

CHALMERS



Environmental Policies versus Construction Procurement

Eight Swedish Municipalities

*Master of Science Thesis in the Master's Programme Design and Construction
Project Management*

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Division of Service Management
CHALMERS UNIVERSITY OF TECHNOLOGY
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ABSTRACT

There is a global trend of greater environmental concern within public procurement. European directives have impact on national legislation, which influences Swedish municipalities to regulate procurement practices through environmental and procurement policy documents adopted by local politicians. These policies are intended to permeate all levels of municipal practices and demonstrate the intentions of the municipalities. However, the policies are not always reflected in the practices of the officials executing municipal procurement. This applies not least to procurement of construction projects. Environmental requirements and criteria included in municipal construction projects are often limited. Today, the larger construction contractors have developed sufficient environmental skills to contribute to a sustainable urban development. However, the restricted client demand for such competences hampers the possibilities for the desirable urban development.

The purpose of this thesis is to analyse the relation between municipal environmental policies and municipal practices for the procurement of construction projects in eight Swedish municipalities. The studied municipalities were Gothenburg and its neighbour municipalities. The empirical data were collected through 24 semi-structured interviews. At each municipality one procurement official, one environmental official and one politician were interviewed. The investigation involved three research questions: How are environmental and procurement policy documents related? How are environmental issues handled in municipal construction procurement? How is the practice of interdepartmental collaboration in municipalities related to policy documents?

The findings of this thesis suggest that the current municipal procurement practices for construction projects are unsatisfactory from a sustainability viewpoint. Only lowest price as contract award criterion for construction projects is used among the investigated municipalities. The relation between environmental and procurement policies is often unclear and the broader internal municipal expertise is seldom used during construction procurement. The choice of environmental requirements to include in tender documents was often made by procurement officials, without involvement of environmental officials.

Key words: Environmental policies, public procurement, construction, sustainability.

Miljöpolicy och Byggupphandlingar
Åtta Svenska Kommuner

Examensarbete inom Design and Construction Project Management

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SAMMANFATTNING

Offentlig upphandling präglas idag av en högre miljömedvetenhet än tidigare. Europeiska direktiv påverkar de nationella lagarna, vilket leder till att politiker i svenska kommuner reglerar lokala upphandlingsförfaranden genom att upprätta miljö- och upphandlingspolicyer. Policyerna är avsedda att genomsyra de kommunala verksamheterna och åskådliggöra kommunernas intentioner. Policyerna återspeglas dock inte alltid i upphandlingsrutinerna bland tjänstemän som arbetar med kommunal upphandling. Detta gäller inte minst för upphandling av byggprojekt. Miljömässiga mål och kriterier inkluderade i kommunala byggupphandlingar är ofta begränsade. I dagsläget har de stora byggtreprenadföretagen utvecklat tillräcklig miljömässig expertis för att bidra till en positiv och hållbar samhällsutveckling. Efterfrågan efter denna expertis är dock generellt sett låg bland kommunala klienter, vilket hämmar möjligheterna för hållbar samhällsutveckling.

Syftet med denna rapport är att analysera förhållandet mellan kommunal miljöpolicy och kommunala upphandlingsförfaranden för byggprojekt i åtta svenska kommuner. De undersökta kommunerna är Göteborg och dess kranskommuner. Empirisk data samlades in genom 24 semistrukturerade intervjuer. Inom varje kommun intervjuades en tjänsteman med upphandlingsansvar, en tjänsteman som arbetar med miljöstrategiska frågor, samt en politiker. Undersökningen omfattades av tre forskningsfrågor. Hur ser kopplingen mellan kommunala miljö- samt upphandlingspolicyer ut? Hur behandlas miljöfrågor i kommunala byggupphandlingar? Hur ser rutinerna för arbetet mellan kommunala avdelningar ut?

Resultatet för undersökningen kan tolkas som att nuvarande kommunala upphandlingsrutiner för byggprojekt är otillfredsställande ur ett hållbarhetsperspektiv. Lägsta pris som tilldelningsmetod för byggkontrakt användes uteslutande bland de undersökta kommunerna. Kopplingen mellan kommunala miljö- och upphandlingspolicyer är ofta otydlig och den samlade interna kommunala expertisen används sällan under upphandlingsförfaranden. Valet av vilka miljökrav som ska inkluderas i upphandlingar fattas oftast av tjänstemän som arbetar enbart med upphandlingsfrågor, utan medverkan från tjänstemän med miljömässig expertis.

Nyckelord: Miljöpolicy, offentlig upphandling, bygg- och anläggning, hållbarhet.

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Preface

This report is our master thesis within the Design and Construction Project Management MSc program at Chalmers University of Technology. The thesis was conducted at the Service Management Division at the Department of Technology Management and Economics. The report was also written with support from Skanska Sweden AB.

The process of conducting this thesis has been both inspirational and challenging for us. The most interesting and rewarding part of the investigation was the 24 interviews with officials and politicians that we made. To get the views and opinions regarding their procurement related work, as well as a general picture of how the municipal system in Sweden works, was essential to the outcome of the thesis. The knowledge it generated for us will also be beneficial for us in our future careers. For this, we would like to thank the interviewees who contributed with their time and patience.

We would like to direct special thanks to our supervisor at Chalmers, Professor Jan Bröchner. He gave us continuous guidance and support throughout the execution of the investigation. Also, special thanks to Fredrik Olsson at Skanska Sweden AB. Through inspiring and cooperative discussions he helped us identifying the research topic.

Göteborg June 2014

Mathias Olsson and Filip Stenler

1 Introduction

This first chapter includes the background for the research that has been conducted. The aim and purpose, and the limitations for the study are also presented, followed by a description of the outline of the thesis.

1.1 Background

In 2012, Swedish public procurement corresponded to approximately 600 billion SEK (Swedish Competition Authority, 2013). The municipalities procured 44 per cent of the total number of procurement cases, and construction works constituted 38 per cent of these. This means that municipalities procured over 100 billion SEK in construction works in 2012. Obviously, through their procurement practices for construction works, municipalities in Sweden have a significant influence on the standards of the built environment due to their market power.

The parliament of Sweden has adopted 16 national environmental goals (Sveriges Kommuner och Landsting, 2012). These goals are intended to govern the environmental work at regional and local levels. The government has expressed that the 16 goals have a local perspective and that municipalities, trade and industry, organisations and citizens are those responsible to achieve the goals.

Municipalities in Sweden have had environmental and procurement policies for approximately 20 years. These policies are adapted by municipal politicians and are intended to permeate all levels of municipal practice and thereby demonstrate the intentions of the municipalities (Carlsson and Waara, 2006). However, the policies are not always in compliance with the actions and practices of the officials executing the municipal procurement (Carlsson and Åström, 2006). Environmental concern in public procurement is a growing global trend (Carlsson and Waara, 2006). There has also been an increased focus on the research field of green public procurement (GPP) (Bouwer *et al.*, 2006; Nissinen *et al.*, 2009; Palmujoki *et al.*, 2010; Zeppel, 2014). However, according to Varnäs *et al.* (2009), environmental requirements and criteria included by procurement staff when procuring construction projects are often limited. One of the reasons behind this is to lower the risk of time and resource consuming court proceedings, due to appeals from rejected tenderers after the procurement. In recent years this risk has become great. The possibilities for rejected tenderers to appeal have increased (Sporrong, 2014).

According to the Swedish Environmental Protection Agency (2010) there are three key factors that appear to determine whether or not environmental requirements are formulated during public procurement. The first factor is political support through a well-implemented environmental policy. The second concerns uncertainty about how to formulate and set environmental requirements in relation to the regulations regarding public procurement. The third factor is the level of individual commitment among the procurement staff. Today it is clear that the larger construction contractors have developed the environmental skills necessary to contribute to a sustainable urban development. However, without client demand there is no driver for a large-scale adoption of environmentally friendly products (Michelsen and de Boer, 2009). Contracting companies with a high level of environmental awareness and in-house competencies have the possibilities to deliver construction projects with great environmental consciousness. However, since procurement practices of municipalities seem to lack sufficient environmental influence, contractors are not fully rewarded during tender evaluations for their environmental knowledge and skills.

1.2 Aim and purpose

The purpose of this investigation is to analyse the relation between municipal environmental policies and municipal practices for the procurement of construction projects in eight Swedish municipalities. Contract award criteria, including staff capabilities, will be studied. Results will make it possible to identify how municipalities can be motivated to implement a broader set of criteria in their award practices.

Based on this purpose, the following research questions are defined:

- How are environmental and procurement policy documents related?
- How are environmental issues handled in municipal construction procurement?
- How is the practice of interdepartmental collaboration in municipalities related to policy documents?

1.3 Limitations

This study is limited to the municipality of Gothenburg and its surrounding municipalities. The municipalities' tenders investigated are from the time span between 1 February 2011 and 31 January 2014. From each municipality, one person from the procurement staff, one person from the environmental staff and politician has been interviewed. Furthermore, the thesis does not aim to investigate governance models or political systems.

1.4 Outline of the thesis

This thesis consists of seven chapters. In the first chapter the background of the thesis is outlined. The second chapter presents the theoretical framework. The Swedish context is described in the third chapter. The method for the research is described in chapter 4. Furthermore, the result of the research is presented in Chapter 5. After that, the analysis of the result is presented in Chapter 6, while the discussion is presented in Chapter 7. Finally, conclusions are drawn in Chapter 8.

2 Theoretical framework

In this chapter, the theoretical framework of the study is presented. The theoretical framework is constituted by transaction cost theory and implementation theory.

2.1 Transaction cost theory

According to Williamson (1998), many contracting related issues and problems can be examined using transaction cost theory. The total cost of a project is constituted by transaction costs and production costs (Winch, 2001). The main assumption that the transaction cost theory is based on is that parties engaging in a contract try to minimize the sum of production costs and transaction costs (Williamson, 1981). Transaction cost theory is relevant and applicable on construction projects (Waara and Bröchner, 2006; Walker and Wing, 1999; Winch, 2001; Yates and Hardcastle, 2002).

In a construction project, production costs for a client is constituted by actual payments to the contractor (Waara and Bröchner, 2006). Transaction costs are harder to define, however in a construction project the transaction costs are for example expenses related to the identification of the project, costs of the establishment of design and contracting organisations, hiring and monitoring of project personnel (Walker and Wing, 1999). Usually, the project owners do not have sufficient in-house competences to execute the construction project themselves and decide to hire contractors and consultants to carry out the projects for them. During such projects, the costs related to the conducting of procurement represent transaction costs (Waara and Bröchner, 2006).

Transaction cost theory focuses on the understanding of the drivers of transaction costs (Winch, 2001). It is possible to define and specify a project thoroughly at an early planning stage in order to minimize the risks of possible unplanned transaction costs at later stages. However, there is also a risk that the transaction costs, which can be derived to the initial planning of the project, exceed the hypothetical amount of transaction costs later in the project that would have appeared if a more limited planning phase would have been practiced. One of the most important aspects of transaction cost theory is the optimization of activities in order to minimize the aggregate sum of transaction costs before the contract has been established, and transaction costs afterwards (Waara and Bröchner, 2006). In the context of construction for example, it is important for the client to conduct well-developed tendering documents that minimize the risk of misunderstandings during the later stages of a project. If the documents are not sufficiently developed, the risk of unexpected transaction costs during the construction phase of the project is impending. However, the transaction costs that can be derived from the development of tendering documents may be too high if too much time and resources is spent at this stage.

According to Wedin (2009), there is a general fear among public clients when it comes to the inclusion of innovative selection criteria in tendering documents for construction projects. When applying innovative environmental selection criteria, the risk of appeals is higher compared to if a more standardised and generally accepted set of criteria is used. In order to minimize the risk of lengthy disruptions of projects with added transaction costs as a result, procuring officers tend to adapt a more recognized set of evaluation criteria (Wedin, 2009).

2.2 Implementation theory

Implementation theory concerns the deviation between how political issues are intended to be implemented and how they are actually done in practice (Hill and Hupe, 1997). According to Sporrang (2014), a common conclusion is that political decisions often shift in the implementation process and that the actual result usually differs from what was intended.

Brammer and Walker (2011) present a conceptual framework, which is adapted from Gelderman *et al.* (2006), of how sustainable procurement policies are translated into practice. Brammer and Walker (2011) analyse how sustainable procurement practices can significantly differ across regions from the same directive.

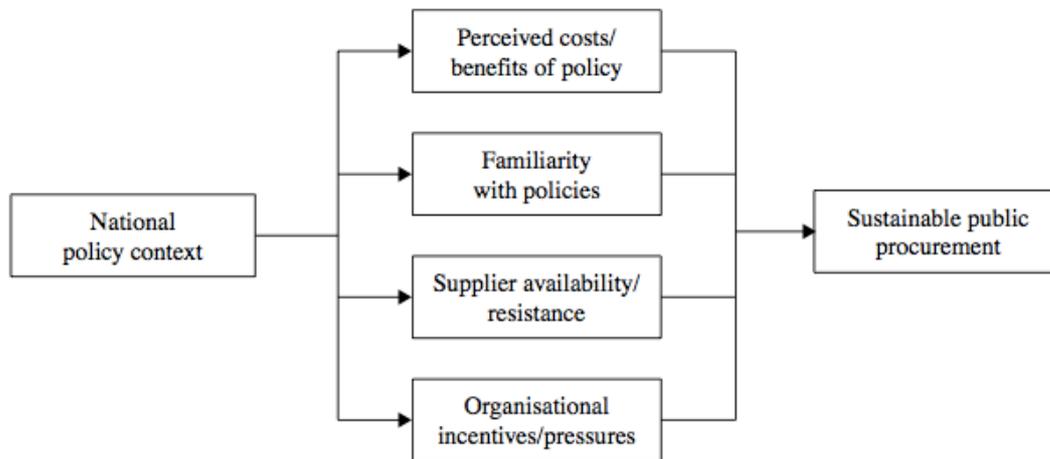


Figure 1: Conceptual framework (adapted from Gelderman *et al.*(2006))

The conceptual framework in Figure 1 explains that sustainable procurement arises mainly because of pressures on the organisation to get involved, which comes directly from the national policy context. The national policy is then influenced by four other factors that affect the outcome of sustainable procurement.

The first factor concerns the role of perceived costs and benefits of sustainable procurement. Due to the budget constraint of all public authorities, perceptions regarding financial strength and cost efficiency of the sustainable procurement are considered to play an important role. The second concerns familiarity of sustainable procurement. Organisations need skills, competencies and tools to achieve sustainable procurement. In order for an organisation to be able to implement sustainable procurement, it needs to understand the concept of sustainable procurement and the government policies. Officials in the front-line of government must have access to accurate information on how to execute their jobs and make important decisions on behalf of the municipality (Carlsson and Åström, 2006). The third affects the availability of sustainable goods and services. Many goods and services procured by public authorities are specialist and identifying sustainable goods and services may be challenging in some context. The fourth affects organisational pressures and incentives for sustainable procurement. The organisational culture, support of sustainability and acceptance of change in general are of great importance in order to succeed with implementation. The support of senior management in sustainable procurement is also mentioned as a crucial aspect to implement sustainable procurement.

3 The Swedish context

In this chapter, the context in which the policy formulation and construction procurement take place is presented. The composition and conditions for local government in Sweden are described. After that, the Swedish application of the EU directive concerning public procurement is presented. Finally, the distinctions between local and national public infrastructure projects are described.

3.1 Local government

According to the Local Government Act (SFS 1991:900), local self-government at local and regional level is practiced by municipalities and county councils, which are responsible for major public services in different welfare sectors. The municipalities are, for example, responsible for basic schooling, childcare and service for elderly. Furthermore, municipal responsibilities concern the technical side such as water supply, sewerage, rescue service and waste management. County council responsibilities are mainly public health care and medical services. A county council also governs the public transport system in collaboration with the municipality (SALAR, 2014).

The municipality is also governed by other acts such as the Social Service Act, the Planning and Building Act and the Education Act. However, all municipalities are self-governed and free to, for example, decide tax levels and how to divide and spend the tax income. The local taxes represent approximately 70 per cent of the municipal revenues. In addition, municipalities are financially supported by the state.

Sweden is divided into 290 municipalities and 20 county councils. Elected politicians govern the municipalities, which means that the population within each municipality has the opportunity to influence which politicians should be represented in the municipalities. The politicians are elected every fourth year and constitute the municipal assembly, which is the highest decision-making body in local government. The municipal assembly determines e.g. the budget and local taxes, which committees the municipal should have, which politicians who sit in the committees and the accountants responsible for the operations.

The municipal assembly also decides which politicians should be in the municipal executive committee, which leads and coordinates the work. Furthermore, they are also responsible for the finances of the municipality. As previously described, the municipal assembly also determines which committees are relevant for the municipality. Due to this, different municipalities have different kinds and numbers of committees. Some committees are compulsory, while the major part is optional. Within each committee, officials who are responsible for the daily work prepare cases and execute decisions agreed on in the executive committee.

Subcommittees are frequently initiated in municipalities and they are responsible for specific areas. A subcommittee might for example execute an investigation that the specific committee or the municipal executive committee has ordered. The basic structure of a municipality is shown in Table 1.

Table 1: Basic structure of a municipality.

Municipal Assembly Municipal Executive Committee Committees/Subcommittees	Politicians
Departments	Officials

3.2 The Public Procurement Act (LOU)

The Swedish Competition Authority (2012) states that the purpose behind the national procurement rules is for the procuring authorities to be able to use public resources as efficient as possible. By taking advantage of the competition on the market, the procuring authorities are able to conduct good business, while suppliers are competing on equal terms.

The Public Procurement Act (SFS 2007:1091) regulates public procurement in Sweden. The content of this law is mainly withdrawn from the EU directive 2004/18/EG concerning public procurement. If complying with the Act, public authorities also are complying with the EU directive. According to 1 chap. 2§ (SFS 2007:1091), if purchasing public works contracts, goods and services, the Act has to be followed by public authorities. The Act also applies when public authorities hold project competitions.

The basic principles of the Public Procurement Act

According to 1 chap. 9§ (SFS 2007:1091) there are some basic principles of public procurement in Sweden, they can be described as follows (Swedish Competition Authority, 2012):

The principle of non-discrimination implies that even though the public procurer does not expect foreign tenders to be submitted during specific procurement, contract documents may not be conducted in a way that counteracts against possible foreign tenderers. It is not allowed to include requirements that only possible Swedish tenderers are aware of and can fulfil.

The principle of equal treatment implies that all possible tenderers should be treated the same way. For example, no tenderer should get access to contract-related information before other tenderers.

The principle of transparency regards the responsibility for the contracting authority to communicate to the possible tenderers the full details of the procurement. The contracting authority is obligated to sufficiently describe how the procurement will be conducted. It is also important that the tender specifications are clear and easy to understand.

The principle of proportionality addresses the responsibility for the contracting authority to anchor the specification of requirements and the requirements on the possible tenderers to the reasonable proportion of what actually is being purchased.

The principle of mutual recognition implies that the certificates that are being issued by contracting authorities in a member country of EU also have to be valid in the other countries of the union.

Threshold values

According to 3 chap. 1§ (SFS 2007:1091), there are different regulations for public authorities whether the value of the contract exceeds or is less than the threshold values issued by the EU. The Swedish government announcement of threshold values for public procurement as of 2012 is presented in Table 2.

Table 2: The threshold values for public procurement as of 2012, expressed in both Euro and SEK (The Swedish Competition Authority, 2012).

Products and services	Threshold values for 2012 expressed in:	
	EURO	SEK
Central government authorities	130 000	1 233 401
Other contracting authorities (e.g. municipalities, country councils, the public utilities sector, associations foundations)	200 000	1 897 540
Works	EURO	SEK
All contracting authorities	5 000 000	47 438 500

The contracting authority has to calculate the value of the contract that they are procuring in order to determine whether the value of the contract is over or under the issued threshold values (Swedish Competition Authority, 2012). All potential costs, like for example premiums and bonuses for the issued supplier, have to be included in the calculated value of the contract.

The different types of procedures

According to 4 chap. 1§ (SFS 2007:1091), if the calculated value of the contract exceeds the relevant applicable value, the contracting authority has to execute open procedure, restricted procedure and during some circumstances, also negotiated procedure. These three different types of procedures can be described as follows:

Open procedure makes it possible for all hypothetical suppliers to submit tenders. During open tendering, negotiations may not take place between the contracting authority and the prospective supplier (Swedish Competition Authority, 2012). According to 8 chap. 2§ (SFS 2007:1091), during an open procedure, the minimum time limit for possible suppliers to submit tenders is 52 days after the day when the advertisement of the specific procurement was sent for publication.

Restricted procedure is a tendering form where all possible suppliers are allowed to apply for participation in the evaluation phase. However, in order for the possible suppliers to be included in the evaluation phase, they have to fulfil the specific requirements that the contracting authority has defined in the advertisement for the procurement (Swedish Competition Authority, 2012). According to 8 chap. 3§ (SFS 2007:1091), during a restricted procedure, the minimum time limit for possible suppliers to submit applications for participation is 37 days after the day when the advertisement for the specific procurement was sent for publication. After the

selection of allowed tenderers has been made, the time limit for the chosen suppliers to submit tenders is minimum 40 days.

Negotiated procedure is a form of tendering that is similar to the restricted procedure. The main difference is that after the selection of suitable suppliers has been made, the contracting authority invites the qualified and selected suppliers to submit tenders. The contracting authority is allowed to negotiate the terms of the contract with the chosen suppliers (Swedish Competition Authority, 2012). This tendering form is not always allowed. According to 4 chap. 5-9§§ (SFS 2007:1091), there are some different scenarios where a negotiated procedure may be approached. If the contracting authority has approached an open or restricted procedure with no tenders being submitted, a negotiated tendering form is allowed. Also, if the content of the contract can be executed only by a particular supplier because of exclusive rights or technical expertise, or if particular haste characterizes the project, the contracting authority is allowed to use a negotiated form of procurement. In some scenarios, the contracting authority does not have to advertise the contract notice. One example of such a scenario is if the product or the service that is being procured can be delivered or executed only by a particular supplier (Swedish Competition Authority, 2012). As in the case with restricted procedures, according to 8 chap. 3§ (SFS 2007:1091), the minimum time limit for possible suppliers to submit applications for participation is 37 days after the day when the advertisement for the specific procurement was sent for publication.

According to 15 chap. 3§ (SFS 2007:1091), if the calculated value of a contract is below the applicable threshold value in Table 2, simplified procedure, selection procedure or a direct award of contract may be approached. These procedures can be described accordingly:

Simplified procedure is a form of tender where all hypothetical suppliers may submit tenders and participate in the evaluation phase of the procurement. The contracting authority is then allowed to negotiate with one or more tenderers (Swedish Competition Authority, 2012). According to Swedish Competition Authority (2012), during simplified procedures, there are no specific regulations regarding the time limits for tender submissions. The contracting authority is directed to give the possible suppliers a reasonable amount of time for tendering.

Selection procedure is similar to the restricted procedure. The main difference is that the contracting authority is allowed to negotiate the terms of the contract with the selected tenderers that have been allowed to participate and submit tenders (Swedish Competition Authority, 2012). As in the case with simplified procedures, the contracting authority is directed to give the possible suppliers a reasonable amount of time for tendering. However, the time limit for possible suppliers for submitting applications for participation may never be less than ten days.

Direct award of contract is a procedure where no particular requirements regarding the tendering are required (Swedish Competition Authority, 2012). According to 15 chap. 3§ (SFS 2007:1091), if the value of the contract is particularly low, or if there are exceptional reasons, direct award of contract is allowed. The lower threshold value, which determines if direct award of contract is allowed, is 15 per cent of the threshold for products and services for contracting authorities, except central government (Swedish Competition Authority, 2012). According to 15 chap. 3§ (SFS 2007:1091), contracting authorities should determine their own policies and guidelines for this kind of procedure.

Contract award criteria

According to 12 chap. 1§ (SFS 2007:1091), there are two different types of contract award criteria when public authorities procure products, services or works. Either the purchasing authority contracts the tenderer who has submitted the tender that is the most economically advantageous (MEAT), or the contract is awarded to the supplier on the basis of lowest price. The contracting authority has to specify in the advertisement or the tender specifications, which approach for evaluation that is to be used during the specific procurement.

When awarding the contract on the criterion of MEAT, the contracting authority evaluates criteria that are specific to the contract that is being procured. Examples of criteria that can be included in the evaluation are price, environmental features, quality, technical characteristics and aesthetic appearance. It is not allowed to include criteria in the assessment that were not presented in the specifications (Swedish Competition Authority, 2012). According to 12 chap. 2§ (SFS 2007:1091), the contracting agency has to specify how the criteria included in the specifications will be weighted, or if not possible, at least rank the internal importance of them in decreasing order.

When awarding the contract on the basis of lowest price, the contracting authority specifies a set of mandatory requirements that the tenderers have to fulfil in order to be included in the evaluation phase. The contracting authority may not award the contract to a tenderer that does not fulfil the mandatory requirements (Swedish Competition Authority, 2012). Out of those tenderers that fulfil the mandatory requirements, the one that can offer the lowest price will be awarded the contract.

3.3 Local and national public infrastructure procurement

On the basis of public authorities, the Swedish road network can be divided into two main groups. Roads built and maintained by the state constitute the first group. The Swedish Transport Administration is the government agency that, through subcontracting, is in charge of the state-controlled road network (Trafikverket, 2013). The Swedish Transport Administration is also the responsible entity for the long-term planning of transport traffic in Sweden. The total distance of the state-controlled road network in Sweden amounts to approximately 98 500 kilometres (Trafikverket 2, 2014). According to the Swedish Competition Authority (2013), the Swedish Transport Administration advertised a total of 845 different public procurement during 2012, the greatest total of all Swedish authorities.

The second group of the Swedish road network is constituted by municipal roads that are constructed and maintained by local municipalities. If local needs regarding transport related issues arise, municipalities have the possibility to execute projects on their own, without any influence of the state. The total distance of the municipal road network in Sweden comprises approximately 41 600 kilometres (Trafikverket, 2014).

It is important to emphasize that the state and the local municipalities do not always work separately on their own projects. Large-scaled road projects are often characterized by collaboration and shared expenses between state and the relevant municipality. When the state initiates a road project of national interest, it often has a positive impact on the municipality in which the project is executed. In conjunction with refurbishments on roads administrated by the state, connected roundabouts and slip roads to the municipal road grid are often being maintained as well. During such projects, local municipalities financially compensate the state.

Example of a national public infrastructure procurement

Södra Marieholmsbron will be the name of a new railway bridge commissioned by the Swedish Transport Administration. The bridge is planned to cross the Göta river northeast of central Gothenburg with the purpose of enhancing the robustness of the transportation system of goods back and forth the Gothenburg harbour. The contract was awarded to Skanska Sverige AB and construction started during the first quarter of 2014. A negotiated procedure was used and the award criterion was MEAT.

The price criterion constituted 50 per cent of the total weighting of the evaluation, while the other 50 per cent were constituted by the qualitative characteristics of the requested information at negotiation. The later criterion was divided into five different sub criteria that were weighted equally and thereby constituted ten per cent of the total evaluation. The five sub criteria were the following:

- 10%, Organisational structure and staffing
- 10%, Interaction, management and control
- 10%, Technical consultants/sub consultants and sub contractors
- 10%, Machinery and installations for openable bridge
- 10%, Execution plan including system calculation and risk management

By conducting requested supporting documents and information, each tenderer were evaluated by the client on the basis of the five sub criteria presented above, along with the price criterion. Skanska Sweden AB was awarded the contract although their tender price of approximately 790 million SEK was higher compared to another tender. Skanska reached the total weight of qualitative characteristics of 38.7 per cent. The equation was the following:

$$50\% \times 790\,600\,000 + \frac{50\% - 38.7\%}{50} \times 50\% \times 790\,600\,000 = 484\,637\,80$$

The tenderer that had a lower tender price than Skanska Sweden AB was Acciona Infraestructuras S.A., with a tender price of 747 million SEK. However, they only reached 24 per cent in their qualitative characteristics, resulting in a total tender value of approximately 568 million SEK. Consequently, Skanska won the contract on the basis of MEAT. Due to the usage of MEAT, this procurement was characterized by a more holistic viewpoint from the client. More aspects were acknowledged during the evaluation and even if the tenderer that was awarded the contract was more expensive compared to another tenderer, it is arguable that the perceived value of the final product will be higher for the client.

4 Method

In this chapter, the research strategy for this investigation presented. First, the characteristics of a qualitative research strategy are described. After this, the two sources of data collection used for the research, as well as the reliability and validity for the study is presented.

4.1 Research strategy

There are a lot of different research strategies for data collection. For this thesis, a qualitative research approach was used in order to interpret and understand the correlation between municipal environmental strategies and municipal practice for the procurement of construction projects.

The qualitative research methodology focuses on words rather than quantification of gathered data (Bryman, 2008). Thus, the possibility for an interpretive approach is greater during qualitative research compared to during a quantitative research (Flick, 2009). According to Bryman (2008), some qualitative researches are inductive, which means that theories are based on the result of the research and thereby developed throughout the execution of the study.

Bryman (2008) states that interviews are the most commonly used source of data collection during qualitative studies. There are mainly two types of qualitative interview approaches that can be used. During an unstructured interview, the interviewer often has a checklist of topics that should be discussed during the interview. The nature of the interview is similar to a discussion and the interviewee is encouraged to elaborate on the topics brought forward by the interviewer. The other main type of qualitative interview is the semi-structured interview. During a semi-structured interview, the interviewer has prepared a questionnaire that he or she wants to get answered. However, the questions do not have to be asked in the original order and supplementary questions may be asked, if they should come to mind. The semi-structured interview also allows the interviewee to elaborate freely on the predetermined topics of the interview.

4.2 Data collection

The research consisted of two sources of data. The first source of data in the study was the semi-structured interviews that were carried out at the municipalities of Gothenburg and its neighbour municipalities. The second data source was the information in the various guidelines and policies for environmental work and procurement practices, which were handed to the authors during the interviews. A more extensive description of the two sources of data collection executed is presented below.

Interview study

Semi-structured interviews were executed at the municipalities of Gothenburg and its seven neighbour municipalities. At each municipality, three different interviews were conducted with people with the following roles:

- One official with responsibility related to procurement of construction projects
- One official with environmental responsibilities
- One politician with insight in procurement of construction projects

In order to find procurement officials to interview, Tenders Electronic Daily (TED) was used for locating all projects in the eight municipalities between 1 February 2011 and 31 January 2014, with the following CPV codes:

- 45100000: Site preparation work
- 45200000: Works for complete or part construction and civil engineering work

The authors contacted the officials who appeared most frequently as contact persons on TED and described the purpose of the research and asked if they could consider participating in an interview. Some of the contacted persons felt that they had the right expertise to participate, while some felt that other officials at their municipality were better suited for our study. The authors then contacted these instead. A few of the smaller municipalities had no previous projects with the specific CPV codes listed on TED. In these municipalities, the authors contacted the procurement units and were then redirected to officials with the most accurate expertise.

To find suitable interviewees with environmental responsibilities, the authors contacted the heads of the environmental departments at the different municipalities. The authors were then redirected to officials that the heads identified as most suitable for the study.

Appropriate politicians to interview, with insight in issues related to procurement of construction projects, were identified to be the chairmen of the local technical services committees. However, the structures and compositions of the eight municipalities differed. Therefore, the roles of the interviewed politicians differed between the municipalities. Interviews were therefore also held with chairmen of local building committees and urban planning committees, as well as with representatives of local municipal executive committees.

The authors established three different sets of interview questions in order to adapt a relevant set of questions to the three different positions of the interviewees. The interviewees received the questions a week beforehand so that they had the opportunity to prepare themselves. The duration of the interviews was between 20 and 60 minutes.

Document analysis

During the interviews, some of the interviewees handed out guidelines and policy documents regarding environmental work and procurement practices to the authors. The authors studied the documents after the interviews in order to establish the level of comprehensiveness of the different documents and also the correlation between the municipal provisions and practices.

As previously indicated, the authors were not handed guidelines and policy documents for all the municipalities. The authors have therefore browsed municipal websites in order to complement the collection of municipal regulation documents. In some cases documents were sent from the relevant interviewee.

4.3 Reliability and validity

Reliability and validity are important factors in order to establish and assess the quality of research for the qualitative and quantitative researcher (Bryman and Bell, 2011). The reliability refers to if the data or measurements are consistent (Hernon and Schwartz, 2009). The validity seeks to determine to which extent the findings can be generalized to a population (external validity).

The municipalities included in this study have not been selected randomly. Instead they form a single geographic area centred on Gothenburg. In order to obtain several perspectives of the procurement routines, three interviews were held in each municipality. This increases the validity of the study. However, a weakness of the study is that the interviewees do not have the same positions in the different municipalities. This was not possible because of different organisational structures of the municipalities. Due to the fact that the municipalities themselves sometimes have chosen the interview subjects, there is a possibility that the interviewees from the procurement staff in this study might have a slightly stronger environmental orientation than the average procurement official. This might lead to decreased reliability of the interview findings. Also, as is common with semi-structured interviews, opinions expressed by some interviewees might not have been touched upon by others. However, this does not necessarily mean that the interviewees that did not express a particular opinion disagree with those who did. Some areas and subjects are just not touched upon during some interviews.

The study is not solely based on the interviews but also in association with analysed municipal regulatory documents. There is a risk that some documents from the municipalities that should have been analysed, was not. The analysed documents are those that were received during the interview, send by email from officials or found on the municipality website.

5 Results

In this chapter, the results of the study are presented. The eight municipalities are presented separately. For each municipality, the policy and guideline documents influencing procurement are presented in the first subsection. In the second subsection, the roles of the three interviewees for each municipality are described. The three following subsections are: 'Tender evaluation practices', 'Views on the Public Procurement Act' and 'Collaboration within the municipality'. These were the three identified main subjects that the interviews comprised. The final subsection is where general analyses and distinctive findings for each municipality are presented.

5.1 Municipality A

Policy and guideline documents

The environmental policy of Municipality A is a general environmental policy for all departments in the municipality and it has been adopted by the municipal assembly. It states that the municipality actively should interact and cooperate, internally and externally, in environmental questions. Also, according to the environmental policy, the municipality should pursue a low environmental impact through a holistic viewpoint, continuous improvements and annual monitoring.

A general procurement and purchase policy document is also established and adopted by the municipal assembly. In the vision of the policy it states that the municipality should base all their purchases on a holistic point of view where aspects like price, time and quality always should be considered. The vision of the policy also highlights the importance of always considering the aggregate expertise within the municipality when purchasing goods and services. The document does not include any regulations regarding procurement monitoring. Also, the procurement and purchase policy does not refer to the municipal environmental policy.

Interviewees

The interviewees for the municipality were a purchaser at the procurement administration, a municipal ecologist at the planning and municipal development office, and the chairman of the planning subcommittee of the municipal assembly.

Tender evaluation practices

Lowest price is the award criterion for all contracts for construction projects, according to the purchaser. When it comes to municipal construction projects, the purchaser claims that the specifications are comprehensive enough for the procurement administration to award the contract to the tenderer who fulfils the required specifications and delivers the project for the lowest price. According to the purchaser, to base the awarding of a contract on the basis of MEAT can be more appropriate when procuring more complex goods and services. The municipal ecologist claims not to be involved in the process of developing environmental requirements for tendering documents of construction projects. However in general, the ecologist is satisfied with the specifications and feels that sufficient environmental requirements are included in contractor procurement.

Examples of mandatory requirements during contractor procurement are competence and environmental requirements. According to the purchaser and the chairman of the planning subcommittee, the tenderers are required to append a specified number of

reference projects that proves that they, as companies, have executed projects similar to the one that is procured. Furthermore, requirements on education and professional experience are formulated on the project specific personnel offered by the tenderers. Environmental requirements are formulated in appendices that are enclosed when the tendering documents are published. There is a document of requirements concerning pollution and noise limits for construction equipment. The municipal ecologist was not involved in the process but this document was partly developed by the planning and municipal development office. This is a situation where expertise across the departments is used, which is important according to both the municipal environmental policy and the procurement and purchase policy.

In the short term, the purchaser believes that the procurement is executed in a sustainable way. However, in a longer term, it would be interesting to include life cycle cost analyses when evaluating tenders. The fact that such analyses are not part of the evaluation of construction procurement is noteworthy. It is expressed in the procurement and purchase policy that a holistic point of view regarding price, time and quality always should be considered when purchasing goods and services. The chairman of the planning subcommittee is pleased with the evaluation practices and states that the fact that there is a great variety of awarded contractors in the municipality is evidence of this. However, if the chairman were to point out one requirement that is too strict, it would be the bank credit requirements that are considered by the chairman to sometimes exclude small local business owners.

If the mandatory requirements not only are fulfilled, but also exceeded by the tenderer, the purchaser states that the procurement administration does not have a system where tenderers are rewarded with bonuses in the evaluation phase or the execution of the project. The purchaser is confident that the specified requirements are high enough and that a bonus system is not necessary. The purchaser also states that although the mandatory requirements are similar in most of the construction projects, the specifications are always adapted to individual projects.

The procurement administration has, in accordance with the environmental policy, started monitoring previous projects by interviewing suppliers of the different purchases. The purchaser claims that this is important in order to improve the standards and the accuracy in their specifications. The purchaser believes that there are aspects to learn from during all procurement executed. It is noteworthy that such monitoring is not brought up in the procurement policy.

Views on the Public Procurement Act

Criteria related to competence are hard to evaluate due to the fact that the extent to which you assimilate education and professional experience is very personal, says the purchaser. The purchaser would therefore like to have more room for subjective assessments during public procurement, than legally allowed for. To be able to include previous experiences of the suppliers in a specific criterion during procurement is expressed by the purchaser as desirable. To be able to evaluate environmental aspects of transportation of goods and services to a greater extent than the Swedish Public Procurement Act allows is also desirable according to both the purchaser and the chairman of the planning subcommittee.

The municipal ecologist does not have specific ideas for improvements of the Act. Instead, the ecologist thinks it is important for the officials working with specifications and requirements to be aware of the full potential of the Act and use it

in the right way. As far as environmental criteria go, the municipal ecologist believes that the overall knowledge among municipalities regarding which requirements can be included in specifications is too low. Furthermore, the chairman of the planning subcommittee would like the limit for direct award of contracts to be higher than it currently is. The chairman has heard that the limit will be raised which is good due to the fact that the municipality will have more possibilities to act quickly when urgent situations occur.

Collaboration within the municipality

Politicians in the municipality have lately started to get more involved in procurement-related issues, according to the purchaser. The policy document for procurement and purchases is a newly developed document that was created through collaboration between the municipal assembly and the procurement administration. However, the collaboration does not extend further than that. The chairman of the subcommittee does not have a clear picture of to which extent the procurement policy affects the procurement processes in the municipality. The chairman argues that this is a matter for the officials rather than the politicians, which is something that the purchaser claims as well. Except for the policy documents established by the politicians, the purchaser does not sense any kind of political involvement during procurement of goods and services.

The ecologist states that monitor meetings between the procurement administration and the ecologist's department, during which environmental aspects of procurement are discussed, only take place a couple of times per semester. Even though this is in line with the guideline regarding monitoring in the environmental policy, the ecologist argues that the meetings should be scheduled more often. The aspects discussed during these meetings often concern environmental issues that the procurement administration has identified during their work. The ecologist thinks that more issues related to specific procurement processes should be discussed during the meetings. Further communication between the procurement administration and the municipal ecologist's department does not often take place and the ecologist feels that the procurement administration has developed a rather wide competence regarding environmental issues themselves. The municipal ecologist's department is never involved in specific procurement issues and they do not influence the choices of contract award criterion and criteria in specific evaluations. This is noteworthy due to their environmental expertise and the fact that such municipal expertise should be used according to both policy documents adopted by the municipal assembly.

Neither the purchaser nor the municipal ecologist experiences any conflicts between their departments. The ecologist believes that the level of involvement from the planning and municipal development office today is rather low and that conflicts could arise if the involvement was more extensive. The purchaser never experiences that the environmental department tries to directly influence the procurement department. Strategic decisions have to come from the politicians, according to both the purchaser and the chairman of the planning subcommittee. Both the municipal ecologist and the purchaser view the ecologist's department as a support for the procurement administration, if needed. The chairman of the planning subcommittee has never heard that the collaboration between the two departments is not effective.

All three interviewees believe that the fact that the planning and municipal development office and the procurement administration are not operating under the same roof impairs the possibilities for a sufficient and continuous collaboration. Both

the purchaser and the ecologist believe that the collaboration could be enhanced through a higher frequency of meetings. The ecologist claims that an annual documentation of the aspects discussed during the meetings with the procurement administration would be a good idea for the future as well.

Comments

Officials working with environmental questions seem to have limited possibilities to influence procurement-related issues in Municipality A. This seems to both be due to the fact that scheduled meetings between the two departments do not take place often and to the fact that the officials of the procurement administration have developed their own relevant environmental expertise. The fact that the two departments are not operating in the same building seems to hamper the possibilities for a more sufficient collaboration. However, if a more extensive collaboration would be initiated, concerns regarding risks for conflicts were expressed. A life cycle cost analysis tool was mentioned as an interesting evaluation tool for the future.

5.2 Municipality B

Policy and guideline documents

In the environmental goals document adopted by the municipal assembly, local goals affiliated to the national environmental goals are presented. The second regulatory document for procurement is the procurement policy with its accompanying guidelines for environmentally adapted procurement, which is general for all municipal procurement. The document has been adopted by the municipal assembly and it is stated in the policy that the municipal procurement should be characterized by a holistic viewpoint regarding costs. It is stated in the procurement policy that the environmental goals document shall be taken into consideration during procurement. Also, in the policy the municipality states that the tool developed by the Swedish Environmental Management Council for environmentally adapted procurement shall be used when procuring. However, the guidelines for environmentally adapted procurement only state that the tool *can* be used. In the guidelines, the municipality states that the expertise of the environmental coordinator should be used in order to identify the environmental requirements suitable for all procurement. No instructions regarding monitoring of procurement are brought up in the documents.

Interviewees

In Municipality B, interviews were conducted with a project manager at the technical services department, an environmental coordinator at the city management department and the chairman of the technical services committee.

Tender evaluation practices

When procuring construction works, basically all tenders are evaluated on the basis of lowest price, according to the project manager. The project manager argues that it is an easy way of conducting procurement and that using lowest price as contract award criterion has been successful for the department. The project manager claims that it is more beneficial to evaluate tenders on the basis of MEAT when procuring consultants.

In addition to the two regulatory documents described previously, the department follows an extensive document constituted by tendering requirements developed by

the Swedish Road Administration in collaboration with three major Swedish municipalities.

A number of mandatory requirements on the tenderers are formulated during all contractor procurement. The project manager states that the department has a template of requirements, which means that the set of requirements does not differ much from project to project. However the project manager also claims that the department makes adjustments in order to make all procurement specific. Competence requirements are formulated on the tenderer of all construction works. There are requirements for both the tendering company as a whole, and the key personnel offered by the company. The tenderers have to enclose a certain number of previously executed reference projects that show how well they have executed similar projects in the past. The requirements for the key personnel regard their previous educational and professional experiences. The project manager thinks that sometimes it can be hard to evaluate professional competence as a criterion since it is very personal how well you assimilate experiences. It is also hard to monitor the execution and the quality of the reference projects enclosed by the tenderers. The project manager believes that these problems could be straightened out if the department chose to award the contract in accordance with MEAT as award criterion. However, the risk for appeals would become higher if using that method. Overall, there are no criteria that have too small of an impact or are too strict, according to the project manager. The environmental coordinator and the chairman of the technical services committee argue that the tender price generally gets too much weight. Furthermore, the coordinator believes that life-cycle costs should be considered. Although in the procurement policy it is stated that a holistic viewpoint regarding costs should be considered, that does not seem to be carried out in the practices. The chairman of the technical services committee would like to tighten the competence requirements even more if it was not for the risk of disqualifying too many small business owners.

The environmental coordinator has the possibility to influence all procurement of the municipality. Scheduled meetings take place between the environmental coordinator, environmental inspectors from the environmental department and purchasers from different departments where tender requirements are discussed. During these meetings, the environmental coordinator has the opportunity to express thoughts about the mandatory requirements. This is in line with the procurement guidelines.

The department's procurement practices are in line with the environmental goals of the municipality, states the project manager. Furthermore, the project manager does not feel that the environmental goals are affecting the procurement practices of the department. The project manager claims, "even if the municipality would not have had environmental goals, things would not have been executed differently". The project manager states that the department could consider more environmental aspects when they procure construction works. According to both the project manager and the coordinator, a large problem is that the municipality does not have enough resources to monitor how well the environmental requirements are fulfilled by the suppliers. The project manager claims that the department is not monitoring procurement practices at all. This is in line with the procurement policy and guidelines. The environmental coordinator would like a general monitoring system where all aspects of procurement are reviewed. The coordinator thinks that it is important for the municipality to develop in-house knowledge of how to formulate environmental criteria when procuring goods and services. Although it is stated in the municipal procurement policy that the Swedish Environmental Management Council's tool for

environmentally adapted procurement shall be used, the environmental coordinator thinks that a higher level of expertise of how to implement the environmental requirements has to be developed within the municipality. However, today both the coordinator and the chairman of the technical services committee believe that the municipal environmental regulations are well represented in the municipal procurement practices.

Views on the Public Procurement Act

The environmental coordinator thinks that the Act is too strict and procurers sometimes are afraid of including strict requirements since they are concerned that the procurement will be appealed. Today, in situations where there is a shortage of time, officials who are publicly procuring goods and services lower the requirements since they are afraid of time-consuming appeals. The environmental coordinator thinks that the Act is intended to be a support and something you can use in order to specify the requirements for procurement, but that is not the case today. The environmental coordinator hopes that the new directive will make the Act more dynamic.

The chairman of the technical services committee would like the Swedish version of the Public Procurement Act to be less strict and allow more freedom for the procurer to reward locally producing tenderers. However, such a change in the law is not something that the chairman believes would change the evaluation of construction works significantly. The chairman claims that it does not matter if the contractor is operatively based in another city as long as they do a good job.

Collaboration within the municipality

The project manager does not sense any clashes of interest between the department and the committee for technical services. The department reports all planned procurement to the committee and it is rarely that the committee has any specific concerns regarding the requirements. Since the committee for technical services is responsible for the budget that the department has to operate with, it is important to have scheduled reporting of procurement according to the chairman

The collaboration between officials working with environmental issues and the technical services department is working well, according to the chairman. However, the chairman states that this is more of an issue for the municipal officials and that the committee does not have clear insight in this collaboration.

There are now meetings scheduled on a regular basis between procuring entities (including the department of technical services), the environmental department and the environmental coordinator. This is in line with the guidelines for environmentally adapted procurement. Environmental aspects of all municipal procurement are discussed during these meetings and the officials working with environmental issues have the opportunity to point out important environmental aspects of all procurement. The environmental coordinator feels that everyone wants to benefit from each other's expertise during these meetings. However, both the project manager and the environmental coordinator believe that the collaboration between their departments can be improved. The project manager expresses a wish for a specific policy document for procurement of construction works, since the document that is followed by the department today is general for all procurement. In order to develop such a document, the project manager believes that the department would need help from environmental officials within the municipality.

The main problem when it comes to collaboration within the municipality is the tunnel vision within the separated departments, according to the chairman. Due to the newly introduced collaboration between the different departments regarding environmental issues, the environmental coordinator claims that the collaboration is much better today than before and that it will continue to develop. The coordinator says that the municipality will adopt an updated set of environmental goals soon. This will contain a municipal requirement that the new collaboration shall be used in all procurement in order to include all relevant environmental criteria for any procurement. The environmental coordinator believes that this requirement will lead to better transparency and learning between the different departments.

Comments

Municipality B's newly introduced collaboration seems to include an extensive and sufficient set of environmental expertise. The officials with environmental competence have possibilities to influence the tendering documents due to the collaboration. There seems to be a desire to implement periodic monitoring of procurement although the municipality does not have enough resources for it at the moment.

As for the policies that are intended to influence procurement practices, it seems like they are neither sufficiently developed, nor implemented. Two of the regulatory documents contradict each other and the project manager claims that the documents do not affect the procurement practices of the department. It is interesting that the project manager expresses a desire for a procurement document that is applied for the usage of the technical services department.

5.3 Municipality C

Policy and guideline documents

There are three main documents affecting all procurement processes in Municipality C. The first is an action plan for the environmental work of the municipality, which has been adopted by the municipal assembly. In the action plan it is said that the municipality is to implement tools for life cycle cost analysis and standardised monitoring of procurement in the near future.

In addition, the procurement administration has developed a procurement policy with accompanying directions of application. In this policy it is stated that policies, guidelines and programs adopted by the municipal assembly shall be taken into consideration during procurement. However, there is no direct reference to the action plan for environmental work. In the procurement policy it is also stated that all procurement shall be executed through close collaboration between procurement and operational expertise. In the directions of application for the procurement policy it is stated that the municipality shall use the tool for environmentally adapted procurement, developed by the Swedish Environmental Management Council. The tool shall be used in order to include appropriate environmental requirements in all procurement.

Interviewees

In Municipality C, interviews were conducted with a construction manager at the department of technical services, an environmental strategist at the department of the municipal executive committee and the chairman of the service committee.

Tender evaluation practices

According to the construction manager, all tenders of construction projects are evaluated on the basis of lowest price. The construction manager argues that the requirements are sufficient and therefore argues, “it is economically most advantageous to award the contract to the tenderer with the lowest price”.

Mandatory requirements are included in all procurement according to the construction manager. Competence related requirements are formulated on both the tendering companies and the personnel offered by the companies. Reference projects show that both the tendering companies and the personnel that they offer have been involved in similar projects before. The construction manager claims that evaluating competence is hard since there are “soft parameters” that have to be acknowledged. The requirements included in their procurement are rather standardised according to the construction manager. The requirements of the previous procurement represent the template for the next procurement. According to the construction manager, small changes can be made if there are major differences of characteristics between the different projects. The construction manager states that the environmental requirements in their projects are not particularly strict. No requirements on noise levels or pollution from construction equipment are included in the evaluations. The reason for this is that the construction manager has never experienced any problems regarding the construction equipment on site. According to the construction manager, the department has the possibility to make the environmental requirements more specific and strict but as of today, they are not committed by any provisions other than the law. The environmental strategist states that the departments most of the time are working independently. The strategist never tries to influence the procurement processes at other departments unless the expertise is being asked for. It is very rare that the environmental strategist helps the department of technical services for input or to develop requirements for procurement. This is not in line with the directions of application for the procurement policy regarding collaboration between procurement and operational expertise.

The environmental requirements used in procurement could be more strict and specific for each project, according to the construction manager. This is something that the construction manager would like to work with but there has been no time for this. In the directions for application of the procurement policy there is a list of environmental regulations that the municipality shall relate to when procuring. According to the construction manager, the municipality could enhance these provisions but it is important that these enhancements are developed into mandatory requirements so that they are easy to implement in evaluations. One option would be to look at what other larger municipalities have developed and use their provisions for environmental requirements in construction procurement. Another exemplified option brought forward by the construction manager is to initiate continuous conversations with contractor companies in order to discuss how to orientate construction procurement in the right direction. The environmental strategist would like to include more social aspects like CSR (Corporate Social Responsibility) related requirements in the municipal procurement. One criterion that the strategist thinks weighs too much is the price. The perfect scenario would be that the set of requirements is sufficient enough to describe all aspects of a project and that the price is the only aspect left that can be evaluated. However, currently the requirements are insufficient for the price to play such an important role, according to the strategist. The strategist claims that the

problem of developing a more comprehensive set of requirements would be that small business owners perhaps would struggle with fulfilling them.

The department of technical services monitors economical and temporal aspects of completed procurement. According to the construction manager, this is important in order to enhance the benchmarking for future projects. The construction manager does not believe that there are any evaluation criteria that are too strict. Overall, all three interviewees claim that their construction works procurement practices are environmentally sustainable. The chairman of the service committee is satisfied with the municipality's long-term perspective when choosing materials for their construction projects. The solutions may sometimes be more expensive but they stand the test of time better than alternative cheaper solutions. The procurement practices of the municipality already seem to comprise a holistic understanding for decay of investments. This should facilitate the implementation of the life cycle cost analysis tool described in the action plan for environmental work.

Views on the Public Procurement Act

Both the construction manager and the environmental strategist would like the limit for direct award of contract to be higher than today. This limit is lower for the municipality than the Swedish Act requires. The environmental strategist believes that the Swedish Public Procurement Act overall should be less strict. As it is today, the environmental strategist has experienced uncertainty when developing requirements. The environmental strategist is sometimes worried that some developed requirements are not eligible according to the Act, and that they will be appealed by lawyers.

The chairman of the committee also thinks that the Act should be less strict. Furthermore, the chairman argues that the Act should allow for purchasing authorities to include more specific environmental requirements in the evaluations. According to the chairman, purchasing authorities should also be able to reward local production of goods and services when evaluating suppliers.

Collaboration within the municipality

Politicians only influence procurement related issues through the adoption of a procurement policy, according to both the construction manager and the chairman of the committee. The technical services department also has to present all their procurement for their committee in order to make sure that it is within the limits of their budget. Committees are never supposed to influence departments more than this, claims the chairman.

According to the chairman of the service committee, the collaboration between the technical services department and the environmental strategist is restricted due to the fact that environmental aspects of procurement are covered in the environmental regulations followed by the technical services department. The chairman does not know how frequent the collaboration is between the different departments. However, recently there have been scheduled meetings between representatives from different departments, the chairman says. These meetings have been initiated after lengthy discussions among politicians about increasing the transparency between different departments. Increasing the interdepartmental transparency is important, according to the environmental strategist. A lot of problems at the municipality can be solved at early stages if officials used the expertise within other departments. The environmental strategist believes that purchasers often feel that all responsibility is placed on them when it comes to procurement related issues. A lot of problems could

be avoided through periodic meetings between the technical services department and the department of the municipal executive committee, claims the environmental strategist. Such cooperation would comply with the statement in the procurement policy regarding close collaboration between procurement and operational expertise, which at this time does not seem to be fulfilled. The construction manager has experienced that officials working with environmental issues at the municipality sometimes only focus on the environmental part of projects and lack understanding for a more comprehensive picture. However, the construction manager believes that if a more continuous collaboration throughout projects had been initiated, a lot of problems could be avoided.

Comments

The collaboration between environmental expertise and construction managers in Municipality C seems to be limited. One thing that sets Municipality C apart in this research is the expressed preference for qualitative products that stand the test of time better than other cheaper options. Another interesting topic that was discussed was the wish of the construction manager to initiate collaborative discussions with contractors regarding how to steer procurement practices in the right direction.

5.4 Municipality D

Policy and guideline documents

Municipality D has a basic environmental policy, adopted by the municipal assembly, that states that environmental activities shall be included in all day-to-day work. It also states that the municipality shall aim to continuously sharpen environmental provisions in order to do more than the law requires. Municipality D also has a general policy and guideline document for procurement, adopted by the municipal executive committee. In this document, it is stated that activity-specific goods and services are to be procured in accordance with the provisions governing the purchasing entity. In Municipality D, there is a specific department responsible for traffic-related issues, including procurement of road and rail projects.

In cooperation with the traffic committee, the traffic department has developed two main regulatory documents that govern the procurement processes of the department. The procurement instructions document brings up important aspects of procurement. It states that environmental requirements always have to be relevant for all procurement and that they always shall be possible to monitor. It is also stated that after the contract period, an evaluation of each procurement shall be conducted in order to establish aspects of improvement. In the procurement instructions it is also stated that policies and guidelines of the municipality always shall be taken into consideration during construction procurement. The second regulatory document is the guidance for procurement, which is a thorough course of action that can be applied to all procurement of the department. It states that all relevant competences involved in specific procurement shall collaborate continuously throughout the procurement process.

Interviewees

In Municipality D, interviews were conducted with a purchaser at the traffic department, an environmental administrator at the traffic department and the chairman of the traffic committee.

Tender evaluation practices

When procuring construction contractors, the traffic department evaluates the tenders on the basis of lowest price almost all the time, according to both the purchaser and the chairman of the committee. The purchaser argues that the department has found a sustainable approach for procurement. To use MEAT as award criterion is more suitable when developing something in collaboration with the contractor or when the service or good procured is complex, says the purchaser. The environmental administrator thinks that it is hard and time consuming to evaluate tenders on the basis of MEAT. Furthermore, the administrator claims that the risk of appeals is higher during such evaluations. The traffic department uses mandatory requirements regarding quality, environmental aspects, experience and organisation. The administrator claims to have significant influence on the set of requirements included in the tender documents. The environmental administrator carries the responsibility related to the mandatory environmental requirements. To have environmental expertise included in all procurement should enable the environmental requirements to be relevant for the specific procurement, which is in accordance with the procurement instructions.

The purchaser claims that the requirements differ between different projects because almost every project is unique. However, the set of requirements is standardised. If the characteristics of two projects are similar the mandatory requirements are similar, says the purchaser. The purchaser claims that the procurement practices of the department are environmentally sustainable since requirements are formulated on environmental management systems and construction equipment. The chairman of the committee argues that the environmental policy of the municipality is consistent with the tender evaluation practices, but also claims that the procurement practices could be better than they currently are.

The purchaser thinks that competence-related requirements in the form of professional experiences sometimes are too strict. According to the purchaser, it is easy for officials to require too much experience on key personnel in a project. The purchaser claims that it is important to ask yourself how much experience is relevant for the specific positions in a construction project. The purchaser would like to attach more focus on personal qualities of the key personnel, during evaluations. However, according to the purchaser, such subjective qualities are hard to evaluate and describe in tender documents due to the Public Procurement Act. The administrator believes that the requirements included in procurement carried out by the traffic department are sufficiently balanced. To be in the forefront when it comes to developing and sharpening environmental requirements is described as important in the environmental policy adopted by the municipal assembly. However, the environmental administrator claims that it is hard to be in the forefront since the Public Procurement Act is too strict. The chairman of the committee claims that it is expected by the traffic department to evaluate the tenders on the basis of lowest price since it is the citizen's tax money that pays for the purchases. However, the chairman argues that the economic aspect sometimes gets too much attention during evaluations. The chairman thinks that site-worker conditions should play a more significant part in the evaluations.

In collaboration with two other municipalities and the Swedish Road Administration, Municipality D has developed a set of requirements on construction equipment that have to be fulfilled by the tenderers. If the contractor outperforms the requirements

during the execution of the project, the contractor receives bonuses. The bonuses are not included in the evaluation according to the purchaser. According to the environmental administrator, the actors in the previously described collaboration have now started to develop a standardised life cycle cost analysis tool that is approximately a year away from implementation. According to the environmental administrator, the tool will make it possible to compare the tenders from a holistic life cycle point of view. The tool will be included in all procurement initiated by the traffic department. The environmental administrator claims that a lot of the larger contractors already use similar tools, but since the tools are different it is hard to compare the outcome of them and include it as a part of tender evaluations.

Monitor meetings are not held after each contract period, which is required in the procurement instructions. The evaluations are held monthly where all aspects of all procurement are discussed. In order to improve procurement practices, the discussions regard both positive and negative features of executed procurement, according to the purchaser. However, the purchaser argues that monitor meetings should take place more often than they do. The administrator controls the environmental requirements on construction equipment.

Views on the Public Procurement Act

The environmental administrator feels limited when it comes to formulating mandatory environmental requirements, since the Public Procurement Act is too strict. Furthermore, the administrator argues that the Act should enable purchasers to exclude tenderers that have poorly executed previous works commissioned by the traffic department. However, the administrator claims that the Act forces the traffic department to be detailed and accurate in evaluations. “The Act forces us to make the right decision”, the environmental administrator says.

The chairman of the committee claims that the Act should enable more space for requirements related to working conditions, such as safety and collective bargaining agreements. The chairman would also like to reward small business owners more than allowed for. As it is today, the Act more or less excludes small business owners due to the fact that the tender documents often are too long and detailed for them to read, the chairman states. The chairman thinks that the Swedish interpretation of the EU directive is too strict and that this leads to too much bureaucracy, which is time consuming for both the municipal and the business communities.

Collaboration within the municipality

The purchaser at the traffic department feels that the impact of the politicians on the traffic department historically has been limited. However, recently the municipal assembly decided to implement a standardised building process for all municipal construction client organisations. Within this program, the procurement phase is included. The purchaser thinks that the program is a good idea since it increases the transparency within the municipality and it enables officials to see how other departments solve similar issues. The chairman of the committee states that the collaboration between the committee and the traffic department is limited and that they only discuss budgetary objectives and environmental targets.

According to both the purchaser and the environmental administrator, the collaboration between them works well. The environmental administrator is included in all procurement at the traffic department. The chairman of the committee believes that the main reason why the collaboration is successful is that both competences are

working at the same department, only a few doors away from each other. To have relevant competencies collaborating continuously like this is determined in the guidance for procurement document. Even though the collaboration is more or less continuous, there is always room for improvements say both the purchaser and the environmental administrator.

The chairman believes that the continuous collaboration between the competencies gradually leads to a greater understanding between them. The purchasers learn more about environmental issues and the environmental administrator learns more about procurement-related issues. This is one of the great advantages with large municipalities with access to sufficient resources, says the chairman of the committee. It allows for possibilities to allocate specific expertise where it is needed and thereby circumvent inflexible organisational structures. The largest problem when collaborating with other departments is the lack of understanding and respect for each other's work, according to the chairman. Such a problem can be avoided if the right set of competences work together on a daily basis.

Comments

What sets Municipality D apart from the other municipalities in the study is the fact that environmental expertise continuously is affecting the contractor procurement processes through close collaboration between purchaser and environmental administrator. In Municipality D, the environmental administrator is responsible for the environmental requirements in the department's procurement. The collaboration seems to be sufficient and this could have something to do with the fact that Municipality D has an applied procurement policy for construction works. It is clear that Municipality D has a strong concern regarding environmental issues in procurement. The document with requirements on construction equipment, developed by the municipality, is used within other municipalities.

The life cycle cost analysis tool that is to be implemented by the municipality should enable tenderers with developed holistic approaches for project solutions to be awarded a greater volume of contracts in the future.

Interestingly, no discussions regarding wishes to favour local suppliers during tender evaluations occurred. Instead, the chairman addressed wishes of including working conditions of project staff in evaluations, to a higher extent than allowed for.

5.5 Municipality E

Policy and guideline documents

Municipality E has two documents regulating the procurement process and one concerning environmental work. One of the procurement documents states guidance for procurement and the other describes the procurement policy. The environmental program is a general document, which contains the environmental goals the municipality must achieve. For example, it states that the municipality must choose the most environmentally friendly option when evaluating equivalent products and services. It also proclaims that environmental requirements must be included in tender documents, concerning procurement of vehicles, machinery and construction equipment. The program also describes that environmental goals should be reviewed every new mandate period. It is noteworthy that the municipality uses an environmental program that has expired. The municipal assembly has adopted all three documents.

The two procurement documents state that all tender evaluations should be based on an environmental perspective in order to achieve a long-term sustainable development. The procurement must also be coordinated internally so that the municipality can use the gathered municipal expertise. The same standards and requirements for the municipality should also apply for tenderers. In the procurement work process document, it states that requirements above what is necessary never is for free and that the requirements should be adapted to what the activity demands. The monitoring process of suppliers' abilities to provide goods or services must be reviewed continuously by the procurement administration. No instructions regarding monitoring of procurement is described in the procurement documents. The documents also state that the municipality will further on introduce electronic commerce. Furthermore, there is not direct connection between the procurement documents and the environmental program.

Interviewees

The interviewees in Municipality E were a procurement manager from the procurement administration, the environmental coordinator from the department of urban planning, and the chairman of the construction and environmental committee.

Tender evaluation practices

Lowest price is the basis for all construction tender evaluations according to the procurement manager. The procurement manager claims that they usually receive criticism for always evaluating tenders with this award criterion. However, the procurement manager thinks that this argument is unfair because the requirements are set high in order to achieve sufficient quality. From an environmental perspective, the procurement manager thinks the procurement process is executed in an environmentally sustainable way, since the procurement process is done in accordance with the municipality's environmental program. However, the environmental coordinator claims not to have any influence on the choice between lowest price and MEAT. The chairman states that the lowest price criterion gets too much attention because the best quality is not achievable at the lowest price. Nevertheless, the chairman does not think any requirements get too much weight. The chairman argues that the tender evaluations should focus more on locally produced products and services.

The municipality has initiated a new practice in their procurement. This practice, according to the procurement management, considers a new model of tender evaluation where the tenderers rate their performances regarding, for example, quality and environmental skills. The purpose of this is to achieve transparency and the practice is based on trust. However, the procurement manager states that this kind of evaluation process probably can be problematic as well. Tenderers do not often include bad references, and also, the self-awareness of companies' qualifications might not be in line with the reality. Furthermore, the procurement manager also claims that monitoring of previous procurement never is done. However, it is not stated in the procurement documents that such monitoring shall be executed regularly.

The construction process gets too much focus according to the environmental coordinator. The coordinator states that the technical specifications and the finished product are easy to measure and control, but during the construction process it is difficult to check how efficiently resources are used. The environmental management system of contractors is difficult to monitor. It is also difficult to see how the

contractor follows it, and how much idle time construction machines have. The coordinator argues for more municipal focus on the holistic environmental perspective. The environmental program has expired, but the older one is still in use.

Views on the Public Procurement Act

The chairman states that the Public Procurement Act is too rigid. In situations where the municipality wants a specific product, they are often hindered and therefore forced to set up certain specifications in order to get what they want. The chairman claims that all municipalities perform their public procurement this way. The chairman says, “if we want a specific product or service, we are sometimes forced to go around the rules of the Act”.

The coordinator thinks the lack of knowledge about the Act is the greatest issue. Furthermore, another issue is the difficulty to purchase locally produced products and services. The coordinator explains that the municipality has circumvented this problem by careful interpretation of the Act.

According to the chairman of the committee and the coordinator, some of the basic principles of the Public Procurement Act are not followed by the procurement administration.

Collaboration within the municipality

According to the procurement manager, there is no direct collaboration between the procurement administration and the politicians. However, there has been a tendency for some politicians to get involved in procurement procedures, which the procurement manager wants to avoid. Furthermore, the procurement manager thinks that the procurement administration and the environmental administration should collaborate more. The knowledge within each administration should be used in a better way, the procurement manager argues. For example, a collaboration where discussions regarding how the tendering process could be environmentally enhanced would be beneficial, according to the procurement manager. The procurement manager thinks this process should be mandatory during each procurement. As for now, there is no collaboration between the procurement staff and the environmental staff. This is noteworthy since it is stated in the procurement documents that gathered expertise within the municipality should be used when procuring. The procurement manager also says that they have to find out by themselves what relevant environmental goals they should consider.

The coordinator claims that it would be interesting to see how much influence they could have. It might for example be possible to influence the choice of award criterion and requirements. Nevertheless, the coordinator explains that the communication works well between the procurement administration and the coordinator.

The chairman claims that the most difficult part of collaboration between departments is that they are not connected. The municipal organisational structure is very rigid and there is a tendency that you only consider your own department’s needs. According to the chairman, this is not unique for Municipality E, but more or less consistent for all local authorities. The chairman says, “the greatest issue within municipalities is that each department has tunnel vision” and “the municipal community is tremendously rigid”.

Comments

During the interview it was clear that the procurement manager felt that some politicians were too much involved in the officials' work. It was obvious that the procurement manager was displeased.

The fact that Municipality E uses an expired environmental program might be a problem. The environmental work and visions of the municipality may differ from the program, which could create difficulties when considering long-term sustainability and shared goals.

Interestingly enough, the chairman and the coordinator state that some of the basic principles of the Public Procurement Act are not followed by the procurement administration.

In the procurement work process document, it is stated that requirements above what is necessary never is for free and that the mandatory requirements should be adapted to what the activity demands. This is specific for this municipality and it is an indication that Municipality E does not favour environmental standards above what is absolutely necessary.

5.6 Municipality F

Policy and guideline documents

Municipality F has two documents concerning the procurement process and one for their environmental work. The procurement policy is a general document while the second document concerning the procurement is guidelines for procurement practices. The environmental policy is a general document, which states how the municipality must act in order to achieve a sustainable long-term development. It explains that the environmental requirements must be included in all procurement. The Swedish Environmental Management Council develops these environmental requirements. Obviously, there is a connection between the environmental policy and the procurement guidelines. The procurement policy and the environmental policy have been adopted by the municipal assembly, while the guidance for procurement practices has been adopted by the municipal executive committee.

The procurement documents state that environmental and quality perspectives must be applied for all procurement. Furthermore, it is stated that the municipality should use the internal municipal expertise in all procurement. The procurement shall stimulate suppliers, consultants and contractors to focus on environmentally friendly products and services at all stages. The municipality strives to work with suppliers with good environmental knowledge and who work with a high degree of environmental consciousness. There are no instructions regarding monitoring of procurement in the documents.

Interviewees

The interviewees in Municipality F were a project manager from the department of urban planning, the environmental coordinator from the department of urban planning and the chairman of the municipal executive committee. It is noteworthy that the chairman of the committee had the answers written down by someone else and then read and talked around the answers.

Tender evaluation practices

All construction procurement is evaluated on the basis of lowest price with mandatory requirements, according to the project manager. The project manager has never been involved in procurement with “soft values” such as criteria that are weighted. Municipality F has learned from previous procurement that applying criteria demands high competence and knowledge of the procurement staff in order to avoid mistakes and to achieve transparency. In other sectors, the municipality has been subjected to appeals. For this reason, the project manager informs there is an active choice to evaluate construction procurement with lowest price as contract award criterion. Criteria create problems concerning how to argue for different grading.

The project manager believes that lowest price as award criterion makes it easy for all parts involved. The environmental coordinator confirms that some procurers might set low requirements in order to avoid appeals. However, the coordinator believes that the Public Procurement Act allows procurers to set high requirements, if the procurement staff have sufficient knowledge of the Act. According to the chairman, the choice between lowest price and MEAT for award criterion depends on which of them can add most value to the finished product or service. Lowest price as criterion is not sufficient without requirements on the product or service quality. The chairman explains that the municipality never uses irrelevant criteria because it could be in conflict with the principle of proportionality. However, the chairman claims that the politicians never interfere in how the officials do their work. Furthermore, the chairman describes that, due to the environmental document of the municipality, environmental requirements must be an active instrument for all procurement. The chairman claims that the Act might exclude small businesses. These firms may find it difficult to submit tenders if the requirements are set too high.

The mandatory requirements are for example reference projects, financial stability, quality and environmental management systems. According to the project manager, all tenderers involved in construction procurement have these systems and standards. The project manager states that a tenderer is not awarded a contract due to good reference projects, instead the price determines. The project manager does not think a tenderer has ever been disqualified because of a low standard of their quality or environmental management system. From an environmental perspective, the project manager is satisfied with how the procurement is executed.

There is no monitoring of finished procurement or projects, as long as there are no criticism, budget overruns or time delays. However, mistakes in the procurement can be reviewed during the project phase, if the contractor finds mismatches in the specifications. If such errors occur, these will be reviewed for the next procurement. The environmental coordinator agrees that the monitoring process is very poor also for environmental concerns. Monitoring of construction projects may be another issue. Many contractors use subcontractors that do not always follow what the contractor have signed up to do, according to the coordinator.

According to the environmental coordinator, the municipality is a fair trade municipality. This means that extra effort is put on purchases of ethically and environmentally friendly products and services. However, the coordinator thinks this should be considered in the construction procurement as well. An example could be to calculate transportation distance of aggregated stone used in construction projects. Also, how and where the material is manufactured and assembled, says the coordinator.

Views on the Public Procurement Act

According to the chairman, the most important aspect of the Public Procurement Act is to compare tenders in an equal manner. However, some requirements are difficult for smaller companies to fulfil, which might exclude them from being awarded contracts by the municipality. The chairman claims that when it is possible and relevant, social concerns should also be considered.

The coordinator says that the procurement staff has argued for many years that they cannot use too high environmental requirements due to the aspect of competition. The coordinator believes that the procurement staff is afraid of mistakes when procuring. Therefore the environmental requirements are set low in order to avoid appeals. The coordinator thinks that the Act should be a driving force for environmental development. The coordinator also states that the procurement practices today are permeated by convenience and routines.

Collaboration within the municipality

The project manager tells that conflicts between the environmental staff and the procurement staff never have occurred. There is no systematic collaboration between the environmental staff and the procurement staff, as regulated in the procurement documents. Instead, the project manager says that if help is needed from the environmental staff, they just walk over to them because they sit in the same corridor. The chairman confirms that the collaboration between the departments arise when the procurement staff need expertise from the environmental staff. Further on, the coordinator verifies the collaboration between them and states that the collaboration works well. However, the coordinator thinks that the collaboration could be better. The coordinator tells that the procurement officials often claim that they lack environmental knowledge. There is no structured sharing of information between the procurement and the environmental staff, the coordinator states. One solution could be to share information and knowledge at early stages of the procurement process, which probably would lead to better end results. The coordinator states that they have tried to collaborate more before but it has not worked out well. The coordinator says the initiative for collaboration must come from the procurement staff.

The coordinator states that each department in the municipality has the responsibility to follow environmental requirements. The missions for the coordinator is to develop documents and help politicians make decisions, help other units with knowledge and expertise within the environmental field, and to share knowledge and information concerning new environmental standards. The coordinator claims that the environmental staff has the power to decide which requirements that should be mandatory requirements. However, the coordinator thinks it is important to not set requirements too high, which would exclude many smaller businesses and result in less competition between tenderers.

Comments

Obviously, the fear of appeals is a recurring theme from the interviewees in Municipality F. The risk of appeals hinders the municipality to make adjustments in their set of requirements and choice of contract award criterion.

There seems to be possibilities for a better collaboration between the environmental and procurement staffs. Today, there is no systematic collaboration between the two departments.

5.7 Municipality G

Policy and guideline documents

Municipality G has three documents affecting the procurement process. The first is the procurement policy which states how the municipality should, in general terms, execute procurement. It describes that the procurement administration must contribute with ecologically and socially sustainable development.

The procurement strategy is the second document affecting the procurement process. The document describes that the municipality as an organisation must work as one unit in order to achieve effective procurement processes. It also tells that all procurement must be orientated in an environmentally friendly manner in order to create a long-term sustainable development. Furthermore, the procurement strategy also states that procurement should be executed in accordance with the environmental policy of the municipality. It is noteworthy that the environmental policy has expired. However, it has been replaced by local environmental goals. The third document affecting the procurement process is the document of ethical rules concerning procurement. The municipal assembly has adopted all three documents. There are no instructions regarding monitoring of procurement in the procurement documents.

As described above, Municipality G has a document concerning the local environmental goals. It has been developed from the national environmental goals. As for now, six out of sixteen of the environmental national goals have been adopted. Noteworthy is that none of these environmental goals consider procurement. Obviously, there is no valid connection between the procurement documents and the environmental documents.

Interviewees

The interviewees in the municipality were the procurement manager from the procurement administration, the building and environmental manager from the department of urban planning and the chairman of the municipal assembly.

Tender evaluation practices

According to the project manager, lowest price with mandatory requirements is the contract award criterion for all construction procurement. Mandatory requirements can for example be work experience of key personnel in the project. The procurement manager does not believe there are any needs for stricter or more requirements because either the tenderer has got the appropriate experience and knowledge or not. However, other criteria may be relevant when procuring services such as consultants. Within the construction field, the principle of MEAT is used when procuring management services. The procurement manager thinks MEAT, as award criterion, is difficult to use because several cases have ended up in appeals from rejected tenderers. Furthermore, the procurement manager does not think that MEAT serves any purpose when procuring contractors. However, interviews for procurement of construction consultants may be relevant. According to the chairman, the choice of contract award criterion depends on what is procured. In order to achieve proper quality, the basis of evaluation is never lowest price without mandatory requirements. The officials decide the choice of award criterion, says the chairman.

The set of mandatory requirements to choose from is very standardised according to the procurement manager. Experiences and CVs from project personnel, financial

stability and reference projects are examples of mandatory requirements. However, the procurement manager thinks experience and reference projects are hard to check and evaluate. Experience, in case of number of years, does not tell how much a person has learned. However, the procurement manager claims that tenderers involved in construction procurement always fulfil these requirements. From an environmental perspective, the procurement manager is satisfied with how the procurement process is done. The procurement manager claims that monitoring of previous procurement is not done. The building and environmental manager thinks the environmental perspective should get more focus when procuring construction works.

The procurement manager states that the local environmental goals are used when construction procurement is prepared. The building and environmental manager tells that each local environmental goal contains milestones but none of them consider procurement. For now, six of the sixteen national goals have been adopted and the remaining goals should have been reviewed last year. Due to limited resources, it was not possible to review the remaining goals, according to the building and environmental manager. The chairman tells that these local environmental goals could for example consider energy consumption of houses. However, the chairman claims that politicians never directly govern how the procurement work is executed. Instead, politicians set up goals and guidance through policies.

Views on the Public Procurement Act

The Public Procurement Act definitely has failures, the chairman of the committee states. According to the chairman, the Act sometimes hinders the municipality to get what it wants. The Act does not allow public clients to consider bad experiences with previous suppliers. Furthermore, the Act does not allow rewarding of locally produced products or services during evaluations. The chairman thinks the Public Procurement Act is very rigid and should provide greater flexibility.

The building and environmental manager thinks more focus should be put on other criteria instead of the lowest price. The building and environmental manager explains that contractors that are awarded contracts on the basis of lowest price, often exceed the budget. One example to avoid this could be to evaluate previous projects and compare the budget with the final price. This would force the tenderers to be more honest.

Collaboration within the municipality

The procurement manager states that collaboration between the procurement administration and the environmental staff does not exist. The environmental manager, who states that they have no influence on the procurement practices, confirms the absence of collaboration that was described as important in the regulatory procurement documents. The procurement manager only has contact with project managers. However, none of them claims there is any conflict of interests. However, the chairman of the committee claims that the collaboration exists. The two units help each other by sharing knowledge and expertise. The procurement administration consults with the environmental staff when it comes to specific criteria concerning the environment, according to the chairman. Noteworthy is that the procurement manager describes this not to be the case. The chairman thinks the greatest issue for the collaboration between the staffs is that they have different areas of interests. However, the chairman states that the municipality has worked very much

with the internal collaboration for the last five years. The work has included how the municipality should work as one unit, where a holistic approach is very important.

The environmental perspective should get more focus but the building and environmental manager does not feel included in the construction procurement process. The building and environmental manager believes the collaboration could improve a lot. “When you are interviewing me now, I realize we have never reflected on or discussed these types of concerns or possibilities”, the environmental manager says. The environmental manager claims that it should be possible for the environmental staff to cooperate with the procurement administration. For example, the collaboration could include a mutual development of requirements and criteria, in order to achieve more long-term sustainability. However, the collaboration initiative must come from the procurement administration according to the environmental manager.

It is important that politicians are not involved in the procurement process, according to the chairman. It could create conflicts of interest and speculations around interests. External auditors and internal controls monitor this.

Comments

It is obvious that the chairman has a different view on how the collaboration works within the municipality, compared to the officials. The collaboration between the procurement administration and the environmental staff does obviously not exist. However, the chairman states that it does.

There seems to be a lack of knowledge of how the environmental staff can influence the procurement. During the interview, the building and environmental manager expressed that the environmental staff had never tried to influence the procurement process but that such involvement might be a possible way of enhancing the environmental perspective in procurement.

Noteworthy is that the environmental policy of the municipality has expired and that it has been replaced by local environmental goals. However, the local environmental goals do not consider the municipal procurement perspective.

5.8 Municipality H

Policy and guideline documents

Municipality H has three documents affecting the procurement process and one environmental policy document. The first procurement document is the procurement policy, which is a general document aimed to create common municipal understanding of the procurement process. It states that internal coordination must be used to obtain sufficient quality to the lowest price. It also describes that all procurement and purchases must be done in accordance with a sustainable societal development and that the municipality wishes to be leading in the work of environmental consciousness. The municipality must purchase environmentally friendly products and services within the construction field because it is one of the fields with greatest potential of environmental improvements. No instructions regarding monitoring of procurement are described in the procurement policy. The municipal assembly has adopted the policy.

The second document is the guidelines for purchases. It proclaims that the municipal assembly has decided to focus on environmental and ethical concerns.

Environmentally friendly options must be purchased regardless of the price and the function, which has been decided by the municipal assembly. Eco-labelled products must also be selected. When Municipality H procures, environmental requirements must be considered to select the best offer. The Swedish Environmental Management Council develops these requirements. The document also says that other municipalities do not have such strict rules concerning environmental standards.

The third document is additional conditions for suppliers contracted by the municipality. It describes that the supplier must strive to decrease consumption of natural resources. The contractor must have environmental goals within the organisation. The environmental goals must result in continuous progress and there must be an action plan concerning how these goals will be reached. The action plan must be reviewed every year within the organisation of the contractor. The contractor must, whenever the municipality wants, send in their environmental goals, action plan and a declaration of how their environmental work progresses. The municipality may review if the standards and requirements of the contractors are followed.

The environmental policy is a general document concerning how the politicians govern the environmental work. The policy is divided in three different levels with different missions. These levels are: municipal assembly, the municipal executive committee and departments of the municipality.

There is no direct connection between the environmental policy and the procurement documents. However, the environmental aspects are obviously well defined in the procurement documents.

Interviewees

The interview subjects in this municipality were two project managers and one construction manager from the department of urban planning, one environmental controller from the municipal department staff, and the chairman of the municipal assembly. Noteworthy is that the chairman of the committee had the answers written by someone else and then read and talked around the answers.

Tender evaluation practices

Lowest price with mandatory requirements is the contract award criterion for all construction procurement, according to the project manager. The project manager states that MEAT with criteria were used before but did not have any substantial effects. The greatest issue was to measure and evaluate the criteria. The procurement must be transparent and in the tender documents, the evaluation must be clearly described. More information about the contractor would be an advantage but due to practical reasons, Municipality H uses lowest price as contract award criterion for construction projects. The risk of appeals is also of great cause when evaluating tenders with MEAT as award criterion.

The choice of contract award criterion depends on what is procured, according to the chairman of the committee. Requirements are easy to formulate for some procurement, while in other procurement such as consultant procurement, it is difficult to set up requirements. The award criterion of lowest price with mandatory requirements is easy to evaluate and the lowest price does not mean low quality if the requirements are set high. The most important but most difficult service to procure is the project manager for a construction project. The chairman of the committee claims that it would be good to focus more on the specific personnel involved in a project.

MEAT with criteria as award criterion is used when procuring construction consultants. Reference projects and reference clients to the tenderers are reviewed and interviewed. The outcomes of these are then transferred to an amount of money, which is deducted from the tender price. After adjusting the bid, the lowest price wins. This has resulted in somewhere around a fifty-fifty balance between price and references for consultants. The project manager states that the procurement practices of consultants have been successful. However, the terminology is very important in order to make it clear for all parts involved.

According to the project manager, references as criteria works poorly for construction works procurement since the contractors only include good references in their tenders. Environmental management systems are also difficult to measure, either the contractor has one or not. The mandatory requirement says that the contractor should have ISO standard or equivalent. However, the project manager states that they lack the knowledge and expertise for deciding what an equivalent system is. The project manager says that all tenderers tend to have these systems. Experience on specific positions e.g. a minimum number of years of work experience among personnel within the project organisation is used as mandatory requirements for contractors. The mandatory requirements are very standardised claims the project manager. The chairman states that price often determines which tenderer that is awarded the contract and thinks that the environmental aspects should receive more focus. Another issue regarding reference projects as a requirement is that the people involved in a previous project might not be the same in the one that is procured.

Monitoring of previous projects and procurement follows no structure, according to the project manager. Problems with a contractor during the project phase might need to be reviewed more closely in order to avoid similar situations in future projects. The chairman argues that it is hard to monitor subcontractors in a project. The project manager states that, due to the fact that they follow the visions and guidelines of the municipality, the procurement of contractors is done in an environmentally sustainable way.

Views on the Public Procurement Act

The project manager states that the Public Procurement Act is inflexible. The greatest issue occurs with contractors who have performed poorly in previous projects. These contractors are not allowed to be deselected by the municipality in future projects. The environmental controller believes that the Public Procurement Act should give the municipality greater possibilities to choose contractors more freely. It should also focus more on life cycle costs instead of the direct costs. The monitoring of suppliers, and how requirements are followed, should get more focus according to the environmental controller.

The chairman of the committee states that the Public Procurement Act makes it difficult to promote local services and products. In cases with similar tender prices, the local supplier should be rewarded. It would not only promote the local businesses, but also decrease transportation costs and the environmental impact. These kinds of issues are not possible to consider today. The chairman claims, “the Public Procurement Act can be too detailed, which decreases innovation and kills creativity”. Nevertheless, the chairman states that the Public Procurement Act serves a great purpose since it creates competition among tenderers. However, the chairman says “the Public Procurement Act creates competition but now it has reached a point where we do not have any freedom of action whatsoever”.

Collaboration within the municipality

The municipality is environmentally certified, according to the project manager. However, the project manager tells that it is mainly the top management that focuses on environmental issues. The project manager and his colleagues have only been involved in a one-day education concerning environmental work.

The environmental work is integrated in every department within the municipality, according to the environmental controller. Instead of only focusing on the general environmental policy document, the environmental work has been adjusted for each department. The focus of the municipality has been to integrate the environmental work in all governance documents instead of one single policy. The environmental controller believes it has positive effects on how the environmental work is prioritized and claims there is no conflict of interests. The project manager claims that one environmental unit sits in the same corridor but they do not meet each other on a regular basis. This is not in line with the procurement policy.

Comments

Municipality H is obviously one of the municipalities within this investigation that concerns itself most about environmental issues. The environmental work is integrated in all administrations instead of being a separate unit. The second document affecting the procurement states that environmentally friendly options must be purchased regardless of the price and function, which clearly indicates that environmental issues are prioritized. However, there is also a conflict of how the environmental work is done. According to the project manager, the procurement staff does not feel as involved in the environmental work as the chairman and the environmental controller say they are. The environmental work might not be as integrated and implemented as the controller believes.

Interestingly, evaluating tenders with competence criteria works well when procuring consultants but poorly when procuring contractors, according to the project manager. Obviously, the project manager has the competence of using MEAT as award criterion but chooses not to when procuring construction works.

The third document states that the contractor must, whenever the municipality wants, send in environmental goals, action plan and a declaration of how the environmental work progresses. The municipality may monitor the awarded contractors and review if the standards and requirements are followed. Obviously, the municipality has tools for actively monitoring and reviewing suppliers and contractors, but these tools are not used.

6 Analysis

In this chapter, recurrent opinions and patterns from the interviews in the previous chapter are presented. This will make it easier for the reader to navigate through the discussion to be presented in Chapter 7.

6.1 Policy and guideline documents

As can be seen in Table 3, all eight investigated municipalities in the research had a general procurement policy document. Municipality D also had an applied procurement policy for procurement of construction projects. Five of the municipalities had environmental policies. The other three instead had environmental goals or an action plan for environmental goals. In total, two of the regulatory documents had expired.

Table 3: Policy and guideline documents in the eight municipalities.

Document type	Municipality							
	A	B	C	D	E	F	G	H
General procurement policy	X	X	X	X	X	X	X	X
Guidelines for procurement policy			X	X	X	X	X	X
Applied procurement policy for construction works				X				
General environmental policy	X			X		X	X*	X
Environmental goals or action plan		X	X		X*			

** indicates expired document*

In Table 4, the level of connection between regulatory procurement documents and environmental documents among the eight municipalities is presented.

Table 4: Level of connection between environmental documents and procurement documents in the eight municipalities

Level of connection	Municipality							
	A	B	C	D	E	F	G	H
No connection	X				X		X	
Weak connection		X	X					
Strong connection				X		X		X

6.2 Tender evaluation practices

All of the eight municipalities in the study exclusively used lowest price as award criterion. Six of the eight procurement officials interviewed stated that the set of mandatory requirements used for procurement were mostly standardised. As can be viewed in Table 5, five of the interviewed procurement officials expressed that it was more appropriate to use MEAT as award criterion when procuring more complex goods and services. Another concern regarding MEAT as award criterion was the risk of appeals that it entails. Four of the eight interviewed environmental officials suspected that procurement officials are somewhat afraid to include more complex requirements or criteria in evaluations since rejected tenderers are more likely to appeal such awards. Some of the procurement officials agreed with this. Four out of the eight stated they are afraid of the risks of appeals that the MEAT award criterion entail.

Table 5: Views regarding procurement practices among interviewees

Statement	Municipality							
	A	B	C	D	E	F	G	H
Procurement official thinks MEAT is good for more complex projects (e.g. consultant procurement)	X	X		X			X	X
Environmental official believes procurers are afraid of appeals when using strict or complex requirements or criteria		X	X	X		X		
Procurement official is afraid of appeals when using MEAT		X				X	X	X
Environmental official is satisfied with environmental requirements in procurement	X	X	X	X				
Environmental official thinks price gets too much focus		X	X				X	
Politician thinks price gets too much focus		X		X	X			X
Politician is concerned to exclude small businesses in procurement	X	X		X	X	X		
Systematic monitoring of procurement is performed	X		X	X				

The five municipalities that lack systematic monitoring of procurement do not depart from any regulations stated in their procurement policies. It is not stated in any of their procurement policies that systematic monitoring of procurement shall be carried out. Two out of the three municipalities that perform systematic monitoring of procurement are not required to do so by their procurement policies. They do it anyhow. The only municipality that is required to monitor procurement and is doing so is Municipality D. Municipality D is not monitoring all procurement after they are completed, as stated in the procurement policy. However, monitoring meetings on a monthly basis, where all aspects of all procurement are monitored are viewed as sufficient.

All of the eight interviewed procurement officials were satisfied with their procurement practices and claimed that their routines were sustainable. Interestingly, only four of the interviewed politicians claimed that they were satisfied with the procurement practices. No procurement official expressed that the price factor gets too much weight. Three of the interviewed environmental officials and one procurement official expressed wishes for implementing a life cycle cost analysis tool.

6.3 Views on the Public Procurement Act (LOU)

As can be viewed in Table 6, the general concern among the interviewees is that the Act is too strict. Seven out of the eight politicians interviewed believe that the Public Procurement Act (LOU) should be less strict. The most frequent aspect of improvement that was brought up during the interviews was the wish among

politicians to be able to make the requirements related to transportation more strict. Six out of eight politicians addressed this and argued that more locally produced or based goods and services could be procured if they could include the transportation aspect in their tender documents more than they are allowed to by the Act. Only one procurement official expressed this concern.

Table 6: Views on the Public Procurement Act (LOU) among interviewees.

Statement	Municipality							
	A	B	C	D	E	F	G	H
Procurement official wants LOU to allow for more subjectivity	X			X				X
Environmental official wants LOU to be less strict		X	X	X				X
Environmental official thinks LOU has potential if you learn how to use it	X	X			X	X		

Only one procurement official, one environmental official and one politician claimed that they would like to be able to include experiences from previous suppliers in evaluations. Furthermore, two environmental officials state that the Act in its current version does not provide the support for procurement that it is intended to do.

6.4 Collaboration within the municipality

The two municipalities that have a systematic collaboration in construction procurement between environmental officials and procurement officials are fulfilling their procurement policies in that matter. All of the other six municipalities are also intended to systematically use the internal expertise in the municipality in all procurement. These six municipalities do not fulfil this in their practices. However, three of the other six municipalities have an on-going collaboration between procurement and environmental officials, where advice easily can be asked for by procurement officials if issues arise. In the other three municipalities, there seems to be insufficient routines for collaboration between procurement and environmental officials. Table 7 presents views on interdepartmental collaboration among the interviewees.

Table 7: Views on collaboration between departments among interviewees.

Statement	Municipality							
	A	B	C	D	E	F	G	H
Procurement official thinks there is a potential for better collaboration with environmental staff	X	X	X		X			
Environmental official thinks there is a potential for better collaboration with procurement staff	X	X			X	X	X	
Environmental official wants to work more continuously with procurement staff	X		X		X	X	X	
Politician claims that tunnel vision within departments hampers the potential for collaboration		X	X		X		X	

As can be viewed in Table 7, the interviewees in Municipalities D and H seem to believe that their interdepartmental collaboration is sufficient. It is noteworthy that both these municipalities have a strong connection between their environmental and procurement policies (see Table 4). The interviewees in Municipalities A and E seem to believe that the interdepartmental collaboration could be better. As can be viewed in Table 4, these municipalities have no connection between their environmental and procurement documents. Seven out of the eight interviewed procurement officials experienced no conflicts of interest between themselves and the environmental staff. Six out of the eight environmental officials concurred with this. Furthermore, no procurement official and only one environmental official argued that the tunnel vision due to the separation of the different departments hampers the possibilities for collaboration between procurement officials and environmental officials. In all of the municipalities where the politician claimed that the separation of departments hampers the potential for collaboration, either the procurement or the environmental official argued that there nevertheless is a potential for a better collaboration between their departments.

7 Discussion

As described in the previous chapter, lowest price is consistently used as contract award criterion for construction procurement in the eight studied municipalities. Both environmental officials and procurement officials expressed concerns regarding MEAT as award criterion since it allows for rejected tenderers to appeal awarding of contracts to a greater extent than when evaluating tenderers on the basis of lowest price. From the perspective of transaction cost theory (Williamson, 1981), procurement officials are afraid of the additional transaction costs that appeals entail due to time consuming court proceedings. It seems as if procurement officials value the contract award criterion of lowest price and feel more confident using it compared to MEAT. Walker and Wing (1999) argue that it is important to understand the drivers of transaction costs. This is something that the procurement officials who were interviewed seem to understand. Construction projects procured with MEAT as award criterion can in some cases lead to finished products with greater value in relation to the production cost. However, the uncertainty regarding transaction costs that MEAT entails is perceived to be too high.

It is unlikely that municipal procurement officials themselves will change the choice of contract award criterion for municipal construction procurement. All interviewed procurement officials expressed that they are satisfied with the procurement practices. Furthermore, no procurement official argued that the price factor is too strict. However, both environmental officials and politicians expressed that there sometimes is too much focus on price in today's municipal construction procurement practices (see Table 5). In order for a change from lowest price to the more holistic approach of MEAT, it seems as if clear strategic decisions from local politicians in municipal assemblies and municipal executive committees are necessary.

As described in Chapter 6, the set of mandatory requirements that procurement officials include in tender documents is expressed as standardised. This practice can also be viewed as an example of how procurement staffs try to secure the procurement process in order to minimize the risk expected and unexpected transaction costs. Costs related to the procurement process are included by Waara and Bröchner (2006) among transaction costs in a public construction project. It is more resource and time demanding for municipalities to develop more specific and innovative requirements to include in tender documents, compared to using a standardised set of requirements. This sophistication would lead to expected higher transaction costs. Also, according to Wedin (2009), it is easier for rejected tenderers to appeal the award of contracts where the requirements included are innovative. As previously described, such appeals would lead to a higher risk of transaction costs due to court proceedings.

Another example of how additional transaction costs are avoided within the eight municipalities is the lack of systematic procurement monitoring (see Table 5). The general tendency among the municipalities is that no monitoring is executed unless obvious mistakes or problems arise during specific projects. Even if the municipalities are not governed by their policy documents to systematically monitor contracts, it is still arguable that systematic monitoring of procurement, where internal municipal expertise is used, would lead to enhanced procurement practices in future projects. However, systematic monitoring of all procurement would lead to increased transaction costs. Once again, since the procurement officials argue that they are satisfied with their construction procurement practices, it is not likely that systematic

monitoring of procurement will be implemented in the municipalities unless local politicians regulate it through strategic decisions.

Politicians may adopt policies that are intended to be implemented in all levels of the municipalities. As this thesis has shown, there is a gap between the regulations in policy documents and the construction procurement practices among procurement staffs. According to the municipal policy documents, this knowledge gap is intended to be reduced through internal knowledge sharing within municipalities. However, according to the interviewees, knowledge sharing between departments is seldom executed. As can be viewed in Table 7, nine out of sixteen procurement and environmental officials believe there is a potential for better internal collaboration. The collaboration should be enhanced in order to fulfil the policies, both because the documents state that internal municipal expertise shall be used, but also due to the fact that there is a sense of potential for better collaboration among both procurement and environmental staffs. According to some politicians, the reason why internal collaboration between different departments is hard is the separation and tunnel vision within different departments. One proof of this could arguably be that Municipalities D and H, where procurement and environmental officials are most satisfied with the collaboration practices (see Table 7), both have environmental staff integrated in the on-going procurement practices.

The gap between regulations in policy documents related to internal collaboration and the actual collaboration practices can be analysed through the lens of implementation theory. In Section 2.2, implementation theory is described as a theory of deviation between the intentions of implementation of political issues and how they are actually implemented in practice (Hill and Hupe, 1997). In Figure 1, a conceptual framework adopted from Gelderman et al. (2006) of how sustainable procurement is translated into practice was presented. The first aspect of the model is perceived costs or benefits of policies. This study has shown that the benefits of MEAT are clearly not viewed by the interviewees to exceed the perceived risks of high transaction costs that MEAT entails. The second subject of the conceptual framework regards the familiarity with policies. Carlsson and Åström (2006) claim that officials in the front-line of public authorities must have access to accurate information on how to execute their jobs and make important decisions on behalf of the municipality. Municipality D is the only municipality where a procurement policy adapted for construction procurement is used. The procurement official in Municipality B claimed that a procurement policy document, adapted for construction works procurement, would be beneficial. This is in line with the statement made by Carlsson and Åström (2006).

The third aspect of the conceptual framework regards the supplier availability or resistance. Procurement on the basis of the more holistic award criterion of MEAT clearly works well for the Swedish Transport Administration (see Section 3.3). Skanska and other construction companies obviously have the sufficient competence and knowledge to meet criteria set in tender documents where MEAT is used as award criterion. Therefore, it can be argued that there is no resistance from suppliers when it comes to the implementation of policy documents in construction procurement.

The fourth and final aspect of the conceptual framework is organisational incentives or pressures. Municipality H was one of the municipalities with highest concern regarding the environmental perspective. Municipality H was also one of the municipalities that had a strong connection between their environmental and

procurement policies. The municipal assembly has a clear vision to become leading in the work of environmental consciousness. From this aspect, the top management, in this case the municipal assembly, supports sustainable procurement. However, the lowest price was exclusively the award criterion for procurement of construction works. As could be seen from Table 7, the interviewees of Municipality H think that the collaboration between procurement and environmental staffs is sufficient. One could argue that this is a result of the overall environmental consciousness within the municipality. Politicians responsible for policy documents are not intended to interfere in the actual work practices of officials. It is important to avoid conflicts of interest and biases. It can certainly be argued that this is the main difference between public actors and private organisations where top management are allowed to interfere on an operational level. Private organisations may therefore be more efficient when it comes to implementation of policies.

8 Conclusions

Due to the significant market share of Swedish construction made up by municipal clients, they have a great influence on the standards of the built environment. The construction procurement practices at the municipal level are intended to be governed by municipal policy documents. However, this study indicates that there is a gap between municipal policy documents and actual construction procurement practices. Municipal policies are intended to permeate all levels of municipal practice. However, for the eight municipalities studied, this is not the case. Politicians adopt the policy documents that municipal officials are intended to follow, without involving themselves in the implementation of the policies. The connection between municipal environmental and procurement policies is unclear. The findings of this study suggest that municipal construction procurement practices are unsatisfactory and the full potential of internal expertise among tendering contractors is not considered during the procurement process.

All eight municipalities included in the investigation use lowest price as contract award criterion for construction works. The risks of appeals from rejected tenderers when using MEAT as award criterion are considered among procurement staff to be too high. The court proceedings that such appeals entail are time consuming and lead to increased costs. Overall, the comprehensiveness of the construction procurement practices in the studied municipalities is limited. The set of mandatory requirements used in tender documents is mostly standardised and the municipalities have inadequate routines when it comes to systematic monitoring of construction procurement.

The main gap between policy regulations and construction procurement practices found here concerns the usage of internal municipal expertise. According to their policy documents, all municipalities included in the research are intended to use the internal municipal expertise in all procurement. However, the collaboration between environmental staff and procurement staff in the studied municipalities is inadequate. In most municipalities, procurement staff is responsible for the environmental requirements included in the tender documents. The competences of the environmental staff are not used by the procurement staff in accordance with the provisions in the policy documents. The main obstacle that hampers the possibilities for interdepartmental collaboration was found to be the separation between the different departments and tunnel vision. The two municipalities where environmental expertise is integrated in the on-going construction procurement practices, turned out to be more satisfied with their collaboration practices.

This investigation shows that municipalities lack full coherence between policy regulations and construction procurement practices. A more comprehensive approach of tender evaluation, where internal municipal expertise is better used, would lead to increased total value of the delivered product or service. For further research, it would be interesting to focus on the perspective of large and small municipalities and identify how this aspect separates the local construction procurement practices. Also, it would be interesting to investigate the role of the municipal chief executive regarding the implementation process of policies. This role is essential for the relation and transparency between local politicians and officials. Furthermore, a similar investigation of construction procurement practices on a national level and in the private sector would be interesting. The findings of such a study would make it

possible to identify clear examples of improvements for municipal procurement practice.

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Appendix: Questionnaires

Interview Questions – Procurement Official

Transparency Between Municipal Policy Documents

1. Do you have a procurement policy document? If so, what is its content?
2. How well do you think that the content of the environmental policy is reflected in the municipal proceedings when evaluating tenders for public procurement projects?
3. When choosing criteria/requirements for public construction projects, how much would you say that you are affected by the environmental documents of the municipality?
4. Do you evaluate previous procurement? If so, which aspects do you monitor?

Selection Criteria and the Act of Public Procurement

5. How often do you base your evaluation of contractor for public construction projects on lowest price, in relation to the economically most advantageous tender?
6. What affects your choice of contract award criterion (lowest price or economically most advantageous)?
7. When basing your selection on the economically most advantageous tender, which criteria are most commonly used and how are these weighted?
8. When competence criteria are included, how are these measured? (Through reference projects, CVs, personal meetings etc.)
9. Which are the largest problems when evaluating competence?
10. How standardised would you say that the municipality's set of criteria/requirements for contractor evaluation is? Are the criteria different from project to project?
11. Are there any criteria/requirements that you think that you may attach to much/little weight to?
12. From an environmental point of view, do you think that your procurement practices are executed in a sustainable way?

Interdepartmental work

13. Are procurement-related questions integrated at a political strategic level? If so, can you describe the collaboration with the involved politicians?
14. Have you ever experienced a conflict of interests from other entities, such as the environmental department, for example when deciding on award criterion or criteria/requirements during contractor procurement?
15. Do you feel that the interdepartmental collaboration between the environmental and the procurement staffs can be enhanced? If so, how?

Interview Questions – Environmental Official

Transparency Between Municipal Policy Documents

1. Do you have an environmental policy document?
2. How well is the content of the environmental policy reflected in the municipal proceedings when evaluating tenders for public procurement?
3. When evaluating previous procurement, do you monitor the environmental policy and requirements as well?

Selection Criteria

4. How significant influence do you and your department have on the choice of award criterion used during public procurement of contractors?
5. How significant influence do you and your department have on the choice and weighting of the criteria during public procurement of contractors?
6. Are there any criteria/requirements during the public procurement selection processes that you think that the procurement department attach too much/little weight to?
7. In a socio-economic point of view, how do you think that the Act of Public Procurement can be improved?

Interdepartmental work

8. Have you ever experienced a conflict of interests from other entities, such as the procurement department, for example when trying to influence them in their selection award criterion or requirements/criteria during contractor evaluation?
9. Do you feel that the interdepartmental collaboration between the environmental and the procurement staffs can be enhanced? If so, how?

Interview Questions – Politician

Transparency Between Municipal Policy Documents

1. What is your view on the collaboration between the environmental and the procurement staffs?
2. How well do you think that the content of the environmental policy is reflected in the municipal proceedings when evaluating tenders for public construction projects?

Selection Criteria and the Act of Public Procurement

3. Can you describe the municipality's policies when it comes to choosing contract award criterion for public construction projects? Do you most often award the contract to the tender with the lowest price, or to the economically most advantageous tender?
4. When basing your selection on the economically most advantageous tender, which criteria are most commonly used?
5. If competence criteria are included, how are these measured? (Through reference projects, CVs, personal meetings etc.)
6. Are there any criteria that you think that the municipality may attach to much/little weight to when evaluating contractors?
7. In a socio-economic and environmental point of view, how do you think that the Act of Public Procurement can be improved?

Interdepartmental work

8. Are procurement-related questions integrated at a political strategic level? If so, can you describe the collaboration between the politicians and the purchasing staff?
9. Can you please describe the cooperative relationship between the procurement and the environmental staffs?
10. What are the most significant problems when it comes to interdepartmental collaboration within the municipality?