



**CHALMERS**  
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# **A Step Towards Better Purchasing Practices**

## **Mapping and Improving the Purchasing Processes at Speed Logistics**

*Master Thesis in the Master's Programme  
Supply Chain Management*

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PER EKLUND**

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CHALMERS UNIVERSITY OF TECHNOLOGY  
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# Abstract

Purchasing as a business discipline has gained a lot of attention in recent decades. This is not very strange since purchasing costs often represents the majority of an organization's total costs. However, one way to consider the purchasing when working on improvements is from a process perspective. This can be very advantageous since it helps the organization to develop a common understanding of how purchasing is conducted and therefore also enables a culture of continuous improvements. One company wanting to review their purchasing processes is Speed Logistics in Borås. Their current purchasing processes can be described as rather immature and insufficient, as no official process maps exists at the moment. Without a common understanding of how the purchasing is conducted it is difficult for Speed Logistics to work on improvements by for example optimising the processes or the work around them. The purpose of this thesis has therefore been to provide Speed Logistics with a process mapping of identified purchasing processes, as well as to identify potential improvement areas connected to their current purchasing processes and provide recommendations for better purchasing practices.

This thesis has been conducted with a deductive research approach and the purpose was achieved through a performed literature study, which culminated into a theoretical framework of relevant theories. These theories were then compared and interpreted with empirical findings, so that gaps and insufficient purchasing practices could be identified. The empirical findings were mainly collected and gathered by qualitative semi-structured interviews with employees responsible for the purchasing activities at Speed Logistics.

As a main conclusion and result of the analysis, it has been shown that Speed Logistics purchasing processes are fairly consistent with theory and when there were gaps identified, these had a rather logical explanation. However, the analysis did highlight some improvement areas connected to the purchasing processes. These are compiled into a shortlist of bullet points and covers areas regarding roles and responsibilities, purchasing routines and manuals, limited exploration of the supplier markets, current purchasing processes being largely dependent on experience and knowledge, limited amount of evaluation and follow-up activities and lastly, an identified internal benchmarking opportunity. A more detailed explanation of each improvement area is provided in the conclusion chapter. It is moreover suggested that Speed Logistics document their purchasing processes and establishes purchasing routines and manuals, clarifies roles and responsibilities, more frequently examines the supplier market for forklifts, creates a 'body of knowledge', make more use of evaluations of suppliers performance and see over the possibility of benchmarking the rest of their purchasing processes against the process for IT-related materials.

Keywords: *purchasing, purchasing processes, process mapping, improvements, procurement, indirect materials and services*



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Finally we would also like to thank Magnus Blinge, our supervisor at Chalmers University of Technology, who has been easy to get in touch with when questions have arisen. He has also guided and supported us during the entire process by reading drafts and giving valuable feedback for the benefit of this study.

Gothenburg, May 2017

Senad Catovic

Per Eklund



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# 1. Introduction

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*This chapter gives a brief background and description of the problem, both from a theoretical and practical perspective, which eventually culminates into the purpose of this thesis. Thereafter three research questions are formulated and introduced in order to help achieve the purpose, but also to guide the reader through the progression of this study. Lastly, the chapter concludes with the delimitations made, as well as a presentation of the thesis outline.*

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## 1.1 Background and problem description

As today's markets constantly are becoming more competitive, purchasing is to a higher extent recognized as a key business driver by companies and their top management teams (Van Weele, 2014). Monczka *et al.* (2009) describes how an increasing number of world-class competitors in recent years, domestically as international, has more or less forced organizations to improve their internal purchasing in order to stay competitive. The huge competitiveness has also led to that purchasing no longer is seen as an isolated function or "just" an administrative unit whose main task is to supply the production units with raw materials, but rather as an integrated function with a higher strategical importance than ever before (Pop, 2012). It has been shown repeatedly that purchasing departments and purchasing professionals greatly can contribute to the company's bottom line, but also to the top line as well (Van Weele, 2014). This does not sound strange since for most companies the costs of purchased goods and services constitute the dominant part of the total costs. According to Gadde *et al.* (2010), purchasing costs represented on average 50% of the total cost for whole industry sectors in both Sweden and the US around the millennial shift. In some sectors and for some individual companies these figures were significantly higher; purchasing costs often represented 70-80% of the total costs. This all together composes a few apparent reasons of why management teams all around the world are becoming more and more interested in purchasing as a business discipline.

However, there are numerous approaches to take on when striving for improving the work with purchasing. One way is to consider purchasing and its issues from a process perspective. This is according to Van Weele (2014) a good starting point, since it more adequately gives everyone a possibility of forming an understanding of how the purchasing really is performed. Ljungberg and Larsson (2012) builds on this by stating that one can, by describing an organization through processes, in a comprehensible way understand how the different parts of an organization are related to each other and maybe more importantly understand how they interact in order to create value for customers. In line with this, Ljungberg and Larsson (2012) further argues for that working with purchasing on a process based level can advantageously lead to that a culture of continuous improvements can be born. Adapting a process approach can furthermore lead to the promotion of process optimization and process efficiency improvements. Thompson (1996) explains how efficiency, amongst other, is a central concept in developing competitive value chains. This is also highlighted by Trent and Monczka (1998)

that further state that as purchasing activities are getting an increasingly central role, increased efficiency is assumed to be preferred also in connection to the purchasing process.

The fact that companies constantly are seeking to improve purchasing practices through a process based perspective is thus not so strange, nor is it uncommon that they are being in the position of wanting to look over their current purchasing processes. One of these companies is Speed Group AB and their subsidiary Speed Logistics in Borås. The company is currently looking into the possibility of increasing their overall purchasing efficiency and they have found that there are a lot of room for improvements of the purchasing processes. This includes everything from possibly creating an internal purchasing organization at the company, since there doesn't exist one today, to involving suppliers in finding a way of working together. This is all grounded in the existence of a governance structure from the company at a group level that describes how work should be conducted. However, they are experiencing that a lot of time and resources are spent on unnecessary activities and that there are no consistent processes for purchasing. Since it doesn't exist any process maps or documented descriptions of the current processes, it might be difficult for the involved at Speed Logistics to develop a common understanding of how the purchasing really is performed. When there is no common understanding of how the processes looks like, it is logically also more difficult to work on improvements. This has led to that the way purchasing is performed at Speed Logistics today, can to a certain extent be seen as unstructured and insufficient, according to the CIO of the company. As Speed Group AB continues to grow and the purchasing volumes are becoming increasingly larger, the need of reviewing the current purchasing processes is becoming more and more evident.

## 1.2 Purpose

The purpose of this study is to map Speed Logistics current purchasing processes, identify potential improvement areas and provide them with recommendations for better purchasing practices.

## 1.3 Research questions

In order to answer the aim of the study, three research questions have been formulated. These questions will also work as a guide throughout the study, giving the reader a possibility to follow how the study progresses. However, to be able to develop a common understanding of the current purchasing processes at Speed Logistics, an extensive mapping of the different purchasing processes is highly necessary. The first research question can therefore be formulated as following:

- RQ1: *What does Speed Logistics purchasing processes look like?*

By examining and comparing the mapped purchasing processes with existing theory in the field of purchasing, improvement possibilities can be identified. These improvement areas will per se contribute with valuable information for the case company as they highlight insufficient purchasing practices. The second research question can therefore be formulated as following:

- RQ2: *What improvement areas exist in Speed Logistics purchasing processes?*

Lastly, in order to be able to improve the purchasing processes and develop good purchasing practices at Speed Logistics, the comparison with existing theory will be the guiding point for future recommendations - first thereafter can improved purchasing processes be realized. The last research question can therefore be formulated in the following way:

- RQ3: *How can Speed Logistics purchasing processes be improved?*

As can be noticed, the first research question (RQ1) is solely connected to the mapping of current purchasing processes at Speed Logistics. This research question will help readers of this study to understand how the work with purchasing is conducted at Speed Logistics, i.e. giving them a current state description. Research question number two (RQ2) will identify flaws and potential improvement areas of current processes on a more aggregated level. The last research question (RQ3) will seek to recommend, if possible, how purchasing can be conducted in an improved manner.

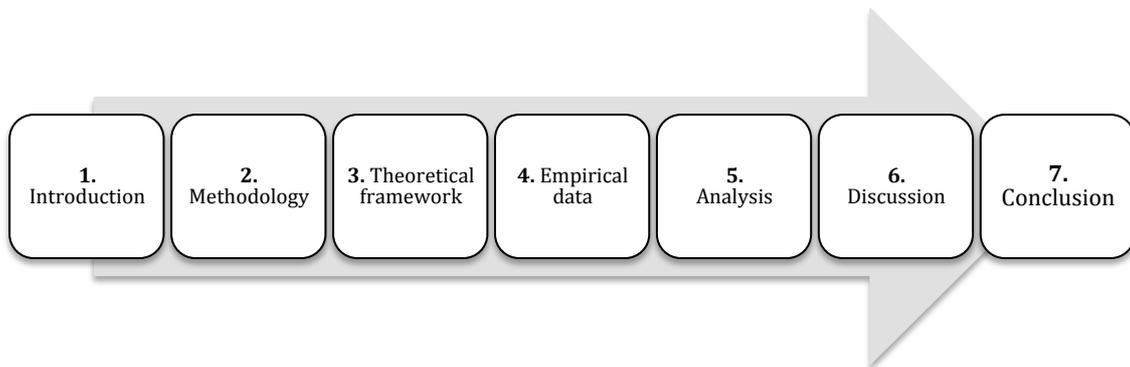
## 1.4 Delimitations

To be able to come to conclusions and present relevant results for this study, some delimitations was established. First of all, to map and try to improve all purchasing processes of Speed Group AB was not considered as possible within the restricted timeframe of a master thesis. Therefore, this thesis focuses on the purchasing processes within one subsidiary of Speed Group, namely Speed Logistics in Borås. This can be seen as both a company specific limitation and a geographical limitation, since Speed Logistics operates in other parts of Sweden as well. A further limitation of this study was to focus on the following five identified categories: *real estate-related materials, forklifts, IT-related materials, staffing and transports*. This limitation was done in consultation with the supervisor at the case company.

The purchasing processes at Speed Logistics are dependent on several different actors in their supply chain. This thesis has however not focused on suppliers' perspectives, i.e. no interviews with suppliers were conducted. Therefore, the primary data needed was collected and gathered solely by interviews with employees at Speed Logistics. The focus of this thesis was thus on the internal activities of the purchasing processes.

## 1.5 Thesis outline

A further detailed description of this study, as well as a brief summary of each chapter, is given in this chapter. Figure 1 below illustrates the disposition of this thesis.



**Figure 1.** The structure of this study

**Chapter 1 - Introduction:** The first chapter describes the background and problem description of this study. Also, the purpose and research questions are presented here and the chapter ends with relevant delimitations that have been made in order to reach the study's purpose.

**Chapter 2 - Methodology:** The chosen research strategy, design and approach is in this chapter presented and explained followed by information regarding how the literature research and data collection has been performed.

**Chapter 3 - Theoretical framework:** This chapter presents relevant theories related to purchasing and process management that has been used in this study.

**Chapter 4 - Empirical data:** Mainly based on semi-structured interviews and internal company documents, information about the case company and descriptions of their purchasing processes are presented in this chapter.

**Chapter 5 - Analysis:** This chapter applies and compares relevant theories with the current situation of the case company. The ultimate aim with the analysis is to eventually reach the purpose of the study by treating and answering the research questions.

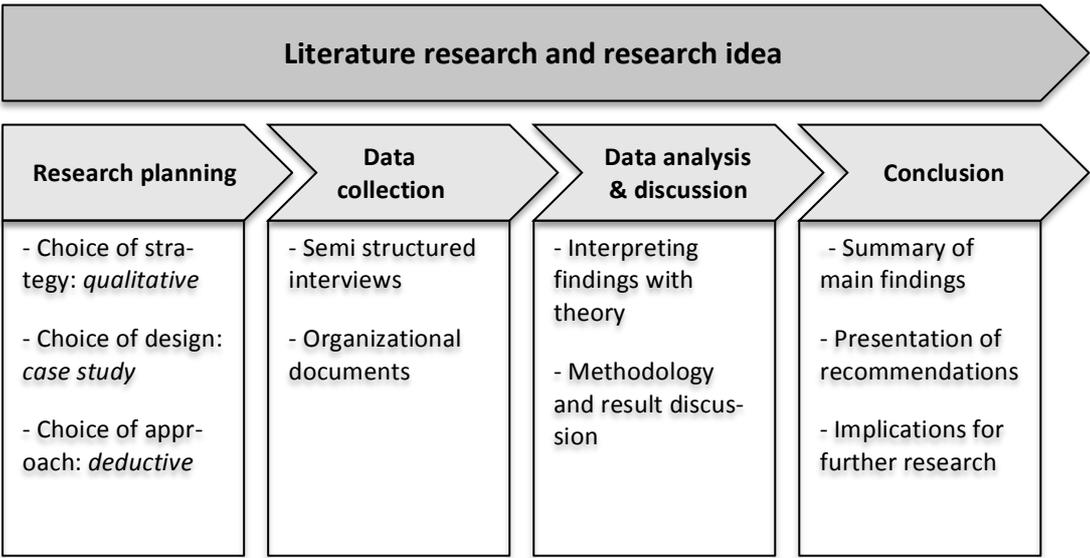
**Chapter 6 - Discussion:** Some further interesting discussions - divided into a result and methodology discussion, are provided in this chapter.

**Chapter 7 - Conclusion:** The last chapter summarizes the main findings of this study and answer the purpose as well as the stated research questions. Based on the discussions of the analysis in chapter 5, recommendations for improved purchasing practices are here presented to the case company together with some further research implications.

## 2. Methodology

*This chapter begins with providing an overview of the research methodology used in this study. The subsequent part introduces the reader to the adopted strategy in this study, continued by the chosen design and approach. Afterwards a description of the method used for data collection is given. The chapter proceeds with a discussion about the trustworthiness of this thesis and ends with a discussion about the ethical concerns.*

In order to make the reader more familiar with the methodology, the authors have created figure 2 to give an overview of the study’s procedure. It aims to introduce and briefly describe, in a more perspicuous way, how work has progressed during the timeframe of this project. The research idea, i.e. the purpose, the research questions, problem formulation and delimitations has been modified and refined throughout the study as new information was discovered. This was done in consultation with the supervisor at the case company as meetings and discussion were held continuously. The literature research started even before the first meeting and has been a continuous source for new theories when existing ones haven’t been sufficient. The other steps shown below have mainly been conducted in sequence to one another, i.e. when research planning was done the data collection started and so on. However, some of the activities have been overlapping and thus performed in parallel when required to. During the planning phase the authors made all the choices that was needed in terms of strategy, design and approach. In the next step; the data collection phase, all necessary information was retrieved mainly through interviews at the case company. Lastly, following step of the analysis and discussion have been performed in order to reach a final conclusion of this thesis project.



**Figure 2.** Overview of the methodology process of this study

## 2.1 Research strategy

Bryman and Bell (2015) divide research strategy into qualitative research and quantitative research. Qualitative research focuses on words, where interviews and observations are common methods. Moreover, qualitative studies are used when the goal is to create a deeper understanding of a specific problem, situation or case (Björklund & Paulsson, 2012). Bryman and Bell (2015) strengthens this, and consequently claim that case study designs frequently are used in qualitative studies. According to Blomkvist and Hallin (2015), qualitative research is often connected to the development of new theories. However, Bryman and Bell (2015) also claim that qualitative research has been used in order to test existing theory. One disadvantage with qualitative studies is that it is harder to generalize obtained results, compared to quantitative studies.

Quantitative research, on the other hand, emphasize on gathering and analysis of numbers (Saunders, Lewis & Thornhill, 2009). Strategies such as experiments and surveys, including questionnaires and statistical methods, are examples of data collection methods that commonly are associated with quantitative studies (Denscombe, 2014). A quantitative approach puts, according to Bryman and Bell (2015), significant focus on measurement, causality, generalization and replication. The researcher is often more interested in studying why something is in a certain way, rather than describing how things occur. Hence, the researcher's aim regularly is to explain questions starting with "why" instead of "how" (*ibid.*). To conclude with, it is primarily the purpose of the study that determines the study's strategic direction (Denscombe, 2014). Table 1 highlights some differences between quantitative and qualitative research.

**Table 1.** Distinction between quantitative and qualitative research (extracted from Denscombe (2014) and Blomkvist & Hallin (2015))

<b>Quantitative research</b>	<b>Qualitative research</b>
Numbers	Words or visual images
Distance (researcher detachment)	Proximity (researcher involvement)
Structured collection of empirical data	Semi-structured collection of empirical data
Deductive approach	Inductive approach
Generalizations and specific variables	Contextual and holistic understanding
Hard, reliable data	Soft, rich data

This study illustrates, based on previous reasoning, a good example of a qualitative study. First of all, and the most obvious reason, is the study's focus on words instead of numbers. Secondly, the aim of this study is mainly to understand and describe the company's current purchasing practices. The fact that it uses idiographic interpretation, i.e. focuses on one

particular process within one specific company, makes it highly contextual. Moreover, the study's objective calls for a holistic approach, and at the same time places demands on achieving deeper knowledge within the studied area. This is obtained from data gathered by the use of semi-structured interviews, which further motivates the appropriateness of a qualitative approach.

## 2.2 Research design

There are, according to Bryman and Bell (2015), different types of research designs that can be used to guide the researcher when collecting and analysing data. They discuss five different designs, namely: comparative, cross-sectional, experimental, longitudinal and case study. In this thesis, a case study design has been used as a framework, which is why the other four won't be treated any further.

### 2.2.1 Case study

Denscombe (2014) states that the purpose of a case study is to get an intense understanding of a specific natural setting and based on that be able to clarify it. Its focus is on having a single system or situation perspective as a focal point for investigation (Bryman & Bell, 2015). A case study can therefore be one single company, location, individual, process, or a specific event. This focus on context is also highlighted by Yin (2014), who adds the fact that boundaries between context and the 'case' often is indistinct. Yin (2014) further claims that case studies generally are preferred when the aim is to answer questions that begin with "how" and "why". Consequently, Saunders *et al.* (2009) argues that this result in case studies often being suitable in exploratory, explanatory or descriptive research.

The case study research design can be constructed and performed in several ways, i.e. collected empirics can comprise of both qualitative and quantitative information (Blomkvist & Hallin, 2015). In fact, a case study encourages the researcher to have multiple perspectives that embrace various approaches and methods for data gathering, which often is a necessity to ensure high validity (Saunders *et al.*, 2009). This is referred to as *triangulation*, meaning that several different data collection methods are used to verify that gathered data is correct and consistent with each other (*ibid.*). Furthermore, Denscombe (2014) explains that processes and relationships are reciprocally connected in social settings. This increases the importance of creating an understanding of how different aspects or elements of a particular instance affect one another, which is why the holistic approach with a case study works well to explain current situations.

As stated before, it is possible to use different approaches for case studies. However, it is common that researchers with this design adopt methods of a qualitative strategy, e.g. use of observations and interviews (Bryman & Bell, 2015). The reason for this is mainly due to the usefulness of interviews for producing an in depth and thorough case examination, which is described in section 2.4.2 Interviews. Although Blomkvist and Hallin (2015) claim that case studies normally are related to an inductive approach, they still can be used when following a deductive logic. For example, Denscombe (2014) describe that case studies have been used in

research with a deductive approach in order to test and compare theory with reality. In this case the aim is to let the researcher check, whether theoretical predictions, correspond with the scrutinized phenomena and its empirical result. The possible outcomes of using this approach is twofold, and at the same time dependent on the aim of the study (*ibid.*):

*“Used in this way, the case study either: (1) tries to reinforce the value of a theory by demonstrating how it works in reality; or (2) sets out to test whether a particular theory might work under the specific conditions to be found in the case setting”.*

(Denscombe, 2014, p.57)

The aim of this study makes the case study a suitable design. First and foremost, it seeks to answer research questions beginning with “how”. It also demands the authors to go into deep investigation of specific processes, in order to acquire rich knowledge. Furthermore, the specific process is a natural setting and the aim is to give a description of the current situation. Even though an inductive approach is commonly adopted, it has been claimed that case studies works with a deductive approach as well. The deductive approach in case studies was described previously by Denscombe (2014) to sometimes be used to test the applicability of existing theory and compare with empirical data, which exactly is the case in this study.

### ***Sampling within the case study***

The section 1.4 Delimitations in the introductory chapter gave the reader a first glimpse of what categories this thesis has focused on. However, there have been some further narrowing within each category, i.e. not all products and services have been mapped and further analysed. This would not have been possible given the timeframe of this study. The authors have therefore, when necessary, chosen the products and services that constitute the vast majority of the purchasing cost within each category. Currently Speed Logistics have a rather small number of products and services that they purchase, in comparison to a producing company. For example, the staffing itself makes up for approximately 70% of their entire purchasing cost, which makes other categories relatively small. Forklifts represents about e.g. 95% of all machines that the company acquire, which thereby makes it most beneficial and relevant to study. The same logic has been applied to hardware at client level in IT and pallet racks within real estate-related material and services. The other products and services within each category, described as seldom purchases, are not investigated any deeper and instead touched upon more briefly in the report.

## **2.3 Research approach**

According to Blomkvist and Hallin (2015) there are primarily two different ways to make use of theory in research, namely inductive and deductive. Saunders *et al.* (2009) claims that it is the degree of knowledge about what theories to use in the beginning of the study that determines the choice of research approach. Bryman and Bell (2015) support this by stating that researchers need to consider the relationship between theory and research. For instance, if theory and hypotheses are developed first and then tested, it is commonly referred to as a deductive approach. In contrast, the inductive approach starts with gathering of empirical data

that is analysed and subsequently developed into theory (*ibid.*). To conclude with, Dubois and Gadde (2002) provides with a third way called abductive approach. It is described as a way of combining induction and deduction, switching back and forth between theory and empirical data.

Since this study largely emphasizes and takes the starting point from existing theoretical knowledge, the deductive approach is most suitable. Theories, mainly within purchasing management (see chapter 3), form the basis for empirical scrutiny at the case company. This study aims to, with the help of current theory, identify, describe and make conclusions based on interviews with employees at Speed Logistics regarding current purchasing practices. Hence theory is compared with empirical data to identify similarities and discrepancies, which further motivates the use of a deductive approach.

## 2.4 Data collection

According to Bryman and Bell (2015), data gathering is a vital part when doing research work. There are various methods that can be utilized when collecting relevant information and data for the purpose of a study (Ejvegård, 2009). Some common data gathering methods used in academic papers and student degree projects are: literature research, interview, survey, observation, experiment, but also conference and lecture presentation (Björklund & Paulsson, 2012). According to Saunders *et al.* (2009) they can be divided into two different types, namely primary and secondary data. However, not all of the mentioned methods are relevant for this study, which is why the following sections only presents and discuss the ones that have been used to fulfil its purpose.

### 2.4.1 Literature research

Literature is defined by Ejvegård (2009) as all printed material, e.g. books, articles, reports, essays, but also information that is found available online. To perform a literature research is necessary in order to explore theories that already exist within the studied area (Bryman & Bell, 2015). It can also, according to Creswell (2009), help the researcher to highlight the importance of performing a study. At the same time, presented literature can be useful for comparison with other findings (*ibid.*). The latter reason for performing a literature review has a clear connection to this case study. Various theories in purchasing, and mainly Van Weele's purchasing process, have been used as a reference point when mapping and analysing Speed Logistics current purchasing practices. The reason for selecting the six-step model of Van Weele can be referred to the fact that it is used a course literature at Chalmers, but also since his process is widely adopted and discussed by other researchers within the field. The consequence of this choice is further touched upon in section 6.1 Discussion of the methodology.

However, the literature research started when the idea was given from the case company to look into their existing ways of purchasing. As a start, relevant keywords were identified, which were used during the entire thesis process in the search for suitable literature in purchasing and process management. More specifically the following keywords were utilized

both individually and combined: *the purchasing process, process management and process mapping*. The literature was primarily retrieved from scientific articles and course books. Most of the scientific articles were collected from Chalmers Summon, but also from external sources such as Google Scholar and Google. Nearly all of the course books and other relevant books were retrieved from the library at University of Borås.

An additional method used in this study were snowballing, which according to Noy (2008), commonly is adopted in qualitative research. Jalali and Wohlin (2012) claim that it is a good method to use after an initial procedure of database search. Snowballing is a method where the researcher uses the reference list of identified books and paper to discover additional relevant literature within the study area (*ibid.*). This has frequently been the case with several books and articles in this study. However, Van Weele's book "*Purchasing and Supply Chain Management*" has chiefly been the main literary starting point.

#### 2.4.2 Primary data

Primary data is, according to Blomkvist and Hallin (2015), material that is collected and used for the purpose of the study. Therefore, all forms of data gathered pursuant to the above reason can be classified as primary data. Björklund and Paulsson (2012) claim that this type of source is important in order to reach a deeper understanding within the subject that is being examined. In this study interviews have been used as a method to collect primary data, which will be described further in the following section.

#### ***Interviews***

The use of interviews to collect empirical data is a common method in qualitative studies (Blomkvist and Hallin, 2015). It is described by Saunders *et al.* (2009) as an efficient way to obtain information that are authentic, valid and pertinent to answer a study's research questions and thus achieve its purpose. Denscombe (2014) divide interviews in the following three categories:

- Structured interviews
- Semi-structured interviews
- Unstructured interviews

The three interview forms give completely different data, describes different contexts and, consequently results in different findings and conclusions (Lantz, 2013). In order to understand in what context the interview forms are useful, one has to know what information each type of interview provides. In structured interviews, the phenomenon and the context is defined in advance by the interviewer. A number of pre-selected questions, and sometimes even answers, are established and followed strictly during the interview. Saunders *et al.* (2009) refers to this type of interview as being suitable for quantitative studies. Semi-structured interviews are similar to structured ones, meaning that they follow a certain theme or set of questions. However, the order of topics and questions is more flexible. This type of interview also allows the respondent to speak more freely, thus the answers are open-ended (Denscombe, 2014). Unstructured interviews, on the other hand, only limit the interviewee to certain predetermined themes or topics. Thereafter the direction of the interview is steered by

the respondent's perceptions, thoughts and beliefs regarding the studied area (Saunders *et al.*, 2009).

Bryman and Bell (2015) claim that interviews in qualitative research mainly are performed in an unstructured or semi-structured manner. It is consistent with this study, as a qualitative strategy has been chosen, which motivates its use of a semi-structured approach. Moreover, an interview that is of a more open nature is often favourable in qualitative research since it increases the possibilities of discovering new and unforeseen information about the studied phenomena (Blomkvist & Hallin, 2015). The use of interviews early in a project process can be helpful to get a clearer picture of the problem and to refine the aim and scope (*ibid.*). The authors held an early interview with the supervisor at Speed Logistics in order to do this. This was both useful and necessary as more detailed information were obtained, which resulted in the purpose and research questions being modified and improved slightly. Combined with the increasing theoretical knowledge from the literature research, the authors got a rather clear view of what to examine. Bryman and Bell (2015) claim that when the researcher has a passably clear picture of what to investigate in the start of the process it is favourable to adopt a semi-structured method, since it helps the interviewer to address more specific issues. Table 2 shows information related to the interviews held at the case company.

**Table 2.** Interviews conducted at Speed Logistics

<b>Name</b>	<b>Position</b>	<b>Date</b>	<b>Duration</b>
Jakob Stigson	Business Area Manager	2017-03-07	1 h 45 min
		2017-04-18	45 min
Jan Fredh	Transport & Customs/ Logistics Manager	2017-03-15	2 h
		2017-04-18	1 h 15 min
Sören Viktorsson	Warehouse Manager	2017-03-22	2 h
		2017-04-19	1 h
Costas Roussos	Chief Information Officer (CIO)	2017-03-24	1 h 15 min
Stefan Lejdebo	Security, Real Estate & Environment	2017-03-29	1 h 15 min
		2017-04-04	1 h 20 min
		2017-04-20	1 h 30 min
Ermin Huremovic	IT Manager	2017-04-04	1 h 45 min
		2017-04-25	1 h

### *The interview process*

The process of the study's interviews is described below, with the steps presented in the order they were performed. Nevertheless, the sequence of all phases should not be considered as strict, since some steps were carried out repeatedly during the process. The process includes everything from pre-interview activities to the final step of describing how the interview data were analysed.

### *Preparatory work*

The authors of this study began with setting the themes, which according to Kvale and Brinkmann (2009) relates to formulation of research questions and to develop a theoretical understanding of the studied subject. Thereafter an interview guide was created, with an overview of the topics to be covered and suggestions for questions, which is shown in appendix A and B. In the following step questions were reorganized and placed in a certain order with the aim of creating a natural flow between topics. During this time the supervisor at Speed Logistics contacted the interviewees, as he had good knowledge of which persons that were most suitable for answering the research questions of this study. This type of selection is, according to Bryman and Bell (2015), referred to as convenience sampling. Because of the study's aim and scope, the sample of interviewees were limited to persons that had knowledge of the company's current purchasing procedures. They were also selected based on their hierarchical position, each with different roles within the company. This was done in order to get different organizational perspectives on purchasing. An additional selection of interview persons was done by the help of "snowball sampling", meaning that some of the initial interviewees referred to other persons that were relevant for the enquiry (*ibid.*)

### *Execution*

The respondents got an introduction in the start of every interview with a brief presentation of the authors, the purpose of the study and in what ways the interview material would be used. The theoretical anchoring, especially in purchasing processes, worked as an internal compass that facilitated and steered the hearing in the right direction during each interview. The authors of this study used audio recording to keep focus on the respondent and to ensure that no relevant information went missing. Kvale and Brinkmann (2009) claim that the use of an audio recorder enables the interviewer to focus on the subject and pace of the interview. Lantz (2013) even claims that by only taking notes the interviewer runs great risk of reducing data in an unsystematic way. However, it can be good to take notes during the interview as a complement. But, if used extensive it might become time consuming and can disturb the dynamic of the interview (Kvale & Brinkmann, 2009). One of the authors therefore focused on interviewing, while the other took small notes when the respondent said something that was worth keeping in mind. The notes made it possible to return to a subject during the interview and ask follow-up questions. This was done in order to acquire more detailed information, which was required to answer the research questions. The pre-arranged order of questions were followed to a large extent during interviews, but changed when necessary to fit each respondent and to facilitate the flow of the conversation. Leading questions were avoided, while probing, specifying, and interpreting questions were commonly recurring.

### *Transcription and verification of gathered data*

After the interviews had been conducted, the collected information was organized and further processed. As a first step the interview material were transcribed by the authors. Lantz (2013) claims that this process is important since it gives the author a unique opportunity to get more familiarized with the material. Transcriptions were done immediately after each interview. All the material that was retrieved from each interviewee got verified. First of all, some of the questions were asked to several respondents in order to ensure that collected information were consistent. The authors also conducted a second interview with the interviewees to check that the descriptions had been interpreted correctly. It gave them the opportunity to correct any misinterpreted information, or to add if there was something missing. This step was performed as an iterative process throughout the whole study. Information that weren't verified during interviews, or data that for some reasons needed to be clarified, were done so through e-mail conversations.

### *Analysis of the interview material*

After the interviews were transcribed the collected information needed to be processed, which was done by data reduction. It is described as a process where information that isn't pertinent in order to answer the research questions is excluded before continuing any further with the analysis process (Lantz, 2013). The information that was deemed important for this study were selected and simplified. This is necessary in order to facilitate the management of information, since continuous text often is hard and impractical to handle (*ibid.*). The interview material was mainly grouped in categories based on the limitations of this study regarding the different types of purchased material and services at Speed Logistics. Each group, with all its content, were structured into the activities as described by each interviewee. These activities were further analysed and compiled with regard to their interrelationship, which formed purchasing processes: from identification of customer need to follow-up activities. The shift between analysis and compilation worked in an iterative way. Lantz (2013) describes it as a process where the goal is to create a complete picture of the examined phenomena. The next step was to utilize the interview data together with theory to reach a more interpretive level. This approach assumes that the interviewer has a theoretical model for the data acquisition, and the aim is to relate to what has been said during the interviews to this model. Hence the respondents' own words were used along with the theory to differentiate and give nuances to the described processes. Using this method, allows the researcher to examine both contradictions and similarities, which goes deeper than a mere description of the phenomena (*ibid.*). The empirical data, previously categorized based on the type of purchased material or service, were compared with theories within purchasing processes so that gaps and areas of improvements could be identified.

### 2.4.3 Secondary data

Secondary material is described as data that already exists, either quantitative or qualitative. However, it's data that has been gathered for other purposes (David, Sutton & Torhell, 2016). This type of data can be useful, at least to some extent, when trying to fulfil the objectives of a study (Saunders *et al.* 2009). Documentary secondary data is commonly used in case

studies, and one of the main benefits is the fact that it saves a lot of time for the researcher. More focus and resources can instead be put on analysis of the given data (*ibid.*).

This study has used several written organizational documents in order to acquire a comprehensive view of the each purchasing process and its content. It worked as a complement to the interviews, which facilitated for the authors to better grasp their procedures. Other information, created for company presentations, and information from their webpage, provided with information that was necessary in order to give a brief description of the organisation. The need for most secondary data were discovered during the interviews and the information was obtained afterwards. The gathering of this data was done to create the most complete and detailed picture of the situation as possible.

## 2.5 Quality of the study

Blomkvist and Hallin (2015) state that it's important to assess the quality of scientific work in order to ensure its trustworthiness. Several authors claim that validity, reliability and objectivity are three commonly adopted measurements in quantitative studies (Björklund & Paulsson, 2012). However, these dimensions and its use in qualitative studies have been questioned (Bryman & Bell, 2015). Qualitative studies should, according to Lincoln and Guba (1985), be evaluated based on different criteria. They divide them into: credibility, transferability, dependability and confirmability, which are further discussed below.

### 2.5.1 Credibility

Credibility is related to what extent the researcher within qualitative studies can show that collected data is accurate, i.e. really measures what intends to be measured. This criterion is commonly referred to as internal validity in quantitative research (Denscombe, 2014). The credibility of this study has been addressed by the use of respondent validation, which was touched upon in section 2.4.2 Primary data. Bryman and Bell (2015) describes this as a process where the researcher returns to the study participants to verify the findings. The compiled process maps, with accompanying description, were used to check that the authors' interpretation was congruent with the opinions and views of the participants. Furthermore, the validity of a study can be increased by adopting different perspectives, such as the previously mentioned method of triangulation in section 2.2.1 Case study. This has also been the case in this study with the input of organizational documents, interviews and literature research.

### 2.5.2 Transferability

Transferability is connected to the extent of how applicable findings are to other situations, i.e. the generalizability of a study, which sometimes is referred to as external validity (Bryman & Bell, 2015). Qualitative studies are often based on a few cases where the focus is on particularization rather than generalization. Hence one can raise some questions regarding this criterion in qualitative research, and in particular since this study is based on a single case. However, Lincoln and Guba (1985) argue that transferability is more about the possibilities of transferring findings to other situations, instead of examining their likeliness of actually existing in other contexts. The authors have strengthened the transferability by

providing as detailed descriptions as possible regarding the company and its purchasing processes. By doing so, the chances of being able to apply findings of this specific context to another increase (Denscombe, 2014). It's worth remarking that since not all products and services have been mapped and analysed, this can weaken the study's transferability within each identified category. Still, the authors believe that the possibilities of applying the processes to other products and services within the company shouldn't be a problem. It's likely that the mapped purchasing processes can be used as a good basis for other purchases, even though they might need some modifications. At the same time, the sampling in this study represents the vast majority of purchases, which increases the generalizability. Furthermore, it should be possible to make use of the result of this study in similar organisations, but also to other types, since it involves a wide range of purchasing processes of both services and products. Much of the material and services purchased at the company can be identified at other companies.

### 2.5.3 Dependability

Dependability is according to Lincoln and Guba (1985) synonymous to reliability. It is described as the degree of whether chosen data gathering and analysis methods will produce consistent results, i.e. if it's possible for someone else to repeat the study and obtain same results (Saunders *et al.* 2009). Reliability can, in the same manner as validity, be increased with triangulation. Björklund and Paulsson (2012) state that it also can be addressed by the use of control questions in interviews and surveys, as these questions aims to examine particular aspects more than once. Lincoln and Guba (1985) stress the importance of providing the reader with comprehensive information regarding methods, procedures and all other steps of the research which resulted in its conclusions. This study presents the chosen methodological strategy, design and approach. It also gives the reader the procedure of the study from the beginning of the research to the last part of conclusion. Moreover, the interview process is described in detail. During interviews the respondents first described the entire process, and as a control question the interviewers asked for a summary of all steps at the end. All these parts increase the replicability of this study. The reliability of this study was also strengthened by the use of audio recorders when interviewing. It made it possible to critically judge the principles for the selection that were made during the procedure of reducing data.

### 2.5.4 Confirmability

Confirmability is associated with the degree of influence that the researchers who performed a study had on its results. In other words, it relates to the problem in qualitative studies of ensuring that the researchers are completely objective, which is alleged to be impossible (Denscombe, 2014). All forms of qualitative material are processed and interpreted in one way or another. It is inevitable the case that the result is dependent on the knowledge, beliefs and values of the researcher who conduct the study (*ibid.*).

The objectivity of a study can be improved by having clearly motivated choices, which gives the reader the possibility to judge the outcome of the study (Björklund & Paulsson, 2012). Furthermore, it can be enhanced by making sure that sources are undistorted, reproduced

correctly and that emotionally charged words are avoided. Sponsorship is stated to be a source of bias, since it can have a significant impact on the end results of a research project (Denscombe, 2010). Any sponsor that possibly could have impacted the end results has not influenced this study. The authors have not had any personal benefits of producing certain result, which strengthens the objectivity. On a further note, the supervisor at Speed Logistics emphasized that one of the main tasks of this study was to get an “internal audit” of how things work. Hence the process of the study hasn’t been forced in any way that would favour a specific outcome. Empirical data has only been presented according to the facts that were discovered during interviews. Questions were semi-structured and based on overarching themes with the aim of not steering the respondents in any theoretical and predetermined favourable direction. No values or opinions were included at this part, which further strengthens the objectivity of this study. The authors entered the process of interviewing with a theoretical frame or view of how the procedures might look like. Despite this, the authors had an open-mind and were willing to accept alternative results. One way to show openness is by letting findings go through a process of ‘falsification’, i.e. accepting the possibility that something might have been misinterpreted (Denscombe, 2014). Hence the interviewees verified the interview material. No data were neglected in this study based on not fitting in the analysis section; instead contradicting facts were further examined in order to seek explanations. New theories were identified and used when existing ones weren’t suitable.

## 2.6 Ethical considerations

Bryman and Bell (2015) claim that those conducting research must consider any ethical concerns that might occur during the project. Denscombe (2014) strengthen this and further states that it’s seen as a vital part of all good research projects. Research ethics covers issues regarding the suitability of researchers’ actions and behaviours in relation to research participants (Saunders *et al.*, 2009). As the authors of this study were external researchers, the gatekeeper (i.e. the company supervisor) granted access to the organization. The participants were initially given a brief description about its purpose from our supervisor at the company. Doing so can add credibility to the project and create an awareness of it, which is important for future work (*ibid.*).

The authors also strived to protect participants’ interests, thus avoid harming any informants throughout the project. The use of semi-structured interviews resulted in topics being discussed quite freely, and it’s worth mentioning that respondents were allowed to skip questions that they for some reasons didn’t want to answer. However, most of the gathered data had no, or little connection to personal information, due to the purpose of this study. Their participation was voluntary, and as mentioned before, they were given more detailed information about the project during the initial phase of the interviews. Furthermore, the authors asked for permission to record and offered the possibility of being anonymous. None of the participants asked to be so, which limits any conceivable issues of confidentiality. Finally, gathered company documents have been modified by the participants when necessary in order to not disclose any sensitive information.

### 3. Theoretical framework

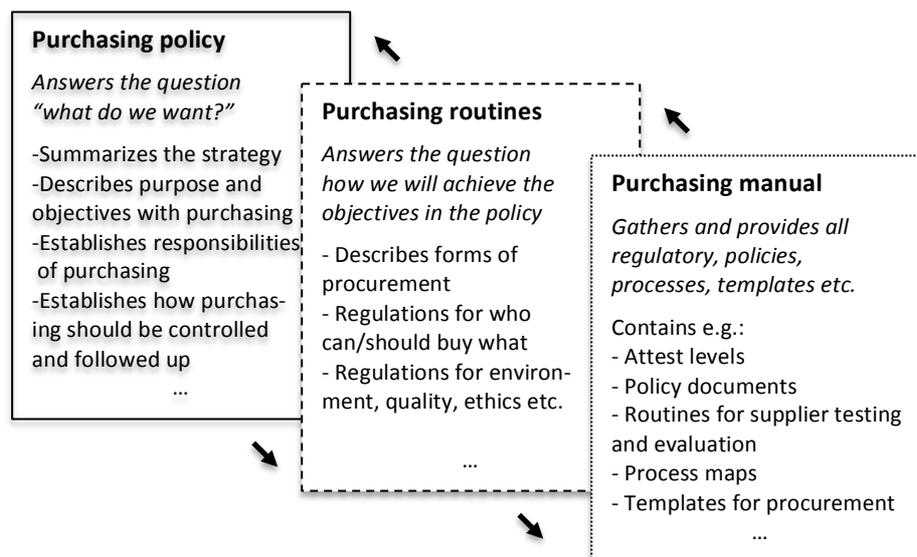
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*This chapter presents the literature and different theoretical concepts used to answer the purpose of this study. The main topics brought up are related to purchasing documentation, the purchasing process and the concept of processes and process management.*

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#### 3.1 Purchasing documentation

The work with purchasing puts large requirements on information and thereby also on the documentation of instructions, routines and processes (Kron & Wallgren, 2010). It is important for an organisation to already from the beginning think through an information structure so that relevant information always and at all points can be found regarding the purchase, the procurement or the call-offs. This can be conceptualized in many different ways; for example, it can be done so that all employees in an organization always can find right information from the purchasing policies at the purchasing department's "site/application" at the intranet, or by compiling all information regarding the purchase in a purchasing manual together with prepared purchase policies at the intranet available for anyone at the company to access. Kron & Wallgren (2010) claims that it is however of great importance that the documentation of purchasing is interrelated so that the objectives that are stated in the policy can be achieved by the developed routines and that necessary documentation for this is available in the purchasing manual. It is therefore also a good idea to gather all the documentation of purchasing at one point and preferably divide it into three areas as described and illustrated in figure 3 below.



**Figure 3.** The structure of the purchase documentation (Kron & Wallgren, 2010)

Kron and Wallgren (2010) describes that a purchasing policy is a document that states the objectives of the purchasing, or simply what the organization want to achieve. They are considered as important since they influence the shared values and the perceptions of the firm

that employees and outsiders have, but also because they are the administrative tools of departmental management.

Heinritz *et al.* (1991) complements this by stating that every department more or less has some kind of policies and that there are several advantages of developing established and approved policies: it removes the need of making new decisions every time a comparable situation occurs, it assures understanding by ensuring that decisions will be consistent and in accordance with the judgments of the responsible department manager, it gives authority to the suggested course of action and it provides guidelines for following up performance etc. However, whatever policies there might exist in different companies and organizations, there are clear benefits of having the policies documented in writing. Heinritz *et al.* (1991) further claims that committing the policies into print clarifies ambiguities and issues connected to the daily work with purchasing, as well as it easier can reveal discrepancies or shortcoming in the current policy (thus seeking to improve departmental standards). Kron & Wallgren (2010) complement this by stating that in order for the purchasing policy to be credible, it is crucial that the document is continuously updated so that it doesn't reflect a reality that prevailed several years ago.

Kron and Wallgren (2010) explains that purchasing routines, sometimes also referred to as purchasing procedures, are essential for companies to establish since they form a common basis for the work with purchasing. These are of extra importance since they also more specifically describe how to reach the goals and objectives stated in the policy in form of purchasing routines, processes and methods for evaluation. Sometimes there is also a great value in putting together some "game rules" for the company's purchases in the form of a purchasing manual (*ibid.*). In this manual employees can find the templates and tools needed to be able to follow the purchasing routines. The organization should develop easy-understandable and pedagogical descriptions on how these templates and tools should be used, as well as manuals for the eventual IT-supports that exist in the company. However, the contents of the purchasing manual may look very different depending on the specific company, but the following list provided by Skoog and Widlund (2001) points at some important aspects that can be included:

- The purchasing function
- Roles, authorities and attestation rights
- Requests to suppliers
- The supplier market
- Contracts and agreements
- Evaluation of quotations
- Ordering and order confirmations

Except the great importance of availability, topicality is another vital cornerstone (Kron & Wallgren, 2010). As like with the policies, the templates, routines and processes needs to be held up-to-date in order for them to be trustworthy and actually used by the employees out in the organization (*ibid.*).

### 3.2 The purchasing process

The activities that are taking place in the purchase of products or services are interrelated and best described as a process, i.e. a purchasing process (Xideas & Moschuris, 1998; Van Weele, 2014). These sets of activities take place after each other dynamically in time and are dependently sequential. However, the purchasing process has been defined and described in many different ways in literature, where number of phases varies depending on chosen model or process (see e.g. Robinson *et al.*, 1967; Ozanne & Churchill, 1971; Xideas & Moschuris, 1998; Kron & Wallgren, 2010). One very modern and famous purchasing process is the one described explicitly by Van Weele (2014) and his six-phase purchasing process is today used for both products and services (for purchasing of services, see e.g. Van der Valk & Rozemeijer, 2009; Rogerson *et al.*, 2014). Further descriptions of the purchasing process in this study will be based on the six-phased process described by Van Weele (2014). His purchasing process approach is illustrated in figure 4 below.

Define specification	Select supplier	Contract agreement	Ordering	Expediting	Evaluation
<ul style="list-style-type: none"> <li>• Get specification</li> </ul>	<ul style="list-style-type: none"> <li>• Assure adequate supplier selection</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare contract</li> </ul>	<ul style="list-style-type: none"> <li>• Establish order routine</li> </ul>	<ul style="list-style-type: none"> <li>• Establish expediting routine</li> </ul>	<ul style="list-style-type: none"> <li>• Assess supplier</li> </ul>
<ul style="list-style-type: none"> <li>• Functional specification</li> <li>• Technical changes</li> <li>• Bring supplier knowledge to engineering</li> </ul>	<ul style="list-style-type: none"> <li>• Pre-qualification of supplier</li> <li>• Request for quotation</li> </ul>	<ul style="list-style-type: none"> <li>• Contracting expertise</li> <li>• Negotiating expertise</li> </ul>	<ul style="list-style-type: none"> <li>• Develop order routines</li> <li>• Order handling</li> </ul>	<ul style="list-style-type: none"> <li>• Expediting</li> <li>• 'Trouble-shooting'</li> </ul>	<ul style="list-style-type: none"> <li>• Supplier evaluation</li> <li>• Supplier rating</li> </ul>
<ul style="list-style-type: none"> <li>• Functional specification</li> <li>• Specification control</li> </ul>	<ul style="list-style-type: none"> <li>• Supplier selection proposal</li> </ul>	<ul style="list-style-type: none"> <li>• Contract</li> </ul>	<ul style="list-style-type: none"> <li>• Order</li> </ul>	<ul style="list-style-type: none"> <li>• Exception report</li> <li>• Due date listings</li> <li>• Invoices</li> </ul>	<ul style="list-style-type: none"> <li>• Preferred supplier list</li> <li>• Supplier ranking scheme</li> </ul>

**Figure 4.** The purchasing process approach (Van Weele, 2014)

The input for the purchasing process is some kind of business need or requirement that is identified by the company. These needs or requirements are often defined in various ways, either very detailed or in a more general way, but are however the triggering factor for the process to start (Van Weele, 2014). Since the process phases are closely connected, the quality output of a phase will greatly affect the quality outcome of subsequent steps. This means that ambiguities and deficiencies in one step will lead to problems in the following steps of the process. According to Van Weele (2014), defining the interfaces of the process phases and determining responsibilities are two vital aspects of the model. The output of every phase in the process needs to be clearly defined, as well as it is necessary to be able to track and trace every activity throughout the whole process. The activities in each following step should not be started before a decision has been made in the previous step. This is best managed by a documentation of the purchasing processes that are usually summarized in a

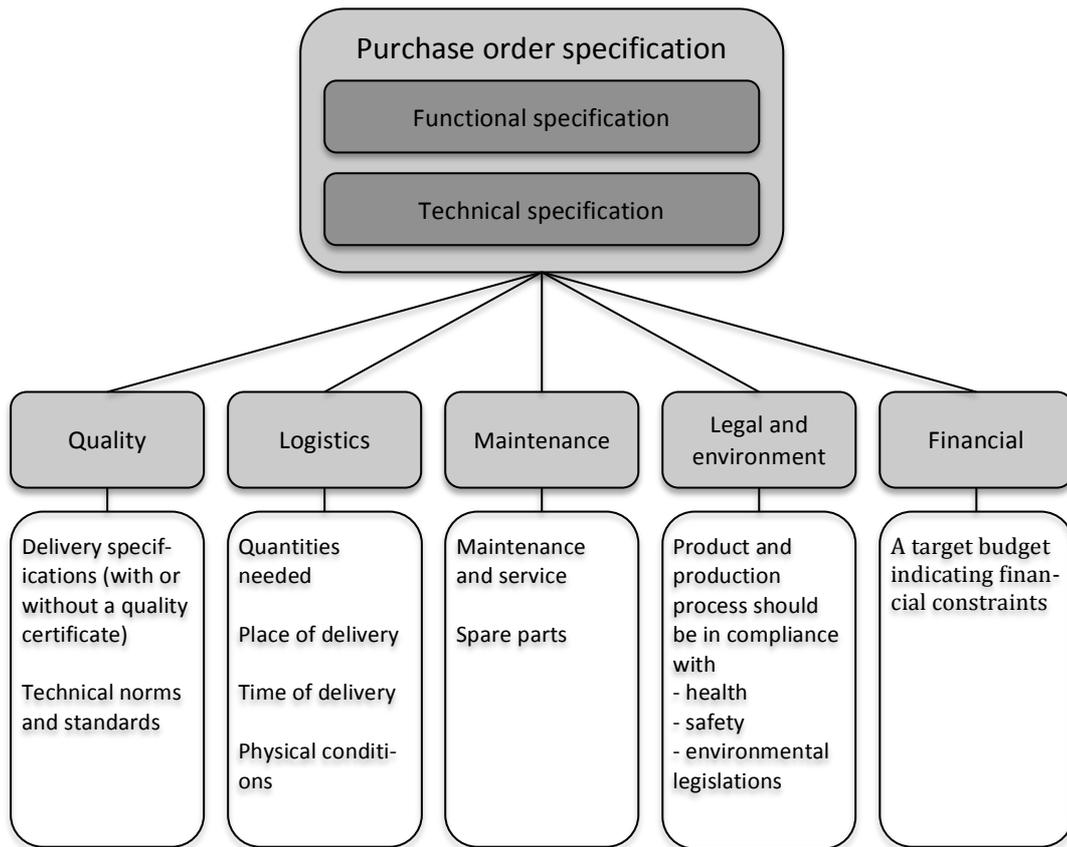
purchasing manual or handbook. This will help to formalize respective process while avoiding unstructured decision-making and operational problems related to purchasing.

Van Weele (2014) also claims that the purchasing process is not limited to the purchasing department only and that many levels of the organization often are involved, thus making purchasing a cross-functional responsibility. However, this requires a clear communication and cooperation among the different departments or functions. It is therefore of great importance to indicate and determine tasks, responsibilities and authority of each department in every phase of the process. This will help to prevent internal misunderstandings and role conflicts, as well as it clarifies the internal understanding of who is responsible of what in the process. Very often the first three steps, called the tactical purchasing function, are separated from the rest of the purchasing process since they primarily are of a technical-commercial nature. The three remaining steps, called the operational purchasing function, are more of a logistics-administrative nature (*ibid.*). However, Kron and Wallgren (2010) add that the division of roles should be clearly reflected in an organization's policies, routines and process descriptions to further prevent ambiguities and unclarities.

### 3.2.1 The specification phase

In the first step of the purchasing process purchasing requirements are specified and decided upon. In general, specifications are separated between two kinds; functional specifications and technical specifications (Van Weele, 2014). The functional specification describes the functionality which the product or service must comprise in order to satisfy the user's requirements. It can for example state how frequently a service should be performed, or which specific quality attributes a product should have. Working with a functional specification will yield several benefits. Firstly, potential suppliers are given the chance to make use of their expertise. Secondly, new technologies can be used that the supplier is familiar with, but not the buyer company. Lastly, a standard can be created that later on also is used to evaluate all supplier proposals. The technical specification on the other hand describes technical properties and characteristics of products and services that is provided by the supplier. These technical specifications are often put down in detailed technical drawings or activity schedules that are used to monitor the supplier's activities. This way of working with suppliers can lead to over specification because users tend to impose requirements on both product/service and supplier, which also may lead to higher costs without necessarily improving the functionality (*ibid.*).

Van Weele (2014) explains that the functional and technical specification together constitutes the purchase order specification. This specification consists of more detailed information and serves as guidelines for selecting the right supplier; more specifically it includes specifications within quality, logistics, maintenance, legal & environment and finance. See figure 5 on the next page for an illustration of the purchase order specification and its cornerstones.



**Figure 5.** The purchase order specification (Extracted from Van Weele, 2014)

### 3.2.2 Supplier selection and assessment

After the purchase order specification has been clearly defined and completed, the buyer can start to explore the supply market to find potential suppliers. The selection of supplier is according to Van Weele (2014) probably the most important step in the whole purchasing process. Gadde and Håkansson (1998) support this and further state that it is important to consider future supplementary possibilities or refurbishments when choosing supplier, since it may limit the buyer's freedom of action. In this step, it is decided which suppliers are to be selected and what the assessment of the proposals should be based on. The selection of a supplier can, according to Van Weele (2014), be broken down into four sub steps that needs to be carefully considered:

- 1) *Deciding the method of outsourcing.* The main issue here is to decide whether to outsource to one supplier or to use multiple suppliers for a certain activity (see next section *Single and multiple sourcing*). A second issue at this stage is to decide upon how to conform the pricing mechanism. Usually the work performed by suppliers are awarded on a fixed price, cost-reimbursable price or a price per unit/activity basis.
- 2) *A preliminary qualification of suppliers and drawing up the 'bidders list'.* The starting point at this sub step is to assemble an initial bidders' list, also called the bidders' long list, based on the purchase order specification. These are the suppliers that are going to be approached for a quotation and indicate which supplier may probably do the job. Thereafter, to each of these suppliers, a request for information (RFI) is sent that is

later evaluated in accordance to the purchase order specification. The long list is then reduced to a shorter list of promising suppliers based on the information gathered.

- 3) *Preparation of the RFQ and assessment of the received bids.* This step starts with creating a requirements template for what the quotation should cover. Then suppliers are contacted through a request for quotation (RFQ). The purpose with this is to get suppliers to submit their bids in a way so that the buyer easily can compare and assess the bids. An important assessment factor is the price that the suppliers offer the prospective buyer. It is also common to identify three to five suppliers from which the quotations will be solicited. This is referred to as the bidders' short list. After the quotations are gathered the purchasing department makes a preliminary commercial and technical evaluation where technical, logistical, quality, financial and legal aspects are recognized.
- 4) *Selecting supplier.* At this last sub step a risk analysis is carried out, especially for critical suppliers and purchase items/activities. Also, potential risks related to a specific choice of supplier are analysed. Eventually one supplier will be selected and in some cases there will be multiple suppliers from whom the products or services will be negotiated.

### ***Single and multiple sourcing***

Jonsson (2008) explains that when shaping sourcing strategies one need to consider whether a product should be acquired from one supplier or from several suppliers. A single sourcing strategy implies that only one supplier is used when obtaining a specific item, even though there exist other suppliers. Jonsson (2008) further claims that single sourcing is preferred when purchased volumes are low, since it would result in large administrative costs if using several suppliers. A second reason is simply that it's sometimes hard for the purchasing company to find alternative suppliers that are located within reasonable distance or operating reach to the buyer. One further motivation for using single sourcing is for companies that aim to achieve partnership relationship with their supplier (Gadde & Håkansson, 1998). By having a deep integration, both parties can adapt their procedures more tightly to each other, which is claimed to be difficult to achieve if using several suppliers. The increased co-ordination can as a consequence enable to lower the amount of work in regard to administrative tasks (*ibid*).

Jonsson (2008) explains that multiple sourcing involves the purchasing of a specific product from several suppliers. The aim with this strategy is to increase the purchasing company's leverage when it comes to negotiations of prices and delivery conditions. At the same time, single sourcing may result in larger volumes for the selected provider, which could lower the price. It's further preferable from a risk perspective, in case of a supplier not being able to deliver what's needed. Moreover, this strategy is most favourable to use when the cost of switching between providers are low. Multiple sourcing can result in increased flexibility in regard to capacity, since it multiple providers can be used in periods of high demand. However, it's at the same time argued that the flexibility connected to delivery in the short-term can be better in single sourcing relationships due to increased information sharing. The

same reasoning can be made that more efficient information exchange facilitates for companies to easier avoid disruptions in single sourcing relationships (*ibid.*). To conclude with, Jonsson (2008) claims that the use of multiple sourcing is on the decrease. The reason for this is that most companies have switched their focus to look at the total costs related to buying instead of merely looking at purchase prices.

One issue when it comes to sourcing strategies is that it's impossible to disregard the fact that variations from suppliers always will exist. Jonsson (2008) states that it can involve everything from variations of the characteristics of the delivered product to delivery precision. The less suppliers that are used, the lower will the variation be. This is partially due to less involvement of actors that try to achieve the same objectives, but also due to the previously mentioned increased and more efficient information exchange that exist in single sourcing relationships (*ibid.*).

### 3.2.3 Negotiation and contracting

When the supplier(s) has been selected, it is time to draw up a contract. The contracting and negotiation will according to Van Weele (2014) look very different depending on the industry and the specific companies involved, whilst the technical content of the purchase agreement is reliant on the product or service that is to be purchased. Commercial specifications, company specific settings and legal terms can also vary in contracts due to differences in purchasing policies, company cultures, market situations or product characteristics. This is also why the use of standardized contracts is limited and implies that conditions need to be negotiated. Some examples of important aspects of the purchase agreement to negotiate about are pricing mechanism, terms of delivery, terms of payment, penalty clauses and warranty conditions (*ibid.*).

When negotiating about prices the buyer should insist on a fixed price that is preferably decided upon through competitive bidding or negotiation. According to Van Weele (2014) this is the best option from a cost control or budget management perspective. Cost-plus contract or cost-reimbursable contracts are two other price arrangements used in purchasing agreements. In terms of payment it is common practice that payments are done in several terms, since suppliers may need to make large investments to meet the buyer's needs. The preferred method of payment is in general the one based on the supplier's performance, but advance payments can also occur (*ibid.*). Finally, Kron and Wallgren (2010) state that asking for monthly invoices can be preferred, since it provides with significant cost cuts potential related to administrative tasks.

#### ***Short-term vs. long-term contracts***

Monczka *et al.* (2009) state that contracts usually are divided into short-term and long-term based on their duration. The first type is associated with purchases of a routine character, usually made over a time horizon of one year or less. The latter however is used for a time longer than one year, often during a period that is seen as indefinite. One advantage from a buyer's perspective with long-term contracts over short-term contracts is that it might reduce the risk. The reason for this is that it results in larger commitment from both parties, which

helps the buyer to reasonably secure supply from their provider. Another advantage with long-term contracts is that the buyer can leverage the company's position with higher volumes, which often results in getting a better price. One risk with this type of contract is that the supplier may lose motivation to keep up the performance during the entire contract period. This can be seen in different ways, e.g. price increases, worse delivery times and technology falls behind etc. Short-term contracts on the other hand are often better suited when flexibility is important, e.g. it is much easier and cheaper to switch supplier (*ibid.*). However, it is far from obvious when a short-term or long-term contract should be used. Cohen and Agrawal (1999) state that the buying company has to consider a wide range of conditions when deciding upon contract duration, e.g. length of planning horizon, risk preference of the buyer, uncertainty of prices on the market and so on.

### 3.2.4 Ordering

When the contract is negotiated and the parties have reached an agreement, the order can be placed. The contract can in some cases constitute the purchase order, while in other cases (such as routine purchases for example) the buyers will negotiate a call-off agreement that includes the products or services needed for a longer time (Van Weele, 2014). Purchase orders can then be placed against this agreement and in such cases contracting and ordering are two separate activities. Purchase orders are also often initiated electronically through a purchase order requisitions generated by the company's material requirements planning system (MRP-system). This is done by matching the volumes of materials needed for production for a determined time period and available inventory. When inventory levels are becoming lower and closer to the minimum acceptable level, the MRP-system will generate a signal to the purchasing department in form of a detailed purchasing requisition indicating that a new order has to be placed (*ibid.*).

In general, the purchase order needs to include an order number, a unit price, a precise description of the product, number of units required, expected delivery date and addresses for delivery and invoicing. It may also contain several order lines describing the different products that need to be delivered. The supplier should send back a confirmation for each purchasing order that will, together with the purchasing order and invoices, form the basis for the vendor rating system (Van Weele, 2014). Jonsson (2008) states that the order confirmation tells the buyer that the supplier accepts quantities, time of delivery etc. It may also be the case that certain parts of the order from the customer have been changed, which in such case should be clear when receiving the confirmation, e.g. change of delivery time. Van Weele (2014) further claims that these preparatory activities are all necessary and if they are executed correctly they will contribute to less work in the ordering and order handling stages.

### 3.2.5 Expediting

When expediting a placed order, Van Weele, (2014) explains that there are three different approaches that may be outlined. The first approach is called 'exception expediting'. Here the buyer gets to know that the materials needed for e.g. production has not arrived in time by the internal customer. The buyer then needs to take actions depending on whether the late delivery will affect the internal customer's operational processes. This is not the most optimal

approach since the buyer operates on an after-the-fact basis - it is therefore better to go for a more preventive approach. The second approach is called 'routine status check' and reflects a more preventive expediting work. The buyer will here contact the supplier some days before delivery to ensure that the requested delivery date will be met and to avoid unpleasant surprises. The third approach is called 'advanced status check' and includes more time intensive activities when expediting. This approach is mostly used for critical suppliers or products/services. Here, the buyer contacts the supplier at regular intervals to check progress based on a time-based work schedule provided by the supplier at the time of the contracting. Sometimes the contract may be so important that an inspector is placed at the supplier's production site to expedite and follow the progresses (known as 'field expediting').

In order to ensure that the specific requirements outlined in the purchase order are met, the products or equipment need to be checked and controlled at the point of delivery (Van Weele, 2014). A quality test, in form of an acceptance test, can therefore be done. This technical test can be done at the supplier's site or at the buyer's site and will ultimately decide if the delivery is going to be accepted or rejected. The acceptance test can also be completed after the product or equipment has been put into place for the first time (*ibid.*).

### 3.2.6 Evaluation and follow-up

The last phase of the purchasing process concerns both the supplier's performance and the performance of the product or service that was provided. To somehow measure the performance, it is necessary to look into how the product or service solved the business need or requirement that was identified by the company at the first phase of the process (Van Weele, 2014). But even after the new product or service has been put into place, the buyer's role continues. According to Van Weele (2014), penalty clauses and warranty claims must to be discussed and determined; extra and minor work must be administered; purchasing and supplier files must be updated and evaluations finalized and archived.

Since the evaluation and follow-up phase is a continuous process, it is of great importance to keep an up-to-date record of actual capabilities of the suppliers (Van Weele, 2014). Keeping track of suppliers' quality and delivery records, innovativeness and competitiveness, leads to that the vendor rating system always is updated and well-informed. Also, when reporting this kind of information to the management and supplier's management, the buyer contributes with a great amount of added value. In this way, the cycle can be concluded; the information can be used in a subsequent purchasing cycle to form future bidders' short list with approved suppliers. A culture of working with suppliers with proven capabilities can in that way be developed. When companies embrace this way of working they will be able to reduce the supplier base and concentrate more business on those suppliers that has shown to be the best ones (based on the vendor rating scores) (*ibid.*).

### 3.2.7 Purchasing situations

There are not many situations in which all of the steps illustrated in figure 4 are passed through. Van Weele (2014) argues for that this process is more representative for first-time purchases of products or services and that in reality most purchases are probably done as a routine task with low risk. Generally, there are three main types of buying situations (Van Weele, 2014; Robinson *et al.*, 1967; Leonidou, 2005); the new-task situation, the modified rebuy and the straight rebuy. The characteristics of the three different buying situations are compared in table 2 below.

**Table 3.** Characteristics of different buying situations (Robinson *et al.*, 1967, p.25)

<b>Buying situation</b>	<b>Newness of the problem</b>	<b>Information requirements</b>	<b>Consideration of new alternatives</b>
New task	High	Maximal	Important
Modified rebuy	Medium	Moderate	Limited
Straight rebuy	Low	Minimal	None

The new-task situation occurs when companies decides to purchase an entirely new product or service from a supplier that they have not done business with before, i.e. a completely new supplier. These situations are considered as the most complex and difficult ones because the buyers are exposed to fulfilling a need for a product or service never addressed before (Van Weele, 2014). This situation also includes more people of several different hierarchical levels in the organization, takes additional time and makes the evaluation of alternative suppliers more problematic. Some examples of new-task situations are buying components for a newly developed product, buying production equipment or the acquisition of entirely new buildings and warehouses (Leonidou, 2005).

Modified rebuys occurs when companies purchase new products from known suppliers, or existing products from new suppliers. This kind of situation occurs mostly when there is a form of dissatisfaction with existing suppliers or just when better alternatives have become available in terms of cost reductions or quality improvements (Robinson *et al.*, 1967). The decision making is characterized by minimal problem solving and the risks involved are lower in comparison to the new-task since either supplier selection or product functionality is more or less known. When making a modified rebuy, it is only the four last steps of the purchasing process that should be focused on. Some examples of modified rebuys are buying office furniture, electronic components or business cars to the employees (Van Weele, 2014).

The last of the three buying situations, the straight rebuy, is the most common situation and includes the purchasing of known products or services from known suppliers. These purchases are made on routine with limited involvement of people and are conducted by the purchasing department itself (Robinson *et al.*, 1967). When making a straight rebuy purchase, it is only the last three steps of the purchasing process that should be focused on. Examples of straight rebuys could include buying office supplies or cleaning materials (Van Weele, 2014).

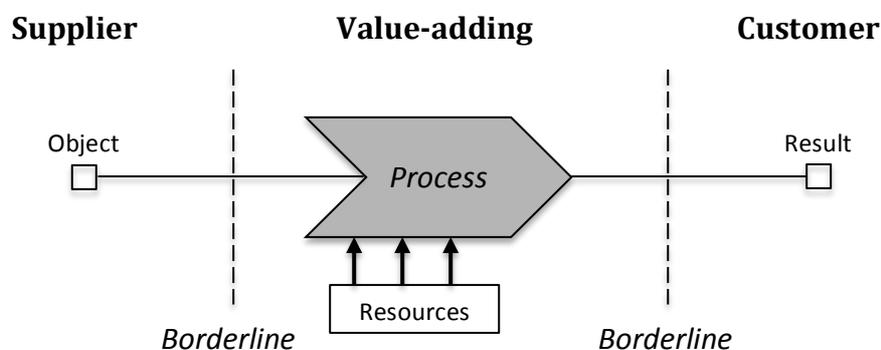
### 3.3 Processes and process mapping

Ljungberg & Larsson (2012) explains that a set of related processes are needed in order to realize organisations business ideas as efficiently as possible. These will also eventually become decisive for the success of the company. The following sections will bring up important aspects related to process management and process mapping.

#### 3.3.1 Process definition and classifications

Ljungberg & Larsson (2012) claim that in order to be able to map a current process, it is of great importance to understand what a process actually is; e.g. its purpose, what it consist of more specifically and how the activities are interrelated. If one does not take the time to reflect upon what a process is, they will not be able to acquire the knowledge and expertise of how it should be developed and improved. However, the purpose of every process is to satisfy its customers with least possible resources used and the resources needed to run a process can be of various kinds, such as information and working hours for example. In general, a process is characterized by a network of ingoing activities that creates value-adding results for its customers. A process is repeated in time and always consist of a customer (sometimes called principal) and a supplier (sometimes called agent) as well as a first and last activity (*ibid.*), see figure 6. A process can according to Bergman and Klefsjö (2010, p.457) be defined in the following way:

*“...a network of activities that are repeated in time, whose objective is to create values to external and/or internal customers”*



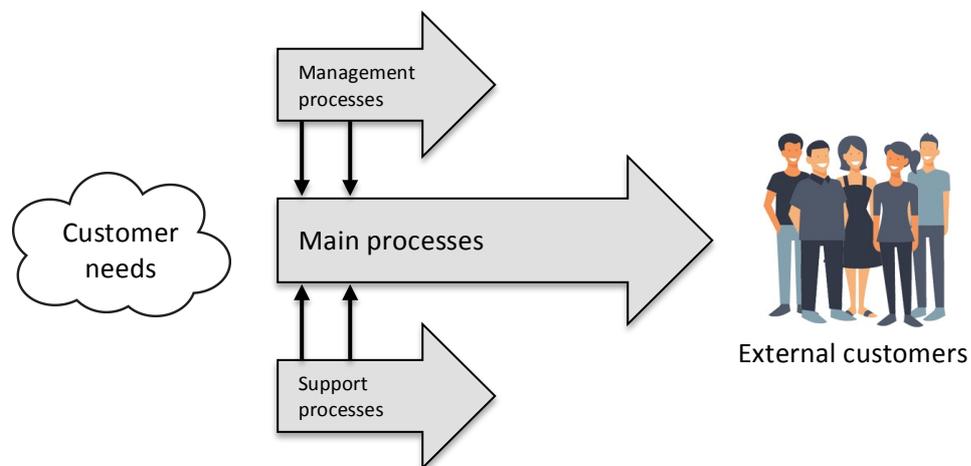
**Figure 6.** The characteristics of a process (Bergman and Klefsjö, 2010)

Since a company can be described as a network of processes looking at it from a holistic perspective, it is necessary to classify the different processes there might exist (Ljungberg & Larsson, 2012). According to Bergman & Klefsjö (2010), a company's processes can be differentiated and divided into the three following categories (see also figure 7):

1. **Main processes** - These processes have the task to fulfil the needs of external customers. They are the overall processes that describe the purpose of the company at a very aggregated level. Examples of these processes could be the

product development process, which creates value for future customers, and the production/distribution process, which creates value for existing customers.

2. **Support processes** - The support processes have the task to provide resources for the main processes and have primarily internal customers. They are needed for the company to work as good as possible as a whole, but are not critical for them in any sense. Examples of these processes would be recruitment, maintenance and information processes.
3. **Management processes** - The management processes have the main task to make decision on targets and strategies, and improve the other organizational processes. These kinds of processes also have internal customers and are needed in order to manage and coordinate the company.



**Figure 7.** Three different processes based on their respective task (Bergman & Klefsjö, 2010)

### 3.3.2 Why map a process?

Activities that are performed in one part of a company will in turns affect other activities in many other parts - if everyone does not understand the connection between the different activities throughout the organization, there will be problems occurring (Ljungberg & Larsson, 2012). It is by a process mapping that the connection between activities in different departments and functions is discovered and understood (*ibid.*).

Ljungberg & Larsson (2012) explains that it is common today, due to the complexity of processes together with the function-based introduction of the work, that very few people within an organization actually has developed a full understanding of how the processes look like. The personnel might have a fairly good understanding about their own little part of the business, but few can see the bigger picture. This clear demarcation has led to that personnel not working in direct contact with customers has difficulties in seeing how their work affects the customer satisfaction, which in turns lead to that demarcation becomes even more evident. Also, the silos within an organization make it hard to identify improvements for the company as a whole. Instead there are different improvement measures made on every function or department itself, which leads to sub-optimisation of the organization. Process maps does therefore play an important role since they visualize the organizations different processes.

Ljungberg & Larsson (2012) further states that when the processes become visible for everyone, it is easier for each and every employee to see how their own work fits into the bigger picture. This will also prevent the risk for that the further development of the work ends up in sub-optimisation. However, it is important to understand that the process mapping does not bring any major improvements to the process (*ibid.*). The mapping is only the first step towards the extensive work with developing and improving an organization's processes. The maps create a stable foundation for developing the business since they facilitate measurement and analysis of the processes. Even though certain improvement possibilities can be identified when the process is being mapped, a deeper understanding of how they work can be achieved first when the processes are being analysed at a deeper level. Based on the analysis it is possible to identify a number of improvement possibilities (in regard to the performance of the process). One can therefore state that process mapping is a necessary beginning of the development and improvement work since the maps enables: a common vision of how the business works as a whole, an understanding of what creates value for customers, an understanding of what the process-based concept implies for the own organization, development of process-oriented measurement systems, deeper analysis of process performance and lastly, improvements of the processes (*ibid.*).

### 3.3.3 Process mapping: the information collection

Before the work with mapping a process can start, information that will form the basis for the process map needs to be acquired. Ljungberg and Larsson (2012) explains that this information gathering can be done in mainly three different ways: “*walk through*”, “*virtual walk through*” and “*process design*”. These are described in the following paragraphs.

A “walk through” implies that one or more persons are responsible for the execution of the mapping and literally walk through the process, hence the name of this method. Along the way, people that are carrying out the different activities of the process are interviewed. Those who are responsible for the mapping then illustrate the process graphically.

Another alternative is to do a “virtual walk through”. This is done by gathering different representatives of the whole process and let each one of them describe their part. A person responsible for the mapping will lead the meeting and ask the participants different questions. Therefore, it is not necessary for all representatives to know the methodology behind the work with mapping the process.

The last method for gathering information is called “process design”. This method is used when there is no formal or official process to map. That can be the case in smaller processes or in processes with large space for personal initiatives. For instance, it has been shown that project-led processes often do not constitute any formal process. With the exception of some common main features, people have created their own ways of working. The process must in those cases be constructed in a way that is confirmed by everyone involved.

### 3.3.4 Process mapping: methodology

After the information about the process has been collected and gathered, the mapping of the process can start. Ljungberg and Larsson (2012) suggests a model for mapping a process based on eight consecutive steps:

**Step 1 - Define the process purpose and it's start and end point.** Before it is possible to start the actual mapping, it is important to determine the scope of the process, i.e. the process interfaces. This also decides the starting and ending point of the process. The better understanding of the process and its purpose one has before the mapping starts, the smoother will the work with the mapping go.

**Step 2 - Brainstorm all the potential activities of the process and write them up on post-its.** This is a good way to get started and it is usually easy to identify a large amount of activities that should be included in the process. When you start putting the puzzle together with the identified activities, it becomes easier to see which activities are missing.

**Step 3 - Arrange the activities in right order.** If the activities are not already in the right order, they are now arranged to be so. By using post-it notes and move them around on a big whiteboard for example, it easy to rearrange them until everyone agrees upon what the process looks like.

**Step 4 - Merge and add activities.** At this stage of the mapping-process it becomes obvious that some activities describe fairly the same thing or that some activities might are missing. One has to merge some of the activities and give them new names that better describe their purposes.

**Step 5 - Define 'object in' and 'object out' of every activity.** When all activities are in place and has been identified, it is time to define each activity's object in and object out and link all these to one big process. This facilitates the understanding of what is happening in every activity and the logic of the map is secured.

**Step 6 - Ensure that all activities are linked via the objects.** The connection of 'object in' and 'object out' to the activities implies a reliable control of whether one has forgotten any activity since the first activity's object out has to be the other activity's object in etc. If that is not the case, some activities have probably been forgotten or parallel flows have been created.

**Step 7 - Control that the activities are on a common level of detail and that they have appropriate/suitable names.** Are the names of the activities acceptable, based on the principles described earlier? Are the activities fairly on the same level of detail? It often occurs that some activities are described more in detail than others; then it is important to raise the perspective to reach the right level of detail throughout all process stages.

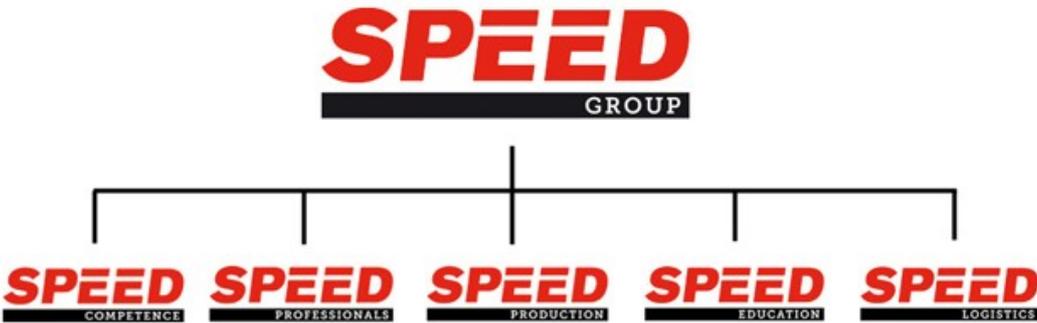
**Step 8 - Keep on correcting until a satisfying description of the process is obtained.** This step can be seen as the final check where the finished map is studied in its totality and various details may be corrected until a good description of the process is reached.

# 4. Empirical findings

*This chapter starts with a presentation of the studied company and continues by describing how purchasing is organized by for example giving an overview of the different roles and responsibilities that exist in relation to Speed Logistics purchasing activities. Lastly, the identified categories of products or services are presented and described as well as an extensive mapping of each respective category.*

## 4.1 Speed Group AB

Speed Group AB is a Swedish organization that provides customers with services within staffing, education, production, recruitment, logistics and warehousing (Speedgroup.se, 2017). It was founded in year 2004 in Borås, where their headquarter also is located. Currently they have around 1000 employees, mainly positioned in Borås, Gothenburg and Halland. Speed Group AB net sales for year 2016 amounted to 562 MSEK and their goal for year 2021 is to reach a net sale of 1 billion SEK (Ratos, 2017). The group consist of five sister companies (see figure 8), all operating in different business areas as a part of their integrated business model.



**Figure 8.** The five subsidiaries of Speed Group

Their business model is based on that the majority of the personnel are employed at their staffing companies Speed Professionals and Speed Competence. The personnel are then “rented out” to the internal companies Speed Logistics and Speed Production, or hired to external customers (Speed Group, 2017). Speed Competence helps companies to fill their needs in regard to blue-collar personnel, where they offer both short and long-term solutions for their customers. They are able to provide with expertise in several different areas, such as assembly workers, forklift operators, warehouse workers, welders, machine operators, and much more (Speedgroup.se, 2017). The second subsidiary, Speed Professionals, were created in 2007 and offers solutions when it comes to recruitment and staffing of white-collar workers, regardless of the type of industry. However, chiefly they operate in areas such as finance, engineering, purchasing, sales & marketing, HR, IT and administration (*ibid.*). The third subsidiary, Speed Production, offers production solutions primarily within electronics. They also produce prototypes and mechanical components, just to mention a few. Due to the company’s flexibility, they are able to give customers a complete solution, if desired, by

taking full responsibility of purchasing, personnel and management. Speed Education provides with educational solutions and has courses within areas such as logistics, leadership, lean and electronics (Speed Group, 2017). This is an important part for Speed Competence, since it helps them to adapt their knowledge according to customer needs. Speed Logistics is the last of the five sister companies within Speed Group AB and also the only one that this study has focused on. Speed Logistics offers solutions within logistics and warehousing. They got five warehouses in Borås and two in Gothenburg, where they can provide with a wide range of tasks and activities: warehousing, picking and packing, handling of returns, consumer-to-store solutions, repacking, cross-docking services and much more (Speedgroup.se, 2017).

## 4.2 Purchasing at Speed Logistics

Stigson<sup>1</sup> describes the purchasing processes at Speed Logistics as rather immature. Today they have no official purchasing function and the purchases are mainly conducted in a decentralized manner, i.e. most of the purchases are carried out by each division or warehouse separately within Speed Logistics. Roussos<sup>2</sup> states that the reason for this is that purchased material and services often are unique for one certain operation and therefore it does not exist a lot that is common to all divisions. Since Speed Logistics don't have any own production they only buy indirect materials and services. The purchasing volumes today are according to Roussos, Stigson and Lejdebo<sup>3</sup> fairly low and much of the purchases are seen as "seldom-purchases". This refers to the fact that some products or services are purchased less frequently, whilst purchasing of other categories are carried out on a daily basis.

However, there is not much documented when it comes to the work with purchasing at Speed Logistics. Currently there are no formal categorization of the purchased products and services, so that the portfolio of indirect materials and services purchased is today not extensively mapped or documented. Also, according to Stigson and Roussos no process maps of the purchasing exists, nor any gathered overall routines or guidelines for how the daily operative work should be conducted. What can be found documented and available at the intranet is some policies, attest-levels and general guidelines in the form of ISO-standards for how the work with purchasing should be conducted at a group level. However, Roussos claims that these guidelines are on a high-level and for the whole Speed Group, thus not specifically for Speed Logistics.

Several persons divided into different areas or categories perform the purchasing activities within the company. There's one person responsible for the handling of agreements for almost all of the identified categories, no matter what product or service it is. This includes the process and activities of developing a requirement of needs and specification of requirements, which is needed in order to enter the step of negotiating with suppliers. According to Roussos, this person's responsibility and role extends until an agreement is concluded. Furthermore,

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<sup>1</sup> Jakob Stigson, Business Area Manager, Interviewed 2017-03-07

<sup>2</sup> Costas Roussos, Chief Information Officer (CIO), Interviewed 2017-03-24

<sup>3</sup> Stefan Lejdebo, Security, Real Estate & Environment, Interviewed 2017-03-29

this person barely purchase/call-off any materials or services, instead this is delegated to other persons in the organization. For example, the category of forklifts has one person that is responsible for acquiring these from their external supplier. Additionally, real estate works in similar ways; here it's often the same person as with forklifts that purchase this type of material from their suppliers. In IT, there's one person that works with procurement and agreements when, for example, buying from new suppliers. At the same time, this person is responsible for ensuring that the organization receives the material that they order, i.e. manages the operative procedure as well. The transport category consists of three employees, where one of them has a more tactical and strategical responsibility, whilst the other two primarily places the orders and manages the booking of transports. In the last category staffing, there are several employees that acquire personnel, even though the responsibility lies on the warehouse managers. Stigson claims that the roles and responsibilities in regard to purchasing at Speed Logistics can sometimes be experienced as quite unclear, e.g. whom to contact when a new need arises in the operations.

Next section will provide a more detailed description of each identified purchasing category included in this study.

### 4.3 The identified purchasing categories

During the interviews, the authors identified five different categories of products and services relevant for this study. These were, according to the interviewees, seen as most important or critical in order to keep Speed Logistics operations up and running. The groups are presented below, with short explanations given to each one.

- **Forklifts** - The category of forklifts refers to all the different forklifts that are used throughout Speed Logistics, i.e. in all the different warehouses. Some of the most common forklifts and machines in this group are reach trucks, pallet trucks, stackers and counterbalanced forklift trucks. It is estimated that Speeds total forklift fleet contains of totally 120 forklifts of varying models, according to Lejdebo. However, the machines in this group are rented, as opposed to the other categories in which materials and services are purchased.
- **Real estate-related materials** - The spectra of products and services purchased within this category at Speed Logistics is very wide; this category includes everything from reparations and maintenance to the purchase of fixed equipment for the warehouses, such as racks or different types of shelving systems. Depending on the specific situation and what is needed, most of these purchases are done less frequently in comparison to the other four categories identified. This is mainly because they are seen as investments for the real estates/warehouses of Speed Logistics and intends to be used during a relatively long period of time.

- **IT** - The category of IT-related products and services relates to both hardware and software products and services. According to Huremovic<sup>4</sup>, there exist four types of different subcategories purchased within the IT-category; hardware at client level (e.g. computers, laptops, printers), hardware connected to the network (i.e. the IT infrastructure), consultancy services (e.g. software, specialists) and everything around that is needed in order to maintain the network, server and client environment. He further claims that hardware at client level is the largest one of these four subcategories, standing for roughly around 40% of Speed Logistics total purchasing spent connected to IT products and services.
- **Staffing** - This category contains services related to staffing of blue-collar personnel. As mentioned before (and as a part of Speeds Group's business model) all staffing of blue-collar personnel needed for the operations at Speed Logistics is acquired through their sister company Speed Competence, which also is their only supplier. Stigson claims that approximately 70% of the company's total purchasing cost can be derived to this category, which makes it the largest purchasing category in regard to the total purchasing costs of the company.
- **Transports** - This category includes the purchase of freight and shipping services, both domestic and international. Speed Logistics are responsible for purchasing transport services on the behalf of their customers and since they don't own any lorries or trucks, they purchase this kind of services from external suppliers.

These categories constitute the vast majority of purchased products and services at Speed Logistics and they are all used/consumed in one way or another at the warehouses covered by this study. Even though there might exist other categories that are purchased as well, these are the ones seen by the interviewees as most critical for the operations to run properly. Also, the operative parts of the purchasing processes might be seen as call-off procedures. This is due to the fact that most of the suppliers, in four of the identified categories above, already are selected and contracted. Once the agreements are signed, the buyers can simply call-off the products or services needed. According to Roussos, it is a strategic awareness that is behind the decision to contract a few predetermined suppliers for the longer term.

#### 4.4 The purchasing processes

This chapter gives the reader a description of how purchasing is performed at Speed Logistics, with focus on the five identified categories of materials and services previously introduced. It should be emphasized that the following process maps were developed and put together after the interviews at Speed Logistics and that they have never been documented or illustrated before. Since no process maps currently exist, this chapter aims to illustrate how the company works with the purchase of these materials and services step by step. Also, the processes mapped in the following sections are showing the longest possible purchasing

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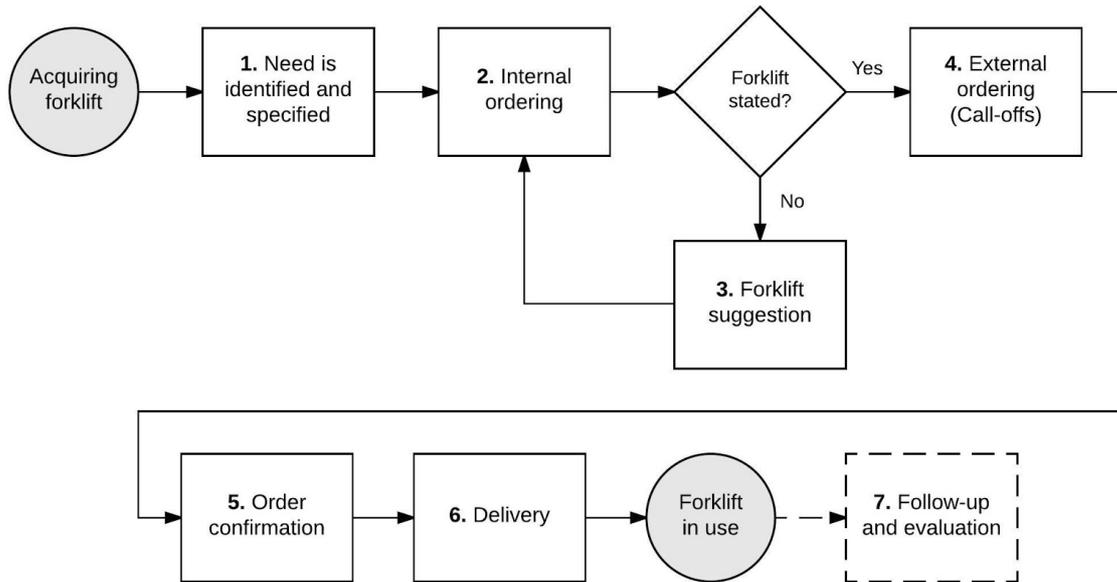
<sup>4</sup> Ermin Huremovic, IT Manager, Interviewed 2017-04-04

process for respective category. In many cases, e.g. when products or services are called-off in a simple rebuy manner, some of the activities can be skipped or bypassed. Those kinds of situations are more described in each category section. On a further note, activities related the monetary flow is not included in the maps since they haven't been the focus of this study. However, attestation and invoices are touched upon in the describing texts that come with each process.

The information collection of each process has been done through the “walk through”-methodology described in section 3.3.3 Process mapping: the information collection. The work with mapping the processes has been inspired by Ljungberg and Larssons (2012) eight-step model described in section 3.3.4 Process mapping: methodology, although all the steps were not followed strictly.

#### 4.4.1 Forklifts

This section describes what activities that Speed Logistics undergo when acquiring forklifts. First of all, they do not buy any forklifts; instead they are rented. Stigson states that it is an active choice and a strategy behind that, since it enables them to have good flexibility in their operations. Currently they have a framework agreement with one supplier, running over five years, which Roussos expressed to be interested in exposing for competition with denser intervals because tendering only has been done twice. Nevertheless, since they have a framework agreement it results in the fact that the process of renting forklifts follows a call-off procedure when a new need arises. At the same time, what is worth noting is that a need can be satisfied without going through the whole purchasing process. There is sometimes the case that a forklift at another warehouse fits the requirements of what is needed. If it's not used to a large extent it can be reallocated in accordance to where the demand is. It is one person within the company that is responsible for managing their forklift fleet. This person has, with the help of a forklift list, a good overview of the situation and continuously gets informed about how much each forklift is utilized. Lejdebo describes it as a central point when it comes to coordinating and reallocating forklifts within the company. Hence the procedure of reviewing the forklift fleet always is done first, but excluded in the process below since it only results in a forklift being reallocated internally, i.e. no “new” forklift is acquired. The entire process of acquiring forklifts, from identified need to follow-up activities, is illustrated in figure 9 and further described in the following paragraphs.



**Figure 9.** The purchasing process for forklifts

**Step 1:** *Need is identified and specified*

The warehouse manager (WM) is the one responsible for identifying a future need, but the need could originally come from another person within the organization. The reason behind a new need could be a new customer business or that forecasts indicates an increase in an existing customer business. There are several ways to specify what is required. One way is to specify what type of forklift that is needed, explicitly stating the exact model. Another more functional approach is to express the request based on what type of problem that needs to be solved, i.e. the type of forklift that is required depends on the characteristics of the goods. These two examples illustrate how it may differ from case to case.

**Step 2:** *Internal ordering*

When the need has been specified it's placed as an internal order to the person responsible for managing their forklift fleet. For example, given the first way; if the orderer explicitly states the need in terms of a specific model, the orderer either calls or e-mails this need to the person within the company that is responsible for handling the acquisition of forklifts from their supplier. In this way, the one who receives the internal order knows which forklift that is demanded. However, given the second approach; if the orderer calls or e-mails a description of what goods to be handled, or function that is required. Then the person who receives the request has to provide the orderer with an example of which forklift that would be most appropriate. Furthermore, it is necessary to state the duration of the need, i.e. the length of time that the forklift is needed. This is discussed with the person responsible for managing the company's forklifts and a joint decision is made. It's important to decide this since it impacts both the total cost and whether modifications of the forklift can be made. The discussions and communication between the two are held continuously during the early phase of the process. Finally, in connection with the internal ordering, the orderer's manager has to give a type of verbal clearance before being allowed to go forward with the case.

**Step 3: Forklift suggestion**

If the orderer has specified or expressed that the forklift has to have a certain function, as described in regard to the second approach in previous step. Then the person responsible of acquiring forklifts gets back to the orderer with a proposal on which forklift that would be most suitable for that operation (illustrated by the arrow going back to Step 2). The orderer receives the suggestion and when accepted the person responsible for managing the forklifts obtains an order where a forklift is stated and the process continues to Step 4.

**Step 4: External ordering (Call-offs)**

When both model and the type of rental option is decided, the person responsible for coordinating and acquiring forklifts takes over the responsibility of the order and checks if the internal order has been given a go-ahead to proceed. If the order for some reasons hasn't, then the orderer's manager is contacted to make sure that it's done before continuing any further with the matter.

The specifications of the internal order are then "translated" into more technical terms. As a part of the framework agreement there are a number of appendices that constitute the forklifts that Speed Logistics, during negotiations with the supplier, expressed to be in need of. These appendices describe the complete technical specification of each forklift, i.e. both basic specifications and if there are any additional functions that are desired.

Each time a forklift is acquired a rental agreement is signed with their supplier (received at Step 5). In the framework agreement, signed over five years, they have negotiated three types of rental options called: rental forklift, flex forklift and short-term machine. A rental forklift is adapted according to customer's request and when signed they're bound to that forklift for five years. Lejdebo states that a flex forklift is a customized machine for their business where they are bound for a year to use that machine and then they can return it to the supplier. This forklift is not completely new, as with the rental forklift, instead it's a used forklift that is reconditioned and modified to fit the customer's need. Lastly, a short-term machine is described as a standard market machine, i.e. it is not adapted to any customer request. However, it is possible for Speed Logistics to quit this type of rental agreement at any time and send back the forklift to their supplier. According to Lejdebo, approximately 30% of their total numbers of forklifts are short-term machines.

Lejdebo claims that the ordering to their external supplier is quite simple for them. The person responsible for acquiring forklifts calls their seller at the supplier and tells him that they want the same forklift as e.g. number 155 (each forklift has their own identity number). This means that they at most times don't even expressly have to specify and instead only refer to one of their existing forklifts. The seller simply checks his documents and sees exactly which specifications it has. If some extra functions are required, then it is possible to just add them when making the order. If a new forklift is needed, i.e. they can't refer to an existing one, then they always start with the basic specifications and choose the extra functions that are needed. However, this doesn't take much longer time compared to if referring to an existing one.

Lejdebo explains that the reason for this is that most of the time-consuming work already has been done during the procurement process when deciding upon the technical specifications.

**Step 5: Order confirmation**

The order confirmation that is received constitutes a complete specification on the forklift that has been ordered. Lejdebo states that it always is received by e-mail and contains, much in similarity to the appendices, the entire technical specification. This means that it shows all the basic specifications, any additional functions that have been added, the forklift's monthly cost, and the estimated delivery time. Lastly, when the confirmation is received it has to be attested and approved by the orderer's manager before giving the supplier a go-ahead to proceed with the order.

When the confirmation is agreed upon the supplier is notified that they can deliver or manufacture the forklift, dependent on what's required. Thereby the delivery time depends from case to case. Lejdebo describes that if a short-term machine is ordered, then the time of delivery is obtained together with the confirmation. If it is available at the supplier it usually takes two or three days until delivered. However, a new rental machine might take several weeks or months from order placement until delivery is made. The supplier also sends a rental agreement that has to be signed as well, no matter what type of forklift or type of rental option that is agreed upon. This is sent by mail in connection with the order confirmation; hence this is always received a few days later.

Furthermore, there are some administrative tasks that have to be done as well. When the order confirmation is received the forklift is added to the forklift list, stating: machine number, serial number, identity number, name, date and where it is located. Thereby it's possible to see when and where a new machine was added to the forklift fleet. At the same time labels are sent by the person responsible for managing the forklifts to the delivery address, to be used for marking of the forklift.

**Step 6: Delivery**

After the forklift has been ordered it is delivered to the address and at the date that was stated when the order was placed. The one who placed the order to the supplier is contacted by the transporter of the forklift and gets notified that he has arrived. The transporter is then referred to a location where reception can be made. In cases of not receiving the delivery when agreed upon, the supplier is contacted. However, Lejdebo states that late deliveries seldom are a problem.

When the forklift is delivered, the supplier's service technician is informed in order to perform a delivery inspection. After it is checked and approved, the agreement begins to apply and Speed Logistics starts paying for the machine. This means that without the service technician's approval that the truck is in proper condition for use, no payment will be made for it. Finally, the forklift is marked with the previously mentioned label that consists of the numbers that are specific for the organization, i.e. so called "Speed numbers" such as identity number 155.

*The previously described step ends the call-off procedure, as the following evaluation and follow-up activities isn't performed in direct connection to this procedure.*

#### **Step 7: Follow-up and evaluation**

When delivery has been made and the forklift is ready for use there are no further activities performed in connection with their call-off procedure. Currently they have monthly follow-up meetings with their supplier's service manager, seller and service technician. The person responsible for handling the forklift fleet, together with one representative from their operation (e.g. a WM), participates on Speed Logistics behalf. During these meetings they review the forklift fleet. The supplier sends a list before the meeting that shows all the reparations, or by the customer desired actions, i.e. if the customer wanted any additional equipment to the forklift, that has been attached during the previous month. This enables them to follow the economic situation in detail; everything from cost to the type of rental agreement (short-term, rental etc.). Lejdebo claims that it is important that this list is updated in case of any changes, as the specified addresses controls where the invoices ends up. The employees at Speed Logistics have access to this list and thus can control that it is correct. At the meetings they also evaluate their supplier with the help of two KPIs, namely:

- Delivery precision (on received machines and the ones sent back)
- Repair/service costs per month

They further check whether some forklift deviates and needs to be managed, i.e. cost deviations from the standard level. At last they look into the coming month to see if some changes have to be made to the forklift fleet, e.g. if the company's volumes are increasing or decreasing.

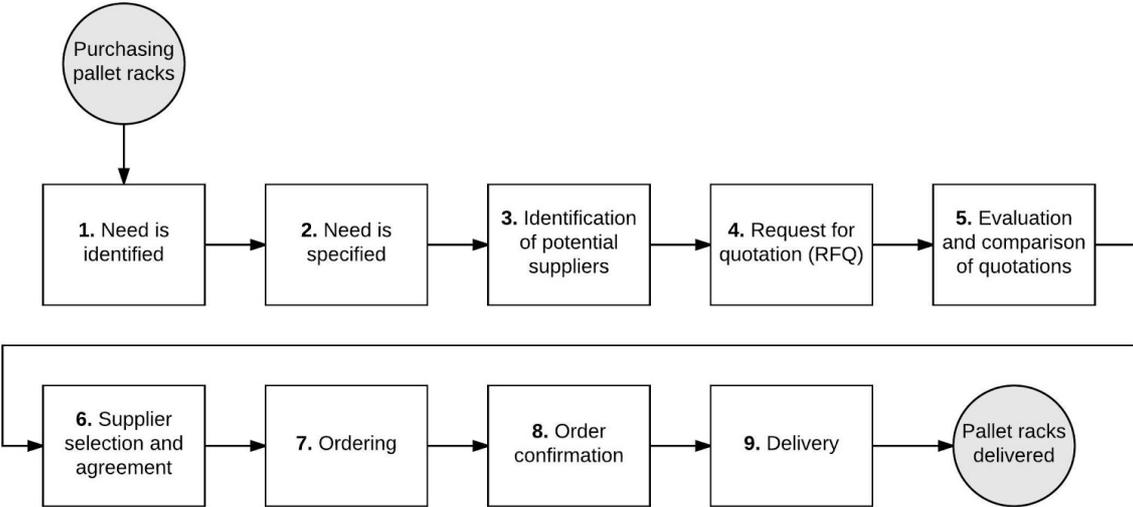
#### *Invoice*

The invoices are received monthly by e-mail as a compiled invoice for an entire address. It shows the identity number, model, contractual period, monthly and total cost of all forklifts connected to each address. All the invoices coming into the house goes to the person responsible for forklifts first, who makes sure that it is the correct amount and manages the assigning of account codes. The invoices are then distributed to the receiver of the forklift where it is approved and thereafter attested by the receiver's manager.

#### **4.4.2 Real estate-related materials**

The following figure 10 shows the steps taken when Speed Logistics purchase pallet racks. Lejdebo claims that purchases of this type of material is being carried out rather seldom, so it's not something that they buy at a daily or weekly basis. Currently they buy both new and used material, and when purchasing new pallet racks they have a type of oral framework agreement with two suppliers that is valid for one year. This means that they are not bound to any agreement, but they have had discussions with the suppliers in terms of how much they expect to buy during one year. It further results in faster processing time and shorter calling-up time, if they provide their suppliers with useful information. The reasons for not having any written agreement is that it is hard for them to predict when the material will be needed.

Lejdebo further states that it is easier to make adjustments when it comes to purchase volumes, which is necessary, since their customers’ demand is very fluctuating. Nevertheless, as they have this type of oral framework agreement the process for purchasing new pallet racks becomes much shorter compared to used ones, since it turns into more of a call-off procedure. The same goes for smaller purchases e.g. spare parts. Therefore, the process below aims to describe the longest possible procedure that the company go through when purchasing pallet racks. However, the following process can also be seen as generic for all types of seldom purchases within the category of real estate-related materials, according to Stigson and Lejdebo. The steps are the same; the only thing that differs is the specification itself, the cost and type of purchase. What generates a need could be a new customer, or that an existing one wants to expand their business.



**Figure 10.** The purchasing process for pallet racks

**Step 1: Need is identified**

The need for pallet racks can be identified by several persons within the company’s operation and also during different circumstances, e.g. by the warehouse manager, account manager, sales department, at daily and weekly meetings etc. For example, it could be that an internal order is placed to the part of the company that is responsible for purchasing material related to real estate. At the same time, the process can be initiated jointly within the company; hence no internal order is placed.

However, it is still a manager with a financial responsibility that makes the overall decision whether to proceed with the case, i.e. decides if it should be approved, based on the purchasing cost and the real need over time. Finally, according to Viktorsson<sup>5</sup> it is important that the one who wants to build more pallet locations have some type of basic data to support that there really is a demand.

<sup>5</sup> Sören Viktorsson, Warehouse Manager, Interviewed 2017-03-22

**Step 2: *Need is specified***

There are primarily two aspects that are considered during the specification of pallet racks, namely: the uprights load and the beam load. Based on those two one receives the total load that the pallet rack can withstand without breaking. They further look at the number of levels; i.e. the height, which together with the total pallet rack load constitutes the parameters that control the degree of filling which can be achieved (number of pallet-locations that can be accessed). Currently they have between four and eight levels within Speed Logistics, depending on the warehouse and its ceiling height. Therefore, the following three things are necessary to specify:

1. Uprights load
2. Beam load
3. Number of levels

They also make a sketch of the pallet racking with the help of a computer program, where a layout is drawn and used as additional material for the suppliers. Lejdebo states that it functions as a help for the supplier to calculate the need, as they're required to make their own drawing and calculations based on their knowledge and skills. Furthermore, it is worth mentioning that several people at different areas within the company are involved when it comes to specification and the process of determining how and where to build. When specification is done, the process moves on to the next step of identifying potential suppliers.

**Step 3: *Identification of potential suppliers***

Speed Logistics identifies the suppliers that they think will be most suitable and in the best way satisfy their need. According to Lejdebo this selection is often based on previous experience, in a "top of mind" manner. Here it is possible for them to contact the suppliers that they have framework agreement with, which facilitates for them, as it significantly reduces the processing time of the case. When it comes to pallet racks it is important that the supplier meets certain requirements, such as: ISO-standard, safety, protection certificates etc. Lejdebo states that there are approximately between five and ten suppliers that are operating nationwide, which are an important selection criterion from their side. He further states that there are smaller and more local actors, but they are not always able to meet their requirements. Hence there aren't that many suppliers that Speed Logistics have at their disposal, roughly four or five. It is also preferred to use the same supplier that has been utilized before in order to not mix different brands. If it's the same supplier, then it is easier to build an extension to an existing pallet rack. They therefore aim to use the two suppliers when purchasing new as well as used materials, in order to make it compatible.

**Step 4: *Request for quotation (RFQ)***

The suppliers that are most suitable are contacted with the above-mentioned information and given a request for quotation, if it's new suppliers. When a new supplier is contacted, the company has to inform them that they would like to have something called Speed Standard (i.e. it states different types of protection that should be included, e.g. for the gable, uprights etc.). They do further state how the quotation should look like and what information that should be included. Otherwise it would be impossible to compare different quotations,

Lejdebo explains. At the same time, the suppliers do often ask whether they want to receive a fixed or variable price, which helps to get the same basis for the subsequent evaluation. The quotations that are obtained should give a detailed description of the costs and states the following:

- Material cost
- Labour cost
- Transportation cost
- Packaging cost
- Total cost
- The total number of pallet locations

Thereby it is possible for Speed Logistics to calculate the price per pallet location, which then can be compared with the revenues of the customer in order to determine if it's economically profitable. If the cost exceeds what the customer is willing to pay for, they simply have to turn down the deal. However, Lejdebo explains that they sometimes can take a loss-making deal to win a bigger deal. He further states that they know, even before sending out RFQs, which actors that are interesting. This is due to the fact that they already have compared suppliers with a calculated basic price to get a first indication of the price. Hence, they know which suppliers that are worth contacting with RFQs.

#### **Step 5: Evaluation and comparison of quotations**

Speed Logistics receives quotations from the contacted suppliers that gives a complete specification of their offering, e.g. the beams, gables, and assembly time, time schedule, delivery time etc. These quotations are then, according to Lejdebo, evaluated and compared (if more than one supplier). The suppliers have then, during the time from RFQ were given, physically examined the location where the pallet racks intend to be built. The suppliers use the previously described sketch in Step 2 as an input when they make the final calculations of the project. Lejdebo claims that it works as a control, to make use of suppliers' competence and knowledge in order to check whether their calculations correspond with the ones performed by Speed Logistics. He further states that it is to their benefit since when the suppliers make their own calculations they take over the responsibility of the deal. Hence, in case of something being wrong in the future it is the suppliers that are responsible for correcting the problem.

#### **Step 6: Supplier selection and agreement**

The following supplier selection is based on three aspects: price, quality and service, which also goes in line with the requirements that was mentioned in Step 3. Thereby they have already ensured that suppliers in this step have a certain level of basic requirements, based on Speed Logistics needs. Finally, the management team are the ones who decide which supplier to sign with, which to a large extent is based on price.

They further decide if a deal with a customer should be accepted, and based on what premises. Depending on what kind of business and how important the deal is, they can sometimes add penalty clauses. If the supplier does not keep the agreed time, they can make

claims for compensation. Which management team within Speed that is involved in the decision depends on the size of the purchase, i.e. the deal's total purchasing cost. After the supplier has been selected the quotation is signed by Speed Logistics, which represents the contract of the deal.

### **Step 7: Ordering**

The initial contact is made by e-mail to the chosen supplier where they confirm that the quotation is to their satisfaction and further ask the supplier about their estimated delivery time. Lejdebo states that it also could be the case that the supplier sometimes wants to visit the location once more to check some things. Thereafter the supplier returns with an indication of their estimated time of delivery, which Speed Logistics requires before they place any order. This further includes information about when the installers are available and when the pallet racks are planned to be installed, thus not only when the material can be delivered. Lejdebo claims that it is a prerequisite for them in order to go all the way and place an order. If they're not satisfied with the delivery time they try to negotiate with the supplier, which is describe as a tough situation, since they want to keep a good relationship. Finally, when the order is placed they receive the exact time of delivery.

### **Step 8: Order confirmation**

The next step is that they receive an order confirmation from their supplier, which usually is an e-mail or a scanned and signed contract. After it is received, the company's authorized signatory, or another designated person within the company signs the confirmation. The confirmation contains information about e.g. price, delivery time, when the assemblers will arrive, a suggestion of time schedule including working hours for the assemblers, etc. When confirmation is received Speed Logistics just awaits the delivery date that was agreed upon previously.

### **Step 9: Delivery**

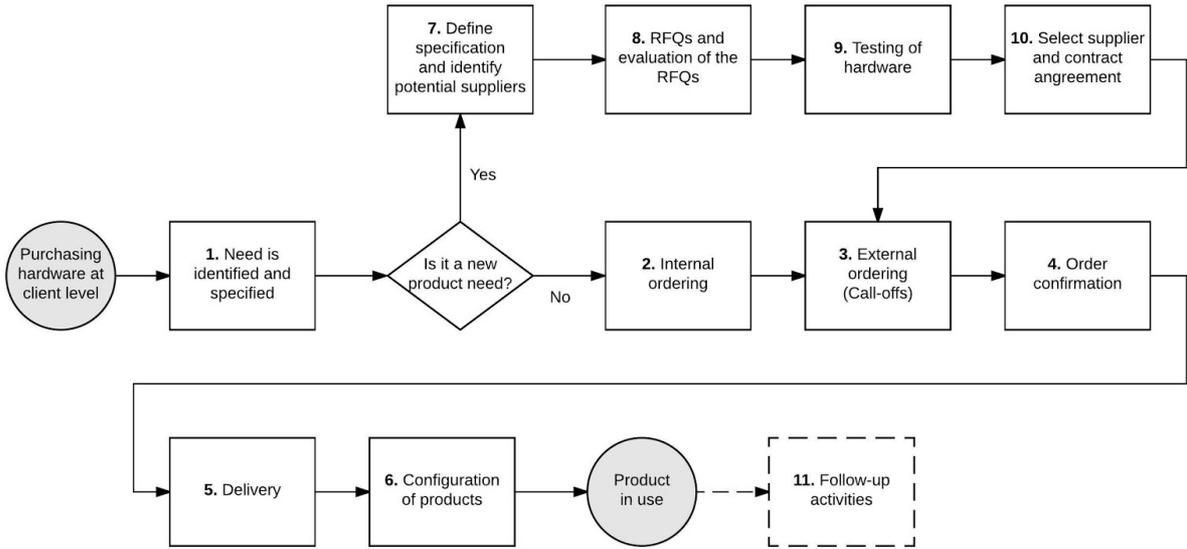
The material is delivered to the stated location and the person that receives it signs the waybill and notifies the orderer that it has arrived. Signing the waybill means that they check whether they have received the right amount from the supplier to what was agreed upon at the correct date. In case of not receiving the material at the date that was agreed upon, then they have to contact the supplier and take actions. The company's contact person, i.e. the person that has ordered the material, is the one that performs this. When the material is delivered the next phase begins, which is the building of the pallet racks that subsequently ends with a final inspection.

### *Invoice*

Speed Logistics and in this particular case, the one who signed the deal, receives the invoice after the final inspection have been carried out. The invoice is then reviewed to make sure that it is consistent with what was agreed upon. Thereafter it is sent to that person's manager who has to attest and approve it. Lastly, when it has been approved by all necessary, then it is put into the right account and the case is closed.

### 4.4.3 IT-related materials

This purchasing process relates to the steps taken when the Speed Logistics buys IT-related products and in this specific case hardware at client level. The reason for that this specific subcategory is mapped is because hardware at client level stands for the majority of the purchasing costs directly connected to the purchases of IT-related products and service. Also, Huremovic describes that this process is very much similar to how the purchases of the other three subcategories (described in section 4.3 The identified purchasing categories) are performed. The IT department works today as a centralized gathering point, or a filter, for all the orders placed related to IT products and materials. When the need of buying these kinds of products arises from the operations, orders are first placed to the IT department meaning that all orders will pass through the IT-department in one way or another. However, Stigson and Huremovic describe the area of purchasing IT-related materials (and services) as one of the clearest ones in comparison to the other products and services; there are clear directions of what degree of freedom that the operation has and how the work with acquiring these materials from external suppliers should be conducted. The purchasing process for hardware at client level is illustrated in in figure 11 below.



**Figure 11.** The purchasing process for IT hardware at client level

**Step 1:** *Need is identified and specified*

The need can be identified in various ways and from several different persons within the organization. It can for example be a warehouse manager that needs a certain type of truck computer or white-collar employee needing an entire laptop package. Practically, it can be every white-collar employee within Speed Logistics that can identify a need for hardware products. Huremovic states that blue-collar employees do not have the authority to place this kind of orders since they work more in the operations and less administrative - however that still doesn't mean that they cannot identify the need.

In conjunction with a need being identified, it is also specified to which kind of product is needed. The IT department has together with the operations and the rest of Speed Logistics

(even across whole Speed Group) predefined a set of hardware packages as well as single products, available for the white-collar employees to order. So, when the orderer wants to place an order they can easily choose from the list of hardware packages or singular products. Huremovic claims that this facilitates the work for everyone involved in the purchasing process of hardware products; the orderer gets to choose from a set of pre-specified options and does not manually have to type in any technical specification in the order to the IT-department, while the buyer gets clear information of which products and in which exact volumes he should call-off from the external suppliers.

**Step 2: *Internal ordering***

Since all orders from the operations and the rest of the company are done to the IT department first, this step is seen as an internal ordering activity. According to Huremovic this is organized in this way so that all IT-related purchases can be centralized and controlled at the same time. The IT department is thus the interface between the operations and the external suppliers.

When ordering internally, all orders are placed through Speeds intranet. At the intranet, which also is the practical gathering point for all orders, the predefined packages and products are stated and available to choose. So, depending on the orderer's need, whole packages of for example laptops with accessories such as charger, computer mouse and laptop case as well as single products such as printers or PC screens can be purchased. Huremovic claims that no other possibilities of ordering hardware products related to IT are possible today; everything has to go through the intranet. He further claims that roughly around 90% of all employees know about how to make an internal order and they are continuously trying to educate/inform employees in this matter. The remaining 10%, of where there might still exist an uncertainty of the internal order procedure, are newly hired or just employees that never placed internal orders of IT hardware products before.

**Step 3: *External ordering (Call-offs)***

When the order has been placed to the IT department, it is now time for the buyer to purchase the products from their external suppliers. The order placed from the orderer/operation generates an automatic e-mail to a common inbox at the IT department that is checked regularly. This order has to be attested and approved by the orderer's manager and it is the orderer's responsibility to get the attest needed before sending the order. The e-mail confirms that an order has been released and it contains information about who the orderer is, what kind of products are required and the delivery address is. This e-mail confirmation becomes the basis for the external orders, so the buyer can then take on the job with acquiring the products from their suppliers. Since the IT department already has framework agreements with all their suppliers, these products can be called-off against the set-up agreements. The buyer checks the order manually a last time and adds some information necessary before an external order is placed by e-mail to the supplier's HelpDesk. The form that the orderer/operation fills in to the IT-department is pretty much the same as the buyer sends to their external suppliers, except that some more information about delivery addresses and if the

hardware's should be delivered configured etc. is added. This form is also attached to the sent e-mail to suppliers.

**Step 4: *Order confirmation***

After the external order is placed to the supplier, an order confirmation comes back to the IT-department in form of an e-mail. In the e-mail, it is stated the following: what has been ordered, the expected delivery date and delivery address. Most of the information in these order confirmations is already well-known since everything is already agreed upon and pre-treated in the framework agreements signed. If there are any changes or deviations, for example that the delivery will take a few days extra due to a stock-out situation, this is stated in the order confirmation as well.

**Step 5: *Delivery***

The supplier is responsible for delivering the products as agreed upon in the agreements. They have their drop-off area at two of Speed Logistics warehouses, depending on the delivery address of the order. At the time of the delivery, supplier scans the products and sends a notification to the IT department that the products have been delivered and are placed at the shelf. The products are briefly checked for any larger defects or damages before taken in for configuration.

*Invoice*

Speed Logistics and in this particular case, the IT department, receives the invoice some days after the hardware products has been delivered. The invoice is then reviewed to make sure that it is consistent with what was agreed upon. Thereafter, the invoice is pre-attested by the buyer at IT and then sent to the orderer's manager who has to attest and approve it one last time. Lastly, when it has been approved by all necessary, it is sent to the financial department where it's put into the right accounting code.

**Step 6: *Configuration of products***

Before the configuration of the products, the buyer performs a more throughout quality inspection of the hardware so that the configuration can commence. All the different programs, such as the ERP-system application and other programs needed for the internal orderer are in this step installed so that the hardware becomes ready for use. The IT-department knows well what kind of standard applications and programs that are needed for the employees at Speed Logistics, but if some additional applications are needed a communication through a simple phone call or e-mail is held.

**Step 7: *Define specification and identify potential suppliers***

If a need arises of a hardware product and it does not exist in the current agreements with suppliers, it is here time to add it. All products purchased are specified in appendices attached to the framework agreement with that specific supplier, so that every product or package (as described earlier) has its own annex attached to the framework agreement. Everything in these annexes is specified and predefined; the supplier, an extensive technical specification of the product, fixed prices, delivery times, article number and so on.

However, if the product required from the orderer/operation does not exist in form of an annex, the buyer has to define the specification for the new need so that the product can get its own appendix added to the agreement. Most often the specification is just a technical translation from what the orderer needs; since the orderer specifies the need in terms of what programs, applications and functions are needed, the buyer summarizes the total application requirements in a technical specification. When certain programs and functions are required e.g. for a computer, the buyer knows well which kind of technical specifications that needs to be defined in order for the computer to be able to handle all applications. When the new need is specified, the buyer has also to identify potential suppliers that can provide them with these products. Huremovic states that he has the existing supplier base consisting of eight suppliers (totally for all IT-related products and services) to check first with which whom Speed Logistics has framework agreements with, but the identification of supplier at this step might overlook the existing supplier base. Today the IT department have also unofficially defined a first and second source supplier, where their first-choice supplier gets the vast majority of Speed Logistics orders placed to external suppliers. However, it does not occur very often that he has to go beyond existing suppliers, but it has happened a couple of times before so the possibility exists. He also claims that three or four suppliers is a good rule of thumb when contacting supplier for the RFQ, but never less than three. Contacting too many suppliers will take up too much energy and time when comparing the answers received from RFQs, in relation to the value it will bring for the RFQ evaluation and supplier choice later on.

**Step 8: RFQ and evaluation of the RFQs**

When everything is specified and the buyer has identified potential suppliers for the new product need, he sends out request for quotations to these suppliers. The RFQs should mainly consist of:

- Product title and article number
- Technical specification
- Prices
- Warranties
- Delivery times

When the quotations arrive from the supplier, the buyer evaluates and compares the quotations in order to get the best possible offer signed. The price, service levels, warranty offerings and supplier proactivity are the main aspects evaluated and compared in this step. Suppliers' proactivity is in this case related to suppliers' approaches against Speed Logistics purchasing volumes. Huremovic explains that if the suppliers are proactive and can prove evidence of a long-term cooperation with constantly updated prices, this will result in the best possible prices for Speed in turns. This is also one of the main reasons for that all framework agreements at the IT side are signed on a one-year-basis and not longer.

**Step 9: *Testing of hardware***

Before the supplier can be chosen and contracted, the hardware products have to be tested. The IT department does this in order to ensure that the hardware will work in Speed Logistics server environment. If the test shows that products are fit and meets all requirements, the process can proceed to the next step. If not, the products will be sent back to the supplier that will provide Speed Logistics with a replacement product that will go through a new test. Notably is that Speed Logistics has so far not paid for anything; the testing step is done on the expense of suppliers and if they reach an agreement, volumes can be called-off against that agreement.

**Step 10: *Select supplier and contract agreement***

According to Huremovic, the flexibility of suppliers and their proactive price approach is the decisive aspect taken into consideration when selecting the supplier for new product needs. The same goes for when the framework agreements are signed. Since Speed Logistics has framework agreements with all their suppliers today, the contract and agreement of a new hardware products will practically mean that a new annex is added to the existing agreement, i.e. a new product is added to the existing product portfolio of the specific supplier. If a completely new supplier is chosen, outside the already existing supplier base, then a new framework agreement is signed.

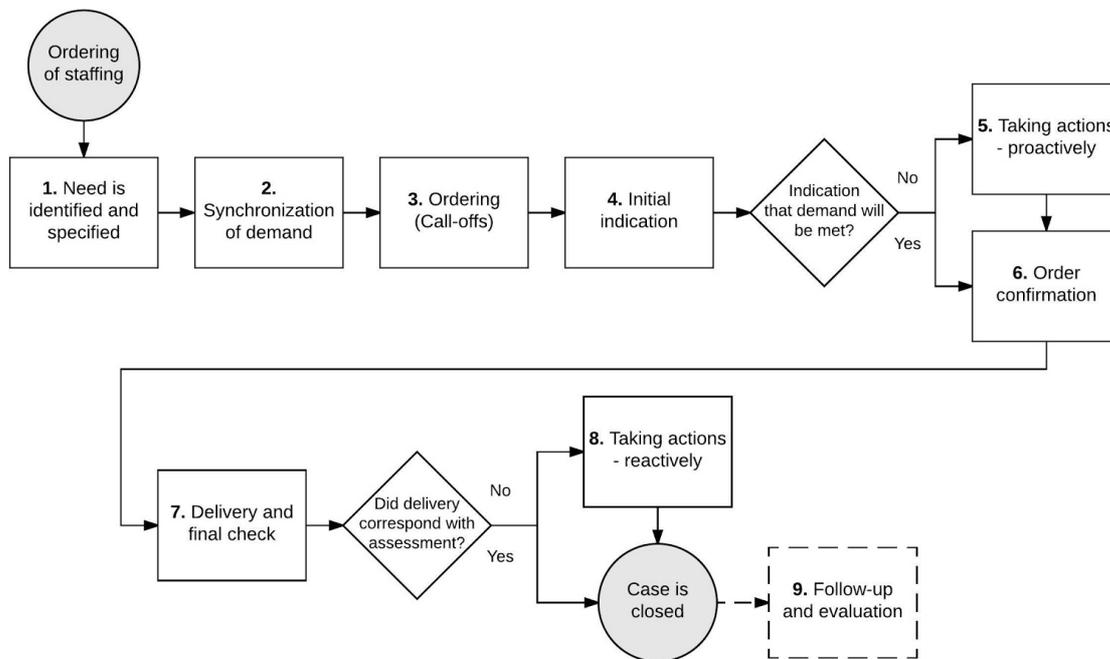
**Step 11: *Follow-up activities***

Huremovic explains that not much follow up activities of suppliers' performance are done today. He further claims that since the purchasing volumes are fairly low and Speed Logistics hasn't experienced many disorders of deliveries at all, it would not bring any added value. Much of the hardware products purchased from suppliers are kept in stock, so that required products can be delivered just a few days after the external ordering. In comparison to Speed Production, their sister company, that needs to strictly measure the delivery precision from suppliers since delays of components for instance can affect a whole production unit, Speed Logistics does not have the same need of doing that. This is mostly because they are only dealing with purchases of indirect materials and services.

However, one thing that actually is measured and documented is the total delivery time from when the orderer places an internal order to when the products are delivered to him/her. This includes both the delivery time from suppliers and the configuration time of the products done internally by the IT department. This data is documented and can be obtained at the intranet. As it is today, the IT-department has weekly follow up-meetings with the largest suppliers (in term of total purchasing cost) where they discuss the previous week and coming needs. Other supplier meetings are held monthly and on a quarterly basis.

#### 4.4.4 Staffing

This purchasing process relates to the steps taken when the company buys staffing services, and in this particular case personnel under collective agreement. Stigson describes purchase of staffing as a very simple procedure. This is mostly because there is a framework agreement with set prices. The way of purchasing thus result in a call-off process to their only supplier and sister company Speed Competence, with whom they have an internal agreement that is valid until further notice. Stigson states that the procedure becomes structured and clear, i.e. what rules that apply in the purchase process for staffing. Currently they have a certain level of basic staffing, i.e. what is needed in the long-term to run the business. However, it is nothing that they call-off on a daily basis and hence it's not treated in the following process. Instead it focuses on short-term personnel, which are the ones needed in addition to their basic staffing. This demand often fluctuates from day to day, which sometimes results in the fact that their supplier has a hard time to satisfy all needs. Everything from a surge in customer demand (more customer orders) to someone being sick could be the reason for a new need arising. The purchasing process, with all its activities, is illustrated in figure 12 below.



**Figure 12.** The purchasing process for staffing

##### **Step 1:** *Need is identified and specified*

The need for staffing is reviewed every day by account managers (AMs), super users (SUs) or team leaders (TLs) at every warehouse. They have different titles and roles that varies dependent on where they work and which customers they work with. However, regardless of title and role, the first thing they do is to identify the need, which is done on a daily basis. To be able to do this they receive forecasts from their customers about their indicated needs for the coming day.

Then they calculate the number of personnel that they think is necessary for their operations, and at the same time define what they need. The specification that is prepared usually

contains more in detail the following (with reservation for exceptions when it comes to certain needs):

1. **Need:** What is needed? e.g. Forklift operators, unloaders, or pickers and packers, etc.
2. **Number of people:** How many? e.g. 3 Forklift operators, 2 unloaders, etc.
3. **Working hours:** Between which times? e.g. 07:00-16:00, 09:30-12:30, two shifts etc.
4. **Contact person:** Contact person at Speed Logistics, i.e. name and telephone number
5. **Location/Address:** Where is the need?

Viktorsson claims that when it comes to specifications, Speed Competence has good knowledge of what Speed Logistics requires in terms of knowledge and previous experience. The persons responsible for staffing at Speed Competence works against different parts of Speed Logistics, which means that they have extensive knowledge of what is required from each operation/warehouse that is within their area of responsibility.

### **Step 2: Synchronization of demand**

The number of persons responsible for identifying and defining the need varies, which was mentioned in the previous step. Hence, when every AM, TL and SU in the same property has calculated their need it has to be compiled to get a total sum for the entire warehouse. The WM receives the demand for all areas or divisions within the warehouse. Each part is then compiled and synchronized (when necessary) by the WM during their daily reconciliations in order to get a picture of the total need.

### **Step 3: Ordering (Call-offs)**

An order is placed to Speed Competence by e-mail when the total demand has been compiled. Stigson explains that the order usually is placed to the supplier by the WMs, since, for example, the AMs don't have the mandate to do this. But, also because WMs are responsible for their respective warehouse, i.e. they make sure that there is enough staff to run their operations. Thereby they own the formal order to the supplier. However, there are some exceptions. Viktorsson states that he has delegated this task to his "SU light". Consequently, it is he who physically places the order to their staffing company every day, but in the subsequent contact with Speed Competence in various discussions, it's the WM that has the ultimate responsibility when it comes to managing the staffing.

### **Step 4: Initial indication**

Speed Logistics receives an initial indication of what Speed Competence believe that they will be capable of providing and what they won't, which later is followed up with a confirmation (see Step 6). Speed Competence has before sending the indication assessed whether they will be able to deliver in accordance to what is demanded. However, the time between order and confirmation depends. For example, if there are no issues with meeting demand it is received rather quickly. On the other hand, in the case of receiving an indication that demand won't be met, then it could take longer time. Viktorsson claims that, in regard to the latter case, it is often necessary to have a conversation with Speed Competence until the confirmation is obtained. Finally, it should be mentioned that an initial indication is not always received, at least when it comes to Speed Logistics B2B (Business-to-business) areas.

**Step 5: *Taking actions - proactively***

If their supplier gives an indication that they won't be able to provide what is ordered, and it would result in major problems for the orderer, then both parties will need to have a dialogue in the afternoon and see if they proactively can take any action to solve the problem. For example, maybe it is possible to prioritize internally and reallocate personnel between any of Speed Logistics warehouses, escalate the issue at their supplier, or to use overtime etc. When every possible action has been investigated they have a complete case, i.e. Speed Logistics know how many persons that their supplier will deliver, and also what to do in the event of a deviation.

**Step 6: *Order confirmation***

The one who ordered at Speed Logistics receives an order confirmation from their supplier, which both can be oral or written. For example, Viktorsson describe that they receive a written confirmation in the form of an Excel document that shows all their personnel at each warehouse, both basic and extra staffing. It also presents information such as: employee numbers, working hours and any additional info that is necessary. Stigson on the other hand states that they get an oral confirmation in his business area. Irrespective of how the confirmation is received, when it is obtained they will find out whether Speed Competence were able to fulfil their needs or not.

**Step 7: *Delivery and final check***

The day after ordering Logistics gets the delivery of staffing personnel. First, they check if the received amount of personnel corresponds with what they ordered. Thereafter three possible outcomes or scenarios occurs:

1. The first scenario occurs when the number of persons conforms to the order, meaning that everything is set and done.
2. The second scenario occurs when the delivery isn't consistent with what was ordered, but it was consistent with the assessment given by Speed Competence. It is then likely that they already have acted on the deviation the day before (as described in Step 5). Then it is reported as a deviation, but they will not act more since they already knew about it.
3. The third scenario occurs when Speed Competences' assessment deviates from what they actually delivered, i.e. they assessed that they would deliver 20 persons but could only deliver 18. The one who ordered at Speed Logistics will then, together with the one responsible for staffing at Speed Competence, investigate the issue and see if they can take any action to manage the current day (Step 8). However, it will still be reported as a deviation.

The first scenario will be reported as green at the pulse meetings held every day and will not be followed up any further. Second scenario doesn't negatively impact the customers but is still seen as a deviation since Speed Logistics didn't get the staff they required and therefore it is reported as yellow. Last scenario will result in a direct customer impact, which in practice

could mean that they didn't get the staff they required, which in turns results in delays. This is reported as red at the pulse meetings. These meetings are held during the morning on a daily basis and aims to capture activities and deviations in the operations.

The above-mentioned colour codes are used and each WM reports the situation for both yesterday and today (what happened so far). Given the example in the third scenario above; Speed Competence reports the two missing persons as a delivery miss, which Speed Logistics confirms and reports as a shortage of personnel for that day. If the first or second scenario occurs then the case for the single day is closed and this step ends the call-off process. Even though Speed Logistics don't always receive what they ordered "they have to live with it". Viktorsson explains that they at the moment can't use any other suppliers to solve eventual shortage of personnel.

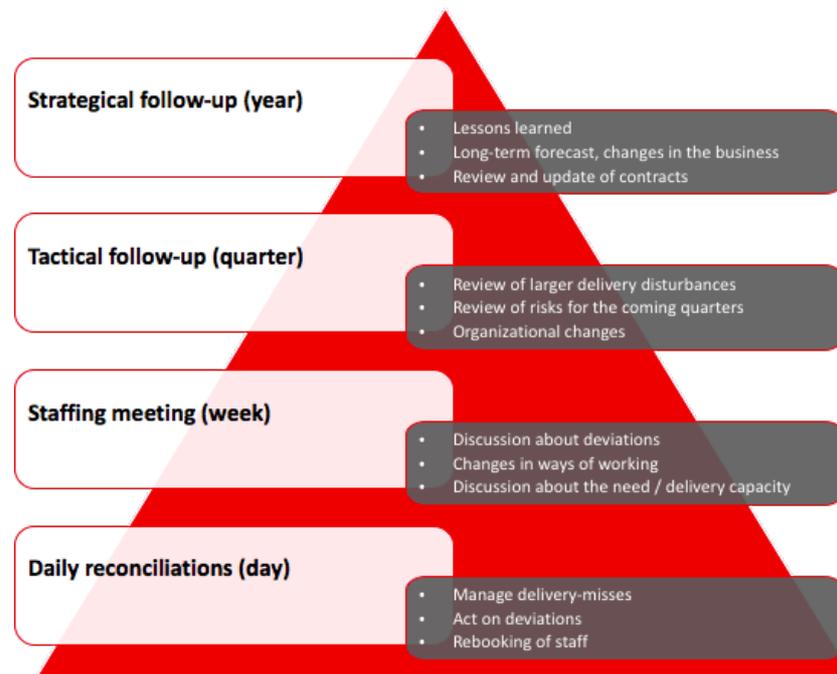
**Step 8: *Taking actions - reactively***

If the third scenario occurs necessary actions are taken, which are similar to the actions taken in Step 5. The difference is that this step is performed after delivery and therefore made in a more reactive manner. When every possible action is taken the case proceeds to the next step, where the case is closed.

*Most of these steps (1-8) are performed on a daily basis. However, there are some activities that take place after this step, or outside their daily call-off procedure:*

**Step 9: *Follow-up and evaluation***

In this step the previously mentioned data, e.g. deviations and incidents, are collected and used at follow-up meetings with Speed Competence on a weekly, monthly and quarterly basis. They have three measurements or Key Performance Indicators (KPIs): delivery precision, number of new personnel that has been educated/trained to be able to work in Speed Logistics operations, and overtime. On a weekly basis, they look at it in rather rough terms on an operational level, e.g. how it worked last week. Monthly meetings bring up the actual data for discussions to check that everything works in a satisfactory way. Quarterly meetings examine it on a more strategic level for the entire business; maybe there need to be some changes in the framework agreement, factors that steer costs, flexibility etc. This joint improvement work exists between Speed Logistics and Speed Competence in order to develop the relationship, mainly due to them being one of their most critical suppliers (Speed Group, 2017). Hence this process is supported by the Supplier Governance Model, seen in figure 13 below, which is designed to create a platform between the companies for follow-up and quality assurance (*ibid.*). It describes how the two subsidiaries should work together on a daily, weekly, monthly and quarterly basis. Employees from both parties participate during the meetings, at all levels. Issues raised at one level that can't be handled are escalated to the level above



**Figure 13.** Supplier governance model (modified from Speed Group, 2017)

As can be seen from the figure, the points included in the daily reconciliations have to a large extent been discussed in the process description since they're part of their daily call-of procedure. In conclusion, Stigson claims that the purchasing process and cooperation is clear and well-functioning.

#### *Invoice*

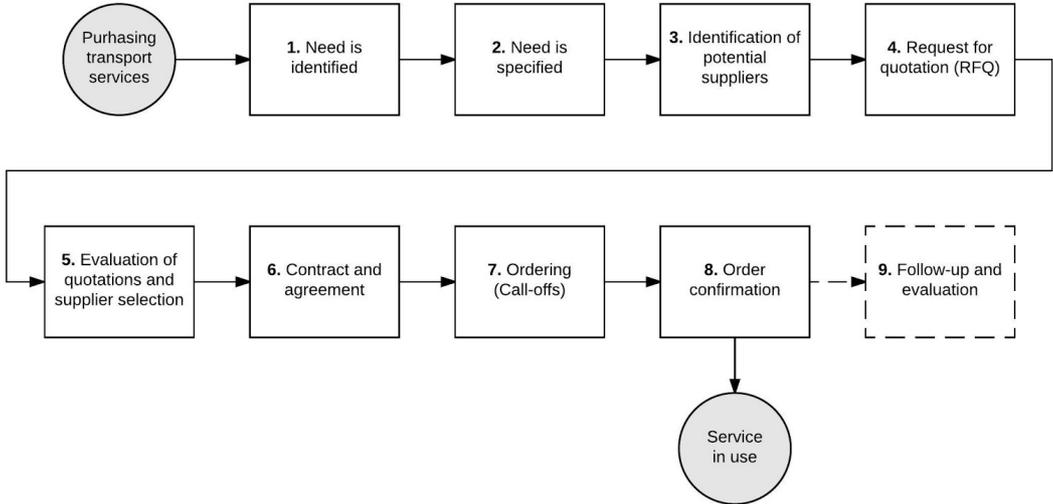
Furthermore, what is worth mentioning is that the order to Speed Competence generates an invoice to each respective WM that has made an order. The employees report their working hours in two systems, one connected to Speed Competence and the other to Speed Logistics. The WMs receives weekly time-sheets from Speed Competence. Viktorsson describes that these time-sheets are reviewed and compared with the ones reported at Speed Logistics. This is performed in order to ensure that they are correct, before the supplier sends the invoice. He further claims that the previously mentioned Excel document works as a good reference at this step. The weekly time-sheets generates an invoice that the client (i.e. WM) at Speed Logistics receives on a monthly basis to be attested and approved.

#### 4.4.5 Transports

This purchasing process relates to the steps taken when the Speed Logistics buys transport services, including both domestically and overseas transports. There is one person that carries out the purchases of transport services. This person is also responsible for negotiating prices and signing the agreements with suppliers. Then, there is a department internally called 'back-office' containing two employees responsible for booking and coordinating the shipments with the goods. According to Fredh<sup>6</sup> there doesn't exist any direct classification of transport services at Speed Logistics, instead he claims that a lot of the work and choices are done in a

<sup>6</sup> Jan Fredh, Transport & Customs / Logistics Manager, Interviewed 2017-03-15

“top of mind” manner. However, the purchasing process for transport are initiated by a customer need, often from new customers wanting to use Speed Logistics services. After the need is identified, the work with all following activities can commence. The purchasing process with all its activities is illustrated in figure 14 below.



**Figure 14.** The purchasing process for transports

**Step 1:** *Need is identified*

The need of purchasing a transport service is most often identified when an oral request comes from a new client. Usually this request goes through the company’s internal sales department first and then to the responsible for the purchase of transports. This oral request contains some brief information about for instance potential goods flows, type of goods and volumes. The next step is for the purchaser of transport service to sit down with the sales representative from Speed Logistics to specify more in detail what requirements the customers has and to get it down on a specification.

**Step 2:** *Need is specified*

When the need is specified, it is done together with the Sales representative within Speed Logistics responsible for that specific customer affair. Fredh states that since the sales representative is closest to the customers and knows their requirements best, it is natural that he is involved in specification to suppliers. The specification to suppliers is mainly based on the received customer requirements. The buyer requests information from customers mainly regarding:

1. Historical consignments (if available)
2. Annual volumes
3. Type of goods (i.e. goods in pallets, cardboards or cages/bulk etc.)

This is done with Speed Logistics sales representative in order to have some indications of which supplier will be the most suitable, but also of course to hand over to the suppliers when requesting for quotation. The specification may vary from case to case and sometimes there

might be additional factors that are considered, but Fredh claims that these three are more or less always on the specifications to the suppliers.

**Step 3: *Identification of potential suppliers***

When the need is specified, it is time to identify potential suppliers that can take on the job with transporting the goods. As it is today, they have around ten suppliers that they are using continuously. Every year Speed Logistics are involved in comprehensive negotiations with transport providers to form the best possible framework agreements. After the negotiations are through, they sign (or most often just extend the already existing) framework agreements with most of these suppliers so that prices, functionalities and other conditions has already been negotiated and agreed upon. However, Fredh claims that he does not shut the door to new suppliers and actors when new customer affairs are signed. Even though that Speed Logistics has framework agreement with a range of transport providers, entering new markets may lead to that the existing supplier base is overlooked to find the best possible transport solution. In those cases, the buyer has to go beyond the existing agreements to make a so-called “seldom purchase”. These kinds of purchases are not very common since the existing supplier base comprehensively covers most of the customer needs today.

Continuously, according to Fredh this step is very much dependent on what kind of goods you are transporting. If it is a question of fragile items, the buyer might not want them to be resorted, moved between terminals or repackaged in any way; instead it might be more attractive to use a supplier that can send the goods in whole pallets, directly to customers. But the identification of which of the ten potential suppliers are most suitable for the specific customer needs is also done in a “top of mind” manner as described briefly before. The buyer has an extensive experience of the transport business and has worked for a long time with transports suppliers. He can therefore narrow down the supplier base even further, into just two or three suppliers he believes is best for the specific customer needs. It can for example be about that supplier A is best when it comes to handling cardboard deliveries or that supplier B is the most optimal choice when sending goods to the southern parts of Sweden.

**Step 4: *Request for quotation (RFQ)***

When the reduction of the ten suppliers has been done into a few potential ones, the buyer sends out the request for quotation. With the request, the buyer also attaches the information he got from his customers described in Step 1. Sometimes this is done electronically through a simple e-mail conversation and sometime sales representatives from the supplier company is invited for a physical meeting; it depends much on how large the customer affair is and what volumes are involved. Anyhow, the quotations need to include some vital information. Fredh list following factors as standard information that needs to be included in the quotations from suppliers:

- *Price*
- *Delivery times*
- *Terms and conditions for delays* - not always included in the request for quotations since it is well known that certain lines of distribution are heavily congested and that delays may come as a ‘natural’ result.

- *Damage management*
- *Payment conditions*

He further claims that this information varies depending on the customization level of the transport service. There is a difference when certain type of goods is to be transported; for instance, transporting colours and dyes may require more safety handling instructions and more special types of transportation (e.g. heated transports in winter) compared to when transporting regular cardboard boxes. However, Fredh states that the above information requested might be seen as a basis for the RFQ.

**Step 5: *Evaluation of quotations and supplier selection***

After some time, the quotations from suppliers are received. They are then gathered and compared to each other so that the buyer has a clear understanding of what respective supplier can offer. Sometimes, mainly if the customer affair concern large volumes, the buyer involves a third party from Speed Logistics to make sure that the right supplier for the specific customer affair is chosen. It could be someone from ‘back-office’ that is handling the operative orders, or someone from sales department that has the most customer contact. However, the evaluation is not solely based on price even though it is the deciding factor in most of the cases. Fredh claims that the evaluation and comparison of quotations is also based on *functionality, the suppliers’ distribution networks* and *service offering*. Functionality can be divided further into two subcategories; a good system solution/complete solution with minimal possible manual handling of shipping documents and a track and trace possibility so that the buyer (or his customers) are able to monitor where the goods are if desirable. The supplier's distribution networks might be about that certain suppliers don't have any own terminals or haulage contractors in the northern part of the country, which has forced them to collaborate with local hauliers. This has according to Fredh led to severe delays since the local hauliers often do not have the sufficient capacity needed. At last, the service offering is simply a customer service aspect that the buyer considers as very important as well; you should know where to turn and whom to contact if problems with the deliveries, or other queries, emerges.

After the quotations are evaluated and compared, it is time for the buyer to choose one supplier for the specific customer affair. Fredh claims that, due to his extensive experience of the transport industry, he knows quite right away which supplier is most suitable for the varying circumstances of different customer affairs if the RFQ-answers don't differ much between different suppliers.

**Step 6: *Contract and agreement***

When the buyer has decided upon which supplier to use, the quotations are signed and becomes a basis for the binding contract that is later on signed. Since Speed Logistics has signed framework agreement with all their ten suppliers, this agreement will be specifically for that customer affair, where more exact prices, functionalities and other conditions (explained in Step 4) are stated.

**Step 7: Ordering (Call-offs)**

The ordering of transport services can commence after the contract or agreement is signed. The ordering can more practically be done in mainly two separate ways: through Speed Logistics internal system or through the 'back-office' department earlier described. Their internal business system is coupled to all the transport suppliers with whom Speed Logistics has signed framework agreements. It is a third party that handles this connection, a cloud-based transport provider that connects Speed Logistics and their goods with carriers. When the goods are picked and packed at the warehouses, the warehouse operators roughly just press the enter button and the files (containing information about quantity of parcels, weight etc.) goes automatically for booking. Fredh claims that 9 of 10 suppliers are integrated into this automatic solution. The other possible ordering point is through the 'back office' department. It is a small department containing two employees that manually handles the transport ordering. They are responsible for booking the transport services in special cases; when there are large orders (e.g. 50 pallets) or when orders do not transfer completely by the automatic solution and they have to handle it manually.

However, the orders become more of call-offs towards the contracts that has been signed. The 'back-office' department can therefore choose without having to negotiate or consider prices - they can just call-of the need from existing agreements.

**Step 8: Order confirmation**

The order confirmation in this case comes in form of shipping notification and consignment lists that is sent automatically through the internal ERP system. If customers require to see an order confirmation it can thus easily be retrieved through the internal system. The customers can also, if desired, be provided with shipping notification that are sent at different occasions; when the goods are packed, when it is dispatched and when the goods have reached its destination.

As for Speed Logistics, it is the consignment list that works as an order confirmation. It contains information about date of departure, ETA-date (estimated time of arrival), weight of goods, volumes, number of parcels, content type and provides the buyer, or whoever requires it, a shipment number so that the goods can be tracked and traced throughout the whole transportation.

*Invoice*

The invoices for all transport services purchased are sent to the buyer and later on forwarded to the respective warehouse that is connected to the specific transport service. Since the buyer is responsible for purchasing transports for all warehouses within Speed Logistics (except for one business area), all the invoices will pass him first. The invoice is checked and approved by respective warehouse manager and lastly sent to the finance department for accounting.

*Next following step is not performed in direct connection to the other steps. Instead, the last step is done on a more weekly or monthly basis, but can still be seen as an activity related to the purchasing process.*

**Step 9:** *Follow-up and evaluation*

The follow up and evaluation is mainly based on the delivery precision of the different transport suppliers used. The delivery precision is logged when there are deviations in the transports or when deliveries are late and the suppliers are responsible. This is also the main data/information that is brought up next time it is time for negotiations of framework agreements with the same supplier. This kind of information is generated automatically by the cloud-based transport provider that sends excel files to the buyer, where mismatches in ETA-date and the actual delivery date can be found easily. Another important evaluation that is done, but not logged at the same way, is the damages of goods. In such cases, one looks at the frequency of damages and if the damages can be traced to a specific supplier.

## 5. Analysis

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*In this chapter, the theoretical framework is used together with the empirical findings as a mean of answering the purpose of this study. The chapter begins by analysing purchasing at the case company on a more general level, including aspects such as: roles, responsibilities and routines. Thereafter, the five previously described purchasing processes are interpreted and compared with theory in order to find gaps and similarities.*

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### 5.1 Purchasing at Speed Logistics

As can be found in literature, Kron and Wallgren (2010) explains for example that purchasing puts large requirements on information so that relevant information regarding the purchase, the procurement or the call-offs, always and at all points should be available to find at the company. However, when conducting the interviews for this study, this was clearly found not to be the situation at Speed Logistics. Currently they do have purchasing policies, but no purchasing routines or any form of purchasing manuals documented anywhere. Even though it exists some guidelines in form of ISO purchasing standards, these are meant for whole Speed Group and do not describe how the daily or operative work with purchasing should be conducted. The reason for not having any purchasing routines or any form of purchasing manuals can however be seen as rather logical; the company as such is still “very young” (since it was founded 2007) and the work with purchasing has not been emphasized to a greater extent until recently. Also, since there hasn’t existed any process maps of the different product and service categories, having to document routines and manuals would seem as kind of difficult or complex without having a common understanding of exactly how the activities are performed and in which order. The process maps developed in this study is therefore a good starting point for the further work with establishing and documenting routines and manuals. However, as logical the reasons may seem, it still does not take away the importance of having these documented at some point at the company. By committing purchasing routines and manuals into print, Heinritz *et al.* (1991) claim that it could clarify ambiguities and issues connected to the daily work with purchasing, as well as it easier can reveal discrepancies or shortcomings in the current policy. Kron and Wallgren (2010) complements this by stating that they form a common basis for the work with purchasing and can be seen as something to lean against in complex or unclear purchasing situations. Speed Logistics has to start their way to improved purchasing practices with complementing the process maps created in this study, by documenting efficient routines and potentially also purchasing manuals. The prerequisites for storing these documentations are obviously in place, where the intranet could be a great place to store these documentations and best practices.

As further appears in section 4.2 Purchasing at Speed Logistics, the roles and responsibilities of the different purchasing categories is sometimes seen as unclear and not totally consistent throughout Speed Logistics. It also seems that not everyone is convinced of who’s in charge for the purchase of certain materials and services and where to turn if wanting to pursue with a purchase, especially when it comes to the so-called ‘seldom purchases’. Even though

responsibilities obviously do exist, they are not clearly stated or communicated throughout the organization, nor documented at any point. This contradicts very much with what is stated in theory for how tasks, responsibilities and authorities related to the purchasing process should be determined. Connected to this, Van Weele (2014) claims that the purchasing process is not limited to the purchasing department only and that many levels of the organization often are involved, so that it therefore becomes extra important to distinguish different roles and responsibilities. Kron and Wallgren (2010) add that the role distribution should be clearly reflected in the organization's policies, routines and process descriptions to further prevent ambiguities and unclarities. Here is an evident gap between the existing theory and how purchasing practices are performed at Speed Logistics today. One major reason for that unclarities and confusions arises is believed to be the lack of *formal* and *official* responsibility roles. By officially stating who is in charge of what (i.e. which specific activities) in each process, a lot of these issues can be minimized. Employees within the organization will know where to turn if having any queries or specific questions about the purchases. This is however more of a problem when it comes to the so-called “seldom-purchases”. Nevertheless, documenting the roles and responsibilities should preferably be done in connection to the documentation of the routines and process maps (discussed in the beginning of this section). By doing this simultaneously, it will become even clearer since every activity within each purchasing process can be linked to a responsible person.

Furthermore, it is believed that the confusions and unclarities regarding roles and responsibilities of the purchasing processes also can be derived to the absence of a department or function solely responsible for these kinds of purchases. By creating a purchasing function at Speed Logistics that explicitly works with purchasing this issue could probably be eliminated. Otherwise there is a risk for that the work with purchasing easily becomes ineffective and that it remains unclear what mandate purchasers have in the business. As it is today, there are clear and documented instructions of attest levels and how these should be used in the company (as described in section 4.2 Purchasing at Speed Logistics). Still, only following them can easily result in that purchases are done according to personal preferences. The buyers could theoretically be able to purchase however and whatever they want, as long as they stay below their attest levels. This could in turn result in even more unstructured and inefficient purchasing practices for the company as a whole. Another aspect worth considering connected to this is the fact that Speed Logistics, as well as the whole Speed Group, constantly is growing. The purchasing volumes will most probably, considering Speed Group’s goal of reaching a net sale of 1 billion SEK by year 2021, also follow this expansion in terms of increasing purchasing volumes. This all together constitute a rather strong argument for considering the possibility of creating an internal purchasing function in the coming future.

## 5.2 The purchasing processes

The following sections will analyse the purchasing process for each respective category by applying them to existing theory and more specifically the six-phased purchasing process described by Van Weele (2014). Doing so, gaps between theory and practices at Speed Logistics can be identified and highlighted for the recommendations later on.

### 5.2.1 Forklifts

By looking at figure 15 below, one can distinguish that the activities *Select supplier* and *Contract agreement* is not applicable to the steps described in 4.3.1 Forklifts. The process follows a simple call-off procedure and therefore it is not necessary to undergo any type of comprehensive procurement process when a new need arises. The type of situation when acquiring forklifts corresponds much to what theory refers to as a straight rebuy, but could also be seen as a modified rebuy in some occasions. However, it is worth mentioning that this type of acquisition process differs to some extent from most of the other categories covered in this study. This is mainly due to the five-year framework agreement that they have signed with their supplier.

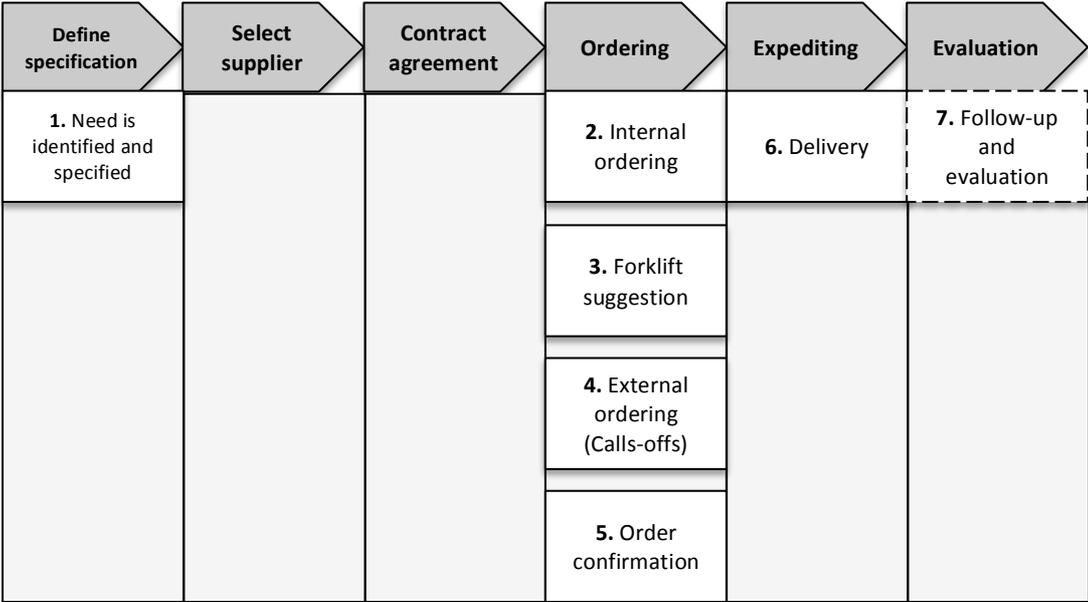


Figure 15. The purchasing process for forklifts applied to theory

#### *Define specification*

A need for a new forklift may arise from several parts within the company, but the WM is responsible for identifying the need. The need is then specified, which in this case can look rather different depending on the knowledge or experience of the orderer. The buyer stated that the orderer either states the exact forklift that is needed, or by expressing it in a more functional way, i.e. what type of goods that intends to be handled. This can be seen as corresponding when looking at theory, where the technical and functional specification is described. The functional approach could be seen as extra time-consuming since it later on during the acquisition process results in the buyer giving the orderer a suggestion of a forklift.

The optimal approach would therefore be to go for the technical approach each time a new forklift is needed. However, this is not simply possible since the orderer sometimes do not know exactly which machine that in the most suitable way could solve their problem. At the same time, it is worth emphasizing that in Speed Logistics case a complete technical specification of each forklift and model were stated (the appendices) in conjunction with the framework agreement. Hence when a new forklift is demanded, the orderer doesn't have to give the buyer a detailed specification of all necessary technical aspects since the basic technical specifications have been decided upon with the supplier in advance. As stated during interviews, this makes the initial specification phase very easy since the majority of the work has been done during negotiations and contracting. Even if the orderer requires additional functions it doesn't result in the specification becoming significantly more complex.

### ***Select supplier***

No supplier selection is done when a new forklift need arises, which explains why the step in figure 15 lacks content. However, the reason for this is simply because they already have signed a framework agreement with one supplier, with whom they have decided to obtain all their forklifts from, i.e. single sourcing. Therefore, when a need for a new forklift arises within the company's operation this step simply is bypassed.

### ***Contract agreement***

In their contract there's a fixed price, i.e. prices that are written in the agreement doesn't change over the time of its duration. Van Weele (2014) claims that this type of contract is favourable since it's easier to keep control over costs. It could further be argued as beneficial from a risk perspective since it lowers Speed Logistics risks in case of conditions changing during the agreement period.

One possible improvement area is their choice of having a five-year agreement, which is a relatively long duration in comparison to what is applied in the other categories. Also, given the fact that the company only have been exploring the market twice since they started their business means that the operation does not have much to compare with. Hence it could be interesting, as expressed during interviews, to evaluate the market a bit harder and more often, if possible. Theory describes several trade-offs between short-term and long-term contracts. Even if the company could obtain higher flexibility with shorter contracts (which is an important aspect for the company and their business model), it could still be hard to receive as good prices or being able to make the same modifications to their forklifts that they can with their existing agreement. Worth noting is that sticking with the same supplier as they have done creates, in accordance to theory, a certain type of stability. Changing supplier could therefore result in high switching-costs, due to the relationship that Speed Logistics have established over the years with their supplier. Still, exposing the supplier with competition more frequently could result in cost-reducing effects and the possibility of acquiring a better contract. A first step could thus be to evaluate the possible advantages and disadvantages associated with this approach, by considering factors that are important for the company.

### ***Ordering***

It was stated in the section 4.3.1 Forklifts that the company have a central point for ordering, which could be seen as beneficial. By having this type of centralization, it is possible to coordinate the forklift needs between all of Speed Logistics locations and thereby avoid that forklifts are ordered unnecessarily from their supplier. When comparing theory related to ordering in case of having framework agreements one can see that it conforms well to Speed Logistics current process. For example, as described previously, the internal order from the orderer could be seen as being ‘translated’ by the buyer into one of the forklifts as stated in their appendices. These appendices are then used as orders to be called-off against the agreement that they have with their supplier. However, often the company can refer to an existing forklift when ordering, which simplifies the ordering process.

The content of the purchase order that is discussed in theory matches with the information that Speed Logistics provide their supplier with. Even though no real order were shown, it was expressed that the content of the order looked similar to the information stated in the appendices. Thereby the supplier receives: a detailed description of what is ordered, the amount, estimated delivery date etc., which is aligned with what theory proposes. However, at least one disparity can be identified when scrutinizing the order confirmation as received by Speed Logistics, compared to what theory states. The difference is that delivery time is not always received jointly with the order confirmation. As stated before, it primarily depends on what type of forklift that is ordered (short-term, rental etc.). In other words, that is, whether it is available in storage or has to be manufactured. In the latter case a confirmation is not received, which is reasonably, given that it could be difficult for the supplier to know exactly when it will be ready for delivery. It is still not a major discrepancy, or an issue for Speed Logistics.

### ***Expediting***

The buyer at Speed Logistics claimed that barely any type of delivery monitoring is performed from the time of order to delivery. A likely explanation for this discrepancy from theory could be that the buyer expressed that their supplier usually delivered on time. Hence, the only time when this type of step occurs is when the delivery date isn’t met. It is thus performed in a reactive manner, in accordance to ‘exception expediting’, as stated in theory. It is further claimed by Van Weele (2014) that this isn’t the most optimal approach. However, since no major problems were described indicates that there’s not a need to expand this activity any further, or to change how it currently is performed.

Lastly, theory suggests that the purchased goods should be controlled in order to check whether requirements stated in the order are fulfilled. At Speed Logistics, this test (or delivery inspection in this case) is performed by the supplier’s service technician. It goes well in line with what theory proposes, since the company doesn’t accept the forklift until this inspection has been made.

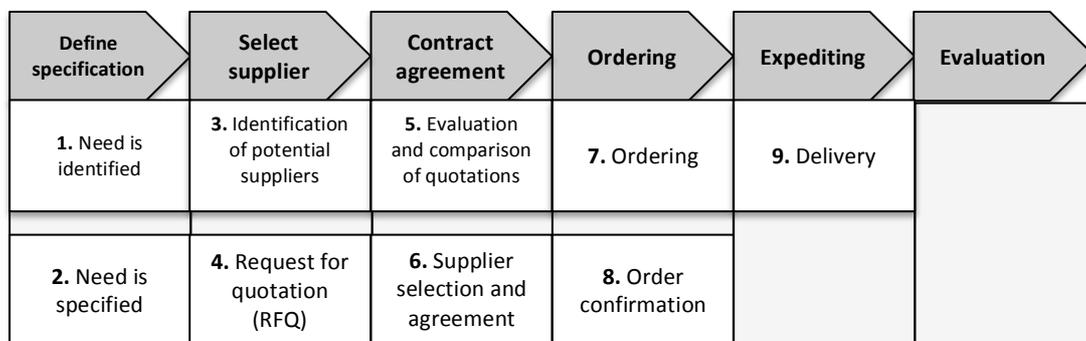
**Evaluation**

In the last phase Speed Logistics have some follow-up activities on a monthly basis. Theory describe that both the performance of supplier and product should be considered in this step. This fits the mode of procedure at the company, where they look at both these aspects. However, what’s extra emphasized in regard to this evaluation is costs related to repairs, where the company wants the supplier to have a proactive approach. Assumably this can be related to the fact that the costs related to forklifts are a large part of the company’s total cost, which makes cost reductions an important part to consider and thus manage.

Furthermore, it is highlighted in theory that one should look at this phase as a continuous process and keep track of the suppliers’ capabilities over time. By having monthly meetings, it not only enables Speed Logistics to maintain a good relationship with their supplier, it also helps both parties to better adapt their planning to each other’s businesses. Hence, and as a final note, the conclusion is that theory corresponds well with how evaluation currently is done at the company.

**5.2.2 Real estate-related materials**

The most distinguishing step when comparing with Van Weele’s purchasing process (2014) is *Evaluation*, since they currently have no follow-up or evaluation of suppliers in terms of measurements or KPIs, which can be seen by the empty box in figure 16 below. In this category, they have both new-task situations and purchases that are performed in a more routine way, due to their oral framework agreements. It is therefore not many situations where all the steps are passed through.



**Figure 16.** The purchasing process for pallet-racks applied to theory

**Define specification**

The specification phase that is described by Van Weele (2014), of the requirements that is put on the purchased product and service, corresponds well with how it’s performed when it comes to purchasing of pallet racks. In Speed Logistics case the specification is constructed according to what in theory is referred to as a ‘technical specification’. Accompanied with the specification is also a drawing of the pallet racks. This is consistent with theory as well, where Van Weele (2014) states that these technical specifications frequently are used to make more detailed drawings. He further states that this can result in an over-specification. However, the drawings are mainly used to support the supplier. This means that that they are not used as ‘strict’ specifications, instead more like an additional input for the suppliers when they make

their own calculations. It was however nothing that was touched upon, nor described as a problem in section 4.4.2 Real estate-related materials.

### ***Select supplier***

The selection of supplier is, according to Van Weele (2014), one of the most important steps in the purchasing process. Deciding whether one or several providers should be used for a product is the first step. In Speed Logistics case the number of suppliers to select isn't much of a choice. The buyer claimed that their requirements on the purchased material limit the choice to a handful of suppliers. Moreover, he stated that suppliers that has been used before most often are given priority over new suppliers, in order to make new material compatible with existing brands. Gadde and Håkansson (1998) further highlight this aspect, claiming that the supplier selection is important since it might impact the buyer's operating freedom in the future. The choices that Speed Logistics has made in regard to picking two suppliers for new material could thereby be seen as limiting from their aspect and to some extent dependent on the development of the suppliers' brands and materials.

Moreover, the buyer stated that the number of suppliers that operate within their geographical requirements is limited to between five and ten. Jonsson (2008) discuss this aspect and claims that it sometimes is difficult to find a lot of suppliers to choose from that are within a reasonable operating area from the buying company. At the same time, using a small number of suppliers is not seen as a disadvantage in theory. Instead, as in Speed Logistics case the choice of having two suppliers for new material could be seen as favourable since it lowers the risk compared to if using one supplier (*ibid.*). It is important for them to make use of these two suppliers as much as possible as this creates benefits in several ways, i.e. it shortens and simplifies the purchase process, resulting in saved time and money. This is because they already have an oral framework agreement with those suppliers and further know that they meet their requirements. It is more problematic when they have to create new supplier relationships, as they in those cases lack this type of agreement.

The following three substeps described in theory goes much in line with how work is performed at Speed Logistics. But, one exception is the second step where the compilation of a 'bidders list' and RFI is discussed. This is not explicitly stated in the empirical findings section. Instead it seems like this step is bypassed or performed more informal due to selection being based on previous experience and not documented anywhere. The same reasoning goes for the third step: since the 'bidders list' doesn't exist, there aren't any 'bidders short list' as described in theory. It is further described in theory that an initial technical and commercial evaluation is made before selecting the supplier. However, since the case company evaluates suppliers even before sending RFQs indicates that some of these evaluation aspects are treated in advance.

### ***Contract agreement***

The work within the company when it comes to the contracting process of this type of material follows what is stated in theory. Although, what's worth mentioning is that the contracting phase for the suppliers with oral framework agreements becomes less

complicated, compared to when contracting with a new supplier. As mentioned in the empirical findings section, this is due to the fact that some aspects have been discussed when they entered these agreements with the suppliers.

According to Van Weele (2014) the buyer preferably should take a firm stand on a fixed price when negotiating, mainly since it is best from the perspective of controlling cost or managing the budget. It could therefore be desirable to strive for a fixed price, which is a possibility for Speed Logistics, since the interviewee stated that they often can choose between a fixed or variable price. Choosing a fixed price could further be seen as beneficial when it comes to the previous step of evaluating quotations, as it facilitates the comparison of different offers.

### ***Ordering***

The theory regarding the ordering process by Van Weele (2014) corresponds to a large degree to what Speed Logistics are doing currently. The content of the purchase order as described in the theory is equally consistent, but what the buyer at the company emphasizes extra is the expected delivery date. This type of purchase is often seen as large investments where several persons are involved and impacted, thus imposing limitations on when it can be built. The following step in the ordering process as stated in theory is that an order confirmation is received from the seller, which also is the case for Speed Logistics.

### ***Expediting***

The delivery and the following reception of the material is not described as any problem by the buyer. Theory doesn't discuss this subject a lot either, which could indicate that it is more connected to the transportation of the goods, and less to the actual process of purchasing. In theory, it is stated that expediting can be performed in three different ways. The company works mostly in accordance to the first approach 'exception expediting', as they take actions if the delivery is not received when agreed upon. However, one should note that this rarely occurs and are hence not expressed as any major issue. At the same time, the most important thing is that the pallet racks are ready-built as latest at the date that was agreed upon when signing the deal.

Theory describes that goods should be checked when they have been delivered. This is performed in order to verify that the delivery corresponds to the purchase order. One common technical test is to check quality. However, this is not performed by the company, instead they look at the delivered quantity to ensure that it is correct. As described in 4.4.2 Real estate-related materials, only suppliers that live up to Speed Logistics technical requirements are contacted, which ensures that quality is adequate. Furthermore, the fact that suppliers become responsible for the project when making the final calculations also safeguards against any possible mistake from the supplier's side.

### ***Evaluation***

In the theory Van Weele (2014) discuss the last phase of the purchasing process, which is evaluation. This evaluation can be aimed at both supplier and product level. Here is a discrepancy between theory and the case company. Currently there are no follow-up or

evaluation of suppliers in terms of measurements or KPIs. The buyer claimed that purchases of this type are carried out rather seldom (more on a monthly basis), indicating that it is not worth the effort to evaluate. This can be strengthened by the fact that no problems in regard to suppliers or deliveries were expressed, as previously mentioned. Moreover, since this type of purchase is not recurring, it could be difficult to have standardized metrics. Nevertheless, in theory it is stated that evaluation can be helpful and add a lot of value for an organization. It can for example be used when a new purchasing cycle is initiated. Suggestively Speed Logistics could make more use of evaluations that could act as a basis when for example selecting suppliers.

5.2.3 IT-related materials

Due to the early decision-activity in the process for hardware at client level, mapped in section 4.4.3 IT-related materials and illustrated in figure 17, this process will look a little bit different when applying it to Van Weele’s (2014) purchasing process. The simple call-off process can be followed from Step 1 to 6 and can be seen as a straight rebuy process. Step 7 to 10 represents all activities performed when there is a new product need identified, e.g. a modified rebuy or new task situation, and represents the longest possible purchasing process for hardware products. However, it is still seen as one and the same process, just with different directions depending on the purchasing situation.

Define specification	Select supplier	Contract agreement	Ordering	Expediting	Evaluation
1. Need is identified and specified	7. Define spec. and identify pot. suppliers	10. Select supplier and agreement	2. Internal ordering	5. Delivery	11. Follow-up activities
	8. RFQs and evaluation of the RFQs		3. External ordering (Call-offs)	6. Configuration of products	
	9. Testing of hardware		4. Order confirmation		

Figure 17. The purchasing process for hardware at client level applied to theory

**Define specification**

When the need for hardware is identified out in the operations, it can come from many different places within the organization. However, this is not really remarkable in this case since it does not affect the appearance of the process. Further, Van Weele (2014) does not describe the identification of a need as an activity related to the purchasing process, but does include it in theory by describing the identified need as a triggering factor for the process. However, when it comes to hardware at client level at Speed Logistics, the need is identified in conjunction with the specification. No relevant gap can be found at this point of the process.

Van Weele (2014) does also describe that the specification phase can be divided into functional specifications and technical specifications, but that a specification to suppliers does not necessarily have to include both. It becomes quite clear how these specifications are performed at the Speed Logistics, where both a functional and technical specification can be identified. When the need is identified and about to be specified out in the operations, the employee ordering the hardware has a pre-specified set of packages or single products to choose from. This can be seen as the functional specification to the IT department, that as earlier described, work as a gathering point for all orders related to IT products. They type in what applications and programs the computer package needs to be able to handle in the form to the IT department. Of course, if the orderer from the operation only need a simple single product such as a new keyboard or computer screen, no detailed functionality has to be included with the form. The buyer at the IT department translates this functional specification and turns it to a technical specification when sending it to external suppliers. Due to his extensive experience and knowledge, he knows rather quickly which specific technical specifications are needed to be included for that specific computer package, or whatever is ordered. Even though that the buyer does not explicitly state that these divisions exist, it appears in his descriptions in section 4.4.3 IT-related materials and is thus consistent with the theory described by Van Weele (2014).

### ***Select supplier***

Van Weele's (2014) step of supplier selection is further divided into four sub steps; this step is in practice instead broken down into three distinct activities at Speed Logistics. Starting with the first substep in theory, i.e. deciding upon whether to outsource to one supplier or to use multiple suppliers for a certain activity and deciding upon the price mechanism, it is clear that Speed Logistics uses multiple sourcing in this matter. First of all because of the existing supplier base consisting of eight suppliers, but most apparently because of the active choice of having a first source supplier and a second source supplier for new product needs. The price mechanism is clearly stated as fixed prices in the annexes attached to the framework agreements. The first substep in theory is treated in Step 7 in the practical purchasing process.

A preliminary qualification of suppliers through RFI and a drawing of the 'bidders long list', which is next substep according to Van Weele (2014), are bypassed in the practical process. The reason for this is that the request for information already is treated and received when the framework agreements were set up and no bidders long list is drawn. Instead the process proceeds to the step of sending out the RFQs to the existing suppliers for hardware products and as in very rarely cases, the existing supplier base is overlooked in order to find a completely new supplier. This does actually agree very much with the next substep stated in theory; to contact supplier through RFQs and by a 'bidders short list' gather and evaluate the answers of the RFQs. The buyer contacts three to four suppliers through the RFQs (never less than three) and when the answers arrive he evaluates the offers mainly based on price, but also other aspects such as service levels, warranty offerings etc. This goes also very much in line in what is stated by Van Weele (2014): "an important assessment factor is the price that the suppliers offer the prospective buyer and it is also common to identify three to five suppliers from which the quotations will be solicited".

The last substep is to carry out a risk analysis and thereafter select a supplier. However, this step is not carried out at this stage of the practical process. Instead the supplier selection is performed at next stage of Van Weele's (2014) purchasing process. Still, this is not considered as a gap since it is performed, just at a later point in comparison to the theoretical purchasing process. Instead a testing of hardware is performed so that it can be ensured that purchased hardware will work in Speed Logistics server environment. The reason for that this is done at such an early point in the process, rather than doing it at the expediting step that may seem more logical, is because it has to be investigated upon before the supplier selection. Thereafter orders can be placed against this supplier without any more testing.

### ***Contract agreement***

The contract agreement will look different in comparison to the theory due to the fact that Speed Logistics already has set-up framework agreement with all their suppliers of IT-related products and services. However, when a supplier is selected for the new product needs a new annex is added to the already existing framework agreement. If it is a totally new supplier, which does not happen very often as described before, a new framework agreement is signed.

Furthermore, theory states that the buyer should insist on fixed prices and that some important aspects of the purchase agreement to negotiate about is terms of delivery, terms of payment, penalty clauses and warranty conditions etc. The prices of the purchased hardware products are always stated as fixed prices in the annexes and the requested information included in the RFQs for negotiations are prices, warranties, delivery times etc. Even though that some of these factors might not be very negotiable, it is still rather consistent with theory.

### ***Ordering***

At Speed Logistics, the ordering step is mainly distinguished between internal and external ordering. Theory seem to be more focused on what in Speed Logistics case is seen as the external ordering, i.e. the orders placed to external supplier. This should however not be considered as a gap since it is well known that companies have their different internal arrangements or set-ups that works well for their environments. On the contrary, this is seen as a very efficient way of ordering internally by the respondents at Speed Logistics.

The external ordering is a basically a call-off procedure. This is because Speed Logistics has, also in the category of IT-related materials, signed framework agreements with its suppliers so that products can be called-off at any time. According to Van Weele (2014), such agreements are common practice. However, he explains that MRP-systems usually keep track of the balances and buffers and generates signals to the purchasing department when it is time to place an order. At the company, no hardware products are stocked and no MRP-system exist for these kinds of product; but the intranet works as the place of order, except that the need is identified by the orderer itself compared to a MRP-system.

Lastly, for the ordering step, the buyer receives an order confirmation. It only includes some basic information that Van Weele (2014) also brings up, since a lot of information is pre-

treated in the framework agreement, such as the expected delivery date and delivery address. It also includes eventual changes or deviations of the initial order, for example delays of delivery, which is very much in line with what Jonsson (2008) states, by saying that these changes need to be highlighted in conjunction with the order confirmation.

### ***Expediting***

None of the three expediting approaches described by Van Weele (2014) takes place at Speed Logistics. This can however be seen as rather logical since they have not experienced any major disruptions or extensive delays in deliveries from suppliers, but also because of the simple reason that IT hardware is not seen as any kind of critical products. It will most probably just take up a lot of time and resources on doing it, while not gaining any added value from it.

When the products have been delivered to Speed Logistics, it is time for the configuration. But before the hardware are configured and installed in line with the orderers need, a more detailed quality test of the functionality and appearance of the hardware is done. This is also stated by Van Weele (2014), who further adds that an acceptance test, in form of a technical test, can be conducted at the buyer's site or at the supplier's site. This test is already done at Step 9 and it is performed at the buyer's site. If the hardware cannot be adapted to Speed Logistics environment, the supplier will not be selected for the new product need - which also is in line with what Van Weele (2014) states in theory.

### ***Evaluation***

The follow-up of suppliers' performance is not specifically measured today. Instead, what is measured and logged is the total delivery time of hardware products; it encompasses the time from that an internal order is placed to that the hardware is configured and delivered to the orderer. This means that both delivery time from suppliers and the internal configuration time are put together as one measuring point. They have also regular meetings (on a weekly basis) with their largest suppliers discussing the coming needs, warranty claims, hardware lifecycles and so on. Van Weele (2014) claims for example that the evaluation step is a continuous process and is important when it comes to keeping track of suppliers' quality and delivery records, by having frequently updated vendor rating system. The regularly held meetings with suppliers back up this theory, even though there doesn't exist any vendor rating score system at Speed Logistics as explained by Van Weele (2014). One can however discuss the necessity of a vendor rating score system when only dealing with indirect materials in fairly low volumes and with a quite small supplier base - it would probably not be worthwhile or even feasible doing in the case of Speed Logistics.

### 5.2.4 Staffing

The process of acquiring short-term personnel as described in section 4.4.4 Staffing differs to some extent from the proposed model of Van Weele (2014), which can be seen in figure 18 below. This is mainly due to the supplier relationship that exist with their sister company Speed Competence, which is an active choice and natural consequence of their business model. As previously stated, this category constitutes approximately 70% of the company’s total purchasing costs. It is also the category where the purchasing frequency by far is the largest, since staffing services are called-off on a daily basis.

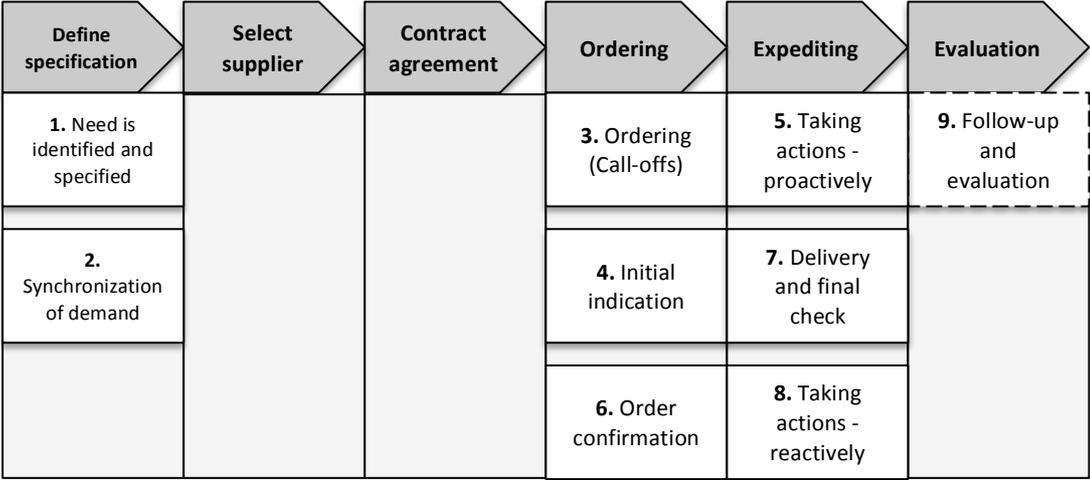


Figure 18. The purchasing process for staffing applied to theory

**Define specification**

In the first phase of the process the need is identified and specified, which in this case means that the specification of the service is defined in terms of technical aspects and the quantity. Furthermore, it is worth noting that there’s a difference when it comes to complexity of the specification. This is highly dependent on the type of personnel that is demanded and the requirements that each business area within Speed Logistics have when it comes to knowledge and previous experience. Sometimes there is a need for unloaders, which often do not need any more detailed specification of requirements. On the other hand, if assuming that a forklift operator is needed, then it results in more detailed specifications. At the same time, it was stated in section 4.4.4 Staffing that their supplier has good knowledge of the specifications that are necessary, both in terms of what personnel that is needed and also the requirements within each of Speed Logistics operations. As this knowledge exists between the parties, it can be argued that the complexity of the specification is maintained at a relatively low level, which simplifies the subsequent ordering phase.

The theory by Van Weele (2014) explains that a separation often is done between functional and technical specification. However, this was not something that was expressed during the interviews. Even though it was not clearly stated it could be seen as a functional specification, since it mainly only defines the role that is needed, e.g. picker and packer. In other words; what they specify is actually what they need the staff for. At the same time, some parts of the specifications could be seen as more or less technical. This is due to the fact that it sometimes

is necessary for them to define some of the requirements more distinctly, e.g. previous experience from Speed Logistics' operations, SAP-experience etc.

### ***Select supplier***

This step is not performed at Logistics since they, as a part of their business model, have decided that all personnel should be acquired through their sister company Speed Competence. This further explains why the box in figure 18 above is empty.

### ***Contract agreement***

Figure 18 shows that the phase of negotiation and contracting is not performed when acquiring personnel. The reason for this is, as stated in section 4.4.4 Staffing, that there is no definite time for the validity of the internal agreement between the parties. Instead it is described to be valid until further notice.

Theory suggests that monthly invoices preferably could be argued for in this step, as it simplifies the payment procedure and thus reduces administrative work even further. This type of setup is currently used with their supplier, which indicates that cost related to invoicing is kept at a relatively low level. However, it could be argued that in this case the payment setup isn't an active choice from the company. It could instead be deduced to the fact that personnel receive salaries on a monthly basis.

### ***Ordering***

In connection to the ordering phase the buying company might negotiate for a call-off agreement with their supplier of the services or products that are demanded during a longer period of time. When the order is placed, it is done so against the agreement (Van Weele, 2014). This does largely correspond to what Seed Logistics have done and because they are well integrated with their supplier, there is relatively little administrative work in connection with ordering. It is however unclear whether they in some terms have specified the personnel that they need over a longer time period (except for the basic staffing). Placing orders automatically as described in theory is not simply possible in Speed Logistics case, which mainly is related to the nature of what is acquired, but also due to rapid fluctuations in demand. Moreover, it was stated in section 4.4.4 Staffing that the forecasts from customers for the coming day are received during the afternoon. This means that it is quite quick commandments to find staff, which is further complicated if there is a large demand at several of Speed Logistics properties.

Thereafter a type of initial indication occasionally is received, informing the orderer of what the supplier assesses to be able to deliver. This indication is later followed up with an actual order confirmation, which is in accordance to what theory describes. The reason for sometimes receiving an initial indication is that it should give the orderer a notice that demand might not be met and thereby give as much time as possible for both parties to solve the issue.

### ***Expediting***

There are different approaches for expediting; both of a more preventive character and some that are less preventive. Expediting is carried out quite extensively at Speed Logistics, where continuous communication with their supplier often is necessary until the delivery is made. By having this conversation, it could be argued that they follow what is referred to in theory as ‘advanced status check’. It is described as a more preventive and more time intensive approach where the regular contact is held with the supplier. It is according to Van Weele (2014) usually adopted for suppliers that are critical for the operations of the buying company, which conforms well to the situation at Speed Logistics. Concurrently, they do further act in somewhat accordance to ‘exception expediting’, i.e. “operates on an after-the-fact basis” (*ibid.*). In that case it is necessary for the buyer to take actions to prevent that the missed delivery won’t impact the operational processes. This approach fits well with Step 8 in their process, where the company take actions more reactively.

The only discrepancy from theory is that no acceptance test in terms of technical or other specific requirements of the delivery is made when it arrives (only the quantity is controlled). This is however not surprising given that it is hard to check in beforehand that a service corresponds to what was demanded. It is usually not discovered until after the service has been performed. At the same time, expediting in theory merely discuss examples that includes purchasing of goods.

### ***Evaluation***

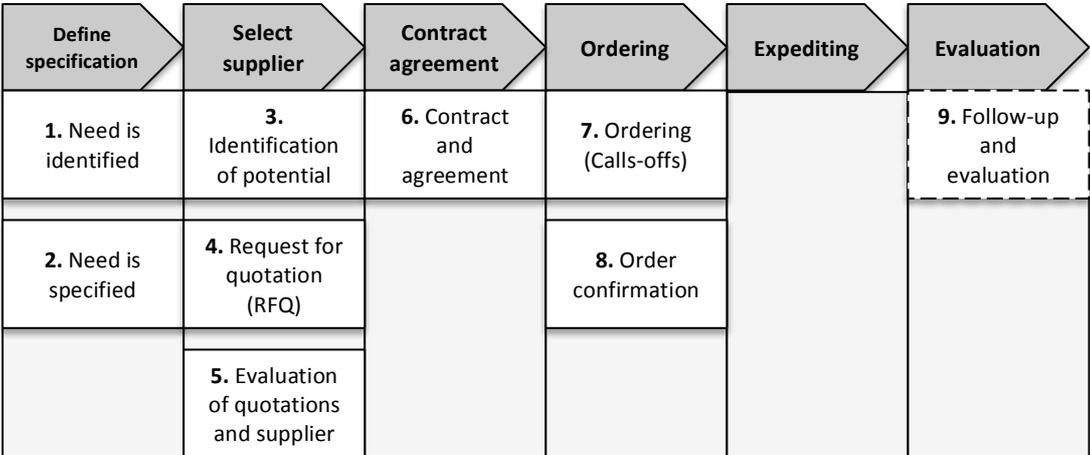
The presented theory depicts that it is important to in some way measure the performance of a product or supplier. This means that the initial request made by the buyer has to be evaluated to see whether the demand was fulfilled. In Speed Logistics case the supplier is not assessed any further in connection with each order. The reported deviations are primarily used as basic data for meetings on weekly, monthly and quarterly meetings. When scrutinizing the KPIs one can see that delivery precision is directly related to the supplier. The other measurements, e.g. overtime, do maybe not appear as clear in how they are connected to their supplier. But, they can in fact be seen as indirect KPIs since they’re a consequence of not receiving what was ordered.

Moreover, the theoretical chapter describe that the process proceeds even after the service is in use. For example, the evaluations need to be completed and filed. This is evident at Speed Logistics where the KPIs are archived and used at the above-mentioned meetings. Keeping track of suppliers is, in accordance to theory, a necessity when it comes to vendor rating systems. Even though the company do not use the evaluation in these terms it is still beneficial. The reason for this is mainly since it helps them to develop the relationship with their supplier, where the measurements works a basis of deciding whether changes have to be made in regard to their basic staffing, ways of working etc. The Supplier Governance Model illustrated in section 4.4.4 Staffing is seen as a good “tool” that guides and facilitates both the evaluation and development of the supplier. Suggestively the company could benefit by using models that are alike but with other suppliers that are of similar importance. At the same time, the deep integration that exist between Speed Logistics and their supplier, justifies its

existence in this category. This is further strengthened by the fact that they are seen as Speed Logistics most critical supplier, combined with the relatively high purchasing cost (70% of total spends) in relation to other categories.

**5.2.5 Transports**

By looking at figure 19, one can see that theory is fairly consistent with practice, even though the step of *Expediting* seems to be missing in the purchasing process of transport services. Also, most of the steps described by Van Weele (2014) are in practice broken down into more detailed activities in the purchasing process at Speed Logistics. These purchases are most often done in a straight rebuy or modified rebuy manner, but could theoretically be done in a new task manner as well.



**Figure 19.** The purchasing process for transports applied to theory

***Define specification***

The first step of Van Weele’s (2014) purchasing process includes the two first steps of the transport purchasing process at Speed Logistics. In theory, the step of identifying a need is not explicitly stated as a step connected to the purchasing process. This is however not a remarkable gap since Van Weele (2014) do state that the process is initiated by some kind of business need or requirement that triggers the process to start, but also because this can be assumed as implicitly understood. The specification of the need is today not separated into a functional and technical specification. When the need is specified against their supplier, it is mainly a functional specification made. This can also be seen as rather logical since it is a service purchased and therefore not many technical aspects need to be involved. However, what can be seen as the technical specification in this case, which is translated into functionality by the buyer, is the information required from customers; the historical consignments, the annual volumes and the type of goods. The buyer has to have this kind information in order to be able to turn it into a functional specification. Therefore, one can say that a functional and a technical specification actually are included, but not separately stated as explained in literature.

What can be viewed as an issue connected to the specification phase is that it is very much based on “local” experience and knowledge. When the buyer defines the specification and writes them down together with the sales representative from Speed Logistics, he already has a few suppliers most suitable for the specific customer affair in mind. This issue is however not only connected to the specification phase; the three first steps in Van Weele’s (2014) purchasing process are in the case of purchasing transport services very much affected by this. Van Weele (2014) calls the three first steps “the tactical purchasing function” and at Speed Logistics not many employees have the same (or even close to the same) experience and knowledge as today's buyer that constitute the tactical purchasing function that Van Weele (2014) is describing. This puts Speed Logistics in a rather exposed situation when it comes to purchasing of transport services. One way of handling this issue could therefore be to store these practices at some point at the company. This can lead to that dependence of the specific buyer’s knowledge and experience (more specifically of the three first step of the purchasing process) will be eliminated, or at least considerably reduced.

### ***Select supplier***

The theory treats the choice of supplier as one step, but further breaks down the selection of a supplier into four substeps that needs to be carefully considered. These are instead separated into three distinct activities at Speed Logistics, namely: ‘the identification of potential suppliers’, ‘RFQ’ and ‘evaluation and comparison of the RFQs’. Despite this, theory and practice seem to be fairly streamlined when it comes to the step of selecting supplier; all activities are not done in the same order, but all substeps in theory are more or less included in practice at the company.

Before the selection of suppliers is about to begin at Speed Logistics, an identification of potential suppliers is done. This is, as stated before, already to some extent thought out in the previous step. The buyer does this on a top-of-the-mind manner and do not have this documented in any way. This is however not stated in theory, which indicates even more that the purchasing process of transports today is very much based on experience and knowledge. However, the first substep in theory is to decide upon single or multiple sourcing and what price mechanism to conform. Since Speed Logistics already has signed framework agreements with most of their suppliers and can in practice call-off services towards all these suppliers, it is clear that they have chosen multiple sourcing with the price-mechanism clearly stated in form of tariffs. Substep two according to theory is to draw up a ‘bidders’ long list’ and request for information (RFI) from these potential suppliers. The buyer at Speed Logistics skips this substep completely since he already has done the first selection of suppliers in his mind and much of the information already is received when the framework agreements were decided upon. Third substep is to request the identified suppliers for quotations (RFQ) and create a ‘bidders short list’ of the three to five most suitable suppliers. At Speed Logistics, this substep is done in reverse sequence; he first sends out the RFQs to the suppliers first selected in his mind and when doing this usually the scope goes from a total of 10 suppliers to two or three (i.e. bidders short list). Then, based on the comparison and evaluations of the RFQ answers, he can see quite right away which one is the most suitable and meet the requirements best. The last substep is simply to select a supplier for the specific customer affair. As there is

no major risk related to a specific choice of supplier, indicates that in practice the buyer has a lot of potential suppliers to choose from, logically no extensive risk analysis is performed (as theory states that should be done).

### ***Contract agreement***

Even though theory states that the use of standardized contracts is limited, the buyer does actually use basically the same information to most of Speed Logistics transport suppliers. The main thing changed between the suppliers' contract is of course the price table (i.e. the tariffs), all depending on the characteristics of products transported, the total distance and so on. Otherwise practices and theory once again is fairly consistent; theory states that some examples of important aspects of the purchase agreement to negotiate about are pricing mechanism, terms of delivery, terms of payment, and penalty clauses etc. All of these aspects are considered since they are stated in the RFQs that the buyer sends out in Step 4. If the buyer accepts the answer of the RFQ from a specific supplier, the RFQs thus become a suitable basis for the contract signing.

However, what is quite special for Speed Logistics case is that the contract signed at this stage is for that specific customer affair or transport. As earlier described, the framework agreements are already set up so that very much of the terms and conditions are already determined, which makes the contractual stage at Speed Logistics running quite smooth. This cannot explicitly be found in Van Weele's (2014) theory, but should not be seen as a major gap since this arrangement with framework agreements is an active choice made at a strategical/tactical level.

### ***Ordering***

When the contract is signed the ordering can commence. As prerequisites and set-ups may vary a lot for how the practical ordering is performed at different organizations, at Speed Logistics this is done through the internal system or through back-office. However, very much in line with what is stated in theory by Van Weele (2014), the ordering is done as call-off orders towards the framework agreements that have been signed before. Van Weele (2014) explicitly claims that: "the contract can in some cases constitute the purchase order, while in other cases the buyers will negotiate a call-off agreement that includes the products or services needed for a longer time. Purchase orders can then be placed against this agreement...", which is more or less the exact case when Speed Logistics purchases transport services.

The order confirmation that the buyer receives, in the form of a consignment list, contains information regarding date of departure, ETA-date (estimated time of arrival), weight of goods, volumes, number of parcels etc. Van Weele (2014) states that a purchase order (basically the same information included as in the confirmation) can in general include different type of information very much dependent on the service or products bought. Jonsson (2008) complement this with stating that an order confirmation usually includes information about that quantities, unit prices, time of delivery date and so on. As transports are a service

offering purchased, the information included in the order confirmation to Speed Logistics can be seen as fairly consistent and rather logical when comparing to Van Weele's (2014) theory.

### ***Expediting***

No expediting of purchasing transport services is done at Speed Logistics today, which is also why the expediting step at figure 19 is empty. This does however seem as logical since it is a service purchased and not a physical product, but also because Speed Logistics has not experienced any major issue of that goods has not been picked up and transported. When the order is placed, the buyer(s) expects that the transporter will pick up goods and deliver them to customers.

### ***Evaluation***

The evaluation of suppliers' performance is to some extent performed at Speed Logistics. The buyer evaluates more specifically the delivery precision and the damages of goods. However, the latter one mentioned is today not logged and documented at all. This can be seen as a minor, but still a contributing factor to that the purchasing process of transport services is so dependent on the buyers experience and knowledge. He knows very well how certain suppliers perform, but probably not the rest of the organization since it's not documented or communicated. Furthermore, Van Weele (2014) states that it is of great importance to document, continuously update and archive supplier files so that performance can be tracked and monitored. Connected to this, there is a clear gap when it comes to the evaluation of damages of goods since it today is not logged, documented or archived in any way, just kept in mind of the buyer. Even though that follow-up activities of suppliers' performance does obviously exist at Speed Logistics, the theoretical process puts a lot of emphasize on the evaluation step, while the evaluation of transport suppliers' performance in practice is done minimally.

## 6. Discussion

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*In this chapter the authors hold a discussion about the methodological choices and findings of the study. The chapter also includes the authors' thoughts about certain issues and other sets of circumstances that appeared during the time of this thesis.*

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### 6.1 Discussion of the methodology

The existing theory within purchasing is quite extensive, which led to the fact that the researchers had to choose one model/framework for the subsequent analysis of this thesis. However, even though all the theories included different number of steps, the entire content of the processes consisted of slightly the same information. The authors selected the general purchasing process described by Van Weele's (2014) since it's commonly referred to by other authors, but also as it is used as course literature at Chalmers. It is believed that even though the choice had an impact on the analysis, it still would not have made a major difference compared to if other processes were adopted, except for the number of steps.

The interviewees in the study were selected based on convenience sampling (previously described in section 2.4.2 The interview process) due to the supervisor's knowledge of which he deemed most suitable in achieving the purpose of this study. Different results and conclusions had possibly been obtained with other persons. At the same time, since this initial sampling wasn't sufficient, the authors used snowball sampling as well. Hence the achieved results are seen as satisfactory from the researchers' perspective, since both useful and comprehensive information about each process were given during the interviews. One possible drawback in relation to the interviews is that the authors chose to use audio recording in order to ensure that no relevant information were missed out. Because of this, the researchers think that there's a risk that it might impeded interviewees willingness to give comprehensive answers and share valuable information.

An issue that occurred during the study is connected to the limitations that the authors made, both in regard to categories and the products/services within each one. Due to the time constraints of this thesis, the authors had to make a choice of what to include. For example, in the beginning of the study an additional category was included and further investigated, referred to as '*packaging and consumables*'. It was however excluded from the study as time progressed. The reason for this was mainly due to the fact that the process was described as a very simple VMI-setup (Vendor Managed Inventory) with no disturbances, but also as the responsibility of refilling materials lies on the supplier. Since this study hasn't focused on supplier activities, the authors considered that it was reasonable to exclude the category. According to the researchers, it would not have resulted in any purchase process to mapped, unlike the other categories. The limitation within each category were also identified as a necessary action to take, hence selections were made with regards to the total purchasing costs. By doing so the largest products and services were chosen, which according to the respondents gave a representative picture of each category. At the same time, the buyer at IT

explicitly stated that the purchase of hardware at client level basically is done in the same way as the other three subcategories of IT. Furthermore, the interviewees claimed that the process of pallet racks could be used for all types of purchases within the real estate category. The generalizability within each category can thus be seen as high; but what is worth emphasizing is that similar results would probably not be obtained if another organization were to be examined.

Another discussable subject is the total number of categories included in this study. One could have chosen to focus on fewer categories. But, as the purpose was to map how Speed Logistics acquires products and services, the authors tried to cover as many as possible in order to increase the generalization and to get as a complete picture as possible. Also, the desire from the company was to get an overall picture that encompassed as many categories as possible. A different approach could have been to focus on only one or two categories and thus be able to go even deeper, as well as e.g. providing job descriptions or some type of purchasing manual for how the purchasing preferably should be done for those particular categories. Moreover, as mentioned earlier, the researchers have not focused on the monetary flow, which possibly could have been included in the process maps.

## 6.2 Discussion of the results

As stated in the introduction chapter, the purpose of this thesis was to form a common understanding of how the current purchasing processes looks like. This was done through an extensive mapping of each process, so the research therefore had a great focus on mapping and giving a rather detailed current state description. Furthermore, the purpose was to identify possible improvement areas connected to the purchasing processes and to come up with recommendations for how improvements can be realized. The purpose of this study has thus not been to provide Speed Logistics with a purchasing manual with stated guidelines for good purchasing practices, nor to necessarily change the current processes remarkably by creating some kind of future state maps for the different categories.

One aspect that had an impact on the results of this study is the current purchasing volumes at Speed Logistics. As has been explained in the empirical findings chapter, but not emphasized throughout the rest of the study, are the relatively low purchasing volumes of most of the identified categories. Even though this study has not treated this question quantitatively in any way, i.e. no purchasing spends or purchasing quantities in form of costs or volumes has been included, it appeared very clearly during the interviews with responsible buyers. The purchasing categories of forklifts, IT-related materials (such as hardware at client level) and real estate-related materials (such as pallet racks) are not products purchased on a daily basis. The authors therefore think that this can have a large impact on for instance how the evaluation and follow up activities, connected to the purchasing processes of each category, are performed. Due to the low purchasing volumes, it might be more difficult to perform evaluations and in some cases maybe even less worth doing it by spending time on using a range of KPIs and metrics. The recommendations of increasing evaluation and follow up activities should therefore only be considered when seen as necessary and value adding. The

low purchasing volumes can also be a contributing factor for the unclear and informal/unofficial roles and responsibilities at the company. This is believed to be the case logically since purchasing is not prioritized in the same way as for instance in a producing company that handles a lot of direct materials. In the case of Speed Logistics, the authors therefore find this impact-relationship as less concrete and thus also affecting how the purchasing roles and responsibilities are handled and designated within the organization.

In this study, the purchasing process has been separated from procurement process due to the purpose of this thesis. However, the procurement of the different categories has clearly had an impact on the results. Due to the already set-up framework agreements with the vast majority of suppliers at Speed Logistics, this study has given readers an overview of the current state and therefore not investigated the procurement process or any related activities to it any deeper. This has led to the fact that some of the processes might be seen as very straightforward and thus not so complex. One reason for that is the already set-up framework agreement that enables an efficient purchasing (i.e. call-offs) of products and services. The authors believe that the procurement process deserves to be highlighted as well since it obviously is a very important enabler for the purchasing processes of Speed Logistics. The authors have found the procurement process to be lacking in documentation, as no process maps nor any stated routines and procedures appear to exist documented. This is however an area for further research for the case company.

As earlier described the purchasing process of IT-related products is highly reputable at Speed Logistics today, both by those working with it but also by employees not involved in the process and its activities. The reason for this could be that the process has clearly defined interfaces of responsibilities and work tasks by the operations contra the IT department, but also because Speed Logistics has found an efficient way of working when ordering these kinds of products internally from the operations and from external suppliers. This way is largely based on two enablers; the internal intranet as an ordering point and the arrangement of the set-up framework agreements with external suppliers over one year where buyer at the IT department can call-off products whenever the need arises. However, what the authors found during the interviews and continuous visits at Speed Logistics, a lot of valuable knowledge and experiences exists that should be taken advantage of. As many other companies and organizations, the main problem is the lack of initiative-taking or developed procedures for sharing information internally. By making use of internal benchmarking towards the purchasing process of IT hardware products, the benefits could be many. First of all, Speed Logistics would be able to find best practices and document these, preferably at the intranet, without much time required. These best practices can encompass for example the distinct classification of products and services or the clear management for how purchasing should be conducted, whether it is internally or externally. Routines for sharing information can thus also be developed. Furthermore, by making the different purchasing processes and routines more uniformed, Speed Logistics will be able to easier create KPIs that can measure and compare the processes on more fair grounds. This is not possible today.

All in all, Speed Logistics has already a rather well-functioning way of working with their purchasing processes for the vast majority of purchased products and services. This appeared during interviews at the company and during the progression of the analysis when practice was compared and interpreted with theory. It was also supported by the respondents whom almost all were positive to the current purchasing processes and felt no major issues or disturbances connected to them. This can be explained by several different reasons; e.g. the efficient arrangement of framework agreements with suppliers and the already compacted supplier base. The latter one can be conceptualized by the example of Speed Competence being the only supplier for staffing services or the category of forklifts where only one supplier has been used since the founding of the company. This has enabled them to develop long-term relationships based on mutual interests and mutual support in problem solving when difficulties arise, as well as they of course do not have to seek for information from new suppliers every time a forklift is about to be acquired for example. The only exception is the category of transports where Speed Logistics has a selection of ten suppliers to choose from, all depending on the specific customer affair; this can however be seen as reasonable due to the varied requirements of different customer affairs. However, the main improvement area identified in this study was the lack of mapped and documented processes that could contribute to a common understanding of how purchasing is conducted at Speed Logistics. The authors believe that the performed process mapping, together with the results of this study, are very useful information for the case company since it forms a good basis for further work with improving the processes. Also, by contributing to a common understanding of how purchasing really is performed in the five different categories identified, work instructions and purchasing manuals can be created which eventually can lead to more efficient decision making in the processes.

## 7. Conclusion

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*This chapter aims at giving the reader a summary of the answers to the purpose and the stated research questions of this thesis. It further provides the case company with recommendations based on the identified improvement areas of the analysis and concludes with some relevant further research implications.*

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In this study Speed Logistics purchasing processes has been mapped in order to give the company a comprehensive view of how purchasing currently is conducted. The purpose has also been to identify possible improvement areas and give recommendations for better purchasing practices. This purpose was in turns broken down into three research questions, which are presented and answered below:

➤ Q1: *What does Speed Logistics purchasing processes look like?*

This question has mainly been answered through the extensive mappings, which have been illustrated and described in section 4.4 The purchasing processes. The process maps present the five different categories included in this study, namely: forklifts, real estate-related material, IT-related materials, staffing and transports. Each process starts with an identified need and finishes when the service or product is delivered, and any follow-up activities have been conducted. The number of process steps in each category varies to some extent. This is mainly dependent on the type of product or service that is acquired, but also based on the fact that the purchasing processes often follows a call-off procedure when a need arises.

➤ RQ2: *What improvement areas exist in Speed Logistics purchasing processes?*

This question was answered as a result of the interviews conducted at the company, but also through the subsequent analysis part of the thesis. In the analysis-phase, gaps and potential improvement areas was identified by mapping and interpreting the five illustrated and described purchasing processes with theory. The comparison showed that work at Speed Logistics conforms to a large degree with what is described as good purchasing practice in theory. It can thus be concluded that the case company has a purchasing processes that are well-functioning and rather streamlined, with competent employees that purchase material and service. At the same time, some improvement areas have been identified throughout this study, which are presented below:

- Insufficient establishment and documentation of efficient purchasing routines and manuals
- Absence of clearly stated and documented roles and responsibility tasks when it comes to the purchasing processes of this study
- Limited exploration of the supplier market in regard to the category of forklifts

- Purchasing processes very much based on knowledge and experiences of the specific buyers within several of the identified categories
- Limited amount of evaluation and follow-up activities of suppliers' performance. This identified improvement area encompasses most of the identified categories in this study
- Possibility of internal benchmarking against the process for IT-related materials. This area can be seen as an improvement for the remaining four purchasing processes of this study

➤ RQ3: *How can Speed Logistics purchasing processes be improved?*

The previously outlined bullet list shows that identified gaps and improvement areas became rather small during the study, which can be derived to the fact that purchasing often is seen as clear and properly functioning. Nevertheless, recommendations are presented in the following section, as a mean of answering the last research question. The theoretical framework is the starting point for the given recommendations. The goal was not to perform any implementation of the given suggestions; hence they are seen as guidelines for the company to make use of in accordance to what they feel appropriate. The list of identified improvements is summarized below:

- Document purchasing processes and establish purchasing routines and manuals
- Clarify roles and responsibilities
- More frequent competitive bidding in regard to the forklift category
- Create a 'body of knowledge'
- More use of evaluations and follow-up activities of suppliers' performance
- See over the possibility to benchmark against the process for IT-related materials

## 7.1 Recommendations

First of all, the company should start by documenting their purchasing processes and its activities, preferably at the intranet. Today there is no documentation of how activities are performed or how the processes look like. All stakeholders should together agree upon procedures for the processes and write descriptions and instructions on how work should be performed. The documentation should contain all the activities included in the purchasing processes. Suggestively, this work can be used as a basis for that documentation. By utilizing the described purchasing processes, the company can more easily create future working instructions on how to efficiently proceed with a purchase when a need arises. This would contribute to the case company by decreasing some of the unclarities that exist in regard to purchasing and also reduce the risk of employees following different procedures when ordering. At the same time, the work after this implementation is just as important, by ensuring that all involved employees follow these routines. It should further be mentioned that documented and clearly stated processes could be a stable foundation for future improvement work. Consequently, by: elaborating, communicating and anchoring processes, improved purchasing practices could be achieved.

Secondly, roles and responsibilities were described as unclear and inconsistent by some of the interviewees, specifically in regard to the 'seldom purchases'. Due to this ambiguity, a recommendation for Speed Logistics is to clarify roles and responsibilities in relation to their purchasing processes. By stating who is in charge of the different activities in the purchasing processes it would help improving the perceived confusions. By doing so it will become clearer where to turn when a need arises, particularly with the products and services where formal purchasing routes (controlled by framework agreements) doesn't exist. Moreover, due to the sometimes cross-functional nature of purchasing, it becomes even more important to distinguish different roles and responsibilities. When the company has clarified this area, it should preferably be stored, constantly updated, and made available for all stakeholders.

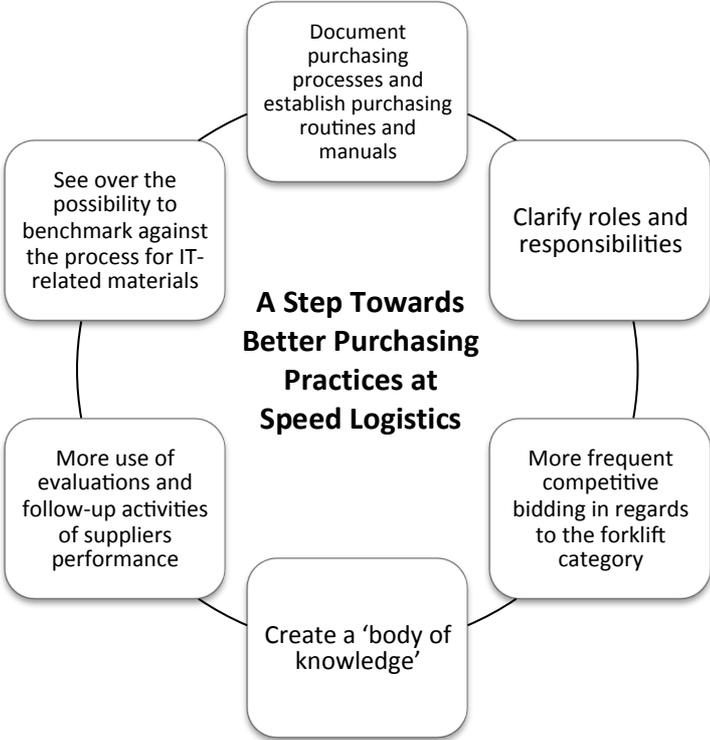
A third possible improvement area is related to the fact that the company haven't exposed the supplier when it comes to the category of forklifts and thereby the operation lacks anything to compare with. It is an area where it is difficult to give any straightforward recommendation whether to pursue more frequent competitive bidding or not, since it might harm the relationship with their existing supplier. It could also be harder for the company to make claims on their different types of rental options (rental, flex etc.) and the potential to influence the degree of possible adjustments. At the same time, it could prove to be beneficial as it has the possibility of resulting in cost-reducing effects and thereby also getting a better deal. It would also be healthy from a market perspective, since it allows suppliers to compete. In order to determine if it's worth the effort the company should examine the trade-offs with this approach, by considering factors that are important for their business, such as flexibility towards customers.

The dependency of certain employees based on their extensive knowledge and experience is the starting point behind the fourth suggestion. In order to make use of all the knowledge and

experience, Speed Logistics should build up a body of knowledge, i.e. structured knowledge with important aspects and further guidelines to purchasers for ‘best practice’ in each purchasing category. This recommendation is however mostly connected to the first three steps of the purchasing processes. Nevertheless, these steps are (as previously described) often the ones that have the largest impact on the purchase. Suggestively the intranet could be used as a place for storing this information. For example, the body of knowledge could include preferred suppliers that previously have shown to be performing well. Another example could be aspects that are important for each product and/or service when selecting suppliers. Documenting the most important aspects can be very valuable for the case company, as it reduces their dependency on buyers’ expertise.

The fifth suggestion refers to the limited amount of evaluation and follow-up activities of suppliers’ performance currently at Speed Logistics. They should consider to more frequently and in broader aspects evaluate suppliers’ performance of finished affairs. This would give them a better picture of suppliers’ exact performance, but also a more stable ground for future supplier selections. However, due to Speed Logistics low purchasing volumes this recommendation should be considered only when seen as appropriate and value adding.

As a last recommendation, Speed Logistics should see over the possibility of internal benchmarking against the process for IT-related materials, or specifically hardware at client level. This particular process has been shown to be very efficient in many ways and exploring the possibilities of best practices by an internal benchmark toward this process could be very beneficial for Speed Logistics. Figure 20 summarises the recommendations presented in this study.



**Figure 20.** Recommendations to the case company

## 7.2 Further research implications

Some areas worth further research has been identified during this thesis. Speed Logistics could make use of these areas in their work with continuously improving their purchasing processes.

The first area is to include more flows to the mapped processes, such as monetary flows (invoices) or attestation flows. Even though the mapped purchasing processes in this study have involved both invoices and attestation levels in the activity descriptions, these were not included in the maps. By doing this, the common understanding of how purchasing is conducted would be extended to also understand for example where the invoices go and who is in charge for attesting each purchase. Also, when roles and responsibility tasks are documented (as presented as a recommendation in previous section) this can be taken a step further by dividing the activities of each process into so-called “swimlanes”. This would contribute to the clarity in understanding who and which departments perform which specific activities.

The second area is to focus on the procurement process by mapping it and identifying potential improvement areas also there. This could also encompass to apply and document clear routines and guidelines for whole Speed Group so that consistent work with procurement, no matter the product or service category, can be realized. The company would also get a more tactical dimension to each purchasing process and thus easier see the distinction between tactical and operational levels of each process.

Lastly, the processes mapped can also be used as a starting point for creating standardised processes and routines for how purchasing should be performed in a more efficient way. A further research area would thus be to see over the possibility to create, based on the already mapped process maps of this study, improved future state maps for the different categories based on process improvements in form of e.g. reduction in administration time, elimination of unnecessary activities or decreased amount of involved personnel in each process.

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# APPENDICES

## Appendix A

Name:

Position:

### ***Introduction and general questions***

- Can you give a brief background about yourself and your role today?
  - What's your role in the purchasing process?
- Can you tell us what products and/or services you purchase?
- Are there any process maps for the current purchasing processes?
- Is there any classification of products in various categories/groups?
- Is there any classification of services in various categories/groups?
- What is indirect/support material in your case?

### ***Process-related questions***

*About the purchasing processes (description of the method/procedure when purchasing both services & products)*

#### *Identify need*

- What is it that triggers that you place an order?
  - How is a need discovered?
  - From whom do you get the information?
- Who is responsible for ensuring that there are materials available in-house?

#### *Define specification*

- Do you have requirement specification for the product/service that you buy?
  - What is included in the specification?
  - How do you know what you need? (i.e. what do you expect from the supplier)

#### *Selection and assessment of supplier*

- How many suppliers do you have?
- How do you go about when identifying and selecting suppliers?
  - What aspects do you take into account?
  - If there are multiple suppliers to choose from, what is the choice based on?
  - Do you perform any type of total cost analysis?
  - How do you know which suppliers to place the order against?

#### *Negotiation and agreement*

- Questions regarding the tendering procedure:
  - How does your bid request look like?
  - Do you have framework agreements?
  - What information do you require that suppliers' quotations should contain?
  - Are there any routines and/or rules for how many suppliers to contact?
  - How are tenders compared and evaluated?

- Is there any template for how to give your suppliers enough clear instructions on how to handle your orders?

#### *Ordering*

- How is the order placed to suppliers?
  - How often do you place an order?
  - How many different ways of ordering are there today?
  - Which way of ordering do you use the most?
  - What happens with the invoice and how is it processed/treated?

#### *Delivery monitoring*

- Is there any kind of delivery monitoring of incoming goods?
  - How does it work?
  - Are there any routines for how to do this?

#### *Follow-up and evaluation*

- Is the purchase checked in terms of quantity, quality or cost when it arrives?
- Is there any follow-up/evaluation of supplier performance?
  - What metrics/KPIs are you using?
  - Do you have any routine for how to follow-up suppliers in regard to new tendering procedures?
- If you would summarize the process from a process-perspective (from the point of when a need arises until it's satisfied); how would it look like?
- Do you have something more important to bring/take up or add that you feel that we might have missed?

## Appendix B

Name:

Position:

### ***Validation of data/information***

- Are the process maps consistent with how it works in practice?

### ***Respondents' own thoughts and opinions***

- How does the process work today?
  - What activity(s) are most time-consuming?
  - What shortcomings/"gaps" exists in the process?
    - What's the reason?
    - How can these be avoided?
    - Where in the process is it most important to minimize the number of mistakes?
  - Where in the process are the greatest improvement opportunities according to you?
  - Do you have any suggestions for improvement?
    - Can any activity be deleted?
    - Can any activity be combined?
    - Can any activity be made more efficient?
- How does the communication with suppliers work?
  - Has it become better/worse over time?
  - Does it exist any development work?
- How does the collaboration between different departments within the company work during the actual purchasing process?
- Do you have anything else to add, in addition to what we have addressed with our questions? Do you feel that we have missed something that is relevant to the purpose of the study?