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Implementation of Category Management in Procurement within Public Sectors

The Case of the City of Gothenburg

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Abstract

Public sectors increased their focus on procurement processes, emphasizing a strategic importance as a key enabler of business performance. Category management is recognized as a new strategic approach in managing procurement operations in order to bring value for taxpayers' money and improve overall businesses activities. However, approaches on how to implement category management in public procurement have not been fully explored yet due to special EU procurement legislation and other constraints. Therefore, the purpose of this thesis is to investigate how different public administrations implement category management in their procurement processes. This thesis is complemented by an in-depth case study of the Administration of Purchasing and Procurement in the City of Gothenburg. As there is a lack of empirical literature regarding implementation of category management in public procurement, this study contributes to filling this gap with a holistic overview that can help navigate public administrations during implementation of category management. The results, which are based on the interviews with public administrations in Malmö, Nacka and Oslo, show that despite strict procurement regulations, it is still possible to apply category management in their businesses. Further, analysis reveal that implementation of category management in public procurement is a challenging task which requires allocation of right resources and change management. However, all municipalities believe that by integrating category management it will reduce purchasing cost and improve overall performance.

Keywords: Category Management, Implementation, Public Procurement, EU Procurement Directives

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1. Introduction

The introduction sector will introduce the topic by giving a background description and then a problem description. The purpose of this study will be examined together with the three research questions in this study. Lastly, the limitations will be discussed.

1.1 Background description

For the last 30 years public procurement has changed remarkably (Keränen, 2016). There has been a shift in a traditional public procurement which has been caused by high demanding customers that led to finding effective solutions of providing public services with limited resources (Jacobson & Choi, 2008).

Public procurement is a process where governments and other bodies under public law, purchase products, services and public works (European Commission, 2019). Government should use professional standards when it spends money on behalf of taxpayers, to be able to obtain a good deal and to provide quality of goods and services (OGC, 2008). There are a lot of entities which are included in public procurement, such as stationery, utilities, power, communication and IT, cleaning and maintenance, insurance, capital expenditures and consultants. Public facilities are engaged in many business relationships and the objectives of public procurement are wide. These objectives have to deliver a vast range of public services, such as law and order, social services, health, defense, education, transport and the environment. Therefore, the scope of most public organizations is wider than for example, the scope of private sectors (Erridge, 2007).

Public procurement is a subject to special legislations in order to ensure that goods and services are purchased at competitive prices (Arlbørn and Freytag, 2011). In Europe, such legislations define requirements for public procurement (O'Brien, 2015). The objective of procurement law is to make sure that all suppliers have equal access to the market in Europe, ensuring free movement of goods, people, services and capital (EU, 2018).

In recent years, public administrations started to realize the importance of strategic role in procurement (Zheng et al., 2007). The strategic value of public procurement is seen the most when an organization shifts its focus from reactive, transactional purchases to proactive, value-based procurement actions (NIGP, 2015). The European Commission is interested in adopting a more strategic approach pointing out that there should be “greater flexibility in terms of cooperation between purchasers and suppliers” (EU, 1998).

Category management is one of the strategic approaches which is used to ensure savings, contributes to improving supplier performance, drives innovation and constant improvement (GEP, 2019). While private sectors started to implement category management since many years ago, public entities seem to be far behind (O’Brien, 2015). O’Brien (2015) points that commercial awareness is “often lacking” and the drive to succeed dulled through years of “unimaginative and ineffective practice” (Supply management, 2010).

“If there is the will, results-driven procurement based on a category management strategy can be learnt and put into effect. The key to success is for public sector organisations to take a different view of what excellent procurement means in practice,” O’Brien.

In this thesis the authors analyze the pilot study of category management implementation for the Administration of Purchasing and Procurement of the City of Gothenburg and then compare with other public administrations. The thesis begins with a problem description that focuses on the complex and strategic approach of public procurement in the City of Gothenburg. In the end of this part the authors formulate the purpose of the study and research questions. To answer research questions the paper is structured as follows.

Firstly, the next section summarizes the literature from different sources of public procurement and its strategic approach, focusing on category management in procurement. Secondly, the research model is proposed by researchers. Thirdly, the following section elaborates upon the methodology that was used in this study. Fourthly, a description of the case study and a brief introduction to the case is given. Finally, the findings of the case study and interviews from other cities are listed in the analysis, whereas the subsequent section discusses the findings and

compares them to the literature. The paper then concludes with a summary of the main findings, implications for practice and research, as well as future research.

1.2 Problem description and analysis

There are a lot of studies related to the strategic importance in purchasing for private sectors, however a few studies address research to public procurement. Public procurement has been overlooked by a research area. Therefore, it is always a challenge to find a good number of research papers (Thai, 2009). Matthews (2005) made a statement on why there is a lack of literature regarding public sector:

“Despite the history of government purchasing and its evolution over the last three centuries, it has still not been completely embraced by the academic community as a formidable player within public administration” (Yagoob & Ting, 2015).

The lack of empirical research and the as yet not fully explored role of strategic public procurement help to motivate the current study.

Municipalities in Sweden are legally responsible for childcare, primary and secondary education, care of elderly, social services, water supply, public transports, infrastructure and rescue services. Most of the municipalities' income is collected from the inhabitant's income tax (The City of Gothenburg, 2019). The public sector in Sweden spends approximately SEK 625 billion on purchasing goods and services annually (The Swedish Competition Authority, 2019). Therefore, efficient public procurement is very important and strategic approach is crucial, as it offers great savings and justify citizens' expectations (Government Offices of Sweden, 2019).

This thesis is supported by the Administration of Purchasing and Procurement of the City of Gothenburg. Today, the City of Gothenburg focuses a lot on its procurement function and sees it as a core activity, however it has not always been like that. According to internal data, the shift occurred a few years ago when the municipality faced corruption problems. In order to mitigate corruption, the municipal executive board realized that they would need to bring changes in the organization and improve purchasing processes. (The City of Gothenburg, 2018)

In September 2018, the city council, together with the city executive board, established new guidelines and goals for the Gothenburg municipality's purchasing and procurement processes. The aim is to increase the municipality's coordination which will boost quality of goods and services at the same time reducing costs. To consolidate these goals, the Administration of Purchasing and Procurement has established a strategic purchasing department.

Currently, the newly established department is doing a pilot study of category management implementation in purchasing processes. Implementation of category management is one of the defined and main areas in the coming years for the strategic purchasing department in the City of Gothenburg. Implementing category management, would give flexibility in a short term and opportunities to develop the city in a sustainable and innovative way in the long term. The division of goods and services into categories based on the supplier market will enable a good management and market knowledge. Category management would further ensure that all resources are used in an efficient manner. Last but not least, it would help to reduce cost of purchased goods and services through good governance and fact-based analysis. (The City of Gothenburg, 2018)

Implementing category management can be challenging, as public procurement has complex processes and a body to special procurement regulations, which could be seen as a constraint (Banfield, 1999). Additionally, category management is a long-term process and requires professional trainings (O'Brien, 2015). Therefore, the City of Gothenburg aims to investigate other municipalities, which have already implemented category management in their purchasing processes and hope to gain valuable insights.

1.3 Purpose of the thesis

The purpose of this thesis is to investigate how different public administrations implement category management in their procurement processes. This leads to the following three research questions, which will be discussed and answered in this thesis:

Research Question 1: How are strategic procurement processes organized within public administrations?

Research Question 2: How do public administrations work with categorization of goods and services?

Research Question 3: How do public administrations measure the procurement performance?

This thesis aims to find success factors from other municipalities that might contribute to a pilot study of the implementation of category management for strategic purchasing department in the Administration of Purchasing and Procurement, in the City of Gothenburg. The authors have been provided with contacts from public administrations in Malmö, Nacka and one of the cities in Norway, Oslo. To conduct the analysis, the authors will follow the existing relevant empirical literature and findings from the interviews with Malmö, Nacka, Oslo and Gothenburg. In the end of the study the authors hope to find the best practice on how to successfully implement category management in procurement processes that could serve as a benchmark for the Administration of Purchasing and Procurement in the City of Gothenburg.

1.4 Delimitations

The initial plan was to interview different public administrations in various municipalities throughout Europe and compare them to the City of Gothenburg in order to get a broad perspective. Unfortunately, the authors of this thesis could only receive contacts with three municipalities: Malmö, Nacka and Oslo. Nacka municipality is relatively small municipality in comparison to the City of Gothenburg, therefore a lot of processes might not be applicable for a big municipality, like Gothenburg. Some interviews were held in Swedish and a lot of additional materials, such as policies, strategies and presentations, were also in Swedish or Norwegian languages and since only one of the authors of this thesis speaks Swedish, it took extra time to translate and transcribe all the materials and interviews into English.

2. Theoretical framework

The literature review provides an overview of the current concepts and knowledge existing in the field of public procurement and category management. It is important to specify that the objective of this study is to map the current phase of a research topic with a scarce practical base. Therefore, the literature review aims to find not only good or bad but all possible practices, so that the interview guide could be as completed as possible.

2.1 Public procurement

Public procurement is a process where public administrations purchase goods, services and works from companies (Araujo, 2016). In some sectors public administrations are the primary buyers, for example in health or education services, energy, transport, etc. Public authorities spend approximately 15-20% of global GDP on the purchase of goods and services (European Commission, 2019). Public procurement plays especially important role in developing the international market within the EU, spending up to 2400 billion in 2010 (van Weele, 2018).

Further, public procurement consists of a big proportion of the public expenditures and it is important for public administrations to ensure cost efficiency. A changing environment in terms of new emerging technologies, increase in product options and complicated procurement processes and methods describes the working environment for public procurers. Further, public procurement can be used as a policy tool for areas such as sustainability, different innovations, social aspects, small and medium sized enterprises (SME) and support local department (Gelderman et.al., 2017).

Additionally, public procurers must observe special rules such as the EU procurement legislation and other national regulations which procurers working for the private sector do not need to follow. In other words, public sector needs to be efficient in order to obtain value and save tax money and at the same time fulfil political goals from the taxpayers, interest groups and the public management team (Gelderman et. al., 2017).

2.2 Public procurement law

Public procurement law is the body of rules that governs public authorities by regulated entities and formally regulate how to deal with suppliers and how to award public suppliers (Schebesta, 2016, van Weele, 2018). The objective of public procurement law is to make the European market fair in terms of dealing with public contracts, making sure that public contracts are accessible to all interested parties (European Commission, 2018). Through the years, it was obvious that governments were breaching principles when awarding contracts by protecting national interests. In order to prevent this violation, the first EU Directives were established in the early 1970: “Works” and “Suppliers”, followed by “Services” and “Public Utilities” in 1990s. (van Weele, 2018). According to the European Commission report, introduction of the Directives have contributed in creating the procurement process in Europe fairer, transparent, open and efficient, which led to increasing trust in public administrations (European Commission, 2019). These initial directives were constantly reviewed and later replaced by four new EU Directives:

1. **Directive 2014/24/EU** on public procurement;
2. **Directive 2014/25/EU** on procurement by entities operating in the water, energy, transport and postal services sector;
3. **Directive 2014/23/EU** for the award of concession contracts;
4. **Directive 2014/18/EC** on defence and security

These new directives aim to give more flexibility, enough consistency and applicability of long-term framework agreements. All EU countries have to implement these EU Directives into national legislation (van Weele, 2018).

When evaluating the impact and effectiveness of procurement legislation it shows that EU public procurement Directives have assisted in establishing a good culture of transparency and outcome-driven procurement in the EU. It positively affected competition for public contracts, reduced cost and improved the quality of procurement (European Commission, 2018).

Swedish Procurement legislation

Swedish procurement legislation is based on EU Directives in regard to public procurement. It assures free movement in the market when making purchasing and the principles of equal

treatment, non-discrimination, proportionality and transparency must be followed (Government Offices of Sweden, 2019).

In Sweden, public procurement is regulated by the Public procurement Act, the Utilities Procurement Act, the Act on procurement of Concessions and the Defence and Security Procurement Act (Government Offices of Sweden, 2019).

The National Agency for Public procurement provides support and guidance to public authorities, suppliers and other public procurement actors. The main goal is to ensure that public procurement is done in socially and environmentally sustainable way to guarantee the benefits of the society and participants in the market (The National Agency for Public Procurement, 2019).

The supervision of public procurement is carried out by the Swedish Competition Authority. Some of the supervisory activities include reviewing, investigating adopting decisions whether contracting authorities or entities have followed the procurement regulations. The prioritization of supervisory activities is given towards illegal direct award of contracts (Swedish Competition Authority, 2019).

Norwegian Procurement Legislation

Norway is a member of the European Economic Area (EEA) and has implemented the EU Directives into national law. Public procurement in Norway is regulated by the Public procurement Act, supported by the Public Procurement Regulation; the Utility Regulation, which are applicable to contracting entities that follow activities in the water, energy, transport and postal services sector; the Defence and Security Regulation; and a regulation Concessions Procurement (International Comparative legal Guides, 2019).

2.3 Organizational structure within public procurement

In general, an organizational structure can be seen as subsystems of different dealings, processes, authority and status. A structure can be used in order to determine how effective a decision-making unit is, looking at transaction cost and problem solution. (Laios and Xideas, 1994)

The purchasing organization structure can vary depending on different factors such as the situational and the characteristics of the business. Large companies often have separate

departments for buying certain important products and in smaller companies they often have only a general manager with that task. (Van Weele, 2018)

The organizational structure for purchasing can be divided into three main groups: centralized purchasing structure, decentralized purchasing structure and hybrid purchasing structure (McCue and Pitzer, 2000). The centralized purchasing structure is characterized by a central purchasing department where all decision regarding suppliers and production specifications are being made. They often use long-term contracts and the main advantages with a centralized purchasing structure are the standardization of products and suppliers. Further, better coordination when negotiating regarding quality, price and cost etc. (van Weele, 2018). Since decisions, coordination and other processes are being made from the top down, a centralized structure could limit the flexibility within the organization (McCue and Pitzer, 2000).

In a decentralized purchasing structure, managers responsible for their own purchasing activities and results, which can create disadvantages when different managers within the same company are competing for the same suppliers. A decentralized purchasing structure could according to Van Weele (2018) be beneficial for businesses where the products are unique and different from each other. Further, a decentralized structure can be seen as more flexible and responsive towards the market due to employers being more empowered to buy according to their demand without too many governances from the center led procurement authority (McCue and Pitzer, 2000).

In order to minimize the disadvantages and utilize the benefits from each two structures, a combination of the two structures has been created (McCue and Pitzer, 2000). The hybrid structure is a combination between centralized and decentralized structures where the contracts can be made in coordination with committees between different managers and units as an example (Van Weele, 2018). The main challenges of a hybrid structure are to find the right level of flexibility respective accountability and control (McCue and Pitzer, 2000).

Furthermore, Van Weele (2018) argues that it is on the top management level that determines where the location of purchasing is in the organization. If the organization sees the purchasing activity as a core value and more strategic activity, it is further up in the hierarchy and vice versa. A core value is when the purchasing share is large in the end-products price (Van Weele, 2018).

The purchasing tasks can be divided into three levels: on top is the strategic level, then it is the tactical level, and, in the bottom, it is the operational level. The strategic level is characterized by top management and long-term decisions regarding major investment, policies and sourcing strategies. The tasks and responsibilities in the tactical level are more how purchasing department functions and how it affects the product, processes and supplier in the medium-term, often from one to three years. Finally, the operational level cover tasks related to daily decisions such as the ordering processes for example. (Van Weele, 2018)

According to Laios and Xideas (1994), the main difference between private and public purchasing structure is that it is hard to see the output-income in the public structure, since it is driven by socio-economic terms and their mission of providing the public with services and facilities. It is more often unique and specialized products and services in the public sector than in the private sector. Further, since the public purchasing organization must follow the procurement law, they have less discretion in their procurement than private companies (Laios and Xideas, 1994).

2.4 Category management

Category management originated in the world of retailing. Previously, this strategic approach was often used in private companies, however today many organizations apply category management in their procurement operations. (O'Brien, 2015; van Weele, 2018)

Category management is a process where different activities are successively adopted in order, with starting point and end time. Some activities could be adopted simultaneously whilst other sequentially which means that they must be finished before starting with the next activity. However, the implementation of category management will never attain full perfection, therefore it should be seen as a circular process which could always be improved, see figure 1. (O'Brien, 2015)

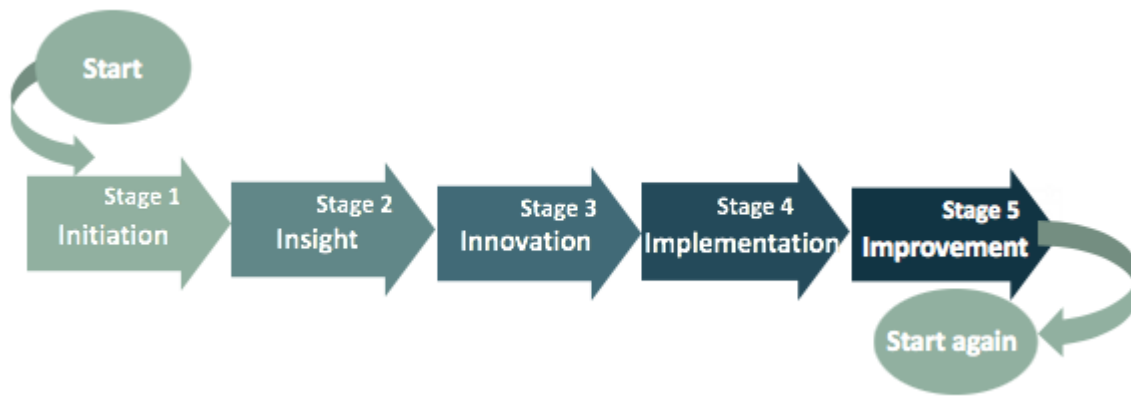


Figure 1 – Five stages within category management. Source: O’Brien, 2015.

Above figure shows that there are five stages within category management. The first stage is the initiation stage. The purpose of this stage is to start the process by establishing the cross-functional teams, the scope of the categorizations and to set up different kind of goals. Further, different analysis, plans, business requirements and project time planning are being made. (O’Brien, 2015)

The second and most important stage is insight. Within this stage valuable data is gathered, which can affect the whole strategy. These data include general data, market overview and trends, sector and category-based market information, financial data, commodity intelligence and company information. After gathering all necessary data, category team makes price/cost analysis and analyze the external environment to determine the strategy. (O’Brien, 2015)

The third stage is innovation, where different solutions and strategies are being made, from the output of the data gathering in the previous stage (O’Brien, 2015). The fourth stage is the implementation of the strategy. It consists of three steps: planning, execution and contracting. Together all of these steps are often the most time-consuming processes within category management (O’Brien, 2015).

The fifth and the last stage is improvement. The purpose of this stage is to see how the implementation works and how to improve it. In this stage the supplier management review is being conducted in order to make continuous improvements. (O’Brien, 2015)

According to Zorica et al. (2012), there is a set of different methods and analysis that could be used within stages. For example, to analyze external market, organizations commonly apply PESTLE analysis. It stands for Political, Economic, Sociological, Technological, Legal and Environmental. In category management this analysis is a valuable tool which helps to better understand the market, issues, trends and risks. Additionally, PESTLE tool can also to identify both future opportunities and possible risks which could be eliminated (O'Brien, 2015).

Another method that could be used for analyzing external environment is through the understanding of competitive market, using Porter's five forces model (O'Brien, 2015). This method assists to understand and evaluate competitive forces within a company and the supplier's company. After understanding the current position of a company and between these forces, it will serve as valuable insights on how to implement a good strategy (Tomingas, 2016).

2.5 Implementation of category management in public procurement

The purpose of implementing category management is to obtain economies of scale by pooling purchases (Heikkilä & Kaipia, 2009). It is a key enabler to achieve savings and overall performance improvements (O'Brien, 2015).

While private sectors began to apply category management in their purchasing practices long time ago, the public sector seems to lag behind (McKinsey, 2009). Banfield (1999) states that one of the reasons why category management is not commonly used in public administrations is because they constantly facing strict rules that limit their activities, even if it is modern and innovative (Banfield, 1999). However, O'Brien (2015) states that category management principles are as relevant to public sector as to private corporations and EU Procurement Directives does not restrict best-practice procurement but seeks to find a balance in good procurement with a greater social and country progression. The author convinced that it is possible to deliver high quality procurement whilst following public procurement regulations.

Further, the EU Procurement Directives can have negative implications for the development of the buyer-supplier relationship and procurers are likely to experience difficulties in managing cooperative and strategic relationship with their suppliers (Bourbita, 2017). Any engagements with suppliers should be, without exceptions, the same with all other suppliers. Since suppliers'

engagements cannot be done at any stage in public sector, it is a must to be clear and precise about organizational purchasing needs before approaching the market. O'Brien (2015) suggests using more time early on sourcing strategy, like analyzing internal needs, and then shape activities on tendering and contracting. The precise requirements will help to find the best suppliers without excluding anyone (equally distributing among interested parties) (O'Brien, 2015).

2.6 Categorization

A category classification is an important and crucial strategic approach in procurement in any organization (Trautmann et al. (2009). Arjan J. Van Weele identifies a category as a group of products and services that are purchased from the market and offered to its customers or that are used by a company (van Weele, 2018).

In order to identify categories of products and services an organization has to perform a spend analysis, company's purchasing spend per type of the purchase, per supplier and per budget, shown in figure 2. This analysis will assist in building a category tree, showing most important spend of the company or spend segments (van Weele, 2018).

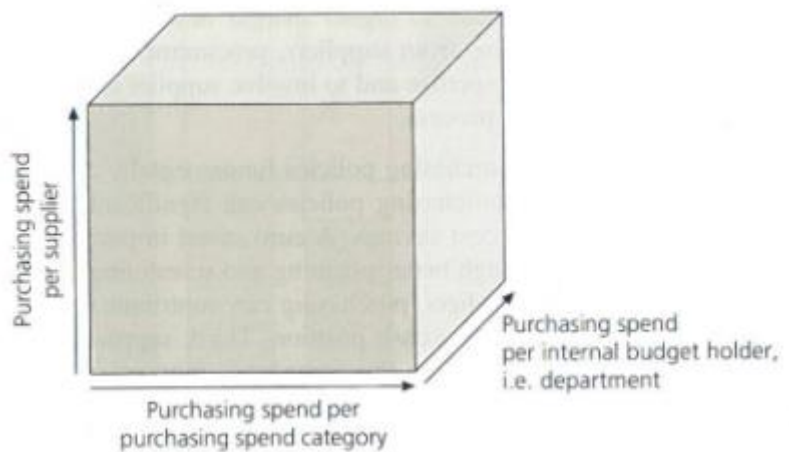


Figure 2 - The purchasing spend cube. Source: Arjan J. Van Weele, 2018.

However, O'Brien (2015) argues that there are just a few large corporations that managed to have a single fully integrated information system. Furthermore, if the data available for the spend analysis, the breakdown may be not suitable; for example, what kind of products suppliers provide, therefore it makes difficult to categorize products in detail (O'Brien, 2015).

Moreover, it is especially complex for many decentralized purchasing organizations to get a picture what is bought at different business units (Trent & Monczka, 2003).

All the categories should be prioritized on the basis of their cost-savings potential (van Weele, 2018). The author suggests Category Prioritization Matrix according to figure 3 as a common method of categorization. According to this matrix, projects can be classified into different “waves” for purchasing managers to set up short-term saving projects (van Weele, 2018).

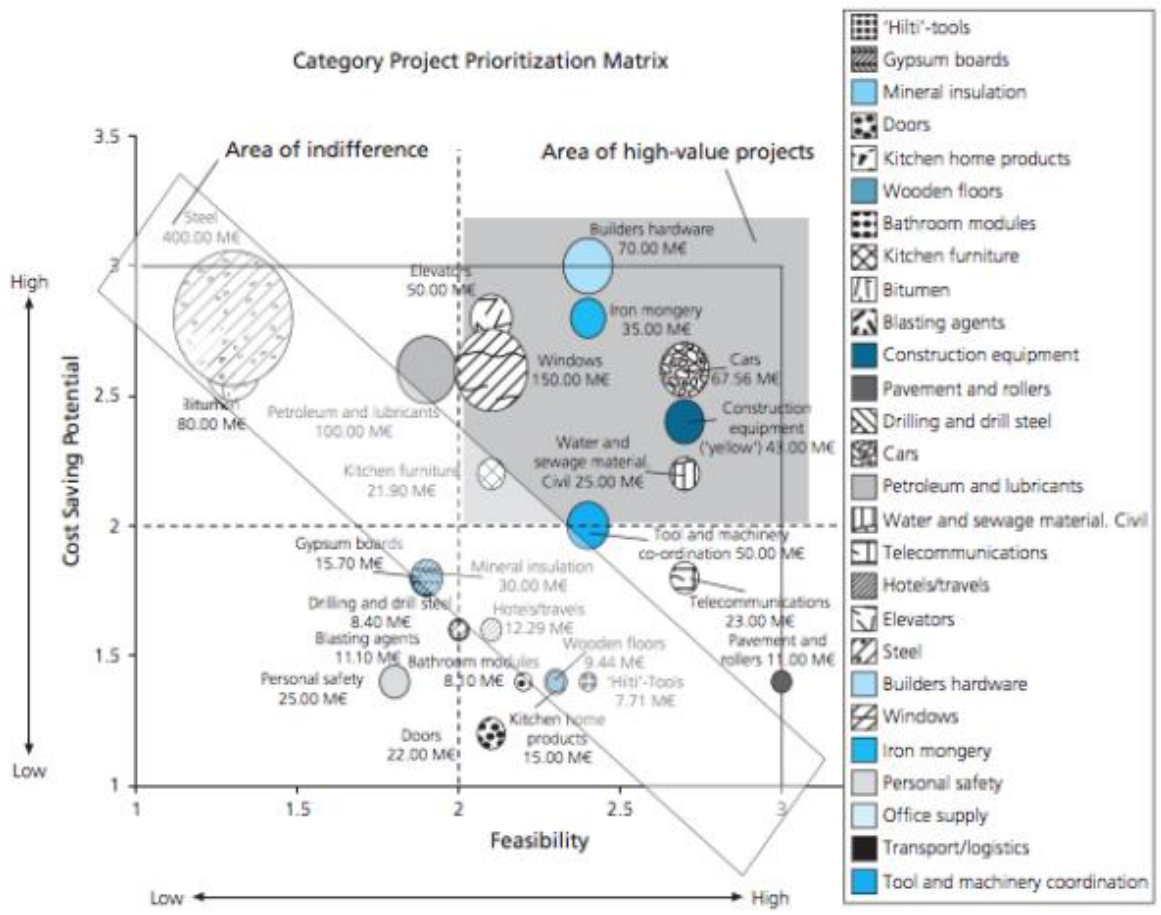


Figure 3 – Category project prioritization matrix. Source: Van Weele, 2018.

O'Brien (2015) suggests using Pareto principle when segmenting categories. The principle is when 80 percent of spend is usually 20 percent of suppliers, and 20 percent of spend with 80 percent of suppliers. So, the 80 percent of spend would be a primary focus for segmentation. The author further classifies the total spend into three groups: categories, non-addressable and rest of the spend (O'Brien, 2015).

Another way of prioritization proposed by O'Brien (2015) is to make an opportunity analysis in order to identify those categories where an organization should put more effort. It is not a very detailed method but rather a macro-level activity. Nevertheless, the output of this analysis will assist to quickly classify categories in terms of prioritization. The same as categorization matrix, opportunity analyze will help to identify possible savings by reducing the price and cost (O'Brien, 2015).

2.7 Sourcing team compositions

Cross-functional sourcing teams seen as a useful coordination technique to organize company's procurement activities (Dridonks, *et. al.*, 2013). According to Jonathan O'Brien (2015), one of the key factors that requires for implementation of category management is a formation of cross-functional teams. The author believes that it is most beneficial when cross-functions work together to define and implement new achievements in sourcing strategies. Cross-functional team consists of representatives from various functional areas related to a category and led by a category manager to achieve a common goal (Webber, 2002).

Main tasks that are executed by the cross-functional team are communicating achievements; defending breakthroughs; finding information, etc. It is very important to choose the right team members, as it is key principles for category management. There is no universal category management process, and some organizations create teams in the end of the project and others in the beginning, however it is highly recommended to set a team in the beginning of the project (ProcurementAcademy.com, 2013).

The empirical literature points out that there are many challenges in implementing cross-functional teams (Dridonks, *et. al.*, 2013). First, when procurement function asks people from various department to participate in category management project, they are quite reluctant to contribute their time. Implementation of category management is a long-term process and the results are not seen as fast as team members would expect. To overcome this issue the executives board should assign cross-functional team in order for it to work and hiring a category manager would play an essential role (O'Brien, 2015).

Second, even after implementing cross-functional teams, members might lose cohesiveness after beginning of the project (Johnson & Leenders, 2004). Kaufmann and Wagner (2016) state

that one of the reasons can be differences in goals which can lead to tensions and decrease effectiveness of the team's performance. The authors argue that it can happen especially when team members come from various departments (e.g. purchasing, logistics, production, R&D, etc.) with different expertise, decision making styles, personalities and emotions. In one of the research papers by Man and Lam (2003), authors propose that cohesiveness is related to the pursuit of common goals and objectives. Therefore, it is important that sourcing teams clearly understand all benefits of the category management and work together through the whole project. In this case members who collaborate together, exchange advices and share perspectives with each other can reach cohesiveness (Van Woerkom and Sanders, 2010).

Further, in the beginning of implementation of category management it could be difficult to understand this concept. Therefore, it is recommended that cross-functional teams obtain special training, and it is crucial to undertake it in the very beginning (O'Brien, 2015). According to Bailey et. al., (2008), to gain the best impact through the use of commercial best practice, those who is responsible for the strategic direction and practical application of procurement operations need to obtain professional training and education.

2.8 Performance measurements

Public procurement contracts represent a big share of any country's GDP (Sigma, 2011). A substantial amount is spent on public procurement, it accounts around EUR 2 trillion per year, representing 14% of EU GDP (European Commission, 2017). This expenditure can be a subject for analyzing the public procurement performance. The primary goal of governance is to assure efficiency and “value for money” in the use of public funds while complying with EU requirements and national laws and policies. Performance measurement is used to evaluate if public procurement system and operations delivery in accordance with main objectives (Sigma, 2011).

One of the performance measurements that public sector focus on is benchmarks. Benchmarks are important because it enables the achievements of better results in public procurement. Benchmarking in procurement aims to measure a supplier performance in terms of price and time delivery. (Tudor, 2005)

Another measurement according to Van Weele (2018) is supplier performance that can be measured through operational measures - price, supplier quality, delivery reliability and invoice processing; and through strategic measures – company's satisfaction working with a specific supplier and vice versa. O'Brien (2015) points out that within category management it might be valuable to measure the supplier's performance relating to their ongoing supply of the goods and services within the category and to measure supplier relationship. However, then the author claims that within public procurement to achieve this, might be not very easy, since public sectors should be complied with legislative provision.

Further, according to O'Brien (2015), key performance indicators (KPI) should be easy and simple to measure. They should also be simple to understand, and they should give feedback in order to improve performances. Helmold and Terry (2016) argue that KPI should be formed and chosen based on what is important to measure for each department and organization. For example, KPIs within supply management could be customer orders, cost, customer satisfaction, quality, people relationship and customer fulfilment. Further, KPIs can be defined and chosen using a balanced scorecard (Helmold and Terry, 2016).

A balanced scorecard can consist of different KPI's, for instance: reduction in cost, total spend, cost savings, procurement operating cost, return on investment, seller defect percentage, client contentment, lead time for procurement, obtaining feedback from sellers and productivity in purchasing (Helmold and Terry, 2016). O'Brien (2015) claims that an overall balanced scorecard can gather all different KPIs and together they can be weighted in a scoring system which then can be used when comparing different suppliers.

3. The research model

The research model, see figure 4 below, is based on the literature review where O'Brien's (2015) five stages of category management have had a great contribution in building the model. The authors of this thesis have identified three factors within the five stages: organization, categorization and measurements, which have helped to understand the concept of category management. These factors also helped the authors to formulate the research questions and create the interview guide in order to gain an explorative approach. Additionally, the research model could cover the important processes of category management while investigating strategic procurement in public administrations.

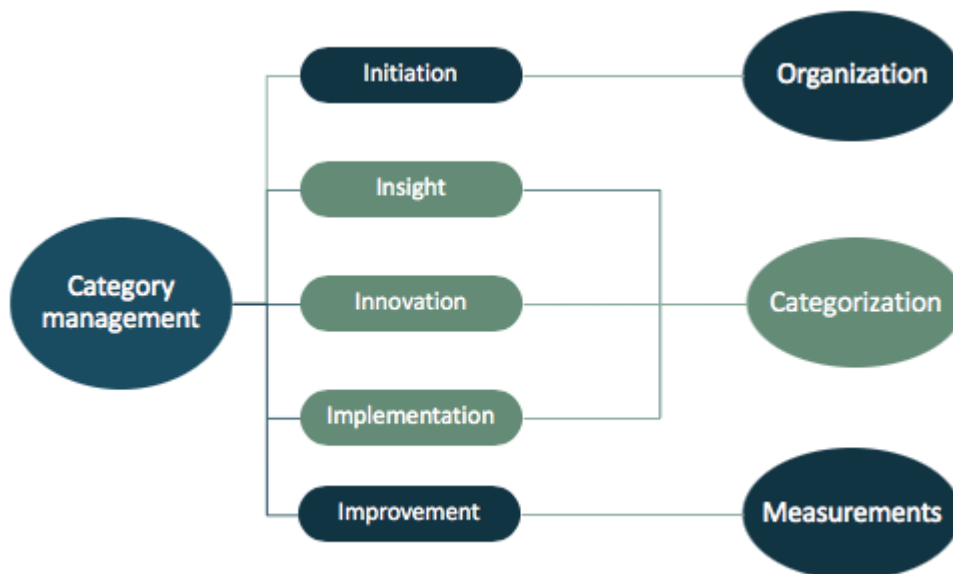


Figure 4 – The research model. Source: Authors.

4. Methodology

This section develops upon the methodology used to conduct the thesis. Saunders, Lewis and Thornhill (2009) propose the research onion: “as a way of depicting the issues underlying your choice of data collection method” (see Figure 5). The six layers of the research onion are further discussed below and appropriate approach to each is specified. In the final subsection, the reliability and validity of the research are discussed.

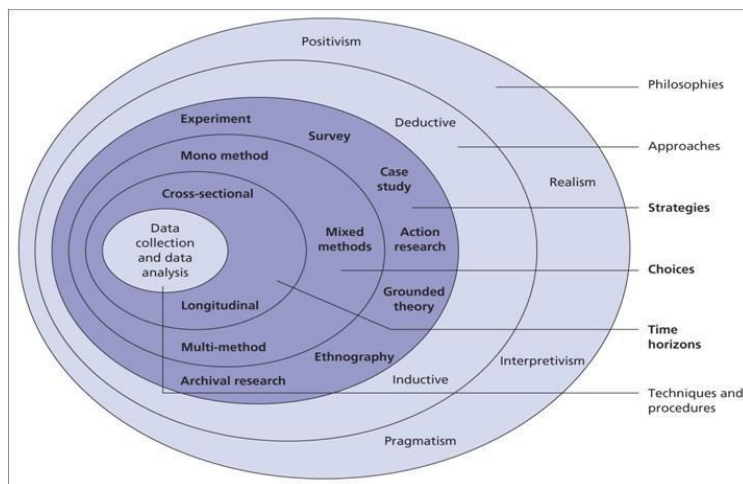


Figure 5 – Research Onion. Source: Saunders, M., Lewis, P., & Thornhill, A. 2009.

4.1 Research paradigm

Positivism and interpretivism are two paradigms that researchers adopt to establish a study (Yin, 2018). Positivism is useful in particular to a natural science, since it can quantify a reality. The positivism approach imposes grounded theory, and is therefore associated with quantitative studies, such as statistical analysis. Interpretivism on the other hand is useful for qualitative studies since it can interpret non-numerical data (Collis and Hussey, 2014; Flick 2014).

Due to lack of numerical data in this study, a positivism paradigm was not appropriate to fulfil the purpose of this study. As the interpretivist paradigm allows gaining rich insights into complex situations, this is well suited for a research conducted using a case study. Further, Yin (2018) claims that using a case study are suitable when using research questions which focus on the aspects: how and why. Since the research questions in this thesis aims to investigate how other public administrations organize their strategic processes compared to the City of Gothenburg it can be argued that a case study is suitable for this thesis.

An interpretivist paradigm was chosen and adopted to fulfil the purpose and answer the research questions in this study. Since an interpretivist paradigm will be used, it is important that the researchers of this study reflect on their own subjective impact on this study in order to minimize their own thoughts in this study.

4.2 Research Approach and Composition

Inductive and deductive are two research logics according to Collis and Hussey (2014). The difference between the two research approaches are that the inductive research based on the theory of the empirical observations and the deductive research has already a theory which can be confirmed or denied by the empirical findings (Collis and Hussey, 2014).

In order to gain understanding on how public administrations in cities and municipalities work with public procurement, both an inductive and deductive approaches were used. When both of the approaches are being used it is called an abductive approach (Bryman and Bell, 2015). The fact that there was lack of previous empirical studies regarding category management in procurement within public sectors an inductive approach could help to create a theory which could be approved by the empirical findings from this study. However, the researchers of this study were investigating some previous research within the field before collecting data which can be seen as a deductive approach. When the two approaches are combined, it can be argued that an abductive approach was used.

A qualitative method has been adapted in this study, this is as mentioned earlier in the 2.1 subsection about the research paradigm, associated with an interpretivist paradigm. A qualitative method is used when doing interviews, observations and text analysis in order to collect and handle the empirical data and to investigate and understand certain phenomenon. A quantitative method on the other hand is used when using numerical and statistical data to utilize it and then analyze it. A qualitative method on the other hand is more explorative where it can explore new approaches where there is a lack of knowledge within a certain field (Yin, 2018).

4.3 Data collection and procedures

4.3.1 Secondary data collection

Theoretical findings were collected through an open search literature, in order to write a theoretical framework. The main database that was used is Gothenburg University Library.

This database contains more than 12000 journals as well as the discipline Business and Supply Chain Management that this paper is focusing on. Other journals not included in Gothenburg University Library Databases were also considered in this research. The key term “category management” in the title, abstract or subject was used to search an initial list of articles. Articles written in English and Swedish were searched for and no limits on the year of publications were set. For the initial search, only peer-reviewed articles were included which resulted in finding several journals, such as e.g. European Procurement & Public Private Partnership Law Review, Public Procurement Law Review, SIGMA Public Procurement Briefs. Initially the search resulted in a list of around 165 articles. In order to identify whether the articles’ main topic was about public procurement, the abstracts were read, and the initial selection was made.

4.3.2. Primary data collection

In order to increase deep insights of public procurement and reasoning behind decisions of implementing category management into procurement processes, as well as to allow for the explanatory nature of this study, qualitative data was collected. Semi-structured interviews were conducted, which allow authors to examine answers of the interviewees to understand the meaning and possibly open up new areas that were previously not considered (Saunders et al., 2009) or may not need to ask all pre-prepared questions as the interviewee might give the information answering another question (Collis and Hussey, 2014).

There are different methods to conduct interviews as it depends on the size of the study, location and time constraints (Collis and Hussey, 2014). The interviews with the city of Gothenburg were held face-to-face in the workplace while interviews with Malmö and Nacka municipalities were held via telephone, as it reduces traveling cost at the same time allowing personal contact (Collis and Hussey, 2014). Lastly, the interview with Oslo was conducted in a form of electronic interview via e-mail, as the quality of responses is the same as conducting interviews by more traditional methods (Lokman I. Meho, 2006).

Further, where possible, documentation of statements made in the interviews was requested, such as category management implementation plans, procurement strategy, in order to verify the empirical findings of the interviews. This technique is in line with the interpretivist approach, as main reasons behind strategic public procurement can be understood. The interviewees were chosen based on general knowledge of strategic procurement processes as

well as the specific knowledge of their responsibility areas. The thesis is based on in-depth interviews with the purchasing managers and directors of several different sized cities in Sweden and Norway. Moreover, these interviewees were all directly involved in either developing or implementation of category management and were part of the decision-making process. A total of nine actors were interviewed from different cities, and an overview of the interviewees' job titles and area of work can be seen in table 1.

Respondent	Position	City	Experience	Interview Method	Date	Duration
Carin Bergdahl	Deputy Manager of the Administration of Purchasing and Procurement	Gothenburg	6 years	Face-to-face, recorded	13/03	00:29:07
Åsa Bergman	Head of Strategic Purchasing Department	Gothenburg	9 months	Face-to-face, recorded	18/03	00:38:20
Gabriella Manieri	Procurement Manager	Malmö	6 years	Phone call, recorded	19/03	00:43:59
Linda Nilsson	Manager of sustainability department	Gothenburg	9 months	Face-to-face, recorded	29/03	00:28:52
Signe Anette Odden (P1)	Advisor to contract management, strategic sourcing	Oslo	-	E-mail	03/04	-
André Joachim Frank (P2)	Procurement advisor	Oslo	-	E-mail	12/04	-
Ola Hope (P3)	Team leader strategic sourcing and contract manager	Oslo	-	E-mail	12/04	-
Sebastian Nordgren	Purchasing manager	Nacka	3 years	Phone call, recorded	16/04	00:32:28

Table 1 – Interview overview. Source: Authors.

To allow the interviewees some time to prepare, the interview guide which included the main questions was sent before the primary interview. This was sent together with a short summary, purpose and intention of this research study. The intention of this was to increase the credibility of the interviewees as well as to boost the validity and reliability of the research, further discussed in the next sections. The follow-up questions, however, were not revealed to the interviewees in advanced, as this could have increased bias and given the respondents time to

prepare for some “provocative questions”. The interview guide together with follow up questions that were used during the interview, can be found in Appendix 1. Finally, all interviews, except the City of Gothenburg, were conducted in Swedish or Norwegian languages. For this reason, authors had to translate and transcribe recorded interviews into English.

4.4 Reliability

To ensure that future study research can replicate the finding of this research, measures to secure reliability were undertaken. In order to reduce the participant bias, external and internal confidentiality was assured before the beginning of the interview to create an open atmosphere. Moreover, semi-structured interviews were conducted, which gives flexibility for the authors in terms of following up on a specific question or eliminating it. It also aims to encourage the interviewee to talk more in depth about the main topic (Collis and Hussey, 2014). During the interview questions were open and non-confrontational and were aimed at creating a level of trust with the interviewees.

Furthermore, in order to prevent the interviewer error, the questions were always prepared in advance and both researches were present at all interviews. During each interview, one researcher was the main interviewer responsible for making sure that the main questions were covered, whilst the other would act as a scribe and ask follow-up questions. The roles were switched, so any personal bias in asking questions could be reduced. In addition, the questions in the interview guide were designed for open-ended answers to ensure comprehensive answers from the interviewees (Collis and Hussey, 2014). Probing questions were included as follow-up questions in the researches’ internal interview guide to secure that the interviewees broadly elaborated on questions. These follow-up questions were asked extensively to ensure full understanding and to minimize any assumptions made by the researchers.

Furthermore, an interview log was kept during the interviews, which included the objective of the interview as well as any documentation that was promised to be sent to the researchers. This log was discussed after every interview and any missing answers to the objective of the interview were noted and followed up over mail. Finally, to minimize interviewer bias, all interviews were recorded to direct the researchers’ full focus on listening and questioning the interviewees (Sounders et al., 2009).

After the interview, the main interviewer would transcribe the interview. The transcription would then be compared with the scribe's notes to determine if any misalignment took place. If this was the case, both the notes and the recording were checked and if necessary, clarification was requested from the interviewee over email. Furthermore, as any mentioned documentation was requested after the interview, assumptions and bias could be reduced. Finally, in the analysis, quotes from the transcribed interviews were used to allow to further diminish the subjective bias of the researchers.

Nevertheless, maximizing reliability is not the aim in single case studies, as complex and dynamic circumstances have to be investigated (Marshall & Rossman, 1995). Therefore, using semi-structured open-ended interviews provides the flexibility of analyzing these circumstances. However, by having a systematic approach in setting up the literature review, contacting interviewees the same way, sending out the interview guide prior to the interview, keeping an interview log and ensuring comparing answers with the requested documentation, if necessary, the researchers believe that rigor was created. This allows for an understanding of the processes in this study and for possibly re-analyzing collected data (Saunders et al., 2009).

4.5 Validity

Validity refers to whether the study is measuring what it aims to measure (Collins and Hussey, 2014). Internal validity is concerned with whether the empirical data can be used to generate the drawn conclusions. First, interview statements were checked by requesting documentation to support these claims. Second, follow up questions were asked on any ambiguous statements during the interview or later via emails.

External validity is related to what degree the results of the research are generalizable to other contexts. As a qualitative case study was conducted, the degree of statistical generalizability is limited.

Furthermore, as the research is based on a single study, universal applicable results cannot be claimed (Yin, 2014). However, according to Guba and Lincoln (1982):

“The aim for single case studies should not be generalizability but gaining situated meaning-making”, Guba & Lincoln, 1982.

Nonetheless, rigor can be created to allow for possible replication of the research findings, which can generate analytical generalizability (Yin, 2014). This will allow the current research to be a starting point for future research and to allow testing of the research propositions in other contexts. To provide increased generalizability, it will require involving additional factors within the same and other contexts, as well as verifying current study with future qualitative studies.

4.6 Ethics

Bryman and Bell (2015) claim that an ethical approach should be conducted when doing a research study. Therefore, those four criteria have been conducted in this thesis: information, approval, confidentiality and the use of information. Every participant was informed before the interview about the purpose of this study and also how long it would approximately take. Every participant has approved to be part of this study and no one has been forced to it. Further, everyone had the possibility to remain anonymous and the information that the authors received will only be used in this thesis and not in other purposes.

5. Case study of the City of Gothenburg

In this section, the case study which this thesis is built on is described. The information presented in the following part has been gathered during a pilot study from the strategic purchasing department in the Administration of Purchasing and Procurement in the City of Gothenburg.

The City of Gothenburg is a municipality in Sweden with almost 550 000 inhabitants and the municipality employs around 55 000 people within the organization. It is the administrative capital of the county of Västra Götaland. (The City of Gothenburg, 2019)

The City of Gothenburg has a decentralized structure, the city council consist of 81 members which are politicians who are selected in general elections every four year. The city council makes all major decisions within the municipality. Politicians make decisions on all the financial matters such as tax rate, budget for the municipality and also on how to organize the committees and establish goals and guidelines for the local operations. (The City of Gothenburg, 2019)

The City Executive Board of the City of Gothenburg consist of 13 members and their task is to oversee and supervise the municipal operations and administrations within the municipality. They support, lead and coordinate all the main activities of the City of Gothenburg. (The City of Gothenburg, 2019)

The City of Gothenburg is divided into 10 districts committees, for example Angered and Majorna-Linné. These district committees take political decisions, for instance on child and family care, public libraries and cultural activities (The City of Gothenburg, 2019). Furthermore, the municipality has 18 technical committees, like education, art and culture, recreation, land and housing, public works, traffic, environment, purchasing and procurement, etc. Additionally, The City of Gothenburg owns 70 public companies, for example Port of Gothenburg, GotEvent AB, Business Region Göteborg AB, Gothenburg City Public Transport AB and Gothenburg City Housing (see figure 6) (The City of Gothenburg, 2019).

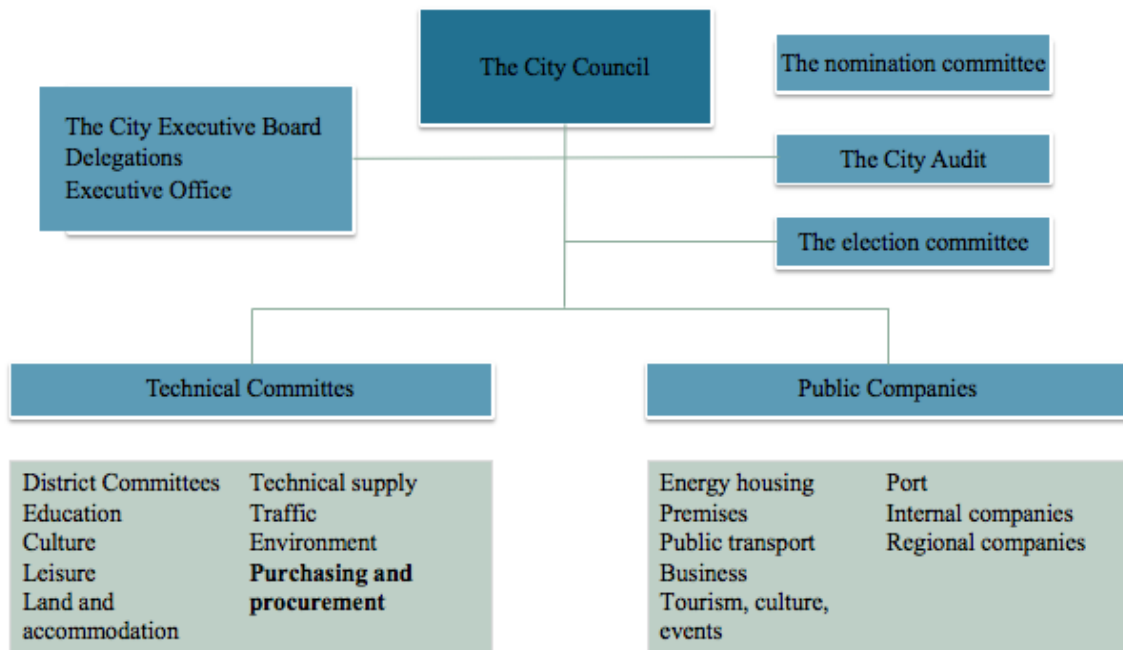


Figure 6 - The City of Gothenburg organization. Source: The City of Gothenburg, 2018.

Public procurement is coordinated by the City of Gothenburg’s central purchasing body, the Purchasing and Procurement Committee, where all guidelines on framework agreements are created (Gothenburg, 2019).

The Administration of Purchasing and Procurement is responsible for the municipality’s purchasing, where all framework agreements are issued to different committees and public owned companies and is a strategic resource in procurement (Gothenburg, 2019). There are 65 employees working within the administration who are responsible for framework agreements and its follow-up as well as the common purchasing processes. The Administration of Purchasing and Procurement governs framework agreements for SEK 6 billion out of 22 billion SEK, which is approximately 25% of the total purchasing volume for the whole municipality (The City of Gothenburg, 2019). There are different departments within the Administration of Purchasing and Procurement, including strategic purchasing department (see Appendix 3) which is responsible for the implementation of category management.

Below the figure 6 illustrates a complex structure of the public procurement hierarchy in the City of Gothenburg. It also shows that decisions in the procurement governance model are top down: from the city council to the strategic purchasing department. (The City of Gothenburg, 2019)

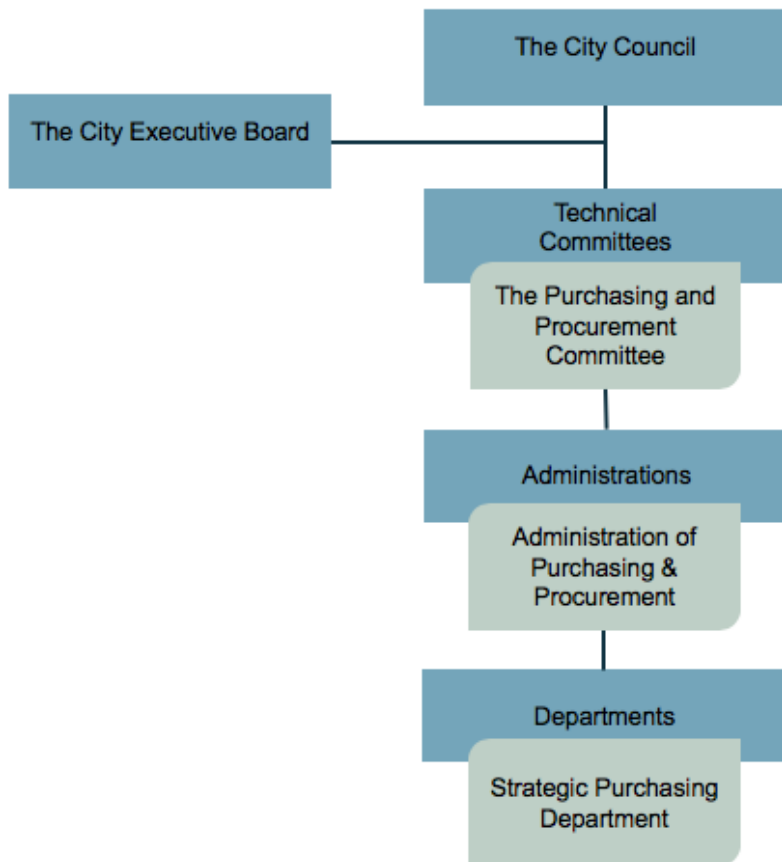


Figure 7 - Procurement governance model. Source: Authors.

The Strategic Purchasing Department has developed a category plan (see figure 7), which shows the five stages of category management processes and describes the activities which will be undertaking in each stage for strategic purchasing. (The City of Gothenburg, 2018)

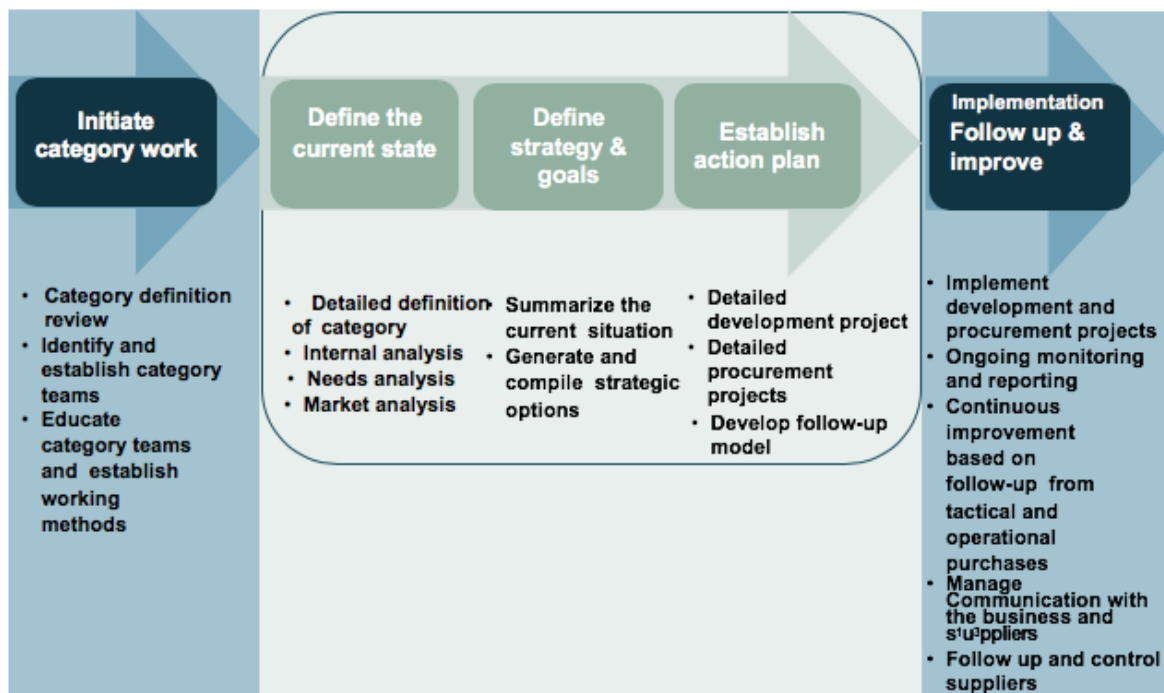


Figure 8- Category development plan. Source: The City of Gothenburg, 2018.

6. Empirical findings

In this section the empirical findings from the interviews with the City of Gothenburg, the City of Malmö, Nacka municipality and the City of Oslo are presented. As summarized table of important factors from each municipality is also presented in the end of the section.

6.1 The City of Gothenburg

Organization

According to a head of strategic purchasing department, Åsa Bergman, the City of Gothenburg owns 70 public companies and is divided into 10 districts administrations. The Administration of Purchasing and Procurement has a centralized structure, where they handle framework agreements for the whole municipality. The municipalities around the city have the opportunity to participate in the sourcing process for framework agreements, if they chose to participate, they are obliged to follow the agreements, says Bergman.

Both Bergman and Bergdahl point out that the Administration of Purchasing and Procurement does not have an overview on how the purchasing process is being managed on different levels (e.g. strategical, tactical, operative levels) for all public owned companies, as yet. However, one of the tasks from the city council was to centralize the processes through a corporate municipal process. The goal is to implement strategic approaches for procurement and purchasing processes into all levels, says Bergman.

Bergdahl points out that they follow the EU Procurement Law and further comments:

“From the competition point of view, it is good, and it is good for the taxpayers”, Bergdahl.

Furthermore, political goals must be taking into account as well in public procurement. There are a lot of political goals, that should be broken down into different levels for different departments in all public organizations in the city, explains Bergdahl.

Bergman states that the city council gives the directives on environment, for example to reduce CO₂ emissions by using electric cars; to prioritize finding jobs for those who have not been able to find a job for a long time. There is a big focus on corporate social responsibility (CSR) when working with procurement, comments Bergman.

Linda Nilsson, a manager of sustainability department at the Administration of Purchasing and Procurement in the City of Gothenburg, stresses:

“There are clear political ambitions in Gothenburg regarding environmental care and social responsibility and have been so for a long time. Sustainability in procurement is therefore something we have worked with and developed since many years” Nilsson.

She continues:

“All sustainability issues will gain a lot if they come in much earlier than in the phase of purchasing. We could do other kind of actions than set up requirements in the contracts, which hopefully would be more efficient. For example, for the vehicle category, instead of trying to reduce CO₂ emissions, we could try to reduce the need of using vehicles”, Nilsson.

According to Bergman, the Administration of Purchasing and Procurement began a pilot study on category management in 2016. However, it shortly came to a dead end, never reaching to an establishing phase, due to the lack of governance and necessary resources. In 2018, when new mandate came into place to optimize procurement processes, the public administration started a new pilot study on implementation of category management, Bergman.

Bergman believes that the main motivation to work with category management is to save money by looking at the total cost and come closer to the business. Another motivation is to follow political goals and keep developing their business. The goal within purchasing to receive money and spend it on the most important categories, adjust quality with demand, aiming to have a good control and balance on what is purchased, comments Bergman.

When it comes to challenges, Bergman says:

“The main challenge working with category management is to change the way we work today, it demands effort from the people who work with it, change management is required”, Bergman.

Categorization

According to Bergman, the category tree for the City of Gothenburg is under development and the first version will be finalized during 2019.

“At the moment it is still in the pilot phase, but the plan is to categorize purchased goods and services. During 2019 we will implement spend analysis tool which was bought last autumn, 2018 and the companies and administrations will have the possibility to use the purchasing analysis tool and follow up their purchasing performance. It will help us to see overall spend for each category”, Bergman.

Bergman also believes that each public owned company already categorize their products.

“The goal is to collect the data on already existing categories in each company and provide an input in order to ensure benefits for the whole city”, Bergman.

Currently the Administration of Purchasing and Procurement is running two category projects in order to test the work method and steering model. The largest buyers in these categories participate in the category work, says Bergman.

“The category tree will be constantly updated to reflect the buying pattern for the whole organization”, Bergman.

Therefore, there will be no fixed category tree for a long term, it should give a possibility to change a structure, explains Bergman.

Bergman further comments that there is a need to improve the forecasting of the needs and it will be enabled through category management.

“We need to improve the forecasting of our needs of goods and services and increase our knowledge of the market”, says Bergman

There is a preliminary model on how to prioritize categories, but it is still under development. From the theoretical point of view, the Administration of Purchasing and Procurement can see what potentially can be influenced, based on needs and what they need to prioritize.

“As the city is big, we need to have a good prioritization model in order to have our resources focused on the categories that brings most value for the city”, Bergman.

Team composition

Since strategic purchasing department is in a pilot phase of implementing category management, there are no formed teams yet. However, the intention is to have 8-12 people in each category team with a category manager in the future. For the biggest spend it is necessary to discuss and get input from different opinion and then revise it. The category steering group will make further decision, explains Bergman.

“The plan is when forming a team, to take into account that the biggest spend will be involved and therefore it is important to have the right competence and experience within sustainability competence, competence of the function and quality needs for the goods and services and purchasing competence”, Bergman.

During the spring, the Administration of Purchasing and Procurement in the City of Gothenburg’s will start recruitment process for the category managers, says Bergman. Depending on the size of the category it will define how many categories the category manager will be responsible for. At strategic purchasing department there is an analyst team that will use spend tool to identify categories and develop category tree. The category tree will be based on the supplier's perspective and not organization own needs perspective, Bergman.

Communication

Bergman says that in the beginning teams will meet quite often to set up a plan and implement it. It will depend on the number of activities they would have, sometimes team will start different projects, like business development and procurement project which are related to the strategy. Therefore, there will be times were teams would have to work quite intense and sometimes less, Bergman.

Furthermore, under 12 weeks period each member might spend 5-10% (four hours per week) of their work on the project. The category manager will be spending more time to gather all information and prepare the meetings, depending on roles and categories, says Bergman.

During the establishment of the new way of working, competence from external consultants will be required for competence transfer to internal resources. The team will not receive any additional compensation in terms of bonuses but only their regular salaries, Bergman.

Performance measurements

At the Administration of Purchasing and Procurement, they follow up on framework agreements and bids received from suppliers. However, they do not have any KPIs that is followed up on the whole city on the strategic level. The plan is to implement the purchasing analysis system which will enable each company and administration to measure purchasing KPI's, claims Bergman. There is a preliminary table of different KPIs that the City of Gothenburg is planning to use in the near future: yearly spend, cost per unit, number of purchased products and services, yearly savings, number of suppliers (from small to large size), supplier meetings, number of category meetings and time spend on framework agreements.

When it comes to what is the most important to measure, Bergman answers:

“Every aspect is important, like economical, environment, social...”, Bergman.

According to the manager of sustainability department, Linda Nilsson, *“how to measure sustainability?” is a complex question. Sustainability is measured within different area, social and environmental, on local to global levels. The link to the purchased products and services in Gothenburg is not always obvious”, Linda.*

“It is a challenge for us to link the actions in a procurement or the requirements in a contract to better health, better environmental, state and many other goals we work towards. We need to work with hypothesis like ‘if certain chemicals disappears from the toys, the health for children will be better in the long run’. But of course, there are many other factors that effects the results”, Nilsson.

6.2 The City of Malmö

Organization

Malmö is the third largest city in Sweden with a population of 336 588 people. The City of Malmö has 8 public owned companies, 15 committees and employs 26 000 people. All public

owned companies and committees work independently when it comes to analyzing their purchasing needs and external market. Malmö's procurement department has a centralized organizational structure. All framework agreements are created in the procurement department of the city and then sent to companies; however, companies are not obliged to follow it. The aim is to assist and support with procurement questions for companies.

The procurement department of the City of Malmö does not analyze external changes in a long term:

“When the demand grows the needs will grow and the purchasing will be increased (year by year). We observe these changes and warn other municipalities because this is a matter not only for our department”, Manieri.

The city counselor makes guidelines for procurement in terms of sustainability and social requirements. The City of Malmö follows EU procurement rules, however Manieri thinks:

“The Swedish legislation interpretation of the EU rules are too detailed for making business discussion, relations, innovative solutions, etc. It is better if the EU procurement law would direct what path they should go and what words of value and ethical aspect they should have in mind instead of having restrict rules for everyone to follow. It makes harder for many businesses because every business is different”, Manieri.

The City of Malmö's procurement department has implemented category management around one and a half year ago and still under developing process:

“It is a great challenge to make the whole organization involved in the implementation of the category management”, Manieri.

She explains that by collaborating, they could gain a better overview on the organization and their business processes, using different tools, such as spend tool. The procurement department of the City of Malmö does not involve in the decision of the purchasing needs for companies and committees. However, it is their responsibility to make sure that both committees and public owned companies organize and manage their purchases in a strategic and long-term manner, Manieri.

Categorization

The basic categorization for procurement is divided into three categories: product, services and IT-related goods and services:

- Products are divided into two different sectors: as one-time delivery goods (e.g. one big bus) or frequent deliveries (e.g. office materials).
- Services are divided into three categories: one-time delivery, continuous deliveries of services and one time delivery of some services that needs to be adjusted for a long time for example, IT system that has to be supported four times per month and updated, as well as followed up; another example could be cleaning of school rooms.
- IT-related goods and services also can be one-time delivery, for example construction of a school and more frequent deliveries.

When it comes to prioritization of categories, Manieri believes that everything is important, therefore there is no specific prioritization model. Thus, in some circumstances they check if there is an urgent need for a specific product or service, Manieri.

Team composition

Since the beginning of 2019, the City of Malmö procurement department has employed category managers to lead cross-functional teams. According to Manieri, the plan is to have more people in each category team in order to manage products and services in more details. The team compositions depend on competences, and the number of people varies how big a framework agreement is, comments Manieri.

Communication

Category teams' responsibility is to manage contacts with already existing suppliers, and to investigate potential suppliers through market analysis. Teams communicate through emails, face-to-face meetings, etc. Additionally, how often they communicate depends on the project and how much effort it demands says Manieri. One procurement project takes 100-400 hours. Employees obtain competence development within sustainability, IT systems, etc. When it comes to compensation, the teams cannot receive any additional rewards in any kind besides salary in the public sector, explains Manieri.

Performance measurements

Manieri explains that the procurement department of the City of Malmö follows up on how many bids are received from suppliers on each tender. Additionally, they follow up on sustainability, for example toys for children should not contain hazardous substances. If the goal is to lower the cost, procurement department measures the spend, says Manieri. So, a person who is responsible for each area of agreements would follow up on yearly spend, using the spend tool.

The City of Malmö spends approximately 9 billion on different kinds of goods and services, according to Manieri. The central procurement follows up on spend by checking in the economic system their spend, though Manieri says:

“It is hard to know all the spend in detail since the data is very general”, Manieri.

The City of Malmö has an e-commerce system for some agreements which represent more detailed information on purchasing, for instance it can be seen that 8 packages of coffee were purchased. However, Manieri adds that in most cases it is only possible to see a name of a purchased category, for example food but there is no name of a product or number of units that were bought within this category.

6.3 Nacka Municipality

Organization

Nacka municipality is a part of Stockholm urban area and has over 101 000 inhabitants. The municipality has two public owned companies, Nacka Energy AB and Nacka Water and Waste AB. There are 16 employees at the procurement department: one purchasing analyst, one legal representative, two e-commerce entities and 12 purchasers, according to Nordgren.

Nordgren explains that in the procurement department they work on operative, tactical and strategic levels. About three and a half years they switched from a traditional procurement towards strategic procurement and continuously improve purchasing processes, according to Nordgren.

Nacka municipality uses various types of analysis when conducting the external environment analysis. For instance: PESTLE, SWOT, Porter five forces, Trend-analysis and competitive analysis (Nacka kommun, 2019). Nordgren further points out that they take into account suppliers when conducting external analysis and data from other organizations and institutes, for example Statistiska Centralbyrån.

Nordgren points out that Nacka municipality has a center led governance model, involving big procurement frameworks, and all call-off agreements are decentralized. Further, politicians set up guidelines or programmes for purchasing; for example, environment programme, SRM programme, etc. Nacka municipality follows the Swedish procurement law, which is based on EU Procurement Directives, says Nordgren.

“I have chosen to focus on other processes than putting a lot of effort on the procurement law. It is something that we follow but it is not the biggest challenges for Nacka municipality in public procurement”, Nordgren.

Further, Nordgren stresses that the Swedish procurement law does not assure, prevent, restrict or enable good businesses.

In the end of 2017, Nordgren initiated the category management implementation. The main motivation to work with category management is to implement tactical and strategic processes for the whole organization and to encourage collaboration within the organization. The biggest challenges, according to Nordgren, are to find time within the organization and make employees to understand the importance of category management and what is good for the city and not for a single employee.

Categorization

Nacka municipality has two category trees: procurement and customer needs, which are driven by the market. Further, Nacka municipality has different categories within procurement, like entrepreneurship, real estate, consumable material, transport, IT, professional services, culture, healthcare, employees. Categories within customer needs are adult education, education, health care and culture, says Nordgren.

Nacka municipality analyses supplier spend through accounting book, spend tools, e-system, benchmarking from other municipalities. All categories are important, but there is a prioritization between the categories focusing on the big spend, which is based on the prioritization model (Appendix 4), explains Nordgren.

Team composition

Nacka municipality has a relatively small procurement department with 16 employees in total. Therefore, there is only one team who works with category management and there are no category managers, however there are people who are responsible for each category.

Employees receive trainings in projects leading, how to negotiate with suppliers and how to work with category management. Since it is a new way of working, employees need a lot of professional trainings within the field. Nacka municipality has recruited people who have experience of working with category management to boost their organization's performance, comments Nordgren.

Employees who directly involved in working with category management do not receive any additional compensations or bonuses besides their regular salary, claims Nordgren.

Communication

Nordgren further explains that there are a lot of meetings related to category management.

“It can be a challenge to come up with a good structure on how the team can communicate [...] they have created email groups, shared documents, etc.”, Nordgren.

The steering committee meets every second or every third months, project groups meet every second week or every second months, depending on the category and how much activities they need to perform. Approximately 25% of work goes to category management for those who have category responsibilities, states Nordgren.

Performance measurements

Nordgren explains that Nacka municipality uses benchmark of different municipalities and private sectors and 50 different KPI's, where they measure everything from category management, different projects, savings and equality. Nacka municipality does not benchmark

on just one municipality since different municipalities are better in different areas. Municipalities like Eskilstuna and Uppsala are good with political issues, but it is important to measure every aspect like, economic, environment social.

“You cannot choose one aspect, to lower the price means to sacrifice the quality and vice versa”, Nordgren.

Further, Nordgren says that in the future there will be an activity plan for each category to measure the effectiveness and potential of it. The category plans are updated one time per year. Nacka municipality measures potential risk and cost.

“Risk management has a big potential in public sector”, Nordgren.

Lastly, Nacka municipality follows up every month on each purchased unit and on yearly spend. Further, Nordgren explains that he can see how much the municipality of Nacka spends in real time.

6.4 The City of Oslo

Organization

Oslo is the capital of Norway and has approximately 673 000 inhabitants. The City of Oslo has five public owned companies and the municipality purchase products and services for approximately 26 billion NOK yearly (Oslo Kommune, 2019). The procurement organizational structure in the City of Oslo is hybrid. There is a centralized procurement team in the Agency for Improvement and Development (which is responsible for strategic procurement for the City of Oslo) with approximately 40 employees. There are approximately 50 decentralized procurement environments throughout the city’s agencies, municipal undertakings and districts administrations, for instance within the Agency for Water and Wastewater Services and Nursing Home Agency. These decentralized procurement teams have between 1 to 20 procurement professionals (P1, P2, P3).

The procurement processes operate on strategic, tactical and operational level. Additionally, the procurement processes are divided into three steps (P1, P2, P3). The first step is the

planning of the procurement, where they assess needs, analyze market environment and contracts strategies. After the planning phase, they compare different offers according to predefined specifications, then the City of Oslo announces a supplier and finally they sign a contract. After the City of Oslo has fulfilled and implemented the procurement processes, they follow up on the contract (P1, P2, P3).

Decisions in the procurement governance model are top down: from the Department of Finance to Agency for Improvement and Development and other agencies. However, those decisions are often based on suggestions from the Agency for Improvement and Development (P1, P2, P3). The City of Oslo follows the Norwegian law on public procurement, which is based on the EU procurement legislation (P1, P2, P3).

Further, the city counselor of the City of Oslo gives directives to the procurement department through yearly allocation letter. The guidelines in the allocation letter, among others, for the year 2018 was as following:

- 1) *Agency for Improvement and Development shall be a driving force for targeted work aiming at preventing work life crimes at construction sites and cleaning industry.*
- 2) *Agency for Improvement and Development shall test out methods of calculating life cycle costs on strategic important procurement areas in order to achieve overall important environmental objectives.*
- 3) *Agency for Improvement and Development shall use category management to increase the share of organic food and beverages, and fair-trade products in the city's purchases.*
- 4) *Agency for Improvement and Development shall offer start up help to businesses that wants assistance in improving their routines and systems to follow up basic human right, ILO core and international law.”, P1, P2 and P3.*

The main motivation of working with category management is to optimize purchases for the City of Oslo as an entirety through category specialization (e.g. specialist within that particular market) and to do long term planning (P1, P2, P3).

Categorization

According to P1, P2, P3 the Agency for Improvement and Development is at the initial face of category management and have recently started to work with the category of food and beverages, as stated in the allocation letter. The main benefits working with category management are efficiencies from consolidation of spend, fewer procurement processes and lower prices. The main challenge with category management is in partly decentralized purchases (P1, P2, P3).

The categorization in the Agency for Improvement and Development reflects on the organizational structure where different agencies handle their own core procurement needs, like the Agency For Waste Management procuring waste contracts, etc. However, the Agency for Improvement and Development handle the general framework agreements for all agencies in the city (P1, P2, P3).

Categories are defined by the top management at the Agency for Improvement and Development together with applicable user groups at the agencies (P1, P2, P3). The final decision is made at the Department of Finance. The first category, food and beverages, was selected for political reasons in order to increase the share of organic food and beverages in Oslo (P1, P2, P3). The Agency for Improvement and Development plans on a gradually implementation of other categories based on the strategic importance and prioritizations (P1, P2, P3).

Figure 8 shows framework agreements for the City of Oslo, 2018. It also presents the number of contracts and how much they are worth (The City of Oslo).

Framework agreements 2018

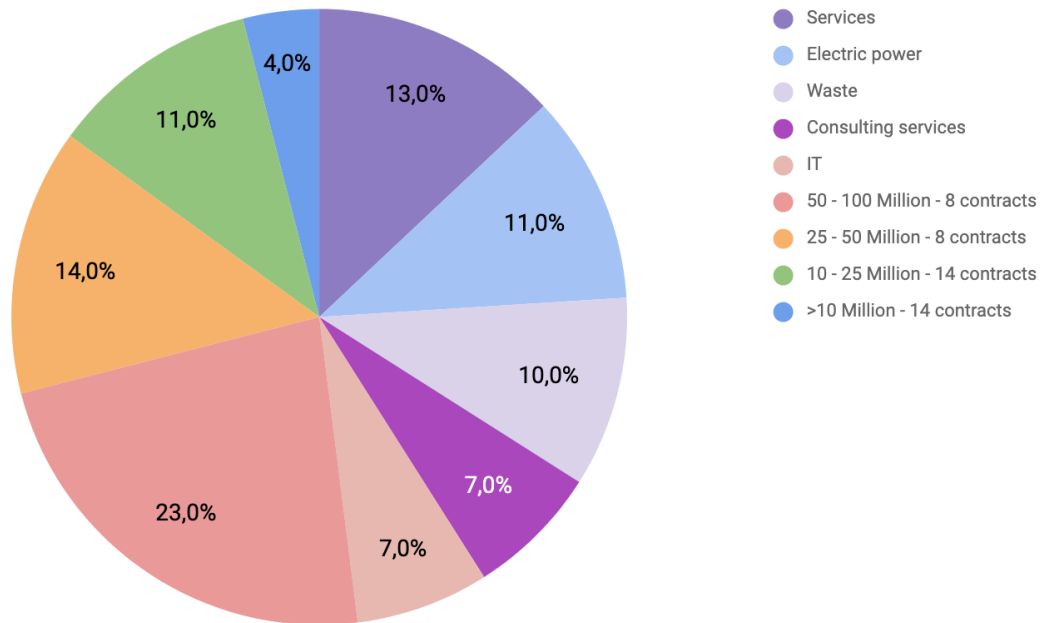


Figure 9 - Framework agreements. Source: The City of Oslo, 2019.

The Agency for Improvement and Development uses invoice data on product (e.g. organic food) and business (nursing home) level in order to make detailed spend analysis. Additionally, they make supplier analysis from the same invoice data. Market data is gathered from official sources, the Internet, suppliers themselves, topic experts, etc. (P1, P2, P3). Pareto analysis used alongside with internal information about strategic importance and overall objectives for political entities and departments. Suppliers are part of the internal and external (P1, P2, P3).

Team composition

There are steering group and the operational procurement team which play important role in managing category management (P1, P2, P3). The steering group consists of decision makers from the Department of Finance, the Agency for Improvement and Development and the largest users. The procurement team consists of project leader, category manager, legal support, user representatives and topic experts. Team compositions may be adjusted at a later stage (P1, P2, P3). The team does not receive any additional bonuses or compensation working with category management (P1, P2, P3).

Communication

The team communicates through emails or meetings (physical/virtual) and depending on the actual need will determine the frequency of the meetings. Approximately 200-500 working hours are spent on one procurement project. The team obtains relevant trainings in category management (P1, P2, P3).

Performance measurements

In order to measure the performance of public procurement the Agency for Improvement and Development benchmark on KPI's. The things that are most important to measure in public procurement depends on the strategic importance and fit to overall objectives for departments and political entities (P1, P2, P3). Finally, the Agency for Improvement and Development follows up on performance every second month and they follow up on a yearly spend (P1, P2, P3).

6.5 Summary of the findings

The table 2 shows a summary of important factors from the empirical findings which were identified during the interviews with Malmö, Nacka, Oslo and Gothenburg municipalities. To make more visible the comparison Gothenburg is highlighted in dark blue. Factors highlighted in light blue indicate similarities between the municipalities.

Factors	Malmö	Nacka	Oslo	Gothenburg
Population	317 000	101 000	673 000	573 000
Org. structure	Decentralized	Decentralized	Decentralized	Decentralized
Number of public owned companies	8	2	5	70
Category management implementation	2017	2016	2017	2018 (pilot)
EU Directives	Follows	Follows	Follows	Follows
Categories of products & services	Products Services IT-related goods and services	Entrepreneurship Professional services Real estate Consumable material Transport IT Culture Healthcare Employees	Under development	Under development
Team compositions based/consist of	Based on the right competences	There are no teams	The team consists of project leader category manager legal support user representatives topic experts	Teams will be based on the right competences: sustainability competence of the function quality needs purchasing competence
Category identification	Based on spend	Based on spend	Based on spend	Based on spend
Methods/Tools analyzing internal environment	Spend tool	Accounting book Spend tool E-system Benchmark	Pareto Invoice data Topic experts Internet Supplier info	Spend tool
Methods/Tools analyzing external environment	Observation for changing needs	PESTLE SWOT Porter five forces Trend-analysis	Collaboration with suppliers and companies	PESTLE

		Competitive analysis		
Performance measurements	Follow up on spend Bids received from suppliers	KPIs Benchmark	Benchmark against KPIs	KPIs: Yearly spend Cost per unit Number of purchased products/services Yearly savings Number of suppliers Supplier meetings Number of categories

Table 2 - Summary of the findings. Source: Authors.

7. Discussion/Analysis

In the following section the theoretical framework will be compared and analyzed in relation with the empirical findings.

7.1 Organization

Van Weele (2018) states that a purchasing organizational structure can be centralized, decentralized or hybrid. Centralized structure is characterized by a central purchasing department where all the main decisions are being made. The empirical findings show that all public administrations have a centralized purchasing structure where they issue framework agreements. Further, all public administrations, from the purchasing perspective, have a decentralized organizational structure. For example, all cities have public owned companies with their own purchasing departments. According to Van Weele (2018), there are some disadvantages with a decentralized structure mainly, that different managers within the same administration can compete for the same suppliers, this is something that City of Malmö tries to minimize by using category management where one person is responsible for one category.

There are three levels within procurement department: strategical, tactical and operational levels (Van Weele, 2018). The City of Gothenburg, Oslo and Nacka municipality all stated that their procurement processes are divided into these levels. Van Weele (2018) claims that larger organizations often have separate departments for purchasing while smaller organizations often have fewer or only one department for this task. This statement could therefore be verified in the empirical findings, Nacka municipality has only one purchasing department for the whole municipality.

All the municipalities in the empirical findings claim that the politicians and the city council set up directives and policies that purchasing and procurement departments must follow. This is something that goes in line with Gelerman et al (2017) where it is stated that public procurement can be used as a policy tool for various areas to fulfil political goals.

Further, in recent years all municipalities started to focus more on strategic approach for the procurement and purchasing processes. This is resulted in the implementation of category management in their businesses. The main purpose is to reduce costs and increase the quality of products and services.

7.2 Procurement Legislation

According to Government Offices of Sweden (2019), public procurement legislation is based on EU Directives and the same implies to Norwegian procurement legislation (International Comparative legal Guides, 2019). The empirical findings show that all cities comply with public procurement legislation which is based on EU Directives.

The aim of these Directives is to ensure equality, non-discrimination and transparency. Additionally, after evaluating the EU Procurement Directives on its effectiveness, the conclusion was; it is in fact help to build a better environment for competition and improve overall procurement (European Commission, 2017). Yet, not all responders are fully aligned with this statement. In the case of the City of Gothenburg, they believe that from the competition and taxpayers' point of view it is good, however they find it challenging to follow. The City of Malmö's public administration disagree with effectiveness of these directives, since regulations are very strict and the same for everyone, there is no space left to improve the procurement processes on a national level and also internally in the organization. It does not allow a full potential to apply innovation and development. On the contrary, Nacka municipality does not consider procurement legislation as a subject of speculation, since there are no other ways of avoiding these rules but to follow it. However, what differ Nacka municipality from other municipalities is that they put more effort towards improving internal purchasing processes in the business, so they can manage their procurement in a better way without breaching legislation. This is also a recommended practice by the literature (O'Brien, 2015).

7.3 Categorization

The literature suggests, in strategic purchasing it is important to categorize products and services (O'Brien 2015, Trautmann 2009, van Weele, 2018). According to empirical findings, all four municipalities either already have category trees of products and services with sub-categories or intent to create it in the near future. Nacka municipality even has two category trees; procurement and customer needs which is driven by the market. The category tree for the City of Gothenburg is under development, and the tree will be regularly updated to mirror the business needs of goods and services. It should be constantly reviewed and re-created as the needs for purchasing are constantly changing. For example, the development of technologies changes a buyer behavior and constant evolution of new products makes

purchasing different. This statement goes in line with O'Brien (2015) notion, when emphasizing that category management requires constant review. Category management like a circular process, as it will never be ideal and the same.

As discussed in the theoretical section, to identify categories of products and services the spend analysis will be a useful technique (Van Weele, 2018). According to the interview answers, all cities use spend tool to identify categories. Gothenburg city started is intent to implement the tool by the end of this year and believes that it will help to see overall spend for each category. However, the City of Malmö states that it will be complex to breakdown the spend per each category. This is also pointed by O'Brien (2015) in the literature review. Moreover, it is especially difficult for companies with decentralized purchasing organizational structure (Trent & Monczka, 2003). As all the municipalities have decentralized purchasing structure it will be a challenge to get all the data from public owned companies.

The City of Gothenburg has a preliminary category prioritization model, which is still in the developing phase. Due to its size, the municipality faces a challenge of allocating resources as there will be a lot of categories. The City of Malmö does not prioritize categories, stating that each category is important and only in some circumstances they put forward special needs. Nacka municipality prioritize categories by look at the spend and give a bigger attention to those categories where they spend the most. The literature states, when implementing category management, the prioritization is an important approach in order to find benefits (O'Brien, 2015). It can be done through opportunity analyzes or categorization matrix (O'Brien, 2015 & van Weele, 2018). Only Nacka municipality uses a categorization matrix, like recommended in the literature.

After prioritization municipalities approach the market and in order to do that, it is essential to analyze external environment (O'Brien, 2015). Nacka municipality is quite advanced in this area, as they apply PESTLE analysis and Porter's five forces (to identify competitiveness). The City of Gothenburg has not started analyzing external environment; however the plan is to use PESTLE analysis in the future. Oslo allies Pareto method and also uses other official sources.

7.4 Team composition

Having a team that includes people from various functions led by category manager will increase the success of category management implementation (O'Brien, 2015). The City of Malmö composes category teams based on their competences and the number of people depends on the size of framework agreements. Nacka municipality does not have cross-functional teams due to its size. Though, there are single people who work with each product category. Oslo plans to have a team that would consist of project leader, category manager, legal support, user representatives and topic experts. In the case of Gothenburg, the Administration of Purchasing and Procurement intends to create a team of 8-12 people, which could be too big as the ideal size of a category management cross-functional team is between three and eight people (O'Brien, 2015). Additionally, the teams will be based on the right competencies; e.g. supplier selection, sustainability experts, legal representatives for each product category and category managers.

Further, cross-functional teams require constant trainings as category management approach may be difficult to understand in the beginning (O'Brien, 2015). All municipalities stated that teams will be receiving trainings, for example within sustainability, IT systems, project leading, communication with suppliers and other relevant trainings. The City of Gothenburg pointed that it is required to have external consultants within category field in order to transfer competences to the internal personal.

The setup of a truly cross-functional team is a challenge due to often conflicting functional as well as organizational goals, overlapping responsibilities, a lack of direction and competition for resources between the functions (Dridonks, *et. al.*, 2013). To facilitate further effective teamwork working with category management, all municipalities should ensure that the right functional mix is included, a category manager is hired, clear responsibilities and roles are defined, and category management goals are clearly understood by the team (Van Woerkom and Sanders, 2010). Further, when procurement function request for people from various business functions to contribute their time on a category management project is not an easy task (O'Brien, 2015). According to Englyst et al (2008), this challenge can be overcome by offering a compensation. As a result, companies have to develop compensation systems and reward members of cross-functional teams. This is a great challenge for the public

administrations as in this sector it is not allowed to award any additional compensations except their regularly salaries.

7.5 Performance measurements

Since the City of Gothenburg has not implement yet category management in their procurement processes, they do not use any KPIs at this moment. However, there is a preliminary list of potential measurements, for example, number of suppliers, effectiveness of category management, etc. Nacka municipality uses 50 different KPIs where the scope of measurement is very broad. Additionally, they use benchmarks of different municipalities to measure everything between category management, saving and equality etc. Additionally, Oslo also uses KPIs and benchmark when measure the performance. Benchmarking gives a possibility to compare with others experience best practices and then prioritize opportunities and areas for improvement (Palaneeswaran and Kumaraswamy, 2000). The City of Malmö on the other hand only measures how much they spend. The Administration of Purchasing and Procurement in the City of Gothenburg aims to implement the purchasing analysis system, so the companies and the administrations would have an improved possibility to measure purchasing KPIs.

Every aspect is important to measure according to all municipalities and this can be explained by Sigma (2011) that argues that public procurement performance primary goal is to assure that the taxpayers receive value for their money and other main objectives. This can explain the fact why every public administration in the empirical findings measure and follow up on their spend.

8. Conclusions

This section will present the main conclusions from study and highlight how the research questions have been answered. The suggestions for future research will be presented, lastly the limitations from the thesis will be discussed.

8.1 Answering the Research Questions

RQ1: How are strategic procurement processes organized within public administrations?

Based on the findings all municipalities organize their strategic procurement processes through implementation of category management. When implementing category management, a very important step is to compose cross-functional teams. Team members are representatives from different functions, and chosen on their core competencies, e.g. sustainability, legal, purchasing. The size of the team always depends on the size of the framework agreement; for example, if the biggest spend goes on health care, therefore there will be a bigger group handling this category. In order to have a good strategy for purchasing, the team analyses the internal business environment to understand organizational needs, and also conduct an external market analysis. Further, category management is a relatively new strategic approach for public administrations and resistance from employees may appear, which can be overcome by change management, good governance from senior management and ensure professional trainings from external expertise.

RQ2: How do public administrations work with categorization of goods and services?

The literature review and the empirical findings indicate that the municipalities make spend analysis in order to identify categories of products and services. All municipalities acknowledge that every category is equally important and require detailed analysis. However, by using spend tool, it also enables to match categories with the biggest spend, which gives the opportunity to potential savings, therefore such categories will be prioritized.

RQ3: How do public administrations measure the procurement performance?

Public procurement performance measurement allows to track business activities, to see potential areas for improvements and benchmark performance with other municipalities. According to the empirical findings, all municipalities measure procurement performance in

different areas. The spend tool is one of the common tools that all municipalities use to measure their purchases. It has been found that municipalities use different KPIs, e.g. yearly spend, cost per unit, bids received from suppliers, yearly savings, supplier meetings, sustainability. There are some municipalities that benchmark against other municipalities. Every municipality can be better in different areas; therefore, the comparison is based on more than one municipality.

8.2 Future research and Recommendations

As this study has a wide scope, in the future research, it is recommended to look closer at different types of categories in more details, as each category requires different set of analysis and tools. Secondly, the procurement performance measurements section was not explored in depth, since municipalities have big category trees, which demands various types of measurements. Additionally, future research needed on how municipalities measure sustainability performance, since it is a very complex process and requires in depth research. Further, category management is a new phenomenon in public procurement and has not been widely used yet. It could be useful for future studies to compare the results of this thesis in a few years from now in order to observe the development of implementation of category management.

Lastly, one recommendation could be for the City of Gothenburg to continue investigate about implementation of category management from other municipalities in more depth. Since the City of Gothenburg governs 70 companies, it makes more complex to organize strategic procurement processes for the whole municipality. Therefore, another recommendation could be to benchmark the municipalities which are similar in terms of complexity of the city.

8.3 Limitations

Further, since public organization is very broad, including many different sectors, e.g. health care, education, construction, etc. Due to the time constraint it was too complex to cover every working process in detail on how the public administrations in the various cities work with category management. Therefore, this study could only investigate the different public administrations from a broad perspective and not in a detail. The research questions and the interview guide were therefore very brief, consisting of broad and not too detailed questions. Thus, it is not clear to what degree the project will be successful and whether there are any

other important decision points that have not been considered by this research but will be relevant in the future.

Another limitation is that there is a lack of scientific research within the field of category management in procurement for public sectors. For this reason, it was challenging for the researches to make a critical analysis between the theory and the empirical findings, since only a few empirical literatures were used.

Lastly, the interviews were held under different circumstances. While face- to-face interviews could be conducted with the interviewees from the Administration of Purchasing and Procurement in the City of Gothenburg, the interviews with the interviewees with the City of Malmö and Nacka municipality were conducted over a phone for time constraints reason. The interview with the City of Oslo was conducted via email, since both researchers and interviewees could not find suitable time. This could have affected the interpretation of the answers, as well as missing out on any non-verbal information that was communicated by the interviewees. Also, even though questions were carefully worded and asked in similar ways to all interviewees, the questions could be understood differently leading to different answers to the same question.

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10. Appendix

Appendix 1. Introduction letter

Dear Sir/Madam,

We are two Masters students in Logistics and Transport Management at School of Business, Economics and Law, part of Gothenburg University, in Sweden. We are conducting a master thesis with a case study of the City of Gothenburg. This thesis has been running since January and expected to be completed in May.

The purpose of this thesis is to study how Public Administrations, within Europe, organize their strategic procurement. The study we are conducting is aiming to find the best guidelines for strategic public procurement. After reviewing academic literature and investigating about strategic procurement processes in the City of Gothenburg, we are now proceed to learn about different cities in Europe. It will give us a great opportunity to benchmark our practices with yours experience.

We would now kindly ask you to contribute your time and answer our interview questions. The interview will take approximately 60 minutes and the interview can be conducted via Skype or telephone. We would greatly appreciate your time as we see it as the most valuable source in completing this research.

We kindly ask you to reply to this email as soon as possible, since the interview should be conducted by the end of March.

Looking forward to hearing from you.

Yours Sincerely,

Natalia Ugriumova and Mathias Skoglund

Appendix 2. Interview Guide

Would you like to remain anonymous? (person, city, sharing the findings with public)

Can you introduce yourself (position, background, number of years in experience within purchasing)

1. Procurement structure

a. What is the city's procurement organizational structure? (e.g. centralized, decentralized, hybrid).

b. Does the city have public-owned companies? (how many?)

b. What is the city's procurement process framework? (e.g. strategic level, tactical level, operational level) (Framework per category/company)

c. How do you analyze changes in external environment? (PESTLE)

(How mature they are, taking into account from the budget and CSR, do they have a process, if they have it in theory it is strategic. On the very high-level thinking- in the future)

d. What is the procurement governance model? What levels? Decisions at each level? Members? (differentiation between decision on the political)

e. Does the city counselor influence the way the strategic procurement department operates today? (e.g. target to collaborate with SME - Small to Medium Enterprises; focus on the environment)

2. Law and regulations

a. Do you follow the EU Procurement Legislation?

b. What is your opinion on the EU Procurement Legislation?

3. Categorization

a. How does your city identify categories?

b. Who is involved in defining each category?

c. How do you select what to include in each category? (e.g. logistics - warehouses; literature - books)

d. How much of spend do you place in each category? (e.g. 70% healthcare)

e. What kind of data do you need in order to analyze internal spend data, supplier data, market, etc.?

f. What tools/methods do you use to make these analyses? (e.g. Pareto analysis, ABC, ZYC, etc.)

g. How do you prioritize categories? (e.g. Category Prioritization Matrix; Opportunity Analysis)

h. What is the main motivation to work with category management (or not)?

i. What are the main benefits and challenges working with category management?

4. Team composition

- a. How do you form a team within strategic procurement (e.g. depending on the category; employees from different departments)
- b. How many members in a team?
- c. What are members' roles? (e.g. legal representative; sales; marketing)
- d. Is there a category manager?
- e. How many categories does the category manager control?
- f. Do you take into account suppliers during internal/external analysis?

5.1 Communication

- a. How does the team communicate? (e.g. via emails; meetings - physical/virtual)
- b. How often does the team meet?

5.2 Resource availability

- a. How much time do the team members spend on a category management? (e.g. 10-15%)
- b. Does the team obtain trainings? (e.g. sustainability)

5.3 Team rewards and compensation

- a. Do the team members get compensations?
- b. What kind of compensations the team receives? (e.g. bonus, increase in salary, travel compensation)
- c. How are the rewards distributed among all members? (e.g. based on individual performance or based on a team achievements)
- d. Who governs the rewards? (e.g. category manager)

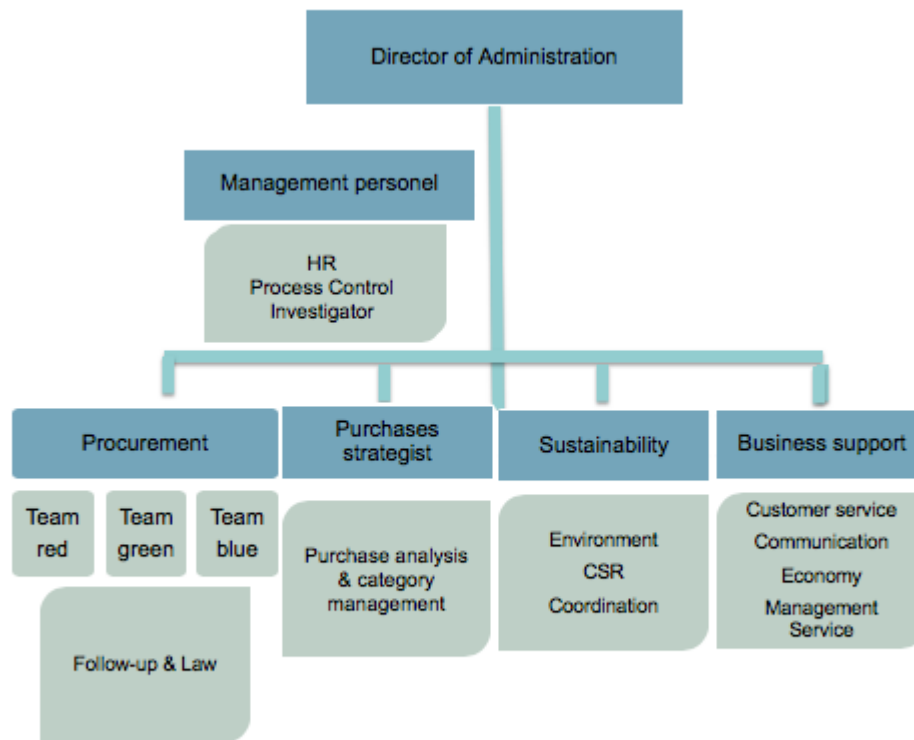
6. Performance measurements

- a. How do you measure performance of public procurement? (e.g. benchmark; KPIs)
- b. What is most important to measure in public procurement? (e.g. economical goals; innovation; legal obligations; environment; social - working conditions; fair wages)
- c. How often do you follow up performance? (e.g. resource demanding)
- d. Do you follow up yearly spend? (e.g. average cost per unit)

Is there anything you would like to add or comment on?

Can we send you an email/call to follow up on the interview?

Appendix 3. The Administration of Procurement and Purchasing



PRIORITERINGSMATRIS

