Master's thesis in Energy, Environment and Society

Individual agency in the social construction of Green Public Procurement: Emergence and implications in Stavanger Municipality

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Abstract

Given the urgent global climate challenges we face today, it is imperative for actors at all levels - international, national, and local - to take decisive action. In this context, green public procurement (GPP) emerges as a valuable environmental policy tool employed by public authorities. GPP involves the procurement of goods and services that have a reduced environmental impact compared to alternatives that serve the same purpose. This thesis examines the institutionalization of GPP at the municipal level through a case study of Stavanger Municipality in Norway. Concepts from institutional theory were used to deepen the understanding of the current situation of GPP in Stavanger. Expert interviews and document analysis, as well as a comprehensive examination of 32 tenders from six sectors, provide a broad empirical foundation that is used to gain an understanding of GPP at the municipal level. The findings reveal a disconnect between the municipality's ambitious emission targets and its actual actions, leading to a decoupling of commitments and behavior relating to climate and environmental efforts, including the strategic use of GPP. The analysis highlights the importance of individual competence and motivation in a complex institutional environment and suggests that leadership should invest in individuals with environmental expertise to accelerate sustainability transitions. By identifying weaknesses in current practices and opportunities for improvement, this study provides valuable insights into how GPP could be used more strategically to align with municipal environmental goals.

Foreword

The submission of this thesis marks the conclusion of 19 years in school. I am excited for the unknown that is ahead while at the same time being saddened for this chapter to end.

Upon completing this thesis, there are several people I want to express my gratitude to. First, I want to thank the interviewees who participated in this thesis and took the time to share their expertise and perspectives with me.

To Sid, my supervisor – thank you for your help in this process. Your support and structure has helped ease this (at times overwhelming) process. I truly could not have asked for a better supervisor.

To my parents – thank you for giving up part of your freedom by lending me the car this semester. Not only did it allow me the flexibility to work on my thesis in an academic environment whenever needed, but it also gave me the most social semester of all my time as a university student.

And lastly, although I know none of them will read this thesis, I want to thank the classmates who I've spent countless hours with at the library. Thank you for the laughs, the walks, the motivation, the support, and the advice. Caspar, Kristian, Jørgen, Serena, Karisma and Birgitte – It has been a joy suffering alongside you all.

Ciao.

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List of Abbreviations

CA	Contracting Authority
CCPI	Climate Change Performance Index
CPP	Circular Public Procurement
DFØ	The Norwegian Agency for Public and Financial Management (*Direktoratet for forvaltning og økonomistyring*)
EEA	European Economic Area
EMAS	ECO Management and Audit Scheme
EMS	Environmental Management System
EPE	Environmental Performance Evaluation
EU	European Union
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GHRM	Green Human Resource Management
GPP	Green Public Procurement
HRM	Human Resource Management
ISO	International Organization for Standardization
IPCC	Intergovernmental Panel on Climate Change
KOFA	The Norwegian Public Procurement Complaints Board (*Klagenemnda for offentlige anskaffelser*)
KPI	Key Performance Indicator
LCA	Life Cycle Assessment
LCC	Life Cycle Costing
LEED	Leadership in Energy and Environmental Design
OAG	The Office of the Auditor General (*Riksrevisjonen*)
OECD	Organization for Economic Co-operation and Development

PV	Photovoltaic
SDG	Sustainable Development Goal
SMEs	Small and Medium-sized Enterprises
SPP	Sustainable Public Procurement
UN	United Nations
WCED	World Commission on Environment and Development

1. Introduction

It is 2007 and Stavanger Municipality is caught in a media storm. Erling Borgen's documentary "De fattiges plass" about the production of granite stone has just been released. The same granite stone procured to cover the city center of Stavanger. The documentary shows a production in India under irresponsible and degrading conditions, where children are part of the workforce. Media and stakeholder pressure is great. The municipality investigates and finds no evidence of child labor but does find evidence of worker safety violations (Espeland, 2021). However, the municipality's procurement reputation is still damaged. This triggers a change in the municipality's procurement strategy, leading to a focus on ethical procurement. Almost two decades later, Stavanger is seen as a proactive procurement authority and even wins an award in 2022 for its ethical procurement practices (Espeland, 2021; Hovland, 2022). Some of this ambition has spilled over into efforts to protect the environment in their procurement. But has this ambition translated into institutionalized green public procurement (GPP) practices?

1.1. Introduction to public procurement globally

It is now clear that human activities have led to climate warming (IPCC, 2022), requiring urgent action to mitigate environmental damage. Since the publication of the *Brundtland Report*[1] in 1987, which has influenced our general understanding of sustainable development[2] today, there have been numerous international initiatives to conserve resources and reduce environmental impacts. Yet we are now expected to exceed the target of a 1.5 °C temperature increase (IPCC, 2022). What further complicates the climate crisis is that those most affected are those who have contributed the least to the situation we face today and need development to improve the quality of life for their citizens. An attempt to alleviate some of this tension was the development of the United Nations (UN) Sustainable Development Goals (SDGs) for 'the 2030 Agenda for Sustainable Development,' which was adopted by all UN member states in 2015 (UN, 2015). The 17 SDGs aim to address issues such as poverty, inequality, and environmental degradation. There are countless different actions that the international community, nations, organizations, and

[1] The *Brundtland Report*, formally entitled *Our common future*, is named after the chairwoman of the World Commission on Environment and Development (WCED) at the time, Gro Harlem Brundtland (Jarvie, 2016).

[2] Defined in the Brundtland Report as "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p.41).

individuals can take to address the climate crisis. This thesis examines one tool that is often overlooked but has the potential to lead to significant emissions reductions - *green public procurement*.

Governments have several powers that can be used to reduce emissions, including the ability to shape markets through their purchasing power. Today, the global value of public procurement is estimated at $11 trillion, or about 12% of global gross domestic product (GDP) (World Bank Group, 2021 p. 10). Government procurement activities at the national, state, and local levels are responsible for 15% of greenhouse gas (GHG) emissions (World Economic Forum [WEF] & Boston Consulting Group [BCG], 2022, p. 4). *Green* public procurement (GPP) is one way in which public sector entities could reduce emissions by purchasing "goods, services and works with a reduced environmental impact throughout their life-cycle compared to goods, services and works with the same primary function which would otherwise be procured" (European Commission [EC], n.d.a). There are several benefits of GPP in addition to emissions reductions, some of which include increased innovation for green products and services, financial savings by considering full life-cycle costs, and reduced energy consumption (EC, 2016). In fact, it is so well recognized that it is included in the UN Sustainable Development Goal (SDG) 12 on ensuring "sustainable consumption and production patterns" even has a specific target about public procurement. Target 12.7 is to "promote public procurement practices that are sustainable, in accordance with national policies and priorities" (UN, 2015). While these benefits are globally recognized, governments still have room for improvement. A 2018 survey by the Organization for Economic Co-operation and Development (OECD) found that 64 percent of countries surveyed integrate environmental criteria into their public procurement[3] (2019). This could be due to a variety of factors, with some common barriers to the uptake of GPP being an increase in costs of procurements, the decentralized nature of procurement activities (WEF & BCG, 2022), and a lack of political support (Bouwer et al., 2006). If these barriers are overcome and governments reduce emissions associated with public procurement, it could lead to an estimated $4 trillion boost to the green economy and create about 3 million new jobs (WEF & BCG, 2022, p.4). Reducing 40% of emissions from public procurement would cost less than $15 per ton of CO2 emissions, according to a study by the WEF

[3] Of these 64 percent surveyed, 25 percent integrated environmental criteria at least "seldom" and around 50 percent at least sometimes (OECD, 2019).

and BCG (2022, p.11), making green public procurement a valuable tool for reducing national emissions. However, it is a tool that is often overlooked in research in the Norwegian context.

1.2. GPP in Norway

Norway has progressive climate targets, some of which could be met through GPP. With a high share of renewable energy, a high carbon tax on several sectors (Burck et al, 2022), and ambitious climate targets, Norway is often perceived as being a high performer when it comes to climate action. The steps Norway has taken earned it a 10th place ranking in the 2023 Climate Change Performance Index (CCPI)[4] (Burck et al., 2022). At the end of 2022, the government also submitted an emissions reduction target to reduce emissions by at least 55 percent by 2030 compared to 1990 levels (Regjeringen, 2022). This is an increase from the previous 2020 target, which increased the emissions reduction target from at least 40 percent to at least 50 percent (Regjeringen, 2022). There is still a long way to go, as Norway, according to one estimate, has only reduced its national emissions by 4.7 percent from 1990 levels by 2021 (Frost, 2022). One of the main policy tools listed in *Norway's Climate Action Plan for 2021-2030* (Meld. St. 13 (2020-2021)) is the use of environmental criteria in public procurement. In the same plan, they state that the expected emission reductions related to environmental criteria in public procurement is 3 million tons of CO2 equivalent (p.47). And Norway needs to take new action to meet its climate goals. According to the Climate Action Tracker (CAT), Norway's "climate policies and commitments need substantial improvements to be consistent with the Paris Agreement's 1.5°C temperature limit" (CAT, 2022). GPP could be a powerful tool to reduce emissions and limit the temperature increase, as the public sector spends approximately NOK 600 billion per year on the procurement of goods and services, accounting for 16% of Norway's total climate footprint (Riksrevisjonen, 2022).

Despite the recognition of the potential of GPP to reduce emissions, the Office of the Auditor General of Norway (OAG), known in Norwegian as Riksrevisjonen, found that Norwegian public purchasers were not making sufficient use of GPP. Their assessment was that it was critique-worthy that the authorities had not used public procurement to a sufficient extent to minimize

[4] CCPI "is an independent monitoring tool for tracking the climate protection performance of 59 countries and the EU" (Burck et al., 2022)

environmental impacts and promote climate-friendly solutions (p.7). This assessment was based on five key findings:

1. *Public procurement practices do not sufficiently minimize environmental impacts and promote climate-friendly solutions;*
2. *Many public procurers lack a holistic approach to ensuring climate and environmental considerations in procurement;*
3. *There is extensive guidance on GPP, but it needs to be made more user-friendly and better known;*
4. *There is a lack of statistics and management information on the status of GPP;*
5. *GPP work requires coordination between the responsible departments*

- *(Riksrevisjonen, 2022 [author's translation from Norwegian]).*

The OAG's findings are particularly interesting given Norway's progressive climate legislation. The Norwegian government's own *Voluntary National Review* in 2021 of their progress towards the sustainability goals indicate room for improvement. Relating to having a procurement strategy, 75 percent of regional authorities have one which is significantly higher than the municipalities and national authorities with 59 percent and 48 percent respectively (Norwegian Ministry of Local Government and Modernization & Norwegian Ministry of Foreign Affairs, 2021, p. 105). This despite public entities being obligated by law to pursue GPP strategies (Norwegian Ministry of Local Government & Modernization and Norwegian Ministry of Foreign Affairs, 2021). As seen in Figure 1, Norwegian public procurers have a long way to go to fulfill this obligation.

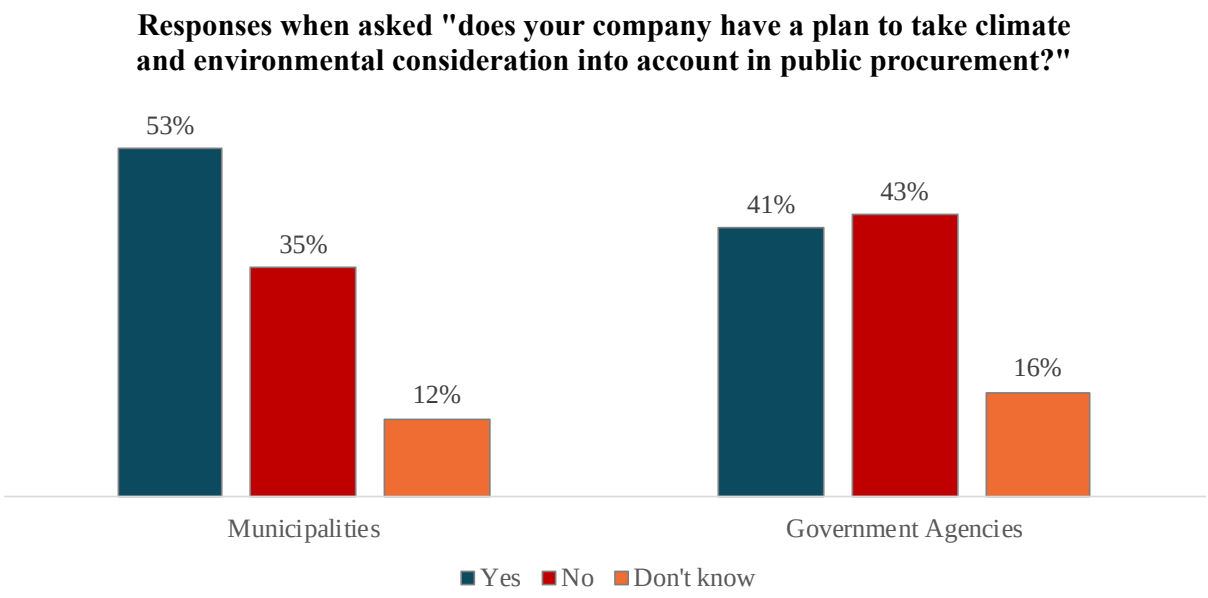

Figure 1: Public CAs responses regarding GPP considerations

Note. Adapted from "Voluntary National Review 2021 Norway: Report on the Implementation of the 2030 Agenda for Sustainable Development" by Norwegian Ministry of Local Government and Modernization and Norwegian Ministry of Foreign Affairs, (2021), p.105.

1.3. This thesis and its purpose

One of these public procurers with high ambitions to be a leader in creating a climate- and environmentally friendly society (*KlimaStavanger*, n.d.) is the Municipality of Stavanger. After decades of being known as the oil capital of Norway, the municipality has pivoted to become the energy capital of Norway (*Energihovedstaden Stavanger*, 2023). The transition to an image as an environmental champion, while still having a culture partly rooted in the oil industry, has required a major external shift. This puts Stavanger in the interesting position of balancing conflicting interests. Stavanger has clarified its intentions with its Climate and Environmental Plan, which is supposed to lead it to an emission reduction target of 80 percent from 2015 to 2030 (Skagen, 2022). However, there is a significant gap between their goals and expected emissions reductions, and currently the projected emissions reduction from 2015 to 2030 is 45 percent (ibid.). This has led to criticism from urban planners that the emissions reduction target is unrealistic and wishful thinking (Røstvik et al., 2022). Based on the emission reductions shown in the 2023-2026 Action

and Financial Plan in Figure 2, reductions are occurring at a much slower pace than needed. So, what can the Municipality do to increase its emissions reductions?

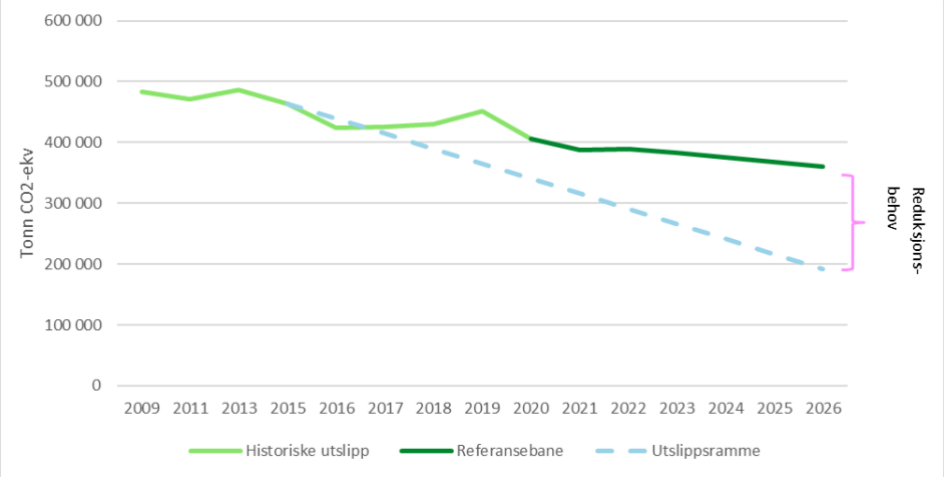

Figure 2: Historical and projected emissions by Stavanger Municipality from 2009 to 2026

Note. Reprinted from "Klimabudsjett", (n.d.). Retrieved from https://pub.framsikt.net/2023/stavanger/bm-2023-handling-_og_%C3%B8konomiplan_2023-2026/#/generic/summary/66c6de22-e3e6-4d65-9445-1d81f7a1f507-cn

Stavanger's shift in sustainability approach combined with its procurement history makes it an interesting case study for GPP. The OAG's assessment of the implementation of GPP in Norway has provided a thorough overview of the environmental policy tool at a macro level, indicating that there is significant room for improvement. It is therefore interesting to examine one of Norway's largest municipalities on a micro level to see if the findings are consistent with the OAG's assessment or if Stavanger, as a larger municipality, performs better. Stavanger's approach to GPP is particularly interesting given its national and international cooperation, both in procurement and in urban development in general. This promotes knowledge sharing, which could be positive if environmentally beneficial procurement strategies are shared, and detrimental if inefficient ones are perpetuated. In addition, the municipality is an international hub for businesses due to its history as the oil capital and current status as the energy capital of Norway. This gives them a unique position to have international influence by influencing these companies through their purchasing power. To investigate whether Stavanger is using GPP to its full potential, I have the following research questions:

Research Question 1: What constitutes GPP in Stavanger?

Research Question 2: What factors impact GPP in Stavanger?

Research Question 3: How does Stavanger Municipality evaluate GPP in the municipality and the potential effects of implementing criteria?

By answering these questions, I believe that my thesis can contribute to the evaluation of GPP efforts at the local level, and perhaps identify areas for improvement. In other words, this thesis is not an investigation of Stavanger's procurement past, but rather a look at its current state and ways forward.

1.4. Thesis structure

Now that the thesis topic has been introduced, I will move on to the substantive parts of the thesis. The thesis has eight different sections with the introduction as *Section 1*. Since public procurement can be a complex process, necessary definitions and key concepts are introduced in *Section 2*. The background section is followed by a presentation of the theoretical framework used in this thesis in *Section 3*. Here I will introduce institutional theory and why it is applicable to the case of GPP in Stavanger. *Section 4* presents the current literature on GPP. The scope of this literature review is limited to focus on the claimed benefits of GPP, factors influencing the uptake of the tool, and the actual effectiveness of GPP as an environmental policy instrument. After laying the groundwork for the thesis, *Section 5* will address the methodology and methods I have used to study GPP in Stavanger. This chapter includes the justification for different methods and briefly addresses their potential weaknesses. *Section 6* presents the results and analysis of the mixed methods research. The significance of the results is discussed in *Section 7*, where they are linked to the existing literature on GPP. It also discusses the broader implications of the findings of this thesis. The final section, *Section 8*, concludes the thesis by reiterating the key findings and their significance. It also provides suggestions for further research in this area based on identified gaps in the literature.

2. Background

Public procurement could be a valuable tool in reducing environmental impacts. This thesis will not go into all the details of public procurement, as it is a complex process with intersections between economics, politics and law that deserves to be explored by someone with more academic knowledge of the topic than myself. Instead, the aim of this thesis is to explore the current state of GPP in Stavanger. Before doing so, I will define the different relevant types of procurement to clarify the scope of my thesis. I will also introduce key elements of procurement that are necessary to understand to justify the methods used in this thesis.

2.1. The basics of public procurement

There are different names for public procurement based on their strategy. The most common way to incorporate environmental and social criteria is through the broad category of *sustainable public procurement* (SPP). SPP is a process whereby "public authorities seek to achieve the appropriate balance between the three pillars of sustainable development - economic, social and environmental - when procuring goods, services or works at all stages of the project" (EC, n.d.a). It goes beyond the scope of *green public procurement* (GPP) where "public authorities seek to purchase goods, services and works with a reduced environmental impact throughout their life-cycle compared to goods, services and works with the same primary function which would otherwise be procured" (EC, n.d.a). *Circular public procurement* (CPP) is an approach to GPP in which the procurement seeks "to contribute to the closed energy and material loops within supply chains, whilst minimizing, and in the best case avoiding, negative environmental impacts and waste creation across the whole life-cycle" (EC, n.d.b). This thesis will primarily focus on GPP, which naturally also includes CPP where relevant. The thesis will not evaluate factors relevant to SPP such as ethical labor, social inclusion, and equity. Instead, it will focus on the Municipality of Stavanger's goals and actions regarding GPP, the environmental criteria used, and the evaluation of their impact.

There are several ways to incorporate environmental criteria into the procurement process to help a procuring authority select goods, services or works with a lower environmental impact. An

overview of these can be seen in Table 1. First, *selection criteria,* or *qualification requirements*[5], focus on factors that relate to the potential supplier's "capacity to perform a contract" with some common requirements being "financial and economic standing, and technical and professional ability" (EC, n.d.c). If a supplier submits a bid and does not meet the selection criteria and/or the contract performance clauses, they will be excluded from the next step of the process where bids are compared based on award criteria. Once suppliers have passed the selection criteria, the technical specifications of a tender works as another elimination process that suppliers must pass. *Technical specifications* give "a clear, accurate and full description of the requirement and standard to which goods, works or services should conform" (EC, n.d.c). If suppliers meet all the requirements, the contracting authority will evaluate their bids based on the award criteria established by the contracting authority. *Award criteria* are used by the contracting authority to compare bids and make its award (EC, n.d.c). Once the contracting authority has selected a supplier, the contract performance clauses come into play. *Contract clauses* are contract terms that are not included in the evaluation of the bid but are conditions that the supplier must meet during the term of the contract (EC, n.d.c; DFØ, n.d.).

Table 1: Type of environmental criteria and explanations

Type of criteria	Definition	Intended usage	Targets
Qualification requirement	Requirements of potential suppliers' capacity to perform a contract.	Bare minimum requirements that exclude unserious suppliers.	Process
Technical specification	Describes the requirement and standards of the goods, works or services.	Knock-out criteria designed to obtain the desired products and services.	Product
Award criteria	Criteria used to compare offers.	Award voluntary performance.	Product
Contract clause	Conditions that the suppliers need to meet during the contract period.	Ensure a successful working collaboration.	Process

[5] In this thesis I will use the term qualification requirement(s) as it is better phrasing given the term used in Norwegian tenders.

2.2. Norwegian public procurement

Laws. In the case of this thesis, it is also helpful to briefly introduce the main laws, regulations and actors that shape the procurement practices of contracting authorities (CAs) in Norway. There are two main procurement regulations that affect public procurement in Norway that these actors need to comply with. First, §5 of the Norwegian Public Procurement Act[6] (§5 LOA) states that public procurement shall reduce harmful environmental impacts and promote climate friendly solutions where relevant (Sinnathamby and Kihl, 2022). Second, the Norwegian Public Procurement Act §7-9[7] states that public authorities may include environmental requirements and criteria in all stages of the procurement process (ibid.). When the environment is used as an award criterion, it should normally have a weighting of at least 30% (ibid.). Norwegian procurement is also linked to EU procurement policy through the European Economic Area (EEA) trade agreement. This means that the current Norwegian procurement legislation is based on European procurement legislation (E1, personal communication, March 14, 2023). If a supplier believes that a CA has gone broken procurement, they can complain to the Norwegian Public Procurement Complaints Board (KOFA). This can be done, for example, if they believe that the CA has included unfair criteria or has stifled competition (E1, personal communication, March 14, 2023). If KOFA finds the complaint to be valid, it can impose a fine on the CA for breaching the rules (Espeland, 2021). These rules have been developed through interaction between various actors in Norwegian public procurement.

Actors. There are several actors that shape these laws and Norwegian procurement standards. The Norwegian Ministry of Trade, Industry and Fisheries is responsible for the development of procurement legislation as the department responsible for Norwegian public procurement. Within this ministry is the Norwegian Agency for Public and Financial Management, DFØ, with a mandate to "ensure sound financial management in Norway's government institutions" (DFØ, n.d.). DFØ is therefore a key agency responsible for developing information and resources on strategic public procurement. Municipalities and other public authorities can contact DFØ via the

[6] Anskaffelsesloven §5
[7] Anskaffelsesforskriften §7-9

website *anskaffelser.no* to find the information or guidance they need. In addition to these national institutions, there are several other actors that influence a CA's procurement practices. Interest groups and industry associations, national and international networks, municipalities and other CAs can all influence the landscape in which a CA operates. These external actors can have a direct influence on procurement practices through dialogue or collaboration, or an indirect influence through a CAs awareness of others' perspectives and current actions. This external environment is then especially important for the central actors in this procurement practice: the CA, which in this thesis is Stavanger Municipality, and the potential suppliers. Although these two types of actors are the ones who ultimately shape how public procurement is conducted in Norway, all actors influence these procurement practices through interactions with each other.

Proposed regulatory changes. In December 2022, the government announced that it wanted to create stricter regulations for GPP. The hearing for this proposal lasted until March 2023. They included three proposed regulatory changes, as shown in Table 2. The wording of these regulatory changes has a significant impact, with some leaving more flexibility for interpretation than others. Proposal 1 states that CAs shall emphasize environmental considerations, while Proposal 2 states that they shall take environmental considerations into account. A key difference between the proposals is also the use of "where relevant" versus a "not insignificant environmental impact" in relation to the inclusion or weighting of environmental criteria. What is "not insignificant" is highly ambiguous, meaning that CAs could implement it in very different ways. This thesis does not address the potential impacts of these proposals if implemented. While further research on actors' reactions to them, potential risk aversion, actual regulatory implementation, and more would be useful, my intention is to highlight the changing (regulatory) environment in which CAs operate.

Table 2: Proposed changes to climate and environmental considerations in public procurement (Nærings- og fiskeridepartementet, 2022)

Proposal	Article impacted	Regulatory change
1	§ 7-9	"The contracting authority *shall emphasize* minimizing the environmental impact and promoting climate-friendly solutions in its procurement, and *shall* set environmental requirements and criteria in the procurement process. *Environmental considerations shall always be weighted with a minimum of 30 percent and higher where relevant*."
2	§ 7-9	"The contracting authority *shall take into account* minimizing the environmental impact and promoting climate-friendly solutions in its procurement. Contracting authorities *shall* set environmental requirements or criteria at least at one of the following stages of the procurement process. a) Qualification requirements b) Technical specifications c) Award criterion d) Contract conditions"
	§ 18-1 (3a)	"In areas with a not insignificant environmental impact, environmental considerations shall always be weighted at least 30 percent."
3	§ 7-9	"In areas with a not insignificant environmental impact, the contracting authority shall either set environmental requirements for the performance or give a minimum weighting of 30 percent to environmental considerations. The use of environmental requirements and weighting of environmental considerations may also be combined."

3. Theory

Institutional theory is one of the most prominent approaches to organizational studies (David et al., 2019). With the popularity of the theory, there has been disagreement among scholars about elements of the theory, such as the definition of "institution" and the role of individual agency (ibid., p.1). The chosen definitions used in this thesis will be made clear in this section as I present the various elements. Due to the extensive existing literature on this theory, I have selected certain theoretical aspects relevant to the institution of GPP in Stavanger. This theory section consists of three brief parts: (1) what is institutional theory, (2) core concepts within the field of institutional theory, and (3) how I will apply institutional theory in this thesis. Selected key scholars in the field of institutional theory will be referenced when explaining the core of the theory, along with a handful of other articles to add dimension to the foundational articles. To present the theory as objectively as possible, this section will focus primarily on using the language of these scholars. In other words, my application and perspective on the theory does not receive emphasis in this section, but rather takes centerstage Section 6 and Section 7 for the analysis and discussion.

3.1. What is institutional theory?

Institutional theory provides a framework for exploring the dynamics and influences of institutions on organizations and their behavior. Institutions can be defined in many ways, and the definitions used shape the application of institutional theory. They can be viewed as formal structures, cultural patterns, or normative systems that guide and constrain human behavior in a given context. Institutionalization then "explains the diffusion of institutions within organizational fields and/ or organizations (...), and institutional maintenance and/or change" (Sieweke, 2014, p.25). In this thesis, I define an institution according to Douglass C. North's (1991) article on institutions as "humanly devised constraints that structure political, economic and social interaction" (p.97). These constraints can be informal, such as transitions, customs, and taboos, or formal, such as laws (North, 1991). Organizations are social entities that operate within institutional environments and are made up of these various institutional elements including rules, norms, and beliefs (Scott, 2008). These can be created through internal interaction or borrowed (and potentially internalized) from their environments. In other words, "institutions provide the rules of the game, whereas organizations act as the players" navigating and responding to these rules (Scott, 2013, p.182). In the context of this thesis, the organization under study is Stavanger Municipality, and the

institution of focus is green public procurement, which encompasses the formal and informal structures and practices that guide green procurement within the municipality.

The complexity of institutions and organizations has led to a variety of research within institutional theory. However, all of this research focuses on “social norms and shared expectations as key sources of organizations’ structures, actions, and outcomes” (David et al., 2019, p.1). It can be used to explain things like isomorphism (Meyer & Rowan, 1977; DiMaggio & Powell, 1983), decoupling (Meyer & Rowan, 1977; Misangyi, 2016), institutional logics (Greenwood et al., 2010; Thornton et al., 2012; Friedland & Alford, 1991), and the role of agency and individuals in institutional change (DiMaggio, 1988; Thornton et al., 2012; Lawrence & Suddaby, 2006). All of these key areas are explored in this thesis. It is also important to acknowledge the changes that institutional theory has undergone since its inception. The foundational articles of institutional theory were published in the 1970s and 1980s, and the accessibility and rigor of the theory has since improved through academic scrutiny and adaptation. Scott (2008) identified seven trends related to this theoretical "maturation," which are shown in Table 3. At the heart of his findings is the conclusion that institutional theory has improved for the better, making room for norms, change and a more holistic approach. However, there are some key components that have remained prevalent and are relevant to this thesis.

Table 3: Key trends in how institutional theory has evolved (Scott, 2008)

From	To
Loose conceptualization. Early formulations of institutional features focused on the role of habit and history in constraining choice or on moral pressures (p.428).	*Tighter conceptualization*. The more recent literature focuses on the importance of symbolic systems that provide guidelines for behavior (p.428).
Determinant arguments. The early literature almost viewed organizations as being a 'victim' to their institutional environment, leading to their inevitable uniformity through various requirements and/ constraints (p.429-430).	*Interactive arguments*. Later literature acknowledged the variety and complexity within these systems, opening up space for choice and agency for individuals and organizations (p.431).
Superficial change. Changes made by organizations in response to institutional pressures lead to superficial conformity (p.432).	*Consequential change*. More recent research has shown that changes that may seem superficial can become significant over time and that early adopters were more likely to implement the reform (p.432).
Assertions. Early institutional arguments were characterized by unmeasurable data or inferences (p.433).	*Evidence*. The field of institutional theory today is increasingly including innovative types of data and solid analytic tools (p.434).
Organization-centric approach. Research focused on case studies of single organizations and the normative constraints on their structural features (p.434).	*Field level approach*. The focus shifted to the organization of the environment organizations were placed in. (p.434).
Non-rational formulations. Early research focused mostly on how institutional requirements and efficiency did not coincide, basing this conclusion off features such as symbolic actions, norms, and institutionalized behavior (p.435-436).	*Rationality within institutional frameworks*. In the 1990s, scholars started to include economic systems while also recognizing rules, norms, and belief systems as the underpinning of stable social systems, together facilitating strategic actions (p.437).
Institutional stability. Institutional change was a topic but focused on "convergent change" (p.437).	*Institutional change*. Several empirical studies have examined the construction of institutional arrangements, organizational fields, and deinstitutionalization (p.438).

3.2. Core concepts of institutional theory.

Pressures. Isomorphism is a term commonly associated with institutional theory. It was used in the seminal article by DiMaggio and Powell (1983), who referred to isomorphism as "a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions" (p.149). There are three isomorphic processes, or pressures, that lead to isomorphism - coercive, mimetic, and normative. Briefly stated (1) *coercive* isomorphism results from "political influence and the problem of legitimacy," (2) *mimetic* isomorphism results "from standard responses to uncertainty," and (3) *normative* isomorphism is "associated with professionalization" (DiMaggio & Powell, 1983, p.150). First, coercive isomorphism results from formal and informal pressures on organizations from other organizations on which they depend and from cultural expectations of the society in which the organization operates (ibid., p.150). *Mimetic isomorphism*, on the other hand, is (self-imposed isomorphism that occurs) when an organization models itself after another organization in response to uncertainty (ibid., p.151). They "tend to model themselves after similar organizations in their field that they perceive to be more legitimate or successful" (ibid., p.152). This modeling may have been diffused unintentionally, indirectly[8] or explicitly[9] diffusion. Finally, normative isomorphism is the "struggle of members of an occupation to define the conditions and methods of their work" (ibid., p.152). An important mechanism that promotes normative isomorphism is the filtering of personnel that occurs in many fields in the hiring process. The three isomorphic processes can occur without evidence that they improve organizational effectiveness and can result in organizations being rewarded for their similarity to other organizations in their field. (ibid., p.153). This desire to be rewarded by actors in their environment is likely why we see decoupling.

Decoupling and loose coupling. Isomorphism can explain the phenomenon of decoupling, which occurs when there is a disconnect between an organization's external practices, which reflect society's expectations, and the organization's actual internal practices (DiMaggio & Powell, 1983, p.155). Meyer and Rowan (1977) state that decoupling is a mechanism to "maintain the assumption that people are acting in good faith" (p.358). Part of this decoupling is a lack of evaluation of technical performance, and this lack of evaluation is accepted by external actors who accept

[8] Through employee transfer or turnover (DiMaggio & Powell, 1983, p.151).
[9] By organizations like consulting firms or trade associations (DiMaggio & Powell, 1983, p.151).

credentials, goals, and evaluations at face value (Meyer & Rowan, 1977). However, this decoupling is not always intentional or even conscious, leading to the term *loose coupling*. This is when decoupling occurs when an organization adopts a legitimate program that is consistent with its external signaling but fails to implement some or all of the practices that said program would entail (Misangyi, 2016, p.408). Thus, coupling[10] and decoupling is happening at the same time. The motivations behind decoupling and loose coupling is a topic that is still being researched, but one likely explanation is that it is an organizational response to a complex institutional environment (ibid., p.410)

Institutional logics. In their influential article, Friedland and Alford (1991) introduced the concept of institutional logics as a critique of institutional theory. They described society as having different sectors with their own distinctive institutional logics that are "symbolically grounded, organizationally structured, politically defended and technically and materially constrained" (ibid., pp.248-249). These institutional logics can be understood as the "master principles of society" that guide social action (Greenwood et al., 2010, p.1). Examples of such logics include democracy, capitalism, and science. A key aspect of institutional logics in organizational studies is that competing logics provide opportunities for individuals to challenge and resist prevailing institutional structures by offering alternative logics (David et al., 2019, p.7). In the case of this thesis, competing institutional logics, such as capitalism and environmentalism, influence the municipality's goals and actions regarding GPP.

To comprehensively analyze these institutional logics, it is valuable to adopt a broader perspective by examining the cultural and historical context and considering the state logics that contribute to the case (Greenwood et al., 2010, pp.14-15). By effectively incorporating the theory of institutional logics, we can better understand the variation in institutional responses to isomorphic pressures, as described by DiMaggio and Powell (1983), which tend to promote organizational sameness. This helps to explain why different municipalities approach GPP in different ways. In particular, the theory of institutional logics recognizes that organizations are not homogeneous, as culture is shaped by different institutional orders (Thornton et al., 2012, p. 44). Thus, institutional logics

[10] Organizational behavior that are consistent with their stated practices.

provide a framework for understanding the influence of competing logics on organizational behavior and responses to institutional pressures. However, institutional logics do not operate in isolation, but intersect with individual agency, which plays a crucial role in shaping organizational actions and outcomes.

Agency. As an approach, institutional logics also allows more room to consider the ability of individuals to influence institutions and in the logics themselves, although Friedland and Alford (1991) do not provide a theory of individual behavior. One of the most common terms used when discussing agency in institutional theory is institutional entrepreneurship (DiMaggio, 1988). These institutional entrepreneurs are actors who "create new and modify old institutions because they have access to resources that support their self-interests" (Thornton & Ocasio, 2008, p.115). Inherent in this conception of agency is the conscious actor seeking change. A similar concept to the institutional entrepreneur is institutional work. Institutional work is the "purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions" (Lawrence & Suddaby, 2006, p.215). It differs from institutional entrepreneurship in that it also considers the "nearly invisible and often mundane" actions taken to maintain institutional arrangements (Lawrence et al., 2009, p.1). An approach that departs from an actor's self-interest is *embedded agency.* This approach recognizes that actors' interests and agency are enabled and constrained by institutional logics (Thornton & Ocasio, 2008, p. 103). Social actors are "embedded in social, cultural, and political structures and (...) guided by cognitively bounded identities and goals" (Thornton & Ocasio, 2012, p.80). Embedded agency is used in this thesis to explain the role of agency for GPP in Stavanger due to its nuances and multifaceted considerations.

3.3. Theoretical application to GPP in Stavanger

Public procurement research has been criticized for neglecting theory (Grob & Benn, 2014), and institutional theory is particularly underrepresented (Flynn & Davis, 2014). In Flynn and Davis' (2014) review of the use of theory in public procurement research, only 50 of the 172 articles analyzed contained an identifiable theory (p.154). And of the 50 articles that used theory, only two used institutional theory (Flynn & Davis, 2014, p.156). They find this noteworthy given the theory's potential to explain and predict phenomena such as isomorphism among organizations and the institutionalization of norms and standards (ibid., p. 169). There are some studies that apply

institutional theory to public procurement that were not included in Flynn and Davis' (2014) review. Grob and Benn (2014) explore how institutional theory can be used to explain sustainable procurement, and conclude that it has the potential to explain the adoption of sustainable procurement. In this exploration, they do not apply the theory to any cases. However, Roman (2017) does this in his study of sustainable procurement in US government agencies. He uses institutional theory in combination with other stakeholder theories and finds that leadership and stakeholder expectations play an important role. Finding literature where institutional theory is applied to GPP studies proved to be difficult, as few scholars have touched on it. This thesis attempts to contribute to this area of research.

GPP as an institution has both formal and informal rules that govern the procurement processes of CAs. These rules have an added complexity by adding the layer of environmental considerations to the already intricate process of public procurement. Formal rules are derived from Norwegian laws and regulations that specify the requirements for public procurers in Norway when procuring goods or services. Some of these rules are introduced in the Background section through a brief introduction of the main laws that shape Norwegian GPP. Other examples of formal rules include ecolabeling requirements for specific sectors and zero-emission vehicles. Informal rules arise from social interaction, organizational culture, and shared beliefs, and shape the behavior and decision-making of organizations and individual procurement officers. For example, there is an informal rule that municipalities, especially large ones, have a responsibility to adopt greener procurement practices. This is shaped by societal expectations, peer pressure and knowledge sharing. While the impact of the formal rules of GPP is often understood, the informal rules may remain unseen. Understanding these rules and the dynamics at play can therefore help to increase the effectiveness of GPP practices and improve environmental outcomes.

This thesis will use four core concepts of institutional theory to investigate GPP in Stavanger. First, it will use the concept of isomorphism to explain the motivations behind Stavanger Municipality’s climate actions. These pressures also explain the initial disconnect between the municipality's plans and communicated ambitions and actual actions. Institutional logics and embedded agency are key factors in explaining the municipality's small, continuous adjustments in its approach to GPP. This is further explored in the Analysis section. I argue that these four concepts are

interrelated and complementary rather than contradictory. Institutional logics explain the institutional context of organizations that shapes their actions but may lack an explanation for the conformity of basic structures that often occurs naturally between similar organizations. And isomorphic pressures can help explain the reason for decoupling when it is not intentional. Overall, I hold that this combination will contribute to the under-researched field of using institutional theory, or any theory, to explain GPP in different cases.

However, there are several limitations to the use and application of institutional theory. A common criticism is that individuals are perceived in a simplistic way (Berthod, 2016). I agree with this assessment of the theory as a whole but approaches such as embedded agency also address the complexity of individuals within their different institutional logics. In fact, I would argue that simply exploring the role of embedded agency in the context of research on environmental policy instruments such as GPP would provide rich research. A second common criticism of institutional theory is that institutional effects have long been equated with superficial conformity (Scott, 2008). Aware of these limitations, I will nevertheless use the three types of isomorphisms in combination with other key concepts of institutional theory to provide a basic analysis of GPP in Stavanger. The common value I assume that organizations or municipalities in this field have is the belief that "reducing environmental harm is good." This is an all-encompassing formulation of something that is generally agreed upon. And finally, the theory is often seen as being characterized by poorly defined concepts, multiple definitions of institutions, and a field with "almost no limits" (Sæbø, 2017). I attempt to combat this by making clear the boundaries of how the theory will be used in this thesis. This includes clearly defining the terms I use and remaining consistent throughout the thesis.

4. Literature review

This literature review outlines the main topics of discussion related to GPP. Some of the literature deals with CPP and SPP, and in these cases I have extracted the findings relevant to GPP: First, I present the most commonly researched GPP topic - the factors that influence its adoption. Second, I outline the benefits of GPP when adopted and the evidence that supports the use of GPP. Finally, I review the literature on the actual effectiveness of the instrument, a topic that has been identified as under-researched. Since the use of institutional theory in this thesis will help to analyze the context of GPP in a more holistic manner, this literature will focus on research specifically related to GPP. A selection of articles from outside the field of GPP will be included to provide the necessary context. The literature review also relies on some systematic literature reviews conducted by previous scholars, the most notable being the article by Cheng et al. (2018) and Sönnichsen and Clement (2020). The aim is to collect some of the most relevant literature related to GPP to establish the current state of the environmental policy tool and provide a deeper understanding of GPP in Stavanger.

4.1. Uptake of GPP

The uptake of GPP is perhaps one of the most researched topics in the literature on GPP. This subsection will attempt to cover the most central areas. First, I will look at the external factors of uptake, including regulation and the impact of the "level" of the contracting authority. Second, I will review the internal factors that influence uptake. The literature is divided on whether awareness of GPP increases uptake. A possible reason for this is risk aversion, which is addressed in the context of GPP. Ultimately, this leads to the conclusion that competence rather than awareness may be the cause of increased GPP uptake.

Level of regulatory flexibility. A key debate in the context of GPP is whether regulations should be more rigid or more flexible in order to increase the uptake of GPP. GPP is a voluntary exercise in the EU[11] and this flexibility is often seen as a strength of the environmental policy instrument. Rosell (2021) points out that more flexible contracting authorities have more flexibility in their procurement process and that “more flexible institutions adopt more GPP” (p.9). In other words,

[11] GPP has only been mandated for a few product groups (Mélon, 2020, p.3).

flexible regulation allows contracting authorities to include environmental criteria in the tenders they deem relevant and in the way they deem most appropriate. Flexibility also opens up opportunities to improve the process of designing and approving tenders that are not available in a formal procurement process (Sparrevik et al., 2018). This flexibility could also reduce the perceived risk associated with potential penalties, which are often associated with more rigid regulations, if mistakes are made. In their study of GPP in Russia, Shandria et al. (2022) found that organizations are more likely to include environmental criteria if they are subject to flexible legislation than rigid legislation, even when neither type of legislation requires green procurement. Their analysis was that rigidity creates caution because procurers know that deviations may result in penalties. This relates to a point made by Mélon (2020) when arguing for more rigid laws referring to the "risk-averse nature of public officials" (p.4) caused by "insufficient knowledge on the use of green options under the current complex legal framework" (p.12). Risk aversion is thus an element discussed in the literature on both flexible and mandatory GPP regulations.

Some scholars have found that mandatory regulations increase the uptake of GPP. At the macro level, Mélon (2020) argues that GPP rules need to be coordinated across EU member states to nudge the market towards sustainable business solutions. International coordination could help avoid the risk aversion associated with formulating environmental criteria in a way that does not discriminate between domestic and imported goods (Mélon, 2020, p. 6). Zhu et al. (2013) studied motivational factors at the micro level, looking at individuals in China, and found that regulations help to motivate and promote GPP practices, as officials feel pressure from GPP-related regulations. Conversely, voluntary regulations or a lack of rigid regulations can be demotivating for GPP practices (Zhu et al., 2013).This is supported by the study by Vluggen et al. (2019), where they "observed a lack of legal pressure to enforce sustainable procuring" (p.12) although they found that low legal pressure is effective in enforcing sustainable procurement This means that although legal pressure has been shown to increase sustainable procurement, legal pressure is not being applied to the relevant actors. This is particularly relevant for municipalities as they show high levels of legal accountability and legal compliance (Vluggen et al., 2019, p. 13). Therefore, the increased pressure and clarity provided by stricter GPP regulation could increase its uptake.

Level of contracting authority. This risk aversion not only affects how contracting authorities respond to mandatory or flexible legislation, but also which type of contracting authority is more likely to use GPP. In Western Europe, the most common finding among scholars is that regulatory flexibility often leads to higher adoption of GPP at the local and regional level (Rosell, 2021; Litardi et al., 2020). One of the main reasons identified by scholars is the perceived difficulty of including green criteria in national government tenders (Rosell, 2021, p.7). However, research on Asian countries suggests that there is a higher level of uptake at the national level. Liu et al. (2019b) found that lower administrative levels in China have lower growth rates due to lower GPP training opportunities, lower resource acquisition, and lower allocation opportunities. Shadrina et al. (2022) also found that federal agencies are more likely to incorporate environmental criteria than local governments due to staff expertise at the national level. Thus, like the research on the effects of regulatory flexibility, cultural differences are likely to influence which level of government has the highest uptake of GPP. What does not vary across cultures is the impact of resources on the uptake of GPP.

The availability of resources for contracting authorities has a significant impact on the uptake of GPP. Large municipalities often have more resources for a dedicated purchasing department "which can generate knowledge and develop purchasing strategies" (Michelsen and de Boer, 2009, p. 166). This could explain the "clear correlation between the size of municipalities and the focus on green procurement" (p.163), with GPP being more established in large municipalities as found in Michelsen and de Boer's (2009) study. Testa et al. (2012) also point to the possibility that smaller organizations may not be able to define responsibilities, roles, and functions in relation to GPP. In cases where purchasing is decentralized, they may lack time and money to focus on sustainability criteria (Vluggen et al., 2019). Solutions to these barriers include clear organizational goals and political commitment to GPP (Cheng et al., 2018). Another key resource associated with GPP adoption is knowledge. Environmental knowledge and awareness increase uptake (Cheng et al., 2018), and lack of knowledge about GPP decreases uptake (Liu et al., 2019b; Shadrina et al., 2022). The value of GPP knowledge and competence is further explored in the following subsection.

The value of competence and risk-taking. There is a consensus among researchers that higher awareness of GPP has a positive impact on the adoption of GPP practices. In an econometric analysis, Testa et al. (2012) found that awareness of GPP tools has a positive effect on the probability of adopting GPP practices and the number of tenders that include environmental criteria. Sönnichsen and Clement's (2020) literature review on GPP also found that awareness and knowledge were the main drivers of effective GPP procedures and decisions on technical specifications and award criteria. Conversely, Cheng et al. (2018) found that lack of awareness of GPP is a common barrier faced by all levels of government, and Mélon (2020) points to insufficient knowledge of PP regulations as a barrier to green practices. In a case study of GPP in the photovoltaic (PV) industry, Fang et al. (2020) also found that internal factors such as a company's lack of awareness were more important than external factors such as a lack of legislation. Similarly, in their review of barriers to GPP, Vejaratnam et al. (2020) found that a lack of awareness and knowledge within an organization is a greater barrier than financial constraints. Awareness of GPP tools is therefore seen as an important factor in their adoption.

In contrast to these findings, some scholars suggest that awareness of GPP may also make public officials reluctant to include environmental criteria in the procurement process. Shadrina et al. (2022) found that awareness of the rigidity of a regulation leads to caution, as procurers know that deviations can result in penalties (p. 12). The findings of Zhu et al. (2013) support this, as their results indicate that actors with pressure related to GPP are more reluctant to implement it when they have more knowledge of GPP regulations. This is because they are aware of the limited penalties for not having green procurement practices, suggesting that the lack of this knowledge may be more beneficial to the implementation of GPP (Zhu et al., 2013). Cheng et al (2018) also found that procurers may "adopt risk-averse behavior to avoid the uncertainty caused by different awarding criteria and scoring rules" (p.781). Risk aversion in GPP, and in which situations it is more prevalent, is an interesting topic for research, as identifying and understanding what factors lead to these differences could increase the uptake of GPP globally.

To address this risk aversion, GPP competence could be a valuable resource for procuring authorities. GPP competence goes a step further than mere knowledge or awareness of GPP practices and tools, implying that the actor has the ability to identify the best solution for different

situations. Competence and know-how could make CAs more confident in their ability to use procedures and include greener criteria in their tenders (Testa et al., 2012). Thus, training CAs in the use of environmental criteria could have a positive impact on the uptake of GPP (Sönnichsen & Clement, 2020; Liu et al., 2019a; Rosell, 2021). Sönnichsen and Clement (2020) also note that the mandate for this training needs to come from top management and be aligned with the organization's strategies and goals (p. 7). This could help address the risk perception associated with the price of CPP and bidding (Sönnichsen & Clement, 2020). However, competence does not necessarily have to be in-house to have a positive impact on GPP, as Testa et al. (2012) found that GPP increased when CAs used external experts in the contracting process. In order to obtain this competence, whether in-house or external, there needs to be a recognition of its value in order to fund it.

Supportive, risk-taking leadership is important to facilitate the development and use of this capability. Walker and Brammer (2009) found that top management commitment to integrating sustainable procurement objectives into processes and procedures was one of the most important facilitators of SPP. Given the similarities in procurement strategies, it is likely that the same is true for GPP. Sönnichsen and Clement (2020) had similar findings, emphasizing the importance of political strategic ambition and supportive top-level management to have effective implementation of CPP processes (p.7). The importance of this is particularly pressing in relation to the allocation of funds, given the biased perception of greener procurement. This is supported by both Sparrevik et al. (2018) and Rosell's (2021) research on GPP, which concludes that management and leadership are important factors in GPP implementation. The positive relationship between supportive management and green procurement is not only true for public procurers, but also for private companies (Liu et al., 2019a). In conclusion, supportive leadership has a detrimental effect on the success of GPP implementation because of its ability to either encourage or stifle the efforts of individuals within the organization.

4.2. GPP as a tool to stimulate environmental innovation

The strategic adoption of GPP could lead to several benefits, one of which is to stimulate innovation of environmentally friendly products[12]. PP can facilitate innovation by specifying functional requirements of products rather than detailed technical characteristics (Sparrevik et al., 2018). Therefore, GPP can facilitate innovation related to green products by increasing market size and reducing the associated demand uncertainty (Krieger & Zipperer, 2022). For this to happen, public contracting authorities must have significant purchasing power (Cheng et al., 2018, p. 781). Krieger and Zipperer (2022) found that GPP triggers a demand pull for small and medium-sized enterprises (SMEs), which "leads to the introduction of environmental product innovations" (p.3) due to the inclusion of environmental criteria. Their findings therefore support the effectiveness of GPP as a demand-side policy instrument for environmental innovation for SMEs. Sparrevik et al. (2018) highlight the importance of integrating policy requirements into formal procurement processes in order to promote innovation. This is because the motivation to approve innovative solutions is linked to the belief that they "may affect future regulation, public agencies and the market to adapt to new technology, thus lowering cost and increasing the availability in the future" (Sparrevik et al., 2018, p.884). This formalization of the procurement process is supported by Sönnichsen and Clement's (2020) findings that local governments find it difficult to promote innovation unless they have very specific or detailed functional requirements. On the other hand, Cheng et al. (2018) point to a lack of empirical and theoretical research on innovation. This gap includes a lack of exploration of how suppliers respond to varying market shares, and whether different sizes of CAs motivate innovation and generate associated spillover effects differently (p. 782).

Despite a lack of research on the subject, there is some evidence that GPP can have positive spillover effects. The use of environmental criteria can have spillover effects on the private sector (Rainville, 2017, p. 1030), with Brammer and Walker (2011) finding that GPP stimulates greater environmental awareness among firms. CAs could increase consumer awareness of a green product, label, or service, thereby unleashing latent demand (Simcoe & Toffel, 2014). On the demand side, public procurement can help reduce the average cost of suppliers, leading to

[12] Including both goods and services.

economies of scale and increased competition (ibid., p. 413). The study by Simcoe and Toffel (2014) is often cited as an example of GPP leading to spillover effects. They found that government procurement processes related to Leadership in Energy and Environmental Design (LEED) certification of municipal buildings led to a spillover effect that stimulated LEED adoption in the private sector. These spillover effects extended to neighboring cities, including cities without their own green building policies. They also found that the impact of procurement policies is somewhat greater in large municipalities (p. 412). And perhaps, most importantly, they found that public procurement could break deadlocks that occur when "coordinated investments are required to adopt a common standard," thereby stimulating the growth of markets for certain goods and services (ibid., p.412).

4.3. Effectiveness of GPP

Despite the potential of GPP to reduce emissions, its effectiveness as an environmental policy tool has been questioned. The impact of the different specific environmental criteria is an issue that has not been explored to the extent that it could be. There are two components to this: (1) the effects of the specific criteria, and (2) in which tender document the criteria are included. I begin this section of the literature review with the former. The subsection on criteria includes the most commonly discussed environmental criteria to include in GPP. Finally, I present literature on the cost-effectiveness of GPP as an environmental policy tool and potential areas for improvement.

EMS. Environmental management systems (EMS) are a common way for an organization to demonstrate its commitment to improving its environmental performance. An EMS is a "set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency" (*Environmental Management Systems (EMS)*, 2022). They have the potential to improve an organization's processes related to environmental management, for example with regard to the collection and use of information and training (Testa et al., 2014). The most common EMSs are ISO 14001 and EMAS, both of which are characterized by flexible requirements that allow organizations to set up their EMS according to their internal characteristics (Testa et al., 2014). This could be seen as a strength of EMSs, but this flexibility could also lead to reduced environmental benefits. In Boiral et al.'s (2018) literature review on the adoption and

outcomes of ISO 14001, they found that some papers concluded that ISO 14001 had a positive impact on environmental performance, while others found no significant improvement (Boiral et al., 2018, p.421). What was clear, however, was the social benefit through reputational benefits and stakeholder relationships (ibid, p.422). The most common disadvantage was the cost associated with implementation and the certification process (ibid., p.422). With a complex and expensive certification process, there is also a tendency for organizations to adopt ISO 14001 symbolically for their image, rather than changing internal practices (ibid., p.422-423). In their study of energy-intensive industries, Testa et al. (2014) found that ISO 14001, especially in combination with the requirements of EMAS, improves environmental performance (p.172). However, they stress the importance of management and internal commitment to ensure an effective EMS (ibid., p.172). Overall, it appears that an EMS, when used effectively, improves an organization's environmental performance.

It therefore makes sense that EMS is a common environmental criterion in GPP. Case studies usually find that EMSs are effective in stimulating GPP adoption (Testa et al., 2012, p. 94) and product innovation (Rainville, 2017, p. 1034). In contrast, Testa et al. (2012) found that the relationship between ISO 14001 certification and the ability to develop and implement a GPP strategy is not evident in the case of Italy. They also found that EMSs focus primarily on “direct” environmental impacts, undermining the importance of “indirect” impacts in the certification process. This can be explained by the lack of knowledge and tools “for the interpretation and methodological approach” for indirect aspects (Testa et al., 2012, p.95). The difficulties in measuring indirect aspects could lead many public purchasers to focus on direct aspects when procuring products and services. Despite the widespread use and assumed benefits of EMSs, there is little research on EMSs in relation to GPP, making it difficult to assess their impact on public procurement.

Ecolabels. While EMSs are the most common GPP criteria for an organization's processes, ecolabels are the most common criteria related to the organization's product. Looking at their general environmental benefits is therefore valuable. Ecolabels are a symbol or logo on a product that indicates that the product can be considered a green product (Sharma & Kushwaha, 2019). There are two key differentiators for ecolabels - whether they are mandatory or voluntary and the

manner in which their certification is conducted (Horne, 2009). In their literature review on ecolabels, Meis-Harris et al. (2021) find various factors that influence businesses to obtain eco-label certifications, such as societal and consumer, economic, operational, and environmental influencers. Companies that are not affected by the aforementioned influences may be influenced by government policy influences through the inclusion of ecolabels in procurement (Meis-Harris et al., 2021). Ecolabels may also lead to increased trust between a business and its consumers (Sharma & Kushwaha, 2019). However, it is uncertain whether ecolabels lead to reduced environmental impacts (Horne, 2009), with little tangible evidence of measurable improvements (Meis-Harris et al., 2021, p.12). In some cases, ecolabels could mask the environmental harm of products if there is voluntary certification (ibid., p.12). One proposed way to overcome this weakness is to "reassurance" that someone is monitoring the labeling schemes and certified companies (Castka & Corbett, 2016). If done correctly, it is easy to see why the inclusion of ecolabels as environmental criteria is included in GPP.

Ecolabels are one of the most common ways to integrate environmental considerations into procurement. This is particularly relevant for "off-the-shelf"[13] products and services (Rainville, 2017, p.1034). Ecolabels are used most in the concept calls or general requirements in tenders (Cheng et al., 2018, p.780). Their inclusion can provide a procurer or consumer with information about the environmental attributes of a product or service. A commonly used label is the Energy Star label, which is used for energy efficiency (Rainville, 2017, p.1034). Therefore, procurers can choose which ecolabels to include based on the attributes they want to see. Ecolabels can also help address the risk aversion[14] associated with circular procurement (Sönnichsen & Clement, 2020). However, there are some weaknesses in the use of ecolabels. In 2013, Bratt et al. found that there are shortcomings in the "process and practice of eco-labelling, which hampers cohesiveness, transparency and comprehension" (p.1631). This is related to the findings of Meis-Harris et al. (2021) that ecolabels may mask environmental damage. CAs should therefore have an understanding of each ecolabel and certification process to understand the potential impact of including it as a criterion. There are some additional steps that can be taken to address potential

[13] Off-the-shelf products are "available as a stock item: not specially designed or custom-made" (*Merriam-Webster*, n.d.).
[14] To avoid legal conflict (Sönnichsen & Clement, 2020, p.15).

weaknesses of ecolabels. Bratt et al. (2013) point out that market-based instruments such as ecolabels cannot create a sustainable society on their own, but only in combination with other policies and political initiatives. Ecolabels could also be used in combination with other environmental criteria, such as EMS and LCA or LCC, to support best practice CPP (Sönnichsen & Clement, 2020) and thereby GPP.

LCC and LCA. The use of Life Cycle Costing (LCC)[15] and Life Cycle Assessment (LCA)[16] in GPP is limited, despite their recommended use. There is a lack of academic literature on their use, which makes the cause of this limited use uncertain. However, it is recognized that these types of tools are likely to support green strategies and can contribute to more sustainable procurement (Cheng et al., 2018). Currently, the use of LCC is not mandatory, although it is at the core of the EU Public Procurement Directive (2014/24/EU) (Orfanidou et al., 2023). However, if included in GPP, it could have positive effects. Sönnichsen and Clement (2020) point out that LCA and other tools for calculating carbon emissions provide a platform that can be used to create a market dialogue on the impact of carbon emissions (p.13). This could also help evaluate innovative and market-ready solutions (Sönnichsen & Clement, 2020, p. 13). In a case study in Greece, Orfanidou et al. (2023) found that when looking at the cost of green products versus non-green products, the cost of the former was 2.3 times higher, but the difference in LCC was only 1% (p.10). Therefore, when price is a key award criterion, the use of LCC could have a significant impact on the choice of supplier. The use of LCC could also have a positive impact on organizations and not only on procurement results. De Giacomo et al. (2019) found that experience with GPP "contributes to LCC adoption and to reducing barriers against its implementation (p.8) in environments with high barriers to LCC. Thus, GPP is not only the inclusion of environmental criteria in tenders, but also a practice that can facilitate the internalization of more sustainable practices. Despite these benefits, LCA and LCC are time-consuming to calculate because they must be done at the individual product level. Therefore, CAs need to be intentional about the cases in which they include these criteria.

[15] Life Cycle Costing (LCC) is a method of calculating all costs of a good or service throughout its lifespan (De Giacomo et al., 2019).

[16] Life Cycle Assessment (LCA) "is a tool to assess the environmental impacts and resources used throughout a product's life cycle" (Finnveden, et al., 2009, p.1).

Inclusion of criteria. The CA's choice of where to place these environmental requirements in the tender is a complex process that influences the environmental benefits of the procurement. The norms for including different criteria can vary from sector to sector. But in general, the norm is to use standards that are intended to be knock-out criteria as technical specifications and award criteria to reward an organization's voluntary performance and open up to more solutions and suppliers (Rosell, 2021). The latter can be used strategically as a method to encourage innovation by making the tender more flexible to a range of solutions and suppliers (Rainville, 2017). Cheng et al. (2018) note that it is important that environmental criteria are linked to "specific, strategic and long-term environmental objectives" (p.781). This is in line with Sönnichsen and Clement's (2020) recommendation that fewer but more stringent criteria could help, as one policy objective per criterion used can have a positive impact on the CPP (p.8), as it would be easier to monitor compliance. It would also be easier to link fewer criteria to strategic goals. In an analysis of the use of green criteria in the building and construction sector, Testa et al. (2016) found that the environmental criteria are used almost exclusively as technical specifications and award criteria. This use of criteria focuses on the product, which Testa et al. (2016) found to be a common tendency among public purchasers. By focusing on criteria related to the product rather than the process of a procurement, the impact of criteria on environmental sustainability could be reduced (ibid, p.211). Including environmental criteria in tenders also requires more compliance monitoring during the contract period (Sönnichsen & Clement, 2020), which can be a resource-intensive process in terms of both time and money.

Even when environmental criteria are included in tenders, they may not have a significant impact. Environmental criteria have little impact on supplier selection based on the weight of the criteria (Igarashi et al., 2015; Sönnichsen & Clement, 2020). Cheng et al. (2018) hypothesize that this may be due to a lack of knowledge and capacity on the part of contracting authorities on how to integrate environmental considerations into the selection process (p. 777). There is also a lack of research on the tender evaluation method (Cheng et al., 2018), which could be risky if the weighting of aspects doesn't reflect the impact of these aspects (Parikka-Alhola & Nissinen, 2012). Michelsen and de Boer (2011) also found that although municipalities say that they focus on environmental aspects when selecting suppliers, suppliers do not believe that their environmental performance is important when selecting a supplier. This is an interesting discrepancy between the demand side

(the CAs) and the supply side. And even when the procurer selects on the basis of environmental criteria, Krieger and Zipperer (2022) found that there is no statistically significant effect that being awarded a GPP project leads to the introduction of new and more environmentally friendly processes. Their explanation for this is that the environmental criteria included are more focused on the product than on the processes. This supports the findings of Testa et al. (2016) that the type of criteria included can limit the environmental sustainability of GPP if it focuses only on the product. Thus, a CA could include environmental criteria as a symbolic gesture without having a significant impact on its procurement.

Cost. A key reason why the more environmentally beneficial goods and services are not selected is their (perceived) higher cost. One reason for this is that purchasers have a short-term perspective, looking at up-front costs rather than life-cycle costs. This is limiting, as solving today's environmental problems is an issue where future-oriented solutions are at the core. Bratt et al. (2013) found that decisions are reactive and made from a short-term perspective to comply with procurement laws (p.314). Limitations of political systems exacerbate this short-term perspective with limited political terms. In addition, single-year budgeting of public spending could lead to discrimination against goods and services with lower life-cycle costs but higher up-front costs (Mélon, 2020, p. 9). The high upfront costs of these goods and services may also be seen as cost inefficient or a barrier to uptake with Zhu et al. (2013) finding that cost is a key barrier to uptake of GPP in China (p.90). Several scholars also question the cost-effectiveness of GPP. Litardi et al. (2020) and Lundberg and Marklund (2013) question the ability to rationalize this increased public spending, and Cheng et al. (2018) suggest that it is difficult to achieve cost efficiency with GPP due to its command-and-control characteristics. It is interesting to note that the GPP literature does not address what would constitute cost-effectiveness in the context of procurement. Of course, when dealing with public spending, it is important to be fiscally responsible. However, in the short term, goods and services that are better for the environment are likely to have higher up-front costs.

There are several ways to encourage the implementation of environmental policy instruments when faced with high up-front costs. One is for the contracting authority to award based on the Most Economically Advantageous Tender (MEAT) method. This involves awarding the tender based on the calculation of a price-quality ratio, where environmental characteristics would be part

of the quality (Rainville, 2017, p. 1031). Another method would be to include the aforementioned LCC to consider costs over the entire life cycle, rather than just upfront costs. This would incentivize suppliers with products that have lower life cycle costs. However, for a purchaser to be able to incentivize these more environmentally beneficial goods and services, they must have the funds to do so. Many public purchasers operate with limited budgets. Both Zhu et al. (2013) and Liu et al. (2019c) found that economic incentives, such as subsidies, increase the likelihood of GPP adoption. This is supported by Nikolaou and Loizou (2015), who found that market-based instruments such as subsidies are necessary to encourage managers to adopt environmental management strategies (p. 59). If CAs have the available funds to potentially spend more on greener goods and services, simply rewarding innovation and not requiring it has been shown to be a sufficient incentive (Krieger & Zipperer, 2022, p.13). This is because potential suppliers with greater resource constraints are dependent on winning public procurement projects (ibid., p.3). There are ways to combat cost reluctance, but it requires a willingness to view procurement as an environmental policy tool that facilitates long-term environmental benefits that are worth the investment.

4.4. Summary of literature review

Research on GPP has increased over the years, but there are some significant gaps in the research. First, there is a lack of research on how culture affects the adoption and effectiveness of GPP around the world. This leads to conflicting results on the impact of flexibility in GPP legislation, which levels of government are more likely to include environmental criteria in tenders, and whether awareness of GPP leads to increased confidence in its use or increased risk aversion. Future research on environmental policy instruments should therefore also assess how cultural differences between (and within) countries affect their effectiveness. It is important to note that the lack of literature found on this topic may be due to an unconscious Eurocentric bias on the part of the researcher when searching for literature. Secondly, there is a lack of research on the environmental impact of including different criteria and in which tender documents they are required. Finally, the cost-effectiveness of the tool has not been sufficiently explored. There is still a need for research on which GPP practices lead to the best environmental impacts at the lowest cost. More resources should therefore be put into researching this, in order to reduce the resources wasted by CAs trying to find themselves through trial and error. However, despite areas for

improvement, nearly all of the scholars included in the literature review agree that GPP could be a valuable tool for reducing emissions if used strategically.

5. Methodology and Methods

In this section I will present the methodology and methods used to explore the topic of GPP in Stavanger. First, I will discuss the methodology that informs my research. This includes explaining why I found the abductive logic of reason to be the most appropriate and how the associated idealistic ontological assumption and constructivist epistemology will influence the research approach and data analysis. This is followed by a brief explanation of why mixed methods were chosen for my research before moving on to the second subsection on data collection and processing. In this subsection, I will introduce each method used, its limitations, the data processing involved, and its potential limitations.

5.1. Methodology

This thesis uses abductive logic, which involves looking at social actors and how they construct, conceptualize, and make sense of their social worlds (Blaikie & Priest, 2019). Abductive logic answers "what" and "why" questions, answering the "'why' questions by producing understanding rather than an explanation, providing reasons rather than causes" (Blaikie & Priest, 2019, p.99). Answering these questions requires the researcher to enter the world of social actors to discover the motives and reasons for their social activities (Blaikie & Priest, 2019), which in this thesis relates to GPP as an environmental policy tool in Stavanger. Abduction also requires the researcher to draw conclusions from partial knowledge (Silverman, 2019), which means that I will find the best possible conclusion based on the information found through my data analysis in combination with the literature review.

I have chosen abductive reasoning over deduction and induction because I believe it is the most appropriate way to explore the topic of GPP. In deduction, the premises used are generally accepted or "true" (Douven, 2021), meaning that the conclusion derived from those premises would also be true. Although there are some concepts that are generally accepted for GPP, the complexity of the procurement process can give procurement officials very different experiences and perspectives on the process. Because of this complexity, I cannot claim that my research

findings are universally accepted or true. Inductive logical reasoning is not relevant because generalizations, even limited ones, cannot be made based on the case study of Stavanger alone. If the scope of the thesis is extended to other municipalities, making the research more comparative, the use of induction would be relevant.

In line with abductive logic, this thesis will use an *idealist* ontological assumption and a *constructivist* epistemology. This is the most commonly used combination with abductive logic according to Blaikie and Priest (2019). The idealist ontological assumption means that "social reality is made up of shared interpretations that social actors produce and reproduce as they go about their everyday lives" (Blaikie & Priest, 2019, p.102). Underpinning constructionism is the belief that social reality is discovered from the "inside" rather than from the concepts and theories of experts (Blaikie & Priest, 2019, p.104). Therefore, when conducting interviews, I will look for the social reality of the actors being interviewed rather than a 'right' answer. Unlike the positivist and naturalist perspective that interviews are reports of reality, constructivists view interview responses as displays of perspectives (Silverman, 2019). Therefore, the interviews will provide valuable insights into the interviewees' perspectives on GPP in Stavanger.

To gain this understanding of GPP in Stavanger, I will use mixed methods through a combination of quantitative and qualitative document analysis along with interviews. There are several advantages to this method, but my main reason is to ensure the credibility of my findings through triangulation of the different data. This is one of the benefits of mixed methods cited by Silverman (2019), in addition to maximizing the benefits of quantitative and qualitative data, moving from numbers to meaning, and providing "more than one way of looking at a situation" (p.403). When using mixed methods in combination with a constructivist approach, Silverman (2019) warns that the researcher "cannot appeal to a single ´phenomenon´ that all your data will apparently represent" (p.411). This is not possible because constructivism treats social reality as "constructed in different ways in different contexts" (ibid., p.411). Therefore, I will be careful to look at the findings of the different methods separately. While the findings may validate each other, they are different social realities, which will be made explicit throughout the thesis when discussing the limitations of my data.

5.2. Data collection and processing

For my mixed methods research, I used a combination of qualitative and quantitative data analysis. The qualitative data came from municipal documents and interviews, while the quantitative data came from an analysis of tender documents. I will present each of these methods separately. In doing so, I will explain why I chose each method and the delimitations I made, how I processed the data, and potential limitations associated with the choices I made. First, I will explain my methods for document analysis - first for the municipal documents, then for the tender documents. Then I will explain the methods related to the interviews conducted. Each of these methods and the specific documents and interviews included are representative of their own social reality. The data will therefore be processed and interpreted separately, before attempting to tell the story of GPP in Stavanger based on the mosaic of data collected.

5.2.1. Document analysis

Municipal documents

I analyzed a number of municipal documents to investigate Stavanger's approach to GPP. An overview of the description of the documents can be found in Table 4. A key document I analyzed was Stavanger's Climate and Environmental Plan for 2018-2030[17]. Their Climate and Environmental Plan is the document that guides the climate actions of the departments within the municipality. I also looked at their previous Climate and Environmental Plan for 2010-2025[18] to see if there was an increased focus on GPP. Rooted in the current Climate and Environmental Plan, there are two action plans - Action Plan 2018-2022[19] and Action Plan 2022-2026[20]. In these action plans, the municipality outlines the steps that various departments will take to achieve the municipality's climate and environmental goals. To track their progress, the municipality has published annual status reports, as well as a final report based on the 2018-2022 Action Plan[21]. I reviewed the progress reports to gain insight into how the municipality evaluates its own GPP

[17] Will from this point on be referred to as "the Climate and Environmental Plan"
[18] Will from this point on be referred to as the "previous Climate and Environmental Plan"
[19] Handlingsplan 2018-2022
[20] Handlingsplan 2022-2026
[21] Sluttrapport Handlingsplan klima og miljø 2018-2022

performance. In addition, the municipality began to include climate budgets[22] in their Action and Financial Plan 2020-2023[23]. My analysis of the municipality's action and financial plans is therefore limited to the four[24] most recent action and financial plans. Any plan prior to that is excluded as it does not have a separate climate budget section. The purpose of looking at these plans is to see if the municipality has intentionally included green procurement in its budget. In total, I reviewed twelve municipal documents of various types to examine the municipality's use of GPP.

Table 4: Connection between selected municipal documents analyzed[25]

	Climate and Environmental Plans	**Action plans**	**Status reports**
Description	The municipality's strategy for sustainable development	Four-year plans to describe measures and indications to track progress	Yearly reports tracking progress towards action plan measures
Documents	2018-2030	2018-2022	2019
			2020
			2021
			2022
		2022-2026	
	2010-2025		

I used the same search criteria to analyze all of the municipality's documents. I skimmed through all the documents to identify key sections and get an overview of how the municipality reports on its environmental performance. After initial highlighting and note taking, I went through all the documents in a more technical way. I used the Norwegian words for "procurement," "tender," and "purchase", which are "anskaffelse", "anbud" and "innkjøp" respectively, to search for relevant

[22] Klimabudsjett
[23] Handlings- og økonomiplan 2020-2023
[24] Handlings- og økonomiplan 2020-2023, Handling- og økonomiplan 2021-2024, Handling- og økonomiplan 2022-2025, Handlings- og økonomiplan 2022-2026.
[25] Excluding the climate budgets.

data points in all of the documents. Statements found that were related to these search terms were then pasted into a document. For some documents, such as the status reports, I created tables to compare their statements between years. This allowed me to see how the reporting had evolved over the years and to assess whether or not the actions had improved. In all of this work, I did not treat the municipal documents as a report on reality, but rather as how a group within the municipality[26] itself chose to report on its work, as recommended by Silverman (2019). The limitations of my methods are outlined in the next section.

My analysis of the municipal documents is limited by two key factors. The first and most significant limiting factor is that my search terms are limited to three words. This means that potentially relevant data points mentioning only "criteria" or "requirement" were not included in the main analysis. These keywords were excluded because the documents mentioned these keywords in different situations, often not relevant to procurement. When scanning to see what might have been missed by using the chosen keywords, I found that the relevant procurement data points that included "criteria" or "requirements" were related to construction, which is not a focus of this thesis. I therefore excluded these data points, but would like to note that the municipality has ambitious goals and targets related to its construction sector, which I will return to later in the thesis. The second limitation is the time period of the selected documents. By focusing on documents related to the Climate and Environmental Plan, I have limited my analysis to documents published after 2018. The only exception to this is the Climate and Environmental Plan from 2010-2025, which was selected to assess changes in the municipality's view of procurement; while this did not yield information I draw on directly, it ensured I was better informed about the historical urban policy trajectory. If I had expanded the scope of documents to include a longer time period, I could have looked more closely at changes in language and priorities over time. However, as the focus of the thesis is on the current status of GPP in Stavanger, the selected documents make the most sense to evaluate this and are mainframed within the scope.

Tender documents

To gain insight into how GPP is used in Stavanger I collected and analyzed tender documents. The purpose of analyzing these documents is to answer RQ1: "What constitutes green public

[26] The Climate and Environmental department (Klima- og miljø)

procurement in Stavanger?" As introduced in the Background section, there are different types of tender documents and environmental criteria. This tender analysis focuses on the type of environmental criteria included and where they are placed. I also looked at whether certain sectors were subject to more environmental considerations than others, and how this was expressed by contracting authorities. Finally, I assessed differences between CAs.

I limited the tender document analysis to six categories. The categories involve food products and services, vehicles and transportation, computer equipment and waste services. The detailed names of the categories and the corresponding Common Procurement Vocabulary (CPV) codes[27] are shown Table 5. All categories except "computer equipment and supplies" are the same as those used in the OAG's assessment of GPP in Norway. This was done to compare my results with theirs, based on the documents they collected in 2018 and 2019. The OAG chose these categories based on three main reasons: (1) several parliamentary notices stating these are areas with large climate- and environmental impacts, (2) these are areas where there is significant potential to reduce the environmental burden and promote climate-friendly solutions, (3) the Norwegian Agency for Public and Financial Management (DFØ) has prioritized the creation of guidance material for these categories to support public procurers in GPP (Riksrevisjonen, 2022, p.11). It would therefore be interesting to compare Stavanger's performance with this national assessment. I chose to include "computer equipment and supplies" in addition to the categories selected by the OAG, because the other five categories did not yield as many tenders as I expected and wanted for my analysis. "Computer equipment and supplies" was then selected based on the European Commission's identification of energy-using products as one of four categories that are important procurement categories through GPP in the Buying Green Handbook (EC, 2016). In addition, similar to reason 3 in the OAG's selection justification, DFØ has guidance on IT equipment, which includes computers, screens, and tablets (*Kriterieveiviseren*, n.d.). All six of the selected categories are recognized as important for environmental considerations, and are therefore well-suited for analysis.

[27] Common procurement vocabulary (CPV) is a classification system for public procurement which standardizes the references used by contracting authorities to describe procurement contracts (*Common procurement vocabulary*, n.d.).

Table 5: Categories included in tender analysis

CPV	Category name
15000000	Food, beverages, tobacco and related services
30200000	Computer equipment and supplies
34100000	Motor vehicles
55500000	Canteen and catering services
60100000	Road transport services
90500000	Refuse and waste related services

The collection and processing of the tender data was done through a careful, multi-step process to ensure the validity of the results. The tender documents were found using Doffin[28] and collected using Mercell[29]. When searching in Doffin, I used several different filters. I used all six CPV codes from Table 5 and limited the search results to show results only from Stavanger. I did not limit expiration or publication dates and decided to include expired notices to get as many notices as possible. This resulted in 79 significant search results. Key information[30] from the tenders was noted in a Google Sheets spreadsheet. To access and collect the tender documents, the contracting authorities linked to Mercell, where I downloaded the available solicitations and saved them in folders on my hard drive according to their corresponding CPV files. I then started the data processing in different rounds. In Round 1, announcements relating to invitations to dialogue were excluded but notes and tenders lacked relevancy to the selected categories were removed. Additionally, I removed tenders that had no documents attached, but noted them elsewhere to follow up with the contracting authority. In Round 2, I read tender documents and highlighted

[28] Doffin is the Norwegian national notification database for public procurement (*Doffin*, n.d.). Here, the contracting authorities can publish a brief notice including details such as the project description, qualification requirements and estimated value of the procurement.

[29] Mercell is an e-tendering and procurement system where contracting authorities and suppliers can exchange information (*Mercell*, n.d.).

[30] Relevant CPV category for the thesis, listed main CPV code, announcement name (which was hyperlinked), contracting authority, announcement type, municipality listed, Doffin reference number, announcement date and response deadline.

statements and sections related to the environment. In this round I also combined announcements for the same tender, meaning the announcement of competition and announcement of award was combined into one folder on the hard drive and was listed as one tender in the data cleanup. Round 1 and 2 is seen in the "Filtering of tenders" step in Figure 5. This left me with 32 tenders to analyze.

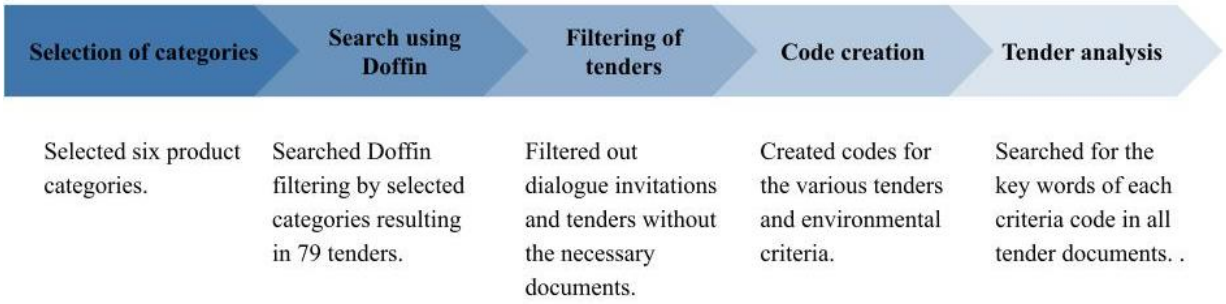

Figure 3: Process of identification and analysis of tenders

Tenders were analyzed considering sectoral differences. I coded the tenders according to their respective CPV categories. These codes were inspired by the code design of Igarashi et al. (2015) for their study of the ICT sector. I was also inspired by the way Igarashi et al. (2015) coded the criteria, but I was not able to do the same because I analyzed multiple sectors rather than just one. The criteria codes for this thesis were created based on the keywords used by the OAG in their bid analysis, and the suggested criteria from DFØ's Kriterieveiviser (*Kriterieveiviseren*, n.d.). I then combined overlapping criteria from the OAG and DFØ and added some original codes for consistency across categories. All codes were color coded by origin and can be seen in Appendix 1. Round 3 of data processing then consisted of analyzing the documents of each tender and adding the codes under the appropriate placement of the criteria, either as a technical specification, qualification requirement, award criteria, or contract clause. This was done by searching for each phrase in all the documents collected for each tender. The frequency of criteria for the various categories can be seen in Appendices 2-5.

The tender analysis is heavily influenced by the selected categories, tenders, and criteria. First, the selected categories lead to several limitations. Any findings will only indicate how GPP is done in these specific sectors. The use of environmental criteria in one category does not imply the use of

GPP in Stavanger as a whole. It is also important to note that for some of the categories there are too few tenders to give a representative picture of the use of environmental criteria in the category. This will be repeated when presenting the results. As in the OAG assessment, building and construction procurements were excluded. Although there are significant emissions within the sector, it is characterized by contracts where much of the engineering and design is left to the winning contractor. Key elements related to climate and environment are therefore not defined in the tender, which – in line with the OAG's rationale for its own assessment – makes a tender analysis with my methodology unfeasible.

The multi-step filtering and analysis of tenders also influence the results. When finding the tenders, my search criteria and the time period in which I collected the data could influence the selected opportunities. In addition, this could lead to an overrepresentation of certain contracting authorities because they may have had a higher rate of projects in the selected time period. This could lead to the perception that environmental criteria are used more or less than they actually are. And third, the criteria searched for have a significant impact on the results. The codes used to analyze the documents could cause certain environmental criteria or requirements to be overlooked. While the process of selecting and combining keywords is inherently susceptible to bias, the combination of OAG and DFØ codes attempts to counter bias as a means of incorporating reflexivity. Another limitation is that I did not distinguish between the level of ambition of the environmental criteria as the OAG did. This means that two tenders with a requirement related to energy consumption could have different levels of stringency in the technical details of their requirements, but they would be logged similarly. While this would add an additional level of analysis to the thesis, I do not believe it would have a significant impact on the overall results.

5.2.2. Interviews

To supplement the document analysis, I conducted interviews. The documents provide a static picture of the goals for procurement at the time they were written. Interviews, however, can provide a more dynamic picture of the current state of procurement. Speaking with municipal employees is therefore an opportunity to compare the static with the dynamic, the goals and intentions with the actions taken. Interviews can be a useful way to learn about the world of others, although "real understanding may sometimes be elusive" (Qu & Dumay, 2011, p.239). I conducted

semi-structured interviews because I anticipated that the flexibility associated with the method (Qu & Dumay, 2011) would open up to answers that a structured interview may not have to room for. It would also allow me, as the interviewer, to modify my questions to allow interviewees to provide their most complete answers on their own terms and in their own language (Qu & Dumay, 2011). My intention with the interviews was not to find a single truth, but rather to learn about the experiences of different actors with GPP. It is also different from drawing generalizations based on a limited sample of people's experiences, which is also not the goal of this thesis.

I interviewed a small selection of relevant actors with a focus on municipal employees. The municipal employees contacted were key actors with knowledge of procurement or climate and environment in the municipality. First, I contacted the procurement department and interviewed two employees together. During this interview, I was referred to the Climate and Environment Department. I had already contacted a representative without success, so I contacted them again. This allowed me to schedule an interview with one employee. During my first contact, I had also contacted a project manager within the BMU. As the interview date approached, they suggested that I contact one of their coworkers for a group interview. Our original interview date was immediately rescheduled and conducted with both employees present. I also wanted to interview with other CAs in addition to the municipality. To do this, I looked at the contacts listed on some of the tenders I had selected. In total, I contacted representatives of eleven CAs and received four responses and one acceptance. Of the CAs that declined, several of them stated that they did not feel they were relevant respondents to the topic of the thesis. Finally, in order to learn more about GPP in Norway as a whole, I also contacted a lawyer whose practice focuses on procurement. I chose them because I had watched a couple of webinars on GPP where they were one of the main speakers. My group of interviewees led to a narrowing of the scope of my thesis to focus on Stavanger Municipality instead of procurement in the Stavanger region. However, I argue that the interviewees nevertheless provide valuable insights with their individual and different skills, perspectives, and experiences.

Prior to the interviews, several steps were taken to ensure the privacy of the respondents and the quality of the data. Respondents were given a code prior to the interview based on their workplace and the order in which they were scheduled to be interviewed. This, with the exception of the

interviewees' names, can be seen in Table 6. The key was stored on a separate hard drive for protection, consistent with research data ethics protocol. To further anonymize the interviewees, I will use the gender-neutral pronouns they/them when referring to their responses in addition to the interviewee code to separate them. All interviewees were also asked for permission to record the interviews by sending them an information sheet created using a template from Sikt, the Norwegian Agency for Shared Services in Education and Research. I also used the interview guide provided to Sikt as a starting point for my interviews, but adapted the questions to each interviewee, as they had different areas of expertise. The intention of the selected questions was to uncover factors that influence the municipality's procurement practice and how they talk about and evaluate their own procurement.

Table 6: Interviewee coding

	Number of interviewees	**Interviewee code(s)**	**Department**
Municipality	5	M1 and M2	Procurement
		M3	Climate and Environment
		M4 and M5	BMU
Contracting authority	1	CA1	
External	1	E1	

All but one of the interviews were conducted in person. Interviews were scheduled to last between 45 and 120 minutes, with an average interview length of 44 minutes. All interviews were semi-structured. In keeping with semi-structured interviews as a data collection method, I had a set of prepared questions based on the literature review I conducted prior to the interviews (Silverman, p.177). The nature of the interview allowed me to ask follow-up questions when things were unclear or the interviewee(s) brought up interesting topics. However, this meant that each interview was different from the other, which I would argue was a strength of this method. Interviewees shared what they felt was most appropriate and took answers to questions in a different direction than expected. This led to valuable insights into the interviewees' priorities and

perspectives. Regarding the recording of the interviews, I informed the interviewee(s) before the recording started and when the recording ended. This was to ensure the interviewee's comfort in willingly sharing information.

After the interviews were conducted, I manually transcribed the interviews before processing the data. The interviewees were asked if they would like to have the transcription after the interview, and two said they would. This resulted in a few corrections, none of which affected the research findings. In analyzing the interview data, I looked at a few key things. First, I looked at the content based purely on what was said. The purpose of this is to see how they convey their experiences with GPP in Stavanger. Based on this I did a thematic analysis organizing responses according to the six-step process of Clarke and Braun (2013)[31] focusing on topics that were mentioned with a higher frequency or that we spent more time discussing. However, a basic principle of constructionism is that the interactions in an interview are a topic in and of themselves (Silverman, 2019). Like naturalism, interviews are encounters between subjects, but instead of seeing this as something that hinders the understanding of the topic, constructionism sees the value in this interaction. I then evaluated the interactions in the interview, focusing on how they interacted with the interview questions and whether their responses led the interview to another topic.

There are several limitations to the interviews conducted. Looking first at the limitations related to constructivist epistemology, constructivism can be narrow because the interview data says something about the interview and the social interaction and not about an external reality (Silverman, 2019, p.201). In the case of this thesis, I am interested in *how* the interviewees talk about GPP in Stavanger. This is in line with a common response to the criticism that there is value in seeing "when and how the participants make certain features of their worlds visible to each other - and to us" (ibid., p.202). Aside from the limitations associated with constructionism, interviewer bias may have influenced the interviews themselves and the subsequent findings. First, the interviewees selected shape the data shared. I tried to counteract any bias in this regard by contacting relevant actors listed in the selected tenders. However, due to a lack of responses, the pool of interviewees was primarily from the community. Second, the questions in the interview

[31] (1) Familiarization with the data, (2) coding, (3) searching for themes, (4) reviewing themes, (5) fefining and naming themes, and (6) writing up (Clarke and Braun, 2013).

could have led the interviewee(s) to assume that there was a correct answer and then shape their answers according to the assumed expectation. I tried to ask open-ended questions to avoid this. However, conducting interviews is inherently about interpersonal connection, which is irreplaceable given the multiple factors affecting the people involved at the time of the interview. As Rapley (2004) notes “interviews are, by their very nature, social encounters where speakers collaborate in producing” accounts (p.16). It is therefore difficult to claim that the results will be reliable as a reproduction of the exact data would be nearly impossible. Thus, although conscious decisions were made to prevent bias in interview responses, bias cannot be completely eliminated.

6. Results and analysis

The use of these methods gave an insight into the current GPP practices in Stavanger and their hopes for the future. Although the different methods have similar results, it is important to first look at the results separately, as I am using the constructivist approach to mixed methods. The first subsection will focus on the document analysis, where I will start with the results and analysis of the municipal documents. I then present and analyze the quantitative results of the tender analysis. I highlight the differences between the selected sectors and present possible reasons for these differences. In the second subsection I present and analyze the results of the interviews. I then combine the findings in the third subsection to present a more holistic, multifaceted picture of GPP in Stavanger. This subsection is structured to answer each research question. It begins by describing the overall conclusion of what GPP is like in Stavanger, and then continues with an analysis of what factors may have made it so. Finally, I summarize the findings and analysis section to answer the research questions and briefly address how to improve the effectiveness of GPP.

6.1. Document analysis

6.1.1. Municipal documents

The municipal documents show a municipality in development, adapting its actions and reporting to its environment. To show this, I will first look at the municipality's goal document. The guiding document that outlines the municipality's climate and environmental aspirations is the 2018-2030 Climate and Environmental Plan. This is a static plan with fourteen thematic chapters related to areas that impact the environment, but only a few mention procurement. The area with the greatest focus on environmental criteria in procurement is Chapter 2: "Energy and material usage in construction". Careful design and the use of environmental criteria are highlighted as a key part of reducing emissions. The only other mentions of procurement in the other chapters are that the municipality should purchase locally produced food and that many eco-labelled products are included in the municipality's procurement. In addition to the 14 thematic chapters, the plan has one chapter each for the role of citizens and the role of the municipality in influencing these thematic areas. Most of the procurement targets can be found in the latter chapter, "The municipality as an environmental and climate influencer". Here the wording is characterized by the use of modal verbs in relation to actions. Some examples are that the municipality "*can* show

the way" for others, "public procurements *shall contribute* to the safeguarding of climate and environment". Often the use of this modality refers to hypothetical situations that have not happened, but could happen (Ellis, 2022). In other words, the goals show an awareness of an ability to do something rather than specific action steps.

The action plans on the other hand provide a more concrete path forward. Using the selected search terms[32], ten criteria were identified in the 2018-2022 plan and 15 in the 2022-2026 plan. Most of them were related to transportation, mentioning criteria related to fossil free and zero emission vehicles. There were also a significant number of measures that fell outside of the scope of the search criteria relating to construction. In addition to the municipality's focus on construction, they also claim to prioritize circular economy. In both action plans, it is stated that circular economy should be a guiding principle in their procurement. However, in the 2018-2022 plan, there are no measures related to this goal. The 2022-2026 plan, on the other hand, has a related measure that circular economy should always be assessed in the municipality's procurements. However, there are no key performance indicators (KPIs)[33] to measure the work of the municipality related to circular economy and its recycling, reuse, lifespan reparability[34]. It could be argued that this ambiguity is addressed by the inclusion of Measure 8.11 in the 2022-2026 Plan, which states that climate and environment must always be considered in tenders, either in requirements, criteria, or contract terms. Where "climate and environment" is used as an award criterion, it must be weighted at least 30% in all procurements. This measure goes beyond the current national regulation and is in line with the most stringent proposal of the government's proposal to amend the GPP regulation. Thus, the measures included in the municipality's action plans do indicate a proactive approach to GPP.

When analyzing the climate budgets, it was difficult to identify information that was purely related to procurement spending. Due to the nature of procurement, it is integrated into all of the different municipal departments. This makes it difficult to distinguish total procurement spending in the

[32] "Procurement," "tender," or "purchasing".
[33] KPIs are data measures used to evaluate the performance of an organization (Yuan, et al., 2009). The evaluation measures are typically related to measuring the estimated and actual performance regarding effectiveness, efficiency, and quality (ibid.).
[34] All factors listed by the municipality as actions to assess in relation to CPP.

action and financial plans. Another implication with the integrated nature of procurement is that there is a need for knowledge of GPP across all departments. It is however clearly stated that the procurement and rehabilitation of buildings will be prioritized investments in the 2020-2023 and 2021-2024 plans. The climate budget has also allocated funds for the electrification of its fleet in the 2021-2024, 2022-2025 and 2023-2026 plans. The latter plan also includes the cost of emission- and fossil free construction and building projects respectively, as well as the cost of zero-fossil fuel public transportation. Each climate budget shows clear progression in detail, indicating improvements in municipal reporting and ambition. Yet, the lack of focus on circular economy from the action plans reappear in the climate budgets. As they solidify their circular economy strategy in the future, they could include cost and emissions savings by internal reuse of items and materials, and the procurement of recycled or used items or rental items in their budgets and reports. This would give them a benchmark to improve their own efforts, as well as to increase transparency and trust with the public regarding the use of their tax funds.

Emission reductions is a key measure of success in all municipal documents but when it comes to procurement, the measures of performance differ. Except for the construction sector, the municipality has few measurable performance indicators. In its progress reports, Stavanger has two consistent KPIs[35] for public procurement: number of suppliers with environmental certifications and number of eco-labelled products bought by suppliers. These numbers can be found in Table 7. As discussed in the literature review, environmental certifications such as EMSs and ecolabels can provide procurers with a quick insight into the environmental performance of an organization's performance and products respectively. And in the 2021 progress report, the municipality states that the main reason for the increase in environmentally certified suppliers is the use of this as a qualification requirement in tenders. The relevance of these KPIs can be called into question. They leave out nuances relating to potential gains from greener procurement. In line with their goals of becoming more circular, they could measure and report on the number of purchases avoided through a decision to purchase used products or to reduce products, and the

[35] In total, there were four different KPIs mentioned in relation to public procurement. One involved the number of innovative procurement projects started, however, no new projects were started after 2020 and performance was measured qualitatively, not quantitatively, making comparison between years difficult. The other was number of environmentally certified municipal companies, which is not relevant in the scope of this thesis relating to the procurement of goods and services done within the Municipality of Stavanger.

consequent taxpayer money saved, waste reduced by this reuse, emissions reduced by purchasing local, and similar KPIs. The current, less granular KPIs for procurement reflect this lack of prioritization of procurements outside of the construction sector.

Table 7: Percentage of certified suppliers and products (Stavanger kommune, 2021, p.63)

KPI	2019	2020	2021
Environmentally certified suppliers	30%	40%	56%
Eco-labelled products purchased	17.1%	21.9%	20.5%

On the other hand, it is clear that the municipality is evolving its procurement processes in a positive direction. The annual status reports have become more detailed, indicating a process of learning and adapting in how relevant information is communicated. This was done by including more procurement projects and changing the format of the report to make "Procurement" its own section. In the 2021 report, subheadings such as "Procurement Status" and "Assessment" at the end of the chapter also make it easier for the reader to find the information. Transparency in their reporting could increase the public's ability to hold them accountable and subsequently improve procurement practices. So the municipality is evolving, even in the absence of institutionalized evaluation practices.

A potential factor that holds them back from more substantive evaluation of procurement could be a lack of resources. In their 2020-2023 Action and Financial plans it was budgeted to spend 450,000 Norwegian kroner each year for procurement, contract monitoring and analysis. To justify this spending, they state that analysis of procurement data prior to a procurement has a positive effect, which is why money was set aside for reporting and following up within the municipality and with suppliers. It is noteworthy, then, that there is no mention of this or money budgeted towards this in the subsequent plans. If there are no resources set aside to plan and conduct proper evaluation, procurement officials will be limited to conducting the most necessary work tasks to ensure that the operation of the municipality runs without interruption.

6.1.2. Tender documents

The tender analysis shows procurement that is not in line with Stavanger Municipality's goals. I analyzed 32 tenders from six different categories. The distribution of these categories is shown in Figure 4. As mentioned in the methodology, these tenders were selected through several rounds of eliminating tenders. However, through this process I also had to exclude announcements with invitations to dialogues before tenders were posted. In total, seven out of the original 79 tenders identified were invitations to dialogues. Market dialogues have been identified as a way to improve GPP practices (Sönnichsen & Clement, 2020; Kristensen et al., 2021; World Bank Group, 2021; DFØ, 2021). In this section I present the results and analysis. Throughout this tender analysis, I compare my results with those of the OAG's 2022 assessment of GPP in Norway. This is done to provide context to my results, in addition to seeing how Stavanger compares to the national average. I start by comparing the main differences between the sectors before moving on to a more detailed analysis. I then discuss the effectiveness of GPP in Stavanger based on the tenders. It is important to note that the findings of this analysis cannot be generalized due to the limited tender pool, however, upon combining the findings, it nonetheless paints a consistent overall picture of procurement in the municipality.

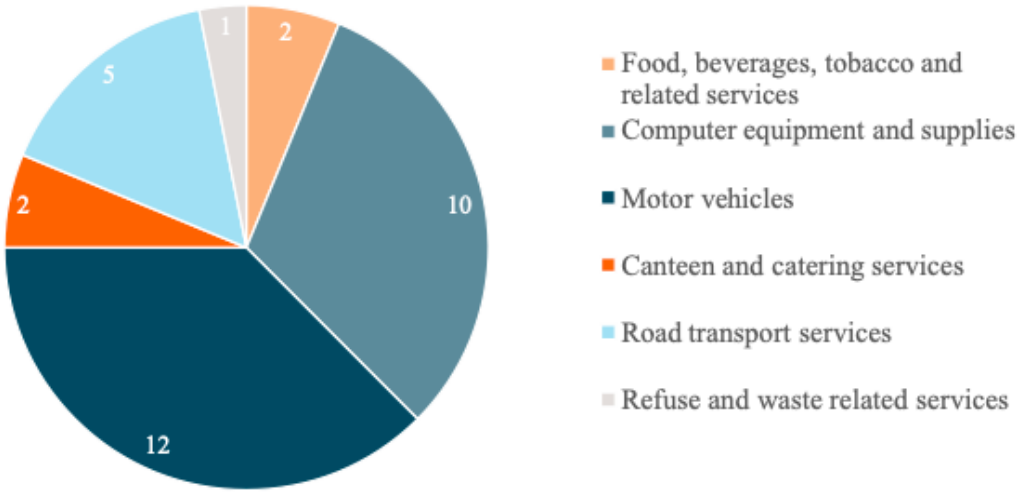

Figure 4: Number of tenders analyzed by category

The tender documents analyzed revealed different approaches to GPP in Stavanger, depending on the category and the contracting authority. Common for most tenders is the inclusion of standardized contract terms. These generalized contract terms included some environmental criteria, which in some cases were relevant, but in more tenders they seemed inconsequential. This is discussed further in the specific sector analyses. Contract clauses and technical specifications are where most of the environmental criteria are found. Depending on the stringency of the technical specifications, this could restrict a supplier's potential to provide innovative green solutions. Less than half[36] of the tenders use environmental criteria in their award criteria, and when it is used it is typically included under the "quality" criteria. Most of these tenders weight environment with over 30 percent, with only two weighted below at 20 and 25 percent. The highest weight given to environmental award criteria was 60 percent for two separate municipal tenders for *computer equipment and supplies*. These two tenders are also the only tenders ranked as having a high ambition level[37] in this tender analysis. As seen in Table 8, the majority of the tenders have a low ambition level. I will explore potential reasons for this in the following sectoral analysis.

Table 8: Number of tenders by ambition level and CA

	None	Low	Medium	High	Total
Local CA	1	13	1	0	15
Municipal CA	1	5	6	2	14
National CA	1	1	1	0	3
Total number of tenders	3	19	8	2	32
Percentage of all tenders	9.38%	59.38%	25.00%	6.25%	100.00%

Vehicles. Even though vehicles and transportation are high emitting categories, the tenders in Stavanger had fewer environmental criteria than expected. I have chosen to combine *motor*

[36] 14/32 tenders

[37] Due to time constrictions, I did not score the ambition level of each criterion, but rather the tender as a whole and its composition of criteria. This was done using a similar definition of low, medium, high as the OAG (2022) used in their assessment.

vehicles and *road transport services*, as almost all requirements overlap. Almost all tenders include an Euronorm requirement, but as the OAG (2022) points out, this is mandatory to include as a minimum requirement for public procurers and is therefore not an active choice (p.43). It is then particularly noteworthy that eight out of 17 tenders in the combined vehicle category do not mention Euronorm. In some cases, this can be explained by the use of stricter requirements for zero-emission vehicles. Six tenders in the motor vehicles category use EMS in the documents with other technical specifications, but it is simply a question of whether the supplier has an EMS certification. EMS certification is also a part of an award criteria in the same tenders, which indicates that it is a bonus, not a necessity. This award criterion, "Quality" is weighted at 35% and includes several indicators on which it is scored, with the only environmental criterion is ISO 14001 certification. This half-hearted use of environmental criteria is also evident through the general contract terms where they state that the contracting authority *wishes* to use products and services that are environmentally friendly in the subsection about environment. This is followed by a requirement for guidance on product selection, the need for products to be adequately labelled, and the need for the supplier to be a member of a recycling program when supplying products with packaging. Although this is helpful for some product categories, it is not relevant for vehicles and transport services. Overall, the results of the analysis of these tenders are consistent with the OAG's findings that there are few climate and environmental criteria for motor vehicles and road transport services.

Food. It is not possible to draw conclusions on the procurement of food products and services in Stavanger based on four tenders, but the findings are similar to those in the OAG's assessment. The *food, beverages, tobacco and related services* and *canteen and catering services* categories have been combined due to similarities in the sectors. In the tenders analyzed, there is a focus on reducing food loss and packaging, but the requirements are weak and require minimal effort from suppliers. These criteria are consistent with some of DFØ's recommendations for these categories (*Kriterieveiviseren*, n.d.). DFØ also recommends criteria related to tropical deforestation and ecological production. Neither of these types of criteria are mentioned in the tenders analyzed in the food and catering categories. In its Climate and Environmental plan, the municipality mentions that they shall by virtue of its purchasing position introduce requirements for short-distance and locally produced food. However, this requirement is not included in any of the four tenders. The

criteria that make the tenders in this category more ambitious are linked to integrated criteria that also include social responsibility. In other words, the contracting authorities seem to have a more integrated approach to environmental sustainability, combining it with other dimensions of sustainability. However, the analysis of the Stavanger tender documents supports the OAG's assessment that the majority of the criteria have a low level of ambition.

Information Technology. The category with the most environmental criteria per tender was *computer equipment and supplies*. Seven out of ten tenders in this category came from the municipality. When comparing the different contracting authorities, it is clear that the municipality includes more environmental criteria and has a higher level of ambition. As part of the documentation, the municipality requires potential suppliers to provide a risk assessment of various factors, also including environmental factors. This goes beyond the current recommended DFØ criteria, and some tenders have therefore been scored as high ambition due to the municipality's inclusion of the environment in ethical procurement. It is therefore a more integrated approach to assessing sustainability. Looking at the development of environmental criteria over time, there is a positive trend. Some of the tenders analyzed from 2020 and 2021 included mentions of deforestation in the contract clauses, which seemed disconnected from the rest of the tender. These references have been removed from the more recent tenders. In addition, there is a significant increase in the number of criteria included, particularly as technical specifications and contract clauses, starting in 2021. The increased use of criteria related to energy efficiency through product labeling, product robustness and the supplier's ability to repair broken equipment is notable. The inclusion of these criteria is in line with the municipality's focus on the circular economy. There are few qualification and award criteria related to the environment, but through the technical specifications, any products that do not meet the standard would be eliminated from consideration. Overall, this category has criteria that are well developed for the products being procured. As mentioned in Section 5, the OAG did not include this category in their analysis, so I have no results to compare with mine. However, based on the bids analyzed, this sector meets the recommended standards set by DFØ.

Summary. The results of this tender analysis are in line with the OAG's 2021 assessment of green public procurement in Norway. In most categories, the Municipality of Stavanger does not

sufficiently to reduce its environmental impacts and promote climate friendly solutions in most categories The level of ambition of Stavanger's tenders compared to the OAG's national assessment is shown in Figure 5. Overall, the municipality has fewer tenders with a high level of ambition, but also fewer tenders without any environmental criteria. There are a few attempts at a holistic approach in some tenders by including environmental considerations in contract clauses, award criteria and technical specifications. Perhaps most importantly, there is a lack of statistics and management information on the status of GPP in Stavanger. This is further explored later in this section and in Section 7 when discussing the importance of evaluation.

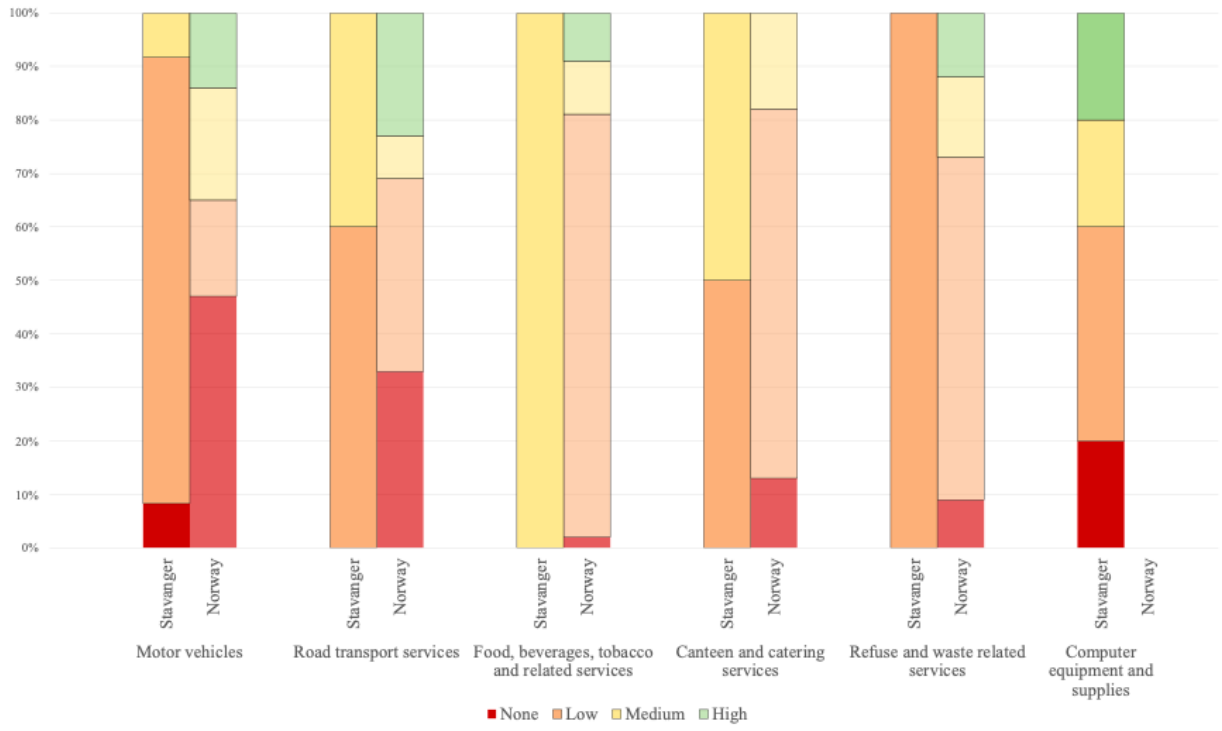

Figure 5: Ambition level of environmental criteria in Stavanger compared to the national assessment by the OAG (2022)

The Municipality of Stavanger appears to have more ambitious environmental criteria than the other local and national CAs based on this analysis. The number of tenders analyzed from each type of actor can be found in Table 8. Most of the number of tenders from the local CAs[38] were

[38] Ten out of fifteen, or 66.67 percent.

from Renovasjonen IKS[39]. Due to the limited number of tenders from national and other local CAs it would be irresponsible to generalize based on the data in this analysis. Yet, based on the tenders in this analysis there is reason to believe that national CAs include environmental criteria when relevant. For local CAs it also varies, but overall local CAs rarely include environmental criteria in their tenders. This impacted the tenders' ambition level which, as seen in Figure 6, led to the assessment that most tenders from local CAs had a low ambition level. However, although the Municipality of Stavanger includes more environmental criteria than other contracting authorities, it still falls short of the targets and related measures it has set.

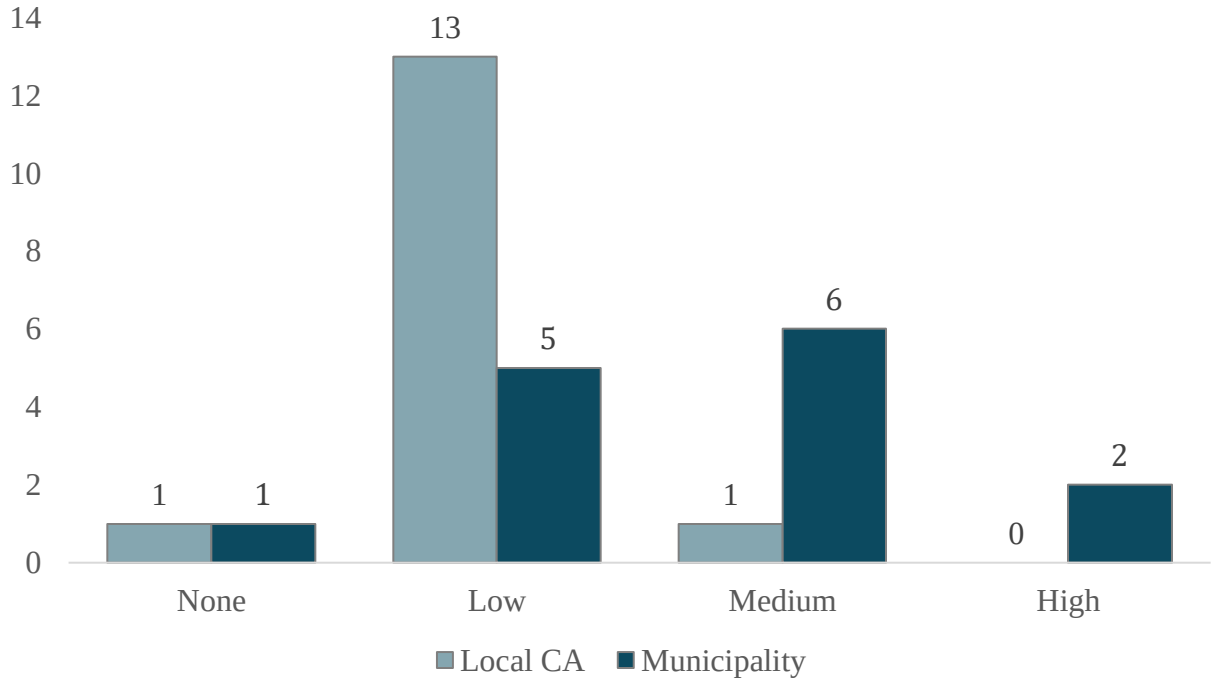

Figure 6: Distribution of ambition level of criteria for tenders from the municipality and local CAs

Surprisingly, the tenders in Stavanger do not use the criteria most often mentioned in GPP literature. The number of instances can be seen in Table 9. Of the 32 tenders, only four use EMS as a qualification criterion. Additionally, it is often included as a technical specification stated as a question and evaluated as an award criterion, which makes it appear optional. This may be due to the resource-intensive nature of the certification process for suppliers, and a reluctance of CAs

[39] Renovasjonen IKS is an intermunicipal waste disposal company owned by Sandnes municipality and Stavanger Municipality (*Om oss – Renovasjonen IKS*, n.d.).

to limit their choice of suppliers. This may also be the reason why ecolabels or similar certifications are rarely used as a tool in the tenders analyzed and are only actively used in tenders for *computer equipment and supplies*. LCC is only mentioned as an aside for the pricing of products in two of the tenders despite the recognition that it can be a valuable tool in evaluating a product's true cost over its lifetime, and its ability to level the playing field compared to simply accounting for upfront costs.

Table 9: Number of instances of key criteria in literature[40]

Type pf criteria	CPV categories where relevant[41]	Technical specifications	Qualification	Award criteria	Contract clauses
EMS	6/6	6	4	6	2
Labeling	3/6	4	1	0	0
LCC	2/6	2	0	0	0
Emissions	4/6	2	0	0	2

Another unexpected finding given the municipality's focus on reducing emissions by 80 percent by 2030 is that only three tenders[42] include criteria directly related to emissions. Some tenders do however include reporting of environmental measures taken by the supplier to reduce environmental impacts as a criterion. This is not captured by the "emission" search word. Yet, the inclusion of this type of criteria would not significantly alter the result of the municipality's lack of focus on emissions in their environmental criteria. Another important part of GPP, in general and in the municipality's own goals, is the encouragement of innovative green solutions, as discussed in the literature review. The tenders in Stavanger were characterized by a lack of openness, which is inconsistent with the municipality's procurement strategy. If the Municipality

[40] There are some cases where tenders use certain criteria in various placements, such as using it as both a technical specification and an award criterion.
[41] The type of criteria was not mentioned in all tender categories. This column therefore shows how many categories where the criteria was searched for.
[42] Two of the three tenders are posted by Stavanger Municipality. There was only a code for emissions in four of the six categories.

of Stavanger wishes to reduce emissions through its procurement, it would be helpful to find ways to measure the reduction in emissions associated with procurement.

6.2. Interviews

The analysis of the interviews reveals a municipality that is continuously developing its GPP. The main topics from each interview are shown in Table 10. Following the logic of Clarke and Braun's (2013) thematic analysis, I weave together the key themes identified from the interviews to tell the story of GPP in Stavanger as described by the interviewees. This data will mainly be contextualized in Section 6.3 using existing GPP literature and institutional theory.

Table 10: Key topics discussed in each interview

Interviewee(s)	External influences	Internal practices	Effectiveness
CA1	- (Little) guidance from municipality - Little knowledge about national regulations	- Knowledge-sharing amongst coworkers - Learn by doing	- No evaluation of GPP evaluation practices
E1	- Flexibility of national regulation - Value of market understanding - Risk aversion	*Not relevant*	- Need to customize criteria to tender
M1 + M2	- Reputation - Market	- Value of market understanding - Holistic approach to sustainability - Competence	- Lack of GPP evaluation practices
M3	- Constant change creates uncertainty - Political support	- Focus on emissions - Collaboration - Competence	- Lack of GPP evaluation practices
M4 + M5	- Collaboration - Political support	- Knowledge-sharing amongst coworkers - Progress driven by individuals - Competence	- Lack of GPP evaluation practices - Contractors will evaluate KPIs

The municipality's GPP practices are closely linked to its Climate and Environmental Plan, which was referred to at several points during the interviews. Interestingly, the plan was originally written to guide action towards a 50 percent emissions reduction target by 2030. Initially, the Climate and Environment department wanted an ambitious emissions reduction target of 80 percent similar to that of Oslo, Bergen and Trondheim, so as not to be "worse" than them. M3 describes this approach as driven by internal motivations within the department. This internal motivation was likely shaped by stakeholders' expectations that they would act similarly to other major cities in Norway. However, after several political discussions, they had to scale back to a 50 percent reduction target. Once the plan was finalized, the 80 percent reduction target was adopted, which was described as "coming out of the blue" for the administration. M3 acknowledges that this is a weakness of the plan, which was originally written to reduce emissions by 50 percent, not the current emissions reduction target. The municipality has had to adjust its action plans to include new sectors as the national climate accounting evolves over time to include more sectors such as agriculture and aquaculture. Thus, although the original Climate and Environment Plan is a static document, the related documents and actions are adaptable to the dynamic landscape in which the municipality finds itself.

The ambition of the plan makes it more proactive than national regulations. When asked about the government's proposed GPP requirements, M1 and M2 seemed confident in their ability to adapt to any of the three, with M1 stating "we are ready". They then referred to the Climate and Environment Plan and associated action plans, which already have the most stringent requirement proposed by the government – a target of 30 percent weighting for the environment, *where relevant*, when included as an award criterion. This differs from the government's actual language of *always* giving environmental considerations a minimum weighting of 30 percent and higher where relevant. However, both M1 and M2 agreed that the national government could choose the most stringent requirement and that this would be positive. Yet, it did not seem that this national regulation was necessary for the municipal employees. All interviewees who worked with procurement confidently reported that the plan provided guidance for their procurement practices. They pointed to clear objectives that they could use as a starting point. For example, the plan provides clarity on how to act when national regulations lag behind. And despite their perception that the plan is ambitious, all interviewees stated that the guidance in the plan is a minimum

requirement and that they are trying to go beyond it. The framework provided by the plan therefore does not limit their flexibility to adapt the environmental criteria to the specific tender.

The practice of setting environmental criteria, while a complicated process, is well established in the municipality. M1 and M2 highlighted the importance of adapting to each specific tender. M1, M2 and M3 all point to the dilemma of including strict criteria that could lead to fewer bids from suppliers. It is a time-consuming process to adapt the criteria to each tender and to ensure that they do not violate any laws. M2 also stressed the importance of understanding the maturity of the market when setting criteria. This is done by staying informed of current market conditions, communicating with suppliers on a regular basis, and inviting suppliers to participate in market dialogues for future tenders to see what suppliers can do. If a market is immature, they use award criteria that give the municipality the flexibility to award environmental performance without excluding suppliers. This is not consistent with the results of the tender analysis. With the more detailed measures relating to construction, M4 and M5 seemed to be more relaxed about including environmental criteria. For their projects, they code targets from the action plans into the project with a description of how they will work with the target in the project. All of the municipal interviewees working with procurement emphasized that the targets included are the bare minimum and that they will take steps to exceed them if possible. As M4 stated, "the minimum requirement is the baseline and it is up to us to be as ambitious as we want to be together with management".

This individual ambition has been a key driving force for the changes in environmental action, and consequently GPP, in Stavanger. The ambition of individual employees within the Climate and Environmental department helped push a more ambitious environmental agenda. Employees in the procurement department are driving the development of a holistic approach of including environmental criteria in tenders. Moreover, project leaders within BMU are pushing the boundaries of new construction projects. M4 and M5 shared that they have gone from almost no environmental criteria, to a goal of fossil-free construction sites, to passive houses, to now having a goal of building (energy positive) plus houses by 2030. They described this process as moving very fast due to ambitious project leaders and politicians willing to invest in the more ambitious projects being proposed. M5 expressed it as positive and motivating to have management and

elected politicians who are positive about pushing boundaries in a more environmentally friendly way. This supports previous findings from literature on the importance of leadership support for GPP implementation. In order to formulate and justify these solutions, which are more ambitious than the norm, these individual actors used their environmental competence.

The origin of this environmental ambition can be traced back to their competence, a common success factor in the literature for the uptake of GPP. All interviewees were asked questions about their educational background and environmental competence. From their responses, it was clear that general procurement and GPP is not something that is taught through formal education, but rather learned through experience. CA1, M4 and M5 shared that their competence grew through learning from colleagues and learning by doing, with the latter joking that he did not know what procurement was. Procurement practices and strategies were not a part of any of the interviewees' backgrounds. This fact demonstrates the importance of proper training when new employees enter the procurement field, as procurement practices are passed on from employee to employee. Incorrect or inefficient procurement practices can therefore easily become institutionalized if there is no control mechanism in place.

On the other hand, sharing strategic GPP practices among staff can encourage a more ambitious and proactive approach to including environmental criteria in tenders. Different types of environmental literacy are therefore key components in the strategic use of GPP, as they provide basic knowledge on which projects to propose or which environmental criteria to include. The educational backgrounds of M4 and M5 included a focus on energy and environment in engineering, as well as conversion and preservation of buildings. M2 had a master's degree with a social science focus on energy and the environment. This type of environmental literacy is considered a driver of greener procurement according to M1 and M2. Knowledge of the legal aspects of procurement is therefore not a driver for greener procurement, but rather a support function once the tender is close to completion. M1 expressed that the organization (municipality) has acknowledged that there is a big need for environmental competence. One of the ways this is shown is through the procurement department having been granted approval to hire a climate and environmental advisor. The value of hiring individuals with environmental competence lies not

only in the individuals themselves, but also in the potential diffusion of environmental knowledge that they could bring to the community.

Where there is a lack of in-house expertise, the municipality outsources to external firms or consultants. Project leaders within BMU seen to have integrated environmental criteria into their project work to a greater extent. It is a technical component built into the project, an unavoidable inclusion. This differs from other types of procurement carried out by the procurement department. The interviewees from this department also described environmental criteria being an unquestionable inclusion in their tender. However, their process for setting the criteria appeared to be more complex and the evaluation more difficult. Measuring emission reductions, energy consumption, waste produced and recycled, and similar KPIs are all possible measures of circular procurement, but they are not currently done. While the BMU interviewees talked about external actors such as consulting firms as a matter of course when it comes to calculating environmental factors such as emissions in relation to their projects, the procurement interviewees could not recall using external consultants for calculations. One of the BMU interviewees, M5, even stated that "you need experienced experts within the field to make these calculations". The municipality recognizes the importance of these experts by requiring environmental consultants to address the environmental ambition of projects that require political approval. This external expertise can be particularly helpful in evaluating procurement practices when internal evaluation routines are lacking.

Critical to the success of a tool is its evaluation, an area where Stavanger Municipality still has room for improvement. Despite improvements in the selection of criteria and their integration into tenders, there is uncertainty about their impact on supplier selection. Relevant KPIs and evaluation routines for their own procurement practices could help shed some light on this. Evaluation of past tenders could also lead to a better understanding of the effectiveness and environmental impact of different environmental criteria. Procurers may talk to each other to discuss how they can improve, but there are no institutionalized evaluation practices. Another informal evaluation method used is dialogues with the market and stakeholder organizations to get their perspectives. Thus, although the municipality does not directly evaluate its own procurement practices, it is open to feedback from others. However, this feedback does not address the lack of past evaluation practices on

procurement projects, return on investment analysis, and measurement of KPIs related to circular economy (a focus area, according to municipal staff and documents). However, a positive sign regarding the development of the municipality's procurement practices is the recognition by all interviewees that they still have a long way to go. They talked about their procurement work as a continuous process of learning and adapting.

One influence on the municipality's GPP practices that was more important than expected was the importance of market input. All interviewees working with procurement mentioned the importance of market dialogues in terms of awareness of the market's maturity for the inclusion of environmental criteria. With this in mind, they adjust the inclusion of criteria accordingly. Although this market knowledge is important for suppliers to perceive the implementation of environmental criteria as fair, it could also prevent the municipality from including more progressive environmental criteria. This is because public CAs adapt to the lagging supply of green products and services, rather than driving a transition using strategic environmental criteria. These market dialogues could support policy goals and increase circularity in procurement (Sönnichsen & Clement, 2020; Kristensen et al., 2021), understanding capacity gaps and how to overcome them (World Bank Group, 2021), establishing targeted requirement, and reducing the cost of green solutions (DFØ, 2021). Hence, the municipality's use of market dialogues could help improve their GPP practices.

The same consideration is not reflected regarding the final consumer. In the interview there was little mention specific measures taken to ensure the satisfaction of the consumer of the product(s). The municipality as a CA is often the "middleman" that delivers the products to the final consumer. Their satisfaction should therefore be considered in the procurement process. Although the municipal interviewees recognized their general social responsibility to the residents of Stavanger as a provider of public services, consumer input was mentioned specifically once. M5 reported that input from stakeholders and residents in the municipality was considered at several stages in the development of a specific project to ensure its inclusiveness and functionality. From the literature and reports seen, there is a lack of research on user satisfaction in general. It would therefore be interesting to explore whether different procurement practices influence the end user satisfaction. However, to do so, the CA would need evaluation routines in place to be able to track

these data points. This is especially important given that municipal procurement is a large, varied and largely invisible process to residents. Procurement officers are then to some extent representatives of residents' needs. It is then notable that they did not articulate a strong sense of ownership or stake for the municipality in project development using GPP.

To conclude this subsection of interview data, I would like to highlight a few key findings. National regulation is not a key driver of the municipality's GPP practices, mainly due to their own Climate and Environmental Plan being more ambitious. Individuals have played a key role in shaping this plan as well as subsequent actions. However, these individuals are constrained by a lack of time and resources. This has led to a shortfall in the municipality's evaluation of own GPP practices and its environmental impact. Yet, the environmental ambitions of municipal interviewees are omnipresent through their responses. Their confidence in their current trajectory of environmental actions and ability to improve is encouraging for the future of GPP in Stavanger given the importance of individuals in the success of the tool.

6.3. Application of institutional theory to GPP in Stavanger

Now that the main findings from the data collection have been presented, I will analyze the findings using the existing literature on GPP and institutional theory. This will be done by first combining the results from the different methods to get a more holistic idea of the pieces that make up GPP in Stavanger Municipality. I will then use the components of institutional theory that were presented in Section 3 to answer Research Question 2 and explain what may have led to the current GPP situation in Stavanger.

6.3.1. The mosaic that is green public procurement in Stavanger

The findings from the interviews and document analysis reveal the dynamic nature of the municipality's GPP practices. Municipal staff actively emphasize their continuous development in environmental work, which is supported by the ongoing improvement shown in municipal documents like the status reports. When examining the municipality's priority areas, it becomes evident that they adopt a holistic approach to procurement, prioritizing sustainability and strict ethical requirements. GPP and environmental criteria on the other hand seems to be integrated as

an afterthought. However, specific requirements such as the 30 percent environmental weighting in award decisions, are not consistently included in tenders analyzed, possibly due to the adoption of the requirement coming with the 2022-2026 Action Plan, which was adopted after the publication of most of the tenders analyzed. Additionally, the absence of other environmental criteria may be influenced by the sectors studied. While this thesis does not delve deeply into the construction sector due to its complexities, it is worth mentioning the municipality's substantial investment in reducing the sector's environmental impact. The municipal plans outline clear goals and concrete actions for the sector, providing project leaders with explicit instructions for designing projects that meet the requirements. These measures also facilitate funding requests as project leaders can demonstrate the value of their projects by surpassing the prescribed measures. Considering the lack of up-to-date national GPP regulations, the Climate and Environment Plan and its accompanying document serve as invaluable tools for the municipality's GPP efforts.

This lack of proactive, forward-looking national regulation, combined with the lack of evaluation, has hindered municipal GPP practices. Scholars such as Vluggen et al. (2019) and Zhu et al. (2013) have found that strict regulation and the associated legal pressure can increase greener and more sustainable procurement, which is particularly relevant for municipalities as they have a high level of legal accountability. This is also evidenced by municipalities adjusting their climate and environmental reporting and emissions calculations to include sectors as the government requires their inclusion, a process of ratcheting up. Municipal staff report an ability to adapt quickly to changes from the government, stating that they are prepared for whichever of the three consultation proposals is adopted. However, with the current lack of coercive pressure or risk of punishment for *not* including environmental criteria from the government, there is little accountability for not meeting the municipality’s own GPP goals. All municipal staff acknowledged the lack of institutionalized internal evaluation practices and saw this as an area with potential. However, construction project managers have the opportunity to assess their performance in collaboration with contractors by looking at the objectives and measures in the various plans. But the general lack of systematic evaluation – and carrots and sticks – regarding the municipality’s procurement practices and strategy may also lead to them being unaware of not living up to their own goals.

In the absence of clear national guidelines, the municipality has looked to its peers. There is direct communication and horizontal learning in two main ways - through networks and through less formal channels. Stavanger Municipality is a member of several national and international networks with different purposes, including Storbynettverket[43], Covenant of Mayors[44] and Eurocities[45], to name a few. In addition to these organized networks, staff at Stavanger Municipality also reach out directly to colleagues in other municipalities for advice or inspiration.

As a member of these groups, Stavanger is affected by both conscious and subconscious comparison. The municipality openly acknowledged the pressure to be as ambitious as other large cities in terms of climate goals. Procurement officers also said that they do not need to "reinvent the wheel" with procurement processes and that they will often look at what others are doing. Project leaders, on the other hand, stressed the importance of benchmarking their own projects against those of other municipalities. The importance of these external actors then becomes noteworthy. If the Municipality of Stavanger looks to actors who have institutionalized GPP practices with well-established evaluation routines, they are likely to improve their practices over time. However, if they look at actors who are developing their GPP practices based on trial and error, they may be led astray and lose money in the process. In other words, their peers have influenced the municipality's environmental goals and actions through indirect comparison and active knowledge sharing. This does not, however, mean that internal factors have not had a significant influence on GPP practices, and a strict distinction between effects that stem from internal and external factors is methodologically hard to trace.

Individuals and organizational structures in the municipality also influence the municipality's ability to advance its GPP practices in the absence of stringent national regulation. The interviewees pointed out the importance of (environmental) competence for their environmental and GPP practices. This is widely supported by GPP literature, which shows that it is one of the

[43] A network for large cities in Norway focused on bringing attention to, and getting political support, for the specific challenges facing big cities (*KS' storbynettverk*, 2020)

[44] An initiative by the European Commission launched in 2008 to support a bottom-up approach to energy and climate action (EC, n.d.d).

[45] A network for large cities in Europe working for city development with a particular focus on climate and environmental topics (Stavanger kommune, 2018, p. 69).

most significant factors to GPP uptake (Liu et al., 2019a; Rosell, 2021; Sönnichsen & Clement, 2020; Testa et al., 2012; Vejaratnam et al., 2020). Municipal employees with environmental competence have therefore been influential in incorporating environmental criteria and shaping the environmental ambition and direction of the municipality. Not only has the municipality's administration been ambitious, but the politicians have also supported the proposed policies. This leadership support is demonstrated by their desire for progressive climate goals and willingness to invest in both hiring and environmentally ambitious projects.

All municipal interviewees expressed time constraints in their work, restricting their ability to do all the work they know would improve GPP practices. Politicians recognized the importance of enabling such improvements by providing funding to hire an environmental advisor in the procurement department. This willingness to fund environmental efforts is also evident in the funding of construction projects. When project leaders propose solutions with better environmental impacts, they are often approved despite the higher costs involved. This support from top management is also an important component for the uptake of GPP (Rosell, 2021; Sönnichsen & Clement, 2020; Sparrevik et al., 2018; Walker & Brammer, 2009). Thus, the structural elements of the municipality both enable and constrain the individual agency of municipal employees. This is further explored in the following subsection, which applies concepts from institutional theory to explain the factors influencing GPP practices in Stavanger.

6.3.2. What led to the composition of this GPP mosaic?

Institutional context of Stavanger

Connection between institutional logics and isomorphic pressures. Before applying institutional theory to understand the current situation of GPP in Stavanger, it is useful to briefly outline the institutional logics and isomorphic pressures that have been identified as having the greatest influence on the municipality. These two concepts are interrelated and influence each other. Isomorphic pressures shape organizational practices. They come from a variety of sources, some of which are regulatory bodies and industry standards. Institutional logics, on the other hand, represent a broader set of values, beliefs, and assumptions that guide decision making. These logics shape the expectations, norms, and practices that lead to the emergence of isomorphic pressures,

while the pressures perpetuate the dominance of specific institutional logics. Their reciprocal relationship of influencing each other therefore has an impact on the analysis as the concepts are difficult to separate. Figure 7 shows some of the dynamics at play between concepts from institutional theory and institutional elements of GPP in Stavanger. The figure is simplified to capture the foundational elements of the situation and set the stage for the following analysis. The cultural and historical context is outside of the scope of this thesis, but included in the figure as it has an influence on the institutional context. Central to the analysis are the five key institutional logics identified that influence GPP in Stavanger: the legal, political, environmental, market and social logics. These are briefly introduced before the theoretical knowledge is applied to the analysis of the results.

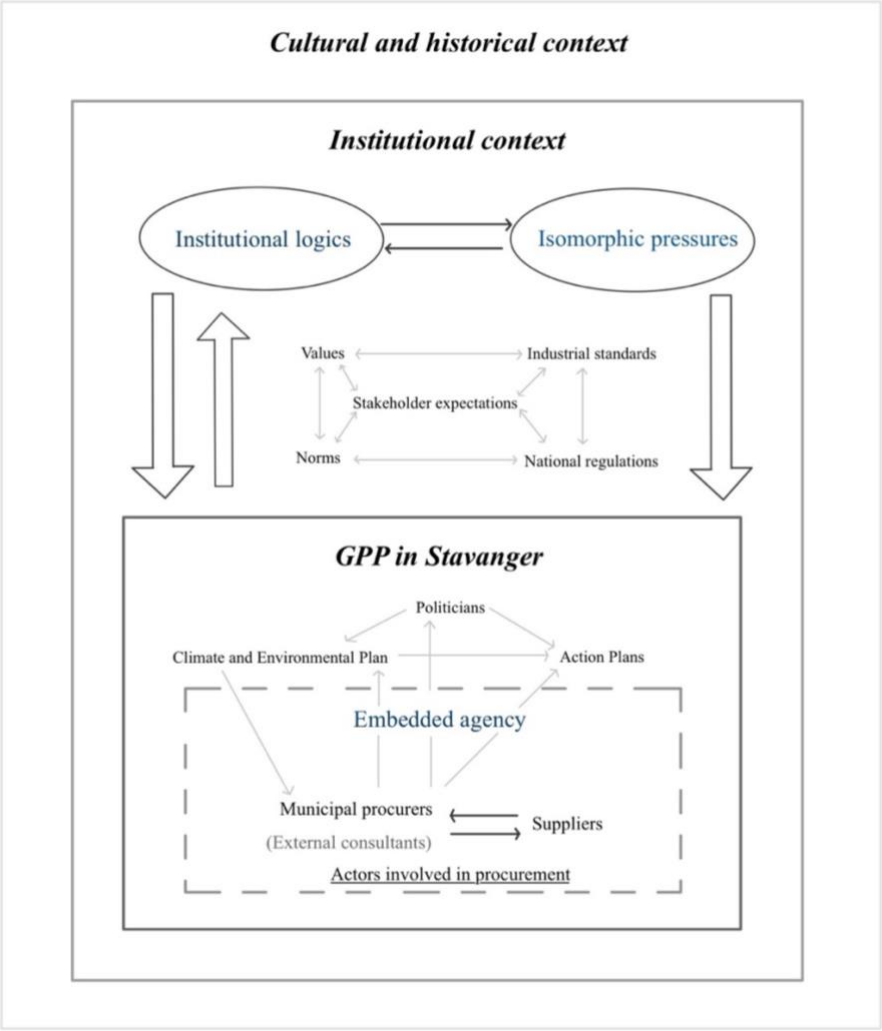

Figure 7: Institutional context for GPP in Stavanger

The legal logic and the political logic. These two logics are particularly intertwined with similar influences on the behavior of Stavanger Municipality and have therefore been combined. The legal logic is shaped by the political logic, as politicians shape the laws. These laws are covered in the Section 2 introducing the background information. I will therefore focus on the political logic in this section. Stavanger is a municipality in Norway, which is a representative democracy. This means that the politicians in Norway are elected by the people and should therefore represent the people. However, it is not only the politicians who are involved in this political climate. All municipal employees are navigating these complexities. Employees in the administration need to convince politicians that what that they are working on is worthy of political priority and investment. This involves power struggles between departments within the municipality, politicians, interest groups, and potential suppliers all trying to make their case. GPP policy, like other policies, can also change when political leadership changes, unless it is institutionalized. Although this is unlikely, it does put procurement officers in a position of having to reiterate the importance of GPP rather than it being the default position. Maneuvering through these complexities requires political savvy and can be time consuming. On the periphery of these internal political dynamics are the people who have the power to elect politicians. Public opinion and pressure are therefore an important part of shaping the political landscape. However, GPP policy is arguably not on their list of top priorities, which may be why it is not a key focus of the Climate and Environment Plan.

Environmental logic. Environmental logic is also key to GPP. There is a general consensus that climate change is a man-made problem that requires action to mitigate. There is an expectation that the state or government will lead this change. National and local politicians are therefore in a position where they must act. If they fall short or fail to achieve their stated goals, they may face public scrutiny. Therefore, the environmental logic in the context of GPP is likely to lead to the implementation of environmental goals and targets, impact assessments, the adoption of ecolabels and EMSs, and the reduction of carbon footprints.

Market logic. At the core of GPP as an environmental policy tool is the assumption that increased demand for green goods and services through public spending will stimulate market mechanisms.

In the context of GPP, actors need to consider the availability of green goods and services, the price of these products, consumer demand, and market incentives to promote greener practices. A complicating factor in the context of GPP is that local governments are often the "middleman" between the goods and services produced and the final consumer. As they spend public funds, they have a responsibility to consider the needs of the final consumer while juggling other competing institutional logics.

Social logic. The social logic is also important to Stavanger's procurement practices. It is essential that procurement officers understand the social norms, values and expectations that shape the municipality to have the best justified procurement practices. This includes working with different groups to ensure that their opinions, values, and needs are considered. It also recognizes that procurement can be a tool for shaping social change through actions such as supporting local businesses, incorporating social justice and inclusion criteria, and encouraging innovation. The influence of this social logic can be clearly seen in the integration of social justice criteria such as working conditions, requirements to include student workers, and ethical practices.

How the institutional context shapes Stavanger's GPP practices

The initial 'need' to act. Central to all the municipality's sustainability work is the Climate and Environmental Plan - a plan that is exemplary of well-intentioned, but hasty political posturing. This is likely due to a combination of isomorphic pressures and institutional logics shaped by the municipality's current environment. Formal coercive isomorphic pressures such as legal requirements were not identified by interviewees as a key motivator for this plan. This was because the regulations were not difficult to comply with. However, it was clear from the interviews that the informal coercive pressures of social expectations and stakeholder pressure were key drivers of the municipality's actions. The 2007 scandal over the alleged sourcing of unethically produced granite has also made the community sensitive to the influence of the media. The media plays a powerful role in holding the municipality accountable and shaping the narrative around the municipality's actions. The combination of these stakeholder expectations to implement ambitious climate goals with the political logic and power struggles between politicians is likely the reason why the politicians changed their tone and increased the emission reduction target from 50 to 80 percent. The problem with this hasty decision was that the administration had designed a

plan to meet current national standards with measures to reduce emissions by 50 percent by 2050. This is a clear example of how mimetic isomorphism can lead to efficient solutions. The reason why this is significant is that it gave the anchor of the municipality's environmental and climate actions a shaky foundation, leading to a decoupling from the outset.

Decoupling. As a result of a mismatch between emission reduction targets and planned actions, we see a disconnect between the municipality's externally communicated desired outcome and its actual behavior. One interviewee openly shared that the design of the plan did not match the emission target that was introduced at the last minute. As there is little focus on GPP in the municipal documents, decoupling is mainly seen in the tender documents. The general terms and conditions include environmental criteria, but they are not a way to eliminate potential bids before selection. In addition, environmental criteria were not included in the award criteria as often as expected. This may indicate that the markets in question are mature enough to include criteria in the technical specifications instead. The problem with this is that the better performing suppliers are not rewarded for going above and beyond the norm, which could hinder the development of greener goods and services. This is also inconsistent with the municipality's goal of using its purchasing power to promote innovative goods and services.

Loose coupling. With an overly ambitious emissions reduction target, the municipality began to play catch-up. Two main causes have been identified: mimetic isomorphism and embedded agency. An example of this relates to their environmental and climate efforts. In an attempt to improve their environmental efforts, but unsure of how to do so, the municipality looked to similar municipalities, resulting in mimetic isomorphism. To communicate their climate work, they copied Oslo Municipality's idea of *klimaoslo.no* to create *klimastavanger.no*, working with limited resources where they admittedly lacked the time and competence to update the website as they wished. The current staff had structural constraints that prevented them from linking their desired and communicated goals with their actions at the time. However, the staff knew how to apply for funding to hire someone to work on environmental communication within the department. Politicians recognized the value of this resource. Institutional logics, such as the environmental logic, create an environment in which it is expected to prioritize environmental considerations, so the politicians approved the funding for the new hire. The announcement of this position was

published the week after my interview with M3, in which the strategy was mentioned. In May 2023, there was a follow up posting seeking adults aged 18-23 to communicate the municipality's climate efforts to a younger audience on social media. In this way, the coupling of climate and environmental goals with action actions happens over time as municipal staff are given the resources they need to do what they know needs to be done.

Although the municipality has a lack of focus specifically on GPP, one can see indications of a loose coupling with this environmental policy tool. Interviewees talked about the municipality's procurement approach as having a more holistic approach to sustainability, including not only environmental, but also economic, social, and ethical factors. The documents clearly support this, both through goals and measures in the municipal documents and through the tender documents analyzed. They do however still have some decoupling regarding their environmental considerations. There is a lack of concrete KPIs related to GPP for sectors other than transport and construction. It is reasonable for the municipality to focus on emission reductions through GPP for these sectors, given their high emissions compared to other sectors. However, this neglects to pay attention to GPP for other sectors. The procurement officers describe that they know what they need to do to improve this. One of the things they have done, similar to the climate and environment department, is to request funding for a climate advisor for the procurement department. This would allow them to do the things that organizational structures that prevent current staff from doing. One way to track whether the municipality is making their connection is to evaluate their use of Measure 8.11 in the 2022-2026 Action Plan his measure clearly states that environmental considerations must be weighted at least 30 percent when included as an award criterion. It would therefore be insightful to look at tender documents in the future for this four-year time period as a simple way to check for decoupling, and on that could assist the municipality in recoupling if their behaviors stray from the goals.

Based on the data collected and analyzed for this thesis, there are several institutional elements that enable loose coupling when decoupling has occurred. The culture of both formal and informal collaboration with other municipalities and organizations allows for knowledge sharing that could help municipal officials solve problems. M4 and M5 shared that it is common to approach municipalities that are running projects that they are interested in, to learn more about them and to

visit them. In return, Stavanger Municipality has also received visits to learn about current projects. This can help advance environmental work when internal knowledge or ambition is lacking. When municipal employees know what needs to be done and how to do it, they need support from management. Competing institutional logics can also give procurement officials multiple ways to justify increased spending. For instance, the environmental logic is currently leading to increased stakeholder expectations of the public sector to become more environmentally friendly. This may be one of the reasons why politicians in Stavanger Municipality are so willing to spend money on initiatives and projects that are environmentally beneficial. The relevant municipal employees must therefore be able to navigate the local political climate to justify this increased spending. This can however be complicated, and often requires experience, skill and knowledge of the system and competing logics to navigate.

There are also several ways in which the current organizational structures limit the community's progress in GPP. First, one good thing the municipality is doing that can also hinder its progress if overused is its use of the market dialogues mentioned earlier. When used correctly, these market dialogues can facilitate the improvement of GPP practices in various ways through gaining market knowledge (Sönnichsen & Clement, 2020; Kristensen et al., 2021; World Bank Group, 2021; DFØ 2021). However, if the municipality is overly concerned with suppliers' current capabilities and desires, they can enable a lock-in of the current goods and services available. Another important limiting factor is the number of institutional logics and interests the municipality must consider. Which institutional logics are most prevalent can also change depending on current national and international events, as well as the political leadership at the time. For example, procurement officers cannot simply focus on the economic aspect of procurement, as they have a social responsibility to their residents as a public body funded by the residents' tax payments. These competing logics can lead to decoupling. The municipality must then use resources to recouple, only to decouple again when faced with changes in national regulations to which it must adapt. The need for constant adaptation also leads to the third constraint - time. This lack of time results in resources being diverted to more important tasks, which, given their current objectives, do not include evaluating their own procurement practices and strategies. This could also result in them being unaware that they are not meeting their own goals.

6.4. Summary of results and analysis

The use of mixed methods has resulted in large amounts of diverse data. Although each interview represents its own social reality, the combination of interviews revealed key trends of factors impacting GPP in Stavanger Municipality. Environmental competence and supportive leadership arise as drivers of the improvement of GPP. Still the municipality has areas of improvement that are unaddressed, likely due to a lack of evaluation. Before providing an overview of potential ways in which the municipality can improve its GPP practices, I will briefly answer each research question to make sense of the data and its significance.

RQ1: What constitutes green public procurement in Stavanger?

Stavanger Municipality's GPP is characterized by individual employees and politicians who are influenced by the current emphasis on 'greener' actions. They have an ambitious goal to reduce emissions by 80 percent between 2015 and 2030. However, this goal is somewhat disconnected from actual behavior in several areas, one of which is GPP. Their GPP practices vary by sector, with a focus on the high-emitting construction sector. Tenders analyzed are characterized by the standardization of contract clauses, which in some cases leads to the inclusion of environmental criteria that are not relevant. However, the development of their annual status reports on their action plans in combination with interviews shows that the municipality is continuously improving its practices.

RQ2: What factors impact green public procurement in Stavanger?

There are several factors that influence GPP practices in Stavanger. Perhaps the most important finding is that the lack of national regulation leaves a gap for individuals and organizations to influence the municipality's procurement practices both directly and indirectly. This lack of legal pressure does not mean that the municipality is not influenced by coercive isomorphism. Stakeholder expectations are a key driver of the municipality's environmental work, including GPP. In addition, GPP practices are influenced by competing institutional logics, such as the environmental logic and the market logic. These logics both constrain and enable individual agencies within the municipality to improve GPP practices. The data showed that the

empowerment of individual agency was important in the development of GPP practices and the environmental ambition of projects.

RQ3: How does Stavanger Municipality evaluate GPP in the municipality and the potential effects of implementing criteria?

The lack of strategic evaluation of their own GPP practices could hinder the environmental benefits of the environmental policy tool. The main KPIs for their procurement practices are the number of eco-labelled products purchased and the number of suppliers with EMS. In tracking the latter, they have found that including EMS as an environmental criterion in tenders has been effective and has increased the number of certified suppliers over time. Including more relevant KPIs linked to their procurement goals could help them identify areas of success and improvement. It is also interesting to note that although the municipality's environmental focus is on reducing emissions, their only emissions-related procurement actions are related to transportation and construction sectors.

Proposed solutions.

Improving how the municipality evaluates its GPP practices could help detect and prevent decoupling. Based on the data, there are three key steps they can take: (1) include new and more relevant KPIs to evaluate GPP, (2) evaluate the level of ambition of the criteria, (3) evaluate the supplier selection process and which criteria have a decisive impact, and (4) assess environmental impact of environmental criteria use. First, the municipality could increase the number of KPIs related to GPP. They could include CPP-related KPIs such as recycling rates, waste reduced through reuse, emissions reduced through local procurement. The latter would require reference procurements, like the reference projects used by the construction sector to measure emissions saved. Keeping track of how often certain criteria are included could also help give the municipality a benchmark of what it needs to work on. For instance, if they measured their inclusion of LCC as an environmental criterion, they would see that it was disconnected from their plans. Second, they could create a ranking system for the level of ambition of the environmental criteria. A potential source of inspiration could be the OAG's scoring methodology in their 2021-2022 assessment of GPP in Norway (p.8), shown in Table 11. Finally, the municipality could evaluate which criteria currently play a decisive role in the selection of suppliers. In this way, they could get a better picture of when the inclusion of environmental criteria actually has a significance

and when it does not. Once this is determined, they can adjust their procurement practices according to their priorities. And lastly, by using reference projects like what is done for the construction projects, the municipality could quantify emission reductions. All these methods would enable the municipality to see current GPP performance and identify areas for improvement.

Table 11: Suggested methods of evaluating GPP in Stavanger

Suggestion	Example
More (and relevant) KPIs	Waste reduced by reuse; Number of products procured used rather than new; Emissions reduced by local purchasing; Percentage of tenders including *X* environmental criteria (ex: LCC).
Rate the ambition level of environmental criteria	*Low ambition level*[46]*:* Requirements involve a limited degree of verification of documentation and follow-up. *Medium ambition level:* Sets higher requirements for environmental performance, while the requirements generally require more resources from the client and suppliers. *High ambition level:* Set the most stringent environmental requirements in the area and/or allow for innovative solutions. Requires more resources from the client and suppliers.
Evaluate supplier selection	Evaluate the scoring of award criteria in relation to environmental criteria. Does the inclusion of environmental criteria actually have a decisive impact?
Assess the impact of green criteria versus regular procurement	Use reference projects similar to the construction sector. Measure the environmental impact end goods and/or services produced when including either individual environmental criterion or multiple environmental criteria and compare it to what it would have been if procured without the inclusion of the criterion or criteria. This data could be used to estimate or track (if done carefully) the reduced environmental impact of the municipality's GPP practices.

[46] The definitions of all ambition levels in the example are taken from the OAGs 2021-2022 report (Riksrevisjonen, 2022, p.8).

7. Discussion of obstacles to the institutionalization of GPP and mitigating factors

The case of GPP in Stavanger is an interesting example of how institutional factors both enable and constrain actors from improving current systems. This discussion will explore some of these structural elements that hinder the institutionalization of GPP and factors that mitigate the effects of these influences. This section will be divided into three parts: (1) when the national government fails, (2) the role of the individual, and (3) the value of strategic evaluation to reduce decoupling. The first part will address the lack of coercive pressure experienced today and the mimetic isomorphism experienced. I will then address the role of individuals in implementing environmental policy tools to ensure their success. This will be followed by a discussion of how evaluation strategies can reduce decoupling and increase emissions reductions. Finally, I briefly highlight topics for future research that were not addressed in this thesis due to its limited scope.

7.1. When the national government fails

Coercive pressure can be a valuable tool in motivating state and local governments to take climate action. However, it can also be an obstacle when there is a lack of legal clarity, and related coercive pressure, at both the international and national levels. A key finding of the thesis is that in the absence of rigid national regulations, municipal staff seemed to find guidance and clarity in their municipality's Climate and Environmental plan. They even welcomed stricter regulations. In the construction sector, with clear targets, they experienced less risk aversion and more focus on how to make the projects more environmentally ambitious. The implication is that strong and clear guidelines provide a valuable starting point and benchmark. Coercive isomorphism as a result of rigid legislation could therefore be a useful factor in promoting sustainability work and reducing emissions. Although the Norwegian government provides several tools and resources for procurement officers, these are mostly advice rather than mandates on how an organization could or should improve its procurement practices. This is not necessarily negative, as the literature argues that this flexibility supports the uptake of GPP (Rosell, 2021; Shadrina, et al., 2022; Sparrevik et al., 2018), which is also something that procurement officers like about today's laws. However, legal flexibility can also act as a barrier due to the lack of coercive pressure, which other scholars have found to be important for GPP uptake (Mélon, 2020; Zhu et al., 2013; Vluggen et

al., 2013). What is clear, however, is that the state plays a significant role in influencing the environmental actions of actors within its national borders.

The national government must therefore create an environment in which actors are rewarded for being ambitious on environmental and sustainability issues. This is not currently the case. The current GPP legislation is lackluster, with no justification for the significance of the recommendation to weight environmental considerations at 30 percent. Where this 30 percent number comes from is unknown, but it seems to function as a symbolic gesture to show that environmental considerations are important (E1, personal communication, March 14, 2023). Symbolic policies such as this gesture could lead to the perpetuation of unsustainable practices (Blühdorn, 2007). The current procurement regulation not only lacking for environmental considerations but could also inhibit more socially just outcomes. In 2021, a company filed a complaint with KOFA against the municipality of Stavanger, claiming that the ethical criteria in a tender for computers were illegal (Espeland, 2021). The complaint was upheld (ibid.). Such lagging national regulation could encourage risk aversion and potentially discourage more progressive local environmental action (Mélon, 2020). If the regulation contained definitive language such as "must include*" x* environmental criteria under *y* conditions, it would be clearer for procurement officials to know what to do. This stringency and clarity would not necessarily take away the flexibility that procurement officials currently enjoy either. The "strictest" proposal put forward by the government for possible changes to the GPP regulations (see Proposal 1, Table 2) still includes this flexibility. However, clearer language in the regulations would help signal to both the market and public purchasers that GPP *needs* to be prioritized.

Absence of national legislation then leaves room for other actors, such as organizations and individuals, to shape the landscapes and norms around the course of action. One way this is done is through horizontal learning through both formal and informal channels, as seen in the case of Stavanger. Transnational municipal networks (TMNs) are an example of formal forums for horizontal knowledge sharing and collaboration. In the context of climate change, these organizations aim to support "cooperation between cities to improve their climate change mitigation and adaptation work" (Heikkinen, et al., 2020, p.1). These TMNs can have a positive impact on how cities approach climate change adaptation and mitigation processes (Fünfgeld,

2015; Giest & Howlett, 2013; Heikkinen, et al., 2020). Open communication between municipalities about best procurement practices and past mistakes could help optimize each municipality's GPP practices. In addition, they can provide individual staff with a broader network to reach out to in more informal settings when seeking inspiration or advice. A low threshold for seeking advice could help avoid potential mistakes or inefficient practices. Horizontal learning can therefore be a valuable tool for the municipality's environmental work.

This horizontal learning could help reduce the uncertainty felt by actors without a national regulatory framework to rely on and reduce the harmful effects of mimetic isomorphism caused by uninformed imitation. In the absence of clear national guidance, organizations are left to "fend for themselves". It is natural to look to others for a template or benchmark. If the organization in question models itself after another with strategic practices that are clearly linked to specific goals, it could positively influence the practices of the organization it is imitating. However, problems can arise and multiply if the organization models itself on practices that are inefficient without clear strategic goals. Furthermore, if all similar organizations look to each other for solutions without communicating, the effects of their decisions could be detrimental to environmentally sound progress. This will be a particular problem in societies where there is a lack of evaluation of current practices. It would then be a situation of "the blind leading the blind", with no national regulation to guide the progressive actions they are told to take. Thus, mimetic isomorphism, where organizations imitate each other, could perpetuate inefficient and potentially harmful practices.

To demonstrate the effects mimetic isomorphic pressure can have on GPP, I will present a hypothetical scenario of a municipality that wants to improve its procurement of vehicles. Municipality A wants to reduce its emissions from vehicles in the municipality. There is currently no national regulation in this area, so they look to Municipality B, which is known in the country for having ambitious environmental goals. So, Municipality A looks at a selection of Municipality B's tender documents for procurements of vehicles. In these tenders they weight "Environment and Quality" with 45 percent in their award criteria, a seemingly high weighting that is significantly higher than national recommendations. Municipality A models its tender for new vehicles on these tenders and, like Municipality B, states in its tender description that it is a municipality with high environmental ambitions and wants to reflect this in its procurement. They

receive five bids as shown in Table 12, ranging from a full fleet of zero emission vehicles to a full fleet of fossil fuel vehicles. After scoring the bids, Supplier 4 is awarded the contract. I will return to this example later in this section when I explore the importance of competence and evaluation to combat decoupling in the context of environmental policy tools. For now, however, it is important to note that because Municipality A's mimicking of Municipality B's procurement methods, it is choosing an option that is less optimal for its desired outcome of reducing its fleet's emissions. Thus, although the intent to improve was present, the mimetic isomorphism as a result of mimicking led to an outcome that may be more harmful to the environment.

Table 12: Bids from vehicle procurement example

	Zero emission vehicles	**Fossil fuel vehicles**
Supplier 1	20	0
Supplier 2	15	5
Supplier 3	10	10
Supplier 4	5	15
Supplier 5	0	20

7.2. The role of individual agency

Employees with experience and environmental competence could help to counteract weaknesses resulting from institutional changes due to isomorphic pressures. Had Municipality A had staff who knew how to place the environmental criteria in the best position to achieve the desired result, the above scenario would probably have had a different outcome. Perhaps, environmental considerations would have been weighted separately from quality to receive a higher weighting. More likely, Municipality A would have included zero-emission vehicles as a technical requirement, eliminating all bids that offered fossil-fueled vehicles, regardless of the number. However, with the conditions modeled from Municipality B, Municipality A had to evaluate based on several factors such as their pricing (weighted 55 percent as an award criterion) and technical specifications such as cruise control and four-wheel drive for all of the vehicles included in the "Environment and Quality" award criteria weighted 45 percent. If the desire for greener vehicles

had instead been included in the technical specifications as a requirement, for example requiring zero-emission vehicles, suppliers would have been required to submit bids that included only these types of vehicles. And because "Environment and Quality" included multiple factors to be scored on, not just the environment, environmental factors were less significant. There are several ways in which this scenario could have turned out differently, but experience in the field and environmental knowledge would have increased the chances of a more environmentally beneficial outcome.

Therefore, the value of different environmental competencies in the implementation of environmental policy tools cannot be underestimated. The findings of this thesis support extensive literature showing that awareness of GPP increases its uptake (Testa et al., 2012; Cheng et al., 2018; Fang et al., 2020; Vejaratnam et al., 2020; Sönnichsen & Clement, 2020; Liu et al., 2019a; Rosell, 2021). I would argue that the same could apply for the implementation of other environmental policy tools. This is because environmental competence would lead to more knowledge-based action rather than simply imitating what seems to work. Organizations need people in the room with environmental literacy to know what to do to keep their external promises. To deal with competing institutional logics, it may also be useful to have people with different environmental backgrounds. This mix of environmental competencies could provide varying perspectives and expertise, in addition to countering normative isomorphism through factors such as education and professional associations. Intentional hiring practices that seek competencies in alignment with an organization's environmental goals and strategy, are therefore essential.

I do not include a detailed analysis of human resource management (HRM) in the case of GPP in Stavanger Municipality due to limitations in the scope of the thesis, but it is worth noting the importance of HRM in attaining and retaining environmental competence. A recurring theme in the interviews was the hiring of individuals to increase environmental competence. The role of HRM in enabling the municipality's environmental work is therefore significant. Findings from the developing field of research on green human resource management (GHRM)[47] show an ability to enable an organization’s green culture (Roscoe et al., 2019) and a positive relationship between

[47] Refers to pro-environmental HRM including practices such as hiring, environmental training, incentivization, and employee empowerment (Kim et al., 2019; Roscoe, et al., 2019).

GHRM and the organization's environmental performance. Part of this is due to environmental training, and the importance of training is also found in literature on what increases the uptake of GPP (Sönnichsen & Clement, 2020; Liu et al., 2019a; Rosell, 2021). Through interviews with municipal employees in Stavanger, it was uncovered that much of the knowledge about procurement is gained through horizontal learning between colleagues. Therefore, proper training of new employees entering the procurement field is an especially valuable tool to prevent the institutionalization of incorrect or inefficient procurement practices. Singh et al. (2020) also found that GHRM has a positive impact on SMEs' green innovation, which indirectly has a positive impact on their environmental performance. Given the ability of GHRM to positively shape and facilitate innovation, the lack of green focus in HRM may conversely lock in unsustainable practices by not recognizing its importance in driving change. HRM can therefore both enable and constrain the agency of individuals within an organization to institutionalize GPP.

In addition to HRM, there are several other structural elements that both enable and constrain individual agency when implementing environmental policy tools such as GPP in a municipal setting. Balancing market interests with social and environmental responsibilities, while being fiscally responsible with public funds, is a complex process. These competing institutional logics may provide opportunities for individuals to challenge the institutional structures of GPP (David et al., 2019) when risk aversion does not kick in due to the complexity of institutional intricacies. National or local policies could help mitigate this risk aversion. Although sanctions, or penalties, typically have negative connotations, they can also act as enablers for agency in the implementation of environmental policy tools such as GPP. Thereby stringent regulations with the possibility of penalties for non-compliance could open up for individuals to justify their more ambitious environmental actions on the basis of legal compliance. The addition of various incentives could further encourage individuals to improve their efforts. Awards, such as the "Ethical Procurement" award won by Stavanger in 2022, could push individual procurers to exceed organizational and national norms to gain professional recognition. Through similar internal incentives or allocation of funds, supportive organizational leadership can facilitate the institutionalization of GPP (Walker & Brammer, 2009; Sönnichsen & Clement, 2020; Sparrevik et al., 2018; Rosell, 2021, Liu et al., 2019a) and encourage individual agency. Even with these

enabling factors, procurers will need political savvy to navigate competing logics and structural constraints if they are to achieve environmental change through procurement.

With the identification of individual agency as an important factor in improving GPP in Stavanger, an interesting question arises - to what extent should an individual be able to influence organizational practices? Using the lens of embedded agency, actors have various that are influenced by their environment and experiences, which influence the beliefs and behaviors of individuals in both their private and professional lives. This embedded agency is typically seen as a source of institutional constraint, but it can also enable significant change (Thornton et al., 2012). As seen in the case of GPP in Stavanger, the identities and motivations of individuals can be a powerful driver in advancing municipal environmental action. This has also been facilitated to some extent by local politicians recognizing the value of their opinions and expertise. This agency must also be limited to a certain degree to remain line with organizational policy, and organizations develop structures and processes to ensure the focus of individuals and groups (ibid.). Institutional logics can also act as a constraint, directing the attention of individuals by shaping which problems receive attention and which solutions are likely to be considered (ibid.). However, if there are too many structural constraints, they can inhibit individuals' motivations and ideas and stifle environmental progress. This tension would be interesting to explore for further research on the significance of individual agency in the development of environmental policy tools such as GPP. Due to its scope, this thesis does not attempt to answer this question. However, the tension is noteworthy given the potential value of individuals in advancing organizational environmental action and countering decoupling.

7.3. The value of evaluation to reduce decoupling

Although the original use of the term "decoupling"[48] in institutional theory has a negative connotation, it can sometimes be a sign of organizational change or adaptation. The phenomena

[48] The disconnect between an organizations external practices reflecting society's expectations and the actual internal practices (DiMaggio & Powell, 1983) as a way to "maintain the assumption that people are acting in good faith" (Meyer & Rowan, 1977, p.358).

can also be observed when a well-intentioned organization attempts to implement an environmental strategy without the substantive knowledge of how to do so. In the context of aligning externally communicated and internally practiced GPP practices, the organization is trying to navigate a complex institutional context with competing institutional logics and interests. Decoupling can therefore occur because of a resource-constrained environment, where actors must choose between tasks that ensure the smooth running of necessary operations and tasks that would follow their environmental ambitions, and ultimately choose the essential tasks. These time constraints can lead to a disconnect between environmental messaging about what is planned and what is actually done.

The decoupling between messaging and action could be interpreted in different ways. Misangyi (2016) points out that when "an institutional program is adopted in a complex institutional field," coupling and decoupling of practices will occur to satisfy institutional logics, even if they are not done intentionally (p. 408). Blühdorn (2007) describes these commitments to satisfy stakeholder expectations without changing practices as symbolic politics involving political gestures. However, I argue that these “political gestures” may originate from a genuine desire and intention to change and could materialize into actual progress through the process of coupling and decoupling. Scott (2008) also points to findings from research using institutional theory showing that changes that may seem superficial can become significant over time and that early adopters were more likely to implement the reform (p.432). In other words, decoupling could be a practical outcome of pragmatic practices rather than intentional misalignment and deception. To avoid decoupling, municipalities could use evaluation methods to ensure that their behaviors are consistent with their communicated strategies.

One factor that may reduce decoupling is the intentional evaluation methods of the effectiveness of environmental policy tools. There are many different environmental performance evaluation (EPE) models that can be used to assess environmental performance (Lundberg et al., 2009). For organizations to get an accurate image of its own performance, they need to determine appropriate KPIs (or other evaluation methods) and monitor them (Yuan et al., 2009). In general, public organizations are lagging behind in the use of these methods and their sustainability reporting (Lundberg et al., 2009; Domingues et al., 2017). Research on the effects of sustainability reporting

has generally focused on the private sector, with a common finding that this type of reporting is important for companies to remain competitive (Taliento et al., 2019). Based on external stakeholder pressure on the public sector to take environmental action, I argue that sustainability reporting could have similar benefits given benchmarking with other similar national and international organizations. Therefore, collecting and reporting data from EPEs could satisfy both external and internal pressures. EPEs can serve as an avenue to assess internal environmental performance and measure performance against national environmental goals (Lundberg et al., 2009; Domingues et al., 2017). Thus, if properly implemented, EPEs can be a valuable strategy for the sustainable development of the public sector (ibid.), thereby satisfying both formal and informal institutional expectations.

Given the value of evaluating environmental practices, it is significant that there is a lack of evaluation practices in GPP for Stavanger and evaluation of GPP tenders in general (Cheng et al., 2018). If organizations had intentionally designed evaluation methods that could measure the environmental benefits of environmental tools in addition to the success of their own implementation, it would be easier to track their progress. Evaluating both factors would likely help them stay in line with external messaging, assuming the decoupling that occurs is unintentional. The lack of evaluation of the effectiveness or success of a policy tool can therefore make it difficult to prevent decoupling. If there is national legislation requiring evaluation, it would become another necessary task for the authorities. This would then require a reallocation of resources but would be a step towards helping CAs to couple goals and actual behavior. Inadequate national guidelines or regulations make it difficult to know what to evaluate on, leaving it up to the organization or individual to decide. This can be a time-consuming task, which can lead to evaluation being neglected in an already time-constrained environment. Therefore, it would be helpful to have some in-house expertise to design and conduct these evaluations. This in-house competence is also valuable given Domingues et al.'s (2017) findings that internal motivations were responsible for sustainability reporting, with individuals within organizations being the main drivers. Stavanger Municipality investing in hiring individuals with environmental competence is therefore an important step towards improving its environmental actions and GPP.

To demonstrate the value of strategic evaluation, I will return to the vehicle procurement example without using the lens of a specific EPE model. If Municipality A had one or more experienced procurement officers, they could have conducted an evaluation of what was the deciding factor in the award of the contract. They would then have found that Supplier 4 won because price was weighted at 55 percent as an award criterion. Additionally, there were too few environmental criteria to score in the "Environment and Quality" award criteria to have a significant impact on the outcome. Once you have identified such trends, you could explore ways to increase the importance of the environment in the next tender. They could also reach out to Municipality B and discuss these findings with them, thereby diffusing more environmentally beneficial procurement practices through horizontal learning. When procurements are made without adequate (or any) evaluation, it is difficult to know how the policy tool is working to reduce emissions and other environmental impacts, and which areas are providing a higher return on investment than others. Institutionalized evaluation practices could therefore help prevent decoupling between a municipality's externally communicated goals and strategies and its actual internal behavior.

7.4. Directions for future research

This thesis leaves several compelling topics unexplored due to limitations of scope and time. An in-depth exploration of motivational factors, including the carrot and stick approach, for individuals could provide insight into how to maximize the potential of one of the most valuable assets of organizations. In exploring the role of the individual in depth, it would also be interesting to explore the balance between giving the individual space to help organizations evolve without leaving behind organizational policies that lead to organizations being sidetracked by individual preferences. Another topic worth exploring is the relationship between the national government and municipalities and the ability of the latter to influence national policy. It would be particularly interesting to conduct this research in the context of the recent public hearing on possible changes to national GPP regulations. Seeing how municipalities express their views and put pressure on national legislators could help to understand the power of municipalities to bring about national change. Finally, exploring the relationship between municipalities and the private sector in public procurement could provide fruitful insights into how procurement is situated in today's neoliberal context. In the case explored in this thesis, Stavanger Municipality invested in building their in-

house environmental competence which goes against a general neoliberal trend of outsourcing. More and more services are being outsourced and subcontracted to private consultants, making the public sector dependent on private actors and introducing the latter's strategic interests into processes over time. It would therefore be interesting to explore the reasons for the municipality's investment in in-house competence and whether it is intentional. In addition, by comparing Stavanger Municipality's actions with those of other municipalities, one could see if there is an emerging pattern of countering the neoliberal trend and investing in its in-house assets.

8. Conclusion

Stavanger's procurement practices have come a long way since the release of "De fattiges plass". With ethical procurement practices ahead of the current national regulation (Espeland, 2021), the municipality now has a proactive approach to strategically use its purchasing power to work on social issues. With the significant impact of public procurement has on the global economy, accounting for 12% of global GDP (World Bank Group, 2021 p. 10), it is essential that public procurers make intentional procurement choices. Through their purchasing power they can shape markets, promote greener solutions and reduce emissions. It is therefore problematic that Norway, a country perceived as environmentally progressive globally, has been found not to use public procurement sufficiently to minimize environmental impacts and promote climate friendly solutions (OAG, 2022, p.7). To explore the use of GPP at a more micro level, I looked at Stavanger, Norway's "energy capital" and one of the country's largest municipalities. Through mixed methods of qualitative and quantitative document analysis in combination with interviews, a picture of a loosely coupled municipality emerged. The following research questions were used. The following research questions were used to guide this research:

Research Question 1: What constitutes GPP in Stavanger?

Research Question 2: What factors impact GPP in Stavanger?

Research Question 3: How does Stavanger Municipality evaluate GPP in the municipality and the potential effects of implementing criteria?

Interviews of relevant municipal staff and document analysis was used to answer *Research Question 1*, finding that the municipality's actions are not in line with its goals. Through a tender analysis of six categories, it was uncovered that Stavanger Municipality is not sufficiently including environmental criteria. The results support the findings by the national assessment of GPP by the OAG (2022) across most categories, showing an inconsistency between municipal stated measures versus its actual actions. However, this does not mean that there has been no improvement. Municipal documents show improvements in measuring and reporting on GPP, and

the employees interviewed were aware of the need for continuous development. GPP in Stavanger can therefore be described as a well-intentioned development project.

The investigation into *Research Question 2* about "What impacts green public procurement in Stavanger?" identified both internal and external forces. The municipality's early climate efforts were a result of mimetic isomorphism where the municipality modeled its goals after similar municipalities. The motivation to adopt these policies came from perceived pressure from external stakeholders, such as Stavanger residents and the media. Beyond ad hoc strategic responses to such specific drivers of change, municipal employees with environmental expertise have also been key to the development of GPP practices in the municipality, albeit without a systematic approach.

This lack of holistic intentionality is one of the reasons why the answer to *Research Question 3* on how Stavanger Municipality "evaluates GPP in the municipality and the potential effects of implementing criteria" is that it does not do so. With so much of its GPP progress being driven by individual municipal employees, the municipality has paid little attention to evaluating its own internal practices and their impact in this regard. This is not due to a lack of ambition and concern for environmental progress, but rather a lack of time as a resource and a lack of prioritization of substantive incentives or sanctions to achieve GPP targets across its portfolio of activities.

Stavanger's GPP practices is an interesting case that show-cases the importance of individuals in driving institutional change in the face of lagging national regulation and weak institutional incentives or sanctions for ambitious action in this regard. The need for more systematic attention to improving GPP at the municipal level therefore increases. This thesis has identified several types of barriers to optimal GPP performance. Among the assets that allow for systematization are the increased environmental competence of municipal staff and the exercise of individual agency that has led to significant improvements in specific GPP processes.

However, there are several factors that hinder progress in GPP. The lack of incentives and sanctions to support municipal targets, combined with a national policy framework that evolves more slowly than at the municipal level, leaves municipalities with little reason to prioritize action on this front, given resource constraints and other public priorities that can score more political

points. Of particular concern is the lack of impact assessment, which limits the municipality's potential to learn and subsequently improve future GPP practices. Especially troubling is the lack of impact assessment, which limits the potential for self-learning to improve future GPP practices. The role of individual agency and its empowerment in adaptive institutional contexts is a timeless theme in social science and of considerable interest to transition scholars.

This thesis makes a significant contribution to the existing literature by providing an empirical analysis that engages with theoretical debates and sheds light on the practical challenges of GPP. By identifying opportunities for improving municipal GPP practices and applying insights from institutional theory, this study adds both practical and theoretical value. It also goes beyond GPP as an environmental policy tool, highlighting the critical role of individuals in driving sustainable transitions. The findings demonstrate the potential for rapid change when environmentally knowledgeable and ambitious individuals effectively navigate institutional elements to advance environmental action. The importance of integrating environmental education across disciplines and fostering supportive leadership that empowers individuals are highlighted as key factors in accelerating environmental change. Investing in environmental competence in schools and supporting the ongoing diffusion of environmental knowledge among adults in the workforce can cultivate the power needed to drive substantive and potentially institutionalized environmental action. This research underscores the pivotal role of knowledge in propelling environmental transformation and provides encouraging prospects for the future of sustainable practices. Simply put, in accelerating the environmental transition, knowledge is power.

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Appendices

Appendix 1: Color coding of environmental criteria used in tender analysis

Color	Criteria origin
Blue	OAG
Red	DFØ
Purple	OAG and DFØ
White	Author's original criteria

Appendix 2: Criteria frequency for vehicle related tenders (34100000 and 60100000)

Criteria	Criteria code	Specification	Qualification	Award criteria	Contract clause	Total per criteria
EMS (ISO, EMAS, equivalent)	2a	6	2	6	0	14
Euronorm	2b	10	0	1	2	13
Zero emission	2c	3	1	0	1	5
Hybrid	2d	0	0	1	1	2
Biofuel	2e	2	0	1	1	4
Electric	2f	4	0	1	0	5
Energy consumption	2g	1	0	0	0	1
Engine noise	2h	5	0	0	0	5
Emissions	2i	0	0	1	1	2
Life cycle costs (LCC)	2j	2	0	0	0	2
Driving style	2k	1	0	0	1	2
Other	2x	4	1	0	6	11
Total criteria by category type		38	4	11	13	66

Appendix 3: Criteria frequency for the food related tenders (15000000 and 55500000)

Criteria	Criteria code	Specification	Qualification	Award criteria	Contract clause	Total per criteria
EMS (ISO, EMAS, equivalent)	4a	0	2	0	0	2
Membership of a recycling company	4b	0	0	0	4	4
Eco-labels	4c	0	0	0	0	0
Sustainable production	4d	0	0	0	0	0
Deforestation	4e	0	0	0	0	0
Soy	4f	0	0	0	0	0
Palm oil	4g	1	0	0	0	1
Packaging	4h	2	0	0	0	2
Organic products	4i	0	0	0	0	0
Plant-based products	4j	0	0	0	0	0
Food loss	4k	2	0	0	0	2
Statistics and measurement	4l	2	0	0	0	2
Transport	4m	1	0	0	0	1
Ordering routines	4n	1	0	0	0	1
Country of origin	4o	0	0	0	0	0
Emissions	4p	1	0	1	0	2
CO2 footprint	4q	0	0	0	0	0
Other	4x	2	1	1	3	7
Total criteria by category type		12	3	2	7	24

Appendix 4: Criteria frequency for IT related tenders (30200000)

Criteria	Criteria code	Specification	Qualification	Award criteria	Contract clause	Total per criteria
EMS (ISO, EMAS, equivalent)	6a	0	0	0	2	2
Certification or labelling	6b	4	1	0	0	5
Battery	6c	3	1	0	0	4
Energy efficiency	6d	2	0	0	0	2
Memory and storage capacity	6e	0	0	0	0	0
Robust	6f	3	0	0	0	3
Replaceable components	6g	0	0	0	0	0
Warranty and repairs	6h	2	1	0	4	7
Packaging	6i	1	0	0	5	6
Chemicals and/or minerals	6j	3	0	2	0	5
Reuse	6k	2	0	0	1	3
Recycling	6l	1	0	0	2	3
Sorting and separation	6m	0	0	0	1	1
Transport	6n	0	0	1	1	2
Other	6x	3	1	3	6	13
Total critera per category		24	4	6	22	56

Appendix 5: Criteria frequency for waste services tender (90500000)

Criteria	Criteria code	Specification	Qualification	Award criteria	Contract clause	Total per criteria
EMS (ISO, EMAS, equivalent)	3a					0
Euronorm	3b	1		1		2
Zero emission	3c	1		1		2
Hybrid	3d					0
Biofuel	3e			1		1
Route optimization	3f					0
Fleet management system	3g					0
Emissions	3h	1			1	2
Climate and environmental reporting	3i				1	1
Driving style	3j					0
Training	3k					0
Waste management	3l					0
Waste separation	3m					0
Other	3x				1	1
Total criteria by category type		3	0	3	3	9