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ENABLERS AND BARRIERS TO CIRCULAR PUBLIC PROCUREMENT

A multiple case study of two sectors on the
supplier's perspectives on circular public
procurement

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Summary of Thesis

- Keyword(s)** Public Procurement, Circular Economy, Circular Public Procurement, Public Administration, Institutional Entrepreneurship
- Purpose:** The purpose of the research is to provide greater knowledge on the enabling components of circular public procurement by investigating the supplier's perspectives on barriers and enablers to circular public procurement.
- Theory:** The thesis applies previous literature to define key terminology on public procurement and circular public procurement. The research further uses the theory of institutional entrepreneurship to better understand the implications of the enablers and barriers of circular public procurement.
- Method:** It is an abductive multiple case study research focusing on two sectors. The empirical data is gathered thru semi-structured interviews with 12 company representatives.
- Results:** The result confirms to a large extent what previous research on circular public procurement has identified as barriers and enablers. The result provides an additional perspective presenting supplier's perspectives on the most essential components to address to initiate more circular public procurements.

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Table of Content

Summary of Thesis	I
List of Figures	V
List of Tables	VI
Abbreviations	VII
Introduction	1
<i>Background</i>	1
<i>Problem Discussion</i>	4
<i>Purpose and Research Question</i>	7
<i>Delimitations</i>	8
<i>Disposition</i>	8
Theoretical Framework	9
<i>Defining and Contextualising Public Procurement in Sweden</i>	9
Public Procurement as a Policy Tool	10
<i>Defining Circular Public Procurement</i>	12
<i>Institutional Theory and Institutional Entrepreneurship</i>	15
Institutional Theory	16
Institutional Entrepreneurship	19
<i>Conceptual Framework</i>	22
Methodology	24
<i>Orientation of Research</i>	24
Nature of Research.....	26
<i>Research Process</i>	28
<i>Research sample</i>	29
<i>Data Gathering Methodology</i>	32
Interview Process	32
Interview Guide	33
Interviews with Company Representatives	34
<i>Analytical Process</i>	34
<i>Quality of research</i>	35
Validity and Reliability	35
<i>Ethical Considerations</i>	37
Empirical Data	39

<i>Technology Sector</i>	39
Company Information.....	39
Knowledge Barriers.....	39
Structural Barriers.....	42
Collaboration	44
Dialogue	46
<i>Waste Sector</i>	47
Company Information.....	48
Knowledge Barriers.....	48
Structural Barriers.....	50
Collaboration	52
Dialogue	53
<i>Summary of Empirical Findings</i>	55
Analysis	56
<i>Summary of the Main Findings</i>	56
<i>Are the Represented Companies Institutional Entrepreneurs?</i>	57
<i>Enabling Conditions for Institutional Entrepreneurship: Field-level Conditions</i>	58
<i>Enabling Conditions for Institutional Entrepreneurship: Social Position</i>	60
<i>Institutional Entrepreneurship Strategies: Divergent Change Implementation</i>	60
<i>Understanding Barriers to Circular Public Procurement</i>	61
<i>Understanding Enablers to Circular Public Procurement</i>	64
Conclusion	66
<i>Limitations and Future Research</i>	68
References	70
<i>Bibliography</i>	70
<i>Interviews</i>	80
Appendix	82
<i>Appendix 1. Interview guide for consultant and trade association (in Swedish)</i>	82
<i>Appendix 2. Interview guide for suppliers (in Swedish)</i>	84
<i>Appendix 3. Consent Form</i>	86

List of Figures

Figure 1. Structure of the Thesis 8

Figure 2. Procurement Process - Compiled by the Author 10

Figure 3. Number of Procurements with Environmental Specifications in Sweden 2022..... 12

Figure 4. A Conceptual Model of the Influences upon SPP 13

Figure 5. Process of Institutional Entrepreneurship 21

Figure 6. Conceptual Framework – Compiled by the Author 23

Figure 7. Steps in Qualitative Research – Compiled by the Author 27

Figure 8. Research Process – Compiled by the Author..... 29

Figure 9. Analytical Process – Compiled by the Author..... 57

List of Tables

Table 1. Overview of Different CPP Concepts 15

Table 2. Isomorphism – Mechanisms for Isomorphic Change 17

Table 3. The Three Pillars of Institutional Theory 18

Table 4. Categorisation of Empirical Data – Compiled by the Author 22

Table 5. Interview Overview – Compiled by the Author 34

Abbreviations

CE	Circular Economy
CI	Circular Innovation
CPP	Circular Public Procurement
GPP	Green Public Procurement
SPP	Sustainable Public Procurement
PP	Public Procurement

Introduction

The introductory chapter introduces circular economy and circular public procurement in Sweden and presents a background on the increased focus on sustainability in public procurement. In the problem discussion, the purpose is to identify the research gap, which furthers the aim of the thesis and the research question.

Background

Sustainable development is most famously associated with the Brundtland Report, also known as Our Common Future, published in 1987. The report stressed the need for action to combat emerging global challenges such as climate change and argued that sustainable development is “development that meets the need of the present without compromising the ability of future generations to meet their needs” (World Commission on Environment and Development, 1987, p. 41). Sustainable Development builds on three pillars; economic, environmental, and social sustainability, and only in harmony with one another can sustainability be achieved (Geissdoerfer, Savaget, Bocken & Hultink, 2017), also known as the “triple bottom line” (SLU, 2018). To secure sustainable development, the United Nations (UN) adopted Agenda 2030 and its 17 Sustainable Development Goals (SDG), 17 workable goals which integrate all dimensions of sustainability with the ambition to be realised in 2030 (UN, n.d.a). Even though the Brundtland Report warned about the devastating effects of climate change over 30 years ago, some argue that no serious actions have been taken to mitigate global warming. Research shows that the earth is getting warmer, and we are now experiencing the most significant levels of carbon dioxide (CO₂) in the atmosphere in over three million years (Steffen et al., 2018). In 2015, the world’s countries united under what is known as the Paris Agreement to mitigate the global temperature to below two degrees Celsius, with national commitments in the form of NDCs. Sweden was one of the first countries to implement a goal of becoming net zero, meaning no greenhouse gas emissions, by 2045 (SOU 2022:15).

With not even a decade left until Agenda 2030 is supposed to be realised and with Sweden’s ambition to become net zero by 2045, the need to transform our way of living to become more sustainable is urgent (11th March 2021). Consumption has a significant environmental footprint, and according to the European Environmental Agency (EEA), it is evident that the environmental pressure from European consumption is increasing (Milios, 2018). One of the

17 SDGs emphasises the need to “ensure sustainable consumption and production patterns” (United Nations, n.d.b), and goal 12.7 directly addresses PP saying that we should “promote public procurement practices that are sustainable, in accordance with national policies and priorities” (ibid). To change consumption- and production patterns, governments have a crucial role as they not only influence via regulation and legislation but also by their own actions (Sönnichsen & Clement, 2020). According to the Swedish Government, public procurement (PP) in Sweden should be “efficient and legally certain and make use of market competition. It must also promote innovative solutions and take environmental and social considerations into account” (Government, n.d.). Leonidas Milios (2018) further argue that PP can have an impact on consumption and the design of products and services. In the European Union (EU), PP accounts for approximately 14 per cent of the European gross domestic product (GDP). Sönnich Dahl Sönnichsen and Jesper Clement (2020) claim that this envisages the influence PP could have to initiate a transition towards more sustainable public consumption. Public consumption has a significant environmental footprint and accounts for nearly 30 per cent of Sweden’s climate impact (SOU 2022:15). The need to find new solutions is also stressed by the European Commission and the European Green Deal, an action plan for transforming Europe into becoming the first climate-neutral continent (European Commission, n.d.a). In 2015 the Commission published the Circular Economy Action Plan, and the European Parliament further encouraged an increased focus on integrating circular economy (CE) principles within PP (Sönnichsen & Clement, 2020). In the New Circular Economy Action Plan, published by the European Commission in 2020, it is stated that “the Commission will propose mandatory green public procurement (GPP) criteria and targets in sectoral legislation and phase in compulsory reporting to monitor the uptake of Green Public Procurement” (European Commission, 2020, p. 8).

CE provides solutions for how to reduce emissions and could be used as a tool for PP to become more environmentally and socially sustainable (Sönnichsen & Clement, 2020; Kristensen et al., 2021). The concept of CE has been born out of the growing awareness that the traditional linear economic system is unsustainable, and that the generation of wealth can no longer be dependent on a continuous usage of virgin materials (Sarja et al., 2021). The concept has, since the late 1970s, gained more attention, both in practice and academia and has developed to incorporate different features with one thing in common: the idea of a closed-loop system (Geissdoerfer et

al., 2017). Sandeep Goyal et al., (2021) argue that “CE aims at decoupling value creation from waste generation and resource use by substituting the end-of-life notion with restoration and closed-loop product life-cycles” (p. 1). In contrast to the traditional linear economy, CE aims to maintain value instead of creating new added value (Stahel, 2019). Governments play a crucial role in enabling the transition from a linear economy to a circular economy, and one way of doing so is thru PP; “bolstering the circularity of individual sectors and activities, circular procurement is essential for promoting a transition at the supplier levels, by creating stable demand for circular goods and services” (CGRI, 2022, p. 66). Annually, Swedish public organisations procure goods and services for approximately SEK 800 billion, which, as Heidi Simone Kristensen et al., (2021) argue, demonstrates the impact a transition within PP could have; “transitioning to CE requires actions from all actors in society with public institutions often presented as one of the key due to their purchasing power in public procurement” (p. 1). While CE could lower the environmental impact within public consumption, it could also increase the demand for circular products and services; “The primary purpose of public procurement is to fulfil the needs and demands of the public administration. However, there is an increasing interest in utilizing public procurement as a multi-level innovative policy tool” (Dybtsyna et al., 2021, p. 328). A purpose of the EU’s Circular Economy Action Plan is to secure competitiveness amongst European businesses by “shielding industries against potential resource scarcities and volatile prices and help to create new business opportunities and innovative ways of production and consumption” (Milios, 2018, p. 866). With this in mind, using PP to increase the demand for circular products and services could also have a spill over effect, generating a competitive advantage for European and Swedish businesses.

CE is introduced as a strategy for transitioning from the traditional linear economy characterised by a ‘take, make, use, and dispose’ attitude towards a circular economy where the value of products and materials is restored in a circular system (Brown et al., 2021). There is an ongoing debate on what CE is and entails. The International Organization for Standardization (ISO) is currently working on defining key terminology, principles, and guidance for its implementation (ISO, n.d.). The Swedish Institute for Standards (SIS) are actively participating in ISO’s current work. The Swedish Committee consists of 26 Swedish businesses and organisations, included are, among others Dustin, Ragn-Sells and Stena Recycling (SIS, n.d.). However, for the purpose of this research, the definition provided by Julian Kircherr et al.,

(2017) will be used. The authors have done an extensive literature review of 114 definitions of CE and concluded that:

A circular economy describes an economic system that is based on business models which replace the ‘end-of-life’ concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes, thus operating at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation, and beyond), with the aim to accomplish sustainable development, which implies creating environmental quality, economic prosperity and social equity, to benefit of current and future generations (ibid, pp. 224-225).

In 2020 the Swedish Government published an action plan for how to transition to a CE with the vision for Sweden to become: “a society where resources are efficiently used in toxic-free circular flows and replace virgin materials” (Government, 2021, p. 5). Sustainable consumption is one of the target areas in the action plan, and it is stated that PP plays an essential role in make resource efficiency, recycling, and circular business models the new norm (ibid).

With this in mind, it seems like there is a common understanding of the positive effects an integration of CE in society could generate for sustainable development. Circular solutions appear to be able to generate economic prosperity for both public organisations and private companies and increase environmental quality and social equity for all. Further, PP seems to be an enabler for the transition towards CE at large. Thus, it is relevant to better understand the enablers and barriers to the implementation of circular public procurement (CPP).

Problem Discussion

Considering the urgent need for solutions to tackle climate change and the potentially positive aspects of CE on sustainability mentioned by several authors (Sönnichsen & Clement, 2020; Kristensen et al., 2021; Milios, 2018; Brown et al., 2021), it is evident that knowledge about the enablers to CE implementation is desirable. With the Swedish Governments ambition to become fully circular and within its action plan towards CE addressing sustainable consumption as one of the target areas, PP plays an essential role to make resource efficiency, recycling, and

circular business models the new norm. Thus, PP can also influence the transition towards CE by generating a bigger demand for circular products and services (Government, 2021). However, a Swedish Government Official Report addresses that there seems to be a lack of knowledge and awareness about CE and how it could be integrated into PP (SOU 2022:15). In 2020, the Swedish Government further gave the National Agency for Public Procurement the mission to increase the awareness about how PP, by integrating a strategic procurement process, can be used as a tool to initiate CE and further reach the national targets relating to Agenda 2030 and the Paris Agreement. In the document, it is stated that one of the key areas to analyse is how to increase the procurement of reused materials and further provide guidance in form of new business models, standards and methods for dialogue and innovation (Government decision Fi2020/05114). PP has an essential role in public administration, providing quality and services for public organisations and society (Kristensen et al., 2021). Thus, there has been an increased interest in PP as a research field within public administration in recent years (Trammell et al., 2020).

CPP requires knowledge, which Kristensen et al., (2021) argue is one of the main barriers for the implementation of CPP. Rolfstam (2012) argues that another barrier to CPP is that it takes a lot of time to change and that public organisations, due to previous policies, have developed risk-averse behaviours, not fostering innovation. CPP requires that governments initiate an innovative procurement climate and further support organisations, for example, by limiting the financial risks (Lenderink et al., 2022). Elvira Uyarra et al., (2010) conclude that the main barriers to innovation in PP are lack of interaction between the procurer and the supplier, lack of knowledge among the procurers and poor management of risk. In a study on the collaborative aspects of circular innovation (CI), Phil Brown et al., (2021) analyse the role of collaboration to distribute risks and argue that: “the challenge in avoiding ineffective risk and cost management when going from a linear to a circular approach is that it seems to rely on individuals’ collaborative mindset” (p. 14). The authors further elaborate on the complexity of such a relationship, where components of trust and personal characteristics have an essential role (ibid).

In a policy analysis conducted by David Olsson and Andreas Öjehag-Pettersson (2020), it is stated that in Sweden, governing (un)sustainable is constructed as a problem of governing and

that the representation of the problem is that it is a result of market failures, concluding that; “if these markets could only be made better and more efficient, sustainability would be within reach through new innovation” (p. 691). Olsson and Öjehag-Pettersson present a critical analysis of how public policy, in the context of governing sustainably/(un)sustainably, is dependent on the market. However, the authors further argue that a risk linked with organisations neglecting their sustainability ambitions is lack of time and conflicts of interests (ibid). PP, due to the balancing of interests and involvement of internal and external stakeholders, is complex. Integrating CE principles adds complexity since it often involves more stakeholders and networks thru, for example, the supply chain (Kristensen et al., 2020).

Based on the previous research presented, it is possible to identify three barriers to the implementation of CPP: i) lack of knowledge, ii) lack of collaboration, and iii) poor management of risks. The Swedish Government (2019) addresses that methods for dialogue and innovation are key areas to address for successful CPP implementation. The role of collaboration and dialogue between the procurer and the supplier is further problematised in several studies, identifying complex relationships challenged by knowledge gaps, mindsets, and behaviours concerning the perception of risks. Thus, the research identifies these areas as critical components to be addressed in future research to better understand how to manage and overcome these barriers (Rolfstam, 2012; Lenderink et al., 2022; Olsson & Öjehag-Pettersson, 2020; Kristensen et al., 2020; Brown et al., 2021).

Further, Sönnichsen and Clement (2020) argue that increased awareness and knowledgebase, together with organisational strategies, will generate a more profound foundation where the perception of risks is diminished, which further provides opportunities for CI. Elina Karttunen et al., (2022) argue that research on the collaborative aspects of CPP is needed to understand not only the procurer’s perspective but also the suppliers and further how to make the public sector an attractive customer for innovative contractors. Sönnichsen and Clement (2020) argue that more research is needed that studies the role of PP as a stimulus for innovation which Kariina Alhola et al., (2019) argue is essential for the transition towards a CE. In the updated version of the Swedish strategy for how to transition to a CE, published in 2023, it is stated that Sweden is a country with an innovative business climate where companies are in the forerun of implanting circular business models (Government, 2023). Sandra Hamilton (2022) further

argues that there is limited data on the implications of both theoretical and practical aspects of sustainable public procurement, analysing the economic, strategic, management, public policy, and innovative aspects; “as more nations adopt mandatory sustainable public procurement, the field will expand beyond policy and public procurement law, into public and private sector management strategy” (Hamilton, 2022, p. 599). Anthony Flynn and Paul Davis (2014) argue that there is an absence of theory in PP research, affecting the disciplinary credibility. With this in mind, this thesis will apply the theory of institutional entrepreneurship to broaden the understanding of PP in the context of institutional processes. The theory of institutional entrepreneurship provides an insightful perspective on how organisations form the institutional landscape. Kostas Selviardis et al., (2023) state that “taken together, the notions of institutional entrepreneurship and institutional work help explain how intermediaries seek to change the institutional architecture to improve the way public organisations ask for, procure and adopt innovation” (p. 3).

This thesis aims to contribute to the academic literature by providing insights on the perspective into barriers and enablers to CPP from the supplier’s perspective, which is limited in current literature that focuses on the perspective of public organisations (Uyarra et al., 2014; Schiele et al., 2012). There is an increased interest in studies on PP in the research field of public administration; therefore, this thesis has the purpose to shed light on the relevance of PP in the research field. Further, it could also provide a theoretical contribution to the field of institutional entrepreneurship. Hoogstraaten et al., (2022) argue that there is a “further need for comparative research and the acknowledgement of collective institutional entrepreneurship” (p. 132). The result of this thesis could be valuable for public officials working with public policies relating to PP. It could also be helpful for public organisations and private companies to better understand critical components to consider when implementing CPP in practice.

Purpose and Research Question

Based on the formulated problem discussion, it becomes evident that there is a lack of knowledge on the enabling components of CPP. Previous studies have exclusively focused on the perspective of the public sector, which motivates why this research aims to explicate the supplier’s perspective. With this in mind, the purpose of the thesis is to produce greater

knowledge of the supplier’s perspectives on barriers and enablers to CPP. The framed research question for the thesis is:

From the supplier’s perspective, what are the barriers and enablers for the implementation of circular public procurement?

Delimitations

This is an abductive multiple case study research focusing on the supplier’s perspective on CPP in the tech- and waste sector. The thesis is therefore limited by only conducting interviews with suppliers in these two sectors. The thesis has also been limited to only focus on CPP in Sweden and is therefore influenced by contextual factors in Sweden. The companies represented in the research are actively working with CE and have a positive attitude towards CPP.

Disposition

The structure of the thesis is illustrated in Figure 1.

Introduction	<ul style="list-style-type: none"> • The introductory chapter consists of the background, problem discussion, the purpose of the thesis, research question and limitations
Theoretical Framework	<ul style="list-style-type: none"> • The theoretical chapter presents the theoretical framework of the thesis and provides an overview of PP in Sweden
Methodology	<ul style="list-style-type: none"> • The methodological chapter explains the research process and the ontological, epistemological foundations of the research.
Empirical Data	<ul style="list-style-type: none"> • The empirical chapter presents the collected data.
Analysis	<ul style="list-style-type: none"> • The analytical chapter presents an in-dept analysis of the collected data in with the theoretical framework.
Conclusion	<ul style="list-style-type: none"> • The conclusion presents the research findings, answering the research question. Identified recommendations for future research and limitations are conferred.

Figure 1. Structure of the Thesis

Theoretical Framework

This chapter covers the theoretical framework of the thesis. The chapter first introduces the concept of PP and the contextual characteristics of PP in Sweden. Further, an overview and definition of CPP is presented. As the purpose of the thesis is to understand the enabling components of CPP, by studying the supplier's perspective on barriers and enablers, relevant concepts and theories are presented in this chapter.

Defining and Contextualising Public Procurement in Sweden

This part of the chapter will first provide a definition of PP and further explain PP in a Swedish context. PP is the purchasing process of governments and public sector organisations, and it is one of their main economic activities. Broadly, PP can be defined as the “designated legal authority to advise, plan, obtain, deliver, and evaluate a government’s expenditures on goods and services that are used to fulfil states objectives, obligations, and activities in pursuant of desired policy outcomes” (Prier & McCue, 2009, p. 329). PP are administered with varying levels of discretion in different countries; however, in most countries it is highly regulated (Trammel et al., 2020). In Sweden, PP is regulated thru laws and EU directives with the Swedish Public Procurement Acts (LOU) being the main out of four legislations regulating PP. According to the Swedish Public Procurement Act, PP shall be conducted in a way which efficiently uses tax funds and ensure healthy competition (The National Agency for Public Procurement, n.d.c). In chapter 4 § 1 in the Swedish Public Procurement Act it is written that “contracting authorities shall treat suppliers equally and without discrimination and shall conduct procurements in a transparent manner. Further procurements shall be conducted in accordance with the principles of mutual recognition and proportionality” (The Swedish Competition Agency, n.d.). All procuring organisations must also consider the principles of i) non-discrimination, ii) equal treatment, iii) proportionality, iiiii) transparency, and iiiiii) mutual recognition at all stages of the procurement process (The National Agency for Public Procurement, n.d.c). To illustrate the different stages of the procurement process, Figure 2 has been developed with inspiration of the general description of how to conduct PP provided by the National Agency for Public Procurement.

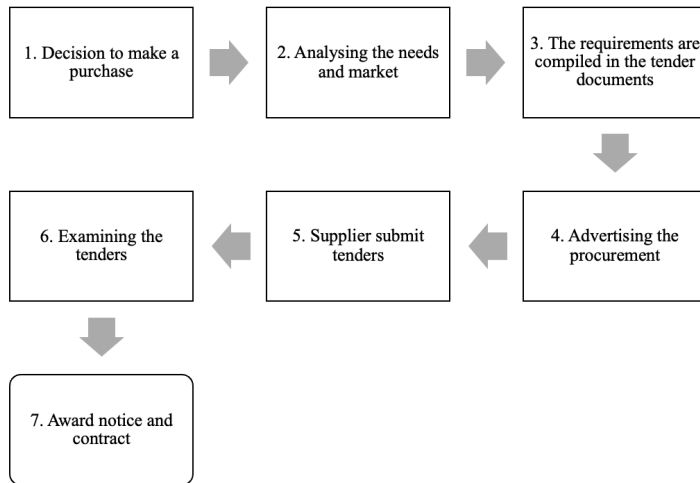


Figure 2. Procurement Process - Compiled by the Author

(Inspired by: The National Agency for Public Procurement, n.d.a).

Public Procurement as a Policy Tool

Despite PP being an integral part of public administration in practice, it is only in recent year it has become topical within public administration research. Further, the understanding of PP as an important policy tool for achieving broader policy goals has become more evident (Brammer & Walker, 2011; Milios, 2018). Evelyn Trammel et al., (2020) argue that “public procurement is often responsible for achieving efficiency by reducing costs while preserving quality of goods and services provided by an organization” (p. 655). According to the European Commission, an improvement of one percent efficiency gain in public procurement could save EUR 20 billion annually (European Commission, n.d.b).

Sweden is often associated for using PP for innovation and last year almost 800 procurements in Sweden was what is referred to by the Agency for Public Procurement as *innovation procurement*. Innovation in procurement has been identified by the Swedish Government as well as scholars, as an important tool to solve societal challenges (Rolfstam & Ågren, 2013; The Agency for Public Procurement, n.d.d). The most common used innovation procurement in Sweden in 2022 was *functional procurement* (The National Agency for Public Procurement, n.d.b; The National Agency for Public Procurement, n.d.d). Charles Edquist and Jon Mikel Zabala-Iturriagoita (2020) define functional procurement as “when a public agency buys products that perform functions that provide solutions to problems” (p. 600). The authors argue

that lack of time and cooperation can be barriers in functional procurements and further argue that if these factors are not successfully conducted it might lead to unfulfilled contacts; “developing the required capabilities to identify needs and problems is thus central for the further development of the ability of contracting authorities to make public procurement work effectively” (Edquist & Zabela-Iturriagagoitia, 2021, p. 601). In 2017 the European Commission (n.d.b) set out a policy strategy with the purpose to improve procurement practices in Europe, presented are the six strategy goals:

- Ensuring wider uptake of innovative, green, and social procurement
- Professionalising public buyers
- Increasing access to procurement markets
- Improving transparency, integrity, and data
- Boosting the digital transformation of procurement
- Cooperating to procure together (ibid).

The area of improvements indicates a desire for an increased focus on integrating sustainable aspects in PP as well as securing a healthy competition. Motivating the increased focus on sustainability in PP, the Commission states that 55 percent of all executed PP, uses lowest price as their main criterion in procurements and are further not paying enough attention to factors such as sustainability (ibid). In the Swedish Public Procurement Act, variables of both social and environmental considerations are written into the law; in chapter 4 § 3 it is, for example, written that “A contracting authority should take environmental considerations, and social and labour considerations into account in public procurements, if the nature of the procurement so justifies” (The Swedish Competition Agency, n.d.). The law is not binding, nor hindering but instead encourages the procuring organisation to consider these factors. However, in 2022 the Swedish Environmental Targets Preparation Group proposed a change and amend to the Swedish Public Procurement Act to make sustainability aspects binding. Though, the law has since then not changed (SOU:2022: 15). Figure 3 presents the number of procurements with environmental specifications in Sweden in 2022. The black pile presents the category “other environmental specification” which consists of 1096 procurements specifying requirements that we do not know what they are (The National Agency for Public Procurement, 2023). In this category specifications on circularity are, for example, included. This part of the chapter has

provided a contextual understanding of PP in Sweden. Further, the concept of CPP is to be presented.

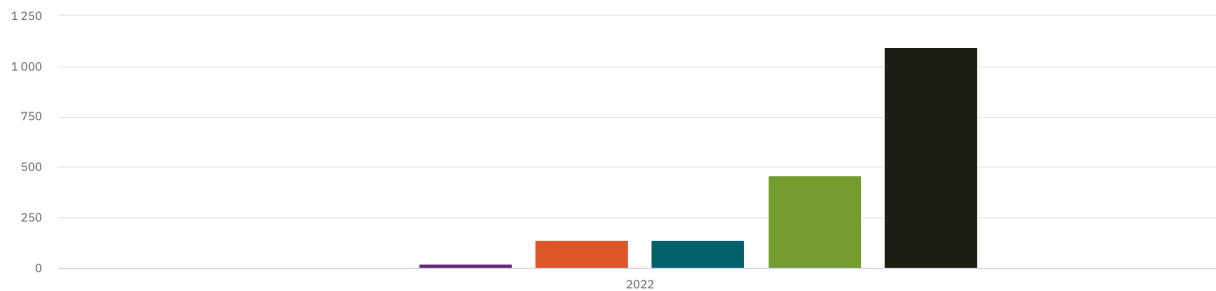


Figure 3. Number of Procurements with Environmental Specifications in Sweden 2022
(The National Agency for Public Procurement, 2023).

Defining Circular Public Procurement

To define CPP, it is relevant to first define the concepts of *Green Public Procurement* (GPP) and *Sustainable Public Procurement* (SPP). GPP and SPP are predecessors to CPP and according to Alhola et al., (2019) it is therefore relevant to first understand these concepts since it could explain important components for the realisation of CPP.

GPP and SPP has gained status and interest as policy tools for addressing societal and environmental challenges through PP. Thus, CPP is the newest field in both academia and practice addressing these issues, first exemplifying the concepts of GPP and SPP can facilitate an understanding of the implications integrating environmental and social variables in PP could have. Further, it could also and help with guidance for critical components in developing processes for CPP (Alhola et al., 2019). Noticeable is that one thing all these three have in common is that it brings complexity to the procurement process and challenges the traditional procurement strategy of going for the cheapest option (Sönnichsen & Clement, 2020). Kristensen et al., (2021) further argue that what differs CPP from GPP and SPP is that it brings more complexity and work for the procurement departments.

GPP refers to “a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured” (European Commission, n.d.c), SPP integrates a broader perspective and refers to a “process

whereby public organizations meet their needs for goods, services, work and utilities in a way that achieves value for money on a whole life-cycle basis in terms of generating benefits not only to organizations, but also to society and the economy, while significantly reducing negative impacts on the environment” (United Nations Environment Programme, 2017, p. 1). While GPP addresses environmental concerns in PP, SPP also embrace social and societal concerns, looking at the long term both environmental, social, and economic impacts of a purchase (Dybtsyna et al., 2021). Even though the concept of GPP and SPP are relatively new in PP research and practice, Stephen Brammer and Helen Walker (2011) argue that in the context of private sector organisations, it has been both researched and practiced for a long time, as part of sustainable management and supply chains. Thus, the authors argue that external factors, such as legislation and reputation motivate private actors to engage in more sustainable activities. However, the increased interest of analysing PP as a tool for governments to assist policy implementation, Brammer and Walker provide a useful framework for examining how public policy are being translated into practice (Figure 4). Even though the framework aims to explain the process of SPP it is applicable to better understand the role influences, such as public policy, has for GPP and CPP as well. The framework suggests that SPP is primary motivated by pressure from public policy. Further, factors of costs, knowledge, experience, markets, and organisational objectives influences the outcome of SPP (ibid).

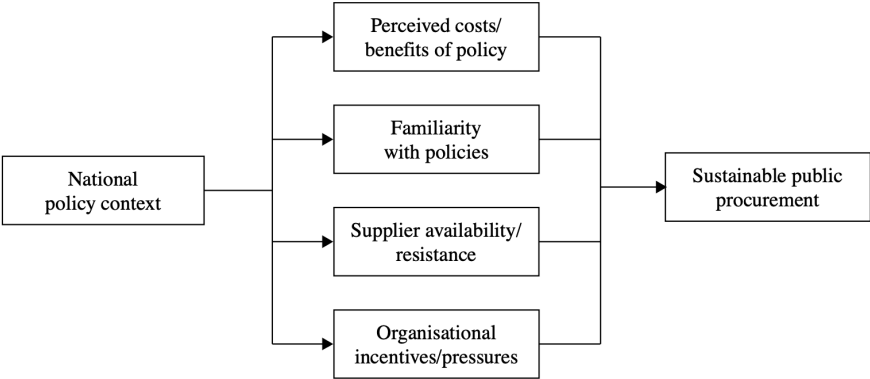


Figure 4. A Conceptual Model of the Influences upon SPP
(Brammer & Walker, 2011, p, 456).

CPP has similarities with both GPP and SPP (Sönnichsen & Clement, 2020). In GPP the environmental impact of a purchase is the key feature, and factors such as energy efficiency, emission reduction, ecolabels and environmental management systems are main criteria in the

purchasing process. Both GPP and CPP are promoting a greening of the economy, and both energy efficiency and emission reductions are key components (Kristensen et al., 2021). SPP, on the other hand, originates from sustainable supply chain management, which largely focuses on sustainable supply-chains, recycling, and minimization of waste. Thus, these themes are similar to the field of CE, focusing on closing the loop in supply chains, circular business models and circular product design, both with the ambition to reduce waste and reuse resources and materials (Alhola et al., 2019). There is an ongoing debate within the academia on the standard definition of CPP (Dybtsyna et al., 2021). For this thesis, the definition provided by the European Commission will be used. The European Commission defines CPP as “the process by which public authorities purchase work, goods, or services that seek to contribute to closed energy and material loops within supply chains, whilst minimising, and in the best case avoiding negative environmental impacts and waste creation across the whole life-cycle” (European Commission, 2017, p. 5). Kristensen et al., (2021) presents four concepts (see Table 1), in which CE can be integrated in PP: CPP levels; CPP pillars; CPP strategies; and CPP contact forms. The presented concepts identify how CE principles and strategies can be introduced in PP, and further, the influence PP could have for the transition to CE at large. CPP can be understood as a procurer’s possibilities to promote CE principles in PP, and further the whole value chain. However, this means that the procurer should also consider the ‘after-use’ process of the procured goods (Sönnichsen & Clement, 2020). Kristensen et al., (2021) argue that innovative contract forms where the supplier buys back the products could be a solution to manage the responsibility of the after-use; “the public organization purchases products with an agreement that the supplier will buy back the products at end-of-life to reuse at the highest possible grade” (ibid, p. 3).

CPP concepts	Key elements
CPP levels	<ol style="list-style-type: none"> 1. System level 2. Supplier level 3. Product level
CPP pillars	<ol style="list-style-type: none"> 1. Promoting circular supply chains by producing more circular products, materials, and services 2. Promoting new business models based on innovative and resource-efficient solutions
CPP strategies	<ol style="list-style-type: none"> 1. Procurement of improved products and services by adding GPP-based “circular-criteria”

	<ol style="list-style-type: none"> 2. Procurement of services and new business models 3. Procurement of new and innovative products, services, and materials promoting circular economy-based business 4. Procurement promoting industrial symbiosis and circular ecosystems
CPP contract forms	<ol style="list-style-type: none"> 1. Product-service systems 2. Purchase and buy back 3. Purchase and resale agreements

Table 1. Overview of Different CPP Concepts

(Reconstructed from: Kristensen et al., 2021, p. 3).

Gabriella Goyri (2022) criticises the concept of CPP for not integrating socio-cultural needs and argue that social equity and justice are equally as important components to consider along the whole life cycle of products and materials. Goyri also stresses the need for a common definition and states that “it is recommended that policy makers build on a consensual definition of CPP and align future CPP policies so that procurement actions are guided by social equity and justice” (ibid, p. 1251). The lack of focus on the social aspects is a general critique towards CE. Alan Murray et al., (2017) argue that:

It is unclear how the concept of the Circular Economy will lead to greater social equity, in terms of inter- and intra-generational equity, gender, racial, and religious equality and other diversity, financial equality, or in terms of equality of social opportunity (p. 376).

This part of the chapter has provided an overview of the research field and a definition of CPP. Further the theory of institutional entrepreneurship will be presented, which will be used for analysing the gathered empirical data.

Institutional Theory and Institutional Entrepreneurship

Institutional Entrepreneurship stems from institutional theory which has been a popular theory in entrepreneurial research. A reason for that is that it has proven successful in identifying factors apart from organisational that lead to entrepreneurial success. In entrepreneurial research, resource-based theory has long been the key theory since access to resources

historically has been identified as the number one success factor. Increased knowledge and insights have shown that other factors than access to resources are equally as important to determine entrepreneurial success; contextual factors such as culture and the environment, and so the popularity of institutional theory has cultivated (Bruton et al., 2010). This part of the chapter will provide an overview of institutional theory and further the theory of institutional entrepreneurship.

Institutional Theory

Institutional theory examines the social structures that provide social stability for various groups and organisations to secure their positions and legitimacy (Ranta et al., 2018). To better understand the essential elements of institutional theory it is relevant to first examine what it referred to as *institutions*. According to Richard Scott (2008) institutions are “comprised of regulative, normative and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life” (p. 48). The term *institutionalized* refers to when such practices and ideas have reached the state of becoming established, resulting in a *homogenization* in organisational behaviour (Higgins & Larrinaga, 2014). The process of homogenization is often referred to as *isomorphism*, defined as “a constraining process that forces one unit in a population to resemble other units that face the same set of environmental condition” (DiMaggio & Powell, 1983, p. 149).

Paul J. DiMaggio and Walter W. Powel (1983) present three mechanisms in which they argue lead to isomorphic change, the three mechanisms are presented in Table 2. Analysing organisational behaviour, using these three factors can indicate structural trends. This process, depending on contextual factors could also be essential for organisations legitimacy (Deephouse, 1999). Collin Higgins and Carlos Larrinaga (2014) argue that the increased usage of sustainability reporting amongst organisations is such a result. Today, coercive factors (laws and regulations) are driving organisations in this direction. However, previously, other factors such as accountability and legitimacy induced this development.

Mechanism	Reason
Coercive	Political influence
Mimetic	Uncertainty
Normative	Professionalisation

Table 2. Isomorphism – Mechanisms for Isomorphic Change

(Developed from: DiMaggio & Powell, 1983, p. 150).

Another tool for analysing elements which provoke organisational processes are presented by Richard Scott (2008). Institutions are according to Scott multifaced and relatively resistant to change; the structures and cultures are maintained and reproduced over generations. Scott stresses the idea of not only treating institutions as something controlling and constraining, but also the empowering and supporting role it can contribute with to activities and actors. Institutions can further be understood thru three institutional pillars concluding, *regulative* (coercive), *normative* (normative), and *cultural-cognitive* (mimetic) aspects, presented in Table 3. These three pillars can be understood to progress both strategically (agency-based) and unconsciously and are differently emphasised in different schools and disciplines (Ranta et al., 2018).

These three pillars form an understanding of the social structures formed by, for example, regulations, government agencies, professions and norms which construct the way organisation adhere to one another and further influences their legitimacy and survival (Bruton et al., 2010). It further envisages the different dimension of each pillar and provide insights into the effects they have on organisational behaviour. The first pillar emphasises the regulatory components, primarily from governments and standards, which constrain and form organisational behaviours (Bruton et al., 2010). The idea of the regulatory pillar is built on the idea of rational choice and Scott (2014) state that “the institutional logic underlying the regulative pillar is an instrumental one: Individuals craft laws and rules that they believe will advance their interests, and individuals conform to laws and rules because they seek the attendant rewards or wish to avoid sanctions” (p. 62). Further, the entrepreneurs do not only have to be a passive agent compliant with the laws, but in cases where the laws are fragmented, they can require action (Bruton et al., 2010).

The second institutional pillar explains the normative components which form organisational behaviours and the normative pillar include both values and norms. Scott (2014) defines *values* as “conceptions of the preferred or the desirable together with the construction of standards to which existing structures or behaviours can be compared and assessed” (p. 64). Norms are what takes the values (*what* is desired) into action (*how* to pursue); how the organisation implement the value in their business. The normative pillar therefore aims to first identify the organisations goals and values, and further how they pursue them (Bruton et al., 2010). Noticeable is also the importance of *roles* in understanding how these normative components affect actors differently; the social position of the organisation or individual provoke conceptions of their goals and activities. Further, roles can be constructed both formally and informally (Scott, 2014).

The third pillar emphasises the cultural-cognitive aspects which form organisational behaviours and is grounded in the idea that social reality, of which meaning is embedded, are shaped thru shared conceptions (ibid). The idea of the subjective nature and its influence on human behaviour are associated with Max Weber who emphasised the meaning behind behaviour (DiMaggio & Powell, 1983). Understanding the cultural-cognitive aspects is essential in entrepreneurial research since that is what often forms where organisations and individuals put their attention or not. However, in a broader perspective it becomes an important tool for analysing societal movements and trends (Bruton et al., 2010).

	<i>Regulative</i>	<i>Normative</i>	<i>Cultural-Cognitive</i>
<i>Basis of compliance</i>	Expedience	Social obligation	Taken-for-grantedness Shared understanding
<i>Basis of order</i>	Regulative rules	Binding expectations	Constitutive schema
<i>Mechanisms</i>	Coercive	Normative	Mimetic
<i>Logic</i>	Instrumentality	Appropriateness	Orthodoxy
<i>Indicators</i>	Rules Laws Sanctions	Certification Accreditation	Common beliefs Shared logics of action Isomorphism
<i>Affect</i>	Fear Guilt/ Innocence	Shame/Honor	Certainty/Confusion
<i>Basis of legitimacy</i>	Legally sanctioned	Morally governed	Comprehensible Recognizable Culturally supported

Table 3. The Three Pillars of Institutional Theory
(Scott, 2014, p.60).

Institutional Entrepreneurship

Institutional entrepreneurship refers to the “activities of actors who have an interest in particular institutional arrangements and who leverage resources to create new institutions or transform existing ones“ (Maguire et al., 2004, p. 657). Institutional entrepreneurs can refer to an organisation, a group of organisations or individuals (Battilana et al., 2009). Further, Rao et al., (2000) argue that institutional entrepreneurs are actors ”who lead efforts to identify political opportunities, frame issues and problems, and mobilize constituencies. By so doing, they spearhead collective attempts to infuse new beliefs, norms, and values into social structures” (pp. 238-239). Markus Perkmann and André Spencer (2007) further states that “by doing this, they propose a ‘remedy’ to vital problems and societal needs” (p. 1103). The theory of institutional entrepreneurship provides an analysis for “how new norms, values, and ideologies are infused into social structures via political contestation; and how institutional entrepreneurs and activists play key roles in framing new practices, mobilizing resources [...], and garnering legitimacy for new forms” (Rao et al., 2000, p. 274). Julie Battilana et al., (2009) recognises two criteria to identify institutional entrepreneurs. The first criteria are that institutional entrepreneurs must initiate divergent change; meaning that the entrepreneurs, not necessarily with the ambition of, actively participate in driving institutional change. That leads to the second criteria which is that institutional entrepreneurs must be an active participant in the implementation of these changes. Institutional entrepreneurs are involved in activities where they educate and propose new practices to create, disrupt or maintain the institutional landscape (Selviaridis et al., 2023). Activities of which institutional entrepreneurs could be engaged in are, for example, coalition building, building networks and co-operations (*interactional activities*), theorisation (*technical activities*) and activities with the purpose to influence a wider audience (*cultural activities*) (Parkmann & Spencer, 2007).

Institutional entrepreneurship is a highly political process interested in the development of new or the reconstruction of existing institutions (Garud et al., 2020). The nature of institutional theory and institutional entrepreneurship are somewhat according to Raghu Garud, et al., (2020) paradoxical. While institutional theory tends to analyse organisational processes because of regulative, normative, and cultural-cognitive functions (see Table 3), institutional entrepreneurship on the contrary emphasises how organisational processes bring about change. However, the contradictory perspectives can provide interesting insights; “the juxtaposition of

these contradictory forces into a single concept generates a promising tension – one that opens up avenues for inquiry into how processes associated with continuity and change unfold, and how such unfolding processes can be influenced strategically” (Garud et al., 2020, p. 958). These conflicting perspectives are often referred to as the *paradox of embedded agency* and the essence of this debate is the role of *structure* versus *agency*. In institutional theory the argument is that organisations actions are embedded in a structural context of regulative, normative, and cultural-cognitive processes. In institutional entrepreneurship the organisations act outside of that structure. Therefore, contrary to institutional theory, aspect of agency becomes an important part of analysis in understanding the enabling components for institutional entrepreneurs to implement divergent change (Bakir & Jarvis, 2018; Battilana et al., 2009). Further, legitimacy become an essential component for institutional entrepreneurs since it is a key factor to get validation, often on an already established market formed by previous agents and contextual ideas. Desirée F. Pacheco et al., (2010) argues that “power is simultaneously a stabilizing force for institutionalization and a driver of institutional change, as powerful actors can shape the institutional environment in either direction depending on their particular interests” (p. 986).

Battilana et al., (2009) provides a framework for analysing the process of institutional entrepreneurship (Figure 5). The process is divided into two categories: i) enabling conditions for institutional entrepreneurship and ii) divergent change implementation; further, each category has two sub-categories. The first sub-category emphasises the role of *field-level conditions* which underlines the contextual implications for institutional entrepreneurship, examples are regulations, social movements, crises in society, degree of *heterogeneity* on the market and the degree of *institutionalization*. In a study conducted by Christoph Brodnik and Rebekah Brown (2018) the institutional environment is identified as an enabling component for institutional entrepreneurs. The results shows that emerging conditions such as social trends create a ‘window of opportunity’ for institutional transition. Further, the actors *social position* becomes essential to be able to take advantage of the enabling field-level conditions, and this component is strongly linked with legitimacy. However, an actor’s social position is not to be mixed with an actor’s social status. Previous research has indicated that institutional change by entrepreneurs often is initiated by organisations with lower status (Battilana, 2009). Further, Hoostraten et al., (2020) argue that “low-status actors [...] have less to gain from holding on to

established field-level institutions and are, generally speaking, less sanctioned when deviating from institutions” (p. 116). However, the organisations social position will be essential for their perception of the field-level conditions and their relations with and opportunities to enter partnerships with other organisations (ibid).

The second category focus on organisational activities to create change. Marjolein J. Hoogstraten et al., (2020) refers to it as ‘*institutional entrepreneurship strategies*’. The three steps identified by Battilana et al., (2009) are variables dependent on one another consisting of: i) creating a vision, ii) mobilizing collaborations and partnerships, and iii) motivating their allies to actively participate in transforming the institutional landscape.

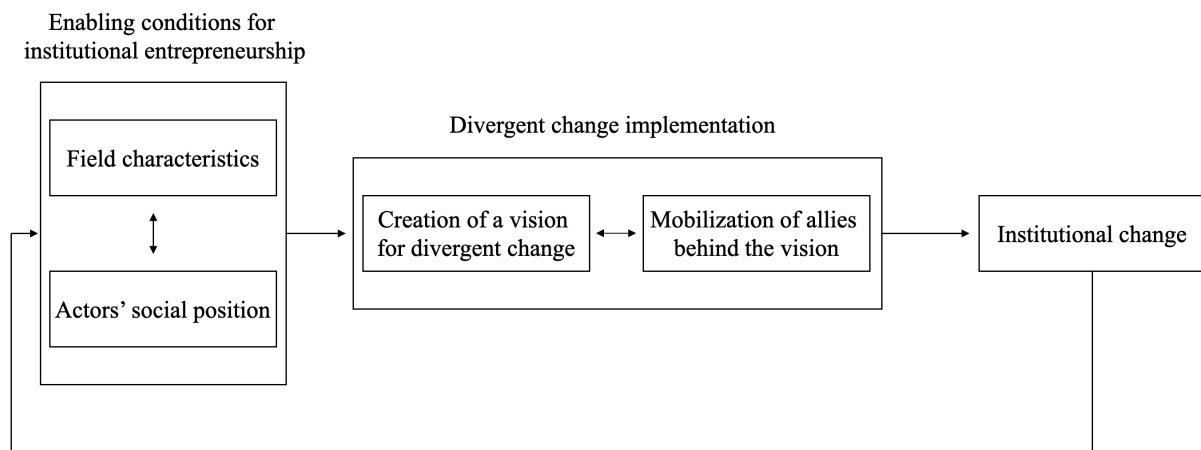


Figure 5. Process of Institutional Entrepreneurship

(Reconstructed from Battilana et al., 2009)

Hoogstraaten et al., (2020) argues that institutional entrepreneurship theory is suitable for studying transitions, and more specifically in the context of innovation and sustainability. In the context of CE, studies have indicated that institutional elements both have a constraining and supporting role in the transition towards CE. For example, regulatory systems can both support, constrain, and coerce organisations to implement CE principals. Normative aspects could as well encourage the transition towards a CE. Ranta et al., (2018) argues that there could be misalignment with sustainability goals were, for example greenhouse gas reductions could be regarded as more important than integrating circular flows of materials. Further, the cultural-cognitive aspects form social expectations in which the organisations need to adhere to stay

legitimate. The theory of institutional entrepreneurship provides an insightful perspective to institutional processes since it analyses how the entrepreneurs form the institutional landscape.

The chapter has so far provided an understanding of PP in Sweden, provided a definition of CPP and an analytical framework for the theory of institutional entrepreneurship. Based on the presented theories and literature a conceptual framework has been developed which illustrates how this further will be applied to analyse the empirical data (Figure 6).

Conceptual Framework

To structure and analyse the empirical findings in the research a conceptual framework has been developed. The first step in order to structure the data was to identify barriers and enablers, presented in Table 4. Further, four sub-categories were identified, two within each main category. Table 4 was constructed based on previous presented research and is used in the empirical chapter to structure and present the data. The conceptual framework, Figure 6, has been established to analyse the empirical data to broaden the understanding of barriers and enabler using the theory of institutional entrepreneurship. The figure explains the analytical process performed in the analytical chapter.

Categories	Subcategories	Examples
Barriers	Knowledge	<i>Lack of knowledge; Perception of risks; Misconceptions</i>
	Structural	<i>Legislative and regulatory; Procurement process; Tendering</i>
Enablers	Collaboration	<i>Collaboration both within contracting authorities and between procurer and supplier</i>
	Dialogue	<i>Market dialogue; Innovative procurements</i>

Table 4. Categorisation of Empirical Data – Compiled by the Author

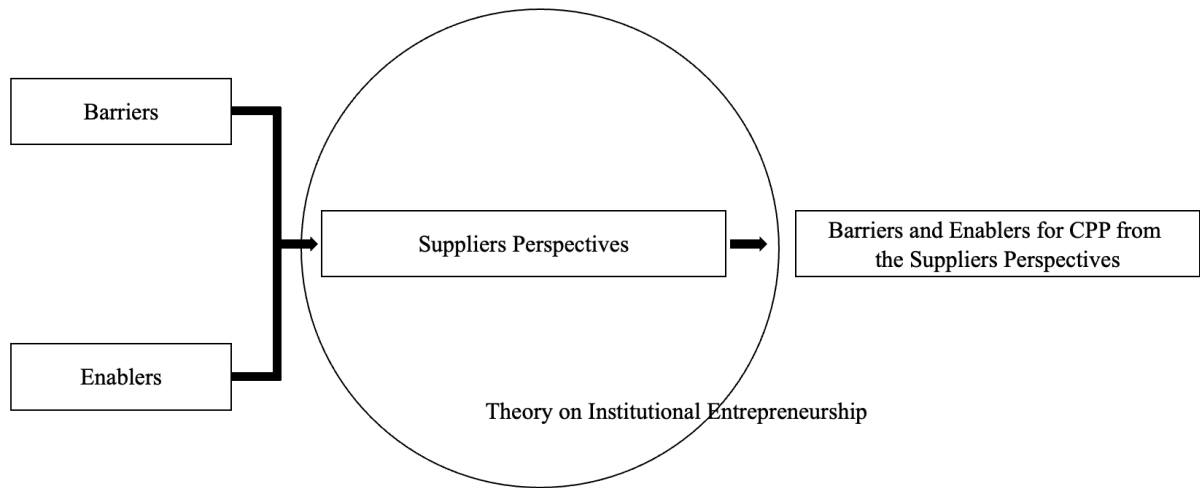


Figure 6. Conceptual Framework – Compiled by the Author

Methodology

This chapter presents the methodological standpoint used to gather the empirical data. A critical discussion will be presented, motivating the chosen method and research design. The chapter will further cover information on the research design and process.

Orientation of Research

The thesis aims to provide more profound knowledge and a better understanding of the supplier's perspective on the enablers and barriers of CPP. A qualitative research approach with a case study design is chosen to answer the research questions. The research questions aim to generate knowledge on the supplier's perspective to better understand the enabling components of CPP. The nature of qualitative research is to describe and better understand a complex phenomenon (Merriam, 2009). Since the purpose of the thesis is to understand better the phenomenon of CPP, a descriptive research design is formed with a research question answering a *how* or *what* instead of *why*. Asking questions of *how* and *what* provide insights for an analytical generalisation of a specific phenomenon, in this study, it is the suppliers' perspectives on enablers and barriers to CPP (Esaiaasson et al., 2017). However, it is essential to note that qualitative research is contextual and, therefore, also the result of the study (Chandra & Shang, 2019). Conducting a study based on a qualitative research approach is motivated by the fact that to better understand CPP and, if desired, make it the new norm, we must gain more knowledge on the enablers and barriers for its implementation.

Quantitative research can provide an overarching generalisation; however, previous research has highlighted factors such as knowledge, collaboration, and risks as barriers to CPP (Donley, 2012). Thus, these factors are subjective; a qualitative research approach is suitable to better understand its implications on CPP. To better understand how these factors are inflicting the process of CPP, a multiple case study will be conducted. The case study methodology is widely used in many disciplines and serves to understand a phenomenon within its context (Merriam, 2009; Daymond & Holloway, 2010; Tight, 2017). A case study can be defined as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context when boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used" (Yin, 1989, p. 23). Christine Daymond and Immy Holloway (2010) further argue that "the distinguishing feature of case study research is its holistic

explanation of how multiple aspects, influences, processes, and relationships ‘fit together’ within each case” (p. 114). Previous research on PP has highlighted a gap between theory and practice.

Further, conducting a case study and investigating CPP within its real-life context could therefore provide essential data to answer the purpose of the research. A qualitative multiple-case study research strategy has been adopted for this study. According to Hanny Torvinen and Pauliina Ulkuniemi (2016), a qualitative case study “allow for an exploratory and flexible approach to the studied phenomenon because of unstructured problems” (p. 61). Conducting a case study provides a better understanding of a complex phenomenon since it can provide insights into different aspects and relations between variables studied. Aino Halinen and Jan-Åke Törnroos (2005) further argue that case studies provide a detailed description of the studied phenomenon and is especially useful in understanding situations which are relatively unknown. Thus, this motivates the case study methodology for this thesis, which examines a phenomenon which still are relatively unknown and where the purpose is to provide greater knowledge. It is important to bear in mind that case studies, equal to qualitative studies in general, are contextual and do not operate in a fixed setting. Factors such as regulations, macroeconomics and trends are volatile and will affect the result of the study (Merriam, 2009). Even though the result could explain the phenomenon on a larger scale, it is important to be pragmatic and connect the result to the narrative context of the study.

Moreover, compared to a single case study, a multiple case study provides empirical data identifying similarities and contrasts between the two cases. According to Daymond and Holloway (2010), a multiple case study enables more generalisation. Matthew Miles and Michael Huberman (1994) further argue that “by looking at a range of similar and contrasting cases, we can understand a single case finding, grounding it by specifying how and where and, if possible, why it carry on as it does. We can strengthen the precision, the validity, and the stability of findings” (p. 29). However, conducting a multiple case study does not allow the same depth as a single case study, which could influence the result (Merriam, 2009). With all this in mind, it is important to clearly define the chosen case and its limitations.

For this thesis, a multiple descriptive case study on two sectors' perspectives on CPP is to be conducted. The two chosen sectors are the tech sector and the waste sector. The motivation for choosing these two sectors is that there are a lot of initiatives on CE within these two sectors, both from larger companies that integrate circularity in their business strategies and smaller companies building their business on a circular model. In the context of PP, these sectors are not at the forefront. However, there are cases of CPP in Sweden within both sectors.

Further, both sectors require specialised knowledge, need to adhere to additional laws and regulations, and in most cases, involve more actors from the procuring organisation, for example, the IT manager, in the procurement of new computers. An additional factor in choosing these two sectors was the availability of relevant informants. In the initial state of the research process, contacts within these two sectors were already established.

Nature of Research

Depending on the nature of the research, a case study could be either abductive, deductive, or inductive (Bryman & Bell, 2015). Since the nature of this research balances theory and empirical data where the research questions are revised and continuously developing throughout the research process, the research approach is considered to be of an abductive nature (Denzin & Lincoln, 2018). The process of abductive reasoning, in comparison to deductive and inductive reasoning, is that it is not driven by either data or theory but instead is one where data and theory are connected and works interlinked (Earl Rinehart, 2021; Timmermans & Tavory, 2012). Iddo Tavory and Stefan Timmermans (2014) argues that the purpose of abductive reasoning is to provide a more creative research process where elements of inductive and deductive reasoning are used to reach new theoretical insights. Further, abductive reasoning has, according to Tavory and Timmermans, a complimentary function to deductive and inductive reasoning on their own since it takes advantage of their specific features to both analytically and practically understand and make sense of the data (Ibid). An inductive research process is often used in cases where the research field on the studied phenomenon is limited, and the researcher, therefore, gathers the data to then build and develop concepts and theories; “the framework is informed by what we inductively learn in the field” (Merriam, 2009, p. 16). The inductive research approach often revises the purpose and research questions one or several times during the process.

On the other hand, deductive reasoning uses existing theories, builds a hypothesis based on observations and then, depending on the empirical data, the hypothesis is either confirmed or rejected. Deductive reasoning does not allow the research questions to be revised throughout the research process (Bryman & Bell, 2007). An abductive research design is suitable for this thesis since the knowledge and understanding of the thesis subject are developed throughout the research process. The pre-study that took place at the beginning of this research process included both an overview of existing literature, conversations with professionals working within the field and an interview with an experienced consultant working with CPP. All these three elements helped form the research questions, which continually developed throughout the process of collecting interviews with company representatives. Figure 7 is developed with the inspiration of Alan Bryman (2011) to visualize how an abductive research process can develop.

Further, a hermeneutic approach was adapted to interpret the data. Hermeneutics investigate the meaning of a text and further aim to understand the studied phenomenon on a larger scale. Further, it emphasizes to understand the text within its given context and encourages an awareness of conditional aspects inflicting the text (Bryman & Bell, 2007). The hermeneutic perspective was continuously practiced interpreting the data and theories throughout the research process. Further, the research process is presented.

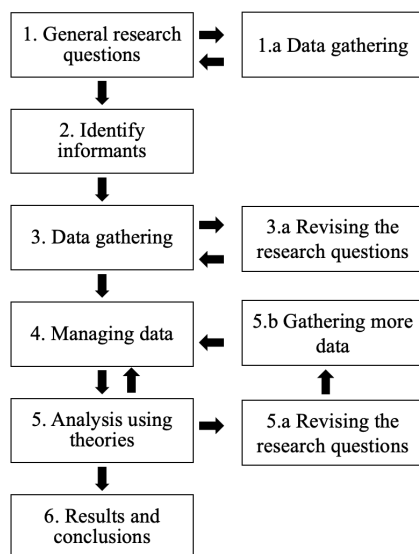


Figure 7. Steps in Qualitative Research – Compiled by the Author
(Inspired by: Bryman, 2011).

Research Process

The research process could be divided into five phases, presented in Figure 8. The first period of the thesis project is referred to as a 'pre-study on CPP'. In the initial state of the research process, the researcher was in contact with and had exploratory meetings with professionals working with CE in different companies and organisations, both in the public and private sectors. Thru an internship at The International Chamber of Commerce in Stockholm during the autumn semester of 2022-2023, the researcher participated in meetings with their working group on CE. The working group consisted of multiple companies, both Swedish and International. During these meetings, the researcher was introduced to the initiatives taken by Swedish and International enterprises as well as the challenges they face to transition towards more circular business models. During the internship, the researcher gained contact with a company representative from Ragn-Sells, who introduced the researcher to the professionals that the researcher later had contact and exploratory meetings with. The researcher had a virtual meeting with Frida Faxborn (also interviewed for the thesis), Public Affairs Expert (Sustainability) at TechSweden and a company representative from Foxway (Foxway is represented in the thesis). The meeting introduced some challenges TechSweden and Foxway had identified concerning CE and CPP.

Further, an overview of the research field on CE and CPP was conducted with the purpose of better understand the concepts and to identify possible gaps within the research field. In the first phase, only general research questions were formulated, which in a later state was revised. The first interview with Maria Losman, Consultant at Ecoplan in Medio, is also considered a part of the pre-study since the primary purpose of the interview was to bridge the gap between theory and practice to formulate the interview guide for the upcoming interviews better.

The second part of the research process explains the gathering of data. After the decision to focus on the supplier's perspective on CPP, it was decided that a multiple case study would be a suitable methodology for a better understanding if there is consensus from suppliers in different industries. Further, the tech and waste sectors were decided as the two cases for this research. Relevant informants were identified thru snowballing sampling and a screening of relevant companies within the chosen sectors. The interviews were then conducted over two months. In parallel with the execution of the interviews, the process of transcribing the

interviews was initiated. No software programme was used to either transcribe or translate the interviews. The collected data were managed in the third phase, and empirical findings were identified. During the process of managing data, the procedure of identifying relevant theories for analysis was conducted. The theoretical framework was established in the fourth phase, which furthered to the last phase, where the result was analysed, and conclusions were drawn.

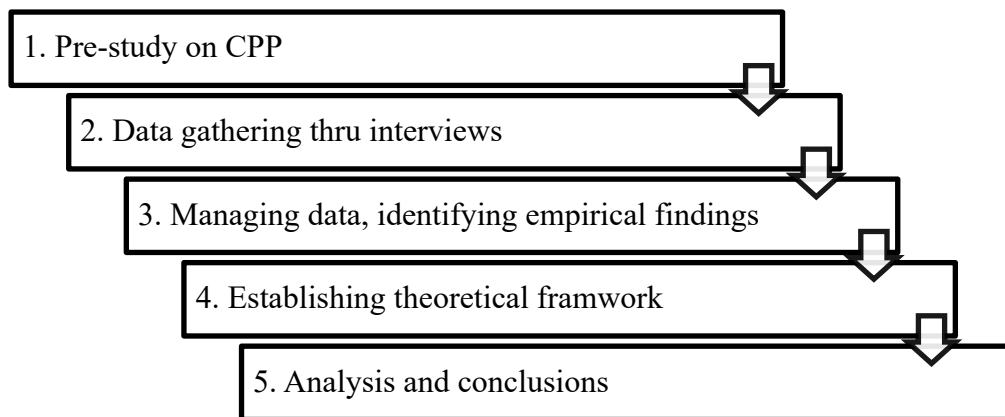


Figure 8. Research Process – Compiled by the Author

Research sample

To answer the purpose of the thesis, a multiple case study design was conducted, following the idea of a comparative analysis of the empirical data gathered from the interviews and secondary data in form of sustainability reports, published by the represented companies. Limitations drawn in this study are both geographical, focusing on CPP in Sweden and narrowing down by only conducting interviews with companies in two sectors. The reason for focusing on CPP in Sweden was, first and foremost, accessibility since the researcher is Swedish and the thesis was conducted with a Swedish university. Second, the Swedish Government has taken many initiatives to transition towards a CE, and PP is identified as an important step to realise these goals. The motivation for focusing on the tech and waste sector was mainly due to access to informants. Further, the two sectors differ in the service and products they offer, as well as the legislations which they need to adhere to. Both the waste and the tech sectors have on their own, many initiatives for implementing circular economy principles. For example, in the tech sector the industry has initiated the Circular Electronics Partnership, a project for transitioning the whole IT sector to become circular by 2030 (Circular Electronics Partnership, n.d.). Both sectors have a significant environmental footprint, motivating that a transition in these sectors

would have positive effects on sustainable development. Not least, there are cases of CPP in Sweden in both the tech and waste sector.

Since the research is a multiple case study comparing two different sectors, the initial face of the data gathering was to identify company representatives in these two sectors with experience working with PP and CE. The first contact was made thru personal interaction with a company representative from Ragn-Sells at a meeting during an internship at the International Chamber of Commerce in Stockholm in January 2023. The company representative was introduced to the thesis subject, which was already decided. The company representative then provided contact information to three other contacts working with CE in different organisations and companies, both in the public and private sector. One of these three contacts was Frida Faxborn from TechSweden. Frida Faxborn provided contact information to Sandra Klackenborn from Dustin Group, Camilla Cederquist from Atea, and Cathrine Birkenes from Techstep. The other informants were identified thru the company's web pages. Thus, the companies were identified by screening the members of trade associations and searching for 'tech', 'waste', 'circular economy' and 'public procurement' on Google. After identifying relevant companies, their web pages were studied to see how they integrate circular economy in their business and whether they work with or towards the public sector.

A company represented in the study which differs from the rest is the consulting agency Ecoplan in Medio. The motivation for including a consulting firm, and Maria Losman, more specifically, was to provide a better understanding of CPP and to bridge the gap between theory and practice, which had been identified as a barrier in previous research. The interview with Maria Losman was the initial interview, which provided guidance for the following interviews with company representatives. When searching for informants in the tech sector, a limitation to companies working with hardware was initially decided. The motivation for focusing on companies selling hardware were that many of the initiatives for CE identified in the tech sector were the sale and management of used computers and telephones. However, one of the companies represented, 3StepIT, does not sell or lease any hardware but instead a service. The reason for including them in the study was that their business model is fully circular, and the service they sell has the purpose of simplifying circular procurements specifically. Therefore, it was decided that their perspective was of interest in the study. The waste sector has a smaller

representation in the thesis. The companies that were interviewed were the companies that were contacted. In Sweden, there are fewer bigger companies working within the waste sector. Several companies are also owned by public organisations and, therefore, not relevant since this study focuses on the perspective of the private sector. Trade associations in both the tech and waste sectors were contacted for interviews. However, the trade association in the waste sector did not have the opportunity to participate. The companies and organisations represented in this research are:

- Atea
- Dustin Group
- Ecoplan in Medio
- Foxway
- Inrego
- PreZero
- Ragn-Sells
- Stena Recycling
- Techstep
- TechSweden
- 3StepIT

The 11 companies comprise one Swedish trade association in the tech sector (TechSweden). One company is a Swedish consulting agency with two employees (Ecoplan in Medio). Three companies are working in the waste sector (PreZero, Ragn-Sells & Stena Recycling), and six are working in the tech sector (Atea, Dustin, Foxway, Inrego, Techstep & 3StepIT). All informants were initially contacted thru email and requested to participate in a study on CPP. In some cases, the company was initially contacted by telephone to find the contact information of relevant informants. Most informants responded, interested in participating; others replied with contact information for someone else, more relevant to interview for this project. Initially, informants working either as Bid Managers or with Sustainability at the companies were selected. However, in some cases, the companies provided contact information to someone with another role in the company but with more experience with CE or PP. Before the interview, the informants were only provided with the information that the purpose of the thesis was to study

the supplier's perspective of CPP. None was provided with the interview guide in advance. All informants were sent a consent form (see Appendix 4) confirming their consent to participate in the study and whether they wanted to be anonymous. No informant asked to participate anonymously.

Data Gathering Methodology

The empirical data for the case study was collected through interviews with representatives from companies' and a trade association in the tech sector, as well as a consultant with experience working with CPP in Sweden. Secondary data was collected from the represented companies latest published sustainability report. The interview process and the gathering methodology are presented below.

Interview Process

Eleven interviews were conducted with a total of 13 informants. One interview was conducted in person (Stena-Recycling), and the other was conducted virtually. In two interviews (Stena-Recycling; Techstep), the companies decided that two informants would represent the company. In the email sent out to the informants after confirming their participation in the study, they were asked if they wanted to have the interview in person or virtually on Skype/Teams. Even though the experience differs, virtual interviews provide more flexibility and still enable the observation and interpretation of facial expressions as such. Anette Halling and Jenny Helin (2018) argue that these factors could impact how the interview develops. The risks of conducting virtual interviews, which could negatively impact the interview quality, are that the informants could be easily distracted and have problems with the technology. It was noticeable that some of the informants were distracted during the interviews. However, it was not something which was judged to have an impact on the quality of the interview. In all interviews, the informants were able to speak their native language. Ten interviews were conducted in Swedish and one in Norwegian (Techstep). All companies were interviewed separately to not be affected by other informants and to get more transparent answers. To prepare for the interviews, the informants were divided into two categories based on the sectors and companies they were representing: i) consultant and trade association and ii) supplier. Further, two different interview guides were created where the questions in the categories

consultant and trade association were more general, and the questions for the suppliers were more specific.

The interviews were conducted using a semi-structured interview approach allowing flexibility during the interviews (Bryman & Bell, 2007). According to Halling and Helin (2018), semi-structured interviews are suitable when conducting abductive research. Allan Bryman and Emma Bell (2007) further argue that semi-structured interviews are suitable when conducting multiple-case-study research since structure is needed to compare the findings later and ensure you have comparable data. The abductive nature of the study is viable in the interview guides, which both involve questions relating to existing theories and research, as well as more open questions where the informant is free to elaborate. All interviews were recorded to later be transcribed. Recording the interviews was done for the researcher to be able to fully focus on the interview. Recording the interviews was also a strategy for limiting the risk of collecting biased information (Brinkmann & Kvale, 2018). The interviews were conducted in Swedish and Norwegian. After the interviews had been transcribed, the transcripts were translated into English before being integrated into the empirical chapter and the analysis. Due to ethical considerations, only the researcher managed the data. No software program was used to transcribe or translate the data. The researcher has profound English knowledge and has been studying and working abroad. Therefore, the translation and quality of the data are not considered to be affected by this. All informants were provided with the opportunity to revise their quotations.

Interview Guide

To prepare for the interviews, the informants were divided into two categories: i) consultant and trade association and ii) suppliers. Further, two interview guides were prepared where the questions in category one was more general to get a broader perspective on enablers and barriers to CPP. In the interview guides prepared for category two, the questions were more specific to get insight into the companies' experiences working with CPP. The interview started with the researcher presenting herself and the thesis project. After the presentation, the consent form was explained, and the informants had the possibility to ask questions about the consent form. The interview guide consisted of questions concerning the informants' professional experience and perspectives on CE and CPP, as well as more theoretically grounded questions. The

interview guide integrated both specific questions and questions allowing the informant to elaborate freely. The interview guides can be found in the Appendix.

Interviews with Company Representatives

Presented in Table 5 are the interviews conducted for the research. The interview with the two company representatives from Stena Recycling was conducted in person, and the others were virtual on Skype or Teams. The interviews were 45 to 60 minutes, held over two months between the 7th of March and the 17th of April 2023.

Company	Sector	Name	Position	Date	Interview type	Interview length
Atea	Tech	Camilla Cederguist	Sustainability Specialist	2023.03.23	Virtual	45 min
Dustin Group	Tech	Sandra Klackenborn	Head of Sustainability	2023.03.16	Virtual	45 min
Ecoplan in Medio	Consultant	Maria Losman	Consultant	2023.03.07	Virtual	45 min
Foxway	Tech	Per Stenlås	Team Leader Bid Management	2023.03.23	Virtual	45 min
Inrego	Tech	Stefan Hållberg	Head of Purchasing, Public Sector	2023.03.14	Virtual	60 min
PreZero	Waste	Anna Boo	Sustainability Strategist	2023.03.17	Virtual	45 min
Ragn-Sells	Waste	Susanna Lind	Head of Public Affairs and Government Relations	2023.04.03	Virtual	45 min
Stena Recycling	Waste	Ebba Krondahl	Strategic Account Manager	2023.03.08	Meeting	50 min
Stena Recycling	Waste	Magnus Mott	Industry Manager Recycling – Public Sector	2023.03.08	Meeting	50 min
Techstep	Tech	Cathrine Birkenes	Head of Sustainability and Compliance	2023.04.17	Virtual	45 min
Techstep	Tech	Martin Meintjes	Head of Bid and Contract	2023.03.22	Virtual	45 min
3StepIT	Tech	Robert Åholm	Head of Sales – Sweden	2023.03.22	Virtual	40 min

Table 5. Interview Overview – Compiled by the Author

Analytical Process

As the research process is abductive, the analytical process was taken part simultaneously throughout the research process. As illustrated in Figure 4, the research questions, and the analytical framework were revised several times throughout the research process. While the

analytical framework and empirics were re-analysed and revised continuously throughout the research process, the thesis formed itself consciously. Timmermans and Tavory (2022) discuss the idea of *positionality*, arguing that the researcher be influenced not only by the development of theory and data gathering in the conducted research but also by previous experiences. This could be regarded as lack of objectivity. However, Timmermans and Tavory (2022) argues that our position matters and that in “abductive analysis because leveraging your insider- or outsider-ness may alert you to surprising findings exactly because you have insight where others gloss” (p. 63). However, it is crucial to be aware of one own position and how it affects the research.

To manage the data and structure a framework for analysis, the data was coded. Coding the data simplifies the process of comparing the data and is, according to Timmermans and Tavory (2022), a key element in the analytical process of abductive research. The coding performed could be referred to as *focused coding*, meaning the researcher sets up a theme and code, having that in mind. *Open coding* may however provide a more open-minded perspective on the data. Performing focused coding, the researcher has an idea, based on theory and data, on a direction that could be relevant to explore. Important to note is that focused coding does not mean that the coding and analysis always end up with the researcher’s initial idea. The researcher should still be open-minded and, as with abductive reasoning, let the data and theories interlinked develop and form the research (ibid). The data was coded based on identified categories and subcategories presented in Table 4 (in the analytical chapter).

Quality of research

It is essential to reflect on the quality of the research and determine its *validity* and *reliability*; several components should be taken into consideration. Qualitative research has historically been questioned for its validity, making it a vital component to discuss concerning this research is of a qualitative nature. The trustworthiness of this thesis will further be discussed to elaborate on the reliability of findings and further the legitimacy of this study.

Validity and Reliability

In broad terms, validity refers to whether the research investigates, measures, or observes what it says it should (Bryman & Bell, 2007). However, validity is often distinguished into *internal*

validity and *external validity* (Gerring, 2006). Internal validity refers to “whether or not there is a good match between researchers’ observations and the theoretical ideas they develop” (Bryman & Bell, 2007, p. 410). For this thesis, the sampling process was essential to ensure that the findings would answer the purpose of the research and further strengthen the internal validity of the research. External validity, on the other hand, refers to whether the research findings can be generalised. John Gerring (2007) argues that case studies often suffer *representativeness*; an important factor for generalisation since it tends to focus on a specific phenomenon in a specific context. Since this thesis is a case study limited to focus on CPP in two specific sectors, the research’s external validity could arguably be questionable with the proposition of Gerring. On the other hand, even though the findings are contextual, they could still be *transferable* and provide insights and knowledge, developing a deeper understanding of the barriers and enablers of CPP.

Reliability can also be divided into *internal reliability* and *external reliability*, where external reliability focuses on whether the study can be replicated. In contrast, internal reliability focuses on whether there is a consensus amongst the researchers and observers about the findings. Due to their nature, qualitative studies are often more complicated than quantitative studies to replicate and therefore suffer in reliability. To strengthen the reliability of this thesis, much emphasis has been put on providing a detailed description of the research process. The interview guides have been attached in the Appendix for *replicability*. All interviews were recorded and transcribed by the author to make sure the data was accessible throughout the research process. The informants were all treated similarly; however, one interview was conducted in person while the other was virtual. Since the informants themselves had the opportunity to decide whether they wanted to be interviewed in person or virtually, this is not judged to impact the reliability of the research. Both validity and reliability have developed thru quantitative research building on the positivist idea of finding absolute truth. However, some researchers oppose the idea of an absolute truth and argue that qualitative research should be evaluated thru different criteria (Bryman & Bell, 2007). Egon Guba and Yvonna Lincoln (1994) propose *trustworthiness* and *authenticity* as the criteria for judging qualitative research. To increase the trustworthiness of the research, the respondents were provided with the opportunity to revise the material and citations. Respondent validation is important for the *credibility* of the research since it diminishes the risk of misinterpretation of the material (Bryman & Bell, 2007).

Guba and Lincoln's (1994) idea of authenticity have not been very influential; however, it raises important issues which are relevant to adhere to when conducting research. The concept discusses, for example, *fairness* in research and what the authors emphasize are an awareness of the representation in the research. In the context of this research, it is important to note that only private companies are represented. This means that only one side of the process of PP is represented in the research. Another aspect that is essential to bear in mind is that the informants are aware of the conditions regarding the thesis wanting to investigate barriers and enablers to CPP. The purpose set a positive tone for CPP, and this could impact the informants to talk about CPP from a more positive angle. The informants also represent their company and are therefore aware of the company's reputation, considering the company's values and interests in the interviews.

Ethical Considerations

To ensure valid and suitable research, it is essential for all researchers to consider ethical aspects. *Objectivity* is vital for the validity and quality of the research, and it is crucial that the researcher reflect on whether the research is biased (Bryman, 2009). Even though objectivity always is desirable, it is important to be pragmatic and recognise that absolute objectivity is impossible. Therefore, it is crucial for the researcher to be transparent and aware of one own presupposition and try to be as objective as possible. The researcher had initial contact with one informant and two companies before sending out invitations to participate in the study. However, since this contact was established in relation to the thesis project, it is not judged to have an impact on the objectivity of the research. The informants and companies represented in this study are participating voluntarily and do not get any compensation for their participation. Some informants were identified through snowball sampling, which is a sampling method that has been criticized for not being objective (ibid). For this study, it was seen as a way to gain contact with experienced professionals working with CPP, who would otherwise be hard to get in contact with. Sharan B. Merriam (2011) argues that snowball sampling can be more relevant than random sampling in qualitative research where the researcher aims to identify informants with specific competences.

To be able to gather data for the research, the process started with a submission to the Norwegian Agency for Shared Services in Education and Research (Sikt) to get permission to conduct the research. Permission from Sikt allowed data gathering and the researcher had to present how the data would be gathered, stored, and managed after the end of the research process. Prior to the research, the guidelines on good research practice provided by the Swedish Research Council (2017) were reviewed and considered. With this in mind, as soon as the informants agreed to partake in the research, the participants were sent a consent form with information about data gathering and considered ethical aspects. In the consent form, the informants had the opportunity to wish to participate anonymously. The consent form also included an additional quotation agreement where the informants could wish to review transcripts and quotations. The consent forms were sent out both by email and with Adobe Acrobat. The informants could then choose whether to sign electronically or by hand. At the beginning of the interviews, the consent form was explained, and the informants had the opportunity to ask questions regarding the form. The informants were also told that if they would be cited in the thesis, they would be informed in advance for them to be able to review. This was regarded as an important component since the interviews were done in Swedish and Norwegian, and the thesis was written in English. This was judged as an essential component to limit the risk of misinterpretation regarding the interpretation of data and translation.

Empirical Data

This chapter presents the empirical findings of the research. The empirical findings in this case study consists of primary data collected thru interviews and secondary data in form of the represented companies' latest sustainability reports. Since the research is a comparative case study, the findings will be presented by each case separately. Further the data will be presented in the structure of the subcategories presented in Table 4. The chapter concludes with a summary of the most important findings.

Technology Sector

This part of the chapter will present the empirical findings from the seven interviews conducted with company representatives in the tech sector, as well as the interview with Maria Losman, Consultant at Ecoplan in Medio. The informants represented in the tech sector are Camilla Cederquist, Sustainability Strategist at Atea, Sandra Klackenborn, Head of Sustainability at Dustin Group, Pär Stenlås, Team Leader Bid Management at Foxway, Stefan Hållberg, Head of Purchasing at Inrego, Cahrine Birkenes, Head of Sustainability and Compliance at Techstep, Martin Meintjes, Head of Bid and Contract at Techstep, Robert Åholm, Head of Sales - Sweden at 3StepIT, and Frida Faxborn, Public Affairs Expert (Sustainability) at TechSweden. The primary data further presented are collected thru these interviews. Secondary data presented are collected thru the company's most recently published annual sustainability reports.

Company Information

The companies could all be considered frontrunners in transitioning to a CE. 3StepIT and Inrego are, for example, built on a fully circular business model. Some companies sell hardware, software, and services, while some only focus on selling services to manage the lifecycle of their customer's IT infrastructure. They all have customers in both the private and public sectors and are all operating in Sweden and abroad.

Knowledge Barriers

In all interviews, the informants were informed that previous research has identified 'lack of knowledge' as a barrier to CPP (see Appendix for interview guide). Frida Faxborn, Public Affairs Expert (Sustainability) at TechSweden, argues that lack of knowledge is the main barrier to CPP. All informants affirm that they have noticed an increased interest in circularity from

the public sector. However, Camilla Cederquist, Sustainability Strategist at Atea, argues that there is an increased awareness within public organisations but that the demand for circular products still is relatively low. Cathrine Birkenes, Head of Sustainability and Compliance at Techstep, argues that larger municipalities are more mature in this process than smaller municipalities, which Birkenes links to access to resources. Per Stenlås, Team Leader Bid Management at Foxway, shares Birkenes observation and further argues that there is often a big gap between the municipalities' sustainability goals and how they procure and manage their IT; "actors in the public sector have begun to set different goals for how to become increasingly sustainable and the awareness among consumers is increasing every day" (Foxway, 2023, p. 9).

Cederquist describes that public organisations often require reused IT in the product catalogues but that they, in the end, seldom purchase these products and choose new IT products instead. Sandra Klackenborn, Head of Sustainability at Dustin Group, shares the experience of Cederquist and states:

"It is quite common that there can be requirements that there must be a recycling solution and a reused product in this category [computers and telephones], for example. It is procured, but then what the colleagues choose to select [...], is not necessarily this reused product."

"I would like to see that they use their purchasing power, that is, that they not only procure different options but also buy those they want to prime. They deliver requirements where you must submit products with low environmental impact, but I would also like them to buy them."

Stefan Hållberg, Head of Purchasing at Inrego, argue that if Sweden wants to become more circular on IT, they need to start procuring reused IT products and further states that Inrego does not see this demand on the market today. Stenlås shares Hållberg's statement and declares:

"I must say that the 'recond' [reused] market, just like 'product-as-a-service', is very small. We do not see the demand in Sweden today. It might be that we are doing very well and have the opportunity to enter the first life cycle."

Several informants explained that their most prominent contribution to circularity today is the procurement of take-back services. Klackenborn states:

“That is our biggest contribution right now, that we have a well-functioning flow, especially with take-back, and that is growing all the time.”

Cederquist argues that Atea would like to see a change in how we today value procured products and suggests a broadened perspective which integrates the ‘total cost of ownership’; integrating the whole lifecycle of products, from the beginning to the end, this would according to Cederquist enable us to value different factors when procuring goods, and she explains that:

“Buying the service of someone picking up your used IT when it is no longer needed is, of course, more expansive if the alternative is to amass since that does not cost anything.”

Cederquist further exemplifies this by explaining that the initial cost might be higher. However, with the proper competence and time, the public sector could do a total cost of life cycle analysis. Then it might be relatively inexpensive to go for the sustainable option. Cederquist states:

“I really want to challenge the narrative that sustainability drives cost. When taking the whole life cycle into perspective it is often not true.”

TechSweden shares the opinion that a product’s entire lifespan needs to be considered; “The public sector must shift its focus from product price to lifespan and circularity when making purchases. Procurements should contain requirements for expected lifespan reporting (TechSweden, 2022, p. 45). Martin Meintjes, Head of Bid and Contract at Techstep, shares this perspective and argues that structural challenges such as budgets can become challenging when buying service instead of hardware since this sometimes requires the procurers to think beyond their current budget. Further, Stenlås argue that there is a need to shift perspectives and state:

“We need to shift our perspectives and not only think locally, here and now in my municipality or department, but to start to think globally, because when you start thinking about the environment, it is not only x municipality or y that is affected by what you buy, it is a global issue.”

Structural Barriers

The informants had different perceptions and experiences concerning structural barriers to CPP and how to manage these challenges. One barrier mentioned in several interviews was quantity, which is an issue of requirements. Klackenborn states:

“It is about being in phase all the time. Partly with how we can offer and what we can offer, that we have made sure that we have that ecosystem, and that we get the products that we need to be able to resell reused products. That it is available in sufficient volume and that it also meets the customers’ demand at the same time. That is the challenge when marking a new ecosystem.”

Dustin Group’s latest sustainability report writes, “The hardware market in the segment [large corporate and public sector] often concerns larger purchases of computers for all or some employees. The awarded public sector contracts often stipulate specific models or performance” (Dustin Group, 2022, p. 27). Klackenborn further argues that it becomes a problem when the procurers require a volume of a specific product since that makes them bound to that model. Hållberg confirms this disincentive and states:

“If you look at a normal procurement of IT equipment today, it is extremely specified, such as what kind of memory it should have, what type of processor it should have, what it should be, it is so extremely specified that it is only one or two models you can choose between.”

A solution to this could, according to Klackenborn, be to demand a solution instead of a specific product. Foxway believes this will be the dominant way to procure IT in the future; to procure a function or service instead of hardware. Stenlåås state:

“Going forward, we will not buy products but instead a service, product-as-a-service if you put it that way, and in this way, we can ensure that there is a supplier who, from the new product to the end, can handle the entire flow, thus making it easier for our customers.”

Birkenes shares Stenlås perspective that a supplier with the whole life cycle perspective is desirable. Further, Meintjes argue that they have seen an increasing request in tenders of reusing IT products in the public sector; this means that the product is kept within the organisation during several life cycles but is passed from one colleague to another depending on their specific needs. Further, Birkenes argue that this requires that the organisation procure a service which manages the process to keep track on and secure service and the safety of the products. Meintjes elaborate on the idea of a common system where all organisations in the public sector could swap their IT products. However, to re-circulate IT products, the initial buy must be high-quality. Stenlås argues:

“If you buy a high-quality product, you might be able to spin it; if we say that a life cycle is three years, then with the right recondition and care, you might be able to spin it three, possibly four times on a global perspective; otherwise, you buy a cheap machine which maybe lasts one life cycle.”

An incentive to CPP could be to review the structure of sustainability reporting. TechSweden argues, “Policymakers can contribute by creating a demand for a standardised method for measuring avoided emissions as well as encouraging government agencies or public procurement to require that this be reported” (TechSweden, 2022, p. 59). Hållberg states that:

“Buying reused IT is even better because you basically buy a product where someone else has already taken the emissions. It does not matter on a global scale where the product is reused, as long as it gets a long lifetime. But for a company, an authority or municipality it is an opportunity to reduce emissions and create impact in the sustainability report.”

Hållberg and Robert Åholm, Head of Sales – Sweden, 3StepIT argue that an enabler to CPP could be to separate the procurement of IT into three different procurements, one for new IT, one for reused IT and one with a take-back service. Åholm argues that another way to structure

it could be to divide the procurement into different options where suppliers could respond to one or all of them; this would, according to Åholm, also be positive as it exposes all these parts to market competition, and further provides better insight into the expenses of each component. Hållberg state that it would also provide an opportunity for smaller suppliers without the same resources to respond to tenders:

“We see many tenders where maybe only two big companies respond, and all the small ones who might be able to deliver do not because they do not have the resources or procurement techniques.”

Hållberg argues that there are many reasons for not integrating all these components into one procurement, stating that:

“If you have the same supplier for new and reused IT, then there will obviously be an incentive for the supplier to steer towards one or the other, depending on where they make the most money.”

Åholm further argues that there is resistance in the public sector today to separate the procurement into several; he further states:

“We would need to come to an understanding that it is not better to have one supplier that delivers everything. It has been modern to have as few suppliers as possible; it is a trend both in the private and public sector.”

Collaboration

All informants agreed that collaboration is vital to enable more CPP. Cederquist states:

“In a circular economy, we are all a part of the life cycle, and we are all both customer and suppliers at the same time. That is why we need to collaborate.”

Maria Losman argues that good business builds on collaboration between the customer and supplier, and she states that:

“In order for good business, you will need collaboration between the customer and the supplier, which requires trust [...] However, it also demands that you engage both before and during the procurement process.”

The informants argue that collaboration is desired from many aspects, Losman further argues that the relationship between the customer and the supplier must be respectful, especially since the suppliers are the experts in their field. Stenlåås states:

“As an expert in your field, you have a responsibility when you enter into business with the public sector to help them know what is at the forefront and how to do it.”

Klackenborn argues that there are structures within the industry that makes some of the requirements from the public sector hard to deliver upon; there is, for example, no standard in place today that makes it possible for Dustin Group to report CO2 emissions for each specific reused product, which is something Klackenborn explain that the public sector today often demands. Stenlåås further argue that it is important that the procurers set the proper requirements where they, as suppliers, can have an actual impact. Klackenborn presents another structural barrier related to reused products: Customers today do not know what they get when they buy reused IT. Klackenborn explains that there is no standard for how to grade reused IT. Inrego has developed its own grading system with a scale from A+ to D in order to communicate the standard of their products. Hållberg further explains that an A+ computer must be in that standard to secure trust in customer relations.

Hållberg argues that if we want to reach our climate targets, we must start to buy reused IT, which exemplifies the case of the city of Gothenburg, which has a climate target of limiting their emissions by 90 per cent by 2030. Hållberg further argues that targets like this, contrary to sustainability ambitions, require the organisation start to collaborate internally. For an organisation to limit their emissions by 90 per cent, every department needs to act, and this requires an internal dialogue between the procurer, the IT manager, the management, and the chief of sustainability.

Dialogue

All informants talked about dialogue as an essential component and enabler to CPP. Klackenborn argues that dialogue can be complex in the context of the procurement process since PP is highly regulated, which could obstruct a constructive dialogue. Klackenborn state:

“The Agency for Public Procurement sometimes invite us for dialogues before [a procurement], and then we usually have a very good, constructive dialogue. We would like to see more of that and also that these best practices really get embedded in the procurement practices and not just the guidelines”

Regarding the dialogue between suppliers and procurers, Cederquist argues that there are some misconceptions among procurers in the public sector about what is legally accepted. Cederquist mentions that the National Agency for Public Procurement has published a guide to clarify myths about market dialogues in PP. The guide was published to clarify these myths and support public buyers to feel confident initiating dialogues with suppliers. Birkenes declare that Oslo municipality has been very proactive in initiating an early market dialogue and collaboration with suppliers to ensure they construct the tender documents as precisely as possible. Faxborn argues that dialogues are needed in both directions and serve the procurers and suppliers. Faxborn states:

“In all public procurement the industry also has a responsibility to listen and understand what the real needs are and not just focus on what they offer, so dialogue and communication need to happen both ways, and it can be better on all levels, but you need to have someone to talk to.”

Cederquist argues that a barrier to CPP is that it is complex and requires that organisations rethink how they have always done things. Cederquist states:

“CPP is also a lot about what you do not buy [...] For example, in our case it can be about how you design the digital workspace in the most resource-efficient way possible.”

An enabler is, according to Cederquist, collaboration, both within the procuring organisation and between the procurer and the supplier:

“I would argue that what is needed is the internal dialogue to start communicating with the Head of Sustainability about what to do, how to think, and what KPIs shall be used to be as resource efficient as possible, still delivering the function needed.”

Cederquist further argues that many dimensions need to be considered additionally to what requirements should be integrated into the tender documents. Further, knowledge, collaboration, and dialogue are needed to integrate all these aspects. Cederquist argues that it puts much pressure on the procurer to possess all that competence and says:

“I was talking to a procurer that said, I buy broccoli in the morning and IT in the afternoon. Of course, it is impossible for that person to know everything.”

Åholm emphasises the importance of internal dialogue and argues that this is essential for a successful procurement process. Åholm states:

“We feel that we have a consensus with IT about what we want to achieve, but internally they fail to explain to the procurement department what they want and how to procure it [...] They may know what you want but do not know how to ask for it.”

Waste Sector

This part of the chapter will present the empirical findings from the three interviews with company representatives in the waste sector. The interviews consisted of four company representatives with Anna Boo, Sustainability Strategist at PreZero, Susanna Lind, Head of Public Affairs and Government Relations at Ragn-Sells, Ebba Krondahl, Strategic Account Manager at Stena Recycling and Magus Mott, Industry Manager Recycling – Public Sector at Stena Recycling. The primary data further presented are collected through these interviews. Secondary data presented are collected through the company's most recently published annual sustainability reports.

Company Information

The represented companies all have circularity included in their strategy. All the companies have customers in the private and public sector, selling similar products and services. They are all operating in both Sweden and abroad.

Knowledge Barriers

In all interviews, the informants were informed that previous research has identified ‘lack of knowledge’ as a barrier to CPP (see Appendix for interview guide). The informants agreed that lack of knowledge is a barrier to CPP; however, they had different perceptions and experiences about how this plays out in practice. Ebba Krondahl, Strategic Account Manager at Stena Recycling, states that most municipalities do not even use the term ‘circular’ but that it differs a lot from municipality to municipality. Krondahls’ colleague Magnus Mott, Industry Manager Recycling – Public Sector at Stena Recycling, believes that the right competence exists within the organisations and argues that he believes the problem is that the public sector is not brave enough to try new ways of working. Mott states:

“What is missing is lack of determination, and there is an anxiety within the public sector in Sweden that makes people more afraid of failure than driven to succeed.”

Anna Boo, Sustainability Strategist at PreZero, argued that even though they experience that there is a knowledge gap within the public sector, they have noticed that public buyers have more knowledge today than before, which, according to Boo, is viable in how they ask questions. All informants said they often take on an educational role towards public organisations. Susanna Lind, Head of Public Affairs and Government Relations at Ragn-Sells said that they have noticed that public organisations are interested in procuring sustainably and that they often demand fossil-free transportation and energy, but further states that:

“There is a long way to go to what we define as circular procurement, which is when the tender document consists of requirements for products made completely or partially of recycled materials.”

Further, Losman argue that sustainability demands tend to be a ‘tick-in-the-box’ in procurements and states:

“The Swedish government has for a long time had a directive that they should measure environmental requirements in procurement. Municipalities and regions often have similar goals. So, if someone writes a standard clause in their contracts where it says that the supplier must take the environment into account, or something similar, then it will be a ‘tick-in-the-box’ that you have included environmental requirements”

Lind shares that Ragn-Sells annually conduct a survey asking Swedish municipalities if they procure circular or not, and she says that approximately 20 out of 290 municipalities answer that they ask for recycled materials in procurements. It is not even seven per cent of all Swedish municipalities. Lind explains that Ragn-Sell works a lot with advocacy work to inform and enlighten public authorities as well as society at large about how waste could and should be viewed as a resource. Lind argues that it is a complex process and states that:

“We inform and try to clarify for decision makers and politicians about what we think needs to be done or changed and, in some questions, we get bigger input, and in other questions, we have a longer way to go than we expected from the beginning.”

Rethinking the procurement process and integrating circularity could be complex since it requires knowledge. Both PreZero and Stena Recycling offer consulting services to private companies and the public sector to help them transition to becoming more circular. In Stena Recycling’s latest annual sustainability report, they write, “To meet the increased demand, we have established Stena Circular Consulting to support our customers on a strategic level. This provides good conditions for transition and circularity” (Stena Recycling, 2021, p. 2, translated by the author). Mott further informs that:

“They [Stena Circular Consulting] have started to work more towards the public sector in order to help our society in the transition towards circularity.”

Boo explains that a lot of the knowledge sharing PreZero does is inform their customers about which materials are possible to recycle and how to recycle them. Boo states that this requires them to rethink the whole purchasing process since they must consider the recycling process already before the purchase and, further, purchase products which they know will be able to recycle in a later state. Boo, states:

“The biggest challenge is that they have not considered what they purchase, what they need, and the knowledge sharing between the procurement department and those in charge of the waste management.”

Boo further argue that it is important that the public sector make sure their procurers possess the proper knowledge and competence and states that:

“We cannot provide all education; they need to possess some knowledge before demanding something; otherwise, we can just deliver whatever we want.”

Another aspect which Boo points out is that if the public sector possesses the proper knowledge and competence, they would also be able to lead the transition and help the companies in the right direction, which is something PreZero welcomes:

“It might be that they request something which no one can deliver upon. But if they never ask the question, then no one will ever fulfil the requirements, and this is also a way for us to develop.”

Structural Barriers

Ragn-Sells identifies current laws and regulations as the main barrier for the society to transition and become fully circular. Lind states that:

“Our view is that the laws and regulations we have today are not adapted for a circular economy.”

In Ragn-Sell's latest sustainability report, they write that "current legislations often discriminate against recycled materials, making it cheaper to source virgin material than recycled ones, and create trade barriers for a circular economy" (Ragn-Sell, 2023, p. 24). Lind provides an example saying that the company EasyMining, part of Ragn-Sells group has developed a technology for recovering phosphorus. Phosphorus, listed by the EU as a critical raw material, can be recovered from sludge and brought back into the loop, securing an endless supply. However, today, several markets are closed for recovered products and the regulations are in general focusing on origin instead of quality. Lind argues:

"The idea of 'waste as a resource' is our main priority; that we stop seeing waste as something to get rid of but instead, in legislation, policy and procurement, start to see waste as a resource – that is our most important message."

Boo shares Lind's perspective that there is strict enforcement of the law on waste management which becomes a barrier to their possibility to circulate materials which could be circulated fully. Boo further argue that this is something which they should advocate for, together with other companies in the waste sector and states that:

"We could also be a visible actor within the circular economy, not only being those who transform waste to material but taking a more active role in this transition generally."

Regarding the Public Procurement Act, Mott argues that collaboration is a crucial feature to see the possibilities instead of limitations in how these laws and regulations are applied in practice and further states that:

"Circularity requires that we start doing things differently; in cooperation, we need to find new ways of working because the old procurement process in the public sector is limiting in regard to taking advantage of the creativity and innovativeness within the private sector."

Mott further argues that there is insecurity and immaturity amongst public organisations making it easy to fall back into old ways of doing things. There is also an insecurity of how to

ensure they meet the requirements on transparency and openness and how to report environmental benefits and resource efficiency.

Lind argues that a structural barrier they have identified when working with municipalities is that the politicians often put much pressure on the procurers with ambitious visions and goals. The result is that it leads to the procurers often ending up somewhere in the middle with goal conflicts and targets which are unable to fulfil. Ragn-Sells see this as a problem, and Lind states:

“Lack of internal dialogue in the municipalities becomes a barrier when the procurement plan is constructed in such a way that it is not possible to execute in practice. The procurer is still obliged to act according to the plan no matter how many tenders they get providing relevant alternatives”

Collaboration

The informants all agree that collaboration is an essential component of CPP, and Mott states that:

“The future belongs to those who are good at collaborating in order to solve problems.”

Mott further argues that the public sector needs to leave its comfort zone to get these successful collaborative processes. Mott’s perspective is supported by Krondahl, who argues that collaboration and dialogue are essential components but need to be executed differently than how it is done today. The desire for increased collaboration is evident in all interviews, and it becomes apparent that all interviewed companies are motivated by supporting their customers to transform and become more sustainable. Mott states:

“It benefits society, and not just one’s own company, and it shows, just as you say, to be a pioneer and also that you create a trust that you want to go the way towards the circular society.”

The company's consulting businesses and willingness to educate their customers indicate that they view collaboration as a key to enable more CPP. Lind argues that she believed that municipalities often trust and look at each other for solutions and further states that:

“The municipalities trust each other, especially in big cities. If one municipality demands a specific solution, other municipalities in the same region will most likely demand the same.”

Lind argues that this is reasonable since the municipalities know that this is a solution that works; second, they know that entrepreneurs are willing to tender. Lind further states that she believes increased collaboration between the municipalities would be desirable for guiding them in the procurement process. Ragn-Sells are involved in creating these forums for collaboration. In their sustainability report, they write that they “participate in a number of partnerships in order to promote more circular procurement practices. Through these collaborations we strive towards ensuring that a greater share of public spending is allocated to products that have been made fully or partly by recycled materials” (Ragn-Sells, 2023, p. 42).

Dialogue

The informants agreed that dialogue is another essential component to enable more CPP. Ragn-Sells write, “Our work on public procurement has led to increased dialogue, and strengthened relations, with local decision makers. We will continue building dialogue by initiating a platform for exchange on circular procurement between municipalities next year. Later, the platform will also include companies” (Ragn-Sells, 2023, p. 39). Krondahl welcomes more initiatives to increase dialogue from the public sector and states that:

“We have now also seen, for example, linked to the new regulation that comes into force on January 1st, 2024, that municipalities initiate meetings with industry colleagues to discuss common challenges together, and that becomes a very nice and good forum, but it is often in matters which they affect, such as legislations.”

Lind argues that it would be desirable if the politicians listened more to Swedish enterprises to gain knowledge about their perspectives and the solutions they could offer. Lind further argues

that if the public sector were more aware of these solutions, they would in a better position to know what to demand and states:

“As long as you compete on the selection criterion of lowest price, it is usually not possible to offer diversified solutions because then you will lose early in the procurement process, so I would say that more dialogue between companies and municipalities is the key.”

Boo confirms Lind’s perspective and argues that market dialogue in the procurement process is not only about finding solutions to complex problems but could also be about informing the buyers about products and services they did not know existed. Lind further states:

“There are always ways to improve the dialogue, and those dialogues are very often person-dependent, so you get to know the other party. In the end, the counterpart at the municipality knows what Ragn-Sells can offer, and we know what this municipality is asking for, and then you have a dialogue based on that, so I would say that the relations are often very good, and I think that the relations are very good for more companies out there.”

The chapter has presented the empirical findings from the research. The following subchapter consists of a summary of the most important findings.

Summary of Empirical Findings

The chapter has presented a selection of the most relevant empirical data gathered from the interviews with company representatives and secondary data gathered from the company’s latest sustainability reports. The most important findings in the research are summarized and presented in Table 7 and provides a foundation for the following analytical chapter.

Tech sector	
Barriers	Enablers
Require reused products in the product catalogue but do not buy these in the end.	Innovative forms of procurement such as functional procurement.
Extremely specified requirements limit the possibility for some suppliers to answer tenders and it limits the supplier’s possibilities to be creative in providing solutions.	Requirement on sustainability reporting could incentives more CPP.
The internal dialogue, between professions and the orderer and procurer, within the public organisation.	Needs assessment before procurement.
Waste sector	
Barriers	Enablers
No requirements for recycled products in tender documents today.	Increased knowledge. The suppliers often take on an educational role providing consulting services.
There is a big gap in the progress amongst municipalities.	Increase the internal competence in the public sector. Both for internal benefits but also to steer the market to become more sustainable.
Current waste regulations hinder the companies in order to become fully circular.	The public sector should take advantage of the innovativeness in the public sector.

Table 6. Summary of Most Important Findings – Compiled by the Author

Analysis

This chapter provides an analysis of the empirical data presented in the previous chapter. The theories presented in the theoretical chapter will form the discussion to answer the purpose of the thesis and the research question: “From the supplier’s perspective, what are the barriers and enablers for the implementation of circular public procurement?”. The analytical process is illustrated in Figure 6. The chapter is structured as follows: first, an overview of the main findings will be presented. Further, the theory of institutional entrepreneurship will be applied to the case study of the two sectors. After that, a discussion of the barriers and enablers will be provided, connecting previous research and the theory of institutional entrepreneurship.

Summary of the Main Findings

The empirical chapter’s main findings indicate a big gap between the public sector’s ambitions regarding CPP and what is being implemented in practice. Previous literature has indicated that lack of knowledge, lack of collaboration and poor management of risks are barriers to CPP implementation. The supplier’s experiences confirm these conclusions. All informants argued that more competence is needed within the public sector, and all informants acknowledge that they most often have an educational role when working with the public sector. According to the empirical data, increased knowledge within the public sector would, benefit both the procuring organisation and the suppliers since a lack of relevant competence becomes an obstacle when demanding circularity in PP. There is a growing awareness and interest in circularity within the public sector; however, the demand for circular products and services needs to grow. Conducting proper needs assessments at the start of or before initiating a procurement could enable a more precise and efficient procurement process. Innovative forms of procurements, such as functional procurement, were argued by the tech sector as a tool to increase CPP. The importance of collaboration and dialogue was stated during all interviews, and dialogue is, according to the informants, of most importance both within the procuring organisation and between the procurer and supplier.

There is frustration amongst the suppliers that the bridge between the public sector’s ambitions and the private sector’s solutions is intact. The empirical findings indicate that the suppliers take on an active role in educating public organisations on how to procure more circular. On the other side, the Swedish Government has initiated a strategy for Sweden to become fully

circular, mentioning PP as a key element in this transition. Somewhere in the middle of the innovative suppliers and the ambitious public policies, we find the public organisations who become the ones to put theory into practice.

The analysis will further discuss the findings in relation to previous research and the theory of institutional entrepreneurship. Figure 9 has been developed to illustrate how this analysis further integrates the theory of institutional entrepreneurship; the theory is applied to better understand how the identified barriers and enablers affect the potential of CPP. The analysis builds on the idea that an institutionalisation of CPP is desired and further discusses the enabling components for a more comprehensive implementation of CPP in practice.

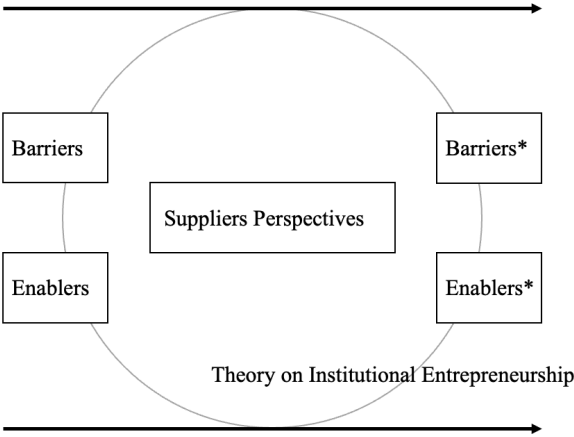


Figure 9. Analytical Process – Compiled by the Author

Are the Represented Companies Institutional Entrepreneurs?

In order to apply the theory of institutional entrepreneurship to further better understand the supplier’s perspectives on barriers and enablers to CPP, it is relevant to first discuss whether they could be regarded as institutional entrepreneurs. Rao et al., (2000) identified institutional entrepreneurs as actors who form new social structures by introducing new norms and beliefs. To do so, they identify political opportunities, create a vision, and mobilise allies. Based on this quite broad definition, the represented companies could be defined as institutional entrepreneurs. The companies all strive to form the institutional landscape concerning PP to make CPP the new norm. Perkmann and Spencer (2007) state that institutional entrepreneurs evoke this institutional change, motivating it as a solution to societal needs. This strengthens

the argument that the companies are institutional entrepreneurs as they propose CPP as a strategy tool for more sustainable procurement. This could further be understood as a tool to mitigate the environmental impact and take action to combat climate change. Further, Battilana et al., (2009) present two criteria to identify institutional entrepreneurs, the first one being that they must initiate divergent change, and the second one that they actively must participate in implementing these changes. Parkmann and Spencer (2007) further provide examples of activities in which institutional entrepreneurs can engage, to change the institutional landscape and further mention activities such as co-operations, theorisation, and activities with the purpose of influencing a wider audience. The empirical data indicates that the companies actively participate in educating the public sector to enable more CPP. They also engage in activities to develop the theoretical understanding of CE. For example, Dustin, Ragn-Sells and Stena-Recycling are a part of SIS's committee on CE to actively participate in the development of new ISO standards. In addition to this, they conduct advocacy work both individually and thru collaborations with other companies in their industry. Grounded on the characteristics of institutional entrepreneurs presented by scholars, the companies, based on their engagement in both interactional, technical, and cultural activities, are further defined as institutional entrepreneurs. With this argument being said, it is important to remind oneself that institutional entrepreneurs could be one organisation, a group of organisations acting together, or an individual.

After concluding that the represented companies are institutional entrepreneurs. The two sectors have identified and framed the need for circularity to be integrated into PP. With this in mind, it is further relevant to analyse the enabling conditions for institutional entrepreneurship, first identifying field characteristics and then the actor's social position.

Enabling Conditions for Institutional Entrepreneurship: Field-level Conditions

With increased awareness about climate change and its possibly devastating effects, different strategies to mitigate global warming have been introduced. The UN's implementation of Agenda 2030 and the 17 SDG put pressure on governments to find solutions to tackle global challenges such as global warming. After the Paris Agreement, Sweden was one of the first countries to implement the goal of becoming net zero. To reach the target of zero emissions by 2045, the Swedish Government identified several strategies to mitigate its environmental

impact, transitioning to a CE being one of them. Further, with the large environmental footprint of public consumption, and the purchasing power within the public sector, PP was identified by the Swedish Government as a key strategic tool to initiate a transition towards a CE. The European Union has further, as a part of the New Green Deal, published the Circular Economy Action Plan, where PP, again, is mentioned as an important strategic tool for the transition to a CE. There seems to be a clear consensus that strategies which provide opportunities to mitigate global warming are desired. With this in mind, the idea of the paradox of agency becomes relevant to discuss. The question is further whether the institutional entrepreneurs are acting within the structural context or if they act outside of that institutional structure, structure versus agency.

Garud et al., (2020) argue that the paradoxical elements of analysing institutional processes provided by institutional theory (structure) and institutional entrepreneurship (agency) generate a tension not to necessarily be neglected. While institutional theory, thru its three pillars containing regulative, normative, and cultural-cognitive aspects, describes how an organisation, due to these hegemonic structures, steer organisational behaviours. With the described field conditions, the institutional theory would argue that regulations, social obligations, and isomorphism would drive organisations to transition. On the other hand, institutional entrepreneurship would argue that the agency of institutional entrepreneurs is, thru the field-level conditions, a window of opportunity to initiate change.

In the context of the empirics in this research, there is, as previously described, an embedded norm where strategies to mitigate climate change are welcomed. CE has further become a term used in public policy both nationally and internationally. However, today we do not see any regulations where organisations are enforced to implement circular principles. Neither do we see any big social movements concerning CE. However, as previous research has shown, there is a growing interest in utilising CE as a sustainability strategy. This is also evident looking at the participant in this thesis; 3StepIT and Inrego were founded on circular business models, Atea and Dustin, which are larger companies, have implemented CE as a sustainability strategy at a later stage.

Enabling Conditions for Institutional Entrepreneurship: Social Position

The social position of the institutional entrepreneur is essential since it determines the actor's perspective on the field-level conditions, legitimacy, and further possibility to initiate institutional change. The sectors differ in their position on the market; while the represented companies in the waste sector all have similar annual turnover and customer base, the companies in the tech sector differ in diverge in annual turnover and customer base. An interesting finding when analysing the different companies in the tech sector from this perspective is that while the smaller companies have a fully circular business model, the larger companies offer both circular products and solutions and traditional IT. Even though the organisations are analysed as one unit, it is still an important finding since it could affect their legitimacy. Further, as was stated by Hållberg and Åholm, smaller companies do not always have the resources or procurement techniques to answer tenders, which in addition, makes it harder for them to take an active role in forming the institutional process. However, Battilana et al., (2009) argue that low-status actors [in this context considered to be actors with limited resources] often are the ones initiating institutional change; this is further motivated by the fact that larger organisations often must take a more considerable risk when deviating from institutions. It could explain why larger companies still provide circular and traditional products and services.

In the waste sector, the market looks different. There are, contrary to the tech sector, fewer larger companies. Stena Recycling, Ragn-Sells and PreZero are the largest private companies on the market. This does affect their legitimacy and status to evoke transition.

Institutional Entrepreneurship Strategies: Divergent Change Implementation

Battilana et al., (2009) identify three variables for the institutional entrepreneur to initiate institutional change, i) creating a vision, ii) mobilising collaborations, and partnerships and iii) motivating their allies to actively participate in transforming the institutional landscape. This part of the process emphasises the activities in which the institutional entrepreneur engages, and this is where the empirics on identified barriers and enablers will further be analysed, applying the theory of institutional entrepreneurship.

Understanding Barriers to Circular Public Procurement

Reviewing the definition of CPP provided by the European Commission, CPP is the “process by which public authorities purchase work, goods, or services that seek to contribute to closed energy and material loops within supply chains, whilst minimising, and in the best case avoiding negative environmental impacts and waste creation across the whole life cycle” (European Commission, 2017, p. 5). Based on this definition, it becomes evident that there are many components for public organisations to consider when implementing circularity in PP, and this further requires knowledge. Based on previous research and the empirics gathered in this research, lack of knowledge seems to be one of the main barriers to CPP implementation. From the perspective of institutional entrepreneurship, the knowledge gap could become a barrier in order to create a shared vision and mobilise allies. However, in the waste sector, two of the three represented companies sell consulting services to help public organisations become more circular, and Stena Recycling has identified this as a growing market going forward. These activities could be understood as a strategy for the institutional entrepreneurs to create networks and awareness and knowledge within the public sector to enable the institutionalisation of CPP. On the other hand, outsourcing the competence instead of making sure the proper competence is feasible within the organisation could become a problem. Trammel et al., (2020) stated that PP is responsible for achieving efficiency and quality and reducing costs. Outsourcing the competence could be seen as a solution for the public sector to quickly increase the competence in the organisation, but without the proper in-house competence, it could become a problem to secure quality and best price over time. The argument is supported by Boo, who states that the public sector needs to secure that they have the proper competence and not only rely on the suppliers.

Edler et al., (2014) conclude that lack of knowledge further is one of the main barriers to innovation in PP, and further states that innovation is a key component to ensure more CPP. Rolfstam (2021) further states that governments must initiate an innovative procurement climate. Kristensen et al., (2021) suggest that innovative contract forms could simplify the integration of circularity in PP; this was acknowledged by the informants who argued that contract forms such as product-as-a-service and functional procurements would enable more CPP.

Hållberg argued that the tender documents today on IT products tend to be extremely specified, which in many cases makes it hard for the suppliers to provide the required demands and stops them from finding innovative solutions. On the other hand, Boo argued that demanding sustainability aspects which no supplier might be able to deliver upon could also incentivise the companies to develop and become more sustainable. Klackenborn argued that the public sector should set requirements where the organisations have an actual possibility to impact. An example is that the public sector wants to know the CO2 emissions for each product, including the reused. Today there is no infrastructure that makes it possible for tech companies to provide that information, and the result is that the product does not meet the requirements. Mott states that public organisations need to take advantage of the innovativeness and creativity within the public sector. Here, the absence of proper competence becomes an evident hinder since in order to construct a tender document where the buyer feels secure, they get what they want and at the same time enable the supplier to be innovative requires knowledge and experience. Klackenborn argued that functional procurement could be a solution to this; requiring a function instead of a product gives the supplier the possibility to be innovative while the buyer gets the service they need.

Sönnichsen and Clement (2020) stated that integrating circularity in the procurement process brings complexity since it challenges the traditional procurement strategy of going for the cheapest option. This statement needs to be revised. In the case of the traditional procurement strategy, Lind argued that competing on the criterion of lowest price inhibits innovation in procurement, motivating that offering a diverse solution in such a case will only make the innovative companies lose early in the procurement process. Stenlåås further argued that investing in quality products is essential to enable a circular flow of products. In this sense, integrating circularity is complex because it requires that organisations start to procure using different criteria than what they traditionally have done. On the other hand, it does not have to be complex, nor does it have to be more expensive. Cederquist argued that the narrative that sustainability drives cost is not true when integrating the whole life cycle of a product. With that being said; if the narrative is that integrating circularity in PP is complex and costly, another barrier to CPP might be mindsets.

Cederquist and Klackenborn both stated that public organisations frequently demand that there should be a reused IT product in the product catalogue that is being procured, but that the colleagues seldom choose the reused IT and instead go for the new products. Klackenborn also shared that Dustin's biggest contribution to circularity today is thru take-back service. Hållberg shared the same experience and noticed the big difference in the market for demand of take-back service in contrast to reused IT. Procuring take-back services for IT in the public sector is a critical component of securing a closed-loop system, which is the fundamental idea of CE. However, demanding reused IT in the product catalogue and procuring a take-back service leaves a gap where the public sector has an essential role in increasing the demand for reused products (Kristensen, 2021). Klackenborn further argued that the public sector should use its purchasing power and buy the products they want to prime.

An interesting perspective provided by Hållberg and Åholm was the idea of separating the procurement of IT into different procurements; they suggest that there should be one procurement for new hardware, one for reused and another for a take-back service. The informants argued that this would expose all these parts to market competition and provide a better insight into the expenses of each component. The finding is interesting since Inrego and 3StepIT are the smallest companies represented in this research; they were also the only ones suggesting this as an opportunity to enable more CPP. This is interesting from the perspective of market competition since PP, according to Swedish law, shall be conducted to ensure healthy competition. Hållberg further stated that smaller companies often have difficulty answering tenders due to a lack of resources or procurement techniques. Implementing the idea presented by Hållberg and Åholm could, from that perspective, enable more suppliers the opportunity to answer tenders.

The Swedish Government has high ambitions for Sweden to transform and aims for Sweden to become fully circular by 2045. In addition, with the Circular Economy Action Plan, the EU has increased the focus on PP as a policy tool for implementing circularity and reaching environmental targets. The informants have identified that the gap between public policy and civil servants' results puts much pressure on the procurer, who ends up in the middle with conflicting targets.

Understanding Enablers to Circular Public Procurement

Previous research has identified collaboration and dialogues as enablers to CPP. This perspective was confirmed by all informants' interviews in both sectors, and they all welcome more forums for dialogue and collaboration. The empirics on the suppliers' perspectives on barriers demonstrate that collaboration and dialogue are ways to overcome and manage these barriers. For example, one of the main barriers identified was a lack of knowledge. Lack of knowledge further results in difficulty contracting proper tender documents and knowing what to demand. Edquist and Zabala-Iturriagoita (2020) further stated that the ability to identify needs is central to making PP effective. The informants argued that proper needs assessments are needed for the public sector to know what to demand. Losman argued that increased dialogue between the procuring organisation and the suppliers could help the public sector understand what to demand and how to demand. Stenlåås argued that the suppliers have a responsibility to guide the public sector since they are the experts. Boo further stated that an important part of the dialogue is informing the public sector about the products and solutions they do not know exist. Faxborn argued that communication needs to happen both ways so that the industry listens to the needs of the public sector. Losman shares Faxborn's perspective as she states that respect between the customer and supplier is essential to gain trust.

It is not only the dialogue between the procuring organisation and supplier that is mentioned as an enabler for more CPP. The internal dialogue within the procuring organisation is equally as important. Boo stated that the internal dialogue and knowledge sharing becomes a problem when the procurer and the one in charge of the waste management have not considered their needs and therefore have not considered what to procure. The argument that increased internal dialogue could enable more CPP is also emphasised by Åholm, who shared that they experience that they often have a consensus with the IT department of the procuring organisation but that when the IT department in a later stage needs to collaborate with the procuring department, they fail to explain what they want and how to procure it.

An enabler mentioned by informants in the tech sector was implementing sustainability reporting to incentivise more CPP. According to Hållberg, this could be a tool for organisations to procure more reused IT. However, incentivising increased circularity in PP thru policy needs

to be implemented thoughtfully. Lind stated that fossil-free transportation often is a requirement in procurements. Losman further argued that sustainability demands tend to be a tick-in-the-box in procurements which indicates that it might not be as effective of a tool as was intended. Ranta et al., (2018) argued that there could be a misalignment with sustainability goals, and the case of the requirements for fossil-free transportation could be regarded as such a case. This could then further have a negative impact on CPP since these requirements could be regarded as more important.

Conclusion

This chapter will conclude the thesis by presenting the most important takeaways from the analysis and empirical findings. The chapter aims to provide an answer to the purpose of the thesis and the research question. Further, the relevance of the findings will be motivated from a theoretical, societal, and practical perspective. After the conclusion has been presented, proposals for future research and the limitations of this research will be discussed.

The thesis has investigated the supplier's perspectives on barriers and enablers to CPP with the purpose of providing greater knowledge on the enabling components to CPP. Previous research had identified barriers and enablers, conducting studies from the perspectives of the public sector. With that in mind, this research aimed to understand the supplier's perspectives on the same theme. To better understand the empirical data, previous research identifying relevant thematic in the research field was presented. Further, the theory of institutional entrepreneurship was applied with the purpose of better understanding the empirical findings. A conceptual framework was established to analyse and draw conclusions from the empirics.

To answer the research question: *“From the supplier's perspectives, what are the barriers and enablers for the implementation of circular public procurement?”*, the results indicate that the companies today witness a lot of barriers when trying to implement circularity in PP. However, the identified enablers could be implemented as strategies to manage these barriers. On the aspects of barriers, the results confirm what previous research has shown, that lack of knowledge is the main barrier to CPP. There is a growing interest and awareness within the public sector, but there is still a big gap between policy ambitions and what is being executed in practice. The represented companies are argued to be institutional entrepreneurs who strategically take advantage of the ‘window of opportunity’ with an increased focus on CE in public policy to implement new norms into PP. The knowledge gap between the public organisations and the suppliers becomes a barrier but also a way for the private sector to educate the public organisations in their interests, infusing their beliefs. On the other hand, lack of proper competence within the public sector becomes a barrier when initiating CPP since it challenges the organisations' traditional procurement process and criterions. Further, it makes them passive agents in this transition rather than active agents involved in building the foundation of this new field. The public sector, due to its purchasing power, is an essential

advocate to increase the demand for circular products and solutions, enabling a transition to a CE at a societal level. The Swedish Government has implemented a strategy for Sweden to become fully circular in addition to the goal of limiting the emissions to net zero by 2045. The EU, with its Circular Economy Action Plan, has urged an increased usage of circular criteria in PP. The result does show that the high governmental and inter-governmental ambitions, in combination with a lack of political steering, have a negative effect on public organisations that ends up with conflicting goals.

What this research would like to add to the list of barriers to CPP are mindsets. Mindsets have been identified as a barrier in CE research but not in the same extension concerning CPP. Mindsets are a critical component to be addressed for public organisations to be able to implement CPP. It is not only the procurers who need to be educated and look for new criterions when conducting procurements. It is as much a question of raising awareness and shifting the mindsets of the colleagues working within the organisation. They must be willing to choose the reused IT if the procurer requires it when procuring the product catalogue. The same idea is applicable to the waste sector. This envisages that shifting the norms will be essential in order to realise more CPP. With this said, it is not only the procurers who need to increase their knowledge; it should be a collective effort in the organisation.

In order to manage the barriers, the empirics provided an understanding of enablers to CPP. The two main themes, collaboration and dialogue, confirmed what previous research has stated, that increased collaboration and dialogues, both external between the procuring organisation and the suppliers and internal within the organisation. Increased collaboration and dialogue enable the procuring organisation and the suppliers to find innovative solutions to organisational needs. On the aspect of needs, the empirics identified that conducting proper needs assessments are critical before initiating a procurement process; this would enable the integration of more circularity in the procurement. An interesting finding was the idea of implementing mandatory sustainability reporting within public organisations as a strategic tool to incentivise a more comprehensive integration of circularity in PP.

The research has tested what previous research has shown regarding barriers and enablers to CPP implementation. With increased attention to CE as a strategic tool to mitigate the

environmental pressure combined with enhanced pressures from national and EU policies, this research could provide insightful knowledge for politicians and public officials to better understand what issues need to be addressed to enable more CPP. The research shed light on both structural enablers, such as legislation which today inhibits companies from making use of innovative circular solutions. The empirics also emphasises that public organisations need to add additional resources to understanding how to construct the tender documents and set requirements that enable both large and small companies to be innovative in providing circular solutions to the public sector. The result could also be of value to the private sector. First and foremost, to understand collective challenges and experiences within their industry. This could further form a foundation for collective action to find solutions to mitigate and manage these challenges. Enabling strategies to mitigate the environmental impact will help reach national climate targets and society. Finding strategies for more sustainable public consumption could immensely impact addressing climate change.

The research contributes to the research field of public administration as it highlights the political aspects of PP and further the opportunities as well as the challenges it can generate for public organisations. Previous research had also stated the absence of theory in PP research, which this thesis purposely considered.

Limitations and Future Research

This research has provided greater knowledge on the barriers and enablers of CPP. Previous studies have exclusively focused on the perspective of the public sector, which motivated why this research aimed to explicate the supplier's perspective. As previous research had identified collaboration as a vital component to enable more CPP, it was considered that understanding the supplier's perspectives in addition to the public organisations would contribute to the research field. With that being said, the research has its limitations which should be addressed in future research. First and foremost, the thesis is limited to only studying two sectors' perspectives on CPP. Future search should broaden this perspective to find deviances in other sectors as well; this would strengthen the validity of the results and increase the transferability of findings. To increase the transferability of findings, further studies investigating the same topic should be conducted in other countries, formed by other institutional characteristics. That could also provide an interesting perspective for the theory of institutional entrepreneurship.

The informants in this study represent companies who could be considered forerunners in transitioning to a CE. These factors inflict the result of the study, and to get a more profound understanding of suppliers' perspectives on barriers and enablers to CPP, future research could include a broader range of companies. Further, the insights this research offers regarding institutional entrepreneurship as an analytical tool to better understand barriers and enablers to CPP implementation are, in some respects, limited. Previous research has highlighted the absence of theory in PP research, and future research should, through theory, explore the steering mechanisms of PP.

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Interviews

Birkenes, C. Head of Sustainability and Compliance at Techstep (virtual interview on the 17th of April 2023).

Boo, A. Sustainability Strategist at PreZero (virtual interview on the 17th of March 2023).

Cederquist, C. Sustainability Strategist at Atea (virtual interview on the 23rd of March 2023).

Faxborn, F. Public Affairs Expert (Sustainability) at TechSweden (virtual interview on the 10th of March 2023).

Hällberg, S. Head of Purchasing, Public Sector at Inrego. (virtual interview on the 14th of March 2023).

Klackenborn, S. Head of Sustainability at Dustin Group (virtual interview on the 16th of March 2023).

Krondahl, E. Strategic Account Manager at Stena Recycling (face to face interview on the 8th of March 2023).

Lind, S. Head of Public Affairs and Government Relations at Ragn-Sells (virtual interview on the 3rd of April 2023).

Losman, M. Consultant at Ecoplan in Medio (virtual interview on the 7th of March 2023).

Meintjes, M. Head of Bid and Contract (virtual interview on the 17th of April 2023).

Mott, M. Industry Manager Recycling – Public Sector at Stena Recycling (face to face interview of the 8th of March 2023).

Stenlås, P. Team Leader Bid Management at Foxway (virtual interview on the 23rd of March 2023).

Åholm, R. Head of Sales – Sweden at 3StepIT (virtual interview on the 22nd of March 2023).

Appendix

Appendix 1. Interview guide for consultant and trade association (in Swedish)

1. Kan du berätta lite om din professionella bakgrund?
 - a. Vad har du för erfarenhet kopplat specifikt till cirkulär ekonomi och offentlig upphandling?

2. Kan du berätta lite om (företag/organisation)?
 - a. Hur kom det sig att ni startade (företag/organisation)?
 - b. Vad är din roll i organisationen?
 - c. Vilken kundgrupp riktar ni in er på?

3. Hur har de projekt ni arbetat i sett ut? Vilka tjänster efterfrågas från er?
 - a. Har ni arbetat i projekt både med privata och offentliga aktörer?

4. Uppskattningsvis, hur stor del av era projekt berör cirkulär ekonomi? (Losman)
 - a. Upplever ni en ökad efterfrågan på tjänster i relation till cirkulär ekonomi?
 - b. Om ja, är det offentliga eller privata aktörer som efterfrågar dessa tjänster?
 - c. Vad är den huvudsakliga frågeställningen ni får av kunder när det kommer till projekt för cirkulär ekonomi?

5. Märker era medlemsföretag av en ökad efterfrågan på cirkularitet vid offentlig upphandling? (Faxborn)

6. Offentlig upphandling anses vara ett viktigt strategiskt verktyg för en omställning till cirkulär ekonomi. Vad anser du är den absolut största utmaningen för att vi skall få fler cirkulära offentliga upphandlingar?

7. I studier där hinder för cirkulär offentlig upphandling har analyserats pekas
 - i) kunskap, ii) samarbete och iii) riskhantering ut som stora utmaningar vilka ofta sätter stopp för cirkulära offentliga upphandlingar.

- a) Stämmer detta överens med din bild och de utmaningar ni stöter på i ert arbete kopplat till cirkulära offentliga upphandlingar?
 - b) Var finns den stora kunskapsluckan och hur anser du att man bör arbeta för att säkerställa att brist på kunskap inte står i vägen för cirkulär offentlig upphandling?
 - c) Vilken roll har samarbete för att vi skall få fler cirkulära offentliga upphandlingar?
 - d) Hur anser du att riskhantering bör integreras i cirkulär offentlig upphandling utan att det blir en barriär för dess implementering? (exempelvis. Ekonomi; ökat ansvar från leverantör; efterbruk?).
8. Finns det branscher/industrier där man ligger i framkant i att erbjuda cirkulära lösningar/produkter/tjänster vid offentliga upphandlingar? Vilken/vilka? (Losman)
- a. Varför tror du att situationen är sådan?
 - b. Finns det branscher där det är svårare för offentliga organisationer att köpa in cirkulära produkter/tjänster?
9. Vilka är de stora utmaningarna ni möter i er bransch när det kommer till cirkulär offentlig upphandling? (Faxborn)
10. Vilket ansvar har privata företag i omställningen till cirkulär offentlig upphandling?
11. Vilken del av upphandlingsprocessen anser du är av störst vikt för lyckad cirkulär offentlig upphandling? Varför?
12. Vilken roll har dialog mellan leverantör och upphandlare för cirkulär offentlig upphandling?
- a. Hur kan en tidig dialog mellan leverantör och upphandlare bidra till att möjliggöra fler cirkulära offentliga upphandlingar?
13. I de projekt ni arbetet i, vad har varit de viktigaste faktorerna vid genomförande av cirkulär offentlig upphandling?
14. Finns det något du önskar tillägga?

Appendix 2. Interview guide for suppliers (in Swedish)

1. Kan du berätta lite om din professionella bakgrund?
 - a. Vad har du för erfarenheter kopplat specifikt till cirkulär ekonomi och offentlig upphandling?

2. Kan du berätta lite om (företag)?
 - a. Vad är din roll i organisationen?
 - b. Vad har ni för kunder?
 - c. Vad säljer ni för produkter/tjänster till offentlig sektor?

3. Hur arbetar (företag) med hållbarhet?
 - a. Är det viktigt för er att integrera hållbarhet i ert arbete?

4. Hur arbetar (företag) med cirkulär ekonomi?
 - a. Varför är cirkularitet viktigt för er?
 - b. Vad skulle du säga är den största utmaningen för er i omställningen till en cirkulär affärsmodell?
 - c. Vad anser ni krävs för att möjliggöra omställningen till cirkulär ekonomi?

5. Uppskattningsvis hur stor del av er kundbas/försäljning är offentlig sektor?
 - a. Upplever ni en ökad efterfrågan på cirkulära lösningar/produkter/tjänster från offentlig sektor?
 - b. Skiljer det sig om man jämför med er kundbas i stort?

6. Offentlig upphandling anses vara ett viktigt strategiskt verktyg för en omställning till cirkulär ekonomi. Vad anser du är den absolut största utmaningen för att vi skall få fler cirkulära offentliga upphandlingar?

7. I studier där hinder för cirkulär offentlig upphandling har analyserats pekas i) kunskap, ii) samarbete och iii) riskhantering ut som stora utmaningar vilka ofta sätter stopp för cirkulära offentliga upphandlingar.

- e) Stämmer detta överens med din bild och de utmaningar ni stöter på i ert arbete kopplat till cirkulära offentliga upphandlingar?
 - f) Var finns den stora kunskapsluckan och hur anser du att man bör arbeta för att säkerställa att brist på kunskap inte står i vägen för cirkulär offentlig upphandling?
 - g) Vilken roll har samarbete för att vi skall få fler cirkulära offentliga upphandlingar?
 - h) Har ni erfarenhet av upphandlingsprocesser där samarbete har varit betydande? Kan du utveckla? Hur såg det samarbetet ut och vad var syftet?
 - i) Hur anser du att riskhantering bör integreras i cirkulär offentlig upphandling utan att det blir en barriär för dess implementering?
 - j) Har ni erfarenhet av att ”risk” har varit en del i dialogen inför upphandling? Hur såg dialogen ut och vad blev resultatet?
8. Vilket ansvar anser du/ni att leverantörerna har för att vi skall få fler cirkulära offentliga upphandlingar?
9. Vilken del av upphandlingsprocessen anser du är av störst vikt för lyckad cirkulär offentlig upphandling? Varför?
10. Vilken roll har dialog mellan leverantör och upphandlare för cirkulär offentlig upphandling?
- b. Hur kan en tidig dialog mellan leverantör och upphandlare bidra till att möjliggöra fler cirkulära offentliga upphandlingar?
11. I de projekt ni arbetat i, vad har varit den viktigaste faktorerna vid genomförande av cirkulär offentlig upphandling?
12. Finns det något du önskar tillägga?

Appendix 3. Consent Form



Interview Consent Form

Interview Consent Form

Research project title: Master thesis – Circular Public Procurement

Research investigator: Amanda Insgård

Research participant:

The interview will take approximately 45 minutes. We don't anticipate that there are any risks associated with your participation, but you have the right to stop the interview or withdraw from the research at any time.

Thank you for agreeing to be interviewed as part of the research project. Ethical procedures for academic research undertaken by the Norwegian and Swedish institutions require that interviewees explicitly agree to be interviewed and how the information contained in their interview will be used. This consent form is necessary for us to ensure that you understand the purpose of your involvement and that you agree to the conditions of your participation. Would you, therefore, **read the information** and then **sign this form** to certify that you approve the following:

- The interview will be recorded, and a transcript will be produced
- The transcript of the interview will be analysed by Amanda Insgård
- Access to the interview transcript will be limited to Amanda Insgård and academic colleagues with whom she might collaborate as part of the research process
- Any summary interview content, or direct quotations from the interview, that is made available through academic publication will be anonymized so that you cannot be identified, and care will be taken to ensure that other information in the interview that could identify yourself is not revealed
- The recording of the interview will be destroyed at the end of the project
- Any variation of the conditions above will only occur with your further explicit approval

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Interview Consent Form

By signing this form, I agree that;

1. I am voluntarily taking part in this project. I understand that I don't have to take part, and can stop the interview at any time;
2. The transcribed interview or extracts from it may be used as described above;
3. I have read the Information above;
4. I don't expect to receive any benefit or payment for my participation;
5. I have been able to ask any questions I might have, and I understand that I am free to contact the researcher with any questions I may have in the future.

Additional Quotation Agreement

I also understand that my words may be quoted directly. With regards to being quoted, please initial next to any of the statements that you agree with:

	I wish to review the notes, transcripts, or other data collected during the research pertaining to my participation.
	I agree to be quoted directly.
	I agree to be quoted directly if my name is not published and a made-up name (pseudonym) is used.
	I agree that the researchers may publish documents that contain quotations by me.

Name of participant

Date

Amanda Insgård

Date

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