- A case study -

Purchasing organisational structure and competence level effects on a category management project in a publicly owned supply company.

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Executive summary

This research provides an analysis and evaluation of the current and prospective status of Copenhagen Energy’s procurement department’s ability to carry out a category management project in terms of their organisational structure and skill levels.

Our case-company is Copenhagen Energy, a publicly owned supply company that must, amongst other things, adhere to EU regulations. The company’s procurement function initiated a bottom up improvement initiative (i.e. a category management project) where the problem amongst others, was that they weren’t able to gather transparent information from their systems. An example of this was the inability to tell whether purchases that fell under the scope of regulations had followed EU tender regulations or not, where it was up to the voluntary efforts of the autonomous business units to involve the procurement tendering professionals if they needed help their tendering.

Our analyses include the procurement department and its context in terms of: strategic alignment, what skill-sets are required for carrying out the project (i.e. managing purchasing synergies) and for managing the categories when moving forward, how effective the procurement department is in terms of its skill-set and organisational status.

We found that the project can be carried out in five steps and requires specific set of skills during each step/phase. When the category teams will be formed, the project lead must select team members whose skill-set is aligned with the strategic goals and objectives of the category that is to be managed, as that will enable for effective purchasing behaviour to take place. The procurement department will rise in internal support and internal recognition because of the project, but if the procurement department is not able to demonstrate their abilities to add value for the company, the internal recognition will not sustain.

Our research identified that KE’s purchasing organisational structure will affect the synergy benefits resulting from the category management project. Where top management should add value by determining a fit between the approach for managing synergies and KE’s specific business situation. Where our findings indicate that KE does not possess all of the pre-requisites that enable effective synergy management and the current business specific situation has low levels of purchasing maturity and low corporate coherence. A situation that is best approached by sharing all available information and knowledge, and achieves cost savings through economies of information and learning. Furthermore, we found that the main obstacles for carrying out the project will be their information systems, the cultural and managerial differences between the two large supply silos.
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1 Introduction

Copenhagen Energy (KE) is one of Denmark’s leading supply companies, employing approximately 700 people, supplying water, heating, sewage solutions, and city gas to the capital’s citizens, as well as drinking water to 17 municipalities in the capital region (ke.dk - "About us" 2012). Today the company has plans on building further supply-networks in order to serve more municipalities (Annual statement 2011). The company is owned by the Copenhagen municipality and has been growing and forming over the last 150 years through mergers of key supply companies in Copenhagen and continuous development in response to increased population and increased sanitary demands (ke.dk - "History" 2012). The company has great responsibility, amongst others, to secure Copenhagen with clean drinking water which is not a light task; it entails sustainment of natural resources meanwhile securing customers’ health (Annual statement 2011).

One of KE’s goals for 2012 is to reduce costs and thus prices for drinking water, which they intend to, reach by focusing on continuous efficiency improvements by collaboration with the industry and enhancements, and optimising capacity utilization through mergers (Annual statement 2011). However, saving initiatives for the procurement department are vulnerable as the importance of receiving high quality products and services at a correct timing are worth spending an extra 10% or 20%, due to the nature of large third party spend\(^1\), which is to build and repair networks of supply pipelines (Appendix 2 - Procurement Manager).

Today KE is actively carrying out a category management project, which was initiated by the Procurement Manager who wanted amongst other things a higher degree of co-ordinated purchasing structure (Appendix 2 - Procurement Manager, Appendix 13 - Purchasing Policy). The goals are to: create categories and get spend overview of each; create a coherent tendering-plan which should in turn improve resource utilisation; establish purchase strategies and assign technical- and negotiation responsibilities; and to establish supplier/contract performance measures (Appendix 18 - Increased Purchasing Structure).

We were interested in researching how KE should structure its organisation and competence level in order to carry out the category sourcing project. Our scope was a single case-study where we analysed the company’s internal structure and competence level in respect to reflecting literature and cross-analysed that with purchasing category management literature in terms of how the company’s structure and skill level affects the category management project. In the end we will conclude whether or not KE has the appropriate structure and competence level.

\(^1\) 3rd party spend are all goods or service purchased from outside the company (O’Brien 2009)
1.1 Problem formulation

The reasons for carrying out the category management project at Copenhagen Energy were twofold, one was a lack of information giving tool and the other was a lack of communication platform between silos (Appendix 2 - Procurement Manager). The Procurement Manager had the following demand for information; (1) what products or services are being purchased from what supplier, (2) which internal user is buying what product, (3) how large customer is one department to any one supplier, (4) and how much volume of a specific product / service has been purchased throughout the entire organisation (Appendix 2 - Procurement Manager).

Further, the Procurement Manager wanted a tool that would enable a higher degree of co-ordinated purchasing structure in the organization. A tool that would increase activities between silos and provide information that identifies and alerts when a purchase falls within the scope of regulations, so the Procurement Manager could trust the purchase process fully (Appendix 2 - Procurement Manager).

Today Copenhagen Energy has an unstructured way of dealing with suppliers, while the supply market conditions differ depending on what products or services are being purchased. The company wants to structure their internal and external sourcing processes by making a tailored strategy for each category, in order to do that they need certain information about their own internal demand and external supply markets, and how large an impact each category has on KE (Appendix 2 - Procurement Manager).

Copenhagen Energy’s goals and ambitions with the project are: (Appendix 18 - Increased Purchasing Structure):

- To gain an overview of spend per category, which will allow for benchmarking between suppliers and give a concentrated supply base to work with, this provides the highest saving potential.
- The categories will make it possible to build a coherent supply auction for all of KE and thereby improve resource utilization
- Establishment of procurement strategies and designation of responsibility for engineering, negotiation, contracting, etc. within each category will provide increased bargaining power and improved competence and resource utilization in KE
- Establishment of supplier-/contract monitoring will provide a much more systematic and professional follow-up on supplier performance and thereby improve the basis to achieve savings when comparing what has been agreed upon and in relations to renegotiations.

Since purchasing does not only take place within the procurement department but is extended to the wider organisation (O’Brien 2009). This leads us to our research question:
How should KE structure their purchasing organisation and competence level in order to carry out a category management project?

In order to address our research question we see KE’s purchasing category management project not as a stand-alone entity, but a purchasing project that is dependent on the company’s purchasing structure and skill levels.

The outline of our thesis is as follows:
We begin to show our point of departure for creating business knowledge in the methodology chapter. Following that, we present a literature review from the fields of, category management, purchasing organisation and skill literature, which we have chosen to gain theoretical contextual evidence.

The literature review reveals what a purchasing category management project is and what it requires, which serves as a point of departure for reviewing the other dependent fields of information. Here we make the assumption that the category management project depends on the structure of its purchasing organisation since it can limit or enable purchasing initiatives and in turn, the contingencies of each category require special integration mechanisms in the purchasing structure.

Second, we focus on what skill levels are related and required for carrying out a category management project, which we base on evidence from both: category management literature and skill literature. Here we explore why a category management project depends on a certain skill-set to be successful, and confirm that the skill-set of the purchasing staff depends on the purchasing organisational structure to enable their effectiveness. Thus, our third part of the literature review focuses on purchasing organisational structures in order to provide evidence for, what determines how a purchasing organisation should be structured and find out what type of structure is most appropriate for our case company in terms of their category management project. The structure is important to take into context since it can limit or enable a skilled procurement department, and vice versa, skill levels can constrain or promote a highly integrated purchasing organisational structure.

Once evidence from prior literature has been presented, we introduce our case description chapter, where we present evidence about our case-study. Further, we combine evidence from literature, our case study, and apply a contextual analysis in the chapter, case analysis, thereby addressing our research question. Finally, conclusions and further researcher will be presented.
2 Methodology

Methodology is the understanding of how methods are constructed, and the different methodological approaches each have different concepts for when and how to use the various methods for developing business knowledge (Arbnor, Bjerke 1996). Our methodology is a case-based qualitative research which allows for a flexible structure that responds to the needs and nature of the research situation. This means we have no intention of testing theory or collecting quantitative data for producing generalizable findings, such as deduction yields, on the contrary we want to explain KE’s situation (Arbnor, Bjerke 1996).

System approach is very common for case-study research, although there are different ways to approach the creation of business knowledge: analytical approach, systems approach and actors approach, these differ in terms of characteristics and assumptions about reality (Arbnor, Bjerke 1996). For instance, the analytical approach seeks to explain causal relations and assumes reality is constructed of summative components (Arbnor, Bjerke 1996). Whereas, the systems approach also seeks to explain, but assumes that reality is objectively accessible and consists of mutually dependent components which cannot be summed up (Arbnor, Bjerke 1996). The actors approach is different from both analytical and the systems approach as it seeks to understand (hermeneutics), it assumes objective reality consists of meanings that are socially constructed by a large or small number of people, here relations are assumed dialectical and concepts are based on actors’ experiences.

In our case study, the problem derived from the fact that one of us is working for Copenhagen Energy’s procurement department as a student worker, and observed the initiation of the purchasing category management project. Initially he noticed that the project was volatile since it depended on the Procurement Manager’s abilities to sell the project internally. Thus, from the student workers experiences and our area of study (Supply Chain Management) we wondered about the position of the department, and whether or not KE would carry the project out in an optimal way in terms of world-class tools or would they just use excel manually, and we wondered if their staff was skilled enough to drive a cross-functional project. Since the company is publicly owned we wondered whether the allocation of resources would be sufficient, many thoughts came to mind, but mostly the student worker worried that the business units would refuse the project during implementation because the procurement department did not have authority over them. So our presumptions about the problem were mostly in terms of what affect the purchasing organisation structure, and the procurement department’s skill levels would have on the category management project.

Since the guiding principles for creating business knowledge must fit both our problem and ultimate presumptions (Arbnor, Bjerke 1996). Our ontology is, reality as mutually dependent fields of information,
see Figure 1, this entails that our approach for creating knowledge is based on the following presumptions: we see man as information transformer, we want to reconstruct context in terms of information, and our technique for creating knowledge is by contextual analysis (Arbnor, Bjerke 1996). Our research approach is that of systems theory, and our epistemology is that of *explanatics*, where we, the creator of knowledge, consider only the observable and referable aspects of reality. Our epistemological orientation is that of pragmatism which claims that the value of knowledge is equal to its practical use and “the truth” of a statement or a systems description becomes equal to its consequence (Arbnor, Bjerke 1996). The systems approach explanaticists conducts interviews and considers individual’s behaviour to be conditioned by the system of which they are a part and to be directed toward maintaining and possibly improving this system.

![Figure 1 - Source: Arbnor and Bjerke (1997) based on O’Donnell (2004)](image)

As creators of knowledge, we see reality as consisting of constantly changing forms and activities that base on the transfer of information, where the relations will usually be probabilistic and relative, rather than fixed or real (Arbnor, Bjerke 1996). This means that a change in any variable will reverberate throughout the system and require adaptations and re-adaptations in the network of relations, as individuals receive, interpret, and react to the information that has been transferred (Arbnor, Bjerke 1996). Thus, we as researchers view the organisation and its environment as evolving together, the members of the organisation continuously adapting to information from the environment (Arbnor, Bjerke 1996).

The principles of systems approach assume that the constitution of components brings about synergistic effects (see Figure 2): meaning that not only the content of the individual components, but also the way they are put together, provides information, the whole is more, or less, than the sum of its parts (Arbnor, Bjerke 1996). By applying the approach we will look for the forces that influence the system as a whole, which can be either more or less purposeful or destructive (Arbnor, Bjerke 1996). This means that
purposeful forces put individual components together in a synergistic way that results in the whole being more than the sum of its parts, whereas destructive forces put them together in a way that the synergistic results are less than the sum of its parts.

![Diagram](image)

Figure 2 - The Systems Approach: Synergy - The whole differs from the sum of its parts (Arbnor, Bjerke 1996).

The purpose of the systems approach, in general, is to reproduce objective reality, by determining the type of system, to describe, to determine relations, to forecast, and to guide (Arbnor, Bjerke 1996). Since the approach assumes reality is objectively accessible and that it consists of mutually dependent components which cannot be summed up, it is possible to base systems models on the subjective conceptions (Arbnor, Bjerke 1996).

Systems analysis has both a descriptive and an explanatory (possibly understanding) purpose, and analysing a system means to depict\(^2\) a real system in a systems model without changing the real system, and to make clear to oneself the internal and external factors influencing this system (Arbnor, Bjerke 1996).

Our system construction means to depict KE’s system in a systems model, i.e. the self-organizing systems model see Figure 3 - Systems model Figure 3, this model will be the basis for constructing a new real system in our case-study.

\(^2\) Depiction is the ability of a system to “reproduce” positions of the environment, the ability to allow the structure of the system to be “similar” to that of the environment (Arbnor, Bjerke 1996).
The self-organizing systems model is a biological systems model which works according to this principle of negative feedback or the principle of positive feedback (Arbnor, Bjerke 1996). The negative feedback is necessary to protect the system from disturbances and variations, whereas the positive feedback allows the system to identify deviations between its current situation and its goal. The system can then change its own structure in order to master new demands made by the environment, meaning that the system is able to grow (or to shrink) and that it has the ability to learn (Arbnor, Bjerke 1996).

The system on the left in Figure 3 represents a current situation whereas the system on the right has either had positive or negative feedback and is now seen as a learning system with the capability of structurally transforming its previous characteristics and behaviour (Arbnor, Bjerke 1996).

**2.1 Research design**

The purpose of this study was to explain a procurement initiative, category management project, in context to its environment, in terms of the purchasing organisation and their skill levels. The case study is the supply company “Copenhagen Energy”. Participants were procurement professionals from the procurement department, and Business Unit Purchasers from the extended purchasing organisation. The study was conducted primarily through the use of semi-structured interviews, participant observation, internal- and official documents. The chapter describes the design of the study, research methods and research process.

The study involved the following stages

Stage one: Participant observation was conducted in the procurement department and at workshop meetings
Stage two: Interview with the Procurement Manager to ascertain his view on the procurement initiative, on KE’s purchasing organisation, hierarchical position and skill requirements for the category management project.

Stage three: Interviews with a sample of the purchasing organisation: a purchasing analyst, a Tender Coordinator, and three Business Unit Purchasers. Information was sought on what role the procurement department played towards to other functions, how Business Unit Purchasers perceived the procurement department’s role and service and their attitude towards changes, how the category management project had been carried out and how business unit managers reacted to the cross-functional initiative.

Stage four: Content analysis of internal and official documents

Combining different data collection methods is commonly referred to as “triangulation” and is often used to increase the validity of the findings (Saunders, Lewis & Thornhill 2003).

We designed this study purposefully to include multiple research methods as different data collection strategies have different strengths and weaknesses (Saunders, Lewis & Thornhill 2003). The semi-structured interviews for example gave us insight into participants’ feelings and thoughts. However, people’s behaviours do not always match their words and therefore observation was useful to understand how they behaved under particular circumstances. Further, conducting participant observation, standing from within the procurement department, and observing workshops at the time of the initial cross-functional interaction, provided an opportunity to observe the interaction between the procurement professionals and the business unit managers/professionals. This helped us to place the interview data in context and gain an in-depth understanding of the relationship between the supply operations and their supporting procurement department personnel. Finally, analysing internal documents gave us an insight to KE as a whole and insight to each supply silo.

Literature data collection followed a Snow-balling strategy where we started by exploring literature and identified relevant areas and then backtracked by reading the sources referenced to the books and articles as the snow-balling progressed (Saunders, Lewis & Thornhill 2003). Our theoretical frame can be seen in Figure 4.
Figure 4 - Theoretical frame

From the literature the purpose was to find theoretical evidence and see how far the literature could lead us in answering our research question. Hereby we sought to understand what purchasing category management is, for which we adopted a normative framework that explains step by step how such a project can be carried out in practice, by Handfield et al. (2011) the “Strategic Sourcing Process”. From his point of departure we added evidence from other authors that gave the literature review more depth.

Once we understood the project that KE was deploying, we sought to explain the category management project in relation to its extended purchasing organisation and the required skill levels.

In order to find appropriate skill structure, we found evidence from category management literature and combined with that of supply strategy literature.

In order to find an appropriate structure for KE’s purchasing organisation we applied two theoretical frameworks, one from purchasing organisation theory, and another that combines category management with purchasing organisations and suggests a structure, depending on category synergy potential.

Finally we explain to KE how they should structure their purchasing organisation and skill levels in terms of their project, for which we critically reviewed literature from the fields shown in Figure 4

2.1.1 Sampling and access

Our Case study is limited to Copenhagen Energy, and the participants are all members of KE’s purchasing organisation: the Procurement Manager; a purchasing analyst; a Tender Coordinator; and three Business Unit Purchasers. We chose our sample because we wanted to gain a cohesive understanding of the purchasing organisation both in terms of the category management project and in terms of communication and information flow. The duration of our study was six months, representing a cross sectional time horizons
where we get a snapshot of a particular time, although we do provide some historical aspects in order to place the snapshot in context (Saunders, Lewis & Thornhill 2003).

The three interviewees from the procurement department were chosen for two reasons; one was to gain a cross sectional view of the procurement department, i.e. the division of six full time employees is 50/50 in terms of those two roles. Second the particular purchasing analyst was interviewed because of his extensive knowledge on the category management project since he assisted the Procurement Manager a great deal in carrying the project out and is a part of the project group (Appendix 4 - Purchasing Analyst (1)).

Three of 27 dispersed Business Unit Purchasers were interviewed, since they are the ones who actually carry out the task of purchasing; two of which are working in the division of water, sewage, and renewable energy (WSRE) whereas the other one is working in the division of heat, cooling and gas (HCG), representing the perspectives of both main supply silos. Two Business Unit Purchasers are involved in project purchases and one in general procurement (Appendix 7 - B.U. Purchaser from Project Department (HCG), Appendix 8 - B.U. Purchaser from Project Department (WSRE), Appendix 9 - B.U. Purchaser from Water Operation (WSRE)).

2.1.2 Data collection methods

The systems approach uses secondary and primary material from direct observations and interviews (Arbnor, Bjerke 1996). Our methods of data collection were semi-structured interviews, participant observations and internal/official secondary data. The internal and the official data were gathered for a more formal and precise indication of what had been seen and heard during the observations and interviews.

**Interviews** were conducted face-to-face with employees from within the procurement department, the Procurement Manager and Business Unit Purchaser. These were conducted in KE’s facilities during the time period: April 24th – September 20th 2012, and audio recorded. Prior to each interview, we sent the topic of discussion by e-mail so that the respondents had time to prepare (Appendix 1 - Interview guides). During the interviews we had a list of themes and questions to be covered, here we asked question in relation to the specific organisational context of each interviewee and the order of questions tended to vary as the conversation flowed.

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3 See chapter 4 for further explanation.
We used both exploratory and explanatory interviews (Saunders, Lewis & Thornhill 2003). The aim of the interviews varied, exploratory interviews were used when we wanted to understand KE´s problem better (i.e. what initiated the project, how had the project been carried out, how is the extended purchasing process, what problems are they experiencing). Explanatory interviews were conducted when we wanted to understand the relationship between business units and the procurement department, and when we wanted to apply particular theoretical frameworks and needed KE specific information. Sometimes we had both exploratory and explanatory styles in the same interview i.e. the Procurement Manager.

The scholar Kvale, emphasised that interview investigation goes through seven stages: 1. thematising, 2. designing, 3. interviewing, 4. transcribing, 5. analysing, 6. verifying, and 7. reporting (Kvale 2007). Before going into the interviews we had formulated the purpose of the research and described the concept of the topic, and considered all seven stages before the interviews started (Kvale 2007).

The questions asked were a mix of broad and narrow questions, which gave the respondents the opportunity to give information about what they perceived as important aspects of the business as well as giving us insight to the semi structured interview questions. In the beginning of the interviews we expressed our topic of interest, this varied from, our interest in the category management project, interaction due to purchasing, how purchasing is done today and how it will be different after the project, interest about the organisation or specific category contingencies when we wanted to place KE´s situation into theoretical frameworks. We opened each interview with an introductory question about the position of our participant (Kvale 2007). We asked open-ended questions which allowed our participants to answer in any way they liked, we used structured questions when we wanted to be very concrete (i.e. second and third interview with the Purchasing Analyst) (Kvale 2007). We asked many probing questions e.g. “Can you give examples?” Sometimes we responded with a nod or silence in order to give our participants time to think more deeply about their answer (Kvale 2007).

Observations were in terms of primary⁴ and secondary⁵ observations (Saunders, Lewis & Thornhill 2003). Hereby, one of us took on an observation role of what Saunders et al. (2003) referred to as observer as participant⁶ and complete observer⁷, here one of us spent on average two days a week working in the

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⁴ Notes of what happened or what was said at the time (Saunders, Lewis & Thornhill 2003).
⁵ Statements by observers of what happened or was said, involves those observers’ interpretations (Saunders, Lewis & Thornhill 2003).
⁶ A spectator whose identity as a researcher is clear to all concerned (Saunders, Lewis & Thornhill 2003).
⁷ Researcher’s identity is concealed. He does not take part in the activities but only observes (Saunders, Lewis & Thornhill 2003).
procurement department, working on the category management project and participating in cross-functional workshop meetings. All of the employees in the procurement department knew of the ongoing observations, but during the workshop meetings, not all of the participants were made clear that there was an observation going on, due to the wishes of the Procurement Manager who wanted the atmosphere to be relaxed.

Secondary data that reflected both on the environment of the real system being studied and other real systems (i.e. the procurement department, the supply silos, purchasing organisation), which we handled with great care (Arbnor, Bjerke 1996). Our secondary data collection was in terms of: internal documents, official documents, statistics etc.

2.1.3 Data analysis

Final analysis took place after the data had been collected. At this time we went through the final steps of 4. transcribing, 5. analysing, 6. verifying, and 7. reporting (Kvale, 2007). Although our transcription stage varied where we either, transcribed the interviews, made summaries of selected themes or used a worksheet that had been filled out during the interview. We thematized the data to place it in context with our choice of literature and verified our results by discussing and asking each other whether the participants really meant what we thought they meant. Here the observations cleared the meaning of internal phrasing, and many times we searched internal documents to be clear of what exactly was being referred to, and whether the words were true. The technique for analysing in the system approach is contextual (Arbnor, Bjerke 1996), so before we reported our findings, we decided on what context we wanted to report in which part of our research.

2.2 Verification

The requirement in systems approach is not so much that definitions must correspond with existing theory or be operational, but that they are perceived to be important and relevant to the creator of knowledge as well as other participants from the real systems (Arbnor, Bjerke 1996). Further, the measurements are not aimed at precision but at a pragmatic position. The important thing is what a measurement can be used for, not the way a measurement was made or its precision, thus, the concept of reliability is rarely used in the systems approach (Arbnor, Bjerke 1996).
The procedure for guaranteeing, to the extent possible, that measurements are correct, is to reflect the real system from as many angles as possible (Arbnor, Bjerke 1996). Hereby we took several interviews, made primary and secondary observations and studied as much secondary material as we could. This increased the triangulation validity to the extent possible, which is we were mostly able to confirm that the data was telling us what we thought it was telling us (Saunders, Lewis & Thornhill 2003).

There is a observer bias threat to validity that cannot be avoided, but since we were two researchers, one standing outside the construction and one as a part of it, we engaged in open discussions about our findings asking ourselves questions like “is that really what he meant?” thus, we sought to control the bias by being aware of the threat (Saunders, Lewis & Thornhill 2003).

Collecting data from one case means that the collection of information will be more detailed (Saunders, Lewis & Thornhill 2003), and a case study is by nature highly contextual our results are only meant to be applicable for our particular organisation in practice. The benefit of allowing a close in-depth look at our real system and its environment allows for a deep understanding of the situation. Such a close look, into one case, makes it possible to bring into perspective a specific problematic point of view which other firms may also face. Since that case-study research results can potentially be used for inspiration for other similar organisation (Flyvbjerg 2006).

However, the purpose of our research is not to produce a theory that is generalizable to all populations, it is merely to try to explain what is going on in our particular research setting (Arbnor, Bjerke 1996).

2.3 Delimitations

It is necessary to delimit the study object in relation to its environment, while at the same time noting its relations to and from this environment (Arbnor, Bjerke 1996). In terms of our external system delimitation, we concentrated primarily on the category management project aspects in the procurement department.

Since there is a limit to how much detail can be considered. It will always be necessary to stop at some level of magnification (Arbnor, Bjerke 1996). Our internal delimitations (e.g. magnifying level) is rather low, where we focused on business units (e.g. we identified that cultural business units differences can be explained due to historic mergers).

Our academic delimitations are within the field of sourcing, in particular: purchasing organisations, purchasing skill levels and purchasing category management. It would have been better to study our case company for a longer period of time, e.g. study the full process of carrying out the project and observing its implementation phase. However, due to academic time constraints, the duration of this case-study was
around six or seven months. During which the category management project had already been initiated and was not close to being implemented.

Although regulations are a big part of KE’s business we chose not to include the regulatory environment in our research.

Our inexperience as researchers must be taken into consideration, even though we are not completely inexperienced since we have made academic case-based researches before. We do not classify as experienced researchers.

Finally, we were only granted one interview with the Procurement Manager, due to his time constraints; since, during the course of this study, he took on a position as information manager in addition to manage the procurement department. Thus, our research is delimited of his managerial perceptions: in terms of how the project was progressing and how environmental factors came into effect.

We have now described the way we approached this research, and the methods that were used. In the following chapter our literature review is presented where we follow our theoretical frame.

3 Literature review

In order to address our research question, we seek evidence from prior literature to see to what extent the literature can answer our research question. From the literature we will find out what a purchasing category management project is, why it is done and what it requires from a purchasing organisation in terms of its structure and skills. Where our goal is to understand its complexities so that we can explain what structure KE’s purchasing organisation and what skill levels the project requires. Further, this will allow for a contextual analysis of KE’s procurement department’s environment.

3.1 Purchasing Category Management

The term category management or commodity management can be defined as a proactive management practice (Heikkilä, Kaipia 2009), and it is a strategic approach for improving a business by categorising products (O’Brien 2009). From a purchasing perspective, category management, segments third-party spend and requires cross-functional teams to develop and implement purchasing category strategies (O’Brien 2009). However, formulating purchase commodities into groups is nothing new; it has been practiced in production companies for decades with the established term: commodity management (Davis,
Eppen & Mattsson 1974). In the early days, according to Heikkilä and Kaipia (2009) commodity management was only done on a limited share of purchased supply items, while more recently companies have systematically been analysing all of their purchasing spend and forming categories that cover the whole spend.

The definition of a purchasing category is:

"A category encompasses a group of similar items that are required for specific business activities of the firm"

(Heikkilä, Kaipia 2009, page 6)

Broadly speaking, companies usually divide their third-party spend into main categories and subcategories (Handfield et al. 2011). According to Heikkilä and Kaipia (2009), it is important to have a hierarchy of categories, so that the different levels within an organisation i.e. corporate level would work, and decide on main categories, whereas operational levels would work on their relative subcategories, so each level has manageable entities (Heikkilä, Kaipia 2009).

When category management is first deployed it is expected to deliver breakthrough improvements in a company’s performance when compared with current performance, this requires determination and a will to challenge the way purchasing has been done in the past (O'Brien 2009). Since third party spend is typically the largest expenditure area for a company, implementing purchasing category management should create a large opportunity for reducing cost and increasing profits, where the benefits are in terms of price, cost, risk and value (O'Brien 2009). Further, the top five perceived benefits that can be expected from a coordinated purchasing approach are: better internal exchange of information, improved market negotiation strategy, significant cost savings, more impact on monopolistic supply markets, and improved insight in market and cost structures (Faes, Matthyssens 1998).

3.1.1 Carrying out a purchasing category management project

In order to understand KE’s purchasing category management we present a normative strategic sourcing process, see Figure 5, which can, according to Handfield et al. (2011), be used as a step-by-step approach for how to carry out category management, a process that entails five steps: Building a cross functional team; Conducting market research; Developing category strategies; Negotiating contracts; and Managing suppliers. According to Handfield et al. (2011), in practice a spend analysis must be done before starting on the five steps, since a business case must be built to gain management support (Handfield et al. 2011).
3.1.1.1 Building a business case

A spend analysis report serves as a senior executive planning document, upon which they make strategic decisions (O'Brien 2009). In addition, according to Handfield et al. (2011), senior management support will automatically give the category sourcing project more leverage.

Here the entire set of purchases done in a company over a year is analysed to identify potential savings, whereas the biggest spend areas usually contain the biggest potentials for saving (Handfield et al. 2011). Here, Van Weele (2010), claims that categories can be conducted upon detailed spend data. Whereas Handfield takes it further, and argues that internal spend data must be matched with the external supply market.

Once the spend analysis has been conducted and validated (Handfield et al. 2011), decision making can be fact driven, since:

"Making a decision when armed with good facts and data is probably the most powerful way to take the risk out of the decision.”

(O'Brien 2009, page 39)

According to Handfield et al. (2011), companies may struggle to develop a comprehensive and accurate spend analysis report, due to purchasing transactions that were incorrectly entered or because of system integration problems due to mergers and acquisitions (Handfield et al. 2011).
3.1.1.2 Build a category management team

The next step, after gaining senior management support, is to build a cross-functional team, for which according to Heikkilä and Kaipia (2009), the purpose is to bring together the required knowledge and resources for coordinated purchasing or purchase pooling, and to ensure strong commitment from independent business units. In terms of implementing an effective co-ordinated purchasing approach, a structured top-down process for cross business collaboration needs to be tailored to each business (Essig 1998, Rozemeijer 2000). Forming a cross-functional category team is, according to Essig (1998), the way to go for companies that want to organise for purchasing synergies, he developed a concept for horizontal cooperation, which he named “Co-operative Sourcing”. For practice, Essig (1998) developed the following recommendations for purchasing managers when building a cross functional team: (1) Find the right consortium partners and adopt a compatible target system; (2) Develop working rules for the consortium; (3) Determine the organisational structure of the consortium, and its operations; (4) Develop a cooperative corporate identity to avoid staff problems; and (5) Try to avoid an imbalance of incentives and contributions of members (Essig 1998).

Further, there should be a person responsible for overseeing the project, and in order to sell the project internally, the project lead could develop a compelling reason for the subject-matter experts’ participation in the team, armed with key information about the project and providing a carrot by stating the potential savings or value that can be created (Handfield et al. 2011). These internal selling abilities, according to Tassabehji and Moorhouse (2008), have been identified by purchasing managers in practice to be the most important skills for a procurement manager to have, to increase effectiveness.

3.1.1.3 Market research

After a establishing a category team, they can start researching the market and comparing data to internal demand patterns, that were identified in the spend analysis (Handfield et al. 2011). Once created the cross-functional teams can then work on the categories individually in order to identify and implement the optimum strategy for each category (O'Brien 2009). To emphasise the importance of conducting a market research Handfield et al. (2011) argue:

"supply market intelligence becomes one of the most important and critical stepping stones for an effective category strategy"

(Handfield et al. 2011, page 210)
When the external market data has been gathered, the team must process and integrate the data to ensure that it’s relevant and that it can be communicated effectively to stakeholders (Handfield et al. 2011). For which an industry analysis tool e.g. Porter’s five forces would allow for a contextual analysis with the broader environment, thus, linking two open system components into a bigger system. The context provided by the five forces model, incorporates industry conditions, developments and anticipates their impact on industry attractiveness (Porter 2008). Further, the model identifies the strengths and weaknesses of a company, and defines the boundaries of the industry in which it competes (Porter 2008). Here, recent and likely future changes should be analysed and aspects of the industry’s structure, that either competitors or the company have an influence on, should be identified.

"Good industry analysis does not just list pluses and minuses but sees an industry in overall, systemic terms."

(Porter 2008, Page 87)

Here, the category team must be aware of some common pitfalls: 1) Defining the industry too narrowly or too broadly. 2) Making lists instead of analysing. 3) Give equal attention to all forces, as opposed to digging deep into the most important ones. 4) Static analysis that ignores industry trends. 5) Not using the framework to guide strategic choices (Porter 2008). And for moving forward, O’Brien (2009) claims that, many organisations miss great opportunities by failing to manage the market as a result of one or more barriers: 1) not updating supply market knowledge, 2) looking at a narrow supply market instead of taking a broad view outside the parent industry, 3) not understanding the power balance in the inter-relationship.

3.1.1.4 Strategy development

In order to develop category strategies, O’Brien (2009) suggests that the category team should: first, determine the course of action for a medium-term period; second, match internal spends requirements with external marketplaces; third, make sure the strategy supports the overall purchasing objectives (O’Brien 2009). Further, Handfield et al. (2011) explains the formation of a category strategy as follows:

“A category strategy is a decision process used to identify which suppliers should provide a group of products or services, the form of the contract, the performance

"
measures used to measure supplier performance, and the appropriate level of price, quality, and delivery arrangements that should be negotiated.”

(Handfield et al. 2011, pg. 204)

The utilization of purchasing portfolio models is recommended for developing category strategies (Handfield et al. 2011). In principle, it should include the following steps:

- “Analysis of products and their classification into four groups according to two dimensions
- Analysis of required supplier relationships to deliver the products in each category
- Development of action plans in order to bridge the gap between current and required supplier relationships”

(Heikkilä, Kaipia 2009, page 6)

The purchasing portfolio matrix model connects the internal buying needs of a company with what the supply market can offer, which links two open systems into a larger system.

Here, Handfield et al. (2011) portfolio matrix for classifying categories of purchases, called “Strategy Portfolio Matrix for Category Management”, builds on Kraljic (1983) classification model “Stages of purchasing sophistication”, and provides suggestions for moving forward, in terms of: how to approach each supply strategy, tactical activities and action plans. In the original matrix presented by Kraljic (1983), the dimensions are profit impact and supply risk, where Kraljic (1983) argued that each of the four classifications required a distinctive purchasing approach, whose complexity should be in proportion to the strategic implications derived from, supply vulnerability and the company’s potential buying power (Kraljic 1983). The four classifications suggested in Handfield et al. (2011) matrix called “Strategy Portfolio Matrix for Category Management” are:

Critical commodity – strategic supplier

The categories of purchases, which apply to the “critical” commodity classification, have high supply risk and high value for the company, which means that the categories that apply have the essential element of forming a partnership in their strategy (Handfield et al. 2011). Further, the goal of these kinds of categories are to develop competitive advantage, support and leverage supplier’s core competencies, develop best-in-class supplier, support the company’s overall strategy and improve value-added services beyond simple purchasing agreements (Handfield et al. 2011).
Routine commodity
The categories of purchases within this classification are characterised by low supply risk and usually low cost (Handfield et al. 2011). The essential element of the “routine” strategy is to simplify the overall acquisition process, which yields cost saving opportunities through efficiency (Handfield et al. 2011).

Leverage commodity – preferred supplier
Categories that have low supply risk, yet account for a high portion of purchase volume and spend, and are important to the business, classify as a leverage commodity (Handfield et al. 2011). Because of the low complexity or risk impart from the marketplace high potential for savings exist for commodities within this classification (Handfield et al. 2011).

Bottleneck commodity – Transactional supplier
Categories that classify as a “bottleneck” commodity have: high supply risk, through either unique requirements or can only be supplied by a niche supplier; and are of significant value to the company (Handfield et al. 2011). Since the marketplaces that these categories originate from tend to be considerable small the product or service is normally quite expensive, due to the exclusive power position that the supplier or suppliers possess (Handfield et al. 2011). The essential element of the “bottleneck” strategy is to ensure continuous supply, for which, the category team could tactically lower the level of uniqueness of the supplier in order to chance the undesirable situation (Handfield et al. 2011).

3.1.1.5 Contract negotiations
The role negotiation plays in every sourcing process is to support the sourcing strategies and the plans of each business unit (Handfield et al. 2011). Negotiations can be defined as:

“A process of formal communication, either face-to-face or via electronic means, where two or more people, groups, or organizations come together to seek mutual agreement about an issue or issues”

(Handfield et al. 2011)

For effective implementation the stakeholders must be made aware of the category strategy as it will give the strategy buy-in and participation (Handfield et al. 2011). In terms of stakeholders the sharing of the final
agreement could be through a corporate contract system, which should ensure that all stakeholders have transparency and can realise what impact the contract has on their responsibilities (Handfield et al. 2011).

Negotiating an agreement should be viewed as the beginning of managing the actual performance for the item, service, or activity covered by the agreement (Handfield et al. 2011). During the contract lifetime it is the buyer’s duty to inform the supplier if he is not performing adequately and vice versa if the buyer is not meeting its responsibilities within the negotiated agreement (Handfield et al. 2011). The required skills and competencies in order to negotiate a considerable good contract are accessed in chapter 3.2.2.

3.1.1.6 Supplier Relationship Management,

The process of category management has a cyclical nature to it, as market conditions and organisations continue to change, so does the need for re-evaluating the categories and relevant strategies (O’Brien 2009).

According to Cousins et al. (2008), supplier relationship management is a process which consists of inputs and outputs, with a focus on business deliverables i.e. the product or service (Cousins et al. 2008).

“Relationships can be thought of as a process or course of action, which should be designed to deliver business outcomes.”

(Cousins et al. 2008, page 173)

Not all companies have supplier relationship management as such, since the spectrum can range from having a supplier alliance where organisations aim is to develop a relationship that is long-term mutual beneficial and consist of close collaboration to having a transaction based relationship ‘arm’s length’ (McCutcheon, Stuart 2000). The supplier partnership, according to Cousins et al. (2008) is a key strategy for organisations to achieve a competitive advantage, on the contrast, McCutcheon and Stuart (2000) claims that arm’s length relationship is appropriate for short-term and traditional contract-based supplier relationship, for which, Cousins et al. (2008) claims it is beneficial in situations when, multiple sourcing takes place through competitive bids (Cousins et al. 2008).

In terms of carrying out a category management project, Handfield et al. (2011), claim that supplier relationship management should monitor internal compliance to contracts, and especially look out for changes in the marketplace so the sourcing strategy is kept up-to-date (Handfield et al. 2011).
This entails that a supplier that supply’s various product or service will require a relationship portfolio, further, the relationship process must ensure that the supplier has the skills and competences needed to deliver what has been agreed on (Cousins et al. 2008).

### 3.2 Skill levels

The understanding of ‘skills’ has traditionally been associated with the level of training necessary for a job and the knowledge and experience that an employee has gained in a (Cousins et al. 2008). Skills have been defined as:

“The ability to carry out the tasks and duties of a job in a competent manner”

(Elias, Mcknight 2001, page 511)

There is a relationship between strategic procurement and strategic skills, in the way that once a procurement department becomes strategic so must it’s staff, without strategic skills the organization cannot reach its strategic goals (Cousins et al. 2008). Since KE’s category management project is a strategic sourcing process, we will now review strategic implications.

Because strategic supply requires strategies to be aligned with, and supportive of, overall corporate objectives (Narasimhan, Das 1999). The organisation can only achieve its strategic objectives, according to Cousins et al. (2008), if four interdependent issues are aligned see Figure 6, thus the organisation is only as good as the skills and competencies possessed by its employees, which makes them a prerequisite for achieving corporate strategy and policy (Cousins et al. 2008).

The four interdependent issues, which can be seen in Figure 6, “The Strategic Alignment Model” depend on each other in the way that supply strategy must support the corporate strategy & policy, performance measures should measure whether the supply strategy is being achieved or not, and the procurement department’s skills must support the expected performance derived from the supply strategy, in order for the corporate strategy to be reached (Cousins et al. 2008). Cousins et al. (2008) model can therefore be used to investigate the contextual environment of KE’s purchasing function. According to Baier et al. (2008) alignment between company strategy and supply strategy is a major prerequisite for company success.
3.2.1 Skill requirements for a procurement department

In order to assess whether or not the skills are aligned and strategic attainment can be reached, we must assess the procurement department’s skill levels. For which we present a review on Tassabehji and Moorhouse (2008) “procurement skills effectiveness matrix”, Figure 8, which recognizes the need for procurement personnel to update their skills, to be able to contribute effectively to the organization success. The matrix determines how capable the purchasing function is, along two dimensions: Skill levels; and internal support and acknowledgement (Tassabehji, Moorhouse 2008). For categorising the skill types required for procurement, they divided them into procurement specific and managerial skills, which resulted in five categories see Figure 7: (1) technical, interpersonal, internal enterprise, external enterprise, and strategic business skills (Tassabehji, Moorhouse 2008).

Here, in their research, procurement professionals perceived that, internal selling ability skills were overwhelmingly the most important skill needed to increase the effectiveness of the procurement role, since procurement professionals always had to deal with other organisational titles.

Figure 6 - Strategic Alignment model (Cousins et al. 2008)
The second dimension in Tassabehji and Moorhouse (2008) matrix is divided into two factors that impact how effective and value adding a procurement department can be, these are in terms of: internal support (internal acknowledgement) and integration (senior management support) see Figure 8. Here Tassabehji states that the role of procurement can only achieve high status levels within the organisation, by acquiring strong management support since that impacts the organisation’s attitude and consequent allocation of resources. However, despite top management support, the procurement professionals will still need to demonstrate their value internally for full internal support (Tassabehji, Moorhouse 2008).

Figure 7 - Categorisation of skill type required for procurement (Tassabehji, Moorhouse 2008).

Figure 8 - Procurement effectiveness matrix (Tassabehji, Moorhouse 2008).
The matrix shows five different situations that a procurement department can have, each position determines how effective and value adding the function is, given the two dimensions, here the skill set is aggregated in the procurement department (Tassabehji, Moorhouse 2008). In order to identify the required skill levels for carrying out the purchasing category management project, i.e. the process of developing and implementing category strategies across the organisation (Handfield et al. 2011). We assume that the procurement department’s skills and internal support determines how effective and value adding KE’s procurement department can be in carrying out the project (O’Brien 2009, Tassabehji, Moorhouse 2008).

3.2.2 Category management skill requirements

In terms of Handfield et al. (2011) five step model, for how to carry out a purchasing category management project, the skill requirements have been put in context to Tassabehji and Moorhouse (2008) skill categorise in the following review (Tassabehji, Moorhouse 2008). Each of these steps requires the procurement specific skill category ‘technical skills’ see Figure 7, which includes: technical knowledge, basic administrative skills, and advanced procurement process skills.

**Skill requirements for building a business case**

In order to build a business case through spend analysis, Handfield et al. (2011) and Tassabehji and Moorhouse (2008) indicates that the procurement department should possess: “Technical skills” like e.g. mathematical skills, and “advanced procurement process skills”, which are associated with category management which has the implications of “essential skills for creating value, strategic decision making” are, logically, advisable to possess and use in this phase; “Interpersonal skills” are needed in order to communicate the business case to the top management and analytical skills are needed for conducting the spend analyses. In order to sell the project and get buy in from different departments the “internal enterprise skill” will be needed.

**Skill requirements for building a team**

The purpose of the category team is ultimately to develop a category strategy, which should entail specific details and action plans for guidance on managing the category later on (Handfield et al. 2011). For those purposes the following skills are required; team building and leadership abilities, decision making ability, power to influence internal users and suppliers, and a compromising attitude for reaching a team consensus (Handfield et al. 2011). Further, the skills required for driving a strategic change are: project management
skills; the ability to lead and facilitate teams; and run the internal communications that keep the wider organization informed and supportive of the project “interpersonal skills” of communication leadership and persuading will be needed for forming the cross-functional teams (Tassabehji, Moorhouse 2008). “Internal enterprise skills” are needed in order to manage internal relationships, barriers and politics.

Skill requirements for researching the market
Researching the supply market requires “technical skills” (e.g. basic product knowledge), and for conducting a market analysis, where internal customers’ requirements need to be managed, requires “internal enterprise skill” in addition to “external enterprise skills” since the external environment is taken into context, however, Handfield et al. (2011) did claim that the market research should be conducted by members of the category team, which indicates that it is not necessarily the member from the procurement department that must possess “internal, and external enterprise skills”.

Skill requirements for developing a category strategy
This step entails putting the internal needs and the external environment into context (e.g. the strategic portfolio analysis), and reaching a team consensus for developing a category strategy (Handfield et al. 2011). This requires the following skill categories from the category teams ”technical skills”, “interpersonal skills”, “internal enterprise skills”, and “external enterprise skills” (Handfield et al. 2011)

Skill requirements for negotiations
As negotiations is fundamentally a process that involves relationships between people, where each party tries to persuade the other to do what is best for them, it is important that the negotiators get proper training (Handfield et al. 2011). The negotiators need to enhance their skills through planning, practice, observation, and constructive feedback (Handfield et al. 2011). These skills can be related to the “technical skills” and “interpersonal skills” (Tassabehji, Moorhouse 2008).

Skill requirements for supplier relationship management
Communication and problem-solving abilities will be required for managing supplier relationships in addition to internal communication skills (Handfield et al. 2011). For low levels of supplier relationships where only effective two-way communication is required the “interpersonal skills” will do just fine in addition to “internal enterprise skills”, but for collaborating with value adding suppliers “external enterprise skills” will be important for supplier relationship management (Tassabehji, Moorhouse 2008).
3.2.3 Skill requirements for managing Category strategies

In order to identify what skills are necessary for each category supply-strategy we present Cousins et al. (2008) strategic supply competency table. The model, see Figure 9, is based on Kraljic (1983) matrix, Cousins et al. (2008) have divided the skills and competencies that go hand in hand with the four strategic classifications. These four groups are: Strategic security, Strategic critical, Tactical acquisition, and Tactical profit. Should there be any missing skills, Cousins et al. (2008) argued that skill development cannot be standardized since competencies should be seen as situation specific (Cousins et al. 2008).

![Strategic supply competency table](image)

Figure 9 - Strategic supply competency table (Cousins et al. 2008).

The implications of this model depend on the importance and value of each category, for which different competencies are needed. So, after classifying the categories according to the “Strategic portfolio matrix for category management” presented by Handfield et al. (2011) in chapter 3.1.1. This model can be used as a guideline for identifying how KE should structure the skill levels of their category teams for carrying out their project.

The category team skill-set should be aligned with the strategic goals and objectives that KE will set for the category that is being managed, in order for effective purchasing behaviour to take place (Cousins,
2008). Or in other words, the level of importance that a category has to the business, should be aligned with the resources allocated in terms of expected achieved benefits (Handfield et al. 2011)

3.3 Requirements for managing a category management project

Through the previous normative model for deploying a category management project, it seems to be dependent on cross-functional purchasing synergy, which can been defined as:

"the value that is added when two or more business units (or purchasing departments) join their forces (e.g. combined buying) and/or share resources, information, and/or knowledge in the area of purchasing"

(Rozemeijer 2000, page 7)

Thus, purchasing synergies can be viewed as the value added that derives from the cross-functional work of purchasing category management. These synergy relations can be described as the aim of producing a combined return on resources that is greater than the sum of its individual parts (Smart, Dudas 2007), and in terms of cost savings, purchasing synergies can be illustrated with the equation 1+1 = 1.5 (Karjalainen 2010).

Success factors for implementing purchasing synergy, are to manage and analyse the product range, the entire purchasing spend, and the identification of common requirements across buying (Monczka, Trent 2003), which is in line with Handfield et al. (2011), framework, thus we make the assumption that literature on purchasing synergy applies to the possible benefits of purchasing category management.

Hereby, purchasing synergy, according to Faes et al. (2000), has three primary sources, these are in terms of: economies of: scale, scope, process and learning, which can be realised when business units exploit their interrelationships, share resources and know-how, coordinate strategies and pool negotiation power. Further, Faes et al. (2000) stressed that the important decision is not the coordination decision itself, but the identification of when to coordinate and the establishment of how implementation within the company should be executed. Here, Rozemeijer et al. (2003) claim that the benefits of a synergetic cooperation are i.e. cost savings, value creation, and increased productivity. Where, the implementation of framework agreements with selected suppliers make way for synergy benefits and increase the professional image of the company (Karjalainen 2010).
Economies of scale refer to gaining lower unit costs by increased market power due to high volume purchases and standardisation of categories (Cousins et al. 2008, Trautmann et al. 2009). Category manager and local managers work in teams, and the category needs a standardized purchasing process with clear definition of roles and responsibilities. Pooling purchasing power, in principal, occurs when a company promotes centralised purchasing (Goold, Campbell 2000). Standardized raw materials, MRO and indirect material are suggested as more suitable for pooling initiatives or centralization than others (Smart, Dudas 2007, Faes, Matthyssens & Vandenbempt 2000). Thus, routine and leverage items from Kraljic (1983) purchasing portfolio are most suitable for centralized framework agreements (Karjalainen 2010). This is because, in terms of leverage items, purchases with high volume and high value are applicable for discounts or that specialists can provide better service than local buyers or departments (Joyce 2006).

Economies of information can be exploited in decentralised purchasing organisation, by sharing all available purchasing knowledge, on suppliers, new technology, internal users, and prevention of mutually incompatible negotiating strategies (Faes, Matthyssens & Vandenbempt 2000), these are usually achieved by commodity team work, as a result from sharing knowledge and information (Englyst et al. 2008). The business synergy can create value simply by exposing one set of people to another, as it creates an opportunity for business units to improve their position by exchanging and sharing information about product specifications, company-wide contracts, product prices, suppliers, purchasing procedures, and supply market developments (Rozemeijer 2000).

Economies of process are the motive for standardized low volume products with irregular demand and high quantity of orders. Purchasing is decentralized to sites with full authority, but standardized purchasing processes are defined. In order to ensure efficiency, catalogues and instructions are created and knowledge of best practices is leveraged across the purchasing organisation. Centralisation provides standardisation, knowledge of company-wide requirements, thus it yields economies of process purchasing synergy benefits (Cousins et al. 2008)

In order to realise high cost savings from the category management project, Rozemeijer (2000) claims that success factors for capturing purchasing synergies, require an explicit and well-structured implementation path, for which there are certain general success factors i.e. prerequisites, which need to be in place:

- top management involvement or active executive support since that is closely correlated with the potential value delivered
• appointing a senior management problem owner
• set velar and measurable target (based on detailed purchasing information
• explicit synergy projects should be identified, prioritised, and decided on
• implement a well-designed organisation structure (working rules, clear communication and reporting lines, balance between incentives and contribution etc.)
• allocation of necessary resources across the different teams
• teams formulating and implementing the strategy for their specific projects
• teams should be supported with training, networking and proper ICT system implementation should be monitored and improvements initiated when necessary

(Rozemeijer 2000, page 8)

It is important to take barriers to success into consideration early on because, like with any organisational change, there is a tendency for trouble in the implementation phase, these are: Lack of involvement, lack of executive support, no felt need, inadequate resources. (O’Brien 2009).

3.3.1 Responsibilities for managing purchasing synergy

One of the most important issues, according to Rozemeijer (2000), in managing purchasing synergy is the issue of responsibility. He found that for managing purchasing synergy there should be a relationship between four important parties which can be seen in Figure 10, these are: chief executive officer, chief purchasing officer or corporate purchasing director, business unit management, and business unit purchasing management. This is so since, in his case-study research, he found evidence that it is very difficult for a corporate purchasing director to change the behaviour of business unit managers without the mandate of the chief executive officer. The chief executive officer’s role should mainly be a supportive one, but also to initiate and monitor, this is so since in the end the CEO should be responsible.
According to Rozemeijer (2000), the four parties all have their specific roles and responsibilities and the better the formal and informal structure of the relationships is, the more successful the purchasing synergy initiative will be. The arrows in Figure 10 are two-way and have the same intensity, as indicators of the nature of the relationships, whereas in practice, Rozemeijer (2000) found that some lines were one-way and/or more intensive in terms of communication and involvement e.g. the CPO interacted more with the BU Mgt. than the CEO.

Our next part of the literature review, is aimed at understanding how purchasing organisations are structured, since it is evident that the wider purchasing organization must collaborate to get a holistic view of potential synergies, in order to carry out a category management project (Handfield et al. 2011). The purpose is not only to understand how purchasing organisations are structured, but also why they differ and identify what kind of structure would best support the deployment of a purchasing category management project.

### 3.4 Purchasing organisations

We found out that a category management project is an improvement effort, for which, according to Monczka et al. (2010), requires a close look at the purchasing organizational design as its structure will affect whether the procurement department can optimise the benefits of their efforts. The drivers for making major changes in purchasing organisational structure, according to Johnson and Leenders (2004), stem from environmental pressure that drives overall corporate structural changes, which result in changes to the supply structure. Historically speaking, ever since the 1970s, the trend for purchasing organisations has been a structural shift from vertical silos to adopting the horizontal flows of communication (Cousins et al. 2008).
Where in vertical silos, each function is distinct and has many layers of work and information running up and down, whereas, in a horizontal purchasing structure, work and information flows across groups and between functions (Monczka et al. 2010). Shifting from vertical to a horizontal structure requires cross-functional teamwork where staff from different silos, must work as a unit for a specific purpose (Cousins et al. 2008). Further, it requires a new mind-set, with a focus on end-to-end processes for each product (Monczka et al. 2010). In practice most companies adopt some mixture of the two structures that capture the best features of each, resulting in flattened hierarchies that enable faster decision making, freer flow of ideas, and cross-functional teams that pursue new opportunities and share ideas (Monczka et al. 2010).

Structuring the purchasing organisation is, according to Heikkilä and Kaipia (2009), a question of what coordination structure under what circumstances is most effective.

The way in which purchasing organisational structures differ is in terms of how companies coordinate their purchasing efforts, typically there is centralisation, decentralisation and some form of mixed structures there in between (Giunipero, Monczka 1997). Whereas the definition of organizational design is:

“the process of evaluating options and selecting the structure, formal communications, division of labour, co-ordination, control, authority and responsibility that best achieves the organization’s aims.”

(Monczka et al. 2010)

According to Monczka et al. (2010), there are multi-levelled decision making in purchasing depending on the time frame and on what level the decisions are made, the levels are: strategic; tactical; and operational. Long term decisions are made at a strategic level by senior management, medium-term decisions are tactical and aligned with the overall strategy, and for day-to-day operations the decisions need to be quick and on the spot, and tactical decisions straddle the two (Monczka et al. 2010). In large corporations the strategic decisions are done in a central sourcing group or at corporate headquarters while operational and tactical decisions are decentralized locally (Monczka et al. 2010).

3.5 Determining the appropriate purchasing structure

In the literature there can be found different ways to determine the purchasing departments position in the organisational hierarchy for example Monczka et al. (2010) and Cousins et al. (2008). According to Rozemeijer et al. (2003) the purchasing organisational structure can be determined by the level of purchasing
maturity and corporate coherence see Figure 11, further, the authors claim that, the interaction between the four (above mentioned) main stakeholders is a crucial requirement for reaping the benefits of purchasing synergies. The interaction is usually facilitated either through formal organisational mechanisms on the one hand and informal networking mechanisms on the other, where a formal mechanism could be through e.g. working in commodity teams, the informal mechanisms could be networking at an annual purchasing conference or through an advanced corporate wide purchasing information and communication system (Rozemeijer, Weele & Weggeman 2003). The reasons why companies choose informal or formal mechanisms are related to the two contingency factors: corporate coherence and purchasing maturity (Rozemeijer, Weele & Weggeman 2003). Without established formal organisational mechanisms, or other measures, the cooperative ways will fade out and the corporate advantage in purchasing cannot be sustained (Rozemeijer, Weele & Weggeman 2003).

Figure 11 - Corporate purchasing organizational approaches (Rozemeijer, Weele & Weggeman 2003).

Further, Rozemeijer et al. (2003) stressed that any corporate purchasing initiative should be in line with the overall level of the two contingency factors, therefore top managers’ won’t add much value just by choosing an approach to create corporate advantage in purchasing, they add value by creating a fit between: the approach chosen and the overall level of corporate coherence and purchasing maturity. Thus, the fit would allow the corporations to effectively manage purchasing synergies among individual business units (Rozemeijer, Weele & Weggeman 2003).

In order to assess how well the different business units can be managed as one entity, corporate coherence is measured along: corporate management style as expressed in: corporate strategy, structure and culture (Rozemeijer, Weele & Weggeman 2003). Any major differences across business units in culture and
structure equal, according to Rozemeijer et al. (2003), significant challenges in integrating the purchasing function. Whereas the higher the levels of similarities, the higher the possible degree of centralisation (Rozemeijer 2000).

A mature purchasing organisation is capable and applies world-class best practices, while the unsophisticated one fails to employ it (Ellram et al. 2002). Which is in line with the other dimension of Rozemeijer et al. (2003) model, i.e. purchasing maturity, which can be defined as:

“the level of professionalism in the purchasing function”

(Rozemeijer, Weele & Weggeman 2003, page 7)

The level of professionalism in the purchasing function is expressed in the: status of the function; role and organizational status of the purchasing department; availability of purchasing information systems; quality of people involved in purchasing; and the level of collaboration with suppliers (Rozemeijer, Weele & Weggeman 2003). Whereas, the status and role of the purchasing department are important situational factors when coordination mechanisms are designed (Rozemeijer, Weele & Weggeman 2003).

In relation to a category management project, the extent of its contribution to a company’s bottom line may depend on the maturity level of the procurement department, due to the correlation between purchasing maturity level and cost-reduction results (Schiele 2007). Schiele (2007) observed that companies...
that had high levels of purchasing maturity tended to identify higher savings potential when doing analytical work in their commodity groups.

When the corporate coherence and purchasing maturity has been determined, the appropriate purchasing organisational structure can be identified in Rozemeijer et al. (2003) model.

In terms of corporate purchasing initiatives e.g. a category management project, if the centralized purchasing structure has low maturity at the operating level, it represents a situation in which most strategic commodities are contracted from a corporate purchasing department (Rozemeijer, Weele & Weggeman 2003). However, if both similarities across business units and purchasing maturity are high the centralised structure becomes center-led where cross-functional teams, strongly managed by the purchasing staff, participate in coordination activities with active support from the business units (Rozemeijer, Weele & Weggeman 2003). Thus, the greater the commonality of the purchased products required by the business units, the more benefits can be obtained from a centralised or coordinated approach (Rozemeijer, Weele & Weggeman 2003).

Decentralisation is appropriate for organisations that have low purchasing maturity and low corporate coherence, due to the few similarities in purchase specification between business units, the synergy opportunities lie in the exchange of information on supply markets, suppliers, and prices (Rozemeijer, Weele & Weggeman 2003). The federal structure is applicable to organizations that have a high purchasing maturity yet low corporate coherence, in this structure, purchasing consists of a small corporate purchasing staff that supports a number of autonomous decentral purchasing units in their voluntary efforts to exploit potential synergies (Rozemeijer, Weele & Weggeman 2003). Finally, a hybrid structure fits organizations that have both corporate coherence and purchasing maturity parameters at a medium value, here the organization is likely to have a mix of central purchasing and voluntary purchasing coordination activities (Rozemeijer, Weele & Weggeman 2003).

Now that it has been clarified what determines the appropriate purchasing structure, we wish to find out more about each structure, thus a review on purchasing structures is presented next.

3.5.1 Centralised purchasing organisation

Centralisation refers to a powerful central purchasing office, which specifies and buys on behalf of the divisions, and here he makes the assumption that the purchasing office has the expertise, records and political power, see Figure 12 (Cousins et al. 2008). The arrows in the figure indicate that the division do not
talk amongst themselves but have a two-way communication and responsibility structure with the central office (Cousins et al. 2008).

Centralisation

![Centralisation Diagram](image)

Figure 12 - Centralisation presented by Cousins et al. (2008)

Centralisation of decision making is, according to Monczka et al. (2010), appropriate for: Managing relationships with critical suppliers; Developing electronic purchasing systems; Implementing company-wide best practices; Negotiating company-wide supply contracts; managing critical commodities, and the standardization of purchasing processes takes place in strategic sourcing. It is in centralisation that a platform to co-ordinate plans is provided, by linking together corporate, business, and purchasing strategies (Monczka et al. 2010). In terms of public procurement centralisation is a clear trend, due to the special requirements set by the EU Directives, where all purchasing above a specified thresholds have to be advertised publicly (Gelderma, Th. Ghijsen & Brugman 2006, Dimitri, Dini & Piga 2006). Where the driver for centralisation is the costs for running a highly regulated tendering process, and any departures from procedures can open the door for suppliers to complain to the court (Gelderma, Th. Ghijsen & Brugman 2006). Thus, attempting to avoid repeating a burdensome process has mainly driven centralization in public procurement, and the expected volume discounts from pooled purchases Karjalainen (2011). Further, volume discounts can only be negotiated and maintained when purchasing volumes of all or most units are pooled under joint contracts; a favourable framework agreement would be negotiated by a centralised purchasing department, even though ordering would still occur at a local level (Karjalainen 2010). Here Karjalainen suggested that the centralisation tasks referred to at least, supplier management and contract handling located at corporate headquarters (Karjalainen 2010). He claimed that all three sources of synergies, economies of scale, information and learning, and process could all be gained by the use of centralized framework agreements (Karjalainen 2010).
However, the centralized operating model is not without its problems, there tend to be attitude problems and difficulty in steering processes remotely, divisional staff might ignore standard processes and preferred sources, then hide the agreements they have done to avoid punishment, i.e. maverick buying (Cousins et al. 2008).

This can be avoided by ensuring that subunits observe the benefits of framework agreements, especially in terms of lower prices (Karjalainen 2010). Here Karjalainen (2010) found that a central purchasing unit provided on average a 19% lower price than of the market, even with the most flexible contract terms turned out to be 37% lower in the framework agreements than on the market. Interestingly there appears to be no relationship between higher volumes and lower prices, but the extent to which the contract is used by group members provides more leverage for getting better prices than simply the volumes themselves (Nollet, Beaulieu 2005). This noncompliance to contracts, which is a typical counter reaction to purchasing centralization, is estimated to account for about 20-30% of unrealized savings (Kulp et al. 2006). Thus, without subunit compliance the high volumes behind the contracts cannot be reached (Karjalainen 2010). So it is not the centralization itself that brings the savings through economies of scale, it is how well it is driven through in the organization that matters. Further, centralisation permits assigning specialist managing certain categories, which enable them to concentrate their effort and thereby the category tends to be more efficient (Johnson 1999).

3.5.2 Decentralisation purchasing organisations

The advantages of decentralized purchasing lies in: flexibility, local specialized knowledge, speed and responsiveness; an understanding of local needs; product development support; and ownership (Monczka et al. 2010). It allows for easier separation of individual business units, with respect to the influence of merger/acquisition activities, and provides the benefits of improved service and lower costs by pushing decision making responsibility closer to the end user (Johnson 2005). Here the central office makes the policy and does corporate deals meanwhile the divisional staff carry out the actual purchases, the communication and responsibility goes both ways as can be seen in the direction of the arrows in Figure 13, the broken lines indicate loose or voluntary interaction (Cousins et al. 2008). Since, the divisional staffs gradually take more control of their day-to-day operations and may even exploit opportunities in local markets that were not possible with a centralized office (Cousins et al. 2008).
Cousins et al. (2008) explain that in order for the division managers to control their purchases they need standardized information systems designed for their needs. The divisions become the focus for activity and planning, and even though a central office is usually still in place, the role is different, the office acts as internal consultancy, facilitating education, training and process development (Cousins et al. 2008). In terms of decision levels, Monczka et al. (2010) claims that operational and tactical decisions are decentralized locally, the dispersed operational decision power is in terms of: Managing transactions with suppliers; use of E-Systems to obtain standard or indirect items through catalogues; Source items that are unique to the operating unit; Generate and forward material releases; Provide supplier performance feedback (Monczka et al. 2010).

Cousins et al. (2008) found that decentralized purchasing systems tend to drive intra-corporate secrecy and competition through so called cross-deals. The opportunities would lie in information sharing between divisions, for instance about a particularly good supplier, the downside is that divisions that have a really good experience with a preferred supplier, might not want to share the resource due to fear of losing the good service. Cousins et al. (2008) also found that suppliers might take advantage of the decentralized operating model, showing corrupt and opportunistic behaviour, by charging divisions different prices for the same service (Cousins et al. 2008).

Figure 13 - Decentralisation presented by Cousins et al. (2008)
In addition to inevitably duplicating resources, as each division has its own set of skills and expertise, there is a difficulty in controlling spend which may lead to a loss of spend-oversight at the corporate level, a situation that cannot withstand for long (Cousins et al. 2008). Thus, decentralised companies must find a balance between the needs for: keeping problem solving abilities close to where problems occur, keeping cost containment in profit centres, and maintaining close relationships in selected collaborative supplier relationships (Gadde, Håkansson 1994).

### 3.5.3 Hybrid purchasing organisations

The primary benefit of using a hybrid organisational structure approach is that it provides the opportunity to combine the key features of centralized and decentralized structures (Leenders, Johnson 2000), although they differ in the extent to what is centralised and what is decentralised (Monczka et al. 2010). The hybrid structure is applicable if local sourcing preferences are vital parallel to exploiting the strengths of central planning, which can be referred to as centralized pricing with decentralized purchasing (Karjalainen 2010). The hybrid operating model entails a central structure of activities up to and including the completion and management of the central contract/framework agreement for the whole organization to use, meanwhile, the tasks after contracting (e.g. ordering) are considered to be decentralized to local units (Karjalainen 2010). Probably the most common hybrid structure, according to Monczka, has centralized strategic design, a co-ordination of major spending categories and some support activities, with decentralization of most of the actual purchases. This allows all of the purchasing activities to be co-ordinated with a free flow of information through the internet, intranets, and information sharing systems (Monczka et al. 2010).

### 3.5.4 Federal purchasing organisations

A federal hybrid structure means that business units or divisions award the central purchasing office with the power to develop policy and provide them with necessary services with specific mandates see Figure 14, the communication and responsibility occurs between all purchasing parties, as can be seen in the arrows in the figure below (Cousins et al. 2008).
According to Cousins et al. (2008) the federal structure has some basic rules; one is to have common rules and procedures in order to avoid conflicts with the corporate policies and strategies. Another is dual citizenship where each staff member is concerned equally about his own department’s success and the overall organisation’s success. The third is giving away power to carry out activities and make decisions to the lowest level possible, meanwhile the centre acts as a coordinating device that answers to the divisions.

A federal structure means that divisions are in constant contact with one another, and they share sourcing information and have both their divisions’ interest in mind as well as the organisation as a whole (Cousins et al. 2008). However, striking the right balance between corporate intervention and business unit autonomy is difficult (Rozemeijer 2000).

3.6 Designing the purchasing organization at the category level

Since supply management derives its strategic direction from both corporate objectives and business unit strategy, and each unit’s strategy drives cross-organisational purchasing strategies, which become supply management goals, and then become detailed strategies at a commodity/product/service level (Handfield et al. 2011). Thus, the process of deploying a procurement strategy effectively should begin at the commodity level (Handfield et al. 2011). Hereby, we present a review on Trautmann et al. (2009) framework for structuring integration mechanisms at the category level. Their research indicated that different categories have different characteristics in terms of how much uncertainty has to be dealt with in for purchasing each category. They researched large global sourcing companies who had worked successfully with category
management for some time; they all had effective hybrid organizational structures that differed across categories since each required different integration mechanisms, even within the same firm (Trautmann et al. 2009). These companies used the category as the primary structural dimension for organizing their purchasing organizations. The generalizability of their paper goes beyond a particular case but remains within a particular context or setting (Trautmann et al. 2009).

Trautmann et al. (2009) claim that the point of departure for organising categories should be in terms of their purchasing synergies potential: economies of scale, economies of information, and economies of processes, since that is where high cost savings can be attained; by pooling volumes by centralization, or exploiting economies of information and learning or economies of process (Trautmann et al. 2009).

In order to achieve these synergies Trautmann et al. (2009) discovered that, there are different ways for structuring the sourcing organization or the integration mechanisms, and it should depend on the peculiarities of a category and the particular synergy potential to be exploited (Trautmann et al. 2009). Hereby centralized structures are preferable when several business units buy similar categories (products), the decentralized structure becomes attractive when each unit produces unique or markedly different products (Trautmann et al. 2009). The key challenge in hybrid structures is to distinguish between different types of categories, identifying the ones with synergy potential and determining their appropriate form of integration across business units (Faes, Matthyssens & Vandenbempt 2000).

According to Trautmann et al. (2009) there are three contingencies that affect the level of integration in dispersed sourcing organizations: (1) Category characteristics, (2) the supply environment and (3) the interdependence of the purchasing units (Trautmann et al. 2009). These contingencies influence how much uncertainty the purchasing units have to face, which in turn affect the level of information processing requirements (Trautmann et al. 2009). Effective management of procurement responds to these information-processing needs by implementing different types of integration mechanisms (Trautmann et al. 2009). Thus, the higher the information-processing needs, the more complex lateral mechanisms are required, and when the opposite is true the purchasing organization can do well with simple vertical mechanisms (Trautmann et al. 2009).

Category characteristics Relate to the task of executing a purchase of the category and are internal to the organization, they include; purchase novelty, purchase importance, category complexity and demand volatility (Trautmann et al. 2009). The authors claim that by analysing these characteristics the organization
can understand the uncertainty it is faced with and assess the required amount of information to be processed.

Supply environment affects the organization because, according to the open system perspective (Scott 1998), organizations continuously adapt to their environments. This adaptation creates uncertainty because the environment is mainly outside the control of the organization (Thompson 1967).

Finally, interdependence among organizational units is highly significant in creating integration needs, where interdependence refers to the interdependence of purchasing units distributed across locations\(^8\) (Trautmann et al. 2009). The higher the reciprocal interdependence of purchasing units the higher is the need for integration mechanisms with higher information processing capacity. However, in order to be effective, the information processing capacity should fit the information processing requirements, which is a question of how the integration of vertical and/or lateral mechanisms should be (Trautmann et al. 2009).

3.6.1 Integration mechanisms

The level of integration in a sourcing organization can be determined by the required information processing needs. Integration (or coordination) refers to the extent the purchasing activities of the business units are mutually supportive, and unity of effort is achieved, to accomplish the firm’s overall goals (March, Simon 1958, Lawrence, Lorsch 1967). The managerial tools to integration, called integration mechanisms can be divided into vertical and lateral ones (Galbraith 1973, Galbraith 1977, Galbraith 2000). They are suggested to vary both in their capacity to facilitate information processing in an organization and in their costs of use (both managerial time and financial costs). While vertical mechanisms include centralization, formalization, standardization and vertical information systems. The lateral mechanisms include, for example, job rotation, cross-unit teams and integrators. When the requirements for information processing are high, numerous complex lateral mechanisms are needed, but when the information processing requirements are low, the organization can do well with vertical mechanisms like centralization (Trautmann

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\(^8\) Although Trautmann et al. (2009) refer to globally distributed locations, we follow his understanding of interdependence since KE’s procurement department does not make any purchases, but each function has its own purchasing unit which are not located at the same place.
et al. 2009). Further, vertical mechanisms like centralization require less investments but their capacity to facilitate information processing is lower than that of lateral mechanisms.

In terms of creating appropriate information processing capacity, Trautmann et al. (2009), suggested lateral mechanisms to be both in the form of category teams and a category manager.

3.6.2 Categories with high Economies of scale potential

Categories with high economies of scale potential had low internal uncertainty in terms of carrying out the purchasing task, since the purchasing task was largely plan-able with little need to gather additional information during task execution (Trautmann et al. 2009). In addition the external supply environment posed low uncertainty but the internal interdependence among purchasing units had high uncertainties. Due to the simplicity of carrying out the purchasing task, which were more or less, straight re-buy with a standardized purchasing process and regular and recurring demand patterns, the information processing needs are quite low for the category characteristics contingency. Further, the supply environment was characterised as competitive, transparent and stable, thus requiring low information processing for the external contingency (Trautmann et al. 2009). However, the interdependence between purchasing units posed high uncertainty, since economies of scale synergy efforts require all units to participate in the bundling of volumes process, and according to Trautmann et al. (2009), the higher the reciprocal interdependence of purchasing units, the higher the need for integration mechanisms with higher information processing capacity. Here Trautmann et al. (2009) argued that reciprocal interdependence among organizational units is a result of the concentration of strategic purchasing activities at one location to take advantage of scale effects, while retaining sourcing flexibility and responsiveness to each supply unit’s interests. Which is in line with, Smart and Dudas (2007), who suggest that commodity teams are a prerequisite for realising economies of scale from volume bundling. Since the interdependence increases, the information processing requirements and the required integration mechanisms increase (Trautmann et al. 2009). In order to create an appropriate information processing capacity that fits the category requirements, Trautmann et al. (2009), found that these categories had a need for having both vertical and lateral integration mechanisms in place see Table 1. The vertical mechanisms were quite simple (e.g. a formalized purchasing process) due to the constant need to exchange routine information such as spend requirements, specifications or prices among interdependent purchasing units (Trautmann et al. 2009). In addition, category management teams acted as lateral integration mechanisms, where the teams provided common understanding for the joint project, for
two purposes, one was to gain acceptance and compliance, and the other was to make sure that all supply knowledge was incorporated into the category strategy (Trautmann et al. 2009).

3.6.3 Economies of information and learning categories

These categories had high complexities involved in the purchasing task which increased the need to process more information during purchase execution since most were project oriented so each purchase represented a new or a modified buy, the specifications were highly technical and customized to each buy in addition to fluctuating demand (Trautmann et al. 2009). Thus, high uncertainty induced by category characteristics entailed a high need for integration mechanisms with high information processing capacity (Trautmann et al. 2009).

The supply environment was characterised by a constant search for alternative suppliers, a lack of supply market transparency and low familiarity with suppliers which made preplanning difficult and required extensive information-processing among the purchasing units (Trautmann et al. 2009). Thus the information processing requirements were high and required integration mechanisms with high information processing capacity, just to be able to make an objective comparison of offers and benchmark supplier capabilities (Trautmann et al. 2009). In terms of interdependence between purchasing units was reciprocal, for which, according to Trautmann et al. (2009), the higher the reciprocal interdependence of purchasing units, the higher the need for integration mechanisms with higher information processing capacity. Thus, the overwhelming need for processing information provides an opportunity to capture economies of information and learning, company-wide. In order to create a fit between the information requirements and capacity, Trautmann et al. (2009), suggest managerial decision making to stem both from vertical and lateral mechanisms see Table 1. The vertical mechanisms should be in terms of information systems that bring transparency to contracts, suppliers and prices. Further, since formalization does not facilitate the required amount of information processing the appropriate lateral mechanisms would be a category manager since he has the capability to process more and richer information across organizational units, and acts as an integrator of knowledge with decision making authority (Trautmann et al. 2009).

3.6.4 Economies of process categories
These categories had low product characteristics uncertainty, since the purchasing task was a straight re-buy with standardized requirements and regular and recurring demand patterns (Trautmann et al. 2009). The supply environment was transparent and competitive with low delivery risk, and as for the interdependence between units, the purchasing units were characterised by pooled interdependence, because once new purchasing processes had been implemented, each unit was independent in executing the purchasing task (Trautmann et al. 2009). The main issue with these categories was that demand planning was difficult, which lead to a high order frequency and as a consequence supply managers tended to spend 80 percent of their time on purchases that represented 20 percent of their spend volume, thus, minimizing transaction costs becomes the main goal to address (Trautmann et al. 2009). In terms of integration mechanisms, Trautmann et al. (2009), suggest that the organization can do well with simple vertical mechanisms and decision making authority should be decentralized and remain at each site see

Table 1. Standardized purchasing processes should be defined, and since best practices can be incorporated into the process descriptions, they become critical for accelerating learning, (Trautmann et al. 2009). Headquarters should install catalogue agreements across sites, so all units follow the same standardised, best-practice, and cost-effective purchasing process (Trautmann et al. 2009).
### Overview on Integration Mechanisms

<table>
<thead>
<tr>
<th>Motive</th>
<th>Centralization</th>
<th>Formalization</th>
<th>Vertical mechanisms - Top-down / Bottom up</th>
<th>Lateral mechanisms - between units of the same hierarchy level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economies of scale</strong></td>
<td>Strategic purchasing centralized at category manager (specification setting, market analysis, sourcing strategy, contract placement) Operational purchasing at each site (ordering, expediting)</td>
<td>Standardized purchasing process with clear definition of roles and responsibilities</td>
<td>Simple mechanism e.g. Formalized purchasing process. IT system to leverage information on dispersed needs, prices, contract structures and suppliers across all sites</td>
<td>Category manager and local managers work in teams to develop strategies for a category. Local knowledge and requirements are considered in the strategy development and acceptance across sites is ensured</td>
</tr>
<tr>
<td><strong>Economies of information and learning</strong></td>
<td>Category manager must approve RFQ list and sourcing decision</td>
<td>Purchasing processes differ across sites, but comparable outputs for each major activity defined. Decision gates for important activities (supplier selection, category strategy) defined a priori by a category manager</td>
<td>IT system to leverage information on best price, suppliers and contracts across sites. Knowledge database with detailed information, templates, etc. about project, best practice</td>
<td></td>
</tr>
<tr>
<td><strong>Economies of process</strong></td>
<td>Full purchasing authority is decentralized to sites</td>
<td>Manuals, guidelines and instructions with best-practice purchasing process and related tools</td>
<td>Database with manuals and instructions</td>
<td>Not used</td>
</tr>
</tbody>
</table>

Table 1 - Integration mechanisms appropriate for exploiting purchasing synergies (Trautmann et al. 2009).
3.7 Implications for re-designing a purchasing organisational structure

As stated earlier, any improvement effort should begin with a close look at the purchasing organizational design to see whether or not the procurement department is organised in an optimal way to best achieve its aims (Monczka et al. 2010). Thus, we present the implications associated with a re-design towards either greater centralisation or decentralisation in order to put the redesign of KE’s purchasing organisation in context to what that requires from the organisation.

The main direction in purchasing restructuring is to move from fully centralised and fully decentralised purchasing activities towards a hybrid or coordinated structure, and even though large companies have a low degree of interdependency between their purchasing business units, there has been a trend towards more coordination of purchasing activities (Karjalainen 2010).

3.7.1 A shift towards centralised purchasing organisation

Despite the potential benefits of decentralisation, research does indicate that some level of centralisation is required to support strategic initiatives of the supply organisation (Johnson, Leenders & Fearon 1998, Johnson et al. 2002).

Under conditions of: little environmental uncertainty (Stanley 1993), oligopolistic supply industry (Corey 1978), or pursuing a more professional purchase function (Faes, MatthysSENS & Vandenbempt 2000), the purchasing department will be more centralized. Further, the following factors can, according to Corey (1978), influence firms to adopt a centralised supply organisational structure: supply assurance, improved profit performance through cost reductions, need for specialized supply skill, knowledge and training for supply staff and the ability to respond to external environment, including political and social trends. However, the ability to standardize is a prerequisite for centralized contracts, which is possible when two or more locations have common requirements (Corey 1978).

A success factor for moving towards centralisation is that organizations need to be able to verify and demonstrate how much can be saved, in order to be able to motivate the necessary changes within the organization and actually gain those savings (Karjalainen 2010). Since coordination cannot work unless real advantages are offered and made visible to the units involved, the situation is like a domino principle: where one unit will be quicker than the others to see the advantages and cooperate, which encourages the other units to cooperate as well (Faes, MatthysSENS & Vandenbempt 2000). A reasonable amount of centralization of the supply function allows the organization to reap the benefits of: higher levels of professionalism, to achieve an agreement on common requirements and suppliers, to become strategic, future oriented and provide a consistent organizational image in the market place (Johnson 2005). Thus, without formal systems
and the organisational structure to support it (i.e. centralisation) the development of a common strategy for a common supplier and cooperation to standardize is unlikely to happen (Johnson 2005).

The shift towards greater centralisation takes a long time and represents an evolutionary change mode (Johnson, Leenders 2001). Implementation issues must be followed through since the benefits of economies of scale are not as clear to one business as it is on the corporate level, thus the allocation of joint leverage benefits to the individual business units may cause a lack of commitment and hesitation to join the central operating model (Heijboer 2003). Further, in order to exploit economies of: scale, information and learning or process, requires actions both from the central purchasing unit negotiating the framework agreements and from the units using them (Karjalainen 2010). The central purchasing unit must be capable of efficient operations to provide the three types of benefits presented, as for the individual units, they need to commit to the centralized operating model if full benefits are to be achieved (Karjalainen 2010).

3.7.2 A shift towards a decentralised purchasing organisation

CEO’s tend to expect their supply function to deliver cost savings regardless of the types of changes made to the supply organizational structure, however, as companies shift towards decentralisation the expected cost saving benefits is not supported by the organisational design (Johnson 2005). It is important for companies to realise that many tools such as standardization, supply base reduction, E-Systems and so on, depend on supply centralization (Johnson 2005). The implementation is executed fast and represents a revolutionary mode, and the main implementation issues include: the business units, role of the chief purchasing officer, top management involvement, changes to existing purchasing staff and the involvement of consultants (Johnson 2005). Where, active top management in the implementation process involves: setting headcount objectives, departmental budgets and dealing with organizational resistance, providing active and visible top management support for the organizational structure change (Johnson 2005).

However, once companies have shifted towards greater decentralisation, there is a tendency for coordination of supply between business units with similar requirements to stop all together, which stems from no felt need and failed efforts (Johnson 2005). Here, decentralised structure with cross-functional teams experience certain barriers, thus, a guideline has been made to overcome the obstacles; co-coordination should be built by up step-by-step, confidence performance measures, trust is built in terms of keeping word, and clear communication lines need to be present (Rozemeijer 2000).
Further, according to Rozemeijer (2000) there are three areas in practice that decentralised companies looked for to stimulate the cooperation in order to realise purchasing synergies. These were: structural designs, networks of people and information and communication infrastructure.

In order to stimulate intra company cooperation, Rozemeijer (2000) found three areas in particular: Structural mechanisms, Networks of people, and Information and communication infrastructure.

*Structural mechanisms* include: Corporate sourcing platform, Executive steering board, Chief Purchasing Officer, Central purchasing group, Commodity teams, Cross-functional teams, Competence team, Working group, Task force and Lead buyer ship. The design of these mechanisms vary depending on the type of cooperation, it can be either: voluntary, informal and bottom-up cooperation; or mandatory, formal and initiated from the top-down.

*Networks of people*: Company events, corporate training courses and conferences, job-rotation across business units, management development programs, group identity programs (e.g. survival weekend) and all kinds of social events. In his case study, Rozemeijer (2000) observed that voluntary cooperation between Business Unit Purchasers had been initiated, not due to procedures, strategy or rules, but simply because they knew each other and saw the benefit in working together. Thus, networking stimulates cooperation.

The third area Rozemeijer (2000) found to stimulate intra-cooperation was *information and communication infrastructure*, including: Internet technology e.g. intranet, electronic communication system (e.g. e-mail), conferencing systems (e.g. videoconferencing), electronic bulletin boards, group decision support systems and information sharing systems (e.g. Lotus notes, corporate databases with information on components, suppliers, and contracts). Here Rozemeijer (2000) suggested that a company’s intranet could be used to communicate corporate agreements to internal users, and share best practice examples when implementing a certain purchase process.

We have now provided evidence from literature about how a category management project can be carried out, what skill levels the project requires and how we can assess KE’s procurement department’s effectiveness. Further, we have reviewed how a company can redesign its purchasing organisation from a category level, and provided evidence for what needs to be in place in order to manage purchasing synergies. Furthermore, we have presented literature that suggest how the specific business situation can be analysed,
and that it should determine how the synergy initiative is approached. This will then be used as a frame of analysis in the case analysis, but first we present our case description.

## 4 Case description

KE’s overall organisation consists of four silos, two of which are supply silos and the other two are support silos. The two main products are water and heat. All water produced in KE is groundwater, which is going through cleaning process before lead out to the consumer (ke.dk - "Water"). The heat is a waste product from power stations located in and around Copenhagen (ke.dk - "Heat") and is distributed through pipes containing hot water or damp.

The procurement department is one of the support functions that answer to the CFO along with customer service, IT etc. The Procurement Manager reports to the CFO and is on a parallel authority level as the heads of other support functions, he is not a member of the board or senior management (Appendix 2 - Procurement Manager).

The organisational chart is presented below.

![Organisational Chart](image)

Figure 15 - Organisational Chart

KE’s corporate strategy consists of the following four ambitions:
Create solutions in respect to the climate and the environment for the future
Provide the end-consumer with competitive water- and energy solutions and transparent prices
Collaborate with the industry in order to create a better and more effective supply of the end products
Be an attractive workplace with focus on results, development, and commitment.

(Appendix 11 - Corporate Strategy)

KE’s procurement department employs 20% of the staffs that are involved in purchasing and sourcing, the other 80% are located at different business units (Appendix 5 - Purchasing Analyst (2), Appendix 14 - Business Unit Purchasers in KE). The procurement department is located in KE’s headquarter and has eight employees which are divided into Tender Coordinators and Purchasers\(^9\) (Appendix 4 - Purchasing Analyst (1), Appendix 5 - Purchasing Analyst (2), Appendix 10 - Job descriptions). The business units hold autonomy over what should be purchased and when, meanwhile the procurement department oversees purchasing and sourcing processes, makes policy, regulations and acts as a service provider to the business units (Appendix 5 - Purchasing Analyst (2), Appendix 3 - Tender Coordinator). The service is in terms of: providing information, process facilitating complex project purchasing and framework agreements, managing the e-catalogue and the contract management system, assisting in negotiations etc. (Appendix 2 - Procurement Manager, Appendix 10 - Job descriptions, Appendix 3 - Tender Coordinator). The procurement department is usually involved when it is time to make a purchase, one of the Tender Coordinators claimed that in many cases they have a hard time keeping up with the ever changing business units, and he said that by involving purchasing professionals earlier in the purchasing process, they could be more value adding (Appendix 3 - Tender Coordinator).

4.1 Strategy

In terms of supply strategies, the Procurement Manager claimed they have a differentiation strategy, although no supply strategy was actually written down, here he claimed that the differentiation strategy depended on the demand for each product type and the market situation. For some products they had a two-

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\(^9\) One of the Purchaser will be referred to as ‘purchasing analyst’ in our paper, since that is more appropriate, according the purchaser himself (Appendix 4 - Purchasing Analyst (1))
tier strategy, while for others only a one-tier strategy, for other products they made competitive bids and some had strategic co-operation (Appendix 2 - Procurement Manager).

The procurement department strategy is divided into four visions and is related to supplying, which are:

- Optimise KE’s purchasing power
- Focus on the total cost of purchasing in KE
- Ensure compliance with procurement laws and politics
- Ensure agile procurement processes and simple tools

(Appendix 12 - Procurement Department's Strategy)

In terms of the purchasing organisational structure the Procurement Manager stressed that:

“Copenhagen Energy is like any other companies, very silo oriented.”

(Procurement Manager, April 24, 2012 (10:55))

Further he stress that the supply market knowledge, for instance, needed to be located out in the operation, not in the procurement department (Appendix 2 - Procurement Manager). When asked about the category management project, he claimed that the department’s role was to facilitate specialists in coordinating their day-to-day operations knowledge. Taking into perspective the nature of KE’s business, i.e. a sole provider of tap water and sewages for a particular geographical area, makes the importance of keeping day-to-day operations running of significant.

The responsibilities for the procurement department, according to their job descriptions, are in terms of having specialised knowledge, managing purchasing processes, when asked to they participate in negotiations and running tenders, the department is supposed to make sure that EU procurement laws are adhered to, but in reality they have no control nor overview on whether KE is complying with the EU laws (Appendix 5 - Purchasing Analyst (2)), since the Purchasing Analyst said the following in the second interview:
“if the procurement department isn’t the only one who can initiate tendering and finish tendering then how can you keep control of compliance“.

(Purchaser Analyst, August 17, 2012 (31:49))

Further the responsibilities are to manage KE’s car fleet in collaboration with internal stakeholders, carrying out administrative tasks, providing statistical evidence, teaching of process supporting tools, development of beneficial tools, contribute to optimizing and streamlining of KE’s purchasing volumes, making sure that procurement lives up to KE’s expectations and goals etc..

The overall purchasing activities fall in two parts: high frequent purchases, and project purchases such as construction projects (Appendix 2 - Procurement Manager).

*High frequent purchases* are handled in an e-catalogue, where the procurement department’s responsibilities are to update it with products and prices, and to ensure that the process time for these types of purchases is as low as possible (Appendix 2 - Procurement Manager), which the Procurement Manager states as follow:

“...we insure that this catalogue is always updated with prices and products to insure that the process time for high frequent purchasers are as low as possible...”

(Procurement Manager, April 24, 2012 (01:40))

Further, the procurement department must make sure, that all Business Unit Purchasers are using the same contracts, for high frequency products (Appendix 2 - Procurement Manager). The Business Unit Purchasers should not need to contact the department, since there should be a framework agreement in the e-catalogue ready for them to use (Appendix 2 - Procurement Manager). The Business Unit Purchasers working with these types of purchases confirmed that the only reason they contact the procurement department is when they have need to have a supplier created in the ERP system or if they have a problem that they can’t figure out between themselves (Appendix 8 - B.U. Purchaser from Project Department (WSRE)). This can be identified through the following:
“They're backup, when I have problems. If there’s something I can’t figure out or if I get stuck or something.”

(B.U. Purchaser from Project Department (WSRE), May 22, 2012 (04:11))

Project purchases have loose or voluntary communications with the procurement department, when they do the procurement professionals help the internal customers to source products or services in a right manner either to get competitive prices or in running competitive tenders due to EU regulations (Appendix 2 - Procurement Manager). The process begins with a project manager specifying what he needs in order to carry out a particular e.g. construction project (Appendix 2 - Procurement Manager). He contacts the procurement department who in turn start to investigate whether there is a framework agreement in place that can be used (Appendix 3 - Tender Coordinator). If that is not the case then the procurement department, in collaboration with the project manager, makes a time schedule with respect to EU laws and regulations, if that’s the case, the procurement department then runs the tendering process including the pre-qualifying phase, request for tender, the final tendering and negotiation (Appendix 2 - Procurement Manager, Appendix 3 - Tender Coordinator). In terms of the category management project, the future project category manager or the project category group would be obliged to make the requirement specification for tendering, since they will have the product specific knowledge (Appendix 3 - Tender Coordinator).

4.2 Category Management project

The category management project derives from another project, that the CFO initiated, which revealed what service the support functions provided the supply functions with (Appendix 4 - Purchasing Analyst (1)). While working on that project the procurement department felt a lack of structure and information, so they saw a need to sit down and decide how different purchases should be carried out, and they wanted their contract systems more transparent so they could identify what internal customer is using what supplier (Appendix 4 - Purchasing Analyst (1)). This applies to the principle of negative feedback, where the system (i.e. the procurement department) uses some of its energy to get a feeling for its own position and to correct its course towards pre-determined targets (Arbnor, Bjerke 1996).

The lack of information was in terms of: spend information, no information sharing platform, information about when there is an EU tender going on, here he wanted a tool that identified purchases within the scope
of regulations so he could feel confident that KE always adheres to EU regulations. Further, the Purchasing Analyst claimed that the project would provide structure, get contract coverage, maintain supply security, ensure that components were purchased for the right price, and finally to comply with the laws (Appendix 4 - Purchasing Analyst (1)). Another internal problem was that whoever had the demand for purchasing a product, he or she might not know who to turn to, but here the Purchasing Analyst hoped that whoever had the demand could in the future simply say:

„Okay, I need something within this category and these are the supplier we have“

(Purchaser Analyst, May 22, 2012 (35:47))

The information sharing platform enable a higher degree of coordinated purchasing structure, an opportunity to illustrate for both supply silos that together they were stronger, since he knew that both silos were in fact, to some extent, using the same suppliers (Appendix 2 - Procurement Manager).

After the Procurement Manager had appointed the project group the category management project was carried out at KE in the following order: First, they spent time on making a baseline/overview of what each business unit was purchasing and what suppliers were used in which business units (Appendix 4 - Purchasing Analyst (1)). During the process of making the baseline, the project group (i.e. procurement manager, a purchasing analyst, a part time employee) in addition to getting inputs from the Tender Coordinators, formulated the first draft of the categories (Appendix 4 - Purchasing Analyst (1)). By doing this it was possible for the project group do add a third dimension to the baseline, which was spending per category. The categories were further divided into two classifications: A and B categories. The classifications were derived from both turnover and what categories were important to the business in terms of maintaining supply security of the end products and thereby keeping the day-to-day operation running. Further, the category management project is supposed to help the procurement department to work proactively, so that people out in the operations wouldn’t have disruptions in their work, because they had to wait for the procurement department to make sure everything was done according to procedure (Appendix 4 - Purchasing Analyst (1)).

The bottom down project required top management approval, for which the CFO and the Procurement Manager filled out a standard project application which was granted. Once the first draft of the baseline was ready it was used to get support from the reference group (middle managers with interest in purchasing) and from the steering group (CFO and one supply silo chief) (Appendix 4 - Purchasing Analyst (1)). Next, some general coordination of the project were made, planning of meetings, time-schedules, and reporting to the project management software. In the workshops, the categories were evaluated by pairing the
baseline and expert category knowledge possessed by the business unit staff (Appendix 4 - Purchasing Analyst (1)). The main argument for formulating the categories was in terms of what made sense internally, once formulated they were then matched with the supply market (Appendix 4 - Purchasing Analyst (1)).

The Procurement Manager states in the interview that:

“*We have already experienced some cultural changes and also some very good ideas of co-ordinating advantages.*”

(Procurement Manager, April 24, 2012 (13:05))

This means that during the first workshops the Procurement Manager already noticed some cultural changes between the two main supply silos, they acknowledged that some cases they used the same suppliers which meant that a purchase category could span both silos (Appendix 2 - Procurement Manager).

For developing category strategies, KE had hired external consultants who sold them a purchase classification tool in excel that classified the purchases according to Kraljic’s matrix from 1983. However, they never seemed to agree with the calculations, so mostly they subjectively dismissed the classification generated from the model, and made their own (Appendix 4 - Purchasing Analyst (1), Appendix 22 - Observations). Further, during the workshops people were reluctant to guess on the savings potential, since that had not been analysed, in retrospect the Purchasing Analyst who conducted the spend analysis/baseline said that initially the focus was on getting a grip of a category i.e. understanding what it was, who used it etc. since there is no product specific knowledge within the procurement department (Appendix 4 - Purchasing Analyst (1)).

During the data gathering in this research, KE has identified 10 main categories that consist of 113 sub-categories where 47 of them have been classified as A categories (Appendix 20 - Category Sheet).

Since the category management project had not been carried out completely during the time-scope of this research, we investigate the expectations for the remaining steps in carrying out the category management project. The project charter, presented in Figure 16, defines the project and the sequence of tasks (Appendix 4 - Purchasing Analyst (1)).
The procurement department does not expect to employ a category manager for each A category (Appendix 4 - Purchasing Analyst (1)), since KE is too small for those kind of resources (Appendix 2 - Procurement Manager). So, Category teams will most likely be formed. The category teams will consist of one representative from the procurement department and two to six internal stakeholders from both silos (Appendix 2 - Procurement Manager, Appendix 5 - Purchasing Analyst (2)). Different knowledge is needed in these teams, so the experts bring subject matter knowledge and the procurement department bring commercial knowledge to the teams, coordinate the teams, and facilitates cross-functional knowledge sharing (Appendix 2 - Procurement Manager). In terms of competence requirements for the project, the Procurement Manager states that the work is not that different but if anything his staff will need to develop their facilitator skills, since that will be their role in the category teams (Appendix 2 - Procurement Manager).

The Procurement Manager had not carried out a purchasing category management project before, however he did have experience with driving projects that run across silos, here he claimed that:
“It is always the same its always kind of problems you’re fighting. Getting alignment, getting people to think that this is a good project, it’s a hard selling project”

(Procurement Manager, April 24, 2012 (22:34))

Since the nature of the KE’s industry is a monopoly situation, the purchaser analyst anticipated that any overlapping of interests within the reference group might serve as an incentive to not change the current work procedures. This might be so since it’s a bottom-up project i.e. there is no pressure for going through what could be a difficult process in order to make the category management project a success (Appendix 2 - Procurement Manager, Appendix 4 - Purchasing Analyst (1)).

5 Case analysis

In order to address our research question we will now analyse how KE has carried out the category management project in context to how prior literature suggests is most effective. How effective KE’s procurement department is in terms of their skill levels and organisational environment. Building on that we analyse what skills are required for carrying out the category management project. In order to suggest an appropriate way for KE to structure their purchasing organisation, we analyse how that can be done from a category level and compare with KE’s specific business situation, and the prerequisites necessary for managing purchasing synergy.

5.1 Purchasing Category Management project in KE

This part of the analysis will focus on how KE has carried out the category management project, and provide evidence from the literature, presented in chapter 3.1.1, about skill and organisational issues that KE could benefit from taking into account, since they have never carried out a category management project before.

In order to address the many problems that the procurement department was experiencing such as: lack of structure, not having category strategies, availability of contracts, lack of spend information, lack of information sharing, and lack of contract coverage KE initiated the category management project (Appendix 2 - Procurement Manager, Appendix 4 - Purchasing Analyst (1)). KE’s procurement manager claimed that his motives for initiating the Category Management project were a lack of spend information giving tool and the lack of a communication platform (Appendix 2 - Procurement Manager). These motives are in line with what, Faes and Matthyssens (1998), found to be among top five perceived benefits of a co-ordinated
purchasing approach, which were: better internal exchange of information and improved insight in market and cost structures. KE’s procurement manager said he needed information and a platform for information sharing, and thus the purchasing bottom up initiative came about.

It seems as though the procurement manager got a feel for its own position, was unhappy with the lack of information and knowledge sharing, and is now trying to correct its course. This, according to the self-organizing systems model, applies to the principle of negative feedback, which indicates that if the category management project is a success, KE’s procurement department can be seen as a learning system with the capability of structurally transforming its previous characteristics and behaviours (Bjerke and Arbnor, 1996).

This means that KE was lacking the ability to fully exploit purchasing synergies in terms of economies of scale, -information, and –process (Trautmann et al. 2009), since the success factors of implementing purchasing synergies are to manage and analyse the product range, the entire purchasing spend, and the identification of common requirements across buying units (Trent, Monczka 2003). Thus, structure and information sharing is a requirement. This is why initiating a category management project in KE, was a good idea, since a category management project entails developing category strategies, which requires, according Handfield et al. (2011), cooperation and coordination, thus information sharing and structure.

According to Handfield et al (2011) strategic sourcing process see Figure 5, KE has conducted the spend analysis, gained senior management support, held workshops to verify the baseline, currently KE situated in step one of Handfield et al. (2011) model, i.e. build the team. In the following analysis we will place the workshop specific cross-functional team work in context to how coordinated purchasing efforts are carried out in KE.

Building a business case

Here, KE did not estimate potential cost savings in their spend analysis which, according to Faes et al (2000), is key to coordination efforts. Where they claimed that coordination cannot work unless real advantages are offered and made visible to the units involved (Faes, MatthysSENS & Vandenbempt 2000).

In addition, Handfield et al. (2011) suggested that a Pareto analysis should be applied to the entire spend of a company. However, KE did not do that, they analysed spend in accordance to what they internally felt was important purchases, and have now narrowed those down to 58 A-categories (Appendix 4 - Purchasing Analyst (1)). Without applying a Pareto analysis to the entire purchasing spend, KE might actually spend time on categories that might have low savings potential.
In order to verify their baseline they held workshops with subject matter experts who provided valuable insight to the product characteristics, the supply environment and internal demand (Appendix 4 - Purchasing Analyst (1)). During these workshops the baseline and some of the categories were adjusted in order to suit KE better in terms of daily operation (Appendix 22 - Observations).

_Building the team_

In order to assess how KE should built their team and made initial meeting plans in an optimal way (the first step of Handfield et al. (2011) model, build the team), we apply Essig’s recommendations to purchasing managers for “Co-operative Sourcing” (Essig 1998).

First, _find the right consortium partners and adopt a compatible target system_, here KE should spend time on identifying who should be involved and responsible for the categories in terms of horizontal cooperation, which to some extend already has been done in KE (Appendix 4 - Purchasing Analyst (1)).

Second, _develop working rules for the consortium_, in KE, according to the purchasing analyst, the category teams, once appointed, will develop their own working rules for the coordination efforts, but he did stress that most of his time had been spent on general coordination of the project in terms of meeting planning and report intervals to their project management module system (Appendix 4 - Purchasing Analyst (1)). Further, the nature of this reporting, was in terms of whether the project was progressing or not and if they were experiencing any hangers Thus, we assume that KE never developed working rules for their horizontal cooperation, although they were clear on getting input from all purchasing stakeholders.

Third, _determine the organisational structure of the consortium, and its operations_. Here of KE and in line with what the Purchasing Analyst claimed to have spent most of his time on we assume that an organisational structure of the category teams and its operations was never determined.

Four, _develop a cooperative corporate identity to avoid staff problems_. Here it can be found in KE’s overall vision where KE wants to be the best water and energy company, in addition to the joint corporate identity, KE’s procurement manager did stress that his message to the horizontal working group was “together we are stronger” which can be seen as a cooperative corporate identity (Appendix 2 - Procurement Manager).
Five, *try to avoid an imbalance of incentives and contributions of members*. In KE the Purchasing Analyst stressed that they anticipated different incentives between individuals in the horizontal working group in relation to how enthusiastic the business unit managers might be in terms of changing a process that runs fine in their opinion, and in terms of avoiding unbalanced contributions they would report those incidents to the project management module (Appendix 4 - Purchasing Analyst (1)).

Thus in terms of Essig (1998) five recommendations for purchasing managers on how to organise horizontal cooperation, we identified the following gaps: adopt a compatible target system, develop clear working rules, and determine the organisational structure of the horizontal working group, and its operations.

*Researching the market*

According to Handfield et al. (2011) the categories should be formed by matching internal needs with the supply market, which is exactly the contextual analysis KE applied in their workshops (Appendix 4 - Purchasing Analyst (1)). However, Handfield et al. (2011) suggested that the information should be put in a contextual model (industry analysis) transforming the data into meaningful knowledge, which was not the case in KE. Here the procurement professional looked in-house to transfer the spend information into meaningful knowledge, as the Purchasing Analyst explained:

“…and have a chat with people who actually know something about these things.”

(Purchaser Analyst, May 22, 2012 (02:48))

Here, the point with some of the workshops was to incorporate current supply knowledge order to validate the baseline and add knowledge (Appendix 4 - Purchasing Analyst (1)). By ensuring valid information, which is important according O’Brien (2009), since it limits the risk in decision making.

*Developing category strategies*

At the workshops the initial phase of developing category strategies was carried out by classifying the categories in terms of Kraljic’s matrix from 1983 based on a model bought from external consultants. According to the Purchasing Analyst the participants never seemed to be in agreement with the model (Appendix 4 - Purchasing Analyst (1)). The future, category teams, will of course go through this stage in hopefully in a more structured way also armed with an in-depth market research in order to develop appropriated categories, which is crucial according Handfield et al. (2011).
The Purchasing Analyst revealed in the first interview that all the categories was divided into two classifications; A and B. The classifications were derived from turnover and the impotence in terms of maintaining the daily operation (Appendix 4 - Purchasing Analyst (1)). It could be argued that making this classification is a good idea in order to focusing resources instead of trying to embrace all categories; 113 subcategories and 49 of them was classified as A (Appendix 20 - Category Sheet). This is supported by Heikkilä and Kaipia (2009), since they explored that creating manageable entities is a main goal when forming categories in order to be successful. Thus, it could be argued that KE is trying to embrace too many categories, which means that they could be unsuccessful in implementing the project. Instead, Handfield et al. (2011) suggest to conduct a Pareto analysis and continue to work on with a few categories with high cost savings potential.

So far the most crucial issue where KE is missing out on, at this time in process in carrying out the category management project, is probably the market research according Handfield et al. (2011), since this they states that it is a stepping stones for an effective category strategy. O’Brien (2009) indicates that organisations are missing great opportunities, when failing to manage the market in terms of e.g. updating supply market knowledge and not taking a broad view on the market. Thus, missing out on the market research could result in crucial disadvantages for KE.

By initiate the strategy developing phase at the workshops, in terms of classifying according Kraljic’s matrix from 1983, instead of forming cross-functional teams and conduct the initial strategy developing phase in these teams and thereby enforce commitment from the category teams (Heikkilä, Kaipia 2009), including a procurement professional, the category strategy may be influent by participants from the workshop, who have their main expertise concerning another category managed at that workshop. Thus, the strategy could loss out to be effective. On the other hand it could be argued that the classification done at the workshop only serve as an overview, since the strategies are meant to be formulated after assigning the responsible, according the project charter, Figure 16.

We have now identified where KE is in the process of carrying out the category management project, and so far they have developed a baseline for the categories and validated the information at the workshops. We will now analyse whether KE has the pre-requisites in place for effective purchasing behaviour to take place.
5.2 Pre-requisites for a company’s success

In order to identify whether KE’s purchasing function is capable of contributing to the success of KE, we must assess whether KE’s supply strategy is supportive of the corporate strategies. Hereby we apply Cousins et al. (2008) strategic alignment model. The model will also allow us to assess the alignment all the way down to the skill levels of the purchasing function.

5.2.1 Strategic alignment in KE

According to Cousins et al. (2008) an organisation is no better than the level of skills and competencies that are possessed by its employees, and they serve as a prerequisite for the organisation to achieve its strategic objectives. Further, strategic alignment is needed in order to carry out a category management project, since, Handfield et al. (2011) advocates that a category management project is the process of forming category related supply strategies through cross-functional teams, thus supply becomes strategic.

Therefore an analysis of identifying if alignment, according Cousins et al. (2008) “Strategic Alignment Model”, exists in KE will be required to explore if the employees working in the area of supply, mainly the procurement department, are skilled and competence enough in order to make supply strategic (Cousins et al. 2008). Cousins et al. (2008) “Strategic Alignment Model”, is a contextual analysis which puts the procurement departments: skill level, their performance measures, the supply strategy, and the corporate strategy, in one system, linking the purchasing function in context with KE’s overall organisation.

The analysis will focus, one at the time, on the links between the four components presented in Figure 6 presented by Cousins et al. (2008).

5.2.1.1 Alignment between the supply strategy and the corporate strategy

Since KE’s procurement department does not have supply strategies as such, we will assess their overall procurement department strategy, which consist of four visions (Appendix 2 - Procurement Manager, Appendix 13 - Purchasing Policy, Appendix 12 - Procurement Department’s Strategy). KE’s corporate strategy and supply visions/strategy can be seen in Figure 17, here there are two corporate strategies that are not supported by the supply strategies, which is necessary in order to achieve alignment (Cousins et al. 2008). These are:

Creating solutions that are climate and environmentally friendly for the future, which is also supported by the Procurement Manager who claimed that they had internally agreed on that they would not pay “extra” to be environmental (Appendix 2 - Procurement Manager).
Collaborating with the industry to create a better and more effective supply of end products.

<table>
<thead>
<tr>
<th>Supply strategy - 4 visions</th>
<th>Corporate strategy - 4 ambitions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making the most out of KE's aggregated purchasing power</td>
<td>Create solutions in respect to the climate and the environment for the future</td>
</tr>
<tr>
<td>Focusing on the total cost of purchasing</td>
<td>Provide the end-consumer with competitive water- and energy solutions and transparent prices</td>
</tr>
<tr>
<td>Ensure compliance with laws and politics</td>
<td>Collaborate with the industry in order to create a better and more effective supply of end products</td>
</tr>
<tr>
<td>Ensure agile processes and simple tools in terms of procurement</td>
<td>Be an attractive workplace with focus on results, development, and commitment</td>
</tr>
</tbody>
</table>

Figure 17 - Analysis of alignment between the supply strategy and the corporate strategy

This lack of alignment indicates that the category management project will struggle to realise strategic attainment (Cousins et al. 2008). As Baier et al. (2008) claimed, alignment between the corporate strategy and supply strategy is a major prerequisite for company success. Thus, if KE wants to be successful, they must align their supply strategies so they are supportive of the overall corporate strategies, since that is the only way to achieve organisations objectives and make supply strategic (Cousins et al. 2008).

5.2.1.2 Alignment between performance measures and the supply strategy

Even though there is a lack of alignment between the corporate strategy and supply strategy we are interested to identify whether there are other gaps KE needs to align in terms of the “Strategic Alignment Model” presented by Cousins et al. (2008). It is important that the performance measures measure whether or not the supply strategy is being fulfilled, since Cousins et al. (2008) advocate that alignment between these two components are necessary in order to fulfil the organisations strategic objectives and make supply strategic. The arrows in Figure 18 represent which performance measure areas support what part of the supply strategy, and as the figure shows, each supply strategy have more than one performance measure to support it.
5.2.1.3 Alignment between skills & competencies and performance measures

Next, it will be identified if the procurement department’s skills support achieving the procurement department’s performance measures for 2012, which indicates if they are able of reaching their strategies, since the performance measures do support the supply strategy, analysed above. The skills and competencies must, according Cousins et al. (2008), be in place in order to achieve the performance measurement, since regardless of the performance measures complexity, if the possessed skills and competencies are not at the required level, the overall strategic objectives for the organisation will not be achieved.

Figure 18 - Analysis of alignment between performance measurement areas and the supply strategy

Upon the above analysis of the procurement department’s performance measures and their supply strategy indication of support has been explored. Thus, it has been indicated that the performance measures are supporting the supply strategy, which is a prerequisite for making supply strategic (Cousins et al. 2008) and thereby make the strategic supply project, the category management project, a success.
This analysis builds on data gathered through interviews and internal documents (Appendix 10 - Job descriptions, Appendix 16 - Procurement Department's PMs).

Figure 19 - Analysis of alignment between the skills & competencies and the PM areas

The arrows in Figure 19 present which skills in the procurement department support what performance measurement area. The left side of Figure 19 called: “Skills possessed by the procurement department”, is a consolidation of skills and competencies identified in the job descriptions and the interviews. This consolidations focus was only on skills and competencies in order achieving the performance measures, which means that this does not list all the skills that potentially are present in the procurement department. The first box is different from the others, since it is concerning employees outside the procurement department. The reason for this is that the procurement department has two performance measures areas, where they depend on the Business Unit Purchasers, in order to achieve their objectives, since they use the e-catalogue and are a part of the purchasing process (Appendix 7 - B.U. Purchaser from Project Department (HCG), Appendix 8 - B.U. Purchaser from Project Department (WSRE), Appendix 9 - B.U. Purchaser from...
Water Operation (WSRE), Appendix 10 - Job descriptions). Thus, the Business Unit Purchasers’ skills and competences are related to the performance measures areas of: “Measures concerning how much (%) of five specific categories must been bought through the catalogue” and “Performance measures concerning the use of the purchasing process”.

The Business Unit Purchasers possess skills for completing invoices, use the e-catalogue, and have the competencies of being a part of a professional purchasing process (Appendix 7 - B.U. Purchaser from Project Department (HCG), Appendix 8 - B.U. Purchaser from Project Department (WSRE), Appendix 9 - B.U. Purchaser from Water Operation (WSRE), Appendix 10 - Job descriptions). Thus, the Business Unit Purchasers have the required level of skills to support the procurement department’s performance measures, which is necessary in order to reach the organisations objectives and make supply strategic (Cousins et al. 2008).

Figure 19 indicates that the procurement department’s competencies and skills do support the procurement department’s performance measurement, however, due to the gap between corporate strategy and supply strategy strategic attainment, cannot be reached (Cousins et al. 2008).

In Figure 20 the lack of alignment in KE is presented by showing no arrows between the supply strategy and corporate strategy, which entails that the pre-requisite for KE’s success is not in place (Baier, Hartmann & Moser 2008).

According to Cousins et al. (2008), either there is alignment and strategic attainment can be reached or there is lack of alignment and strategic attainment cannot be reached (Cousins et al. 2008). Since one of the objectives with the purchasing category management project is to develop a written down supply strategy we will suggest they emphasise that it is supportive of KE’s corporate strategy and policy (Cousins et al. 2008).

Figure 20 - Result from the analysis present where alignment exist in KE
The implications are that KE has not reached the point where the organisation is able to fulfil its strategic objectives and let supply become strategic (Cousins et al. 2008), which might be a challenge for the category management project, since it is a project which enable the potential of making supply strategic (Handfield et al. 2011).

The relations here are that KE’s corporate strategy relies on the supply strategy to support it, which in turn relies on the skill base of the procurement staff, in order to achieve the corporate objectives. It can be assumed that the purchasing function and the overall organisation aren’t fully functional system since there is a lack of alignment. However, from the interviews and the reasons for initiating the project we consider KE’s empirical data to perhaps not be completely up to date, since one of the fundamentals of this analysis is what will be one of the outputs from the category management project, i.e. written down supply strategies.

5.2.2 Determining the capabilities of KE’s purchasing skill sets

Since skills have a direct impact on the ability of procurement professionals to fulfil their role proficiently, and the degree of organisational support and internal acknowledgement can be a major barrier to the development and progress of procurement professionals (Tassabehji, Moorhouse 2008). In line of this we hereby apply Tassabehji and Moorhouse (2008) “Procurement Skills Effectiveness Framework” to assess how effective KE’s procurement department is. The model connects two dimensions: (1) the procurement department’s skill levels, (2) with the degree of organisational support and level of internal acknowledgement. Thus, by applying this model we are able to make a contextual analysis that places the procurement department in context with its broader organisation.

5.2.2.1 Assessment of KE’s procurement skills effectiveness

In order to assess the first dimension of Tassabehji and Moorhouse (2008) model we assess KE’s procurement department’s skill types according to the authors’ skill type categorisation.

The first skill category is procurement specific, technical skills, which includes three skill types and the following impact: Technical knowledge: Using new technology for effective procurement decision-making, Basic administrative skills: Undertaking negotiations and discussions, Advanced procurement process skills: Essential skills for creating value and strategic decision making (Tassabehji, Moorhouse 2008).
Hereby KE’s procurement department possesses skills like: updating, optimising, computer literacy, negotiation, laws and regulations knowledge, and they are in charge of the e-catalogue (Appendix 10 - Job descriptions, Appendix 3 - Tender Coordinator), which applies to both technical knowledge and basic administrative skills.

Since the procurement department has proven, by successfully implementing the “purchase process project” that they possess advanced procurement process skills (Appendix 4 - Purchasing Analyst (1), Appendix 5 - Purchasing Analyst (2)).

The managerial skill category: interpersonal skills also consists of three skill types and have the following impact: Oral communication: Effective two-way communication, Analytical skills and problem solving: Effective personal development, awareness and management, and Leadership skills: Building and managing cross-functional teams and relationships (Tassabehji, Moorhouse 2008).

Hereby KE’s Tender Coordinators were hired on the notion that they possessed: teamwork abilities, project leadership, and internal communication skills in terms of influencing and persuading (Appendix 10 - Job descriptions). Although these criteria’s were stated in their job descriptions, the interviews revealed that they were rarely involved in purchasing decisions, and struggled e.g. with influencing and persuading the business unit managers to involve procurement professionals early on (Appendix 5 - Purchasing Analyst (2), Appendix 3 - Tender Coordinator). Thus, we assess that KE’s procurement department possess the skill types: oral communication and analytical skills, however, they do not possess full leadership skills.

KE’s procurement department’s skill-set, did possess some of the skill types in other managerial skill categories, such as: internal enterprise and external enterprise, but since the skill categories are cumulative, it doesn’t affect KE’s placement in Tassabehji and Moorhouse (2008) model. Here we assessed that the internal enterprise skills that the procurement department possesses are in terms of: managing internal politics and barriers; where a procurement professional at KE must ensure effective implementation of agreements; resolving internal issues, where the procurement professionals at KE act as the primary contact persons to the internal customers of KE’s e-catalogue (Appendix 10 - Job descriptions) in addition to the fact that they successfully drove and implemented a cross-functional purchasing process (Appendix 5 - Purchasing Analyst (2)); and communicate and sell message/strategy internally since KE’s procurement manager was able to gain support from top management and middle managers, in addition to the fact that he has driven cross-functional projects before in his career (Appendix 2 - Procurement Manager). However, we do not see them possessing change management skills nor cultural awareness.
In terms of the external enterprise skill category: work in cross-functional team in terms of early involvement in purchasing decisions, supplier relationship management in terms of collaborating with value-adding suppliers, and stakeholder mapping proficiency, supplier evaluation, in terms of effective supplier selection and stakeholder involvement and management. Hereby, KE’s Tender Coordinators should possess cross-functional team work abilities, due to the fact that the procurement department initiated and drove the first cross-functional project in KE and successfully implemented it (Appendix 5 - Purchasing Analyst (2)). However, in terms of early involvement in purchasing decisions, that is rarely the case since procurement is usually contacted when it is time to make the purchase (Appendix 3 - Tender Coordinator). Further, in terms of supplier relationship management and stakeholder mapping, KE had two job descriptions that stressed that the procurement professional should be capable of making effective supplier evaluation. However, the department does not have a written supplier strategy (Appendix 2 - Procurement Manager), and most communication with suppliers goes on out in the operations, and when asked, one of the Tender Coordinator claimed that the procurement department called the suppliers when they weren’t performing as expected in the contract (Appendix 3 - Tender Coordinator). Also, he stressed that in the future it would be very beneficial to incorporate the experiences from the people who are in daily contact with the suppliers, into the information system (Appendix 3 - Tender Coordinator). Thus, we assess that supplier relationship management as such, is not structured nor carried out completely in the department. The procurement professionals do not have product specific knowledge which makes their supplier evaluation skills dependent on the expertise of the business units, here the business units make specifications and the supplier evaluation is a process of benchmarking bids from suppliers with the specifications (Appendix 3 - Tender Coordinator).

Thus, KE’s procurement department possesses Technical skills, and to some extent Interpersonal skills, in order to place them in Tassabehji and Moorhouse (2008) model we must assess the other dimension, which places the skill levels in context with its organisation.

5.2.2.2 The level of internal support and integration dimension

Tassabehji and Moorhouse (2008) stated that the role of procurement could only achieve high status levels within the organisation, by acquiring strong management support which in turn would impact the organisation’s attitude and the allocation of resources. However, despite top management support, the procurement professionals still need to demonstrate their value internally for full internal support (Tassabehji, Moorhouse 2008).

Here, KE’s procurement department has gained management support for deploying the category management project, from top management and middle managers, who in turn have allowed for the
allocation of relevant resources from their departments (Appendix 4 - Purchasing Analyst (1)). However before the project was initiated, the procurement department didn’t have any particular top management support, the Procurement Manager would report to the CFO just like all the other support functions (Appendix 2 - Procurement Manager). Where the only meetings that the Procurement Manager would attend with the CEO were in terms of their leadership forum, where all heads of functions and silos attended (Appendix 2 - Procurement Manager). Thus, top management support is limited to the category management project.

Since the other managers felt this project was a necessary step for KE to work in a more structured way, and expressed their initial shock that this had not been done before (Appendix 4 - Purchasing Analyst (1)). It further supports that the project was a result of, the principle of negative feedback, where KE is now trying to streamline its organisation to correct its course, e.g. structure spend, structure information, increase transparency etc..

In terms of the internal acknowledgment of the department’s role, KE’s procurement department is supposed to service the supply and support functions (Appendix 3 - Tender Coordinator, Appendix 23 - Spend Data for A Categories). The business units have full autonomy to initiate and complete purchases without ever contacting the department, where the Business Unit Purchasers see the procurement professionals as “problem solvers”, since they only contact the department when they need to have a supplier created in the ERP system or if there is a problem they can’t figure out between themselves, here they perceive their service as very good (Appendix 7 - B.U. Purchaser from Project Department (HCG), Appendix 8 - B.U. Purchaser from Project Department (WSRE), Appendix 9 - B.U. Purchaser from Water Operation (WSRE)). However, in terms of project purchases, the procurement department is occasionally asked to facilitate the project purchase processes, where the supply silo professionals, would voluntarily involve the procurement professionals, either to make sure a EU tendering process is fully complied with or if they would like to run a competitive tender (Appendix 2 - Procurement Manager, Appendix 3 - Tender Coordinator). Here, one of the tendering coordinators felt that KE as a whole was missing out, where he was sure that if the procurement department would be involved earlier and more often, the sourcing could be more strategic and better contracts negotiated (Appendix 3 - Tender Coordinator).

Thus, we assess the level of internal acknowledgement to be rather low and management support is radically increased due to the category management project.

This means that KE’s current situation classifies as a low degree of internal support and integration, see Figure 21, however due to the emerging category management situation, they classify at a medium level and if their internal acknowledgement increases they will move towards “celebrity purchasers” (Tassabehji,
Moorhouse 2008). Further, their skill set is limited to technical and interpersonal skill categories, which implies that KE’s current situation is at a level of “administrative procurement” where procurement is underdeveloped and consists of limited performers (Tassabehji, Moorhouse 2008). However, due to the category management project the procurement department will move towards a ‘constrained and inhibited procurement’ (Tassabehji, Moorhouse 2008). The constraint would be in terms of a limited skill base, where the goal for KE should be to develop their skill sets and move towards the status of a strategic purchaser and demonstrate their value internally to gain a sustained internal acknowledgement (Tassabehji, Moorhouse 2008).

![Procurement skills effectiveness framework](image)

Figure 21 - Procurement skills effectiveness framework

The implications, for the procurement departments classification, are that the procurement department is not, neither in terms of the current situation or the category management project, in an optimized position and is therefore not capable of achieving added value and competitive advantage for the organisation, which according to Tassabehji and Moorhouse (2008) is only possible for the “Strategic Purchaser” located in the top right corner of Figure 21. We suggest that KE’s procurement department staff gradually develop their internal enterprise and external enterprise skill-sets so all of them can be candidates for facilitating the collaboration efforts in the category teams.

In general the procurement department would need to develop their skill sets in order for the department to add significant value to the organisation (Tassabehji, Moorhouse 2008). Thus, the procurement
department role is only to a limited degree significant and has only a limited chance of achieving procurement effectiveness in KE. Like, Ellram et al. (2002) claimed, a mature purchasing department is capable and applies world-class best practices, while the unsophisticated one fails to employ those (Ellram et al. 2002).

In terms of KE’s category management project, we suggest that the procurement department focuses on developing their internal selling skills, since the procurement professional’s role is to facilitate a process in cross-functional team (Handfield et al. 2011), and that particular skill type was considered, in practice, to be the most important skill type to develop, by procurement professionals (Tassabehji, Moorhouse 2008).

The relations here are that the procurement department skill base effectiveness depends on the internal support and recognition to get a voice, if the voice doesn’t demonstrate value the internal status will decline, resulting in limited performance.

5.2.3 Competencies and skills requirement for the category teams

Building on Tassabehji and Moorhouse (2008) model, we will now assess how KE should structure their skill levels for carrying out a category management project in terms of Handfield et al. (2011) strategic sourcing process see chapter 3.2.2., and Cousins et al (2008) strategic supply competency table see Figure 22

Building a business case,
When KE’s purchasing analyst was asked about how they made their baseline he said:

“The initial realization was that we do not really know anything about these things that we really ought to know something about.... the next step for us is to find out about and have a chat with people who actually know something about these things, hold some workshops for them and pull information out of them, which they ofcourse possess”.

(Purchaser Analyst, May 22, 2012 (02:30))

From the Purchasing Analyst´s words it is clear that the procurement department was not able to conduct and complete the baseline, without the help from subject-matter experts out in the operations, for the category management project. This means that the required skill set for conducting the spend analysis i.e. technical skills is not enough in KE’s case, since there was a need for internal product knowledge.
In order to communicate the business case to top management there is a need for what Tassabehji and Moorhouse (2008) categorised as: interpersonal, and internal enterprise skills (Handfield et al. 2011, Tassabehji, Moorhouse 2008).

Although KE’s procurement department has both technical and interpersonal skills it seems evident that, without the internal product knowledge, they could not have built their business case. However, KE did not use pareto analysis to categories the spend according to volume and value, like category management literature suggests a spend analysis should be done (O’Brien 2009, Handfield et al. 2011).

The next step in carrying out a category management project is, according to Handfield et al. (2011) building a purchasing category management teams should consist of sourcing professionals and internal stakeholders of the relevant category in order to achieve purchasing synergies (Handfield et al. 2011, Essig 1998). For which Handfield et al. (2011) claimed required the following skill sets: team building and leadership abilities, decision making ability, power to influence internal users and suppliers, and a compromising attitude for reaching a team consensus, project management skills, and run the internal communications that keep the wider organization informed and supportive of the project (Handfield et al. 2011).

Hereby, the Purchasing Analyst said in terms of the project planning:

...if I just sit and look over the plan here, it's really, what's been taking a lot of time is to coordinate general coordination of the project on meeting planning and when should we report to our project management module

(Purchaser Analyst, May 22, 2012 (05:52))

Building a team as suggested by Handfield, seems to require a lot of efforts from the team-builders. These skills classify with Tassabehji and Moorhouse (2008) technical, interpersonal, internal enterprise skills, see chapter 3.2. Hereby, KE’s procurement department has technical and interpersonal skill categories, but only the Procurement Manager has the internal enterprise skills, which indicates either, a need for the other procurement members to enhance their facilitating skills so they can manage internal relationships, barriers and politics (Tassabehji, Moorhouse 2008). Or, it indicates that KE should make sure that the reference group make a big effort to work as one, in reaching a team-consensus, make decisions, and use their power to influence internal users etc.
Reseaching the market

According to Handfield et al. (2011), once the category team has been established, they can start researching the market and comparing data to internal demand patterns, that were identified in the spend analysis, which then allows for categories to be formed (Handfield et al. 2011). The required skill categories for conducting a market research is technical skills (e.g. basic product knowledge), internal enterprise skill for managing internal requirements, and external enterprise skills for taking the external environment into context see chapter 3.2. However, Handfield et al. (2011) did claim that the market research should be conducted by members of the category team; not only by the members from the procurement department since involvement is important and the category team members each have their specialisation areas.

Hereby, KE did not conduct an extensive market research, like the Purchasing Analyst said:

“Initially, you could say it was based on our knowledge, knowledge outside the department, and then in relation to exactly what we know the suppliers can deliver, and you can say that our internal or our own people know that they can deliver, i.e. those who have contact with the various suppliers on a day-to-day basis”.

(Purchaser Analyst, May 22, 2012 (10:03))

Thus, it seems like KE did not grant the project with enough resources to research the market overall, in their workshops they did claim that supplier information was lacking for some of the categories since they didn’t have enough information to make decision about the category (Appendix 20 - Category Sheet, Appendix 23 - Spend Data for A Categories). This could mean that KE will make market research when for individual categories that don’t have very transparent markets. Assuming that will be the case then we suggest that, as KE does individual supply market researches they should make sure that the people conducting the research have the required skills to enable effective purchasing behaviour (Cousins et al. 2008).

Developing a category strategy requires the following skill categories: technical, internal- and external enterprise skills, where the procurement department has technical skills (Handfield et al. 2011, Tassabehji, Moorhouse 2008). Since KE’s categories will be divided into purchase portfolio classifications (Appendix 4 - Purchasing Analyst (1)), each category team will have to possess relevant skills to effectively manage the particular category supply strategy. Cousins et al.’s (2008) has, based on Kraljic’s (1983) classifications, conducted a supply competency table that addresses a list of skills that could be required for each supply...
strategy, but must of course be tailored to company specific situations. The four supply strategy skill classifications are in terms of: critical supply, bottleneck supply, leverage supply, and routine supply.

**Critical Category Supply Strategy skills**

Here the category team must possess competencies such as; relationship management skills, product/service knowledge, risk assessment, strategic thinking, cross-functional working, and communication skills see Figure 22 (Cousins et al. 2008). As these support the goals of “critical” categories suggested by Handfield et al. (2011), since they enable the opportunity to develop a competitive advantage, support the company’s strategy, take advantage of suppliers core competencies, and developing best-in-class supplier (Handfield et al. 2011). Since KE’s procurement department is limited to technical and interpersonal skills, see chapter 5.2.2.1, which is cross-functional working, and communication skills, the subject matter experts must possess the other skill levels, in addition to the cross-functional and communication skills, in order to make the category team effective and thereby the category strategies (Handfield et al. 2011).

**Bottleneck Category Supply Strategy skills**

These categories need to be strategically secured because of high supply risk, which requires: relationship management skills, inventory management skills, forecasting ability, risk assessment, and supply industry knowledge see Figure 22 (Cousins et al. 2008). All of KE’s procurement professionals possess forecasting skills since they classify as technical skills. KE must ensure that the category team members possess, combined, all of the above mentioned skills (Cousins et al. 2008).

**Leverage Category Supply Strategy skills**

The skill requirements, according to Cousins et al. (2008), are in terms of tactical profit competencies, these are: numeracy, ability to aggregate needs, impact of volume on cost & profit, negotiation, and competitiveness. Since these purchases have low supply risk and high volume purchases it could be beneficial to have high expectation towards suppliers and use competitive auction tools (e.g. e-reverse auction) (Handfield et al. 2011). Since, the procurement professionals possess technical skills which apply to: numeracy, ability to aggregate needs, and negotiations. KE must ensure that the last remaining competency; impact of volume on cost & profit, and competitiveness, are possessed by other team members. The leverage category classification requires negotiating skills, which according to Handfield et al. (2011), requires: planning, practice, observation, and constructive feedback, even though these skills have been identified within KE’s procurement department within the classifications of technical and interpersonal skills (Tassabehji, Moorhouse 2008). The negotiations will always require detailed planning which cannot be
done without the subject matter experts involvement (Appendix 3 - Tender Coordinator), thus, the procurement professionals must facilitate different skill sets to support effective purchasing behaviour (Cousins et al. 2008).

**Routine Category Supply Strategy skills**

Categories within this classification are characterised by low impact on the organisation and low supply risk. Cousins et al. (2008) suggested that the focus should be on tactical acquisition, which requires the following skills: computer literacy, negotiation skills, assertiveness, and impact on price margin. The reasons for these particular skills are on one hand the extended use of electronic tools in order to simplify the sourcing process, on the other hand to negotiate the lowest possible price (Handfield et al. 2011). Hereby KE’s procurement professionals possess both computer literacy and negotiation skills, through their *technical skills* (Tassabehji, Moorhouse 2008). Assertiveness we assume is a personal skill, and since the routine category should above else be handled in an efficient way (Handfield et al. 2011), there might not be a category team allocated to manage these routine purchases. Further, if we assume that KE´s procurement department will manage this category, since the Procurement Manager must make sure that there are tools that show the impact on price margin to support effective purchasing behaviour (Cousins et al. 2008).

![Strategic supply competency table](image)

**Figure 22 - Strategic supply competency table** (Cousins et al. 2008).

Supplier relationship management is appropriate for strategic supply categories, see Figure 22. This means that KE should take the required skills into consideration when they form category teams for high volume, high supply risk categories and supply categories that must be strategically secured (Cousins et al. 2008).
According to Handfield et al. (2011), it is crucial that KE, monitor: compliance to contracts, changes in the market, and enable supplier performance improvement, since the supply strategies must be up to date at all times.

Historically, there hasn’t been a structured process in KE for supplier relationship management, it has mostly been in terms of whether their suppliers are performing as agreed to or not (Appendix 3 - Tender Coordinator).

When we asked the Tender Coordinator if there was a plan for working more structured with suppliers he responded:

“Well the relationships will probably be better, when we become better at follow up... it depends on how good we are to get the Business Unit Purchasers to use the systems as optimally as they can be used now. Because it is no use if we only have one Business Unit Purchaser in an area where there are alot of other Business Unit Purchasers, who also use the same supplier. And there is only feedback on positive reports from one. It makes no sense.”

(Tender Coordinator, May 25, 2012 (54:12))

In relation to projects:

“Well, there I think there might almost already be a relatively positive feedback to the suppliers directly from project. Because I am not in the slightest doubt that in the construction meetings, and there you’re actually in the whole project setup. You are forced to have continuous talks to your suppliers”

(Tender Coordinator, May 25, 2012 (56:10))

When KE form strategic category teams, they should include: technical skills, interpersonal skills (communication and problem-solving abilities), internal communication skills and external enterprise skills (Handfield et al. 2011, Cousins et al. 2008, Tassabehji, Moorhouse 2008). As these skills will ensure effective two-way communication, incorporate organisation wide requirements and to manage the suppliers and identify changes in the market (Handfield et al. 2011, Tassabehji, Moorhouse 2008).

KE’s procurement department has interpersonal skills, in terms of communication and problem-solving, which has been identified chapter 5.2.2.1. Thus, the other members of the category team must possess internal enterprise skills and external enterprise skills.
Figure 22 lists up the skills required for each of the four supply strategies that KE’s categories will be classified into. KE’s category teams will manage different categorise, here the different classifications demonstrate that KE should take skill levels into consideration, when planning who to involve in carrying out the category management project (Cousins, 2008). Since these skills should be possessed by a cross-functional team (Handfield et al. 2011; Cousins, 2008), the purchasing professionals, who are driving the project, should make sure that the necessary category supply strategy skills are possessed by the subject-matter experts in the relevant category team.

However, first and foremost, the category team skill-set should be aligned with the strategic goals and objectives that KE will set for the category that is being managed, in order for effective purchasing behaviour to take place (Cousins, 2008). Or in other words, the level of importance that a category has to the business, should be aligned with the resources allocated in terms of expected achieved benefits (Handfield et al. 2011).

If it is not possible for KE to employ all of the required skill levels for a category supply strategy, we suggest that they develop their existing competences, so the teams can fulfil the supply strategies (Cousins et al. 2008).

The relations here are that KE’s category management project depends on subject matter experts skill base in addition to the procurement department’s skill base will bring about synergetic effects.

5.3 KE’s purchasing organisation analysis

Now that we have identified how skill levels should be structured, for carrying out KE’s category management project, to support effective purchasing behaviour and category management. The following analysis chapter will identify how KE can structure their purchasing organisation in terms of the category management project and how KE’s company specific situation affects the approach for managing purchasing synergies in terms of their purchasing maturity and level of corporate coherence.

5.3.1 Structuring the purchasing organisation at the category level

As we search for how KE should structure their purchasing organisation in terms of the category management project, we apply Trautmann et al (2009) framework for how a purchasing organisational structure should be designed at the category level. Here Trautmann et al. (2009) focuses on how to determine the level of integration in a sourcing organization in terms of the required information processing needs.
We will assess the information processing requirements for six of KE’s A-categories, and suggest an effective way of managing the categories by determining the contingencies and apply the appropriate level of integration mechanisms. This can be done by analysing the information processing requirements that Trautmann et al. (2009) base on three category contingencies: category characteristics, supply environment characteristics and the interdependence of purchasing units. Once that has been analysed we will match Trautmann et al. (2009) suggestions for integration mechanisms to create a fit between KE’s requirements and capacity for processing information.

In Table 2 KE’s category characteristics can be seen, for each synergy potential.
## Category Characteristics

<table>
<thead>
<tr>
<th>Synergy potential</th>
<th>Product type</th>
<th>sub category</th>
<th>Purchase Novelty</th>
<th>Purchase Importance</th>
<th>Category complexity</th>
<th>Demand volatility</th>
<th>Supply Environment</th>
<th>Interdependence</th>
</tr>
</thead>
<tbody>
<tr>
<td>EOS</td>
<td>CAPEX</td>
<td>Water measures and accessories</td>
<td>Straight rebuy once specifications have been made</td>
<td>Low value, high quality criticality, low deliverytime, medium impact</td>
<td>standardized once specifications have been made</td>
<td>regular and recurring (buy a stock)</td>
<td>Competitive supplier base, transparent, hard to substitute the product, market is stable (high entry barriers)/ RFQ and tenders</td>
<td>pooled,</td>
</tr>
<tr>
<td>CAPEX</td>
<td>Pumps</td>
<td>straight rebuy</td>
<td>small value, high impact on quality, high criticality</td>
<td>standardized once specifications have been made</td>
<td>regular and recurring</td>
<td>Easy to substitute product, competitive supplier base, low entry barriers.</td>
<td></td>
<td>pooled</td>
</tr>
<tr>
<td>EOI</td>
<td>Service</td>
<td>IT consultation</td>
<td>New buy/ modified buy</td>
<td>medium volume /high criticality</td>
<td>Customized specifications</td>
<td>Infrequent /irregular</td>
<td>Competitive, transparent, low delivery risk. Information processing high, no two consulting jobs are the same</td>
<td>Reciprocal Interdependence</td>
</tr>
<tr>
<td>OPEX</td>
<td>Groundwork</td>
<td>(New buy/ modified buy)</td>
<td>High volume/ Critical to the business</td>
<td>Highly customized</td>
<td>irregular /frequent</td>
<td>Competitive, large supplier base, transparent, low delivery risk, RFQ and tenders</td>
<td>Pooled interdependence</td>
<td></td>
</tr>
<tr>
<td>EOP</td>
<td>CAPEX</td>
<td>Hardware (purchases )</td>
<td>straight rebuy</td>
<td>medium volume / high criticality</td>
<td>Standardized item</td>
<td>Regular and Recurring</td>
<td>Competitive supplier base, Transparent market, low delivery risk</td>
<td>Reciprocal interdependence</td>
</tr>
<tr>
<td>OPEX</td>
<td>Software (maintenance)</td>
<td>straight rebuy</td>
<td>medium volume / high criticality</td>
<td>Standardized item</td>
<td>Regular and Recurring</td>
<td>Competitive supplier base, Transparent market, low delivery risk</td>
<td>Reciprocal interdependence</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 - KE’s Category characteristics
5.3.1.1 Economies of scale

Two categories were found to have high economies of scale potential, due to low uncertainties both internally during purchasing and in the supply environment. The categories are both from KE’s main category “Physical products”, and are in terms of ‘Pumps’ and ‘Water measures and Accessories’. The flow of supply is controlled by the pumps, and the water measures are critical, for water level transparency, thus, they help control the flow of water (Appendix 6 - Purchasing Analyst (3)). Most of KE’s silo functions purchase both the pumps and the water measures, and together they represent a great deal of purchase spend within the physical product category (Appendix 23 - Spend Data for A Categories). Since bundling of volumes efforts require all units to participate, these categories seem especially exploitable (Trautmann et al. 2009).

As can be seen in Table 2 the category characteristics for both categories were according to KE’s purchasing analyst characterised as straight rebuy, standardized purchase, with regular and recurring demand patterns (Appendix 23 - Spend Data for A Categories, Appendix 6 - Purchasing Analyst (3)). Both categories have framework agreements, which made the purchasing of the category largely plan able with little need to gather additional information during the purchasing execution (Appendix 6 - Purchasing Analyst (3)). These low uncertainty levels indicate, according to Trautmann et al. (2009), that the purchasing units have low levels of information processing requirements.

Both the pumps and the water measures categories, have a competitive supplier base who operate in a transparent market, with low delivery risk, thus, the external supply environment contingency poses, according to Trautmann et al. (2009), low uncertainty to the purchasing units, however, the need to process external supply market information is higher during tendering, but once the purchasing units can order from a framework agreement they face low external uncertainties and don’t need additional information processing requirements (Appendix 23 - Spend Data for A Categories, Appendix 6 - Purchasing Analyst (3)).

According to KE’s purchasing analyst, the supply functions do not need to talk to one another before purchasing pumps or water measures, and although not all purchases go through framework agreements, the functions would be more likely to first contact the procurement department before talking to each other (Appendix 23 - Spend Data for A Categories, Appendix 6 - Purchasing Analyst (3)). Thus the purchasing units have pooled interdependence at the moment but we expect them to rise since, according to Trautmann et al. (2009), a reciprocal interdependence among organizational units is a result of the concentration of strategic purchasing activities at one location to take advantage of scale effects. Exploiting economies of
scale through common bundling projects increases the interdependence between purchasing units, which entails that the information processing requirements and thus the required variety of integration mechanisms to successfully accomplish the purchasing task increase (Trautmann et al. 2009).

Thus, it could be expected that due to KE’s category management project, these two categories could exploit economies of scale synergy, and as a result the supply units would move from pooled to a reciprocal interdependence. Further, according to Trautmann et al. (2009), the higher the reciprocal interdependence of purchasing units, the higher the need for integration mechanisms with higher information processing capacity, so KE needs to make some changes to their integration mechanisms to match their information processing capacity to their requirements.

In order to create an appropriate fit between KE’s information processing requirements and the categories information processing capacity, Trautmann et al. (2009), claim that both vertical and lateral integration mechanisms should be in place see Table 3 - Water measures and Pumps.

<table>
<thead>
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<th>Overview on Integration Mechanisms</th>
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<tr>
<td><strong>Motive</strong></td>
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<td>EOS</td>
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Table 3 - Water measures and Pumps

The vertical integration mechanisms should be quite simple (e.g. a formalized purchasing process), through which KE’s supply units could get an appropriate information processing capacity for their constant
need for exchanging routine information such as spend requirements, specifications or prices among interdependent purchasing units (Trautmann et al. 2009).

In terms of lateral integration mechanisms, a category management team would be an effective way of creating information processing capacity, since the team provides a common understanding for the joint project for two purposes, first is to gain acceptance and compliance between the supply units, and the second is to make sure that all supply knowledge is incorporated into the category strategy (Trautmann et al. 2009).

Economies of scale are realised through contract compliance. Since Procurement controls nothing. They have the authority to help and support, there is no policy or regulation that states that everything has to go through the procurement department, the purchasing analyst expressed his frustration:

"if the procurement department isn’t the only one who can initiate tendering and finish tendering then how can you keep control of compliance"

(Purchaser Analyst, May 22, 2012 (31:49))

5.3.1.2 Economies of information and learning

Two categories with high economies of information potential were taken as a sample for how KE’s should structure their purchasing organisation at the category level.

KE’s category ‘Groundwork’ is necessary for most contractor projects as KE’s supply pipelines are in the ground, the category represents OPEX, operational expenditures, and covers nearly 70% of all contractor purchases for which all supply functions have demand for (Appendix 23 - Spend Data for A Categories).

Another category “IT consultancy” has to do with the implementation of new projects in addition to maintenance, and operations after implementation, although after discussing the category at workshops, KE has plans on dividing the category accordingly, thus one should be in terms of professional services and the other in terms of OPEX, for practical reasons, we will treat this category as if it were only in terms of professional service (Appendix 23 - Spend Data for A Categories).

These two categories are characterised by high uncertainties in all three contingencies, except for interdependence between supply units for purchasing groundwork, (Appendix 6 - Purchasing Analyst (3)), thus, there exists a high potential for cost savings by exploiting economies of information, where the high complexities involved in the purchasing task increase the need to process more information during purchase execution (Trautmann et al. 2009)
The categories represent project oriented purchases so each purchase represents a new or a modified buy, with highly technical specifications and/or customized to each buy in addition to having fluctuating demand, (Appendix 23 - Spend Data for A Categories, Appendix 6 - Purchasing Analyst (3)), thus they both have high information processing requirements during purchase execution (Trautmann et al. 2009).

The supply environment in KE’s, IT consultancy category, is characterised as competitive, not so transparent, and with high delivery risk since it is hard to estimate beforehand what exact output the service will give, because no two consulting jobs are the same (Appendix 23 - Spend Data for A Categories, Appendix 6 - Purchasing Analyst (3)).

The supply environment for KE’s Groundwork category is also competitive, not very transparent and requires additional information in terms of RFQ’s so that suppliers can be objectively compared, the complexities differ in terms of geography where digging in downtown Copenhagen is drastically different from digging outside Copenhagen where complexities in the ground are less (Appendix 23 - Spend Data for A Categories, Appendix 6 - Purchasing Analyst (3)). Because, pre-planning is difficult and requires extensive information-processing among the purchasing units, the information processing requirements are high and both categories require integration mechanisms with high information processing capacity (Trautmann et al. 2009).

When supply units want to purchase IT consultancy service, they are required to contact the IT department and cooperate with them through the purchase process, thus the interdependence between purchasing units is reciprocal (Appendix 6 - Purchasing Analyst (3)).

The opposite is true for the Groundwork category where each supply unit is free to execute purchases in isolation, although there is a big difference in how often each supply unit purchases/orders groundwork contractors (Appendix 23 - Spend Data for A Categories, Appendix 6 - Purchasing Analyst (3)). We therefore assume that if KE increases the communication, for groundwork purchases, between the supply units they can gain cost savings, because the overwhelming need for processing information provides an opportunity to capture economies of information and learning, company-wide (Trautmann et al. 2009).

Since KE’s purchasing units face high uncertainty, induced by the category characteristics, KE has a great need for integration mechanisms with high information processing capacity (Trautmann et al. 2009).

For creating an appropriate fit between the required information processing and KE’s capacity for information processing, KE should have managerial decision making both in terms of vertical and lateral mechanisms see Table 4 - IT consultation and Groundwork categories (Trautmann et al. 2009).
The vertical mechanisms should, according to Trautmann et al. (2009), be in the form of information systems that bring transparency to contracts, suppliers and prices. However, because no two purchases are exactly the same for these categories, IT consultancy and Contractor Groundwork, formalization does not facilitate the required amount of information processing (Trautmann et al. 2009). Thus, assigning a category manager as a lateral mechanisms would, according to Trautmann et al. (2009), provide an appropriate information processing capacity, since he has the capability to process more and richer information across organizational units, acting as an integrator of knowledge with decision making authority (Trautmann et al. 2009).

5.3.1.3 Economies of process

Two categories with high economies of process potential were taken as a sample for how KE should structure their purchasing organisation at the category level. These categories are: Hardware purchases and telephone purchases, which represent capital expenditures, the hardware controls the supply flow in the supply pipelines and telephones enable communication (Appendix 23 - Spend Data for A Categories,
Appendix 6 - Purchasing Analyst (3)). This means that any hardware-downtime\(^{10}\) will result in supply disruptions to the citizens of KE’s municipalities.

In terms of product characteristics, both categories represent a standardised straight rebuy, once specifications have been made, with regular and recurring demand patterns, although the hardware is tailored upon delivery by the IT department to fit different user requirements (Appendix 23 - Spend Data for A Categories, Appendix 6 - Purchasing Analyst (3)). Thus, there is little uncertainty during the task of purchasing the category which in turn requires low information processing capacity (Trautmann et al. 2009).

The supply environment is characterised by a competitive supplier base competing in a transparent market with low delivery risk, (Appendix 23 - Spend Data for A Categories, Appendix 6 - Purchasing Analyst (3)), thus, according to Trautmann et al. (2009), KE does not require much information processing capacity for comparing suppliers.

The purchasing units have reciprocal interdependence but only towards the IT department which, according to the IT purchasing policy, requires that all IT purchases go through the IT department (Appendix 6 - Purchasing Analyst (3)). Since this interdependence is not between all the purchasing units but only between the business unit in need and the IT support function, these purchases are, ideally, only executed by the IT purchasing unit, thus there is reciprocal interdependence but at a moderate level, causing low uncertainties (Trautmann et al. 2009, Appendix 6 - Purchasing Analyst (3)).

Here we see an opportunity for KE to implement simple vertical mechanisms i.e. a new standardised, best-practice, cost-effective purchasing process, and decentralised decision making authority to each site enabling autonomy in purchasing hardware and telephones, for which the IT department could install catalogue agreements across sites, so that all units could follow (Trautmann et al. 2009). See Table 5 - Hardware purchases and Software maintenance categories.

This would create a fit between the information processing requirements of the categories and the information processing capacity at KE, the process would minimize transaction costs and have IT’s best practices incorporated into the process descriptions, thus, accelerating learning, and ensuring that the categories are still sourced most efficiently, through e.g. system contracting (Trautmann et al. 2009).

\(^{10}\) Periods where hardware is not up and running.
Trautmann et al.´s framework was developed as he studied world-class global companies who had been working successfully with category management for some years. Whereas the purchasing category management project at KE is the second cross-functional project that has been carried out in KE, ever.

It is questionable whether KE´s purchasing organisation is ready for managing all three purchasing synergies simultaneously.

The relations here are in terms of the how the exploitation of purchasing synergies depends on the purchasing organisational structure, which in turn depends on the uncertainties associated with each category.

We have now analysed how KE could structure their purchasing organisation at a category level, and identified how synergy results depend on the purchasing organisational structure. However, since there are general success factors or pre-requisites that need to be in place when managing a purchasing synergy, we will next analyse whether KE is capable of deploying a synergy driven purchasing structure, which will only be possible if all of the synergy management pre-requisites are in place.

### 5.4 Managing purchasing synergies in KE

Structuring the purchasing organisation at a category level, entails that KE would have three purchasing organisational structures in place, one for each purchasing synergy. Thus, we apply Rozemeijer (2000) general success factors, to assess whether KE’s current purchasing organisation has the necessary pre-requisites in place, and assess their responsibility issues. Since successful
management of purchasing synergies, requires an explicit and well-structured implementation path, (Rozemeijer 2000)

First success factor: there needs to be top management involvement or active executive support since there is close correlation between the potential value delivered and the level of executive support. Hereby, KE does not have active executive support, the CFO is the project owner but he does not actively participate in the synergetic coordination efforts (Appendix 5 - Purchasing Analyst (2)). Activating KE’s top management in terms of: setting headcount objectives, departmental budgets and dealing with organizational resistance, providing active and visible top management support for the organizational structure change would help the purchasing category management implementation process (Johnson 2005).

Second success factor: appointing a senior management problem owner, and the allocation of necessary resources across the different teams.

Hereby, KE’s category management project owner which we assume is thereby the problem owner, is the CFO. He is a part of the steering group and reports directly to the CEO thus there is a senior management problem owner. Again, he is not actively participating in the project, and from observations we know that the procurement manager has full autonomy from the CFO to run the project. The decision gates are therefore between the reference group members, who all sit at the same authority level, so when it comes to allocating necessary resources, it is not done by the problem owner, but by the reference group. Thus, problem solving in the reference group must be agreed upon in a federal manner (Appendix 2 - Procurement Manager, Appendix 4 - Purchasing Analyst (1)).

Third success factor: setting clear and measurable targets (based on detailed purchasing information). Hereby, KE has not established clear and measureable targets for what the category project should achieve. According the application for the category management project to top management and the description of the project, the goals of the project are to establish an overview, develop methods for data collection, make strategies, and establish a method for monitoring supplier and contract compliance (Appendix 18 - Increased Purchasing Structure, Appendix 19 - Application for the CM Project). Thus, not so clear measurable targets that were conducted, although the broad goals are measureable, e.g. make a strategy. We assess that KE could have set much clearer goals and added milestones to measure if the target had been achieved, e.g. specific outputs to data collection methods.
Fourth success factor: Senior management must invest time and resources in ensuring that collaboration projects are identified, prioritised, selected and driven forward by top management. Expectations, outputs and results should be made explicit, and a manageable and agreed number of projects should be fully supported by management of each unit (business mandate).

Hereby, KE’s procurement manager and the CFO had to fill out a standard project application form where the project was defined, in order to ask for top management/senior management support for the project (Appendix 19 - Application for the CM Project). Senior management then prioritised and decided on that the Category management synergy project should be carried out, although no top management pressure exists for driving the project forward, only progress reports into a database (Appendix 19 - Application for the CM Project). In addition KE should decide on a number of categories to work on, make a business mandate.

Fifth, success factor is to implement a well-designed organisational structure (e.g. working rules, clear communication and reporting lines, strike a balance between incentives and contribution etc), since intra-company co-ordination is built up step-by-step incrementally.

In terms of KE, the purchasing analyst claimed that most of his time had been spent on making a baseline and general coordination of the project e.g. meeting planning, deciding report intervals to the project management module (Appendix 4 - Purchasing Analyst (1)). Further, he anticipated that if a complicated issue came up, due to the category team’s closeness, the team members would have no or little incentive for making a big effort, since he expected them to see no reason to change a process that runs fine in their opinion (Appendix 4 - Purchasing Analyst (1)), perhaps a direct result from the lack of top management pressure.

Another pitfall in terms of the category teams and the success factor concerning implementing a well-designed structure is that the purchasing analyst claims that it is up the individual category teams, to organise themselves:

"the team will decide between themselves on how important they think collaboration about the category will be, and decide on intervals.. once a month.. every two years..."

(Purchaser Analyst, August 17, 2012 (02:00))

The procurement manager though stress that the category teams will be equipped with tools in order to carry out their tasks (Appendix 2 - Procurement Manager).
The sixth pre-requisite for capturing purchasing synergy is to have teams formulating and implementing the strategy for their specific projects.

In terms of KE, the project group from the procurement department is making the project planning and pre-work, the workshop is verifying the baseline and developing categories. Once the categories have been formed the category teams will be appointed who then formulate and implement category strategies (Appendix 4 - Purchasing Analyst (1)).

The final success factor is that teams should be supported with training, networking and proper ICT system implementation should be monitored and improvements initiated when necessary. According to a business unit purchaser, the mind-set concerning training and education in KE for the employees is very positive, but the employees are required to take the initiative themselves (Appendix 7 - B.U. Purchaser from Project Department (HCG)). Thus, the employees are not directly supported with training, but the opportunity to achieve more competencies is in place. The ICT system has not been investigated as such, but from the interviews it seems like different software and communication platforms are in place in KE, just in terms of purchasing and sourcing activities, such as: a corporate intranet, a contractor-portal, contract management software, and an ERP system entailing e-catalogue, supplier master data, and the ordering platform (Appendix 7 - B.U. Purchaser from Project Department (HCG)). Whether these platforms and programs are sufficient enough is difficult to assess, but based on the project charter for the category management project, Figure 16, it can be argued, that current ICT systems are not sufficient, since it is a focus area in carrying out the category management project.

Since KE does not possess all of the pre-requisites mentioned by Rozemeijer (2000) for successfully capturing purchasing synergies they might experience difficulties in deploying Trautmann’s purchasing synergy organisation structure. KE could add the missing success factors to their project structure, such as: activating executive support, getting senior management to drive the Category Management project forward. State the expectations, outputs and results from the project more clearly, e.g. by stating to what extent the transparency will be increased, or by calculating an estimate of possible cost savings. Finally, KE’s top management should develop a structured top down process for cooperation efforts, since intra-company co-ordination is built up incrementally and KE has a very silo oriented company structure.
These general success factors depend, of course on the specific business situation at KE, for which Rozemeijer (2000) claims to be in terms of three types of contextual factors: Structural designs, Networks of people and Information and communication infrastructure.

5.4.1.1 Stimulating cooperation and realising purchasing synergies

In terms of how sustainable KE’s purchasing synergy will be on a corporate level, we apply Rozemeijer (2000) to analyse the three contextual factors that KE should look for to stimulate the category management cooperation and realise purchasing synergies.

5.4.1.1.1 Structural designs:

The following structural mechanisms can stimulate intra-company cooperation: Corporate sourcing platform, Executive steering board, Chief Purchasing Officer, Central purchasing group, Commodity team, Cross-functional team, Competence team, Working group, Task force and Lead buyership (Rozemeijer 2000). The structural designs vary between cooperation that was: voluntary, informal and bottom-up cooperation on the one hand, and cooperation that was mandatory, formal and initiated from the top-down.

In terms of KE, the purchasing category management project is a voluntary bottom up project, which has brought about a corporate sourcing platform in terms of the reference group workshops.

The project’s executive steering group consists of one supply silo chief and the CFO, who are not actively involved in the project workshops, i.e. the corporate sourcing platform.

The central purchasing group controls nothing, and the commodity team is yet to be assigned and the formal mechanisms of their teamwork will be designed later on by the future commodity team. Here The commodity team will have a person from procurement and 5-6 others representatives from both supply silo: project lead (chief) and project managers, here the purchasing analyst described his expectations for the future cooperation efforts:

„Hopefully later on when there is some engineering work or some external consultants then the procurement department could coordinate some workshops and get them to share knowledge, get them to talk together. Share best practice, know-how. “

(Purchaser Analyst, August 17, 2012 (02:10))
This sounds like loose voluntary cooperation mechanisms, which according to Rozemeijer (2000) are not likely to be sustainable on the corporate level.

5.4.1.1.2 Networks of people

Rozemeijer (2000) also found that, in addition to structural mechanisms, networks of people stimulated intra-company cooperation and teamwork, the instruments used to facilitate the forming of these networks included: Company events, corporate training courses and conferences, job-rotation across business units, management development programs, group identity programs (e.g. survival weekend) and all kinds of social events.

Our observations show that over a period of 16 months (student workers employment period) there are two company-wide people networking events per year: a summer party and a Christmas party, other networking events are business unit specific where each unit can organise their own group identity programs and training courses.

Further, observations also showed that no job-rotation or management development programs are in place in KE.

Rozemeijer (2000) observed that networking stimulates cooperation, as voluntary cooperation occurred simply because in his case study, two employees in different units knew each other and saw the benefit in working together.

This is unlikely to be the case for KE, since e.g. group identity programs and most networking is business unit specific, indicating that the cultural differences between the two silos are not likely to break down any time soon. Here, KE should perhaps focus their networking efforts on reducing barriers between silos.

5.4.1.1.3 Information and communication infrastructure

The third area Rozemeijer (2000) found to stimulate intra-cooperation was information and communication infrastructure, including: Internet technology e.g. intranet, electronic communication system (e.g. e-mail), conferencing systems (e.g. videoconferencing), electronic bulletin boards, group decision support systems and information sharing systems (e.g. Lotus notes, corporate databases with information on components, suppliers, and contracts). Here Rozemeijer (2000) suggested that a company’s intranet could be used to communicate corporate agreements to internal users, and share best practice examples when implementing a certain purchase process.
The intranet in KE has procurement specific material, and stakeholders can subscribe to a procurement newsletter to make sure they don’t miss any updates (Appendix, 8). They use e-mail to communicate but no electronic bulletin boards, supplier performance information cannot be shared through the systems, no product-database has fulfilling information about components since the purchasing analyst had to engage in dialogues with subject matter experts to understand the categories. For example the system does not provide a list of supplier recommendations when a user enters the product he wants to purchase, the system only shows the suppliers that have a contract running. And then the purchasing analyst claimed that people only see what they want to see (Appendix 5).

In summation, the structural mechanisms seem loose and voluntary which make them unlikely to sustain over longer periods (Rozemeijer, 2000). The information systems aren’t ideal for stimulating intra-cooperation and the networks of people are mostly business unit specific, which indicates that voluntary cooperation between business units is unlikely to be a result of these networking events. Here KE should perhaps focus their networking efforts on holding company wide events so barriers between silos may eventually break down.

The relations here are that: structural designs, networks of people, and information and communication infrastructure all contribute to how sustainable KE’s category management project will be in the future. The cooperation relies on structural designs such as category teams, the networks of people stimulate cooperation between functions through familiarity, and information/communication infrastructure stimulates information sharing and thus cooperation between functions.

5.4.2 Responsibility of managing purchasing synergies

We will now address the four key stakeholders that play an important role in managing purchasing synergies.

Rozemeijer (2000) found that the issue of responsibility is one of the most important issues for managing purchasing synergy, and claimed that without a strong CPO capturing corporate synergies seemed almost impossible. Here he found it to be extremely difficult for a CPO to change the behaviour of a business unit management so there is also a role for the CEO. The four parties that need to be responsible for managing the category management project are the: CEO, CPO, business unit management, and business unit purchasing management (Rozemeijer 2000)
Hereby, KE has not given the procurement manager the role of a CPO, and the CEO is not involved in the synergy cooperation at all. The category management project is carried out in a reference group which represents the business unit management and the business unit purchasers did not know what the project was about when we interviewed them (Appendix 8). In Figure 23 the relationship diagram in KE can be seen, where there is only responsibility between the CPO and Business unit management which according to Rozemeijer (2000) makes the management of KE’s synergy efforts a very difficult task. The full vs dotted arrows indicate that the procurement manager interacts more frequently as he is present at all workshops but the business unit management participants differ according to category relevance.

![Relationship Assessment Diagram](https://example.com/relationship-diagram.png)

Figure 23 - Relationship assessment diagram presented by Rozemeijer (2000) applied in KE

According to Rozemeijer (2000) the better the relationships are formally and informally structured, the more jointly conducted tasks and the more frequent the interaction the more successful the purchasing synergy initiative will be.

Hereby, KE has a formal relationship between the procurement manager and the business unit management, through the corporate sourcing platform, the category workshops (Appendix 4 - Purchasing Analyst (1))

In terms of the category management project, there was no further communication or involvement between the four parties, which is why there are no arrows between the other parties.

This indicates a serious lack in KE’s approach to capture the purchasing category management synergy, since KE does not involve the key players. This analysis is consistent with how the procurement manager expressed that it was difficult to sell the project since he could never make coordination orders, but had to reach an agreement with the business unit management (Appendix 2 - Procurement Manager).
In addition to the fact that KE is lacking some of the pre-requisites that a company should have in place, in order to manage purchasing synergies. Since the approach taken to manage purchasing synergies should be business specific as expressed in the level of business homogeneity and purchasing maturity (Rozemeijer, 2000). Where successful intra-company purchasing consortium, depends on a minimum amount of homogeneity or ‘procurement fit’, in the company, where the higher the fit, the higher the possible degree of centralisation. We will now analyse whether KE’s business specific situation is capable of deploying Trautmann et al.’s (2011) category structures.

The relations here are that the CPO relies on the CEO in order to reach a consensus with the business unit management.

5.5 KE’s business specific situation for managing purchasing synergies

In order to analyse how KE should approach their purchasing initiative, we will now analyse how ready KE is for synergetic cooperation between business units and assess the level of professionalism in their purchasing function. Hereby, we apply Rozemeijer et al. (2003) corporate purchasing organisational approaches model, which claims that by assessing those two dimensions, i.e. purchasing maturity and corporate coherence, the appropriate approach for managing corporate purchasing synergy initiatives should be identified. Here KE’s approach to their purchasing category management project (initiative) should be in accordance with the overall level of their corporate coherence and purchasing maturity (Rozemeijer, Weele & Weggeman 2003). From that perspective we will assess how KE can best approach their purchasing initiative.

5.5.1 Purchasing Maturity at KE:

Purchasing maturity or the level of professionalism in the purchasing function can be assessed by the following factors:

*Status of the function:* The purchasing function’s status is quite low in KE, since the Business Unit Purchasers only contact the central office, the procurement department, if they run into problems (Appendix 7 - B.U. Purchaser from Project Department (HCG)), and the project managers involve the procurement department only if they choose to (Appendix 5 - Purchasing Analyst (2)). However, according to the Tender Coordinator, the people involved in purchasing can turn to the procurement department at any time for getting help on running tenders, investigating the supply market, assist on negotiations, or to tell a supplier
off when he is underperforming etc. (Appendix 3 - Tender Coordinator). Sometimes the project managers involve their procurement contact persons but according to a purchasing analyst, that is rarely the case (Appendix 5 - Purchasing Analyst (2)). Further, the Procurement Manager is not at top management level or a board member (Appendix 2 - Procurement Manager), which is an indication of that the procurement department is not a strategic function.

Since the nature of the procurement department is an important situational factor for the design of coordinating mechanisms (Rozemeijer, Weele & Weggeman 2003). Our analysis reveals that the procurement department is not a strategic one and only little evidence was found that the procurement department is in a position to coordinate purchases (Appendix 13 - Purchasing Policy, Appendix 10 - Job descriptions). Thus, we determine that the status of KE’s purchasing function has low levels of integration and low levels of overview over purchases (Appendix 5 - Purchasing Analyst (2)). Therefore KE’s status as a purchasing function has a low maturity level.

However, due to the category management project, the purchasing function will be more integrated in the sourcing process for important categories, as there will be one representative from the procurement department facilitating the process of the category teams (Appendix 2 - Procurement Manager, Appendix 4 - Purchasing Analyst (1)). Thus, it seems like the status of the function will radically reach higher levels, as the arrow in Figure 24 indicates.

**Role and organisational status of the purchasing department:** KE’s procurement department has a service role towards the business units, by investigating, analysing, and exploring, whether the units can source in a better way (Appendix 5 - Purchasing Analyst (2)). The Procurement Manager’s authority level is at the same level as the business unit managers so neither party has control over the other (Appendix 2 - Procurement Manager). The procurement department has responsibility over the Business Unit Purchasers due to the purchasing process, since they are the ones who make the purchases, however the procurement department does not have direct authority over the Business Unit Purchasers (Appendix 5 - Purchasing Analyst (2)).

Since an established organisational structure is necessary for purchasing to be able to fulfil its duties which, according to Rozemeijer et al. (2003), can be measured upon roles, responsibilities and strategic integration i.e. participation in board meetings. We find it evident that the procurement department has a reactive service role, with responsibility over purchases made by the Business Unit Purchasers, over whom, the department has no direct authority, and the strategic integration is low since the Procurement Manager is not at top management level or a board member. Thus, we determine that the role and organisational status of KE’s purchasing organisation has a low maturity level.
Due to the category management project, although the procurement department will still have a service role, the purchasing function will become more strategic, since they are carrying out a strategic sourcing project (Handfield et al. 2011). This indication can be seen in Figure 24.

Availability of purchasing information systems: The central office, the procurement department, does neither have an overview over the purchasing organisation, nor do they have knowledge of how purchasing patterns differ across locations in terms of who is buying what (Appendix 5 - Purchasing Analyst (2)). Further, they don’t have and are unable to gain an overview of to what extent the Business Unit Purchasers comply to existing framework contracts, and finally they don’t know and have no way of measuring whether EU regulations are adhered to (Appendix 5 - Purchasing Analyst (2)). This complete lack of overview is a major reason for the initiation of the category management project (Appendix 2 - Procurement Manager). Communication systems between are in terms of: intranet, e-mails and phone calls, and a contract portal (Appendix 7 - B.U. Purchaser from Project Department (HCG), Appendix 8 - B.U. Purchaser from Project Department (WSRE), Appendix 9 - B.U. Purchaser from Water Operation (WSRE)). Specific product or service knowledge is not kept in an information system but locked in the minds of specialised staff, with whom the procurement department needs to engage in a dialogue when they need specific product or service knowledge (Appendix 2 - Procurement Manager).

Thus, the structure and communication of KE’s purchasing organisation does not reflect the underlying departmental technology, which, according to Rozemeijer et al. (2003), is a situation where any procurement departments would tend to be less effective. Therefore we determine that the availability of information systems is of low maturity.

Due to the category management project, KE plans on gaining the spend overview and information availability, by optimising the use of their software system, coordination across silos, and there will be a platform for knowledge sharing (Appendix 4 - Purchasing Analyst (1)). This, requires that the IT-department makes some system changes, (i.e. put in a category field, that will be filled in each time a purchase order is placed) which will provide KE with spend overview (Appendix 22 - Observations). Thus, purchasing overview depends on the IT-department. Due to these changes to the purchasing information system, the level of maturity should increase when deploying category management in KE. See Figure 24.

Quality of people involved in purchasing: Both the people inside the procurement department and the dispersed Business Unit Purchasers are required to have some procurement specific skills, which together indicate the purchasing maturity level (Rozemeijer, Weele & Weggeman 2003).
Here we build on a prior skill analysis in chapter 5.2.2, where we determined that the procurement department has qualified people in terms of procurement-specific and to some extent interpersonal skill-sets (Tassabehji, Moorhouse 2008). In terms of synergy initiatives i.e. the category management project, the corporate headquarters need, according to Rozemeijer et al. (2003), specialised knowledge of the particular synergy, the ability to make business managers pay attention, and the process and interpersonal skills to bring about the desired results. Here we found the Tender Coordinators in the procurement department possess all skills of the process and to some extend interpersonal skills (Appendix 10 - Job descriptions), but they do not possess specialised knowledge which they are dependent on getting from internal stakeholders (Appendix 4 - Purchasing Analyst (1)). The Business Unit Purchasers are the ones that purchase what is needed in each business unit, according to their job descriptions they are required to have system knowledge of Dynamics and the e-catalogue, the skills to enter tax codes correctly, follow-up abilities, communication skills, overall understanding of the business they serve, and an internal customer and service focus (Appendix 7 - B.U. Purchaser from Project Department (HCG), Appendix 8 - B.U. Purchaser from Project Department (WSRE), Appendix 9 - B.U. Purchaser from Water Operation (WSRE), Appendix 10 - Job descriptions). It can be assumed that through their jobs, that they develop purchase expertise in their own unit, mixing product specification knowledge with purchasing procedure knowledge (Cousins et al. 2008).

Thus, we assess that there is a minimum purchasing skill base in place at the business units and the procurement department skill base is at a basic level, we determine that the quality of people involved in purchasing is at a low to medium maturity level.

The level of collaboration with suppliers: KE does not collaborate with suppliers since they perceive long term supplier relationship in terms of familiarity and ease of working together, not in terms of collaboration efforts (Appendix 3 - Tender Coordinator). KE is inhibited by regulations to share technical information that could in any way give one supplier an advantage over the others, and supplier contact is normally only in the contract making phase or if any problems occur (Appendix 3 - Tender Coordinator). The procurement department acts as regulator in terms of bad performance, where operations would contact the procurement department who in turn contact the supplier and tell him off, this way, according to the Tender Coordinator, a good relationship between the operation and the supplier can be maintained (Appendix 3 - Tender Coordinator). However, the Tender Coordinator did emphasise that supplier dialogue mostly occurred out in the operations, and like the Procurement Manager said:

“Some products we need a two-tier strategy, someone will say we only have one-tier strategy, some products we make competition on quite often and some we have more
strategic co-operation with suppliers so it’s in fact differentiated in accordance with what is the demand from the inside customer and what houses the market situation”.

(Procurement Manager, April 24, 2012 (08:57))

Thus, we assume that even though there is not a written down supplier collaboration strategy, it is evident that supplier and the people out in day to day operations, talk, collaborate, communicate, between themselves.

However, even though day to day operations seem to have an undocumented supplier relationship, EU regulations hinder long-term collaborative efforts, there are no supplier performance measurements, and partnership is mostly in the form of familiarity (Appendix 2 - Procurement Manager, Appendix 16 - Procurement Department’s PMs), we assess the level of collaboration with suppliers to be low in KE.

Due to the category management project, collaboration with suppliers will at least be more structured, supply strategies will be written down, performance measures will be made and thereby a proactive way of managing suppliers will emerge. This will most likely give the purchasing function a more professional image.

In summation KE’s current status has low purchasing maturity, but due to the category management project that status will raise to a medium maturity level as the purchasing function is becoming more professional.

5.5.2 Corporate coherence at KE

In order to analyse KE’s ability, to generate and explore synergies, we will determine whether there are major differences across business units in corporate management style as expressed in strategy, structure and culture, which if present will reflect a low corporate coherence (Rozemeijer, Weele & Weggeman 2003).

Corporate Strategy, KE has a shared vision across business units which should imply an ease for synergy management (Rozemeijer, Weele & Weggeman 2003), KE’s vision is:

“KE will be the best Water and Energy Company”

(Appendix 11 - Corporate Strategy)

However there is no joint growth strategy for the two supply silos and no strategic focus on related businesses, and even though there is a shared vision, the vision is broad and fluffy. The silos have different
purchasing style which indicates that the unwritten differentiation strategy is quite different between silos (Appendix 5 - Purchasing Analyst (2)). Thus it is quite clear that there are strategic differences across the business units. In KE's purchasing policy, there is a list of purchasing principles, that claim that all significant areas of purchasing agreements will develop a sourcing strategy including a supplier strategy, price factors, an interval for how often competitive tenders will be run and assign responsibility for the area (Appendix 13 - Purchasing Policy).

**Structure:** Since the procurement department at KE has a small size of corporate staff, 8 employees, meanwhile the business units have 27 purchasers. The Business Unit Purchasers perceive the procurement department as problem solvers, and, as mentioned earlier, the procurement department does not have any direct authority over the Business Unit Purchasers (Appendix 4 - Purchasing Analyst (1), Appendix 14 - Business Unit Purchasers in KE, Appendix 15 - No. of employees in the Procurement Department). Thus, we can determine that the business units have high levels of autonomy, which can be a roadblock for managing synergy, since Rozemeijer (2000) stated, the strategic alignment of two or more business units can be an important source of synergy, but striking the right balance between corporate intervention and business unit autonomy is not easy. There have been some changes towards cross-functional teamwork in the organisation, but the change is happening very slowly and that is mainly due to the big difference that exists between the two silos (Appendix 5 - Purchasing Analyst (2)).

**Culture:** In terms of culture, the two supply silos are very different, there is competition between them and each thinks their own silo is the better one (Appendix 5 - Purchasing Analyst (2)). This cultural difference originates from the year 2005 when a water company and a heating company merged together under the name of KE (Appendix 5 - Purchasing Analyst (2)). The two silos don’t contact each other to share good contract prices or let the other know of some supplier opportunities, and here they would rather sit on a good supplier in order to keep the good business at their own supply silo (Appendix 5 - Purchasing Analyst (2), Appendix 22 - Observations). The water silo involves the procurement department a lot more than the heating silo, which according to the Purchasing Analyst, is because heating has more purchasing knowledge, here he stressed that even though they were independent, that did not mean they were purchasing correctly. In addition he expressed that the procurement department was concerned about the heating silo being too friendly with their suppliers i.e. not running competitive tenders as often as they could. Further, the Purchasing Analyst claims that the procurement department is one of the few functions at KE that tries to change the mind-sets of the two supply silos. In terms of both silos there is a tendency for a narrow mind-set amongst the project people who are, according to the Purchasing Analyst, completely focused on their own
projects and have no interest of what the other parts of the business are doing (Appendix 5 - Purchasing Analyst (2)).

Thus, the cultural differences between the two supply silos are big which indicates a situation where the approach to manage a corporate purchasing synergy are not very advanced, this could perhaps be overcome by increasing informal networking where the two main silos could get to know each other better, since familiarity has been found to increase cooperation (Rozemeijer, Weele & Weggeman 2003).

Management style: Since an appropriate corporate management style is expressed through the above mentioned factors: strategy, structure and culture, where KE had differences in each factor across business units. We can determine that there exist some major differences in management style across KE’s business units, which according to Rozemeijer et al. (2003) could be a major roadblock for achieving corporate synergy. In addition, KE is not managing any synergies at the corporate level in other functional and business areas, except through the purchasing category management project, which are the second cross-functional project ever carried out in KE (Appendix 3 - Tender Coordinator). Thus, considering the correlation, Rozemeijer et al. (2003) found, between the number of synergies managed at the corporate level and the success level in achieving them, it indicates that KE might have troubles in achieving purchasing synergy. Further, since there exist major differences in culture and high business unit autonomy over what is being purchased and when, we can determine in accordance to Rozemeijer et al. (2003) that integrating the purchasing function is likely to be a significant challenge.

In terms of the category management project, coordination activities between silos is increasing, a platform for information sharing is emerging, and representatives from both supply silos have seen, through the workshops, that coordination is possible (Appendix 2 - Procurement Manager). In addition to the fact that KE’s two main end-products are drinking water and heat (also water, but at high temperature), and the main difference is that each end product runs through its own supply pipeline network. We assume that the supply-items also have significant similarities, which should encourage the two supply silos to manage and operate the business in a more coherent way (Rozemeijer, Weele & Weggeman 2003). In line with this, the Purchasing Analyst is hopeful that the category management project will be an eye-opener through coordination collaboration through the category teams (Appendix 4 - Purchasing Analyst (1)). Thus, we expect that KE’s corporate coherence has all the opportunities to align their corporate strategy, management style, structure and culture, to some extent.
In summation, KE’s current situation is low purchasing maturity and low corporate coherence, due to the few similarities in purchase specification between business units, see Figure 24, KE has a decentralised structure and the synergy opportunities for that structure lie in the exchange of information on supply markets, suppliers, and prices (Rozemeijer, Weele & Weggeman 2003). This is what Faes et al. (2000) referred to as economies of information and leaning, where all available purchasing knowledge is shared.

However, due to the category management project there are indications that the purchasing maturity will rise, resulting in a shift towards a federal structure, in this structure, purchasing consists of a small corporate purchasing staff that supports a number of autonomous decentralised purchasing units in their voluntary efforts to exploit potential synergies (Rozemeijer, Weele & Weggeman 2003). This federal structure is much in line with how the business unit managers and the Procurement Manager authority levels work, where they have to reach an agreement before making a on strategic purchasing related issues (Appendix 4 - Purchasing Analyst (1)). Further, the Federal structure is also in line with the current structure where all actual purchasing is done by the Business Unit Purchasers in their respective business units and the fact that they possess a high level of autonomy.

In Figure 24 this shift is indicated, (blue arrow), from the current decentralised purchasing structure, due to increased professionalization of the purchasing function, through higher integration levels and top management support, and information systems and sharing.

Since any corporate purchasing initiative should be in line with the overall level of the two contingency factors, KE’s top managers should, according to Rozemeijer et al. (2003) add value by creating a fit between:

Figure 24 - Corporate purchasing approaches
the approach chosen for the purchasing initiatives and the nature of the purchasing organisational structure, as expressed in corporate coherence and purchasing maturity.

Hereby, KE’s decentralised purchasing organisation allows for: economies of information, according to Faes et al. (2000).

In terms of implementing an effective co-ordinated purchasing approach, Rozemeijer (2000) stressed that when co-ordination purchasing initiatives are approached there needs to be a structured top-down process for cross-business collaboration, tailored to the business. In KE the procurement manager explained that the Category Management project was a bottom-up initiative and what KE was lacking as an organisation was pressure from top management, saying that there should be certain outcomes at certain time-intervals, from the project, thus not only do we assess that KE does not have a structured top-down process for cross business collaboration in the organisation but there is also no pressure on the business unit managers to realize measurable benefits (Appendix 2 - Procurement Manager).

The business synergy of sharing knowledge and information can according to Rozemeijer (2000), create value simply by exposing one set of people to another, here KE’s procurement manager expressed that already in the initial workshops people were having and sharing good ideas about synergy opportunities (Appendix 2 - Procurement Manager). Further, Rozemeijer (2000) stressed that exposing people to each other created an opportunity for business units to improve their position by exchanging and sharing information about product specifications, companywide contracts, product prices, suppliers, purchasing procedures, and supply market developments.

We have now identified that KE’s purchasing organisation is not ready for a synergy driven purchasing organisational structure, since it lacks many pre-requisites and the business specific situation indicates that the appropriate synergy approach is in terms of economies of information. Thus, KE is not ready for Trautmann et al.’s., framework for managing all three synergies simultaneously.

5.5.3 The implications of shifting from decentralised towards federal.

Since we identified a possible shift in KE’s purchasing maturity, due to the category management project, we want to assess whether the structural shift towards more centralised decision making, i.e. federal structure, has implications for KE. According to Cousins et al. (2008) a federal structure has some basic rules such as: to have common rules and procedures in order to avoid conflicts with the corporate policies and strategies, dual citizenship where each staff member is concerned equally about his own department’s success and the...
overall organisations success, and giving away power to carry out activities and make decisions to the lowest level possible, meanwhile the centre acts as a coordinating device that answers to the divisions.

In terms of having common rules and procedures it seems like this is lacking in KE at the time, since even though a purchasing policy and the different purchasing process has been mapped up (Tassabehji, Moorhouse 2008, Rozemeijer, Weele & Weggemann 2003), to what extend the business units complies to them, the procurement department don’t know (Appendix 4 - Purchasing Analyst (1)). Further, it was discovered that one of the Business Unit Purchaser didn’t knew that there exist a formal purchasing process for some of her main activities (Appendix 8 - B.U. Purchaser from Project Department (WSRE)). This, of course, implies that the purchasing policy and the purchasing processes support the corporate policies and strategies. In extension to this the Purchasing Analyst explains that there exists a lack of internal collaboration strategy in KE (Appendix 5 - Purchasing Analyst (2)). Thus, it has been indicated that a federal structure has the implication, at KE, of establish lateral communication along with common rules and procedures, in order to shift purchasing organisational structure towards a more centralised form, the federal structure.

The issue of dual citizenship, should be emphasised when KE shifts to a federal purchasing organisational structure, since the business unit purchasers may no longer only have the interest of their business unit at heart, but must include KE’s interest as a whole.

The reason for this indication is vague, since no research was done investigation if the employees in KE are capable of concerning equally about their own department and the overall organisation, which dual citizenship is about (Cousins et al. 2008).

The last basic rule, according Cousins et al. (2008), when having a federal structure is concerning the procurement department giving power away in order to carry out activities and decision making to the lowest possible level is different in KE’s case, since they have at the time a decentralised structure, where they serve as a support function, which is supported by the interviews with the Business Unit Purchasers (Appendix 13 - Purchasing Policy, Appendix 4 - Purchasing Analyst (1), Appendix 17 - Diagram of Purchasing Processes). It seems like that an implication for KE is that the procurement department should be awarded with more power in order to be able to coordinate, which the central department should do in a federal purchasing organisational structure (Cousins et al. 2008).

According to Cousins et al. (2008) in decentralised structure it is only loose or voluntary interactions between the business units and the central purchasing office, which is also the situation in KE at the time e.g. the procurement department is perceived as a service function, as mention above, and it is voluntary to involve the procurement department in tendering processes (Appendix 3 - Tender Coordinator). Further, no
communication between the business units, concerning purchasing, happens at the time in KE (Appendix 4 - Purchasing Analyst (1)). When shifting to a federal structure it becomes necessary that the business units communicates much more by sharing sourcing information and the business unit must focus on both their own interests but also the organisation as a whole (Cousins et al. 2008).

The implications for KE to shift to a more central purchasing organisational structure, federal, has been indicated above. It seems like that KE’s main focus in order to implement the new structure, which a result of having category management, should be on increasing the communication between business units and between the business units and the procurement department. This could be a very difficult task at KE, since the management style and the culture in the two supply divisions are different, and they do not have interest in what is going on in the other supply division (Appendix 5 - Purchasing Analyst (2)). Therefore KE can expect a difficult and long time until the shift towards a more central purchasing organisational structure formed as a federal, has been carried out, which also has been stated by Johnson and Leenders (2001), is what to expect when shifting towards greater centralisation.

We have now analysed what implications a shift from a decentralised structure towards a federal purchasing structure would entail for KE.
6 Conclusion

This research was about Copenhagen Energy and their procurement department’s improvement initiative, the purchasing category management project. Our focus was to research what the project required and how it could be affected by the procurement department’s skill levels and their purchasing organisational design. Our aim was to suggest to KE how they should structure their skill levels and purchasing organisation.

We found that KE’s motives for carrying out the category management project were a result of the principle of negative feedback, where KE wanted to streamline its current structure. In line with this our analysis showed that KE’s procurement department strategies did not support the corporate strategies, which in itself is a major roadblock for a company’s success.

When the category teams will develop the category supply strategies, they must make sure they are fully aligned and supportive of the corporate objectives so supply can become strategic.

We identified that the project is a synergetic cooperation effort, where different synergy potentials can be exploited. It can be carried out in five steps and requires specific set of skills during each step/phase. Since, KE is currently in the first step, their project leader has every opportunity to include the skill considerations that we have provided in our case analysis.

Further, we found that category teams will be assigned to manage different purchasing categories, each category team will manage different category supply strategies. This has the implications that each strategy requires different skill levels. So, when the category teams will be formed, the project lead must select team members whose skill-set is aligned with the strategic goals and objectives of the category that is to be managed, as that will enable effective purchasing behaviour to take place.

We found that KE’s procurement department, in terms of their skill levels and internal recognition, the department has a limited skill base and low internal status. However, due to the project the internal support and recognition will increase, if the procurement department is not able to demonstrate their abilities to add value for the company, this internal recognition will not sustain.

We suggest that KE’s procurement departments’ staff gradually develop their skill-sets towards internal- and external enterprise skills, so each member will be fully capable of facilitating the category management teams’ progress.

Our research identified that KE’s purchasing organisational structure will affect the synergy possibilities that can be exploited through the category management project. Here we found that a purchasing organization can be structured from a category level, according to Trautmann et al.’s (2011) framework. Where we then provided case examples of how the KE’s categories can be the structural dimension for the structure of their purchasing organisation, an ideology that deploys three purchasing organizational structures.
within the same company, which seemed optimal for KE, as it enables all three purchasing synergies to be exploited simultaneously.

However, the approach to manage synergies should fit KE’s specific business situation. Where our research found that our case company does not have all the pre-requisites in place that are needed to enable effective synergy management. We found that KE’s current business specific situation has low levels of purchasing maturity and low corporate coherence, which entails that the appropriate approach for managing purchasing synergy is in terms of sharing all available information and knowledge, and thus exploit economies of information and learning. This leaves out economies of scale and process.

It is interesting that Trautmann et al.’s. framework does not go into what pre-requisites need to be in place in a company in order to manage the three purchasing synergies. Our contribution to knowledge is therefore that his framework cannot be viewed in isolation from purchasing organisation literature. Since our research found that structuring a purchasing organisation at the category level requires that the specific business context must be taken into consideration and that there are pre-requisites that must be in place, in order to manage purchasing synergies, let alone all three purchasing synergies simultaneously.

In terms of KE, our research identified that KE has big cultural differences as a result of a merger, in order for them to become more coherent, we suggest they focus their informal networking events at breaking down barriers between silos. In addition to making a top down structure for horizontal cooperation as that enables for effective synergy management. Our suggestion is aimed at KE’s top management, since intra-company co-ordination is built up incrementally and KE is a very silo oriented company.

KE’s purchasing organisation should consist of more formal and informal structural mechanisms, as that will enable KE to carry out their project and sustain its benefits.

Finally, we found that KE’s procurement department, as a self-organizing system, was able to feedback in a negative way and protect the system from disturbances (e.g. not adhering to EU laws). If KE’s procurement department can successfully implement the purchasing category management project, the function, as a system, can then be seen as a learning system with the capability of structurally transforming its previous characteristics and behaviours. This will depend on how the constitution of components (business units) bring about synergistic effects, where not only the content (skill levels), but also the way they are put together (purchasing organisation) will result in the whole being more than the sum of its parts.

If KE is not successful, e.g. by selecting wrong stakeholders or approaching the synergetic cooperation in a way that doesn’t fit their purchasing organisation, they risk involving destructive components which might result in the synergetic effects of KE’s cross-functional cooperation, being less than the sum of its parts.
In terms of further research, there is a lack of a practical framework that companies could use to identify what structural changes they must make in their purchasing organisational structures to become candidates for managing the synergy driven purchasing organisations.
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