, first, we suggest to circular entrepreneurs but also to managers willing to guide the transition towards the circular economy to look for committed stakeholders and to engage them through the illustrated stakeholder engagement mechanisms by considering and acknowledging the resulting multidimensional value creation. Second, we highlight some of the limits and challenges that the engagement of stakeholders and the underlying mechanisms may have in fostering value creation and circular practices. The most evident challenges are related to finding the appropriate stakeholders to engage, the high commitment required to the engaged stakeholders, and the time needed to develop trust and transparency, key elements for a long-lasting and constructive relationship.

Finally, the cases highlight that the output stemming from the engagement mechanisms is not solely beneficial for the circular firms and the stakeholders involved, but also for the environment and the society at large. Some of our circular firms are in fact developing disruptive technologies to reduce the environmental impact of the production processes, others are promoters of the education concerning circular practices and are sources of inspiration for other firms aiming to start the transition towards CE.

Our study's main limitations are represented by its context-specificity (the Finnish circular entrepreneurship context), the paucity of evidence regarding B2C firms, and the limited number of cases. Future studies might collect more in-depth case studies of circular firms established in different countries (both in the B2C and in the B2B contexts) to provide more empirical evidence of stakeholder engagement mechanisms and related value creation stemming from them.

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Appendix 8.1: Interview Guides

a. Interview scheme (circular firms)

1. General info

Foundation (year)
Industry
Core activities
Number of founders
Number of employees
Turnover 2019 and/or 2020

2. Please describe the company's core business.
3. Please describe in detail the company's circular business model.
4. Which stakeholders (e.g., suppliers, clients, public institutions) does your firm engage?
5. Describe in detail how your firm has engaged/engages its key stakeholders. Which mechanisms do you develop? Which interactions do take place between you and each stakeholder?
6. What is the value generated from the process for you and each stakeholder? And for the context?

b. Interview scheme (stakeholders)

1. General info

Foundation (year)
Industry
Core activities
Number of founders
Number of employees
Turnover 2020
Starting year of the collaboration with the circular firm

2. Could you describe your firm/cooperative/institution?
3. How did your firm/cooperative/institution meet the circular firm?
4. Describe in detail how the circular firm has engaged you for the first time and how it engages you now. Which engagement mechanisms have been implemented?
5. Describe how you interact with the circular firm and how your interactions evolved.
6. What is the value generated from the process for you, for the firm, and for the context?

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9

Alignment Through Value Consolidation Mechanisms—Focusing on Multi-Stakeholder Collaboration for Circular Economy

Elina Vikstedt and Tomi Rajala

Introduction

Societal problems, such as climate change, are difficult to resolve without cross-sectoral collaboration efforts. In multi-stakeholder settings, public, private, and third-sector stakeholders influence the circular economy and sustainability through standard-setting and co-regulating (Ewert & Maggetti, 2016), developing innovative operating models and solutions (Arsova et al., 2021; Mishra et al., 2019), provisioning green infrastructure, coordinating material cycles (Pinz et al., 2018), reframing agency (Gonzalez-Porras et al., 2021), and familiarising new stakeholders with sustainable practices (Alexius & Furusten, 2020).

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Multi-stakeholder collaboration is characterised by institutional hybridity. Institutional hybridity means that organisational entities face a plurality of beliefs, values, goals, and practices arising from divergent institutional logics (Greenwood et al., 2011; Pache & Thornton, 2020; Skelcher & Smith, 2015). Different stakeholders adhere to different institutional logics (Cobb et al., 2016), which are "socially constructed historical patterns of material practices, assumptions, values, beliefs, and rules" (Thornton & Ocasio, 1999, p. 84). Institutional logics are important because they guide stakeholders in interpreting daily organisational reality and inform them about what constitutes appropriate behaviour, how to survive and succeed in the social world, and what is good and valuable (Friedland, 1991). Stakeholder engagement (Freeman et al., 2017; Kujala & Sachs, 2019) refers to a variety of processes that organisations and individuals—in this chapter, organisations and individuals who adhere to various institutional logics—attempt to collaborate, cooperate, and communicate with one another.

We approach the topic of stakeholder engagement in institutionally hybrid settings by focusing on alignment and misalignment (Corsaro & Snehota, 2011) in value-creating relationships between the stakeholders exercising circular economy. A stakeholder is typically understood as a "group or individual who can affect or is affected by the achievement of the organisation's objectives" (Freeman, 1984, p. 46). In this chapter, we are particularly interested in those stakeholders who matter to collaborative value-creation activities (Mitchell & Lee, 2019). We limit the scope of our study to the cognition, goals, and practices that are aligned or misaligned (Corsaro & Snehota, 2011) in stakeholder engagement processes. More precisely, the purpose of this chapter is to investigate how alignment can be constructed through different value-consolidation mechanisms. Through value-consolidation mechanisms, stakeholders combine and decouple cognitions, goals, and practices of value creation that are guided by their divergent institutional logics.

We argue, in this chapter, that value-consolidation mechanisms are important for aligning institutional logics and enabling value creation in circular economy because societal value creation and the legitimacy

of governments are contingent upon private sector stakeholders' contributions while companies are dependent on government actions (e.g., Michelini & Fiorentino, 2012; Vakkuri et al., 2021). Combining the distinct elements of multiple logics, such as commercial logic, which seeks to maximise market value, and sustainability logic, which targets the preservation of natural resources, is integral to value creation in multi-stakeholder arrangements focusing on resource circulation. The engagement of stakeholders with divergent logics in joint value creation has been described in the earlier literature as both an opportunity and a challenge: the participation of divergent stakeholders can safeguard the appropriateness of activities, improve changes to acquire social and material support from various sources, and boost collaborative innovation and value creation (Pache & Santos, 2013). The presence of multiple institutional logics can also result in tensions and conflicts that hinder collaboration and compromise the ability to meet stakeholders' value-creation expectations (e.g., Oliver & Hussey, 2015; Skelcher & Smith, 2015).

Although the past literature has discussed the alignment of stakeholder interests and the benefits of such (e.g., Kujala & Sachs, 2019; O'Riordan & Fairbrass, 2014), the role, variance, and use of various value-consolidation mechanisms in the alignment of cognition, goals, and practices have not been analysed. We contribute to stakeholder engagement research by showing how and why constructing alignment through various value-consolidation mechanisms is relevant to circular economy utilising multi-stakeholder organising. We also broaden the discussion from alignment to misalignment in value creation as we argue that value consolidation mechanisms offer viable ways to start collaboration in settings where perfect alignment is difficult to achieve. We used an exploratory literature review approach (e.g., Adams et al., 2014) to locate various value-consolidation mechanisms in the past literature (e.g., Vakkuri & Johanson, 2020). To empirically study the use of value-consolidation mechanisms in alignment and misalignment, we adopted an in-depth case study approach (Yin, 2013). The case study results offer examples of the alignment of stakeholders' goals, practices, and cognitions through various value-consolidation mechanisms.

The cases investigated in this chapter are multi-stakeholder partnerships for circular economy innovation in Finland. Data are collected through semi-structured interviews with stakeholders and analysed using deductive content analysis.

The remainder of the chapter proceeds as follows: the next section presents the dimensions of alignment and value-consolidation mechanisms as forms of alignment. The third section explains the research method used in the study. The fourth section is devoted to empirical analysis, and the final section presents the discussion and conclusions.

Alignment and Misalignment of Cognition, Goals, and Practices in Multi-Stakeholder Settings

The first dimension along which we examine alignment is the cognitive dimension. Cognitive alignment describes the alignment of values, beliefs, and perceptions among actors (Corsaro & Snehota, 2011). This is related to how stakeholders understand and perceive value: what activities and outcomes do the stakeholders consider valuable and value-creating? Watson et al. (2018) have highlighted the importance of addressing and leveraging divergence in the value frames of different stakeholders to unleash their environmental innovation potential. Caldwell et al. (2017) have identified mutual knowledge as a necessary component of alignment, which, in their work, refers to knowledge stakeholders share and know they share. The extant literature often argues that the institution of shared values, assumptions, and beliefs steering organisational practices supports the co-existence of plural institutional logics (Pache & Thornton, 2020), while the maintenance of opposing values and beliefs makes collaboration more complicated (Rajala et al., 2021). Cognitive alignment can be observed in terms of cognitive proximity, e.g., how closely related the values and beliefs steering organisational practices are, and compatibility, e.g., how compatible these are, have been identified as beneficial for value creation

in multi-stakeholder settings (Nguyen et al., 2019). Cognitive alignment has been noted to facilitate communication and increase trust and reciprocity between stakeholders (Brass, 2003). The past literature has also highlighted the critical role of dialogues in locating cognitive misalignment and seeking alignment: they operate as fora for revealing and synthesising differing views and discourses arising from divergent institutional logics (Brown, 2009). Misaligned cognitions are contradictive facts, values, or beliefs signalling inconsistency. This inconsistency may or may not be beneficial.

The second dimension we use to explore alignment is related to collaborative goals. Goal alignment refers to the consistency and agreement of goals among stakeholders (Corsaro & Snehota, 2011). Stakeholders adhering to different institutional logics often have incongruent goals. For example, organisations conditioned by a commercial institutional logic may focus on financial goals, whereas organisations conditioned by a social logic may focus on social goals. Goal alignment relates to the processes in which shared goals are adopted, multiple complementary goals are accepted, or stakeholders develop new common goals, whereas goal misalignment refers to processes in which stakeholders continue pursuing their own goals or such goals are in direct conflict with one another. Caldwell et al. (2017) have discussed goal alignment in terms of mutual understanding of desired outcome goals and the timeframes needed to achieve them. In the same spirit, Emden et al. (2006) have discussed strategic alignment, which is comprised of goal correspondence and motivational correspondence. Here, goal correspondence refers to noncompeting goals that can lead to mutual gains. For example, commercial goals may be harnessed to produce the financial resources needed for social and environmental goals. The literature on institutional hybridity has extensively addressed goal incongruence and the need to align the organisational priorities where multiple potentially conflicting goals are present (Caldwell et al., 2017). Goal conflicts between stakeholders are among the central challenges in cross-sectoral settings (Rajala, 2020; Rajala et al., 2021). Being able to pursue divergent goals that are important to different stakeholders is often required to keep such stakeholders engaged in collaborative efforts serving common goals.

The third dimension, practice alignment, refers to the degree to which processes and competencies fit the actors and are integrated (Corsaro & Snehota, 2011). The possibility of aligning practices depends on the institutional logics of the stakeholders. Conflicting logics often generate practice misalignment that leads to stagnant and poorly functioning organisational arrangements, with questionable legitimacy, antagonistic practices, and coalitions of stakeholders with opposing views (Ingstrup et al., 2021; Pache & Santos, 2013; Skelcher & Smith, 2015). In comparison, compatible institutional logics typically offer a better premise for the smooth integration of the value-creating practices of divergent stakeholders. Often, value-creating practices that are not only compatible but also mutually supportive or synergistic are sought in collaborative multi-stakeholder settings. There is no uniform consensus on the effects of practice alignment. The research evidence has shown that practice alignment does not necessarily create positive value and misalignment does not inevitably lead to negative results (Ingstrup et al., 2021). Nevertheless, a typical argument in the literature has been that optimally aligned practices fortify one another, whereas misaligned practices harm one another while hampering organisational value creation (e.g., Delery, 1998).

The previous research literature has suggested that the outcomes of activities attempting to align cognitions, goals, and practices can be categorised as perfect alignment, partial alignment, partial misalignment, or misalignment (Ingstrup et al., 2021). If the stakeholders can reach perfect alignment:

1. their practices are compatible and complement each other
2. they share goals and aspirations
3. and they possess shared perceptions of what types of value they want to pursue and share common knowledge and a sense of reality.

While this is often described in the literature on institutional hybridity as an ideal state (e.g., Battiliana et al., 2012), it may be difficult to attain. More often, partial alignment may be reached. In this case, some but not all practices, goals, and cognitions become aligned. Sometimes, the situation is closer to partial misalignment, in which some elements of goals,

practices, and cognition fit together and support one another but stakeholders with incompatible goals or practices are more prevalent. Finally, misalignment indicates that stakeholders' goals, practices, or cognitions do not support one another or are contradictory, conflicting, or mutually exclusive (Ingstrup et al., 2021).

Dealing with Institutional Hybridity: Consolidation Mechanisms

Blending, transforming, and mixing are value-consolidation mechanisms commonly associated with a high level of alignment (see Fig. 9.1). Such mechanisms join practices, goals, or cognitions that support one another. This support motivates the alignment. Blending joins together two distinct institutional logics into an amalgamation, in which the previous element of distinct logics can no longer be bifurcated (Polzer et al., 2016). Blending is described as the "synergistic incorporation of elements of existing logics into new and contextually specific logic" (Skelcher & Smith, 2015, p. 440). Other sources discuss deep integration. For example, Emerson (2003) has introduced the concept of blended value, in which financial, social, and environmental values are indiscernible from one another. Similar ideas about joint or blended value have been addressed in discussions of stakeholder value creation (Freeman et al., 2020). Blending as a consolidation mechanism can be observed in the adoption of new context-specific shared goals and ways of thinking, or in the integration of practices of the stakeholders into a novel and shared practice in circular economy. Using mixtures of ideas from private-sector stakeholders to reshape public service designs typically are referred to as transforming value (Vakkuri & Johanson, 2020), but private-sector service designs can also be modified by applying public-sector influences. In mixing (Vakkuri & Johanson, 2020) or assimilation (Skelcher & Smith, 2015), elements can also be deeply integrated and mutually reinforcing but discernible from one another, and the practices and goals of various stakeholders may not be deeply altered. Although the goals and practices of value creation are integrated to derive benefits via their synergy, organisations may continue

to serve different stakeholder groups (Vakkuri et al., 2021) and maintain a modular structure in terms of their circular economy value creation.

The literature has also described value-consolidation mechanisms that are associated with partial alignment. Complementing (Jacobides et al., 2006), or coupling (Pache & Santos, 2013), has been proposed as another way to consolidate the institutional logics. In using complementary mechanisms, stakeholders seek "synergistic" combinations of institutional logics to create surplus value (Jacobides et al., 2006). Often, readily compatible and mutually beneficial elements in value creation are joined together. This may mean, for example, that an R&D alliance for circular innovations between public research and private stakeholders utilises the institutional logic typical of research institutions in generating and validating innovations and couples it with the commercial logic of a private enterprise to introduce a new technology to industry and rapidly distribute it. Expanded to value creation, selective coupling is a mechanism in which intact elements drawn from different institutional logics are selectively coupled in joint value creation. When stakeholders share some interests, employing selective coupling (Pache & Santos, 2013) is possible. For example, stakeholders may adopt a common goal that serves everyone's interests, but otherwise, they continue to pursue their own unique goals.

Several studies discuss consolidation mechanisms that can be associated with misalignment, partial or otherwise. Conceptually, balancing is very close to complementing or coupling: it focuses on finding an optimal balance between different institutional logics in collaborative value creation (Pirson, 2012). However, competing and even contrasting logics are also considered, not just synergetic ones, as in coupling and complementing value. The aim is to find an optimal balance between alignment and misalignment stakeholder engagement. Polzer et al. (2016) report that, in practice, a high level of alignment is often difficult to reach. The authors introduce the idea of layering as a more robust option. The essential feature of layering is that different institutional logics coexist as recognisable layers at different organisational levels at multi-stakeholder collaborations for circular economy, like sediments in geology. Skelcher and Smith (2015) propose a similar notion,

Consolidation mechanism	Example of the type of alignment or misalignment*	Literature
Blending	Create a new practice by blending practices of Stakeholder A with practices of Stakeholder B in such a way that blended practices cannot be bifurcated anymore	Emerson (2003) Nicholls (2009) Skelcher & Smith (2015) Polzer et al. (2016)
Replacing	Replace the practice of Stakeholder A with the practice of Stakeholder B or *vice versa*	Campanale et al. (2021) Castellas et al. (2019) Mair et al. (2015)
Transforming	Change the current practice of Stakeholder A by incorporating the practices of Stakeholder B or *vice versa*	Vakkuri et al. (2021)
Mixing or combining	Retain practices of Stakeholders A and B while keeping them identifiable in the new combined practice	Vakkuri et al. (2021) Pache & Santos (2013)
Complementing	Use the complementing activities of Stakeholders A and B side by side but as separate practices	Jacobides et al. (2006)
Coupling	Join the appropriate practices of Stakeholders A and B together selectively to avoid conflicts	Pache & Santos (2013) Mair et al. (2015)
Layering	Retain those practices of Stakeholder A that are still responding to the demands faced by Stakeholder A and add the practices of Stakeholder B responding to new demands placed on Stakeholder A as layers on top of the practices of Stakeholder A (layered practices can be complementing, contradicting, or both)	Polzer et al. (2016) Vakkuri & Johanson (2020)
Balancing	Find an appropriate and balanced combination of the stakeholders' practices, some of which are in conflict (attempt to create a balance between the practices of Stakeholders A and B, which is used in the engagement processes between Stakeholders A and B)	Pirson et al. (2012) Saz-Carranza & Longo (2012)
Compromising	Practices of Stakeholders A and B are not adopted unmodified in compromises because this arrangement is most valuable, although not perfect for the parties	Vakkuri et al. (2021) Pache & Santos (2013)
Competing	Keep the competing practices of Stakeholders A and B in your arsenal and move fluidly from one practice to the opposite one in turbulent environments (competition over practice options)	Thorton & Ocasio (1999) Saz-Carranza & Longo (2012) Pache & Santos (2013) Skelcher & Smith (2015)
Decoupling	Decouple at least some practices of Stakeholders A and B by not using them in joint stakeholder practices	Pache & Santos (2013)
Contradicting	Allow the parallel utilisation of the contradictory practices of Stakeholders A and B (misalignment by acceptance of pluralism, relativism, subjectivity and/or ambiguity)	Castellas et al. (2019) Skelcher & Smith (2015)

*Each consolidation mechanism can also be applied to goals and cognitions, although the examples refer to practice alignment or misalignment.

Fig. 9.1 Value consolidation mechanisms and (mis)alignment

terming it segregation: functions oriented towards different logics are compartmentalised but remain interconnected.

Sometimes, the common ground between different stakeholders can be difficult to find. In such cases, a compromise between the stakeholders may be in order. Compromises require modifications to stakeholders' value creation. In deadlocks, compromises may be the most valuable resolution to conflicts between competing institutional logics, although they are not ideal for any individual party (Vakkuri et al., 2021). If compromises are not an option, allowing competing logics can be useful for enabling resource circulation in societies. Endorsing competing mechanisms enables stakeholders to shift from one institutional logic to another based on which logic fits the situation (Thornton & Ocasio, 1999). Keeping competing logics in the arsenal can be valuable in turbulent settings. Nevertheless, it is a risky tactic that does not help to resolve the tensions between the stakeholders.

There may also be collaboration in which the stakeholders have very little in common: each stakeholder continues to create value according to their logic, following their typical practices. As such, the collaboration remains merely symbolic. Taking part in partnerships for a circular economy may be a type of symbolic performance, in which the stakeholders seek reputation but have little interest in investing in joint value creation. Situations in which cognition, goals, and practices guided by different institutional logics remain disconnected from one another have been termed de-coupling (Pache & Santos, 2013). In specific circumstances, tolerating disconnection may be the most reasonable way to proceed because different partners can pursue their ambitions instead of engaging in never-ending power struggles relating to the ways they perceive circular economy and create value. Using contradictory practices is often associated with decoupling, but sometimes actors state directly that they want to promote contradictory practices simultaneously, such as privacy and openness. Finally, situations in which one of the logics becomes dominant and replaces others have been recorded (Campanale et al., 2021). This places the stakeholders back in alignment. In a way, a high level of alignment is achieved through replacement: in replacing value, all stakeholders begin to work according to, for example, a commercial logic, while other potentially relevant logics are marginalised.

Research Methods

In the first phase of the study, the Knowledge-Resource-Nomination Worksheet (KRNW) (Okoli & Pawlowski, 2004) and snowball sampling (i.e., referrals by other interviewees) were used in creating the sample of informants. Fifty-five experts from different organisations representing various positions at the frontlines of multi-stakeholder collaboration for circular economy were invited to take part in the study. Thirteen experts participated. Interview data were collected from May to August 2020 through semi-structured in-depth interviews performed via phone or online tools. Interviews were from 30 to 60 minutes in duration. The audio was recorded, and the interviews were transcribed verbatim. By using inductive content analysis and pattern matching (See Yin, 2013), data were used to identify various institutional logics relevant to multi-stakeholder collaborations for a circular economy. These logics motivated us to search value-consolidation mechanisms from the literature.

In the second phase, we purposefully selected two key cases. The cases were instrumental in the sense that they reflected emerging collaborative forms of organising in the circular economy and thus had the potential to reveal aspects related to the use of consolidation mechanisms applicable in the broader context. Two partnerships that strategically aimed towards alignment and that had a relatively broad partner network consisting of both public and private sector stakeholders were chosen. The multiple case study was selected as a research method because it was considered suitable for an in-depth look at social dynamics in real-life contexts at multiple sites (Stewart, 2012; Yin, 2013). Our approach involved theory-testing (e.g., Stake, 1995) which was intended to either confirm or disconfirm the use of value-consolidation mechanisms and alignment or misalignment in stakeholder engagement of the cases.

The first case organisation, the CLIC Green Innovation Cluster (hereafter, CLIC), was based on a public–private partnership model between businesses and public research institutions. At the time of the study, the key stakeholders (owners and partners) were 30 forest, energy, and waste management corporations and 17 research partners. Collaborative value-creation activities between the internal stakeholders were organised

through co-innovation projects and two more permanent open innovation ecosystems, GreenE2 (focused on green energy) and 4Recycling (focused on solving plastic challenges through the circular economy principles). The activities were steered by a co-owned limited liability company formed by and for the partners. A visualisation of the stakeholders central to value creation in CLIC is provided in Appendix 9.1 CLIC and ECO3 stakeholder maps.

The second case organisation was the ECO3 Eco-Industrial Bio- and Circular Business Park (hereafter, ECO3), located in the city of Nokia, Finland. Like CLIC, ECO3 was based on a public–private partnership model. The city of Nokia steered the Park through a fully publicly owned limited liability company. Businesses located in ECO3 included two publicly owned municipal corporations (waste and water management) and a diverse group of small- and medium-sized enterprises representing the recycling, construction, and energy sectors. The research partners were public research institutions: Tampere University, LUKE Natural Resource Institute of Finland, and VTT Technical Research Centre of Finland. Material cycles handled in the ECO3 area included nutrients, wood, energy, and waste. Collaborative value creation between the stakeholders was organised through the ECO3 consortia, a regularly meeting group comprised of the key stakeholders. At the time of the study, there were 28 consortia members in total. A visualisation of the stakeholders central to value creation in ECO3 is presented in Appendix 9.1 CLIC and ECO3 stakeholder maps.

Because we explored stakeholder engagement in collaborative multi-stakeholder settings, we did not focus on one organisation as the "manager" of the process but, instead, understood stakeholder engagement in multi-stakeholder settings as a collective activity, as De Schepper et al. (2014) have proposed. Attention was directed towards stakeholders that were in a definitive role in the arrangement (Freeman, 1984) and responsible for value-creation activities (Harrison et al., 2019). Semi-structured online interviews (n = 19) that lasted from 30 to 60 minutes were collected from the key stakeholders of the cases (CLIC = 12, ECO3 = 7). The interview period was from February to August 2021. The audio was recorded, and the interviews were transcribed verbatim. In addition,

we collected strategy documents, project reports, annual reports, financial statements, and other materials for data triangulation (Flick, 2004) to verify and cross-examine the findings. The case data used for this study are represented in Table 9.1.

A directed latent qualitative content analysis method was used to analyse the data (Hsieh & Shannon, 2005). Deductive coding was performed by assigning codes to each value-consolidation mechanism in Fig. 9.1 (combining alignment dimensions with a specific value-consolidation mechanism) and coding the data with this a priori set of codes. Phrases were coded as meaning units. Only those phrases that were identified as signifying the coding categories (presented in Fig. 9.1) were coded. Both researchers participated in the coding process, and the coded data were compared to test the intercoder agreement.

Results

Institutional Logics of Finnish Circular Economy Field

Four archetypal institutional logics—commercial logic, public value logic, academic professional logic, and sustainability logic—were identified from the data. These are summarised in Table 9.2. Commercial logic, public value logic, and academic professional logic were more prevalent and dominant in specific types of organisations: private-sector stakeholders commonly leaned on a commercial logic, research stakeholders an academic logic, and public-sector stakeholders a public value logic. However, commercial logic was noted to also affect public sector organisations and research institutions, while private sector stakeholders could adopt some traits associated with public value or academic professional logic. Sustainability logic was an overarching form of logic that seemed to unite stakeholders from different sectors. The desire to combine relevant elements of more than one of the logics as means to pursue the ends of sustainability logics was present in both case organisations. Alignment was possible because it was possible to combine elements of the logics in value creation (e.g., cutting energy costs, which is important for sustainability logic, often also cuts financial costs, which contributes to value

Table 9.1 Data collected for the study

Phases and cases	Interviewee	Role	Organisation
Phase 1 Cross-sectoral collaboration for circular economy	1	CEO	Publicly owned corporation A
	2	Director	Publicly owned corporation B
	3	CEO	Publicly owned corporation C
	4	CEO	Public–private corporation A
	5	Branch manager	Industry federation A
	6	Branch manager	Industry federation B
	7	Director	Non-profit A
	8	Research director	Research institute A
	9	Research director	Research institute B
	10	Project coordinator	Research institute C
	11	Project coordinator	Research institute C
	12	Head of department	Public-sector organisation A
	13	CEO	Private-sector organisation A
Phase 2 Case CLIC	14	CEO	Public–private corporation A
	15	Head of Circular Economy	Public–private corporation A
	16	Head of Services	Public–private corporation A
	17	Project coordinator	Private-sector organisation B
	18	Researcher	Research institution A

(continued)

Table 9.1 (continued)

Phases and cases	Interviewee	Role	Organisation
	19	Project coordinator	Research institution A
	20	Researcher	Research institution C
	21	Researcher	Research institution D
	22	Manager	Private-sector organisation B
	23	Head of R&D	Private-sector organisation B
	24	Executive vice president	Research institution A
	25	Vice president	Private sector organisation B
	+ Secondary data: Research and Innovation strategy of CLIC (1), project reports (6), CLICs website (1), performance matrix (1), CLIC newsletters (6)		
Phase 2 Case ECO3	26	CEO	Publicly owned corporation C
	27	CEO	Publicly owned corporation D
	28	Head of Circular Economy	Public-sector organisation C
	29	Director	Public-sector organisation D
	30	Manager	Private-sector organisation C
	31	Vice president	Research institution A
	32	Researcher	Research institution E
	+ Secondary data: ECO3 website (1), ECO3 press releases and news (25), project reports (1)		

creation according to a commercial logic). Thus, interviewees perceived that joining together the four dominant logics could produce value for all stakeholders. Nevertheless, they also noted differences, inconsistencies, and tensions between the four logics, highlighting the need to also consider misalignment.

Cognitive Alignment in Collaborative Value Creation

In both case organisations, interviewees noted that cognitive distance between stakeholders' notions of value—what the stakeholders hold as important, meaningful, and beneficial—is not uncommon and varies between the stakeholders. For example, research organisations focusing on applied research and enterprises capable of agile innovations share cognitive proximity, while there may be a cognitive distance between basic research-oriented institutions and traditional multinational enterprises. In the former case, neither the private nor the research stakeholders follow archetypal sectoral institutional logics and may readily share common values, knowledge, or beliefs, while in the latter case, the archetypal logic is dominant in the organisations. Findings are summarised in Table 9.3.

In CLIC, finding a functional balance between conflicting and synergetic perceptions was an often-used value-consolidation mechanism. CLIC sought to combine academic professional logic and commercial logic in value creation to produce innovations and technologies. Balancing mechanisms were used to seek mutually beneficial combinations and prevent competition between cognitive frames informed by different logics. Data pointed towards a threshold indicating there is a fine balance between academic freedom and profit maximisation. One logic attempting to take over could lead to cognitive dissonance and competing frames on value and value creation. The quotation below demonstrates how balancing, as a consolidation mechanism, is adopted to avoid cognitive misalignment when the stakeholders are in danger of slipping from complementing cognitions to competing and contradicting ones:

Table 9.2 Institutional logics in the circular economy field

Institutional logic	Cognition	Goals	Practices
Commercial (corporate) logic	Value is understood as financial profit and created for the shareholders. Other forms of value (environmental, social) created for stakeholders and society legitimate commercial activities	Goals of value creation, such as profit maximation and growth percent, are typically defined in corporate strategy through corporate processes and may vary. The board and shareholders exert control over the goals	Value is created by producing products or services that can be exchanged in the market. Typical processes include new product development and market expansion
Public value logic	Value is understood as contributions to society and citizens' welfare. Created value must benefit citizens	Goals of value creation are typically related to supporting the economy and increasing the welfare of the citizens through jobs and tax revenues. Goals are defined through democratic processes. Local actors must comply with operational and budgetary goals defined by the governing bodies higher in the government hierarchy	Value is created by adjusting market price mechanisms with taxation, producing public goods and services and steering and regulating actors
Academic professional logic	Value is understood as the accumulation of scientific knowledge and theoretical development and impacts of this process for society	Goals of value creation are related to producing state-of-the-art knowledge in the areas of research interest and providing education that benefits the society	Value is created by producing scientific publications and distributing new knowledge in society (e.g., creating research impact). Typical processes include collecting data, testing, and developing theories and teaching

(continued)

Table 9.2 (continued)

Institutional logic	Cognition	Goals	Practices
Sustainability logic	Value is understood as the protection and/or regeneration of natural resources and human welfare for future generations. Economic, environmental, and social values are under focus simultaneously, and respecting ecological boundaries while satisfying basic social needs forms a basis for all human activities.	Goals in value creation are typically related to the reduction of CO_2 emissions, the reduction of waste (and the use of virgin materials), and establishing sustainable economic growth. Goals can be adopted from international sustainability agreements and programmes (for example, the UN Sustainable Development Goals)	Value is created by protecting natural resources and human wellbeing. Typical processes include saving energy, protecting natural resources, and securing a sustainable financial and social position

Table 9.3 Synthesis of the results

Case	Consolidation mechanisms used in cognitive (mis)alignment	Consolidation mechanisms used in goal (mis)alignment	Consolidation mechanisms used in practice (mis)alignment
CLIC	Partial alignment: Soft mixing and balancing as a primary value consolidation mechanisms in cognitive alignment between commercial and research logics. Both logics have been infused with sustainability logics to different degrees. Stakeholders retained their typical mindsets and value perceptions but had inherited influences from one another. Occasional misalignment occurred when there was cognitive distance: in these cases, contradictions and competition were allowed to prevail	Partial alignment: Situational. Mixing, balancing, complementing, coupling, and compromising between commercial and academic professional logics, depending on stakeholders involved. Goals were coupled and mainly readily compatible. Goals were coupled when they were readily compatible. Temporal use of replacing mechanism was also detected	Partial misalignment: Employment of consolidation mechanism at the practice level was highly situational and dependent on the actors involved. Layering value was most used. Other uses of consolidation mechanisms varied from compromises and decoupling to complementing and selective coupling, which were used to obtain joint funding or meet other external expectations

(continued)

Table 9.3 (continued)

Case	Consolidation mechanisms used in cognitive (mis)alignment	Consolidation mechanisms used in goal (mis)alignment	Consolidation mechanisms used in practice (mis)alignment
ECO3	Partial alignment: Soft mixing as a primary value-consolidation mechanism between commercial and public value logics. Public and private logics were infused with sustainability logics. Stakeholders retained mindsets and values typical for their sectoral logics but had inherited influences from one another. Occasional contradicting and competing value were also observed	Partial misalignment: Layering as primary value consolidation mechanism between public value and commercial logic, but also decoupling was used. Stakeholders hoped that goals could be more synergistic in the future	Partial misalignment: Layering value-creation practices between governmental, private, and research stakeholders. Stakeholders mainly created value separately but benefitted from one another's value creation

> In these projects, we aim to bring a business perspective and economic side to these solutions at an early stage so that they would be techno-economically viable and operationalisable as a business [activities], these solutions that we develop. But on the other hand, research institutions wish for, and in my opinion, they should have academic freedom, so that money is not the first thing we bring into the discussion, [or] the economic side, because that we way can get that out-of-the-box thinking that produces these break-through solutions. Yet there is the risk that we go into too high-flying things, which are not in any way viable in a business sense and can never be operationalised at a large scale. So how do we combine them so that realism would be part of academic thinking, but we would not limit big innovations. (CLIC Interviewee, private sector stakeholder)

Mixing could be used when institutional logics enhanced one another and were readily compatible. Due to the differences between business and academic logic, the interaction of academic professional and commercial logics mostly led to more subtle forms of mixing, in which stakeholder thinking was not modified but new understanding emerged from collaboration. The following extract demonstrates this type of mixing resulting in partial alignment:

> The businesses have operated in a certain way. They have had certain views about research organisations. Research organisations have operated in a certain way, and they have had certain thoughts about business organisations. And, in a way, hybridisation has taken place, which means that we understand the views of others. (CLIC Interviewee, facilitator)

The construction of cognitive alignment was an iterative process: several interviewees at CLIC referred to learning processes in which actors' views, mental frames, values, and perceptions mixed over time or were consciously shaped through dialogue. Because participation was voluntary and actors maintained their autonomy, blending in the form of novel identities and mindsets was not evident. However, the integration of different perspectives was sought after. While research activities retained an academic professional logic, "the business perspective was

included from the beginning", as one informant stated. Some interviewees noted that full alignment would be difficult to attain due to the boundaries of commercial logic. As an example, public and environmental value creation was possible if there was a chance for profit-making in the foreseeable future. A common mantra we encountered in the content analysis is represented in the following:

> A business works in a way a business does in any case. No matter in what type of network the company operates, the logic will not change. (CLIC Interviewee, research stakeholder)

In ECO3, where research involvement was not as strong but public actors were more closely involved, the search for cognitive alignment between commercial, public value, and sustainability logic was very much present. Mixing was the primary mechanism for aligning the three logics. The businesses in ECO3 were seeking profits and growth from circular solutions, so a sustainability logic was noted to be present in the value thinking of private stakeholders. Generally, the relationships between commercial and sustainability logic in value creation were considered unproblematic by many of the informants because sustainability logic was something all the stakeholders involved in the partnership shared. The research and public partners were noted to diffuse alternative ideas and enhance sustainability logic in the system, which advanced value creation. However, a few informants also pointed out that mixing may have limits and eventually lead to conflicting and competing cognitive frames demonstrating either contradicting or competing values, as the following extract displays:

> There is always that idea of striving for growth, and then if one thinks of a sustainable economy, then one strives for something other than growth, and it brings certain dynamics to how that value is structured there and what kind of value creation is expected. (ECO3 Interviewee, public sector stakeholder)

Consortia meetings between value-creating stakeholders were noted as essential fora in which stakeholders "hear introductory speeches and

reviews from different organisational members in the consortia" and "create common conceptions based on mutually shared knowledge", which "empowers and opens new perceptions through the vast knowledge capital of the network", as interviewees described them. Due to these fora, stakeholders held value perceptions more commonly associated with other sectors. For example, a private stakeholder was discussing the preservation of natural recreational areas by increasing the use of circular products, whereas public sector stakeholders might refer to the importance of being competitive. Some noted that value perceptions should be "broader" and different forms of value increasingly balanced or blended, as the following quote indicates: "This pursuit away from fossil fuels and living within the boundaries of nature's carrying capacity… means that we should more closely combine economic and ecological thinking and make these two bubbles collide" (ECO3 Interviewee, public sector stakeholder). The quotation reveals that high levels of cognitive alignment were generally perceived as enhancing collaborative efforts serving sustainable development by the interviewees. The quotation also indicates that stakeholders in ECO3 employ mixing as a mechanism of cognitive alignment, in which different ideas are identified and shared but necessarily not blended.

Goal Alignment in Collaborative Value Creation

Data from CLIC indicated that goal alignment was closely tied to partner selection at the early stages of collaboration. Because CLIC was a project-based organisation, goal alignment between research stakeholders and private sector stakeholders was typically constructed at the beginning of each project, where goals were defined as part of the project agreements. Project goals and contracts worked as a boundary object that helped stakeholders to construct alignment. A boundary object is an ambiguous goal that provides a common identity to public and private stakeholders, although the goal often means something different to each stakeholder. In practice, the parties in the partnerships are attempting to achieve the goal used as a boundary object, although they define the goal differently and pursue its achievement in different ways (Rajala, 2020).

Balancing and complementing were used to craft goals that operated as boundary objects. In defining the vision, mission, and purpose for the ecosystems in CLIC, the key stakeholders "seek joint value-creation opportunities" (signalling complementing value), although "it takes time to find a common vision and way to realise it if you have 10 to 20 organisations", as one interviewee noted (to signal balancing value). Typically, stakeholders could retain their own more specific goals in their operations but share the higher level goals, such as the generation of new circular innovation. Because neither direct business development nor deep engagement in theoretical debates was a suitable goal for all partners, the second-best option was to pursue more vaguely defined and abstract goals that would not lead to competition between the partners at the network level. Thus, the aim was to make compromises and find broad goals at the strategic level, which could transform the competing strategic goals of the partners into complementary sub-goals in the partnership. For example, the goal of innovation as a boundary object offered a sense of balance by enabling the use of dissimilar goals, some of which are tailored to commercial logic while others are specifically designed for academic scholars. Dissimilar sub-goals offered complementary value, and in some cases, even mixing of goals was beneficial under the broader goal of innovation. A complementary approach to the goals adherent in institutional logics was evident in the quotation below, which signals the activation of balancing and complementing value consolidation mechanisms:

> In a way, the university is fulfilling its core mission, which means that it is doing research and providing education based on research, and in that industry [related to the circular economy], these collaborative projects and programs provide a meaningful context. So, the starting point of research is chosen in a way that is also benefitting the industry and the science in general. (CLIC Interviewee, research stakeholder)

Although balancing was predominant, some comments pointed towards selective coupling, in which only those goals that were readily compatible were combined. Private-sector interviewees spoke about "strategic fit": They took part in those projects that were readily aligned with their own strategic goals and stayed out from others.

In CLIC, external factors sometimes encouraged the use of replacing in goal alignment. The Finnish funding system incentivised researchers to opt for business perspectives instead of the archetypal institutional logic of academia. As one interviewee from a research institute put it, "The approach is business-oriented so that we will do these projects to serve the needs of the companies". This may, in some cases, result in a logic of replacement instead of mixing.

In ECO3, the interviewees described how the arrangement had been built through close interaction among stakeholders, as well as how goal setting was a more organic and iterative process that took place among consortia members. At the same time, this goal setting was not as defined and codified as in CLIC: stakeholders in ECO3 did not have "one common agenda", as interviewees stated. Each of the stakeholders retained their own goals, signifying partial misalignment through both layering and decoupling. Some interviewees noted that goals should be increasingly aligned and that developing a joint agenda could benefit the partners. For example, increasingly employing complementing mechanisms in goal alignment would allow SMEs in the area to bundle their complementary offerings and help advance circular economy in large public infrastructure projects, as one of the interviewees envisioned:

> This kind of joint development thinking into value creation [is needed]. I mean, it is part of that future that we can adjust these different interests and perspectives towards what we are aiming for together. (ECO3 Interviewee, private sector stakeholder)

Interview data pointed towards a layered structure, in which the research stakeholders' goal was to provide new circular solutions and transfer expertise and knowledge to businesses, whereas the business stakeholders' goal was to apply the knowledge to the development of new circular solutions for profit. This structure formed the basis for the goals of the city, which aimed, among other things, for new jobs, healthy entrepreneurial communities, and climate neutrality. The interviewees emphasised the importance of layering the goals of public and private stakeholders. Layering the strategic goals of research and business partners was required for social value creation:

> We can generate thoughts about strategic changes relating to climate change and circular economy [when the public sector is taking part], and that is something that cannot be done in a purely market-led way, so when public partners are involved, value for society can be created. (ECO3 Interviewee, public sector stakeholder)

Thus, achieved goal alignment in CLIC can be characterised as partial alignment, where as ECO3 represented partial misalignment. The cases employed different consolidation mechanisms. Findings from both cases are summarised in Table 9.3.

Practice Alignment in Collaborative Value Creation

When CLIC used consolidation mechanisms in the practice level, there was a high situational variation in the mechanisms employed at different projects and different sub-activities with different stakeholders. This was the case because joint value-creation activities were typically organised as projects, and there were very few routine activities. Moreover, the technological readiness level of innovation, competencies, and resources for the stakeholders, among other project or activity-specific factors, explained the variations in the value consolidation mechanisms used.

CLIC utilised compromises, selective coupling, complementing practices and layering. In some situations, practice alignment was described as a compromise or selective process, in which the stakeholders accepted some changes to and constraints on their typical processes but mostly maintained their practices as "business as usual". Otherwise, selective coupling often meant that CLIC temporally combined synergetic practices and value-creating in funding applications to obtain public funding targeted for cross-sectoral collaboration, although the value of the project was eventually created separately and occasionally even decoupled manner in the typical value-creation processes of each partner. In layering, the outcomes of the value-creation processes of research stakeholders (e.g., new knowledge) were used as inputs in the typical value-creation processes of private sector stakeholders, or vice versa. This is described in the extract below:

> These types of projects have been put together in which research institutions are core actors and the businesses are there to co-finance it. And it is done [in practice] as research that the private partners steer, and right beside those [research activities], there are private R&D projects that are strongly linked with the thematic area of the collaborative development, and the thematic area can utilise the research results. (CLIC Interviewee, research stakeholder)

Although the blending of value-creation practices appeared in strategic narratives through terms such as "value co-creation", in practice, the projects had tight schedules and limited budgets and resources available, and a high level of practice alignment was rarely achieved. In some projects or their sub-parts, more effort was made to find complementary resources and practices. In these situations, operations were often compartmentalised into different cross-sectoral technology teams to group partners with readily compatible institutional logics, as shown below:

> In the preparation phase, we have more and more moved into that direction [that we ask] whether all the relevant competence and expertise can be found from this binary arrangement wherein, at one end, there are research organisations and, at the other end, there are businesses. Or do these side-streams and side-products require that kind of specialisation, and does their piloting and testing require specialised know-how, or is it far from the core operations, so we need another actor specialised for it? For example, in one project, we had a water treatment company included because it was not part of the core competencies or business of these [metal] factories. It was recognised that it makes more sense to find a partner with a much broader view on this topic and that is a better entity to work in collaboration with the university than the factory that is, in no way, specialised in it [water treatment]. (CLIC Interviewee, research stakeholder)

Sometimes, a commercial logic focused on generating new products prevented stakeholders from seeing complementary benefits in field-level collaboration. In one such instance, private stakeholders perceived

specific practices as nonrelevant, although, eventually, these practices offered complimentary benefits, as the following extract indicates:

> We had one project where we brought in legal expertise from Helsinki University, and part of the businesses, at the beginning, were saying, because they were technical people and engineers there, that we don't need this. What is this? We are not interested in this. However, as the preparations progressed, I noticed that everyone took a tremendous interest in that project area, although they initially thought it couldn't be a part of a technologically oriented project. But if you think about the circular economy, the legal framework, it's really important because circular solutions often collide with legal requirements or the absence of frameworks. (CLIC Interviewee, public-private stakeholder)

Because ECO3 was an eco-industrial partnership rather than a networked industry cluster like CLIC, public-sector organisations representing regional administration and research institutes created a basis for private value creation by building a knowledge base and infrastructure. In this arrangement, value-creating competencies existed in their layers but complemented one another. Businesses focused on their operations. Research partners practiced their value-creating activities by providing knowledge inputs that were transferred into the system. All actors maintained their autonomy, but layers remained interconnected. The layering mechanism was described in statements such as the ones below:

> Company X pays us a sum of money and gets the results of the research, for example, a technological solution. As a result, their competencies and capabilities increase, but the information has monetary value [for the business when commercialised]. (ECO3 Interviewee, research stakeholder)

> Responsibility for the implementation… is, especially, at city organisations… where these kinds of services are produced, starting from business services to zoning and infrastructure… the organising role of [the fully city-owned limited liability company] has been concluded as working well. This type of limited liability company within the network in its role as a small and agile organisation within this environment... and

> everyone who practices business operations there, they are independent companies that make fully independent and voluntary decisions. (ECO3 Interviewee, public stakeholder)

In both case organisations, the boundary between value-creating processes and practices between the stakeholders typically remained clear, and value-creation processes that served different stakeholder expectations placed on the network were guided by the distinct logics of each partner. This manifested layering value (see Table 9.3). CLIC also used complementing and coupling value on an ad hoc basis.

Discussion

This chapter has strengthened the stakeholder-oriented perspective on value creation in the circular economy. The circular economy value-creation discussion has traditionally been very company-centric and customer-value-focused, even though multi-stakeholder participation is considered vital in realising the vision of circular economy that goes beyond business-as-usual (Tapaninaho & Heikkinen, 2022). The value promise of multi-stakeholder collaborations for circular economy is based on the capacity to employ the logics of private-sector, public-sector, and third-sector stakeholders to serve collaborative value creation in a meaningful way. This chapter expands the discussion on multi-stakeholder value creation for circular economy by proposing ways to better understand the alignment of collaborative value-creating relationships in settings where the stakeholders adhere to different institutional logics.

The cases show that alignment was not pursued symmetrically at all levels and fronts but, instead, could be better understood as a dynamic and emergent process in which different consolidation mechanisms were employed depending on the situation and the stakeholders involved. Both cases seemed to strategically pursue a high degree of alignment. However, the dominant alignment status in the CLIC was partial alignment, whereas partial misalignment was emphasized in ECO3. This underlies the challenge of aligning cognitions, goals, and practices,

in multi-stakeholder settings in which value-creating stakeholders are autonomous organisations and collaboration is voluntary.

To contribute to stakeholder engagement research, the consolidation mechanisms presented in Fig. 9.1 propose a framework for analysing alignment of various dimensions relevant to collaborative value creation in multi-stakeholder settings. Consolidation mechanisms can be used in theorising about and explaining both difficult and flourishing stakeholder relationships, and future studies can investigate their effects on the outcomes of collaborative value creation. In stakeholder engagement, such mechanisms can be described as an activity of consolidation (i.e., attempts to consolidate practices) or as an outcome of consolidation (i.e., practices are consolidated). This shows that consolidation mechanisms do not always respect the conceptual boundaries of stakeholder activities and impacts, which indicates that some social phenomena can move fluidly across conceptual boundaries and complicate the development of a stakeholder engagement lexicon. To describe phenomena moving across conceptual boundaries, the stakeholder engagement literature may need to consider the concept of fluidity (e.g., Harrison et al., 2019; Parmar et al., 2010).

As a second contribution to the stakeholder literature, the chapter showed that partial misalignment can be beneficial in circular economy settings where multiple institutional logics of different stakeholders intersect. The stakeholder literature typically emphasises joint interest while avoiding trade-offs (Freeman et al., 2020), whereas our data displayed that partial alignment and misalignment are intentionally used to enable value-creating collaboration (e.g., Watson et al., 2018). For stakeholder engagement literature, this indicates that imperfect alignment is not always unintended or unwanted, because it can operate as an enabling condition for cooperation, as Ingstrup et al. (2021) have previously suggested. We observed that, sometimes, the partial misalignment was strategic, whereas, at other times, it was a reactive action to avoid deeper conflict between incompatible logics. Acknowledging the diversity of consolidation mechanisms in stakeholder engagement can promote collaboration in settings where stakeholders must draw legitimacy and funding from multiple institutions, although stakeholders'

logics are not readily compatible or easily combined (e.g., Vakkuri & Johanson, 2020).

Because the research was conducted as a case study, the results are not generalisable beyond the investigated cases. Furthermore, the investigated cases were recently established organisations, and several interviewees noted that the alignment process was still "evolving" or "iterative". For example, Polzer et al. (2016) noted that some institutional logic combinations can be transitional. This study describes value consolidation in a short review period and the reported state may not be long-lasting. The results reflected the interviewees' perceptions of alignment of goals, values, and practices. Thus, decoupling can be underrepresented in the results because the respondents may not be aware of the full extent of decoupling when the focus was on finding joint interests in stakeholder engagement. Finally, because the study was theory testing, the results showed possibilities regarding the use of consolidation mechanisms. However, drawing any robust causal inferences about the relationships between consolidation mechanisms, institutional logics, alignment types, or value-creation outcomes is not possible, because we examined only two cases. More robust examinations of these relationships are left to subsequent studies.

Conclusions

In this chapter, we presented a novel theoretical framework combining the three dimensions of alignment (cognitive, goal, and practice) and consolidation mechanisms identified from the extant research literature. We used this to explore how circular economy stakeholders pursue and develop alignment in multi-stakeholder value creation by employing different value-consolidation mechanisms. We show that value-consolidation mechanisms can inform the analysis of value-creating stakeholder relationships and provide a more nuanced way of understanding the alignment of stakeholders' cognitions, goals, and practices as part of stakeholder engagement.

Future studies on stakeholder engagement in collaborative value-creation processes are needed. First, the proposed theoretical framework

can be further tested in different settings. Second, the study field is missing studies investigating the links between alignment and misalignment from the perspective of value-consolidation mechanisms. Lastly, interlinkages across consolidation mechanisms could be further investigated at the cognitive, goal, and practice levels to enhance the knowledge of these mechanisms.

Appendix 9.1 CLIC and ECO3 Stakeholder Maps

See Figs. 9.2 and 9.3.

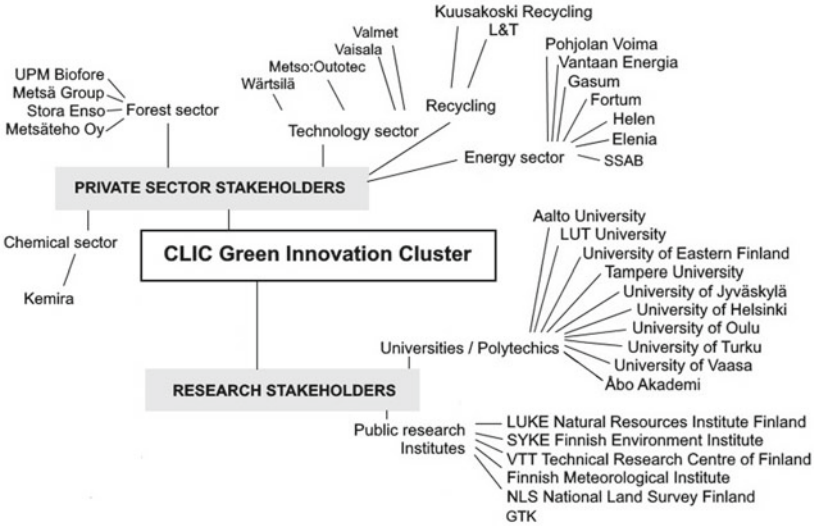

Fig. 9.2 CLIC Stakeholder Map

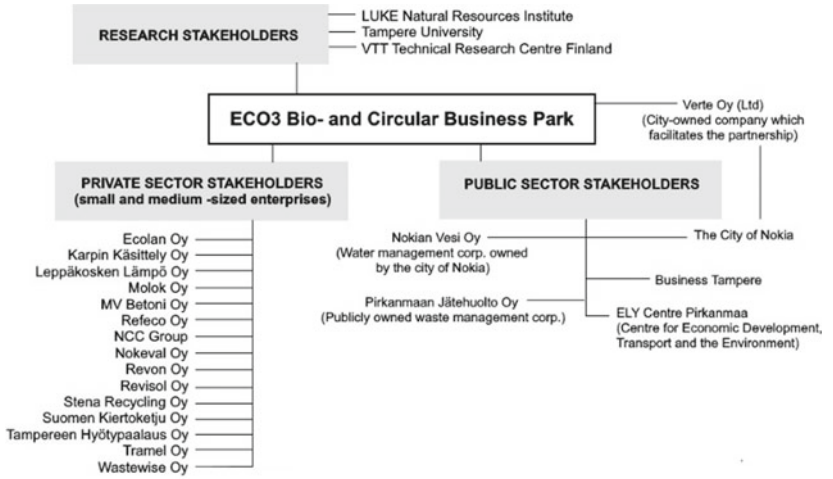

Fig. 9.3 ECO3 Stakeholder Map

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10

Coopetition for a Circular Economy: Horizontal Initiatives in Resolving Collective Environmental Challenges

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Introduction

Under increasing pressure from stakeholders to accelerate the transition to more environmentally friendly ways of doing business (Geissdoerfer et al., 2017; Martín-de Castro, 2021), companies have started shifting their focus to sustainable solutions and a circular economy (CE). To advance CE initiatives and business models, companies often join forces with diverse external stakeholders (Bocken & Ritala, 2021; Konietzko et al., 2020), including their competitors (Martín-de Castro, 2021). The systemic nature of CE transition also requires competitors to enter the paradoxical relationship of *coopetition* (simultaneous competition and

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collaboration), which can be fraught with tension if not managed properly (Fernandez et al., 2014; Tidström et al., 2018). Competitors possess similar interests and capabilities in markets and technologies (Ritala & Hurmelinna-Laukkanen, 2009). Therefore, they are particularly well-positioned to engage in initiatives that can enhance industry-level practices and standards (Mione, 2009), including those facilitating environmental sustainability (e.g., Manzhynski & Figge, 2020; Volschenk et al., 2016). Thus, coopetition initiatives are crucial for advancing a CE, as horizontal collaboration in industries enables collective action challenges to be addressed and system-level outcomes to be achieved, both of which are vital for advancing a circular transition (Bowen et al., 2018; Manzhynski & Figge, 2020; Thomas & Ritala, 2021). Extant research has indicated that coopetition may advance a variety of CE outcomes, such as industrial symbiosis, recycling, innovation and setting new industry standards (Bowen et al., 2018; Brown et al., 2019; Jacobsen, 2006; Volschenk et al., 2016). However, the phenomenon of coopetition for a CE has been neither systematically addressed nor empirically studied. This study addresses this gap by providing empirical insights from a multiple-case study of coopetition for a CE.

The increasing emphasis on coopetition for a CE can be viewed as part of a broader trend in which firms need to collaborate with various stakeholders to accelerate the transition towards a sustainable CE (Aarikka-Stenroos et al., 2021; Gonzalez-Porras et al., 2021; Kujala & Sachs, 2019; Kujala et al., 2019), a situation which highlights the need for stakeholder engagement. Stakeholder engagement refers to the practices adopted by an organisation to involve stakeholders positively in its activities (Greenwood, 2007), and the analysis of stakeholder engagement is based on the aims, activities and impacts of stakeholder relationships (Kujala et al., 2022). Stakeholder engagement is especially important for companies in terms of sustainable development initiatives, as, for instance, circular-oriented innovation requires intensive collaboration between companies (Brown et al., 2021). This chapter focuses on the special characteristics of competitors as stakeholders and analyses the stakeholder engagement activities which are especially relevant to engaging competitors to collaborate for a CE. The similarities among competitors regarding their objectives and positioning in relation to

different CE challenges can even simplify the management of these collaborative activities. However, the tensions inherent in collaboration between competitors (Gnyawali & Charleton, 2018; Tidström et al., 2018) can affect stakeholder engagement activities in CE contexts.

In this chapter, coopetition is understood as the simultaneously competitive and collaborative relationship between two or more organisations within the same value-chain position, or, in other words, between horizontal actors (Ritala et al., 2014). Coopetition, in general, has been discussed in the management literature in multiple contexts, and various advantages have been demonstrated (Bouncken et al., 2015), including the sharing of risks and costs, resource efficiencies and expanding current markets and creating new ones (Ritala et al., 2014). However, much of the coopetition literature has focused on the question of how companies secure private benefits from coopetition in addition to joint benefits (e.g., Gnyawali & Charleton, 2018; Ritala & Hurmelinna-Laukkanen, 2009). When studying coopetition in terms of the grand challenges, the outcomes must be considered beyond both individual organisational benefits and the immediate benefits of a particular coopetitive relationship (Crick & Crick, 2020; Manzhynski & Figge, 2020). Recently, more research has emerged on how coopetition can advance environmental sustainability, and this research has addressed, for example, logistics, shared green reputation, recycling and procurement (Christ et al., 2017; Meehan & Bryde, 2015; Rivera et al., 2017; Volschenk et al., 2016). Only a few recent studies have linked coopetition and a CE and suggested that a CE requires coopetition (Hirvensalo et al., 2021; Narayan & Tidström, 2020). Therefore, we need a comprehensive view of coopetition for a CE, as such a view is lacking. Furthermore, empirical insights are required to understand the dynamics of horizontal collaboration—coopetition—to advance a CE.

To address the identified research gaps of coopetition for a CE, the first research question is as follows: *How do coopetitors organise to advance a CE?* This question aims to explore the various ways of organising coopetition to address collective environmental challenges and create an understanding of the various approaches to organising coopetition that suit different situations and purposes. The second research question—How can competitors be engaged as stakeholders in coopetition

for a CE?—explores how to steer this paradoxical relationship with stakeholder engagement. The third research question—*What are the contributions of coopetition to a CE?*—improves the understanding of how coopetition can promote a CE.

This chapter contributes to the limited understanding of coopetition in CE research. We develop new knowledge through an exploratory multiple-case study of horizontal collaboration for advancing a CE. We present and analyse 12 exemplary empirical cases on coopetition for a CE from various industries, such as retail, forestry, brewery, construction and manufacturing, in Finland. These cases showcase different levels of collaboration and competition as well as various types of stakeholder engagement. The empirical insights provide a comprehensive review of organising coopetition for a CE and extensive insights into stakeholder engagement for coopetition. This extensive multiple-case study allows us to identify patterns of coopetition for a CE and gives profound insights into the collaboration dynamics among competitors contributing to a CE. This study uses the stakeholder engagement literature to broaden the understanding of coopetition relationships and thus contributes to the intersection of coopetition, stakeholder engagement and CE literature.

This chapter is structured as follows. After the introduction, we discuss the theoretical background to the study, focusing on coopetition and stakeholder engagement for a CE. We then explain the methodology of our exploratory multiple-case study, followed by the study findings. Finally, we discuss the contributions of the theory, implications for practitioners, limitations and future research, followed by a brief conclusion.

Theoretical Background

The theoretical background for the study is at the interface of coopetition and stakeholder engagement research to advance a sustainable CE. First, coopetition is discussed as a form of collaboration, after which the second section presents coopetition as a CE setting. The last section discusses engaging competitors as stakeholders.

Coopetition as a Form of Collaboration

Coopetition refers to relationships in which two or more organisations are simultaneously involved in both cooperative and competitive interactions (Bengtsson & Kock, 2000). Coopetition occurs between horizontal actors, that is, companies with the same value-chain position (Ritala et al., 2014). According to the seminal perception of coopetition, competitors create a bigger pie together (i.e., create more value), and through competition, the pie is divided (i.e., value is captured) among the actors in the coopetitive relationship (Brandenburger & Nalebuff, 1996); thus, in coopetition, companies aim for better or more encompassing outcomes together than those possible for individual companies to achieve alone (de Resende et al., 2018). The essence of coopetition is the realisation of collective goals and a joint understanding that a rising tide lifts all boats (Mathias et al., 2018).

Typical drivers for companies to enter coopetitive relationships include improving efficiency by sharing resources and knowledge (Bengtsson & Kock, 2000, 2014). Synergies achieved by coopetition catalyse various collaborations among companies (de Resende et al., 2018). Because competitors within the same industry have common challenges and similar objectives, their resources and capabilities are often relevant to each other (Gnyawali & Park, 2011), which drives the formation of coopetition relationships (Bengtsson & Raza-Ullah, 2016; Gnyawali & Park, 2011). A common vision and shared goals stemming from mutual objectives and complementary needs are necessary for coopetitive relationships to succeed (Bengtsson & Kock, 2000; Planko et al., 2019).

Coopetition relationships are most often viewed in a dyadic setting, and the literature has provided many means for managing such relationships (for a review, see Bengtsson & Raza-Ullah, 2016). However, when coopetition occurs in a network or an ecosystem or horizontally within industries, the relational dynamics change because the influence of a single company on the coopetition-partner selection is more limited than in dyadic coopetition (Choi et al., 2010; Czakon & Czernek, 2016; Hannah & Eisenhardt, 2018). Furthermore, trust-building mechanisms in coopetitive arrangements differ depending on the number of actors and their commitment to collective activities (Czakon & Czernek,

2016), and the balance between cooperation and competition can be increasingly challenging as the number of actors increases (Hannah & Eisenhardt, 2018). Collective system building also requires close cooperation between competing companies through information sharing and resource pooling, which introduces additional risks (Planko et al., 2019). However, such risks can be mitigated by various governance structures, such as using a neutral intermediating or orchestrating actor (Pinnington et al., 2021; Ritala et al., 2009).

Coopetition Enabling a Sustainable CE

Although a vast majority of coopetition studies have focused on the economic profitability of the relationship, recent research has discovered that coopetition serves multiple purposes which extend far beyond purely financial measures, for example when competitors address environmental sustainability and CE challenges together. A CE—'an industrial economy that is restorative by intention and design' (Macarthur, 2013, p. 14)—can be seen as a systemic phenomenon which underscores the need for collaboration among multiple actors (Aarikka-Stenroos et al., 2021; Harala et al., 2023), including horizontal actors, to gain an industry-wide commitment to promote CE initiatives. A sustainable CE refers to a CE that considers simultaneously the environmental, social and economic aspects of sustainability (Velenturf & Purnell, 2021). Collaboration among competitors can deliver positive outcomes on the macro-level for society as well as on the micro-level for individual companies (Manzhynski & Figge, 2020). Thus, presumably coopetition for a CE can also deliver positive outcomes on the micro- and macro-levels which are complementary. The micro-level lens allows us to assess the business model benefits for individual companies (e.g., Bocken & Ritala, 2021), while the macro-level lens helps to explain the system-level impact of advancing a CE. Most of the literature on coopetition outcomes has focused on economic profitability on the micro-level (e.g., Bengtsson & Kock, 2000; Gnyawali & Park, 2009, 2011; Ritala, 2018; Ritala et al., 2014). However, when aiming for collective system-level outcomes in advancing sustainability and a CE through coopetition, environmental

and societal issues must also be considered (Manzhynski & Figge, 2020). The viability of coopetition to advance sustainability depends on the perspectives of the stakeholders involved in it (Manzhynski & Figge, 2020), as coopetition to advance environmental sustainability does not only bring benefits but also entails risks (Planko et al., 2019). The risks of coopetitive relationships, for example, opportunistic behaviour, do not disappear even though coopetition aims to advance sustainability (Hahn & Pinkse, 2014).

To achieve the collective system-level outcomes required to advance a CE, coopetitive relationships must involve multiple companies or organisations. For example, coopetition is required to establish joint standards (de facto or de jure), frameworks and institutions at the industry level (Mione, 2009; Ritala et al., 2009). According to previous research (e.g., Czakon & Czernek, 2016; Della Corte & Aria, 2016), in *network coopetition*, actors seek to join a network, are invited to join a network or establish a network together (Czakon & Czernek, 2016). In *collective horizontal coopetition*, all or most of the major competitors in an industry collaborate, for example, to develop a new idea, technology or standard collectively, while simultaneously competing in other areas of business (Choi et al., 2010). Therefore, coopetition initiatives for a CE might include both industry-wide endeavours and more targeted coopetition projects by a limited number of industry actors. In the latter case, coopetition might be a way for an actor to (competitively) differentiate itself from the rest of the field in terms of CE contributions, while the former case might help the whole industry increase its viability and legitimacy.

The literature linking coopetition to sustainability is nascent, albeit developing; however, studies have, to date, argued that there are potential benefits in various areas, such as collective action problem-solving (Bowen et al., 2018), logistics (Christ et al., 2017; Limoubpratum et al., 2015), recycling (Volschenk et al., 2016), sustainable procurement (Meehan & Bryde, 2015) and the application of coopetition strategies to sustainability at the corporate level (Christ et al., 2017). In addition to this research discussing coopetition for sustainability, two very recent studies have suggested that coopetition plays an important role in a CE. Hirvensalo et al. (2021) showed coopetitive relationships in circular city ecosystems, whereas Narayan and Tidström (2020) studied

the operationalisation and optimisation of coopetition using tokens to support CE transition. However, this initial stream of research needs a more thorough understanding of various forms of coopetition for a CE, which is contributed by this study. To provide a basis for this study, the previous studies addressing coopetition in the environmental sustainability or CE context are presented in Table 10.1. This table does not list all studies conducted on horizontal collaboration but, rather, those in which coopetition has been explicitly studied as a relationship between simultaneously competing and collaborating actors (Bengtsson & Kock, 2000).

Engaging Competitors as Stakeholders in a CE

In this study, we focus on competitors as stakeholders to be engaged through coopetition for a CE. Traditionally, competitors are regarded as *unintended stakeholders*, not engaged deliberately, with coercive powers enabling them to influence the focal organisation in either harmful or beneficial ways (Bacq & Aguilera, 2022). However, when employing coopetitive strategies for a CE, competitors are more likely *intended stakeholders*, and referring to Bacq and Aguilera's (2022) analysis, such 'coopetitors' can become *empowered stakeholders*, sharing the same goals or mission. Thus, when analysing coopetition for a CE from a stakeholder's perspective, competitors can be viewed as each other's stakeholders, with joint interests and objectives, as the collaboration benefits the industry as a whole (Rivera et al., 2017). What distinguishes competitors as stakeholders from non-competitive actors is the potential that tensions between competitors will persist despite their common interests (for a discussion, see Ritala & Hurmelinna-Laukkanen, 2009; Gnyawali & Charleton, 2018). Therefore, competitors as stakeholders represent an interesting setting in which they might possess conflicting motivations and goals while sharing both an 'intended' and an 'empowered' stakeholder relationship.

Stakeholder engagement can be understood as the 'aims, activities and impacts of stakeholder relations in a moral, strategic, and/or pragmatic manner' (Kujala et al., 2022, p. 4). Similar categorisations of the

Table 10.1 Synthesis of previous research on coopetition in the environmental sustainability or CE context

Authors (year), Research type	Horizontal actors collaborating	Environmental sustainability focus	Insights on coopetition for sustainability and CE
Hirvensalo et al. (2021), Case study	Circular city ecosystem	Circular city development	Coopetition-related tensions arise in a circular city development in public or private partnerships and ecosystems
Narayan and Tidström (2020), Conceptual study	CE ecosystem	Circular business models	A strategy combining coopetition and a blockchain to direct the transition to CE models
Manzhynski and Figge (2020), Case study	Focal firm and coopeting firm	Assessment of environmental sustainability outcomes	The connection of organisational and societal outcomes of coopetition. Coopetition for sustainability can be assessed from firm, resource and societal perspectives
Planko et al. (2019), Case study	Dutch smart grid industry	Sustainable development through technology	Coopetition strategy for sustainable development at the network level. Coopetition enablers in sustainability technology development

(continued)

Table 10.1 (continued)

Authors (year), Research type	Horizontal actors collaborating	Environmental sustainability focus	Insights on coopetition for sustainability and CE
Bowen et al. (2018), Inductive examination	12 oil sand companies in Alberta	Industry self-regulation for environmental issues	Organising rules determining collaborative or competitive relationships in industry self-regulation for collaborative collective action is more effective for smaller-scale issues than larger-scale issues
Stadtler (2018), Case study	Two multi-company cross-sector social partnerships (from Egypt and Jordan) in education	Sustainability-related tensions	Coopetition in the interface of social and economic goals is of paradoxical nature, and competition can positively impact cross-sector social partnerships
Christ et al. (2017), Case study	Australian wine industry	Sustainability in logistics	Coopetition strategy for corporate-level sustainability. There is no fixed relationship between improving carbon performance and increasing competitiveness

Authors (year), Research type	Horizontal actors collaborating	Environmental sustainability focus	Insights on coopetition for sustainability and CE
Rivera et al. (2017), Panel data analysis	Collective voluntary environmental programme in Costa Rica	Environmental programme	Higher levels of cooperation within communities for shared green reputation are more likely in seashore localities with lower income inequality and/or more businesses
Melander (2017), Literature review	External collaborations in green product innovation	Green product innovation	By developing green products, companies can reduce environmental costs and create new opportunities in new markets in collaboration with partners
Volschenk et al. (2016), Case study	South African wine industry	Recycling	Coopetition can create socio-environmental value. While socio-environmental value is a public benefit and cannot be appropriated by coopetitors, it can act as a catalyst for value creation for coopeting firms

(continued)

Table 10.1 (continued)

Authors (year), Research type	Horizontal actors collaborating	Environmental sustainability focus	Insights on coopetition for sustainability and CE
Limoubpratum et al. (2015), Survey	Thailand newspaper industry	Sustainable logistics distribution	Managers strongly believe in coopetition to achieve sustainable logistics' distribution, which results in significant economic, social and environmental improvement
Meehan and Bryde (2015), Case study and survey	UK social housing sector	Sustainable procurement	Collaborating social housing organisations takes holistic considerations of sustainable procurement to support the importance of connecting the planet, people and profit in the sector
Hahn and Pinkse (2014), Conceptual study	Cross-sector partnerships	Governance for global environmental issues	The effectiveness of cross-sector partnerships in governing global environmental issues depends on whether competitive forces at the firm level are aligned with the collective benefits of partnerships

Authors (year), Research type	Horizontal actors collaborating	Environmental sustainability focus	Insights on coopetition for sustainability and CE
Peloza and Falkenberg (2009), Case study	Multiple firms and NGOs	Corporate social responsibility	Collaboration with either multiple firms and/or multiple NGOs can deliver better performance in corporate social responsibility issues than collaboration between a single firm and an NGO

contents of stakeholder engagement have been presented in the literature with terms such as purposes, reasons and incentives substituting *aims*. Stakeholder engagement *activities* are referred to as steps, practices, approaches, levels and methods, whereas related terms for *impacts* include outcomes, implications and contributions (Kujala et al., 2022; Novoa et al., 2018; Sachs & Kujala, 2021; Shackleton et al., 2019). This chapter follows the most recent way of organising stakeholder engagement contents (Kujala et al., 2022), namely into the aims, activities and impacts of stakeholder relationships.

When engaging competitors as stakeholders to advance a CE, stakeholder engagement should be analysed from a macro-level perspective rather than a focal organisation perspective (for stakeholder engagement levels, see, for example, Gonzalez-Porras et al., 2021). The seminal work of Freeman (1984) presents stakeholder engagement at three levels, starting from the rational stakeholder identification level, proceeding to the procedural stakeholder communication level and finally reaching the transactional stakeholder involvement or dialogue level. Stakeholder engagement comprises integrative stakeholder engagement, examining stakeholder relationships, communicating with stakeholders and learning with and from stakeholders (Freeman et al., 2017; Sachs & Kujala, 2021). These also link to the means of trust building and value creation in coopetitive relationships, which makes coopetitive relationships interesting settings for analysing stakeholder engagement. In coopetitive relationships, active learning over time by partners deepens trust and cooperation (Hannah & Eisenhardt, 2018), and competing companies have to share information and pool resources to enable collective system building in close collaboration (Planko et al., 2019). According to stakeholder engagement research, relationship development is an ongoing process that advances over time (Freeman, 1984; Greenwood, 2007), which, again, provides fruitful ground to focus on coopetition through stakeholder engagement lenses.

Stakeholder engagement has also been recognised as relevant in the context of CE and sustainability (e.g., Gonzalez-Porras et al., 2021; Hörisch et al., 2014; Kujala et al., 2019; Marjamaa et al., 2021; Salvioni & Almici, 2020). Hörisch et al. (2014) identified three challenges faced in managing stakeholder relationships in sustainability

management: strengthening the particular sustainability interests of stakeholders, creating mutual sustainability interests based on stakeholders' interests and empowering stakeholders to act as intermediaries for sustainable development. These challenges can be addressed through regulation, education and sustainability-based value creation for stakeholders (Hörisch et al., 2014). In addition to contributing to organisations' business goals, comprehensive stakeholder engagement can support the transition to a CE and enhance economic, social and environmental sustainability through improving stakeholder relationships as well as creating timely awareness of sustainability-related issues (Salvioni & Almici, 2020). In turn, the push for a CE transition can improve stakeholder engagement because the CE can enable and boost stakeholder collaboration (Kujala et al., 2019). A recent study by Marjamaa et al. (2021), conducted in the Finnish context, indicated that stakeholders share an interest in promoting a sustainable CE while pursuing their own CE interests, which provides a strong foundation for studying stakeholders' engagement in coopetition for a CE in Finland.

Methodology

Research Design and Case Sampling

To create the much-needed understanding of coopetition for a CE (Christ et al., 2017; Manzhynski & Figge, 2020), we conducted an exploratory and qualitative multiple-case study (Yin, 2003, 2018). A qualitative research strategy was chosen because it enables the understanding of complex real-life situations (Hirsjärvi et al., 2009). An exploratory approach was chosen due to its suitability for studying emerging topics (Corbin & Strauss, 2008) and to address the lack of understanding of coopetition for a CE (Table 10.1). Given the lack of empirical evidence on deploying coopetition strategies to promote a CE, a multiple-case study with numerous cases across multiple industries was undertaken, and the chosen design allowed us to identify patterns across coopetition cases for a CE. A multiple-case study design strengthens

the generalisability of the findings and reduces unexpected vulnerabilities in the selected cases while enabling a cross-case analysis (Yin, 2003). The cases in this chapter refer to various industry-wide initiatives, networks, projects, platforms and systems. These cases were chosen through maximum variation sampling in different industries which are especially relevant for a CE, for example, retail, construction, plastic and textiles. Typical case sampling per industry was used to identify the most typical coopetitive initiatives for a CE within these industries in Finland (Patton, 1990, 2002). Selecting typical case sampling (Patton, 1990) within these relevant industries fulfilled the research objectives of describing and illustrating what is typical in coopetition for a CE.

The cases were selected through a pre-study, including extensive expert interviews and discussions, news articles and internet sources. In the initial case identification, 15 potential cases were tracked and initially analysed, of which 12 were chosen to provide variation. As understanding of coopetition for a CE in Finland is scarce in practice and in theory, industry experts were interviewed to identify what is typical regarding the coopetitive activities performed to promote a CE in various industries in Finland. The 12 cases were all selected from Finland to diminish variation in geographic context and related institutions. Conducting research in the CE context in Finland is justified, as the Finnish government aims to strengthen the country's role as a pioneer in CE and Finland has a strategic programme to promote such an economy (Finnish Ministry of Environment, 2021). Selecting a broad set of 12 cases allowed us to compare numerous cases, detect similarities and differences in them, theorise them and thus identify generalisable patterns explaining coopetition for a CE. The cases span business and society, including the retail, construction, plastic and textile industries, as well as industrial cases. Coopetition in all of the selected cases has happened within the last five years. The selected cases also capture different levels of success: most are ongoing success cases, while in some, collaboration has ceased (see Table 10.2) because, for example, coopetitive stakeholders have not been sufficiently engaged. However, we do not want to categorise the cases as complete successes or failures, as collaboration can be seen as dynamic and a continuum rather than a category (e.g., Ingstrup et al., 2020). Thus, we believe that ceased cases are

fruitful for examining what went wrong in stakeholder engagement and revealing what would have been required to foster coopetition. Four cases were chosen as primary cases as we had an opportunity to study them particularly closely through interviews, expert discussion and secondary sources. Table 10.2 presents an overview of the studied cases and their data sources across the various industries; the primary cases are marked in bold.

Data Collection and Analysis

In the pre-study, primary data, such as expert interviews and discussions, enabled the identification of the most relevant and typical cases of coopetition for a CE from various industries in Finland. Most cases included one or two main expert interviews or discussions, which were then complemented with secondary data or supplementary interviews. Interviews were conducted during 2019 and 2020. Secondary data included presentations, a lecture, internet sources, news articles, information booklets, brochures, theses and a report, which were used to triangulate the primary data from interviews. Some of the cases were sourced closely, including more interviews and secondary data, while others were regarded as more complementary and sourced mostly through secondary data sources. Four cases were sourced particularly closely, as they were regarded as primary cases in terms of presenting various industries and different types of coopetition settings. These cases are marked in bold in Table 10.2. Data analysis was initiated by inductively identifying patterns from the data with data-driven coding and sorting the data into tables (Gibbs, 2018). First, within each case, the collaborating horizontal actors, coopetition settings, rationale for coopetition and contribution to a CE were identified, analysed and sorted into tables. Following this, the cross-case analysis identified similarities as well as differences across the cases, which enabled us to identify more theorised patterns and categorise the cases. The initial inductive data analysis was followed by multiple deductive analysis rounds on the basis of the stakeholder literature regarding, for example, the aims, activities and impacts of stakeholder relationships in coopetition initiatives for a CE. To ensure the research

Table 10.2 Overview of the cases and data sources across industries

Case	Industry	Overview on stakeholder collaboration for CE within cases (*ongoing/ceased collaboration*)	Data sources
No more free plastic bags for consumers	Retail	Consumer store retailers reduce plastic usage by not giving out free plastic bags to consumers. *(ongoing)*	Interviews: Senior Expert, Senior Expert (2) News articles (4) internet sources (3) Report (1)
'Ham trick' (Kinkkutemppu)	Retail	The 'Ham trick' is grocery retailers' and recycling operators' joint act for gathering consumer cooking fat for renewable fuel production. *(ongoing)*	Interview: Chief Advisor (1) Internet sources (3) News article (1)
Beverage package recycling system	Brewery and retail	The brewery industry, retail industry and other horizontal stakeholders collaborate to run the beverage package recycling system in Finland. *(ongoing)*	Interviews: Director, Manager, CEO, Chief Advisor, CEO, Senior Expert, Senior Expert (7) Internet sources (6) News articles (4) Information booklets (3) Presentations (2) Thesis (1)

Case	Industry	Overview on stakeholder collaboration for CE within cases (*ongoing/ceased collaboration*)	Data sources
'Material market place' (Materiaalitori)	Construction and waste management	The construction and waste management industries use the 'marketplace for materials' platform to facilitate the exchange of side streams and waste between companies and organisations. *(ongoing)*	Interviews: Senior Expert, Senior Expert (2) Internet source (3) Presentation (1)
'The land bourse' (Maapörssi)	Construction	The construction industry uses the platform to recycle surplus soil and demolition materials to fulfil the needs of companies or individuals. *(ongoing)*	Interview: Head of Sustainability & Business Development (1) Internet source (2) Presentation (1)
Loop Rocks	Construction	The construction industry promotes resource efficiency for stones and other building masses through the platform developed by the company NCC. *(ceased)*	Interview: Head of Sustainability & Business Development (1) News articles (2) Internet source (2) Presentation (1)

(continued)

Table 10.2 (continued)

Case	Industry	Overview on stakeholder collaboration for CE within cases (*ongoing/ceased collaboration*)	Data sources
New Plastics Center (NPC)	Plastic	Companies performing R&D for plastics address the challenges of plastics, e.g., creating knowledge about new materials, through innovation, product development and networking. *(ongoing)*	Expert discussions: Ministry of the Environment representatives (2) Internet source (4) News article (1) Presentation (1)
PLASTin	Plastic	Research organisations and companies utilising plastic improve the recycling rate of plastics in collaboration. *(ongoing)*	Interview: Head of CE (1) Internet sources (3)
Telaketju network	Textile	A network to advance textile recycling and reuse; it includes, for example, textile companies, charity organisations, recycling operators, municipalities and research organisations. *(ongoing)*	Internet sources (4) Thesis (1)

Case	Industry	Overview on stakeholder collaboration for CE within cases (*ongoing/ceased collaboration*)	Data sources
Circular Economy Service Platform (CEP)	Forestry	Forestry industry companies, recycling operators and research organisations enable the creation of new business from industrial waste and side streams through a digital platform. *(ceased)*	Interviews: Head of CE, Chief Advisor, Director, CEO, Manager, Manager, Associate Professor (7) Internet sources (5) Presentations (3) Thesis (1) Information booklet (1) Report (1)
Material-efficiency commitment	Multiple	Various industries (e.g. the food industry) are committed to engaging companies to decrease environmental impact and increase profitability. *(ongoing)*	Interviews: Senior Expert, Senior Expert (2) Internet source (1)
Energy-efficiency agreement	Multiple	Various industries (e.g. the industrial sector, energy and service sectors, property sector and municipal sector) engage actors in enhancing energy efficiency. *(ongoing)*	Interviews: Senior Expert, Senior Expert (2) Internet source (3)

quality, data triangulation was performed using different data sources, and the collected data were handled carefully, which included recording and transcribing the interviews.

Findings

Our cross-case analysis revealed four categories of coopetition for a CE: agreements for industry standards, pre-competitive R&D and knowledge sharing, platforms and reverse logistics systems. These categories, their coopetition characteristics, the collaborating stakeholders within cases, stakeholder engagement for coopetition and contribution to a CE are further explained in Table 10.3 and the following sections.

Agreements for Industry Standards Supporting a CE

Having competitors involved in industry-standard settings refers to building the groundwork for a more competitive environment for industry; that is, when the entire industry develops, the horizontal industry actors benefit from the improved competitive environment as well. When competitors collaborate on technical or other industry standards, they set up the rules, norms and practices in their shared environment and therefore make it clear how and under what conditions firms are allowed to compete. In the CE context, this is particularly important work, as it creates equal operating conditions for the entire industry, which allows companies to compete and differentiate among themselves while improving particular CE goals and the sustainable development of a particular industry more widely.

The cases categorised as agreements to set new industry standards, in which the actors in certain industries have committed to joint goals, are the material-efficiency commitment, the energy-efficiency agreement and an initiative by retailers to not hand out free plastic bags to consumers. These cases illustrate how horizontal actors from various industries enter coopetitive relationships through agreements and commitments to set new industry standards. The motivation for companies to join these

Table 10.3 Collaborating stakeholders, stakeholder engagement for coopetition and contribution to a CE of the cases

Case	Collaborating stakeholders	Stakeholder engagement for coopetition *(aims, activities and impacts of stakeholder relations)*	Contribution to the CE
Agreement for industry standards supporting CE: *Building the groundwork for a better industry competitive environment*			
No more free plastic bags for consumers	Consumer store retailers	*Aims*: Reduce single-use plastic bags *Activities*: The green deal agreement initiated in 2016 from major Finnish retail chains' voluntary agreement to reduce plastic bag usage by charging a fee for single-use plastic bags. During 2017, most retail chains in Finland stopped giving free plastic bags. In 2019, an EU directive banned giving out free plastic bags *Impacts*: No more free plastic bags are provided at the sale of goods or products in Finnish retail stores	Reducing the use of single-use plastic bags. The amount of single-use plastic bags consumed annually declined from 71 plastic bags per Finn in 2017 to 63 plastic bags per Finn in 2019

(continued)

Table 10.3 (continued)

Case	Collaborating stakeholders	Stakeholder engagement for coopetition *(aims, activities and impacts of stakeholder relations)*	Contribution to the CE
Material-efficiency commitment	Various industries (e.g., food & packaging and retail)	*Aims:* To improve material efficiency in various industries through voluntary commitments *Activities:* Motiva set up voluntary commitments between the ministries and sectoral industry associations. Each company from the sector joins the commitment by making its own commitment and determining the best methods that can be used to reach the targets. Motiva arranges joint meetings and activates the knowledge-sharing of the companies committed to collaboration *Impacts:* Boosting companies' profitability and reducing their environmental impact	Decreased environmental impact and improved material efficiency. For example, the Finnish food retail sector's aim is to reduce food by 13% and improve the recycling rate from 74 to 78% during their commitment period of 2019–2021

Case	Collaborating stakeholders	Stakeholder engagement for coopetition *(aims, activities and impacts of stakeholder relations)*	Contribution to the CE
Energy-efficiency agreement	Various industries (e.g. energy and service sectors, property sector and municipal sector)	*Aims:* The voluntary agreements facilitated by Motiva aim to meet the international energy-efficiency obligations without legislation *Activities:* When companies join the agreement, they get a chance to receive government aid for energy-efficiency investments. Companies are engaged in co-development and share best practices through the agreement *Impacts:* During the energy-efficiency agreements of 2008–2016, 667 companies and 132 municipalities participated and implemented over 21,000 energy-efficiency measures. The energy-efficiency agreement period for 2017–2025 extends the previous period	The agreements promote the efficiency of energy consumption in the energy and service sectors, property sector and municipal sector. The energy-efficiency agreements of 2008–2016 reduced carbon dioxide emissions by 4.7 million tonnes a year. Finland's annual energy consumption decreased by 16 TWhs by the end of 2016
Pre-competitive R&D and knowledge-sharing for CE: *Growing the value creation and capture potential*			

(continued)

Table 10.3 (continued)

Case	Collaborating stakeholders	Stakeholder engagement for coopetition *(aims, activities and impacts of stakeholder relations)*	Contribution to the CE
New Plastics Center, (NPC)	Companies utilising plastic, research organisations and industry associations	*Aims:* NPC aims to promote the innovation and product development of biomaterials and strengthen the collaboration and networks required for developing and implementing new materials *Activities:* NPC is a business-oriented knowledge network launched in 2019, bringing different actors together to enable company-based plastic development projects through collaboration. Research organisations participate in the companies' projects, providing knowledge on plastics, plastic streams and plastic usage *Impacts:* The NPC network strengthens biomaterial expertise, collaboration and R&D in the plastics industry in Finland	Addressing the challenges of plastics through innovations and new materials, product development and networking and developing new materials

Case	Collaborating stakeholders	Stakeholder engagement for coopetition *(aims, activities and impacts of stakeholder relations)*	Contribution to the CE
PLASTin	Plastic industry actors, research organisations	*Aims:* The PLASTin-project aims to build collaboration within the plastics cluster in Finland to promote the creation of new knowledge and improve business opportunities based on plastic recycling *Activities:* The co-innovation project is coordinated by CLIC Innovation and engages plastic industry companies and research organisations in collaboration. The project is funded by Business Finland for 2020–2022. During the project, new knowledge is created about recycling processes and technologies (sorting, pre-treatment, mechanical and chemical treatment and reject handling) *Impacts:* The PLASTin project was established to support plastic industry actors in developing systemic and environmentally optimised recycling concepts	Improving the recycling rate of plastics and creating new business opportunities from the plastics challenges in Finland

(continued)

Table 10.3 (continued)

Case	Collaborating stakeholders	Stakeholder engagement for coopetition *(aims, activities and impacts of stakeholder relations)*	Contribution to the CE
Telaketju	Textile companies, recycling operators, waste centres, municipalities, charity organisations, research organisations	*Aims:* Telaketju aims to build a forum for creating new and strong industry engaged in multidisciplinary collaboration *Activities:* Telaketju is a collaboration network forwarding textile recycling and conducting research and advancing knowledge on the CE of textiles. Telaketju engages a wide variety of stakeholders to advance knowledge creation. The Telaketju network is based on one ongoing and multiple completed research projects that have all contributed to the development of the CE of textiles *Impacts:* Telaketju network has provided knowledge (research publications, presentations, media releases) through its six research projects. Telaketju has engaged approximately 100 companies, recycling and waste operators, research and charity organisations and municipalities to collaborate within the multiple Telaketju projects initiated in 2018	Promoting the sustainable production, usage and circulation of textiles through collaboration and knowledge creation

Case	Collaborating stakeholders	Stakeholder engagement for coopetition *(aims, activities and impacts of stakeholder relations)*	Contribution to the CE
Platforms enabling CE business models: *Matching supply and demand among competitors*			
Circular Economy Service Platform (CEP)	Forestry industry companies, recycling companies and research organisations	*Aims:* The aim of CEP was to enable the creation of new businesses from industrial waste and side streams by serving as a customised platform with different services *Activities:* The utilisation of researched knowledge, a third-party project leader with a strong operational role, the equal involvement of all stakeholders and consideration of conflicting personal chemistries among stakeholders were aspects identified as necessary for the launch and usage of CEP, but these activities were not applied sufficiently, as CEP did not reach its aims *Impacts:* The launch of the platform was not successful, and the project was ceased	If the platform had become operational, the CE contribution could have been increasing the utilisation of the scattered side streams of the forestry industry

(continued)

Table 10.3 (continued)

Case	Collaborating stakeholders	Stakeholder engagement for coopetition *(aims, activities and impacts of stakeholder relations)*	Contribution to the CE
Materiaalitori	Construction industry, waste management industry	*Aims:* Materiaalitori aims to promote the utilisation of waste and side streams by providing a platform for matching the supply and demand of these recycled materials *Activities:* The platform is administrated by a third-party actor, Motiva. The platform matches companies searching for different materials with those having excess side streams or waste. In addition, various service providers can be found through the platform. The use of the platform is free of charge and open to all stakeholders in the industry *Impacts:* Materiaalitori promotes resource efficiency and creates industrial symbiosis by facilitating the exchange of waste and side streams among companies	Materiaalitori facilitates industrial symbiosis. For example, solely in the Uusimaa region, 39 announcements of major volumes of different waste or side-stream materials (e.g., glass, metal, concrete, soil, construction and demolition waste) were given during 2021 through Materiaalitori

Case	Collaborating stakeholders	Stakeholder engagement for coopetition *(aims, activities and impacts of stakeholder relations)*	Contribution to the CE
Maapörssi	Construction industry	*Aims:* Maapörssi aims for profitable business through offering a recycling service for surplus excavation material *Activities:* Spreading awareness of the existence and usage possibilities of the platform over time. The platform requires registering and Maapörssi charges users upon registering to the system, which can promote trust for the platform as it corresponds with conventional market logic *Impacts:* Construction companies can save on excavation and transportation costs by recycling surplus material through the Maapörssi platform. Maapörssi creates a profitable business from a CE solution	Maapörssi enables recycling surplus soil and demolition materials for the needs of companies or individuals through a digital platform

(continued)

Table 10.3 (continued)

Case	Collaborating stakeholders	Stakeholder engagement for coopetition *(aims, activities and impacts of stakeholder relations)*	Contribution to the CE
Loop Rocks	Construction industry	*Aims:* Match the supply and demand for soil and rock between construction sites through an online marketplace, Loop Rocks *Activities:* The online marketplace launched in 2017 in Finland matched supply and demand between construction sites through an open, free-of-charge platform and a mobile app. Loop Rocks could not engage the necessary stakeholders (users and external investors), and NCC shut down the platform in 2019, as it did not reach the profitability targets *Impacts:* Loop Rocks enabled more efficient handling of rock and soil between construction sites but did not create a long-term impact as the platform was closed in 2019	The contribution could have been improving the resource efficiency for building masses by preventing the masses from being sent to landfill, if the platform had gained a significant user base instead of its closure
Reverse logistics systems for circular operations: *Improving competitors' resource efficiency*			
Kinkkutemppu	Grocery retailers, food companies, recycling operators, associations and Neste company	*Aims:* Gather the consumer cooking fats during Christmas time and refine them into renewable diesel *Activities:* The Chemical Industry Federation's initiative to gather cooking fat engages various organisations, including grocery retailers, food companies and recycling operators. Approximately 300 collection points all over Finland (grocery stores, gas stations and recycling locations) gather cooking fat, which Neste utilises in the production of renewable diesel *Impacts:* The collaboration performed for the annual Kinkkutemppu benefits the companies' marketing and boosts their sustainability image. In addition, gathering cooking fat for reuse enables R&D to find new solutions	Gathering consumer cooking fat and reusing it for renewable fuel production. During Christmas 2020, approximately 240,000 households recycled their cooking fats, resulting in 55 tonnes of fat to be refined into renewable diesel through the Kinkkutemppu collaboration

Case	Collaborating stakeholders	Stakeholder engagement for coopetition *(aims, activities and impacts of stakeholder relations)*	Contribution to the CE
Beverage package recycling system	The brewery industry, retail industry and recycling operators	*Aims:* Recycling beverage packages in Finland with a deposit-based recycling system. The system aims for closed-loop recycling in an energy and cost-efficient manner *Activities:* The central actor, Palpa, is a non-profit company owned by the major companies in brewery and retail industries. Palpa administers the recycling system with an operational and objective role. The consideration of trade secrets and regulations in operations by Palpa eases the collaboration between competitors. Palpa coordinates the collaboration, reduces tensions between competitors and maintains the balance between the interests of various actors *Impacts:* The recycling system enables cost-savings for beverage producers by organising the recycling operations efficiently, with lower costs than paying the packaging taxes from which the producers are exempt when joining a recycling system. The recycling system provides environmentally friendly image benefits for all stakeholders collaborating to enable the recycling of beverage packages	The recycling system managed by Palpa enables efficient beverage package recycling in Finland. Finland has one the highest return rates of beverage packages globally, with an overall return rate of 93% for cans and bottles in 2020

agreements and commitments stems from building positive sustainability brands and improving profitability. Companies from specific industries join to match their competitors; thus, companies can set new standards for the industry as a whole. For example, the initiative to reduce plastic bag usage by not giving out free plastic bags spread quickly among retailers before legislative constraints, because it would have been negative for a company's sustainability image to be the only retail store still following this practice. In addition, the first movers initiating these changes in their industries might gain significant sustainability brand benefits among consumers.

Regarding stakeholder engagement in coopetition, all three of the cases in question were initially based on voluntary agreements. Today, an EU directive guides retailers' plastic bag decisions. However, the material-efficiency commitment and energy-efficiency agreement facilitated by Motiva, a state-owned Finnish sustainable development company, are still voluntary for companies. Motiva motivates companies to join the energy-efficiency agreement on its webpage by stating, 'Join an agreement and increase the efficiency of your energy use—you will improve profitability, demonstrate your own responsibility and build a positive public image'. According to the senior experts interviewed at Motiva, when energy-efficiency agreements reach sufficient coverage in an industry on a voluntary basis, no legislative constraints are required. The companies that have signed up to these agreements participate in co-development and share best practices to improve energy efficiency. Regarding the coopetitive aspects of the agreement, a senior expert explained that even though energy efficiency is a significant competitive factor due to cost reductions, the companies do not see it as an area in which they could not collaborate with their competitors.

Agreements for industry standards can significantly contribute to a CE. Retailers not giving out plastic bags for free has recently had a great impact in decreasing the use of plastic bags. The material-efficiency commitment aims to reduce companies' environmental impacts; for example, the food retail sector aims to reduce food waste and increase recycling rates during the commitment period. The objective is to expand the material-efficiency commitments coordinated by Motiva into other

industrial sectors. Energy-efficiency agreements enhance the efficient use of energy and thus combat climate change.

Pre-Competitive R&D and Knowledge-Sharing for a CE

Pre-competitive R&D and knowledge sharing allow competitors to increase their future value creation and capture potential by developing new industry-relevant knowledge, innovation and insights by collaborating in clusters, networks or projects with the aim of jointly addressing common CE challenges. The competitive pressures in such projects are deemed generally low, given that commercial use cases are still far away and the knowledge being developed is potentially useful for and applicable to all actors' CE objectives.

Case examples of such a collaboration include the knowledge network New Plastics Center (NPC) in Lahti, the co-innovation project PLASTin and the collaboration network Telaketju. These cases engage various actors to contribute jointly to a CE. NPC and PLASTin address the challenges of plastics together with plastic industry actors and research organisations, whereas Telaketju advances the CE of textiles in a collaboration network comprising textile companies, recycling and waste operators, municipalities, charity organisations and research organisations.

The stakeholder engagement enabling collaboration among competitors in these pre-competitive R&D and knowledge-sharing cases is based on bringing various stakeholders together to advance a shared goal. In addition, conducting research enables and advances collaboration within these networks or projects, and research organisations play an essential role in these cases. A third-party coordinator may ease collaboration between competitors. A project coordinator describes their role as 'to be a sort of orchestrator because we feel that we are an objective actor'. NPC was established in collaboration with two plastic industry associations, Muoviteollisuus ry and Muovipoli Oy, which advanced the collaboration between the companies in the network by facilitating joint projects, gathering information on biomaterials and promoting networking.

The CE contributions of NPC, PLASTin and Telaketju concern advancing the CE of plastics and textiles. NPC solves plastic-related challenges through new innovations, developing new materials and products and promoting networking in the plastic industry. The PLASTin project aims to improve the recycling rate of plastics and create new business opportunities from the current plastic challenges in Finland. Telaketju promotes the sustainable production, usage and circulation of textiles.

Platforms Enabling CE Business Models

Digital platform-based business models in the CE context can effectively match the supply and demand among companies that can both sell and buy excess materials and resources. Competitors typically acquire and use similar resources; therefore, CE platforms are often set up in horizontal industry settings where those selling and buying are often (but not exclusively) current or potential competitors. At best, platform models can become good businesses on their own and, at the same time, improve CE outcomes in the entire industry.

Coopetition to contribute to a CE can occur through different, mostly digital, platforms, which enable industry-wide collaboration to promote, for example, material circulation and industrial symbiosis. Some platforms are run by a particular for-profit organisation with a platform-based business model, while others are based on a broader collective effort. Materiaalitori, Maapörssi and Loop Rocks in the construction industry and CEP in the forestry industry represent industry-wide platforms in which one organisation provides the platform and the entire industry can use it. Materiaalitori and Maapörssi are up and running, whereas Loop Rocks and CEP have stopped operation.

The challenge to engaging competitors to use these platforms is fostering trust in the platform. If a particular firm provides a platform or actively participates in platform development, the competitors of the platform owner might be sceptical about using the platform or entering information into it. Companies do not want to share data regarding their proprietary business or, for example, production volumes or side-stream volumes, which might be necessary information for the efficient use

of platforms facilitating industrial symbiosis. A senior expert described the challenge of information-sharing between competitors thus: 'For example, exact waste amounts can reveal too much for competitors. Companies may want to keep the information related to core business to themselves. That is maybe where the limit is'. Trade secrets must be handled carefully on platforms which engage horizontal actors. Platforms can operate in different ways and yet facilitate successful horizontal collaboration, advancing CE outcomes. The Materiaalitori platform, provided by the Ministry of Environment and administrated by a trustworthy third party, Motiva, is free of charge and open to all industry actors. In contrast, Maapörssi is a private company providing a platform which requires registration, and registering a profile on the platform incurs a cost. Maapörssi's operation mode can promote trust in the platform because it corresponds to conventional market logic.

Platforms developed to promote a CE contribute to the CE when they achieve extensive coverage and usage in the industry. These platforms enable the circulation and reuse of materials and may thus promote resource efficiency and enable industrial symbiosis. However, the platforms themselves do not create value chains, which was regarded as a challenge for CEP in aiming for new business creation. Value chains have to exist, and a platform is a good tool to easily match the supply and demand of materials and services.

Reverse Logistics Systems for Circular Operations

Reverse logistics systems often require horizontal collaboration to enable efficient operations and substantial contributions to a CE. The motivation for competing firms to engage with such initiatives lies in their 'positive-sum' nature. Competing firms can improve their own material efficiency and, at the same time, improve their CE goals and CE outcomes by enabling circular value chains for the overall industry.

Our case examples of reverse logistics systems include the beverage package recycling system and Kinkkutemppu, which engage competitors to collaborate in recycle and reuse operations. Beverage package recycling in Finland dates back to the 1950s and has developed into a

well-functioning and efficient recycling system, resulting in high return rates. Kinkkutemppu, a recently launched initiative, enables cooperation to ensure excess cooking fat can be reused and R&D can be undertaken into fat reuse.

Both cases engage consumers to participate in enhancing a CE by returning their beverage packages and excess cooking fat. For companies participating in these recycling systems, collaboration benefits their sustainability image and marketing. The beverage package recycling system is guided by regulations exempting beverage producers from packaging tax when they join a recycling system and obliging retailers to accept returns if they sell beverages. There is no regulatory guidance for collaborators in Kinkkutemppu. The operations of these recycling systems engage the entire supply chain. Therefore, the value chains comprise of different actors from various industries; thus, horizontal collaboration occurs simultaneously in different industries. Stakeholder engagement activities in the Finnish beverage package recycling system include a central actor administrating and coordinating collaboration within a recycling system in which the consideration of trade secrets and regulations eases the collaboration between competitors. This third-party coordinator, Palpa, reduces the tension between competitors and maintains a balance between the interests of different actors within the system. A manager from the brewery industry described Palpa's role in the recycling system as 'mostly to operate from the recycling system's perspective and maintain the balance in a way that the system isn't based on the will of breweries or on the will of retail companies; instead, Palpa ensures that the system is as efficient as possible and consumer-friendly and that the return rates are high'.

These reverse logistics systems demonstrate significant CE contributions at the national level in Finland. In particular, the Finnish beverage package recycling system, with a return rate of over 90%, is among the most efficient beverage package recycling systems globally, enabling the recycling of plastic bottles, aluminium cans and glass bottles. During the Christmas season in 2020, Kinkkutemppu was able to collect 55 tonnes of cooking fat for use in renewable fuel production.

Coopetition for a CE: Synthesis

Coopetition for a CE can take various forms, which have different requirements for stakeholder engagement and make different contributions to a CE. The cases were divided into four categories, demonstrating the various coopetitive activities engaging competitors to advance a CE together. Figure 10.1 provides a visual synthesis of the coopetition categories we found among our cases, which we briefly elaborate on in this section.

Our findings portray coopetition initiatives both in foundational areas (industry standards and pre-competitive R&D) and at the more

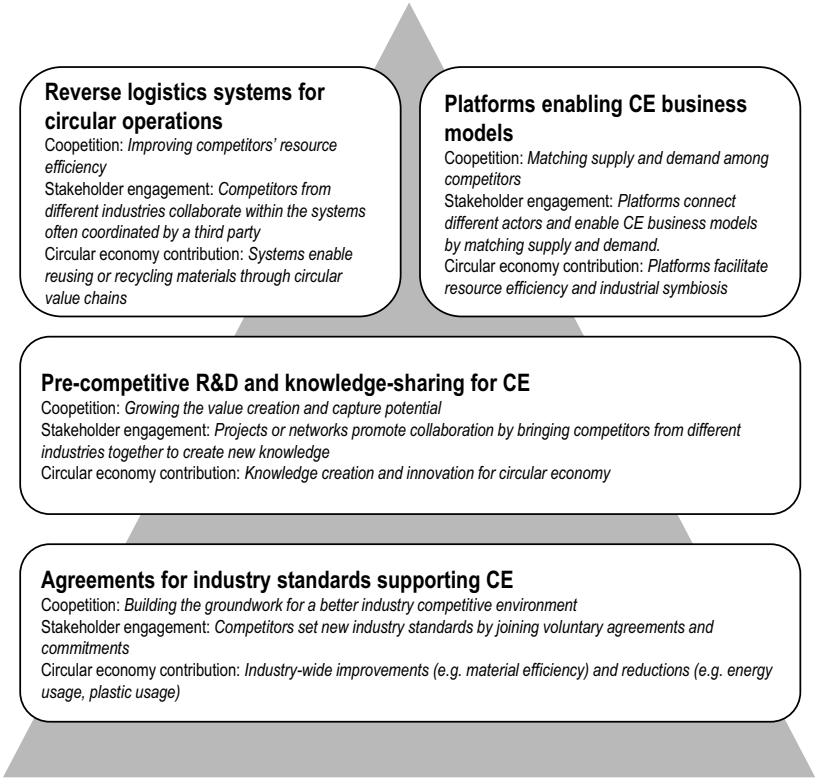

Fig. 10.1 Coopetition for a CE: main categories and contributions

applied and commercial end (reverse logistics systems and platforms). The triangular shape in the picture depicts how the groundwork for joint CE-related industry principles helps organisations to engage in joint research and, later, joint business models. Such initiatives, however, do not occur linearly; more likely, there is activity going on in all 'layers' of the industrial and economic system. In all layers, the coopetition for a CE involves many types of stakeholder engagement, which we briefly discuss below.

Agreements for industry standards supporting CE and resource-efficient operation modes can rapidly shift the practices and processes in an industry in a more sustainable direction when all industry actors are involved through peer pressure or, later, by legislative measures. We found evidence of agreements and commitments that enable the setting of new industry standards and may lead to co-development and the sharing of best practices to advance a CE. The agreements for industry standards are typically voluntary initiatives which companies join to match their competitors and build positive sustainability brands. However, the peer pressure from competitors to join sustainability-related agreements and commitments boosts companies' engagement in collaboration.

Pre-competitive R&D and knowledge sharing for CE networks and projects to increase resource circularity bring different stakeholders together with the aim, for example, of addressing plastic-related challenges, improving the recycling rate of plastics and promoting the CE of textiles. We found that conducting research and creating new understandings are important when engaging competitors to collaborate to address shared challenges. *Platforms enabling circular and resource-efficient business models* promote the circulation of materials and components and thus facilitate resource efficiency. The platforms enable the connecting of stakeholders and matching their supply and demand, thus potentially enabling industrial symbiosis. We found evidence that platforms can operate in various ways to achieve sufficient coverage in the industry. However, building trust in the platform is required to ensure sufficient coverage and usage to contribute to a CE.

The studied *reverse logistics systems* between competitors can make linear value chains more circular by enabling, for example, closed loops,

which enable more circular operations in value chains, such as recycling beverage packages and reusing cooking fat. In particular, the Finnish beverage package recycling system significantly contributes to the CE, with over 90% return rates of plastic bottles, glass bottles and aluminium cans. Third-party coordination or facilitation of collaboration is important for major national and cross-industry systems, such as beverage package recycling systems. A third-party coordinator can facilitate the consideration of trade secrets and competition regulations, which is important when competitors collaborate regarding, for example, data inputs to platforms or production volume estimation in the beverage package recycling system. Third-party coordination can reduce tensions between competitors, which enables smoother collaboration. In the beverage package recycling system, this was addressed by, for example, maintaining the balance between the interests of different actors, focusing on operations and considering trade secrets in the operations of the recycling system.

All four types of coopetition for a CE seem to benefit from third-party facilitation. Our cases indicate that such third-party facilitation between competitors should understand different institutional logics (see, for example, Ingstrup et al., 2020) and thus take into consideration the competitors' different interests and perspectives in order to engage competitors and enable feasible collaboration. Previous research has identified that implementing a sustainable CE requires coordination or intermediaries, such as academic or third-party organisations, government bodies or industry champions (see also Pinnington et al., 2021; Velenturf & Purnell, 2021). Third-party facilitation played an important role in engaging stakeholders in collaboration, particularly in the beverage package recycling system, Materiaalitori, Maapörssi, material-efficiency commitment and energy-efficiency agreement in which a third-party organisation coordinated the collaboration between competitors. For example, in the beverage package recycling system, a non-profit company, Palpa, was founded to enable efficient collaboration between competitors in the brewery industry, whereas a state-owned company, Motiva, facilitates and administrates the horizontal collaboration in the material-efficiency commitment, energy-efficiency agreement and Materiaalitori. Some form of third-party coordination, such as legislative

steering or academic organisations leading research projects, was identified in all cases except CEP and Loop Rocks. In the latter two platforms, one of the competing companies was in charge of the technological solutions or administration of the platform, and thus third-party coordination was not realised, which might be one reason that these platforms did not succeed in sufficiently engaging stakeholders in reaching their objectives.

Discussion

Theoretical Contributions

This exploratory multiple-case study analysed coopetition for a CE and identified four main categories for organising coopetition. The key findings add value to the stakeholder engagement, coopetition and sustainable CE literature by bridging coopetition and stakeholder engagement research and providing important insights to understand stakeholder engagement and coopetition in the context of a CE (Christ et al., 2017; Johanna Kujala et al., 2019; Manzhynski & Figge, 2020).

For the stakeholder engagement literature, the findings create an understanding of the characteristics of competitors as stakeholders and the stakeholder engagement activities relevant especially for coopetition (Bacq & Aguilera, 2022) and contribute to the understanding of stakeholder engagement by analysing the aims, activities and impacts of stakeholder relationships for coopetition (Kujala et al., 2022; Sachs & Kujala, 2021). We address the need for more stakeholder engagement research with a more extensive level of analysis (network level and relationship-based), unlike the current research, which focuses on the focal firm (Sachs & Kujala, 2021). Our study also addresses the research gap in the in-depth understanding of stakeholder engagement in different contexts (Kujala et al., 2022) by providing insights from coopetition and CE contexts. The study contributes to the CE literature by identifying how coopetition can contribute to a CE as it is often necessary to enable systemic changes in the latter (Geissdoerfer et al., 2017).

For the coopetition literature, this study contributes to the very limited understanding of coopetition for a CE (Hirvensalo et al., 2021; Narayan & Tidström, 2020; Volschenk et al., 2016), which lacks empirical insights. The conventional coopetition literature has identified that collaboration between competitors typically occurs in activities far away from the customer, such as R&D (Bengtsson & Kock, 2000), whereas more recent research has demonstrated that collaborative activities occur close to the customer, such as marketing and sales (Flanagan et al., 2018). This study provides empirical insights which showcase collaborative activities occurring both far away from (e.g., R&D and knowledge sharing in networks and research projects) and near (e.g., recycling beverage packages and gathering consumer cooking fat) the customer.

The findings of this study also improve the understanding of the third-party coordination and facilitation of coopetition and demonstrate the importance of a third-party coordinator or facilitator of collaboration, which has been previously identified (Kestemont & Chalant, 2013; Planko et al., 2019; Ritala et al., 2009). The benefits of such a neutral 'orchestrator' (Pinnington et al., 2021) can be viewed as a means to resolve the tension-laden nature of the competitors as stakeholders relationship. As our results demonstrate, such orchestration occurs through various projects, systems and collectives and, more formally, through digital platform models. In these cases, it is important to understand how legitimacy is developed in both roles, the orchestrator and the participants (Thomas & Ritala, 2021), and, more broadly, how such collective action can contribute to a CE.

Practical Implications

Practitioners will benefit from the insights discussed in this chapter, as the findings provide valuable understanding of organising coopetition for a CE. For companies, the study demonstrates different ways in which a CE can be promoted through collaboration with competitors. The findings help companies understand what kind of coopetition is feasible for various CE objectives. Non-profit organisations or industry

associations aiming to organise horizontal collaboration within industries are offered important insights on how to engage competitors to collaborate for a CE and how this has been achieved previously. The categorisation and analysis of the cases provide an outlook on what type of coopetition has contributed to a CE previously and the key points for stakeholder engagement for each coopetition arrangement. Third-party facilitation or coordination of collaboration is important in all types of projects and schemes, but the right governance model will vary across cases; for some projects, a digital platform solution might help to scale up the CE impact, while for others, the project might focus on looser elaboration and development of industry norms and practices. In addition, the consideration of trade secrets and regulations, reducing tension between competitors, peer pressure to commit to initiatives and trust building for platform users seem to be necessary to engage competitors in collaboration to advance a CE.

Limitations and Future Research

Our study has limitations that represent pathways on how to further advance understanding of the vital role of collaboration and coopetition for a CE. We sampled cases from multiple industries in Finland, and we assume that findings are generalisable to many industrial and geographical contexts. However, as all cases are from similar institutional contexts, the findings may have been affected by certain cultural and geographical characteristics. Therefore, coopetition for a CE should also be studied in different institutional contexts. The cases in this chapter analyse collaboration between competing companies. However, insights from other competing organisations, such as NGOs, universities or public actors, collaborating to advance a CE can provide interesting results and improve the understanding of multi-actor collaboration for a CE. The importance of trust in coopetition became evident in this study, and thus further research on trust building in stakeholder relationships entailing competition could provide interesting future research avenues and important contributions to the stakeholder engagement literature.

Conclusion

This chapter examines how coopetitors organise to advance a CE, how to engage competitors as stakeholders and the contributions of coopetition to a CE. For this purpose, we conducted a multiple-case study of coopetitive initiatives for a CE in Finland. Building on a very limited previous understanding of coopetition for a CE, we identified four main patterns across 12 cases which were categorised into agreements for industry standards, pre-competitive R&D and knowledge sharing, platforms and reverse logistics systems. Adding to the understanding of stakeholder engagement for coopetition, we identified the aims, activities and impacts of stakeholder relationships within the coopetitive initiatives. Coopetition can contribute to a CE in foundational areas when competitors are engaged to set new industry standards that support the CE through voluntary agreements and commitments as well as through pre-competitive R&D and knowledge-sharing projects and networks promoting collaboration for a CE by bringing different stakeholders together. Coopetition can also advance a CE through more applied and commercial approaches, as stakeholder engagement enables cross-industry collaboration within reverse logistics systems and platforms to connect stakeholders and match their supply and demand, facilitating the development of CE business models. Coordination that acknowledges different, even conflicting, stances, by, for example, making available third-party organisations, government bodies or academic organisations, benefits coopetition for a CE in all categories. Finally, with sufficient stakeholder engagement, including coordination of collaboration, coopetition can contribute significantly to a CE through agreements for industry standards, pre-competitive R&D and knowledge sharing, platforms, and reverse logistics systems.

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Part IV

Novel Approaches to Stakeholder Engagement

11

Enablers of a Circular Economy: A Strength-Based Stakeholder Engagement Approach

Hanna Lehtimäki, Johanna Kujala, and Tojo Thatchenkery

Introduction

This chapter increases our understanding of strength-based stakeholder engagement as an enabler of the sustainability transition to a circular economy. A circular economy entails reducing the use of natural resources, reusing materials to sustain value, recycling more efficiently and seeking to build closed cycles of material, energy and nutrient flows (Corvellec et al., 2022; Korhonen et al., 2018). A circular economy is seen as a promising response to the current sustainability crisis (Kirchherr et al., 2017; Marjamaa et al., 2021). The transition from a linear to

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a circular economy is a systemic change that requires broad-based stakeholder interaction, collaboration and engagement of public and private organisations (Geissdoerfer et al., 2017; Gonzalez-Porras et al., 2021; Lehtimäki et al., 2020; Lieder & Rashid, 2016; Morseletto, 2020). The circular economy makes the sustainability transition actionable at individual, organisational and societal levels.

Recent research has indicated that stakeholder engagement is significant in the circular economy, as the mutual support of stakeholders is needed to effectively implement the idea of a circular economy (Lieder & Rashid, 2016). Stakeholder engagement is increasingly used to study sustainability-related issues such as sustainable innovations (Scuotto et al., 2020; Todeschini et al., 2020), environmental management (Onkila, 2011; Papagiannakis et al., 2019), sustainability accounting and reporting (Herremans et al., 2016), biodiversity conservation (Jolibert & Wesselink, 2012) and climate change mitigation (Luís et al., 2018). In a sustainability transition, stakeholder engagement entails identifying the drivers and barriers of the advancement of environmental and sustainability issues and sustainability management (Harclerode et al., 2016). Moreover, stakeholder engagement has an impact on the ways in which sustainability (Hine & Preuss, 2009), goodwill, consent, control, cooperation, accountability, trust and fairness (Davila et al., 2018) are considered in stakeholder relationships.

Stakeholder engagement, in this chapter, refers to the involvement of stakeholders who can affect, or are affected by, a circular economy and their relationships in activities and decision-making processes related to a circular economy (cf., Freeman, 1984; Greenwood, 2007; Roloff, 2008). Previous research has concluded that stakeholder engagement consists of a variety of practices and is a purposeful action with aims and outcomes (Sachs & Kujala, 2021). Stakeholder engagement practices involve processes through which various stakeholders can be included and acknowledged in decision-making and policy-making processes (Kujala et al., 2022). Examples of stakeholder engagement practices are informing, consulting, dialoguing and learning from and with stakeholders (Greenwood, 2007; Kujala & Korhonen, 2017; Lehtimäki & Kujala, 2017). As the outcomes of stakeholder engagement, previous

literature has highlighted the importance of positive and constructive stakeholder relationships (Freeman et al., 2010; Harrison & Wicks, 2013). While stakeholder engagement is often considered as something positive (Correia Loureiro et al., 2020; Davila et al., 2018; Greenwood, 2007), a deeper understanding of what creates the positive in stakeholder relationships is needed.

In this chapter, we explore what constitutes positive and constructive stakeholder relationships at the individual, organisational and societal levels of stakeholder engagement. Theoretically, we build on an established notion in management research arguing that by engaging stakeholders collaboratively and democratically, leaders can create collective futures that are built on the strengths of the participants and an appreciation of the best of what is (Cooperrider & Srivastava, 1987; Cooperrider & Whitney, 2005). The goal is to increase our understanding of how identifying and enhancing the strengths in stakeholder relationships reveal opportunities that exist for sustainability transition and support, realising sustainable value for all stakeholders. In the strength-based approach, the best of 'what is' and 'what could be' are taken as a starting point in the analysis of the situation at hand and in imagining the future (Bushe & Marshak, 2014).

Empirically, we present an exploratory study of stakeholder engagement in a circular economy in Finland, a country globally recognised for its thought leadership in advancing the circular economy. The data comprise in-depth interviews with 36 specialists representing different stakeholders involved in advancing the circular economy in Finland. The respondents were asked to describe situations where they had received positive feedback on their personal or collective action in advancing the circular economy. In the analysis, we focused on the language the respondents used in describing the situations and the positive experiences they have had. The results of the analysis elaborate on the situations of receiving positive feedback from others and moments of success as experienced by the interviewees at the individual, organisational and societal levels.

Our study contributes to the stakeholder literature by elucidating the positive foundation of stakeholder engagement. By focusing on the moments of appreciation and positive experiences of individuals engaged

in stakeholder interaction, we explicate the ways in which stakeholders engage 'in a positive manner' (Greenwood, 2007, p. 318) and build a 'positive connection' (Correia Loureiro et al., 2020, p. 388) with each other. The result of empirical analysis demonstrates the constructive capacity of stakeholders for creating positive social change by nurturing life-giving forces in interaction (Cooperrider & Whitney, 2005). Our study illustrates that identifying and enhancing the strengths in stakeholder engagement reveal opportunities that exist for a circular economy activity in fostering sustainability transition.

The rest of this chapter is structured as follows. In the next two sections, we discuss the theoretical premises of our study, the strength-based approach and stakeholder engagement. Next, we describe the methodology and findings of our study. We conclude with a discussion of the theoretical contributions, managerial implications and guidance for future research.

The Strength-Based Approach

The strength-based approach is an alternative to problem-solving and root cause analysis as organising principles. The focus in the strength-based approach is on identifying the strengths of the current state and working on the desired future, starting with the smallest available action points (Cooperrider & Srivastava, 1987; Thatchenkery, 2013). Cooperrider and Srivastava (1987) evoked the construct of 'anticipatory reality' to demonstrate that by engaging stakeholders collaboratively and democratically, leaders can create a collective future that is built on the strengths of the societal participants. Contrary to viewing organisations as problems to be solved, the strength-based approach is interested in what it is that people consider as valuable and in what situations they feel appreciated (Thatchenkery & Metzker, 2006). Thus, organisations are considered as sites of human relatedness and alive with infinite constructive capacity for creating positive social change, where the purpose of organising is to nurture life-giving forces in interaction. The central argument is that an organisation and organising that focuses on problem-solving is tied to what is wrong, while organising that focuses

on strengths can more easily identify solutions and use the strengths in transforming the organisation (Cooperrider & Whitney, 2005).

The difference between a problem-solving and strength-based approach can be illustrated with an example from organisational development research. Bushe and Marshak (2009, 2014) identified two complementary approaches, diagnostic and dialogic, in organisational development and change. In the diagnostic approach, the objective is to produce a detailed analysis of the system, identify problems in the system and create action plans to invoke behaviour to solve the problems. The objective of the dialogic approach, on the other hand, is to increase awareness of a variety of experiences in the system and help to change the mindset of organisational actors. Both approaches emphasise process orientation and focus on interaction that enables the solution-seeking action of others. While the diagnostic approach emphasises objective data, detailed analysis and problem-solving methods, the dialogic approach emphasises raising consciousness about alternative perspectives and self-organising for invoking generative ideas that lead to change (Bushe & Marshak, 2009, 2014).

The strength-based approach comprises two well-established streams of research, appreciative inquiry (Cooperrider & Selian, 2021; Cooperrider & Srivastava, 1987; Cooperrider & Whitney, 2005; Laszlo & Cooperrider, 2010; Thatchenkery et al., 2010) and appreciative intelligence (Thatchenkery & Metzker, 2006). Next, we describe these two research streams more closely.

Appreciative Inquiry

Appreciative inquiry is a constructive inquiry process that looks at what is of value to organisations, communities and larger human systems when they are functioning at their best (Thatchenkery et al., 2010). It is both a form of study and a mode of practice. As a form of study, appreciative inquiry adopts a systematic search for capacities, processes, language and practices that give life to a living system. It seeks to increase our understanding of the types of practices that support human growth, increased awareness and capacity-building (Bushe & Marshak, 2009,

2014). As a mode of practice, appreciative inquiry is a process through which people are invited to discover what is working well, to dream and envision what might be, to design what should be and to define the plan to achieve what is designed (Cooperrider & Srivastava, 1987; Cooperrider & Whitney, 2005; Whitney, 2010).

In empirical research, appreciative inquiry refers to action research that combines studying and changing social systems using social constructionist principles to draw attention to the power of positive language in creating desired futures (Gergen & Thatchenkery, 2004). In empirical inquiries, researchers collaborate with people engaged in the study to identify the future potential and create action plans in the focal organisation. Laszlo and Cooperrider (2010) demonstrated that appreciative inquiry strengthened a system's capacity to apprehend, anticipate and heighten positive potential. Drawing on their experiences at an appreciative inquiry summit that was designed to facilitate collaborative discovery with a strengths-based approach, they argued that involving stakeholders in imagining what is possible fosters co-learning, co-development and responding to complex situations creatively and holistically (ibid.). Studies conducted in Finnish organisations comprised appreciative inquiry in public, private and non-governmental organisations (Holma et al., 2015; Lehtimäki et al., 2013; Parkkali et al., 2015; Parkkinen et al., 2015). The studies indicated how appreciative inquiry supports developing a customer-oriented culture through bottom-up processes, engaging the members of an organisation and middle management in organisational change processes and enhancing communication and focusing on positive potential in post-merger situations.

Appreciative Intelligence

Appreciative intelligence refers to the ability to perceive the positive potential in a situation and to act purposively to transform that potential into outcomes (Thatchenkery & Metzker, 2006). Appreciative intelligence has three components: reframing, appreciating the positive and seeing how the future unfolds from the present. We will describe each of these in the following.

Reframing refers to seeing problems in a new light and creating alternatives that have not occurred within the old framework. It involves shifting a frame so that new relationships and dependencies become apparent. As an example, Thatchenkery and Metzker (2006) demonstrated that Silicon Valley entrepreneurs thought differently (with respect to the content of their thoughts and the processes they employ) by intentionally reframing market signs and opportunities. Reframing is necessary in leadership, as continuous problem-solving and crisis management are what leaders face often. Over a period, the firefighting mindset may inhibit the appreciative intelligence of leaders and trap them in a path of a single-trajectory problem-solving style. Opportunities for innovation and creativity might be lost and time is spent attending to what is urgent as opposed to what is important. As an example, in the transition from a linear to a circular economy, the default mode is the deficit conversation such as warnings about the looming ecological disaster originating from the irreversible climate change. Even though the science about climate change is solid, the doomsday crisis mentality generally pushes people to resort to a reactive way of thinking and responding. Reframing means, seeing the circular economy as a novel purpose for joint action across organisations to create opportunities for sustainable innovation. It encourages new relationships and dependencies among stakeholders from the public and private sectors and government agencies.

Appreciating the positive, the second component of appreciative intelligence is based on social constructionist philosophy. Appreciating the positive is about intentionally seeking the generative vocabulary that looks at what works in a system as opposed to what does not. Appreciating the positives must become a habit if it is to have a lasting impact. Most well-meaning participants in a circular economy are unconsciously participating in all-pervasive deficit discourse with a vocabulary consisting of hundreds of negative words about the ecological crisis awaiting us. Circular economy activists will have to observe with an open mind and truly believe that positive possibilities can be brought to the surface with intentional reframing. Appreciating the positives allows for shifting the viewpoint from visibly insurmountable macro-level issues to small changes that are possible to attend to at the individual and local levels. Such reframing encourages action towards a

sustainable future instead of helplessness and procrastination in the face of incomprehensible change.

Seeing how the future unfolds from the present is the third component of appreciative intelligence. It is not enough to reframe or recognise positive possibilities. We must know what to do at the present moment, akin to a state of being mindful (Kabat-Zinn, 2005). The future possibility must be realised in the current reality through purposive action, very similar to the process of the enactment of possibilities (Weick, 1988). It becomes easier to join the action rather than remain an outsider and criticise, dismiss, or neglect the sustainability transition. For example, climate activist Greta Thunberg has demonstrated the power of individual initiatives to create and transcend global movements. With appreciative intelligence, we start noticing and valuing the actions that are taken by investors in for-profit corporations for the public good and by the citizens and legislators at the societal, national and global levels.

In addition to the three components mentioned above, appreciative intelligence leads to four qualities in individuals (Thatchenkery & Metzker, 2006), namely persistence, conviction that one's actions matter, tolerance of uncertainty and irrepressible resilience. Persistence is the ability to stick with a project or problem to its fruitful completion. There are two types of persistence. The first one, behavioural persistence, is the external manifestation of visible actions that are sustained over a period to accomplish a goal. The second one is cognitive persistence, where an individual continues to think about a goal that may continue long after behaviour to accomplish it has stopped.

Conviction that one's actions matter creates confidence in our abilities to mobilise the mental resources and plan of action needed to accomplish a task. Overall, people with high self-esteem have a greater tendency to persist in the face of failure and challenges. They are also more likely to reframe and see the presence of alternatives to achieve a goal. The creative ideas and actions that individuals pursue create uncertainty or ambiguity. Moreover, people with high appreciative intelligence exhibit a high tolerance of uncertainty, ambiguity and cognitive dissonance (Thatchenkery, 2015). Beyond tolerating their own uncertainty, they help other people to address uncertainty, often by reframing situations to help them see

what was positive. Finally, individuals possessing high appreciative intelligence exhibit irrepressible resilience and can bounce back from a difficult situation or a challenge with renewed energy (Thatchenkery & Metzker, 2006).

Appreciative intelligence also relates to cognition and opportunity recognition, two important facets of a circular economy. Gaglio and Katz (2001) suggested that successful entrepreneurs possess a cognitive schema called 'entrepreneurial alertness', which helps them to stay in a mental state of being alert to opportunities. They hypothesised that entrepreneurs possessing such a schema are predisposed to searching for and noticing market disequilibria and possibly reframing to see new positive possibilities, for example, for a circular economy. Entrepreneurially alert individuals will thus be more able to 'think outside the box' than people with a lower level of alertness. This line of thinking is consistent with the characteristics of people with high appreciative intelligence who have narrated stories regarding how they reframed problem situations, recognised opportunities and overcame challenges, all by recognising the generative potential in them and engaging in immediate actions to help unfold the future of the circular economy. The potential for enhancing a circular economy vitality by creating a robust appreciative intelligence development programme for stakeholders is clear.

Stakeholder Engagement

Most of the current stakeholder engagement literature builds on stakeholder theory, focusing on the relationships between firms and other societal actors (Freeman, 1984; Freeman et al., 2010). Accordingly, stakeholder engagement can be described as involving stakeholders and stakeholder relationships in organisational activities and decision-making (Sachs & Kujala, 2022), and examined by paying attention to stakeholder relations, stakeholder communication, as well as learning with and from stakeholders (Freeman et al., 2017; Kujala & Sachs, 2019). Moreover, stakeholder engagement is often understood as something positive (Correia Loureiro et al., 2020; Davila et al., 2018; Greenwood, 2007) and constructive stakeholder relationships are seen as the

outcomes of stakeholder engagement (Freeman et al., 2010; Harrison & Wicks, 2013). To better understand stakeholder engagement and relationships, especially in the sustainability context, we need to pay attention to what happens at various levels of stakeholder engagement.

The levels of stakeholder engagement comprise the individual level, the organisational level (firm and industry levels) and the societal level (Gonzalez-Porras et al., 2021). In sustainability transitions, the individual level of stakeholder engagement focuses on stakeholders as change agents (Pelenc et al., 2015). This level examines actors and their actions rather than stakeholder relationships and interactions (Fischer & Newig, 2016; Koistinen et al., 2020) and considers individuals' role in sustainability transitions. Understanding stakeholders' attitudes and motivations is important, as individual-level practices may lead to positive societal transformations when supported by the institutional environment (Köhler et al., 2019; Mutoko et al., 2014; Pesch, 2015).

The most established organisational-level stakeholder engagement analyses organisation–stakeholder relations (Sachs & Kujala, 2022). At the organisational level, stakeholder engagement refers to relationships and interactions between an organisation and its stakeholders such as employees, suppliers or customers (Bulgacov et al., 2015; Loorbach et al., 2010; Sulkowski et al., 2018). Stakeholder engagement at the organisational level also depends on the context in which the organisation operates (Gonzalez-Porras et al., 2021). The presence of a supportive environment is highly significant (Rhodes et al., 2014; Waddell, 2016), and stakeholders, such as the government and researchers, have a key role in establishing regulations, promoting infrastructures and disseminating sustainability practices (Foxon et al., 2004; Hörisch et al., 2014).

In addition, the organisational level of stakeholder engagement involves industry-level networking to address common concerns (Millar et al., 2012; Mutoko et al., 2014). Collaborative processes include gaining knowledge and expertise, accessing resources and improving each participant's legitimacy through an interorganisational learning process based on diverse dyadic relationships and interactions between the actors (Millar et al., 2012). As a process, industry-level networking

requires a dialogical approach and a high level of trust (Millar et al., 2012). To advance sustainability-related issues in stakeholder engagement, collaborative relationships, resource sharing, mobilisation in stakeholder networks and partnerships and the alignment of objectives and activities towards a shared goal are needed (Köhler et al., 2019; Millar et al., 2012; Mutoko et al., 2014).

Finally, at the societal level, organisations and their stakeholders from different sectors interact with civil society to support systemic change and promote sustainability transitions (Glasbergen, 2010; Köhler et al., 2019; Pattberg & Widerberg, 2016; Waddell, 2016). The societal level includes 'diverse stakeholders from multiple sectors and industries who, together with civil society actors—NGOs, local communities, governments, cities and the media—seek to solve sustainability challenges and enable sustainability transitions' (Gonzalez-Porras et al., 2021, p. 220). At the societal level, stakeholder engagement consists of various dialogical collaborative practices that lead to knowledge sharing and learning, as well as promoting societal change through partnerships, human interactions, communication, conversations, negotiations and agreements (Pruitt et al., 2005). Stakeholder engagement may be improved by processes of learning and argumentation, where stakeholders interact to promote environmental change and learn how to turn conflicting views and interests into shared views, agreement, consensus and joint solutions (Van de Kerkhof, 2006). The outcomes of stakeholder engagement at the societal level consist of change innovations and value creation that meet societal needs and support sustainability (Gonzalez-Porras et al., 2021; Mont et al., 2014; Watson et al., 2020).

To conclude, stakeholder engagement at the individual, organisational and societal levels consists of various activities that often have a positive or constructive connotation or undertone such as gaining knowledge and learning, generating innovations, turning conflicts into consensus and supporting sustainability change. To deepen our understanding of what constitutes the positive and constructive in stakeholder relationships, especially in the sustainability context, we move now to our empirical examination of stakeholder engagement in a circular economy context in Finland.

Context and Methods

A circular economy in Finland is an interesting context for studying stakeholder engagement, because Finland has been a global thought leader in the circular economy, introducing the first circular economy road map in the world in 2016 (Sitra, 2016). In 2019, the government set the goal of reaching carbon neutrality by 2035 (Programme of Prime Minister Sanna Marin's Government, 2019) and, in 2021, the government prepared a strategic programme to promote the circular economy.

We conducted 35 interviews and interviewed 36 circular economy specialists (two specialists were present at the same time in one interview) in Finland in the spring of 2020. The interviewees represented different stakeholders involved in advancing a circular economy at local, regional and national levels in both public and private organisations (Table 11.1). The interviews were conducted in Finnish, and recorded and transcribed verbatim.

During the data collection, we followed the appreciative inquiry guideline of not asking the interviewees to share their problems and challenges but rather to focus on positive experiences. In designing the interviews, we applied the appreciative framework by Thatchenkery and Metzker (2006) and asked the interviewees to describe two types of experiences. First, the interviewees were asked to describe an experience of positive feedback they had received on individual achievement in advancing a circular economy. Second, the interviewees were asked to describe an experience of appreciation for a joint achievement. We then asked the interviewees to reflect on positive thoughts, constructive feedback, feelings of appreciation and points of learning from both experiences.

For the analysis of the interviews, inductive content analysis (Berg & Lune, 2017; Elo & Kyngäs, 2008) was performed to identify keywords and themes of strength-based experiences. Many interviewees initially reported that it was difficult to describe their feelings during the occasions they described as moments of appreciation. This exemplifies that dwelling on the negatives is the default mode. However, when we persistently reframed and asked what was working and when they had felt joy,

Table 11.1 The interview data

Stakeholder groups	Interview date	Length (minutes)	Interview code
Ministries	14.5.2020	45	20MI13
	20.5.2020	46	20MI19
	27.5.2020	81	20MI27
	29.5.2020	110	20MI33
	28.5.2020	101	20MI30
Federations	13.5.2020	48	20FE12
	15.5.2020	59	20FE10
	20.5.2020	70	20FE34
	20.5.2020	90	20FE18
	22.5.2020	83	20FE20
	27.5.2020	69	20FE28
Development and support organisations	11.5.2020	79	20DE01
	12.5.2020	80	20DE03
	13.5.2020	57	20DE06
	14.5.2020	73	20DE07
	25.5.2020	64	20DE22
	29.5.2020	84	20DE31
	11.5.2020	110	20RE02
	15.5.2020	84	20RE09
	18.5.2020	85	20RE14
	25.5.2020	69	20RE23
	26.5.2020	87	20RE26
	26.5.2020	68	20RE25
Cities and municipalities	12.5.2020	52	20CI04
	14.5.2020	88	20CI08
	15.5.2020	56	20CI11
	25.5.2020	83	20CI21
Companies	13.5.2020	55	20CO05
	18.5.2020	62	20CO15
	18.5.2020	79	20CO17
	29.5.2020	80	20CO16
	26.5.2020	96	20CO24
	27.5.2020	93	20CO29
	29.5.2020	68	20CO32
Other	22.5.2020	79	20MI35

excitement and success in working with others, the interviewees were able to share several such instances. The responses to positively oriented questions indicate that when encouraged, people become empowered to focus on what is vital and nurturing in their work. Consequently, we were able

to collect data that allowed us to examine what worked in stakeholder relations and the opportunities that emerged when stakeholders communicated with each other. Intentionality and mindfulness are needed to focus on positive language, to reassure constructive feedback from others and to foster empathy and positive emotions.

Findings

To answer our research question regarding what constitutes situations where people feel appreciated and make the organisation/stakeholder engagement alive with a constructive capacity for creating social change, we identified life-giving forces at the individual, organisational and societal levels of stakeholder engagement (Table 11.2). We will elaborate on each of these in the following.

Individual Level

The responses reflected an understanding that, as an individual, one can have an impact but that appreciation for a slow change is necessary. The respondents described that individual motivation gives a sense of value as a change agent and that the work on a circular economy

Table 11.2 Moments of appreciation in stakeholder engagement in a circular economy

Level	Moments of appreciation
Individual	Having individual motivation
	Feeling of appreciation
	Having positive feelings about oneself
	Being able to set an example
Organisational	Appreciating routines
	Crossing organisational boundaries
	Building a shared understanding
	Doing things together
	Receiving positive feedback from others
Societal	Recognising that change is possible
	Understanding collaboration as a powerful practice
	Becoming empowered through interaction

is rewarding. These actions help in reframing and focusing on what is possible. At the individual level, emotions and feelings of appreciation were important. The interviewees described a variety of emotions they experienced, namely pride, satisfaction, empowerment, inspiration, humility, enthusiasm, belief, capability and appreciation. The circular economy specialists also described a variety of positive feelings of themselves while working on issues related to a sustainable future. These feelings included satisfaction, tranquillity, empowerment and a sense of doing the right thing. Appreciation of stakeholder engagement supported self-efficacy.

Also, the sense of being able to set an example in the sustainability transition in society at large was considered important. The interviewees appreciated the notion of being among the forerunners in the sustainable circular economy. They described the importance of being able to demonstrate how solutions can be identified and applied. They were also proud of being among those who are applying the sustainable circular economy principles and being in a position of awakening others about the importance of sustainable development in public and private organisations and in society at large.

> The latest example is from this week, when I got a government official to change his mind and approve an alternative construction material manufactured by our member organisation as part of their project. The material is not purely circular economy but involves the use of recycled materials. I also got appreciation from the company for getting deeply involved in this and for giving clear guidelines. (Interview 20FE20)

Organisational Level

The responses indicate that learning to appreciate routines and practices in stakeholder engagement for sustaining continuous communication and learning with stakeholders so that the desired future can start to unfold from the current reality was important. Moments of success that the interviewees described included success in creating collaboration across organisational boundaries and winning competitions. The

respondents considered crossing organisational boundaries as empowering in collaborative learning and continued interest in engaging with each other. What was considered important in collaboration was building a shared understanding among different actors. This included the sense of being open in dialogue, the capability of bringing people together to discuss and find solutions, and the ability to enable discussion among those who were identified as important actors in advancing the sustainability transition through a circular economy, but who might not identify each other as actors working on similar topics. The excerpt below expresses the sense of accomplishment that an active specialist had achieved through active participation in a national dialogue on advancing the circular economy:

> I am proud that [our industry] has become one of the central actors and discussants in the circular economy so that we are now participating in almost everything that takes place in Finland. It has been a joy to talk about all that companies are doing, and then you notice that your voice is heard, and you receive invitations to all kinds of programmes and groups. (Interview 20FE12)

Joint efforts in organisational boundary-crossing co-operation built a sense of accomplishment. Encouraging trust building in relations that transcend organisational boundaries was considered important. The excerpt below illustrates that trust building is considered an outcome of openness and self-commitment:

> … trust needs to be built. It comes with open discussions and maybe also with setting a personal example, I mean, that when I show that I share a secret with the other person, they notice that they can tell their secrets to me. Being an open and trustworthy partner takes you far. Also, I would like to add that it is important to recognise your own weaknesses, be appreciative of them and be open to say that, listen, I don't know or understand much about this either, but I know someone, let's call them. (Interview 20CO17)

The sense of doing things together in collaboration with others emerged as an important consideration. This included the experience of

growing and building competence together, being part of a successful team and building lasting relationships with others, and working on making the sustainability transition happen in organisations.

Instances of receiving positive feedback from others were plentiful and were described in rich detail. Peers in the interviewees' own organisations and in stakeholder organisations, superiors and young people were mentioned as those giving positive feedback. Such feedback included indicating interest in what the specialist had to say, curiosity to learn more about the viewpoints of the specialists and expressions of gratitude for taking action to advance a sustainable circular economy.

> It feels good to get appreciative feedback. But when you look a bit deeper, well, I think, I don't know, I think it starts with placing yourself in the positions of others so that one can communicate the different kind of viewpoint. It is about humility. (Interview 20CO32)

Societal Level

The responses indicate that there is a sense of empowerment in recognising that one can influence change in society through one's work and that people and the society can change. This notion builds on the experience that collaboration is a powerful practice. The excerpt below describes a situation where people from different organisations came together to launch an event for a circular economy product:

> Well, we learned to appreciate that we have incredibly motivated people and that it was very rewarding that we pulled together teams that crossed organisational boundaries and found a completely novel kind of power in them. (Interview 20CO05)

Change in the societal level entails interaction across organisations. The excerpt highlights the value of interaction between stakeholders from different organisations. The interaction took place across sectors and involved private, public and third-sector organisations. Our analysis shows that at the societal level, stakeholder engagement does not only

consist of various dialogical collaborative practices that lead to knowledge sharing and learning, but also a sense of togetherness, empowerment, motivation and reward that stems from working together for a common goal. The excerpt above shows that the outcomes of stakeholder engagement at the societal level include a potential for innovative practices in future collaborative activities across organisational boundaries.

Discussion

Our analysis shows that individual motivation, feelings of appreciation, positive feelings of oneself and pride in being among those who are making a change constitute the life-giving forces of a strength-based stakeholder engagement at the individual level. At the organisational level, appreciating routines, collaboration within and across organisational boundaries, building a shared understanding, doing things together and receiving positive feedback from others are the life-giving forces of a strength-based stakeholder engagement. At the societal level, the life-giving forces of a strength-based stakeholder engagement consist of recognising that change is possible, understanding that collaboration is a powerful practice and becoming empowered through interaction with people from different organisations. The findings contribute to multi-level analysis of sustainability transition (Geels, 2020).

In particular, this study contributes to previous research by elucidating the positive in stakeholder engagement (Correia Loureiro et al., 2020; Davila et al., 2018; Greenwood, 2007) and by explicating that strength-based stakeholder engagement builds on the positive potential for change at all levels of stakeholder engagement (Gonzalez-Porras et al., 2021). Focusing on strengths highlights the power of collaborative efforts in organising for sustainability and fosters appreciative dialogue in framing the desired future (Gergen & Thatchenkery, 2004). Furthermore, the results of our analysis indicate that strength-based stakeholder engagement is powered by being non-judgmental about the variety of experiences in advancing a circular economy, constructive feedback to novel ideas and collaboratively attending to constructing anticipatory realities. Identifying strengths in stakeholder engagement and focusing

on the best in people reveal opportunities that exist for sustainability transition.

The analysis also indicates that a broad-based understanding of the change and courage of both an individual and a larger collective is needed. The circular economy specialists considered that keeping up the momentum and being resilient in the face of a slow-moving societal change are important. Such notions seem to strengthen learned optimism (Seligman, 1991) and belief that the circular economy makes the sustainability transition possible.

Our study points to significant managerial implications. Enhancing the circular economy has had a technological 'bias' to some extent. There is an underlying belief that scientific and technological advancements will solve the sustainability crisis. Corvellec and colleagues (2022) have recently pointed out that the circular economy has an implicit ideological agenda dominated by technical and economic narratives, which may slow down long-term viability and acceptance among leaders and decision-makers at the organisational and political levels. Our study indicates that there is space for a dialogical organisational development approach founded on transformative positive conversations among stakeholders, focusing on what is possible instead of what is not.

We would like to caution the well-meaning and highly motivated stakeholders and leaders that ignoring the resistance-to-change aspect of organisational transformation may come at a high price. Circularity is a socio-technical systems (STS) challenge. The technical domain has shown immense progress, which should be acknowledged and celebrated. At the same time, we should be mindful to equally focus on the social domain and recognise how the default deficit dialogue can unconsciously undermine future progress and innovation for circularity. Our study points to the promise of positive conversations and the development of appreciative intelligence among stakeholders for creating a robust social foundation for supporting the technical advances yet to come.

The limitation of our research is that we have only examined stakeholders who are involved in the challenge of advancing the sustainability transition with a circular economy. Our interviewees were among the pioneers of the circular economy development in Finland and thus

enthusiastic about and committed to advancing the issue. Future research on stakeholder engagement should focus on finding ways to address strength-based stakeholder engagement among the non-interested or critical stakeholders. Lessons learned from this study will be directly relevant for framing a workable research design for such research.

Conclusion

The circular economy represents action that supports the sustainability transition and requires stakeholder engagement. Building on a strength-based research approach, we interviewed circular economy specialists representing various circular economy stakeholder groups and explicated the life-giving forces for positive and constructive stakeholder engagement at the individual, organisational and societal levels. By focusing on moments of appreciation and positive experiences, we elaborated on the ways in which strength-based stakeholder engagement reveals opportunities that exist for circular economy activity in fostering the sustainability transition. Our study contributes to the stakeholder literature by elucidating the positive foundation of stakeholder engagement.

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12

In the Margins of Stakeholder Engagement: Fringe Stakeholders' Inclusion in Sustainability Transition Initiatives

Mariana Galvão Lyra and Hanna Lehtimäki

Introduction

Sustainability transitions are long-term systemic changes that comprise not only technological innovations but also socio-cultural and economic changes, and they have a deep effect on institutions' routines and people's beliefs (Loorbach et al., 2017). Transitions entail a multiplicity of incremental changes that emerge from socio-political struggles (Swilling, 2020). Yet, while it has been noted that sustainability transitions do not provide everyone with equal opportunities or positive outcomes, little scholarly attention has been paid to social and economic inequalities connected to sustainability transitions (Chowdhury et al., 2021). The idea that not everyone is willing to engage in or collaborate on sustainability transition initiatives raises questions: Who is not included

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in the advancement of alternative sustainable solutions? Why is there resistance to taking up sustainability transitions? What is it about sustainability concepts that some find upsetting, creating contradictory and non-engagement stakes?

In this conceptual paper, we focus on fringe stakeholders to examine how those who are marginalised and non-collaborative are treated in stakeholder and sustainability transition literature. Fringe stakeholders comprise poor, adversarial, weak, non-legitimate and divergent groups (Chowdhury et al., 2021; Hart & Sharma, 2004; Rodrigo & Duran, 2021). In addition, fringe stakeholders include non-collaborative ones that, for instance, question the prevalent structures in society and the ways in which governments, researcher institutions and those in societal power positions seek to address and find solutions to the sustainability crisis. Fringe stakeholders, such as activists and local resistance actors, are perceived as intransigent, seeking to challenge the status quo with few resources and strategic capabilities, limited legitimacy and little influence (Chowdhury et al., 2021).

The central argument in stakeholder literature is that stakeholders have complex and contradictory interests regarding corporations or issues (Freeman, 2010a; Kujala et al., 2022). In his seminal work, Edward Freeman (2010b) brought together strategic management and stakeholder approaches by demonstrating that in strategic management, a firm must consider two parties. First, they should consider not only shareholders but also other stakeholders whose interests the corporation serves. Second, a firm should not only account for groups who can affect the corporation but also for those who are affected by the company's operations. The stakeholder approach has been insightful in broadening the scope of business to wider societal embeddedness and making the involvement of business operations in society an important topic in strategic management (Hörisch et al., 2014). Stakeholder prioritisation has highlighted the need for corporate decisions to avoid negatively affecting marginalised groups (Hall et al., 2015), making the stakeholder approach an important component of addressing corporate social responsibility. Furthermore, stakeholder categories have been broken down into new dimensions, such as social identity (see Crane & Ruebottom, 2011), so that research can become better informed about

the various aspects of heterogeneity and diversity. However, past literature has focused primarily on salient stakeholders, and there is still a lack of knowledge in the literature about the roles and perspectives of fringe stakeholders (see Chowdhury et al., 2021; Daudigeos et al., 2020; Derry, 2012; Khazaei et al., 2015; McCarthy & Muthuri, 2018).

Salient stakeholders are actors with legitimacy, power and urgency (Mitchell et al., 1997). The main body of existing stakeholder literature has been interested in how corporations engage salient stakeholders and the implications of their engagement for corporate, social and environmental outcomes (Kujala et al., 2022; McCarthy & Muthuri, 2018). There have been calls for more research on holistic and less corporate-centric approaches to address the inequalities among stakeholders in society (Mayes et al., 2013; McCarthy & Muthuri, 2018). In addition, the stakeholder model's focus on primary stakeholders has left the concept of community undefined (Di Maddaloni & Davis, 2017), which is problematic when seeking to understand stakeholders' roles and perspectives in sustainability transitions.

The sustainability transition literature depicts the transition as a complex systemic change that involves a variety of stakeholders, activities and interests that are both interconnected and interdependent (Geels, 2020). The literature has largely focused on techno-economic aspects, and less attention has been paid to socio-cultural aspects of such transitions (Swilling, 2020). Proka et al. (2018a) showed that sustainability transitions involve system destabilisation and conflict between incumbent regimes and initiatives that originate in niches. As an incumbent regime becomes destabilised, conflicts are bound to emerge between it and its niches. Sustainability transitions change both the formal and informal rules of the game because there is a power gap between the regime and the niche, and the niche is fragmentary. Proka et al. (2018a, b) recognised the transformative potential of fringe stakeholders to have a fundamental impact on the established regime. To better understand the socio-cultural aspects of the sustainability transition, bottom-up approaches and increased consideration of the most vulnerable are needed when it comes to exploring climate change and social inclusiveness in sustainability transitions (Raj et al., 2022).

Our chapter contributes to the stakeholder and sustainability transition management literature in two ways: First, since we direct attention to fringe stakeholders, we highlight the importance of a deepened understanding of those who are marginalised and non-collaborative in sustainability transitions. Our review integrates extant knowledge of the concept of fringe stakeholders to provide valuable insights into studying fringe stakeholders in sustainability transitions. Second, we examine ways in which the multistakeholder approach accounts for fringe stakeholders and elucidate the challenges related to addressing fringe stakeholders in stakeholder research. In turn, our investigation of past empirical studies on fringe stakeholders in sustainability transitions provides insights into how to account for the fringe stakeholder's voices in empirical research. As a contribution, we synthesise learnings from these efforts and propose attention to methodological features that will guide researchers in giving voice to fringe stakeholders in stakeholder engagement research. In sustainability transitions, power structures favour the interests of businesses, corporations and other incumbent stakeholders, while the interests of fringe stakeholders are easily ignored or silenced. Our paper provides insights into features in stakeholder research that, on the one hand, maintain the focus on the salient stakeholders, and on the other, provide openings for accounting for the interests of fringe stakeholders.

The remainder of the chapter is structured as follows. First, we review the variety of conceptualisations of fringe stakeholders and present a comprehensive definition of the concept. Second, we examine multistakeholder approaches in the stakeholder literature to demonstrate that although fringe stakeholders are of concern in stakeholder literature, they remain understudied and difficult to address. Third, we present past empirical research on fringe stakeholders in sustainability transitions and summarise the key learnings for fringe stakeholder inclusion in research design. Fourth, we discuss the features of methodology and propose that particular attention should be paid to stakeholder identification, methods of data collection, researcher reflexivity and context when studying fringe stakeholders and stakeholder engagement. We summarise with guidelines for writing that enhance giving voice to fringe stakeholders and conclude the paper.

A Comprehensive Definition of Fringe Stakeholders

Previous literature has identified two types of fringe stakeholders, marginalised and non-collaborative. First, fringe stakeholders have been considered as those who have less power, voice and urgency than salient or primary stakeholders (Hart & Sharma, 2004). Examples of these types of fringe stakeholders include indigenous peoples; people who are extremely poor and isolated; and other marginalised and vulnerable individuals, such as women in developing countries (McCarthy & Muthuri, 2018). Vulnerability is considered to be shaped by social relations and reproduced by class, gender and heritage factors (Sovacool, 2021). By definition, these kinds of fringe stakeholders are voiceless (McCarthy & Muthuri, 2018). In developing countries, for instance, it is common to see fringe stakeholders' voices silenced by powerful and legitimate stakeholders, such as multinational corporations, the government or the military (Lyra, 2021). Furthermore, it is common for the views of fringe stakeholders to be expressed through proxies, such as non-governmental organisations (NGOs), community leaders or academic research (Lyra, 2019b).

Second, fringe stakeholders have been considered those who question the pre-existing system and power structures. Hopwood et al. (2005) mapped stakeholder views on sustainable development in terms of the stance of the stakeholder towards socio-economic and equality concerns and environmental concerns. With this framework, Hopwood et al. (2005) identified three groups of stakeholders—namely, those who support the status quo, those whose interests are connected to reform and those who drive transformation. This framework depicts the differences between legitimate and fringe stakeholders as differences in the levels of intensity of socio-economic equality and environmental equality concerns. Supporters of the status quo recognise the need for change but do not see either the environment or society as facing insuperable problems. Such stakeholders include established institutions, such as the World Bank, Organisation for Economic Co-operation and Development (OECD) and the European Union (EU). In contrast, those who take a reform approach accept that there are mounting problems, and

they are critical of the current sustainability policies of businesses and governments. However, they do not believe that a collapse in ecological or social systems is likely or that a fundamental societal change would be necessary. These stakeholders include mainstream environmental groups. Transformationists, the third type of stakeholder, consider mounting environmental and social problems rooted in the existing structures of society, including the flawed ways in which humans interact with and perceive nature. They argue that a transformation of society and the human–nature relationship is a prerequisite for avoiding ecological crisis and the future collapse of society as we know it. Such stakeholders include ecofeminists, ecosocialists, ecofascist groups and anti-capitalist movements (Hopwood et al., 2005). We consider the transformationists to be fringe stakeholders who question the status quo and join the sustainability debate in an attempt to interrogate the prevalent understanding of society, humans and nature.

Despite the urgency of their claim, fringe stakeholders have neither power nor legitimacy (Mitchell et al., 1997). Activists and local resistance groups are often perceived to be intransigent, seeking to challenge the status quo with less strategic capabilities, limited legitimacy and little influence (Chowdhury et al., 2021). The level at which they can influence corporations to adopt new practices is largely dependent on the amount of support and resources they can access. Exposing the public to corporate transgressions is part of successful mobilisation by fringe stakeholders. Previous studies on corporate scandals and associated political transformations have shown that fringe stakeholders, especially those in developing countries, emerge with an agenda against corporations and self-organise in unpredictable ways to push corporations to reconsider their practices (Daudigeos et al., 2020; Lyra, 2019a). Their capacity to do so depends on their ability to organise into social movements that gain influence and attract resources to pressure companies, both nationally and internationally. Once this happens, fringe stakeholders may acquire an important voice and become a threat to the status quo of both corporations and government institutions.

Overall, when talking about non-salient stakeholders, the stakeholder literature tends to classify them as a secondary or less important stakeholder type (see Clarkson, 1994; Donaldson & Preston, 1995; Eesley & Lenox, 2006; Savage et al., 1991). This categorisation at times considers such stakeholders as hostile, dangerous or threatening (see Table 12.1). Furthermore, addressing stakeholders in the fringe has stemmed from an interest in examining the negative impact of focal companies on stakeholders and vice-versa, and thus, it has focused on examining the ways in which companies become vulnerable or socially exposed (Miles, 2017).

To summarise, we define *fringe stakeholders as groups and/or individuals who have less power, voice and legitimacy than salient stakeholders, and because of this, find challenges in being included in stakeholder engagement processes. In this regard, some decide to question the status quo power structures in society and find disruptive and alternative ways to exert their influence on the main institution/organisation/initiative in question* (Table 12.1). This conceptualisation of fringe stakeholders is needed to strengthen stakeholder theorising on sustainability transitions and to better account for the voices that are at the margins of stakeholder engagement. In Table 12.1, we contrast our definition of fringe stakeholders with similar concepts. A review of similar concepts shows that conceptual clarity is needed.

Secondary stakeholders are considered as a diverse set of stakeholders and include groups that are not directly associated with the focal organisation. They do not have a legal or contractual bond with the firm, and they do not directly engage in economic activity. Moral and legitimate claims are often associated with secondary stakeholders (Savage et al., 1991). Aaltonen and Kujala (2010) applied the concept using a life-cycle perspective for global projects aimed at understanding secondary stakeholders' behaviour and the extent to which they can influence management's decision-making. It is required that a secondary stakeholder gains salience and becomes part of the stakeholder network to obtain inner and lateral benefits. These include means to impose their will in the firm–stakeholder relationship, increase their legitimacy and reinforce the urgency of their claims in terms of time sensitivity and relevance. Secondary stakeholders deploy different types of strategies and tactics compared with primary stakeholders to engage in stakeholder

Table 12.1 Definition of fringe stakeholders and a review of similar concepts

Fringe stakeholders (authors' definition)	Groups and/or individuals who have less power, voice and legitimacy than salient stakeholders, and because of that find challenges in being included in stakeholder engagement processes. In this regard, some decide to question the status quo power structures in society and find disruptive and alternative ways to exert their influence on the main institution/organisation/initiative in question	
Similar concept	Definition	References
Fringe stakeholders without power	Stakeholders with less power, voice and urgency compared with salient or primary stakeholders	Hart and Sharma (2004), Lyra (2019b, 2021), McCarthy and Muthuri (2018), and Sovacool (2021)
Fringe stakeholders who question the status quo in society	Stakeholders that question the pre-existing system and power structures	Hopwood et al. (2005) and Lyra (2019a, 2021)
Secondary stakeholders	A diverse set of stakeholders, including those who are not directly engaged in the organisation's activities but exert influence on or are influenced by the organisation	Clarkson (1994), Donaldson and Preston (1995), Eesley and Lenox (2006), and Savage et al. (1991)
Marginal stakeholders	Stakeholders that are neither highly threatening nor especially cooperative	Savage et al. (1991)
Derivative stakeholders	Groups whose actions and claims have potential effects on the organisation and its normative stakeholders	Phillips (2003)
Shareholder activists	Activists who decide to file resolutions with companies, especially those that have questionable practices	Rehbein et al. (2004)
Claimant stakeholders	Stakeholders that actively pursue a claim but lack the coercive power to guarantee that they are attended to	Miles (2017)
Recipient stakeholders	Individuals or groups that are passive recipients of the impact of corporate/organisational activity	Miles (2017)

(continued)

Table 12.1 (continued)

Similar concept	Definition	References
Dangerous stakeholders	Stakeholders who have urgency and power but lack legitimacy and thus, are potentially coercive and violent	Mitchell et al. (1997)
Hostile stakeholders	Stakeholders who aim to bring an intensifying negative value	Barraquier (2013) and Pirozzi (2019)
Dormant stakeholders	Stakeholders that possess the power to impose their will on a firm, but because they do not have a legitimate relationship or an urgent claim, their power remains unused	Mitchell et al. (1997)

politics, and the consequences of their tactics may differ (de Bakker & den Hond, 2008). Den Hond and de Bakker (2007) showed that, when conflicts between secondary stakeholders and firms escalate or endure over time, the tactics used become increasingly resource-intensive and confrontational. Their research suggests that radical and reformative stakeholder groups tend to use different tactics. Radical groups may be more inclined to bring material damage to the firm, whereas reformative groups may require mass participation for their success.

Marginal stakeholders are considered to be neither highly threatening nor particularly cooperative. In sustainability transitions, such issues as pollution and product safety may increase marginal stakeholders' potential to cooperate or threaten the organisation. The corporate social responsibility literature talks about the positive consequences of engaging with marginal stakeholders. For instance, a firm that interacts positively with such stakeholders as communities and minority groups could exhibit positive financial performance (Rehbein et al., 2004).

Phillips (2003) studied the underpinnings of legitimacy in stakeholder theory and distinguished between normative and derivative legitimacy. In this understanding, normative stakeholders are those whose focal organisation has a moral and fair obligation to pay attention. Derivative stakeholders, in turn, are groups whose actions and claims must be accounted for by the focal organisation because of their 'potential effects upon the organisation and its normative stakeholders' (Phillips, 2003, p. 31). Activists and competitors are examples of derivative stakeholders,

and their descriptions have some resemblance to dangerous and dormant stakeholders (Phillips, 2003).

Shareholder activists (Rehbein et al., 2004) are those who target companies that have questionable practices, including human rights and labour issues. Their motivations for filing social policy resolutions are interest-based, and while affecting the company, they also help to solidify the stakeholders' identity as a group. Claimant stakeholders (Miles, 2017), in turn, are active in pursuing claims but lack the coercive power to guarantee that their claims will be attended to. Their claims often originate from moral or social rights issues rather than legal or economic claims, and thus, they lack political and economic power.

Recipient stakeholders (Miles, 2017) refer to individuals or groups that are passive receivers of the impact of corporate or organisational activity. This may be due to the mere existence of the stakeholder rather than because of an action or claim. Stakeholders may not always exercise their power, legitimacy or urgency, often choosing to keep quiet about their claims. Recipient stakeholders lack power and are affected by the focal company's operations and activities. The focal firm can put recipient stakeholders at risk (Clarkson, 1994) or affect their interests (Madsen & Ulhøi, 2001). Such stakeholders may be ignorant of the presence or form of their claim or may lack the voice to present it. This is why they are called *recipients* rather than *claimant stakeholders*.

Dangerous stakeholders have urgency and power but lack legitimacy, and thus, they are potentially coercive and violent (Mitchell et al., 1997). Hostile stakeholders aim at increasing negative value (Barraquier, 2013; Pirozzi, 2019), and if not managed properly, they can pose risks to the project. Examples of hostile stakeholders are competitors and communities with '*not in my backyard*' (NIMBY) attitudes. Sometimes, hostile stakeholders are suspected of acting in bad faith, malevolence and ignorance.

Dormant stakeholders (Mitchell et al., 1997) have little or no interaction with the firm or the focal organisation. They have the power to impose their will on the focal organisation, but because they do not have a legitimate relationship or an urgent claim, their power remains unused. Dormant stakeholders become more salient when they acquire either urgency or legitimacy.

Common to all the concepts described above is that, they denote stakeholders that do not fit the definition of a stakeholder proposed in Mitchell et al.'s (1997) framework as having power, urgency and legitimacy. As our review shows, there is an overlap in the use of the related concepts.

Fringe Stakeholders in Multi-Stakeholder Approaches

There are various approaches in stakeholder research that depart from the premise of a corporate/ego-centric focus on firm–stakeholder relations and address stakeholders and stakeholder relations in broader terms (Friedman & Miles, 2006; Miles, 2017). These approaches provide fresh alternative views to the corporate-centric stakeholder theory (Freeman, 2010b; Mitchell et al., 1997) and carry the potential to account for fringe stakeholders. However, as our review of these approaches shows, this potential has yet to be seized.

As an extension of the core idea of managing stakeholder relations, rather than looking at a focal firm, multi-stakeholder research has directed attention to issues that stakeholders have interests in or are affected by (Heikkinen, 2017; Roloff, 2008; Rühli et al., 2017; Sachs & Rühli, 2011; Schneider & Sachs, 2017). The multi-stakeholder approach examines stakeholder networks and collaboration and builds on the notion that in sustainability transitions, multiple actors join loosely in a collaborative effort to address a specific issue that concerns various actors (Heikkinen, 2017; Roloff, 2008; Rühli et al., 2017; Sachs & Rühli, 2011; Schneider & Sachs, 2017). In this line of research, there is surprisingly little attention to fringe stakeholders. However, Sachs and Rühli (2011) concluded that it is important that stakeholders become legitimate participants in multi-stakeholder collaboration and assume responsibility for the consequences of their contributions. There is an underlying assumption in multi-stakeholder network research that it is not only the responsibility of corporations, but also all stakeholders to identify how mutual interests can be negotiated (Boutilier, 2017; Ramirez, 1999).

The multi-stakeholder approach neglects attention to fringe stakeholders in assuming a responsible stakeholder that is interested in and capable of setting sustainability goals and finding ways to align with other stakeholders, whether in the short or long term. There is an assumption of responsibility for all stakeholders who share an interest in searching for ways to overcome trade-offs (Hörisch et al., 2014). Multi-stakeholder research acknowledges conflicts of interest and considers it important to address them via fair procedures (Rühli et al., 2017). However, while acknowledging that there are negative dynamics and conflicting interests among stakeholders, the multi-stakeholder approach builds on the assumption that stakeholders are motivated to interact and negotiate for integrative solutions (Lehtimäki & Kujala, 2017). The underlying notion is that there is a way to manage a multi-stakeholder network so that conflicting interests can be resolved, for instance, via approaches in which participants define their evaluation criteria regarding the outcomes of their engagement process (Heikkinen, 2017).

In environmental management research, there is a recognition of the need to address a wide diversity of relevant stakeholders. However, it has been difficult to distinguish between who is and who is not a stakeholder. Because of a lack of clear guidelines or solutions, the manner in which stakeholders have been conceptualised and classified has been based on scholars' interests (Rivera-Camino, 2007). Stakeholder analysis in development and natural resource management projects has often focused on inclusivity and ways to empower marginal or socially disadvantaged groups (Johnson et al., 2004). In this line of research, stakeholder analysis has been developed in parallel with and enriched by the development of participatory methods in project design and planning, such as rapid and participatory appraisal, action research, social forestry and land-use planning (Grimble & Wellard, 1997).

The literature on managing stakeholder relationships highlights the importance of seeking win–win outcomes, and there has been limited attention on studying interactions with more marginalised and vulnerable groups (Mayes et al., 2013). How a company avoids, mismanages and neglects its stakeholders has not gained much attention in the literature (Kolk & Pinkse, 2006; Nadeem, 2020). Firms usually resist

stakeholder pressures (Rowley, 1997), and previous research has shown evidence of situations in which managers have intentionally neglected stakeholders to strengthen their own positions (Kolk & Pinkse, 2006). Scholars have found that vulnerable stakeholders are rarely informed or explicitly considered in sustainability transition policies and actions; moreover, they are poorly positioned to provide inputs about their preferences, and thus, they have been discriminated against (Sareen, 2021).

Our discussion above shows that fringe stakeholders are of concern, but the issue of fringe stakeholders is difficult to address in multi-stakeholder and sustainability transitions research. The continued relevance of stakeholder theorising on sustainability transitions calls for bringing in fringe stakeholders' perspectives. Indeed, attention to fringe stakeholders provides for a deeper understanding of critical views on existing institutions and an increased understanding of the underlying dynamics of societal institutions and the ways in which institutions support or resist change in sustainability transition.

Fringe Stakeholder Perspectives on Sustainability Transition

As established above, fringe stakeholders are relevant yet difficult to identify and study in stakeholder research on the sustainability transition. As a solution, researchers have suggested that rather than approaching fringe stakeholders directly, attention should be directed to what pathways shape the activities of stakeholders (Wolfram, 2018). This approach directs attention to activities in civil society and allows for depicting fringe stakeholder activity as it emerges from lived experience and local contexts. Researcher sensitivity to value orientations and social needs that drive locally based ways of living, sharing and creating allows for articulating fringe stakeholder perspectives and identifying ways in which engagement of fringe stakeholders could occur.

Sustainability transition management research has directed attention to three proxies for studying fringe stakeholders—namely, grassroots

niches, bottom-up initiatives and vulnerable user perspectives (Table 12.2). We review each of these proxies and case studies on cities in Europe and Asia that show different strategies for fringe stakeholder inclusion. First, studies of grassroots innovations and niche formation highlight the importance of cities as spaces where citizens and local civil society actors can be involved in sustainability transition initiatives (Seyfang & Smith, 2007; Wolfram, 2018). Second, bottom-up initiatives as proxies for studying fringe stakeholders (Fratini et al., 2019) direct attention to the needs and world views of fringe stakeholders. Third, vulnerable user perspectives (Sareen, 2021) allow for looking at policymaking based on the needs of fringe stakeholders.

Cities are hotspots in the sustainability transition because of their role as incubators and catalysts of socio-economic and environmental change (Douglas, 2013; Wolfram, 2018). They are sites of multilevel politics and shape civil society-driven sustainability transition initiatives. Cities draw on policymaking capacities that directly affect citizens across all domains, such as housing, employment and education. It is important to enable the engagement of a broad variety of stakeholder groups, including fringe stakeholders, in planning and decision-making. Therefore, it is inspiring and significant to direct attention to cities as socio-spatial spaces for studying fringe stakeholders in sustainability transitions.

An example of using grassroots niches as a proxy for studying fringe stakeholders is the study by Wolfram (2018). This author analysed urban community development and social innovation in the city of Seoul starting in 2012. His research demonstrated that stakeholder engagement can involve place-making activities that mutually engage citizens, local authorities and businesses in the transformation of diverse socio-technical systems that are embedded in the urban fabric. Furthermore, grassroots innovations address several socio-technical systems simultaneously.

In Seoul, proposals for community initiatives were collected twice a year (Wolfram, 2018). An initiative received support if it was evaluated as showing high potential in terms of necessity, public benefit, feasibility, durability, creativity, participation, resources, partnership and expected results. A conceptual stage model was developed, which further comprised the following stages: (1) the seed stage in which definitions

Table 12.2 Proxies for studying fringe stakeholders and illustrative cases on strategies for fringe stakeholder inclusion

City	Case	Strategies for fringe stakeholder inclusion	Learnings for research design
1. Grassroot niches as a proxy for studying fringe stakeholders			
Seoul (Wolfram, 2018)	Urban community development and social innovation	Collecting proposals for community initiatives to aid citizens to form village communities that address self-defined needs. A model can be developed to specify what type of support is needed and when; provide training for citizen collaboration, conflict management and options assessment; support implementation of solutions; and build communities' self-organising capabilities for maintaining and creating new solutions	Attention to diversity in framing the issue Avoiding the bottom-up vs. top-down dichotomy Nested structure of intermediation
2. Bottom-up initiatives as a proxy for studying fringe stakeholders			
London (Fratini et al., 2019)	Circular economy imaginary	Three social groups are at the centre of the circular transformation—namely, the 'finance community', the 'young' community of start-ups and small and medium-sized enterprises (SMEs) and 'community gardens'	Attention to placing fringe stakeholders (not businesses) at the centre of focus
Paris (Fratini et al., 2019)	Circular economy imaginary	Bottom-up initiatives carried out on a volunteer basis. Integrating principles of the sharing economy with the public authorities' facilitating role in ensuring a large integration of citizens	Emphasis on the inclusion of citizens, communities, and methods for participatory processes

(continued)

Table 12.2 (continued)

City	Case	Strategies for fringe stakeholder inclusion	Learnings for research design
Amsterdam (Fratini et al., 2019)	Circular economy imaginary	Ongoing bottom-up activities at the city/neighbourhood level to capture local green identities (car-pooling, repair cafes) and identify expectations for changing local identities and consumption patterns (goods to services). The initiatives around the circular economy in Amsterdam follow an agenda that has a multilevel nature, including the following levels: Global–National–Metropolitan–City–Neighbourhood–Dwelling	Attention to mapping local and already existent initiatives Government, non-government organisations, and the private sector are working together at the municipal level but following multilevel targets
3. Vulnerable user perspective as a proxy for studying fringe stakeholders			
Bergen (Mullen & Marsden, 2016; Sareen, 2021)	Smart mobility transitions	Multi-modal mobility hubs; improved public ticketing tools; more equitable service delivery; avoiding toll charges on poor users; incentives other than for electric car users; participatory planning modes; responsiveness to feedback; attention to information flow; penalties on e-scooter operators and users for illegal parking	Importance of social competence and soft skills; continuous context-specific support, personal interaction
Lisbon (Horta et al., 2019; Sareen, 2021)	Smart electricity transitions	Schemes to identify and alleviate energy poverty using digitised grids and solar energy; favourable solar techno-economic frameworks; laws to enable small community solar energy schemes; more accessible energy efficiency support schemes; lower fees in fixed grid charges	Collect data with participant observation, field visits and attendance at local meetings

and prioritisations emerged through on-site training and seminars; (2) the sprout stage in which management and business plan training was conducted to integrate earlier activities into wider solutions; and (3) the hope stage in which the capability of self-organising to generate and maintain solutions was strengthened (Wolfram, 2018). A Village Community Support Center (VCSC) was created as a new intermediary that would be responsible for managing the development process, including proposal selection, organisation of support and coordination. It was staffed with community leaders and other non-officials. The task of the independently operating VCSC was to implement community support. Indeed, the VCSC became a crucial intermediary in bridging the gaps between civil society and authorities in terms of trust, skills and language (Wolfram, 2018). Between 2012 and 2014, a total of 1709 new village communities were formed in Seoul, adding to the existing fabric of grassroots initiatives. Direct interaction and personal linkages between existing activist networks, local governments and the new entities created trust and empowered communities to adopt new knowledge and continuous adjustment in the support structures (Wolfram, 2018).

In terms of accounting for fringe stakeholder perspectives, the Seoul case showed that to synergise and enhance impacts beyond individual villages, initiatives may be framed and connected in multiple ways to attain diverse objectives by targeting established policy fields, such as housing, welfare or parks. It is not merely a matter of enabling 'bottom-up' initiatives to counter 'top-down' exclusionary policies and practices. Rather, it is equally important to avoid creating new divides or favouring only particular coalitions. Wolfram (2018) proposed a 'nested' structure of intermediation between authorities and civil society as instrumental for this.

Three case studies in three cities elaborate on issues related to bottom-up initiatives as a proxy for fringe stakeholders. Fratini et al. (2019) conducted a study comparing the circular economy imaginary in European cities. In London, the focus was a product oriented on facilitating the design and production of low-carbon goods. The approach to circular economy was developed around different types of business models and facilitated by local authorities in collaboration with business

and academic research. The core stakeholders for circular transformation were the finance community, start-ups, small and medium-sized enterprises (SMEs) with the notion of youth, and community gardens. Researchers have found that when positioning businesses as the core beneficiary of the circular city strategy, both citizens and NGOs become uncertain about their roles and find it difficult to participate (Fratini et al., 2019). In Paris, strategies to be implemented by 2050 were conveyed to public decision-makers, economic actors and citizens. In 2015, the General Assembly brought together a wide spectrum of stakeholders to develop opportunities for the implementation of a circular economy in the Greater Paris area. Emphasis was placed on community-based initiatives with a particular interest in developing an inclusive circular economy model and creating a stronger sense of belonging in the region. The researchers concluded that not enough emphasis was given to the inclusion of citizens, communities and methods for participatory processes. Simultaneously, too much emphasis was placed on incumbent stakeholders (Fratini et al., 2019). The results reinforce the challenges in engaging fringe stakeholders, denoting that the predominant engagement of salient stakeholders is being reproduced in transition arenas if particular attention is not paid to stakeholder involvement. In Amsterdam, the development of the circular economy imaginary proceeded hand-in-hand with the development of the 'smart city' and the 'sharing economy' imaginaries. The government and municipality were considered facilitators of circular resource flows. However, in practice, the public sector was mainly carrying out circular economy activities, whereas the private sector and NGOs were in charge of sharing economy activities. This independent approach to work created an apparent disconnection between consumption and production patterns and generated questions on how green identities carried through the 'sharing city' imaginary would be linked and integrated into the systemic and growth-oriented 'circular city' imaginary (Fratini et al., 2019, p. 982).

Finally, two case studies examined vulnerable user perspectives as a proxy for studying fringe stakeholders. Studies on two cities, Bergen and Lisbon, revealed gaps in regulation, lack of policies and piecemeal implementation, as well as identifying scope for concrete advances to ensure inclusive essential services. Bergen is one of the frontrunners in

electric vehicle adoption, and Lisbon is the founder of Solar Cities. In the case studies, smart mobility transition efforts in Bergen were associated not only with transport decarbonisation solutions but also with mobility justice (Mullen & Marsden, 2016). The benefits included enlarged public spaces for walking and bicycling and local air quality improvements (Sareen, 2021). Improvements to public services in the field of smart electricity transitions in Lisbon, in turn, worked to enhance the practical benefits of these transitions among ordinary households, 15–23% of which are energy poor (Horta et al., 2019). The researchers collected data via participant observation in the smart grids, interviews with solar energy cooperative members, field visits to solar plant and meetings on energy flexibility and poverty. Both studies are examples of the inclusion of marginalised stakeholders in transition efforts in cities.

The study by Sareen (2021) showed that cities could be developed as inclusive spaces where residents can be assured of their safety and feel free to express themselves in ways that are respectful of others. In terms of fringe stakeholders, this includes developing social competencies and soft skills (e.g. conflict management and confidence building), tailored support that adjusts as initiatives mature and personal interaction to encourage the application of new knowledge in local contexts.

Giving Voice to Fringe Stakeholders in Stakeholder Engagement Research

Addressing and giving voice to fringe stakeholders in stakeholder research is necessary to ensure that research remains relevant in terms of contributing to an increased understanding of the socio-cultural aspects of sustainability transition and addressing social inclusiveness and social justice. In Table 12.3, we highlight methodological features that enhance giving voice to fringe stakeholders. In future research on fringe stakeholders, we propose that particular attention should be paid to stakeholder identification, methods of data collection, researcher reflexivity and context. We discuss each of these features below and summarise guidelines for writing aimed to enhance giving voice to fringe stakeholders.

Table 12.3 Features of methodology to enhance giving voice to fringe stakeholders

	What to do?	Why?	How to write it up?
Stakeholder identification	Use rich conceptualisation of fringe stakeholders	To be inclusive of the different types of stakeholders and appreciative of different stakeholders' reasoning, motivation and thought structures	Be transparent in describing the selection criteria for study participants and provide a rich description of the stakeholders in the study
Methods of data collection	Employ a variety of techniques (e.g., visual, narrative, drama methods)	To overcome barriers of expression by the stakeholders and to be sensitive about the power relations between the researcher and the stakeholders	Describe how the method of data collection allows for understanding fringe stakeholders' worldviews and meaning-making
Researcher reflexivity	Identify, explore and challenge assumptions that guide research design, and method of data collection and analysis	To open spaces for the Other in research accounts	Give the reader an active role in interpreting meaning
Context	Observe practices, routines, conceptions, roles, shared beliefs, institutional structures and taken-for-granted arrangements that produce the context and the 'fringe'	To deepen understanding of how the context sets the conditions for fringe stakeholder agency and how the context is created and recreated in fringe stakeholder activity	Provide a rich interpretative description of the context and the interplay between context and agency

First, stakeholder identification and selecting informants is about giving voice to the different kinds of stakeholders. To improve the criteria for stakeholder identification and to include more vulnerable and marginalised individuals, Khazaei et al. (2015) suggested considering the four following themes: (1) diversity and heterogeneity in salient stakeholder groups; (2) engagement of marginal and less powerful stakeholders; (3) the adoption of flexible strategies to account for changing stakeholder motivations; and (4) the use of a less corporate-centric approach that is more focused on collaborative relationships between stakeholders. In their review on community engagement in tourism planning and decision-making activities, these authors identified first-generation immigrants as an example of fringe stakeholder groups that would go unnoticed without attention to these four themes. In studying fringe stakeholders, attention to these themes will support the inclusion of the different types of stakeholders and appreciation of different stakeholders' reasoning, motivation and thought structures. Consequently, such inclusivity will allow for building an understanding of fringe stakeholders' subjective experiences. When writing about data collection, it is important that the researchers are transparent in describing the selection criteria for the subjects of study and provide a rich description of the stakeholders in the study.

Second, methods of data collection determine the richness and depth of understanding of what is relevant to fringe stakeholders in the setting of the study. When studying fringe stakeholders and using traditional methods of data collection, such as interviews, researchers may consider talking to proxies, such as NGO representatives, as equivalent to engaging with the whole community's perspectives and viewpoints. While interviewing proxies can be justified based on the easier access to interview data this approach presents, the challenge is that NGO representatives may pursue a large agenda, and while the agenda may be aligned with fringe stakeholders, it is not equal to accessing the authenticity of the lived experience of fringe stakeholders. In addition, a challenge with traditional interviews is that the interview protocol creates a question–answer conversation in the discussion between a researcher and an interviewee. The protocol may reduce the researcher's flexibility to adjust the conversation based on informant responses, and it may subdue

the power relation that is inherent in the interview situation. Thus, subtle nuances in the interviewees' talk and expressions may go unnoticed.

To address the challenges outlined above, previous research has highlighted the need to build dialogue with the vulnerable (Roberts, 2003) and to invest in understanding the socio-environmental issues that these groups face (Rodrigo & Duran, 2021). In addition, the use of creative methods in data collection has been explored, and researchers are also encouraged to include such methods in interviews (McCarthy & Muthuri, 2018). McCarthy and Muthuri (2018) used visual participatory research (VPR) methods to understand gendered power relations along occupational and domestic divisions of labour in the Ghanaian fair trade cocoa value chain. The results of their study showed that VPR helps challenge organisational assumptions about what fringe stakeholders can communicate, as well as power relations between the researcher and participant, allowing participants to circumnavigate linguistic and cultural barriers. McCarthy and Muthuri (2018) argued that keen attention to power relations is necessary to account for fringe stakeholders in sustainability transitions research. According to these authors, this requires enabling fringe stakeholders' voices to be heard and ensuring participation from these stakeholders by critically addressing issues of power, class, ethnicity and gender. We propose that future research on fringe stakeholders would benefit from employing various data collection techniques. This would benefit the studies in terms of overcoming barriers to expression that the stakeholders experience and help researchers to be more sensitive about the power relations between the researchers and the stakeholders. In describing the methodology, researchers are advised to describe how the method of data collection allows for understanding fringe stakeholders' worldviews and meaning-making.

Third, research reflexivity and sensitivity to concepts used in studying fringe stakeholders and stakeholder engagement are needed. Without researcher reflexivity (Harley et al., 2004), the researcher may dismiss multi-voiced worldviews as they unfold from the perspectives of the fringe stakeholders. In addition, the unidentified pre-assumptions of the researcher may contribute to dismissing the views of fringe stakeholders.

For instance, with all good intentions, a researcher may adopt an empathetic approach to studying fringe stakeholders to increase understanding about their potential to pressure corporations, their legitimacy and their right to operate (Hart & Sharma, 2004). With such an approach, a researcher adopts a systematic approach to identifying, exploring and integrating views from the 'fringe'. However, the challenge with this approach is the underlying assumption of stakeholder engagement as a dialogue between the corporation and the salient stakeholders where the worldviews of the elite and stakeholders with legitimacy set the established rules for dialogue. Like the concept of voice, the idea of *dialogue* is also discursively produced. It informs who may speak, as well as when, how and where they may speak; moreover, it shapes meanings in stakeholder engagement (Carolan & Bell, 2003). Thus, critics of stakeholder dialogue argue that it inherently limits the interests and behaviours of marginalised groups (Mayes et al., 2013).

To open spaces for the Other in research accounts, we propose that researchers studying fringe stakeholders should identify, explore and challenge assumptions that guide research design and methods of data collection and analysis. Such research reflexivity will allow for being open to unexpected and unconventional lines of argumentation that may interrogate the power structures in society. In writing the results of the study, researchers should describe how the method of data collection allows for understanding fringe stakeholders' worldview and meaning-making. Ideally, the style of writing would give the reader an active role in interpreting meaning.

Fourth, attention to context is necessary for creating valid accounts of fringe stakeholders' views and reasoning and operational conditions. Rodrigo and Duran (2021) advocate for a contextual approach to stakeholder dialogue to respond to stakeholders' specific characteristics and expectations. They developed the concept of fringe community dialogue, which is composed of three dimensions and two enabling mechanisms. The first dimension is dialogue groundwork, which acts as a predialogue stage, setting the foundation for a relationship between the parties and addressing issues that could hamper conversations. The second dimension is dialogue confirmation. This encompasses aspects of successful talks, considering the features of fringe communities. Finally,

dialogue reinforcement contains intimate aspects that emerge when the dialogue process happens such as a sense of involvement and trustworthiness. The enabling mechanisms for fringe community dialogue are dialoguing attitudes and knowledge accumulation. Rodrigo and Duran (2021) believe that these mechanisms describe the dynamics of fringe community dialogue and explain how the dimensions are intertwined.

Previous literature has shown that a lack of analysis of the social contexts and institutional conditions under which sustainability transitions are being implemented creates a significant barrier to making valid contributions to understanding socially just and environmentally desirable transitions (Fratini et al., 2019; Korhonen et al., 2018; Moreau et al., 2017). In their ethnographic study on social bricoleur entrepreneurs working in remote rural areas in India, Sengupta and Lehtimäki (2022) showed that, on the one hand, the environmental, cultural, social and societal context created conditions that facilitated the enactment of care ethics in interaction between the entrepreneurs and the vulnerable local people. On the other hand, they showed how the context became constituted in that interaction and what opportunities for change in the socio-cultural context of the marginal and vulnerable were created via an entrepreneurial agency. In a study analysing why some groups oppose mining projects in Brazil, Lyra (2021) also concluded that the context plays a key role in explaining stakeholder resistance and non-engagement and can be associated with deep historical roots from previous struggles.

Drawing on social constructive theory (Crawford & Mills, 2011; Unger, 1987), we propose that a contextualised understanding of fringe stakeholders allows for examining how the context sets the conditions for fringe stakeholder activity and how the context is created and recreated in that activity. In future studies on fringe stakeholders, we encourage attention to practices, routines, conceptions, roles, shared beliefs, institutional structures and taken-for-granted arrangements that produce the context and the 'fringe'. To do this, a rich interpretative description of the context and the interplay between context and agency are needed when discussing the research results.

Conclusions

While the stakeholder approach has proven its validity and importance in business and society research (Kujala et al., 2022), further research is needed to account for fringe stakeholders. Studying complex issues related to sustainability change, such as climate warming or biodiversity loss, and advancing sustainability thinking requires a broad understanding of the techno-economic and socio-cultural dimensions of transition. Sustainability transitions have been included in national and transnational policies as a means to prepare companies to become more competitive in global markets while engaging in actions to support climate neutrality. Along with efforts to make industries and nations more sustainable, there is a need to engage a broad variety of stakeholders to support a just transition. Contemporary policy initiatives, such as the recent EU Green Deal, emphasise the need to put 'everyone in the same boat' and 'leave no one behind', and many types of stakeholders must be engaged to accomplish this.

Including a variety of stakeholders in sustainability transition research requires attention to power structures that privilege the interests of businesses, corporations and other incumbent stakeholders and ignore or silence those of the fringe stakeholders. Stakeholder theory pioneered the idea of firms' responsibility to all stakeholders, not only shareholders. Our review shows that, without researcher reflectivity and critical attention to research methodologies, stakeholder research runs the risk of neglecting fringe stakeholders while favouring salient stakeholders in sustainability transitions. Multi-stakeholder approaches have been insightful in decentring corporations in stakeholder analysis (Mayes et al., 2013) and broadening the view to a variety of stakeholders and stakeholder interactions. However, a critical approach to power structures and relations of power is needed to widen the view further and give voice to fringe stakeholders.

Our review of empirical studies on fringe stakeholder inclusion in urban settings highlights grassroots niches, bottom-up initiatives and

vulnerable user perspectives as proxies for studying fringe stakeholder interests. In studying sustainability transitions, urban settings are important because cities are socio-economic and cultural sites where sustainability initiatives can be created by civil society actors (Seyfang & Smith, 2007; Wolfram, 2018). Studies from different cities around the world show that in empirical research, attention to the research design is needed to address power issues and imbalances among the different stakeholders.

Fringe stakeholders' actions challenging the status quo have to do with the way they see and interpret sustainability development and the ways in which problems are located within existing social–economical power structures. This calls for a critical research approach, sensitivity and skill in using interpretative research methods. More research is needed on the potential strategies and tactics that fringe stakeholders use to interpret and create reality and what kinds of actions they use to dispute truths in sustainable circular economy transitions. Fringe stakeholders build their arguments against certain views on sustainability development by claiming that sustainability advocates are not primarily concerned with human well-being or environmental sustainability but instead promote the power of the elite.

More attention needs to be paid to translating sustainable business discourses and representations into political action and to the active role that public authorities and citizens could play in this process (Fratini et al., 2019). Corporations should not underestimate fringe stakeholders' potential because, in a connected world, remote groups can find common causes to pressure and question a given firm's legitimacy and right to operate (Hart & Sharma, 2004). As a managerial implication, our study proposes that to prevent surprises and threats and to manage uncertainty, companies should be keen on acquiring knowledge from diverse stakeholders, many of whom may be adversarial. As part of risk management, companies should proactively seek out fringe voices related to social and environmental concerns.

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13

Connecting the Circular Economy and Sustainability: Finnish Stakeholder Perceptions

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Introduction

A circular economy denotes a systemic transition from a linear economy towards a circular economy. It has been presented as a solution to pressing sustainability challenges such as resource scarcity and depletion and climate change (Ellen McArthur Foundation, 2020; Korhonen et al., 2018a). Globally, the promotion of the circular economy and sustainable development are high on political agendas (Geissdoerfer et al., 2017; Pieroni et al., 2019). For example, the United Nations has introduced 17 sustainable development goals which serve as a blueprint for future direction (United Nations, 2020). At the European level, the European Union (EU) has committed to fostering sustainability through its internal and external policies (European Commission, 2019).

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However, the constructs of a circular economy and sustainability, as well as their connection to each other, remain vague in theory and practice. While several literature reviews have been conducted related to the circular economy (Merli et al., 2018; Prieto-Sandoval et al., 2018; Winans et al., 2017), researchers have not reached a mutual understanding of how the circular economy as a concept should be defined and how it is linked to sustainability (Geissdoerfer et al., 2017; Pieroni et al., 2019; Reike et al., 2018). Regarding the connection to sustainability, a main critique has been that environmental and economic aspects have been dominant in discussions on the circular economy, while less attention has been given to the social dimension (Mies & Gold, 2021; Murray et al., 2017; Schröder et al., 2019). Furthermore, one of the paradoxes of sustainability is that despite the increasing attention to sustainability in business, deprivation of the natural environment has not decreased (Dyllick & Muff, 2016; Landrum, 2018). Thus, it has been argued that sustainability requires systemic change at all levels of society instead of incremental improvements to the current economic model (Kirchherr et al., 2017; Velenturf & Purnell, 2021).

Circular economy research focuses on change agents and, in particular, on stakeholders and stakeholder engagement in accelerating systemic change (Centobelli et al., 2020; Gonzalez-Porras et al., 2021). Indeed, the transition from a linear towards a circular economy requires close collaboration between various stakeholders (Gupta et al., 2019; Marjamaa et al., 2021; Pieroni et al., 2019; Tapaninaho & Heikkinen, 2022). However, there is limited empirical knowledge on how stakeholder groups at different levels of society understand and perceive the circular economy and its connection to sustainability (Geissdoerfer et al., 2017). This is surprising, since studies have stressed the vital role of stakeholders, such as public sector actors and civil society organisations, in promoting the circular economy (Centobelli et al., 2020).

The purpose of this study is to examine how the connection between the circular economy and sustainability is understood among key stakeholder groups promoting a circular economy. Stakeholders are defined here as those who influence or can be influenced by a circular economy (Freeman, 1984; Kujala et al., 2019; Roloff, 2008). Empirically, we study stakeholder perceptions of a circular economy and sustainability

in Finland. Finland provides a particularly interesting context to examine the circular economy and sustainability, as the Finnish government has set an ambitious goal of achieving a socially, ecologically, and economically sustainable society and being a forerunner in the circular economy by 2025 (Prime Minister's Office, 2019).

The contribution of this study is threefold. First, it explores how different stakeholders perceive the circular economy. To date, few studies have empirically investigated perceptions regarding the circular economy among multiple stakeholder groups (Kunz et al., 2018). Second, in line with recent sustainability studies (Geissdoerfer et al., 2017; Merli et al., 2018; Pieroni et al., 2019; Velenturf & Purnell, 2021), we focus on how the understanding of sustainability varies among different stakeholders. Thus, our study provides empirical evidence of how different stakeholders perceive the connection between the circular economy and sustainability. Third, as a result of our empirical findings, we provide a novel categorisation of circular economy approaches.

The rest of the paper is organised as follows. First, theoretical underpinnings and conceptualisations of the circular economy and sustainability as well as their linkages are discussed. This is followed by the methods section, in which the data collection and analysis are described in detail. Afterwards, the findings are presented. Finally, the discussion is followed by practical implications, limitations, and future research directions.

The Circular Economy and Sustainability

Research on the Circular Economy

As a research topic, the circular economy is multidisciplinary by nature. It has been studied in many fields, e.g. in industrial economy, and environmental and ecological ecology (Korhonen et al., 2018b; Merli et al., 2018; Murray et al., 2017). In recent years, the business potential of the circular economy has been recognised, and interest has also grown in the field of management and business studies (Centobelli et al., 2020),

where, for instance, new business models have been examined and developed in accordance with circular economy principles (Ranta et al., 2018; Tapaninaho & Heikkinen, 2022).

The historical roots and the origin of the circular economy concept are debatable (Murray et al., 2017; Winans et al., 2017). For example, Blomsma and Brennan (2017) examined antecedents of the circular economy discussion tracing back to 1960. Boulding's (1966) idea of the closed system has often been mentioned as a starting point for the circular economy (Geissdoerfer et al., 2017; Merli et al., 2018). During the period between 1960 and the early 1980s, attention was paid mainly to the handling of waste and its polluting effects. After this period, waste came to be comprehended more broadly, and its business potential was recognised (Blomsma & Brennan, 2017). The period from 2013 to the present has been described as a "validity challenge period", because clarity regarding the circular economy concept has started to emerge (Blomsma & Brennan, 2017, p. 610).

In this study, we understand the circular economy as an opposite of a linear economy (Geissdoerfer et al., 2017). In the literature, the linear economy has been described with terms such as "make-use-dispose systems" (Geissdoerfer et al., 2017, p. 764) and an "open cowboy-economy" (Blomsma & Brennan, 2017, p. 608). In the linear economy, waste is the final endpoint of products, which are produced using natural resources. Contrary to the linear economy, the circular economy aims at closed loops without waste. There are many circularities in nature, and the premise of the circular economy is that we can imitate these natural circularities in the economy (Murray et al., 2017). The term "circular" implies that little to no waste is produced (Velenturf & Purnell, 2021).

The "three Rs" (Reduce, Reuse, and Recycle) are often used to describe the main principles of the circular economy (Murray et al., 2017; Ranta et al., 2018). Reducing refers to a reduction in the use of materials as well as in consumption, but also to increased efficiency in production. Reusing concerns the reuse of discarded products or components. Recycling, on the other hand, refers to processes in which waste is transformed into raw materials which can be further used. Reike et al. (2018) introduced a more nuanced hierarchy of resource value retention options

with a 10R typology ranging from the principle of "refusing" (R0) to "remining" (R9).

Recently, criticisms have been directed towards the circular economy construct. For example, Korhonen et al. (2018b) have pointed out that the circular economy is mainly focused on technical and practical issues, while social and abstract issues such as values and worldviews have been ignored. The extent to which the circular economy can promote global sustainability is also debatable (Schröder et al., 2019), although it has been presented as a driver for sustainable development (Manninen et al., 2018; Murray et al., 2017). It has also been pointed out that different stakeholders involved in the circular economy, such as companies and policymakers, may understand it and its linkage to sustainability differently (Geissdoerfer et al., 2017).

Connection to Sustainability

Scholars have attempted to explicate the connection between a circular economy and sustainability (Kirchherr et al., 2017). One definition connecting these concepts is provided by Korhonen et al. (2018b, p. 547), who defined the circular economy as "a sustainable development initiative with the objective of reducing the societal production-consumption systems' linear material and energy throughput flows by applying materials cycles, renewable and cascade-type energy flows to the linear system". Similarly, Prieto-Sandoval et al. (2018, p. 610) defined the circular economy as an "economic system that represents a change of paradigm in the way that human society is interrelated with nature and aims to prevent the depletion of resources, close energy and material loops, and facilitate sustainable development". Moreover, Velenturf and Purnell (2021, p. 1437) stressed that the circular economy should contribute "to sustainability from the whole system perspective of optimising social, environmental, technical and economic values of materials and products in society". In addition to making a connection between the circular economy and sustainability, these definitions also highlight the importance of broad, systemic and multi-level economic and societal changes intended to promote sustainable development.

Some circular economy studies have evaluated the connections of the circular economy to sustainable development by examining whether and how three dimensions of sustainability (economic, ecological, and social sustainability) are acknowledged in the circular economy (Murray et al., 2017). From the economic sustainability perspective, the circular economy is seen as providing diverse value-creation mechanisms (Manninen et al., 2018). In other words, the circular economy is presented as enabling economic growth and creating jobs through new business models (Ellen MacArthur Foundation, 2020). For example, the European Commission has estimated that the circular economy can generate a net economic benefit of 1.8 trillion euros and create over one million new jobs in the EU by 2030 (European Commission, 2019). However, emphasis on the economic outcomes of the circular economy has also received criticism. For example, the term "circular economy rebound" has been used to describe the unintended effects of the circular economy, such as failing to replace primary production with secondary production (Zink & Geyer, 2017).

Regarding the ecological dimension of sustainability, the circular economy aims to reduce virgin material and energy inputs as well as limit waste and emissions outputs (Korhonen et al., 2018a, p. 41). The objective of the circular economy is to reduce negative environmental impacts to respect planetary boundaries (Velenturf & Purnell, 2021). Furthermore, the aim of the circular economy is not only to safeguard resources, but also to repair the damage that has already been caused (Murray et al., 2017).

Few circular economy scholars have paid attention to social sustainability objectives, such as increased employment, participative and democratic decision-making, and co-operative cultures (Korhonen et al., 2018a, p. 41). Merli et al. (2018) concluded that while the economic and ecological dimensions of sustainability are closely related to the circular economy, the link between the circular economy and social sustainability has received marginal attention. Thus, it is still unclear how the circular economy can promote, for example, equity and justice in society (Murray et al., 2017; Schröder et al., 2019). However, in the broadest sense, social sustainability can be understood as covering current generations' welfare objectives in the national context along with international and

intergenerational aspects (Murphy, 2012). The intergenerational perspective is a defining principle of sustainable development; for example, the influential Brundtland Report (1987) definition emphasises sustainable development as actions aiming to promote the needs of current generations without compromising the needs of future generations. However, the time dimension is largely missing in most discussions on the circular economy, and not enough attention has been paid to intergenerational equity (Geissdoerfer et al., 2017; Millar et al., 2019). Thus, a holistic view of sustainability in the circular economy context is called for (Pieroni et al., 2019).

Finally, approaches to the circular economy may vary, from a business-centric approach (Ranta et al., 2018) to a broad approach emphasising the circular economy as a force for social and economic change (Mies & Gold, 2021). Likewise, along the sustainability spectrum, views can vary from weak to strong (Landrum, 2018; Roome, 2012). Weak sustainability refers to a situation where the aim is to maintain the status quo concerning, for example, the economic model and consumption patterns. Whereas, in strong sustainability, the preservation of natural resources and planetary limits define the boundaries for human actions (Landrum, 2018; Loiseau et al., 2016). In other words, strong sustainability is related to radical economic reorganisation aiming at a reduction in material use and degrowth, while a weak sustainability perspective does not contest the current neoliberal economic model (Schröder et al., 2019). In addition, the dimensions of economic, ecological, and social sustainability may vary and influence the degree and comprehension of a sustainable circular economy (Landrum, 2018).

We argue that to understand the connection between the circular economy and sustainability, we need to analyse key stakeholder groups promoting the circular economy as well as their approach to the circular economy and their understanding of sustainability. Analysing stakeholder views is important since different stakeholders can act as change agents for accelerating the transition towards the circular economy (Geissdoerfer et al., 2017; Lieder & Rashid, 2016). In addition to individual stakeholder actions, stakeholder engagement, that is, the aims, activities, and impacts of stakeholder relations (Kujala et al., 2022), can also have change agency in the transition towards a circular economy

(Gonzalez-Porras et al., 2021). For example, a recent study showed that stakeholders can simultaneously pursue their own interests related to the circular economy and share a joint interest in promoting a sustainable circular economy (Marjamaa et al., 2021).

Methods

Data Generation

A purposive sampling method was used for data collection (Elo et al., 2014). The data collection process started by identifying key stakeholders promoting the circular economy in Finland based on discussions with circular economy experts. A similar sampling method was used in a study regarding stakeholder views on extended producer responsibility and the circular economy (see Kunz et al., 2018). The selected six stakeholder groups, all at the forefront in the promotion of the circular economy in Finland, included (1) ministries, (2) federations, (3) research, innovation, and support organisations, (4) regional actors, (5) cities, and (6) businesses. While these key stakeholder groups share a joint interest in supporting a circular economy, each also has its own interests and motivations towards the promotion of a circular economy in Finland (Marjamaa et al., 2021; Salminen et al., 2020).

From each stakeholder group, at least three professionals were interviewed. The interviewees were carefully selected by ensuring that they were involved in the circular economy activities of their employer organisation and therefore, had profound understanding of the circular economy. The interviewees' employer organisations represent different sectors and industries and are actively involved in the promotion of the circular economy at the local, regional, or national level in Finland.

A total of 26 semi-structured interviews were conducted in Finnish between May 2019 and February 2020. Four of the interviews were conducted via Skype, and the others were face-to-face. The total length of the interviews was over 27 hours. The tape-recorded interview data was transcribed verbatim, resulting in a total of 388 pages. Table 13.1 summarises the interview data. The interview questions covered broad

Table 13.1 The interview data

Stakeholder category	Number of interviews	Number of participants	Duration	Number of transcribed pages	Interview codes
Ministry	4	5	variation: 0:52–1:17, total 4:27	74	M1, M2, M3, M4
Federation	3	3	0:57–1:21, total 3:32	62	F1, F2, F3
Research, innovation, and support organisation	3	3	1:05–1:21, total: 3:67	58	RIS1, RIS2, RIS3
Regional actor	4	5	0:49–1:18, total 4:28	61	RA1, RA2, RA3, RA4
City	4	4	0:54–1:14, total 4:42	43	C1, C2, C3, C4,
Business	8	8	0:31–1:32, total: 7:40	90	B1, B2, B3, B4, B5, B6, B7, B8
Total	26	28	27:35	388	

themes covering the circular economy concept, sustainability, and stakeholder collaboration, as well as the interviewees' own roles in the promotion of a circular economy. The interviews were thematical by nature with open-ended questions (Eriksson & Kovalainen, 2016). Thus, the themes of each interview were identical, but there were variations in terms of individual questions.

Data Analysis

Qualitative content analysis was applied for analysing the data. The analysis started with carefully reading all the interview data. Atlas.ti software was used to assist in the analysis. Interviewee expressions regarding issues under scrutiny were used as the unit of analysis (Tuomi & Sarajärvi, 2018). The process can be described as theory guided, since theoretical pre-understanding guided the analysis (see e.g. Tuomi & Sarajärvi, 2018). Moreover, there was an ongoing "back and forth" process between theoretical discussion and empirical data (see e.g. Eriksson & Kovalainen, 2016). In the analysis, the original expressions were simplified, and

subcategories were formed. The subcategories were further combined into higher order categories (see e.g. Tuomi & Sarajärvi, 2018). The findings were organised into three dimensions: (1) understanding of the circular economy, (2) understanding of sustainability, and (3) understanding of stakeholder engagement. Similarities and differences were looked for regarding the three dimensions, and based on the theoretical pre-understanding (e.g. Landrum, 2018) and the empirical analysis, three approaches to a sustainable circular economy were identified.

Findings

As a result of the study, we present three approaches to a sustainable circular economy: (1) a business-centric circular economy, (2) a systemic circular economy, and (3) a regenerative circular economy (Table 13.2). At the one end of the continuum, the business-centric circular economy approach represents a narrow understanding of the circular economy, sustainability, and stakeholder engagement. At the other end of the continuum, the regenerative circular economy approach represents a broad understanding of the circular economy, sustainability, and stakeholder engagement. Between the narrow and broad approaches, the systemic circular economy approach represents an intermediate understanding of circular economy, sustainability, and stakeholder engagement.

Business-Centric Circular Economy

The business-centric circular economy approach represents a narrow understanding of the circular economy, and the circular economy is discussed mainly in the business context. For example, recycling and waste management aspects of the circular economy are stressed. Also, new business opportunities are associated with wise use of resources, resource efficiency, and the reuse of materials. Similarly, new service-oriented circular economy business models are seen as providing new business opportunities. Whereas, changing business logics and the aim

Table 13.2 Categories of a sustainable circular economy

Dimension	Business-centric circular economy (narrow)	Systemic circular economy (intermediate)	Regenerative circular economy (broad)
Understanding of the circular economy and its connection to sustainability	Circular economy is seen as a business opportunity (e.g. recycling, waste management, recourse efficiency, new business models) Circular economy is loosely connected to sustainability	Circular economy is seen as a systemic change (e.g. an opportunity to increase prosperity and human well-being) Circular economy is closely connected to sustainability	Circular economy is seen as a new economic and societal model (a paradigm shift in the economy and society) Circular economy and sustainability are intertwined
Understanding of sustainability	Focus on only one or two dimensions of sustainability Short-term orientation to economic sustainability Focus on eco-efficiency and mitigation of harmful impacts Economic aspects as a precondition to ecological sustainability Social sustainability remotely connected to circular economy only at the organisational level	All dimensions of sustainability are integrated Long-term orientation to economic sustainability Balanced orientation to ecological sustainability Social sustainability includes societal and global-level orientations	All dimensions of sustainability are aligned to all Earth's systems Economic sustainability is associated with degrowth orientation Embedded orientation to ecological sustainability Holistic orientation towards social sustainability

(continued)

Table 13.2 (continued)

Dimension	Business-centric circular economy (narrow)	Systemic circular economy (intermediate)	Regenerative circular economy (broad)
Understanding of stakeholder engagement	Focus on key stakeholder groups One-way communication	Cross-sector and cross-country collaboration Both shared and conflicting interests Mutual learning	Multi-stakeholder collaboration Innovation platforms and ecosystems

of reducing negative environmental impact are largely discussed without questioning the overall economic status quo. The following quotations illustrate the narrow understanding of the circular economy typical of the business-centric approach:

> A circular economy consists of effective utilisation of existing materials and finding ways to constantly enhance the efficiency of circles. (B4)

> …we don't talk only about recycling or wise use of resources, instead we talk about core business logic [in the context of a circular economy]. (F3)

> At the centre of a circular economy is always some kind of materials and the circulation of materials, and the philosophy of it [i.e. the circulation of materials] defines what a circular economy is. (B7)

While sustainability is often an objective or a driver for circular economy actions, the link between sustainability and the circular economy is rather loose in the business-centric approach. For instance, some of the interviewed professionals discussed unsustainable or superficial circular economy practices. Manufacturing products from waste, which do not provide added value for people, and greenwashing are examples of such activities:

> How much there is so-called greenwashing, and how much is talking instead of doing... it depends, but all big, publicly listed companies take this [the circular economy] seriously. (B2)

> I feel that there's too much greenwashing…It happens these days that companies greenwash [their businesses]… you need to scratch the surface and look at if it's really sustainable and in line with the circular economy… and even if it is a circular economy company and it's doing the right things from a sustainability perspective, the company may have operational principles which don't stand up to scrutiny… (B7)

Moreover, the circular economy is only loosely linked to the ecological and economic dimensions of sustainability in the business-centric approach, and the social dimension of sustainability is often disregarded.

Trade-offs between different dimensions of sustainability also exist, and contradictory views occur regarding whether ecological sustainability should precede economic sustainability or vice versa. In the interviews, some professionals argued that ecological sustainability should dominate other pillars of sustainability due to planetary boundaries. However, there were also professionals who stressed the importance of economic sustainability:

> …ecological sustainability, it's for me always the first [priority], …it's a fact that we have only one planet. Money can be printed more at any time, and then there is this social sustainability. (M1)

> It's a fact, that this world does not spin, even if we produce as environmentally friendly as possible, if the costs get out of hand, then it's not sustainable doing. The basic trinity – economic, ecological, and social sustainability – must be considered. So, there has to be at least economic sustainability along with ecological sustainability. (B4)

When it comes to economic sustainability, the circular economy relates mainly to a short- or medium-term profit-centric orientation. For example, resource efficiency, the reusability of materials and wise use of resources in general are seen as ways to reduce costs, but also to provide new business opportunities for companies. Also, new service-related circular economy business models such as renting clothes, for example, are discussed in the context of economic sustainability. The next quotes illustrate the prioritisation of the short-term orientation in the interviews:

> … for our member companies, it [circular economy] is important, because the world is moving forward, and new business opportunities are searched for all the time and there is a shortage of raw materials… (F2)

> For me it's hard to imagine a sector, for which this [circular economy] wouldn't be an opportunity. [The wise] use of resources is an opportunity to optimise and reduce costs… of course, there are challenges and some elements in it [circular economy] are costly, but I believe that it will pay

> off… in quartal economy… it is hard to make it [circular economy] work, but if you have a longer time perspective…absolutely, it [will work]. (B2)

Although the interviewees acknowledged global challenges such as climate change, ecological carrying capacity, and sufficiency of materials as ecological reasons for circular economy actions, in the business-centric circular economy approach the understanding of ecological sustainability is rather narrow. In other words, ecological sustainability is mainly related to eco-efficiency and the mitigation of harmful environmental impacts. Furthermore, economic aspects, such as the profitability of the new circular economy models, are considered a precondition for ecological sustainability:

> Along with economic measures, there has to be a clear impact. Whether it's CO_2 emissions or something else…but it needs to have a positive impact. (B7)

> …we need to improve repairing, reutilisation [of materials] and mileage… Those should be tremendously important issues in terms of global production. (B6)

Compared to ecological and economic sustainability, social sustainability receives less attention in the business-centric approach, and social sustainability is rarely mentioned as an outcome or objective of circular economy actions. Thus, only a weak linkage between the circular economy and social sustainability exists, and social sustainability is mainly discussed in an organisational context. For example, the interviewees mentioned safe working environments and the well-being of employees as examples of social sustainability:

> We do lots of things… which are remotely related to circular economy, such as [the] well-being of employees, work safety issues and so on. (F2)

The importance of stakeholder engagement in accelerating the transition towards a sustainable circular economy is generally accepted. Yet, in the business-centric approach, stakeholder engagement is understood

narrowly, focusing on only certain stakeholder groups. Moreover, stakeholder engagement is understood as responding to stakeholder demands and as a one-way influence or communication. Moreover, understanding of stakeholder engagement varies among different stakeholder groups. For example, the company representatives stressed the role of customers in circular economy actions and argued that customer demands together with the general attitude of society are fostering the transition towards circular economy business. Whereas, professionals representing federations and regional actors highlighted their own role in sharing information with various stakeholders. The following quotes illustrate one-way communication and the role of customers.

> They [customers] have really high demands, many of them have higher than what regulation forces us [to do]… Thus, they [customers] act as a driving force for circular economy actions. (B5)

> Our job is to share information… finding the right people around the same table, so that they could find new opportunities. That is mostly our job as a change agent… spreading right information and refuting disinformation. (RA4)

Systemic Circular Economy

In the systemic circular economy approach, the circular economy is understood more broadly than as just a wise use of resources or closing material loops. The circular economy is understood as a systemic change towards a more sustainable way of living. For example, interviewees linked the circular economy to wide regional or national development, which covers various areas such as transportation, construction, infrastructure, and living arrangements. Thus, the circular economy is seen as a tool to maintain and develop prosperity in society, but also to increase human well-being:

> It [the circular economy] creates opportunities for Finland – new jobs, sustainable jobs, sustainable services, and material solutions. It [the circular economy] can be, due to our high competence level, a business

> advantage, which enables [us] to survive in product development… and replace our current exports based on virgin materials with new sustainable circular economy solutions. (C4)

In the systemic circular economy approach, the ability of the circular economy to promote all dimensions of sustainability is acknowledged. For example, interviewees considered social and cultural sustainability as important outcomes of the circular economy. In addition, acting within planetary boundaries was closely associated with circular economy actions.

> I don't personally see that we could promote circular economy, which is not sustainable... but does it [circular economy] consider all aspects of sustainability – that is another question. In other words, is it [circular economy] socially and culturally sustainable? And… we must keep in mind that, if we do not act within the planetary boundaries, there will be no social and cultural sustainability. …Cultural sustainability can include actions which are distortive from the perspective of nature, so we need to make value-based choices. (RIS1)

In the systemic circular economy approach, the circular economy is not discussed only in the business context; rather, it is also understood as a means to enhance economic prosperity at local, regional, and even national levels in the long run. For example, interviewees linked economic sustainability to the well-being of the local community and to national competitiveness:

> To me, circular community makes more sense than circular economy because the community wants to get together, and then it helps the economy grow in a sustainable way. (B8)

> If we are here [in Finland] able to develop technologies and practices [in terms of a circular economy]… it's a business opportunity for Finnish people and that way we can increase our exports. (M4)

When it comes to ecological sustainability, the systemic circular economy approach highlights a more balanced orientation compared

to the business-centric approach. For example, interviewees emphasised mitigating harmful environmental effects along with the conservation of resources. Furthermore, ecological sustainability was linked to the overall development of regions such as through the creation of smart city solutions, CO_2-neutral solutions, and the development of urban nature:

> …the ultimate reason [for a circular economy] relates to overconsumption and climate change, so a circular economy… it is a way to fight against the overconsumption of natural resources, loss of biodiversity and climate change. (M3)

> …we want to find pioneering solutions in terms of energy, smart city, circular economy, city nature, recreation activities and responsibility… All these activities need to support our aim of CO_2 neutrality. (C4)

Regarding social sustainability, both societal and global-level consequences regarding the circular economy are considered in the systemic circular economy approach. At the local and societal level, the circular economy is related to local prosperity and the well-being of citizens. For example, interviewees discussed the creation of new jobs and the promotion of health and well-being as well as sustainable living arrangements as social sustainability issues. This reflects an interest in building a sustainable community. At the global level, social sustainability is related to human rights issues, equal treatment, and the inclusion of all individuals in the transition towards the circular economy.

> …at the local level, it [circular economy] is important because it's our local economy. It [circular economy] happens in a certain geographic area… and [it] creates in a way the local well-being [of citizens] and success. (C4)

> …[the transition to circular economy] should be kind of democratic and fair, there should be compensation… and of course culture is important. (M1)

> I see circular economy more like a way of doing, how we can address the sustainability challenges and act in a responsible manner. Responsibility

> includes many other aspects in addition to circular economy, for example equal treatment [of individuals] and geo-political questions. (F3)

In the systemic circular economy approach, stakeholder engagement is related to mutual learning and co-creation among private and public sector stakeholders. Furthermore, stakeholder engagement does not concern collaboration only with stakeholders in Finland; there is an ongoing collaboration with actors from other Nordic and EU countries.

> … if we want more competence, we'll find it faster from partners than learning by ourselves… these big companies can [do] so much… They are top in the world, so it's wiser to collaborate with them than trying to copy them… In that way, we have knowhow at our disposal… we are a so-called pioneering city in the UN in terms sustainability goals… so we reflect new solutions with these companies… and then we think always how to be a role model [for other cities in the world]. (C4)

> Circular economy is so horizontal and cross-sectional… so, we have quite a lot of international collaboration in terms of climate goals, issues related to biodiversity and sustainable development goals. (M1)

Regenerative Circular Economy

The regenerative circular economy approach represents the broadest orientation towards a sustainable circular economy. In this approach, the circular economy is seen as an entirely new economic and societal model, one which encompasses all levels, sectors, and actors in society. In other words, the circular economy is considered a paradigm shift towards a sustainable economic model. In the interviews, the idea of a regenerative circular economy was discussed mainly in the context of certain industrial fields such as manufacturing and construction. Thus, what a regenerative circular economy could mean, for example, in the social or healthcare sector, was rather unclear. The broad orientation is exemplified as follows:

> A circular economy requires an all-encompassing transition in the whole society. Although the basic issue is the circulation of materials, it means also change in the mindset. We cannot always take new resources into use. There are no infinite reserves to deploy. (RIS1)

> So, if we think about our regional development strategy, [it includes] industry, smart city and then [the] health and well-being [sector] along with the circular economy… So, it might be that [in the future] we will promote the circular economy in all those sectors… For example, last autumn we pondered what a circular economy can mean in the field of health and social sector. (RA3)

In the regenerative circular economy approach, the circular economy and sustainability are closely intertwined. Furthermore, different sustainability dimensions can be promoted through circular economy actions not only at the business level, but also at the local, national and global levels. In other words, the circular economy is considered an operational model, which makes it possible to act in accordance with the principles of sustainable development, as illustrated in the following:

> For me the core [of circular economy] is that we generate as much value as possible in the broadest sense, not only economic value, but value for humans, society and nature as a whole in a way that as little waste as possible is produced… and that we use as little resources as possible. (F3)

> It [circular economy] is an operational model, which enables us to achieve goals… such as climate-related goals and biodiversity goals, and we can achieve sustainable development goals. So, it's more like a tool, a way to organise economic activities, but also private consumption, living, and other areas… thereby, it covers the social dimensions, so it's a societal model… (RIS3)

While most of the interviewees discussed economic sustainability only from the perspective of economic growth, one interviewee mentioned decreasing consumption and degrowth as an alternative to current economic thinking.

> … I don't believe that there should be always [economic] growth… There should be qualitative changes… I don't agree that we should consume in order to make economic wheels spin. (M1)

In a regenerative circular economy, the importance of ecological sustainability is highlighted. However, only a few of our interviewees had a broad, embedded orientation towards ecological sustainability. In this broad orientation, ecological sustainability was closely intertwined with economic and social sustainability:

> For us, resource wise [actions] mean that everything is automatically done in an ecologically sustainable way. In that way we create economic and socially sustainable well-being for our citizens. (C2)

A broad approach to social sustainability was scarcely discussed in the interviews. However, a few interviewees brought up the intergenerational perspective and the well-being of all humans and discussed broad social sustainability at a philosophical level.

> …Philosophically, sustainability can be approached [from a long historical perspective]… In 1960, there were 3 billion people on our planet. Last week or two weeks ago, there were approximately 7.45 billion people. In 2100, it's estimated [that there will be] 11.2 billion people. So, it's the population which burdens the climate. [We] need to see responsibility in a way that every person is able to live here on the planet… I see it even as a philosophical [question]… we [companies] [need to] act so that in the future, people can still be here on Earth. (B5)

Despite the mutual interests towards close stakeholder collaboration and engagement in the promotion of the circular economy, the interests of stakeholders can vary and even contradict each other. Diverse interests concerned, for example, the promotion of different sustainability goals. To accelerate the transition towards the circular economy and sustainable development, interviewees stressed the importance of multi-stakeholder collaboration, in other words, collaboration between diverse actors, including different-sized companies, but also between public- and private-sector actors:

> One thing which I have noticed is that the collaboration between big and small companies does not function in Finland… So, big companies, they don't open up the market… they don't bring those opportunities to the table, even if they could… and there is also a gap between public and private sector and partially also between the academic world… so they're all too much in their own silos. And that way, every actor has a bit different understanding of the whole phenomenon [circular economy]. (B7)

Examples of broad, multi-stakeholder engagement activities in the regenerative circular economy are co-creation labs, innovation platforms, and ecosystems for stakeholder collaboration. For example, interviewees representing cities highlighted the importance of creating a community, a platform or an ecosystem in which different actors, such as companies and universities, can share knowledge and create new solutions together. Such multi-stakeholder collaboration could enhance the idea of a regenerative circular economy:

> …These companies are at the centre… we don't invent [new things] here at the city. It's the universities who create the opportunities to invent and develop. But, the universities can't commercialise [those innovations]. We need companies, who do that. That's why we aim to build this community… an ecosystem… that is what we do. (RA2)

Discussion

This study examines how the connection between the circular economy and sustainability is understood among key stakeholders promoting the circular economy in Finland. Thereby, it answers calls to investigate stakeholder perspectives on the circular economy and to explore the connection between the circular economy and sustainability (Geissdoerfer et al., 2017; Gupta et al., 2019; Pieroni et al., 2019). By empirically investigating stakeholder perceptions of the circular economy and its connection to sustainability, this study sheds light on sustainability dimensions which have been emphasised in recent sustainability

research (Dyllick & Muff, 2016; Landrum, 2018; Mies & Gold, 2021). Our findings demonstrate that key stakeholders acknowledge the importance and urgency of the circular economy for the promotion of sustainability. However, in line with previous studies (Kunz et al., 2018; Winans et al., 2017), the circular economy is considered a complex topic, and variation was found in terms of how broadly the circular economy was understood among the studied stakeholders (cf. Zink & Geyer, 2017).

We offer a contribution to research on the circular economy and sustainability with sustainable circular economy categorisation. Along three dimensions (understandings of the circular economy, sustainability, and stakeholder engagement), our categorisation distinguishes three sustainable circular economy approaches: (1) the business-centric, (2) the systemic, and (3) the regenerative circular economy approach.

The business-centric circular economy represents a narrow approach, where the circular economy is mainly related to recycling and waste management, and it involves only certain sectors and stakeholders in society. This is not surprising, since recycling is considered an easier way to implement circularity than reusing or reducing (Ranta et al., 2018). A business-centric circular economy mainly focuses on the ecological and economic dimensions of sustainability, whereas the link between the circular economy and the social dimension of sustainability is still largely underrepresented (Geissdoerfer et al., 2017; Merli et al., 2018). Moreover, ecological, economic, and social sustainability objectives are not perceived as mutually reinforcing in the business-centric circular economy approach. Instead, competing views exist on whether ecological sustainability goals should precede economic sustainability goals, or vice versa, leading to trade-offs between economic and ecological sustainability (Loiseau et al., 2016). Thus, the business-centric circular economy approach implies a weak sustainability view and gives credence to previous studies demonstrating that in the business context, economic goals are usually considered superior to ecological goals (Centobelli et al., 2020; Landrum, 2018; Ranta et al., 2018). Regarding stakeholder engagement, the business-centric circular economy approach relies mostly on one-way communication and thus, misses possibilities for joint value creation built on interaction, information sharing, and trust (Kujala et al., 2017).

Compared to the business-centric circular economy approach, the systemic circular economy approach adopts a broader perspective by emphasising systemic change and an integrated view on sustainability dimensions. Our empirical findings demonstrate that some of the stakeholders underlined the importance of the circular economy to build longer term ecological, economic, and social sustainability at local and national levels. Furthermore, a more balanced orientation towards different sustainability dimensions is adapted compared to the business-centric circular economy approach. In terms of stakeholder engagement, the systemic circular economy approach stresses mutual learning, collaboration, and co-creation among different stakeholders.

The regenerative circular economy approach illustrates the broadest orientation to the circular economy and its connection to sustainability. In this approach, ecological sustainability relates to an embedded understanding of environmental prosperity, whereas social sustainability is associated with international and intergenerational aspects of human well-being (Murphy, 2012). Interestingly, our findings demonstrate that although current understandings of climate challenges and planetary boundaries are acknowledged, the urgency of an alternative economic model and the importance of degrowth or decreasing consumption is rarely discussed. Similarly, a broad embedded approach to ecological and social sustainability was scarcely discussed in the interviews. Some interviewees stressed the importance of strong, multi-stakeholder collaboration and a long-term orientation to the circular economy, but concrete examples of these kinds of actions were scarce. To sum up, in our findings, the business-centric and systemic circular economy approaches prevailed, while the regenerative circular economy approach was less prominent.

The presented categorisation links the regenerative circular economy approach with strong sustainability (Landrum, 2018). While some researchers see the circular economy as a means to promote strong sustainability (Loiseau et al., 2016), our findings indicate that in practice, circular economy understandings and practices align mostly with the weak and intermediate sustainability understandings represented by the business-centric and systemic circular economy approaches, thus supporting previous circular economy research (Geissdoerfer et al., 2017;

Merli et al., 2018; Pieroni et al., 2019; Reike et al., 2018; Velenturf & Purnell, 2021). Thus, it can be pondered whether the regenerative circular economy approach is merely an ideal approach or is something that can be achieved through circular economy actions and stakeholder engagement.

Practical Implications

Based on the findings, we argue that there is a need for a dialogue among stakeholders regarding the connection between the circular economy and sustainability. To solve global-, national-, and regional-level sustainability challenges, it is important to pay attention to different sustainability dimensions in the circular economy context. Instead of seeking trade-offs between various sustainability dimensions, there is a need to find mutual benefits in the circular economy transition in the long run. As short-term economic priorities may complicate the delivery of the ecological and social outcomes of the circular economy, a broad understanding of sustainability among key stakeholders is needed to foster the transition towards a sustainable circular economy. The categorisation presented in this study can assist practitioners in understanding how the circular economy and sustainability are connected and the importance of stakeholder engagement in the promotion of a sustainable circular economy. The categorisation can also provide guidelines for practitioners to further sustainability through circular economy actions. Finally, the regenerative circular economy approach challenges current understandings and highlights that much needs to be done if we wish to achieve a regenerative circular economy.

Limitations and Directions for Future Research

There are some limitations that should be addressed. First, all the interviewed professionals were involved in the promotion of the circular economy in Finland. Thus, their perceptions may be biased, as they have advanced insight into the circular economy and the promotion of sustainable development relative to that of other actors. Future studies

could examine how private and public sector organisations, which are not yet involved with the circular economy, perceive the connection between the circular economy and sustainability. Second, some stakeholders, including customers, nongovernmental organisations (NGOs), education organisations, and media, were excluded from the study. Thus, future studies should investigate how these stakeholders perceive the connection between the circular economy and sustainability, as NGOs, for instance, are needed in discussions regarding transitioning towards a sustainable circular economy, and changes in consumer consumption patterns are required in the transition. Third, this study investigated the circular economy and sustainability perceptions among multiple stakeholder groups. In the future, a narrower focus could be taken. For example, the connection between the circular economy and sustainability could be investigated in a specific industrial sector or at a particular level of society to uncover context-specific issues regarding the sustainable circular economy. Finally, this study was restricted to the Finnish setting. The connection between the circular economy and sustainability should be explored in other cultural contexts as well.

Conclusions

This study examines stakeholder perceptions of the circular economy and its connection to sustainability. Building on the circular economy and sustainability literature and on empirical findings from interviews with key stakeholder groups, we identified three sustainable circular economy approaches: (1) the business-centric, (2) the systemic, and (3) the regenerative circular economy approach. Along three dimensions, our study showed that the business-centric approach represents a narrow understanding of the circular economy, sustainability, and stakeholder engagement, while the systemic circular economy approach represents an intermediate understanding of these dimensions. The regenerative circular economy approach represents the broadest understanding but was less evident in our findings. This study calls more attention towards the connections between the circular economy, sustainability,

and stakeholder engagement to accelerate the transition towards ecological, economic, and social sustainability.

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