



**PURCHASING PROCESS DEVELOPMENT FROM THE  
PERSPECTIVE OF LAUNCHING INTERNATIONAL  
PROCUREMENT**

Case: semi-large construction company

Lappeenranta–Lahti University of Technology LUT

Supply Management, Master's Thesis

2022

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Examiners: Professor Jukka Hallikas and Professor Mika Immonen

## ABSTRACT

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### **Purchasing process development from the perspective of launching international procurement**

Master's thesis  
2022

79 pages, 16 figures, 8 tables, 3 pictures and 1 appendix

Examiners: Professor Jukka Hallikas and Professor Mika Immonen

Keywords: purchasing, sourcing, international procurement, purchase management, process development

Purchasing is an important part of business operations. Nowadays organizations are constantly trying to find ways to improve their operations and cut costs. One of the ways to improve operations is starting international purchasing. Before international purchasing can be started, the purchasing process steps, and the strategies need to be determined. In this research, purchasing is referred to as organizational buying. The purchasing process starts with determining the specifications. The specifications mean what items or products are needed and how much. When the specifications are determined, the supplier selection process starts. The supplier or contractor is selected using multiple selection criteria. Once the selection is made, the contract is signed. Now, orders can be placed. The supplier and contractor are constantly being monitored and evaluated throughout the process.

The development of the purchasing process is very crucial. The processes can be improved in many ways, such as planning of the purchases beforehand, focus on quality, maintaining great relationships with suppliers, efficient negotiating skills, centralizing purchases, educating personnel, and maintaining the strategies and development plans.

## TIIVISTELMÄ

Lappeenrannan–Lahden teknillinen yliopisto LUT

LUT-kauppakorkeakoulu

Kauppatieteet

Emilia Kullberg

### **Hankintaprosessin kehittäminen, näkökulmana kansainvälisen hankinnan aloittaminen**

Kauppatieteiden pro gradu -tutkielma

79 sivua, 3 kuvaa, 8 taulukkoa, 16 kuviota ja 1 liite

Tarkastajat: Professori Jukka Hallikas ja Professori Mika Immonen

Avainsanat: ostaminen, hankinta, kansainvälinen hankinta, hankintajohtaminen, prosessien kehittäminen

Hankinta on erittäin tärkeä osa yritysten yritystoimintaa. Nykyään yritykset etsivät koko ajan tapoja kehittää toimintaansa ja laskea mahdollisia kustannuksia. Yksi näistä mahdollisuuksista on kansainvälisen hankinnan aloittaminen. Ennen kuin kansainvälinen hankinta voidaan aloittaa, hankintaprosessin osat ja strategiat on oltava kunnossa. Hankinnalla tässä työssä tarkoitetaan yrityksellistä ostamista. Hankintaprosessi alkaa yksityiskohtien määrittämisellä. Määritellään se, mitä tarvitsee hankkia ja kuinka paljon. Kun määrittäminen on tehty, on toimittajan valinnan aika. Toimittajan valinta tehdään perinpohjaisesti useita eri kriteerejä käyttäen. Kun valinta on tehty, sopimus urakoitsijan/toimittajan kanssa tehdään. Kun sopimus on tehty, tilaukset toimittajalta voidaan aloittaa. Toimittajaa arvioidaan ja seurataan tiiviisti prosessin aikana.

Hankintaprosessia voidaan kehittää monin eri tavoin. Näitä tapoja ovat esimerkiksi hankintojen etukäteinen laadukas suunnittelu, laatuun panostaminen, toimittajien suhteiden hyvä ylläpito, tehokkaat neuvottelutaidot, hankintojen keskittäminen, työntekijöiden kouluttaminen sekä strategia ja kehityssuunnitelmien ylläpito.

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# 1 INTRODUCTION

Nowadays purchasing is a crucial part of any business operation. Purchasing refers to organizational buying (Van Weele, 2005). Organizations purchase goods and services to fulfill their goals. Purchases can be done internationally as well. Jhony & Hai. 2015 discuss in their article "*Going global: do you have the necessary strategic and resources fit?*" the reasons for going global. Organizations can expand their supplier base into foreign countries for getting an edge of its competitors, for having more possibilities, for lowering costs, having a better-quality product, lack of suppliers in the domestic markets, margin improvement reasons and so on. (Burt et al. 2012, 421.)

The aim of this research is to familiarize with international purchasing and how it's purchasing process can be developed in the case company. The data will be collected from the case company and the questionnaire will be executed. Based on the results, a development plan with suggestions will be generated. When it comes to purchasing, the purchasing process needs to be understood. This research will mostly focus on purchasing process and purchasing from a foreign country. The case company of this research is a construction organization, who not yet does not purchase abroad, but in the future prefers to.

The subject of the thesis is "*Purchasing process development from the perspective of launching international procurement*". Firstly, purchasing process will be explained and examined. How the purchasing process is being processed in the case company will also be looked through. The aim is to develop case company's purchasing process and keep in mind case company's desires to start international purchasing. The structure of the final thesis will start with an introduction. After the introduction, research objectives, questions and limitations will be explained. The purchasing process chapter will follow. The purchasing process will be looked deeply through, and the purchasing process model will be explained step by step.

After this methodology and data collection chapter will be put into one's mind. The final thesis will finish with conclusion and summary chapters.

The structure of the thesis is as follows: firstly, background of the thesis topic will be explained, then the thesis objectives, research questions and research limitations will be explained. Then the theoretical framework used will be elaborated. Chapter 1.4 will include the methodology and data collection. The data for this research will be gathered by using surveys/questionnaires that will be sent to the purchasing department workers in the case company. Surveys and questionnaire questions are planned as early as possible since the data needs to be analyzed and the survey/questionnaire responders need to have enough time to leave their answers.

Under Chapter 1.5 will include the preliminary timetable for the actual writing process of the thesis work. Under Chapter 1.6 will explain the structure of the thesis.

## **1.1 Background**

This chapter will focus on why this study is important. The researcher does work for the case company. Researcher's work title is production engineer. The case company's wants to remain anonymous for confidentiality reasons. The author's work does include plenty of purchasing, that is why the author off this research was interested in the thesis topic, since international purchasing and its development will be very important improvement milestone for the company in the upcoming years. Case Company does most of the purchases from Finland and from the Finnish suppliers. Case Company has 314 employees and is working on capital city area, Tampere, Turku, Jyväskylä, Kuopio and Oulu. The Revenue for 2021 was over 350 million Euros. (Case Company intra, 2022.)

Since the company is rapidly growing, international purchasing process is on the works. Covid pandemic has had its toll on the company's intentions to decentralize purchases internationally. The case company has had intentions to start international purchasing for couple of years and since the world will be opening again these plans will be worked out. The development plan and purchasing plan need to be up to date and improved before the purchasing for abroad can begin.

## **1.2 Thesis objectives, research questions and limitations**

The main idea of this final thesis is to be able to answer the research questions. The idea is to gather a development plan for the case company that it can take into use and help daily purchasing operations.

### **Thesis objectives**

Hothi 2012 points out in article "*The Impact and Deformation of Press-Fit Metal Acetabular Components*" that research aim specifies what this study will answer, and the research objectives specify how this study will answer it.

Next research objectives are created for the thesis research:

- investigate the purchasing process in the case company
- describe the process steps one by one
- investigate how the purchasing process can be developed
- investigate the differences in international purchasing
- report the challenges in case company's purchasing process
- create development plan

The author of this thesis aims to analyze the international purchasing process of the case company by describing the process steps and indicating the possible development areas. Therefore, the main objective is to present development ideas for the case company for improving its international purchasing system



## **Research questions**

The aim of the final thesis is to answer research questions.

The research questions will be as follows:

- 1) How can the international purchasing process be developed in the case company (and what are the possible improvements for the purchasing activities)?

To answer the main research questions, sub-questions are as follows:

- 2) What are the challenges the company is facing
- 3) How are purchasing activities carried out and managed

## **Limitations**

There are certain limitations in the final research. Firstly, as the questionnaire is chosen for the data gathering, the writer of the thesis determines the questions. Secondly, it is very important to have as large as possible sample of the workers to answer the questionnaire questions. Since the questionnaire will be voluntary, the researcher does not have an effect on how many employees answer the questionnaire. The questionnaire is sent to every employee with work tasks related to purchasing, so for instance many managers who have a lot of experience on purchasing, will not be included in the questionnaire.

As the scope of the research is the case company, and the findings of the research will be limited only to the case company and its personnel.

Thirdly, the case company will not be named for the final thesis. This also means that the thesis will not reveal any names of the personnel or the company's costs relating to purchasing process. The plan is to execute the research in a way that the case company is not easily recognizable.

### **1.3 Theoretical framework**

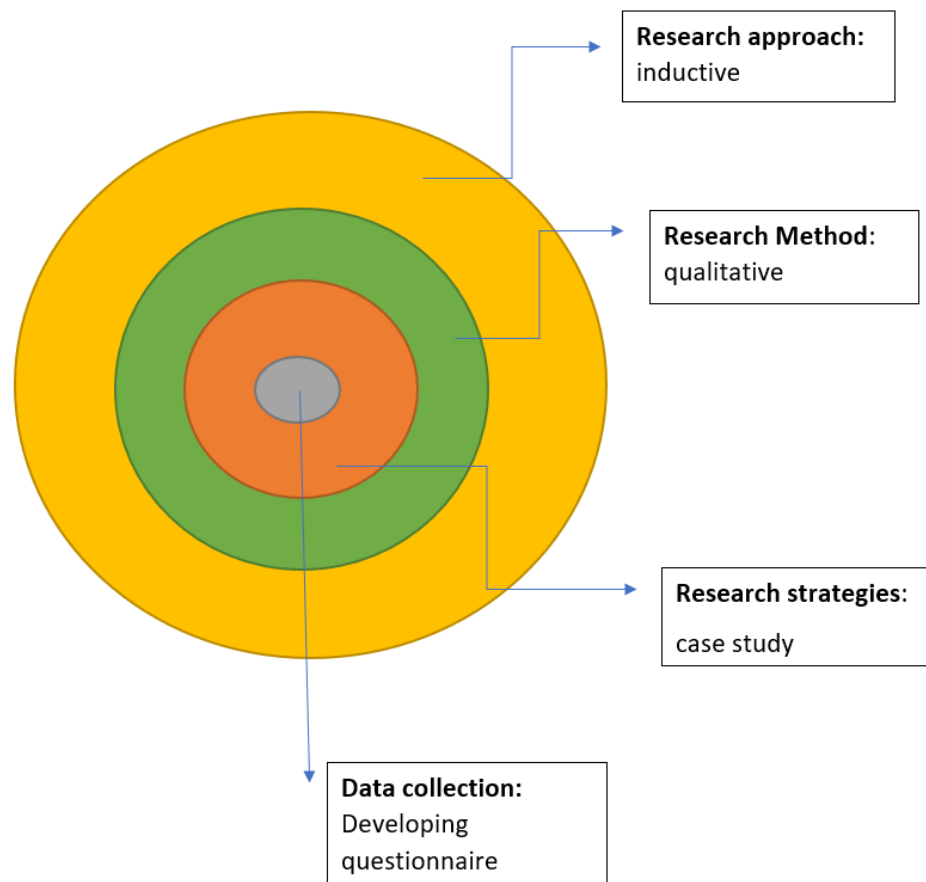
The aim of the thesis is to analyze the purchasing process in the case company and keep in mind case company's desires to kick start international purchasing. The idea is also to suggest development ideas to the international purchasing process. The thesis will also go deeply into the challenges the case company is facing.

The focus of the thesis is on the concepts and theories of purchasing, purchasing process, the duties of purchasing management, and the tools supporting purchasing operations. The main chapters in the research will focus on the theoretical data about purchasing.

SWOT-analysis is used to explain the case company's strengths, weaknesses, opportunities, and threats related to international purchasing and overall operations.

### **1.4 Methodology and data collection**

Research onion can be seen as a model of designing in research methodology. Methodology is a general research strategy which defines how the actual research should be handled. (Melnikovas 2018, 33.) Saunders et al. 2016 proposed the research onion that provides a description of the main layers which are accomplished to create an effective methodology. Following Figure 1 will present the research onion for this research.



**Figure 1.** Research onion. (Modified from: Melnikovas 2018, 33.)

## **Research approach: Inductive approach**

The outer layer of the research onion presents the approach to theory development. These approaches include *deduction*, *abduction*, and *induction*. *In deduction* the research starts with an existing theory, then rising a hypothesis and data collection to confirm or reject the hypothesis. *In abduction*, the empirical phenomena will be observed following the best conclusion based on the evidence that was available. The inductive research approach was selected for this research. *In inductive* approach the research is started with observation and data collection to create a theory. (Melnikovas 2018, 34.) The observation is done in the case company by the researcher and the theory in this case the development plan is created based on the

observation and data collection results.

## **Research method: Qualitative method**

The research methodology is considered as the study of methods used in the actual research. *Quantitative* and *Qualitative* methods are the two most used approaches for conducting business research.

Quantitative measures are expressed as scores and numerical data. On the other hand, qualitative measures express that words (verbal, narrative and descriptive) can be used as effectively as numerical data. (Taylor 2005, 4.) Qualitative method gathers data for example with in-depth interviews, direct observation, and questionnaires.

For this research the qualitative method will be used. The data will be measured and expressed in words.

## **Research strategies: Case study**

The next layer of the research onion is the research strategies layer. The idea is to collect and analyze data. Data will be collected and analyzed with for example experiments, surveys, archival research, ethnography, case study and narrative inquiry. (Melnikovas 2018, 33.) In this research data will be collected from the case company, its operations, and personnel opinions.

The data will be collected and analyzed with the help of the questionnaire. Questionnaire will be sent to every employee whose work tasks include purchasing. It is important to have as many workers as possible to answer the questionnaire. The author also deliberates whether also some interviews should be made.

## **Data collection: Developing questionnaire**

The inner circle of the research onion includes the techniques and procedures that include data collection and analysis. Data will be collected with questionnaires. Questionnaires are developed in a way that it serves the thesis research questions. Gillham 2007 points out that doing a questionnaire is relatively easy. Questionnaires need to be well structured. Important fact is that the possible answers to the questions are not determined in advanced. Questionnaires can include open and closed questions. A closed question is the one where all the possible answers are predetermined. Open questions on the other hand do not include the answer choice and the person who is answering the questionnaire needs to think the answer him/herself. Open questionnaires are usually harder to analyze (Gillham 2007, 5.)

The author of this final thesis plans to conduct the questionnaire with open questions. Open questions work better since the answers are not predicted beforehand. The aim of the questionnaire is to figure out answers to the research questions and develop a development plan for the case company.

### **1.5 Timetable**

The preliminary timetable will be presented in the Table 1 below. The aim is to finish writing the research plan in September 2022 and start planning the questionnaire that will be sent to the purchasing department and worksite personnel. The plan is to be able to send the questionnaire to the workers in October 2022 and get the answers by the end of October 2022. It is likely possible that the final thesis will be ready earlier than expected, but that is only a bonus.

month	tasks
September 22	research plan
October 22	finishing research plan
	actual thesis writing process starts, questionnaire questions and sending them to purchasing department
	writing process, analyzing of the questionnaire answers
November 22	writing process
	finilizing introduction and conclusion chapters, sending the finished version to supervisors
	presentation to LUT
December 22	final check and corrections

**Table 1.** The preliminary timetable of the writing process

The final paper will also be presented in the seminar to other students. The final paper will be about 70% ready when the presentations will be held. The presentations also include opponent work were other student work as opponents to others final thesis. The presentation is planned for November.

## 1.6 Structure of the thesis

The final thesis will start with an introduction chapter. **The introduction** will include the research background, the objectives, research questions, limitations, theoretical framework, methodology and data collection and the structure of the thesis.

**The second chapter** will dive deeply into purchasing. The purchasing definitions, objectives and the whole purchasing process will be explained. Also, international purchasing differs from purchasing from homeland. The differences will also be discussed further. The purchasing process will include determining specification, selecting the supplier, contracting, ordering and the follow-up and evaluation.

**Third chapter** will focus on purchasing management and how purchasing department and processes are managed in the case company. Third chapter will also determine the tasks and responsibilities of the purchasing

management. Different tools can be used to manage the purchasing. These tools will be also examined shortly.

<b>Chapter 1</b>	Introduction
<b>Chapter 2</b>	Purchasing, definition, objectives, and the process
<b>Chapter 3</b>	Purchasing management
<b>Chapter 4</b>	Challenges in international purchasing
<b>Chapter 5</b>	The case company introduction
<b>Chapter 6</b>	Empirical research and data analysis
<b>Chapter 7</b>	Development plan
<b>Chapter 8</b>	Conclusion

**Table 2.** Thesis structure.

**Chapter 4** will concentrate on the challenges of international purchasing. Five different challenges will be looked through more deeply. **Chapter 5** will give a short introduction to the case company and its operations. **Chapter 6** will immerse deeply into the empirical research and the data collection. Based on the analysis of the data collected, **Chapter 7** will conclude results into a development plan for future international purchasing. **The final chapter** will be the conclusion chapter and the research questions will be answered.

## 2 PURCHASING

Bäckstrand et al. 2019 address in their article “*Purchasing process models: Inspiration for teaching purchasing and supply management*” that purchasing has become important, strategic, and critical business activity over the years. Hallikas & Lintukangas 2016 as well point out in their article “*Purchasing and supply: An investigation of risk management performance*” that if a company wants to be successful, the purchasing function has to a vital part in company’s actions. It is important to understand what purchasing is and what it is not.

In order to explain the multitude activities of purchasing to others, purchasing process needs to be identified. The process is presented with the help of purchasing process model.

### 2.1 The definition of purchasing and procurement

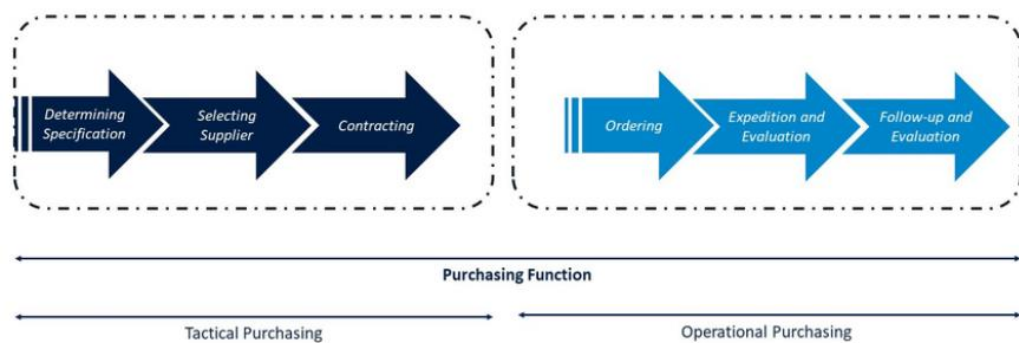
Nowadays, the terms *procurement* and *purchasing* are used in unison, but in this research paper term *purchasing* will be used more often. Van Weele 2005 highlights that purchasing can be seen as organizational buying. On the other hand, procurement is a wider term, because it consists of other aspects as well related to buying, for example transportation, quality control and environmental issues. (Van Weele 2005, 12 & 14; Lysons & Farrington 2012, 6.) Pajunen-Muhonen & Iloranta 2015, point out that purchasing comprises of commercial entries associated with the buying of products and services.

Van Weele (2005, 12) addresses that

*The management of the company’s external resources in such a way that the supply of all goods, services, capabilities, and knowledge which are necessary for running, maintaining, and managing the company’s primary and support activities is secured at the most favorable conditions.*



Depending on different types of businesses, industries, and a company's goals and final objectives, each organization can create its own purchasing process and follow its own purchasing strategy. Van Weele (2010, 8-9) points out that a typical procedure consists of several objectives such as the selection of suppliers, negotiating with vendors, finalizing purchase orders and the follow-up of the orders. A typical purchasing process model that can be seen in the Figure 1.



**Figure 2.** Purchasing process model. (Ramires, 2020)

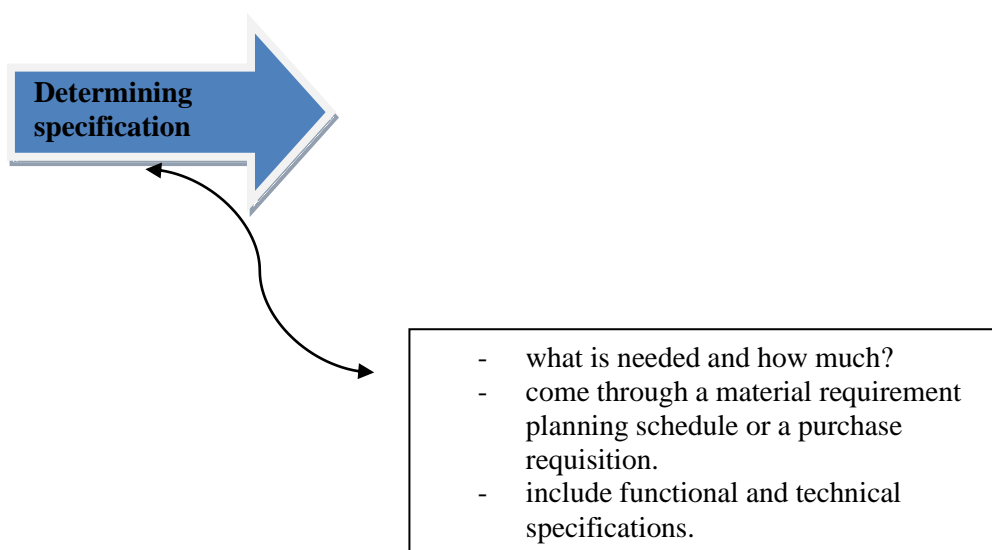
The purchasing process can be divided into tactical purchasing and operational purchasing (Balm et al. 2015) Tactical purchasing includes the determining specification, selecting the supplier and contracting. Operational purchasing on the other hand includes ordering, expediting and evaluation and the follow up. The process steps will be explained throughout in Chapter 2.2.

## 2.2 The purchasing process model steps

Purchasing process model helps to understand the different steps of the actual purchasing process. Purchasing does include many aspects and steps and each organization has its own process. Usually, processes do follow the purchasing model steps but sometimes for example some steps can be skipped. The next chapters will explain the purchasing process model steps throughout.

### 2.2.1 Determining specification

The first activity of the purchasing process model is **determining specification**. At the beginning, the requirements of the demanded item or a service are clarified. The requirements of the products or services usually come from the inventory areas of the company. The demand is informed to purchasers through a material requirement planning schedule or a purchase requisition. It is possible that the material requirements planning schedule and a purchase requisition include functional and technical specifications. (Van Weele 2005, 47-48). The determining specification step is summarized in Figure 3.



**Figure 3.** Determining specification.

### 2.2.2 Supplier selection

The next step of the purchasing process model is **selecting a supplier**. The selection of a global supplier is much more complex than selecting a supplier from the domestic markets. (Felix et al. 2008, 3828.) Kshirsagar et al. 2014 discuss in their article *“Analyzing Supplier Selection with Lean Philosophy: A Review”* that due to globalization competitive business environment forces companies to increase their performance and quality while reducing the costs and satisfying the final customer. Procurement is one of the most critical

activities in company's supply chain management and therefore supplier selection is important for company's intentions to improve its performance. Business with suitable suppliers provides great advantages in the long run.

The supplier selection includes seeking potential suppliers and, in the end, selecting the most suitable supplier for your company. It is important to remember that in the construction industry purchasers commonly have their own list of regular contractors so that the supplier search stage does not take much time or follow all the steps of the supplier selection process. Burt et al. 2012 point out that for expensive and for example totally new purchases require more time for the supplier selection process.

New suppliers (and contractors) can be found through experience from others or for example scrolling through the internet. Purchasers have their own habits of finding new suppliers. The data information and references can be obtained through colleagues, acquaintances, industrial exhibitions and for example different platforms. (Truong 2020, 11.) References are an important tool of gathering information how the supplier has previously worked and what have met its needed development areas.

Kshirsagar et al. 2014 present the steps of the supplier selection process seen in Figure 4. When the need for a supplier has been recognized the procurement strategy will be determined.

Veli-Matti Virolainen discusses in his article "*A survey of procurement strategy development in industrial companies*" the possible procurement strategies and divides them into four different groups

- 1) simple contracts
- 2) global trading
- 3) close relationships
- 4) strategic partnership (Virolainen, 1998, 679.)

After the procurement strategy has been selected, the criteria need to be determined next. The criteria need to be weight, which criteria is the most important one? When the quotations have been received, the suppliers and contractors are being prequalified and not suitable suppliers are cut off. Then the potential ones are being analyzed and evaluated against each other. In the end the supplier that best suits the company will be selected as the final supplier (contractor).



**Figure 4.** Steps of supplier selection process. (Kshirsagar et al. 2014, 72.)

Once the best suitable supplier has been selected the co-operation starts. First, a contract is made.

### **2.2.3 Contracting**

Once the supplier is selected the next step is to prepare and establish a contract. A contract is defined as an agreement before the sale that occurs between the buyer and the seller. Burt et al. 2012 point out that in most situations the contract equals a purchase order. Each contract requires an agreement between the seller and the purchaser. The agreement is very important to have in written. In the construction field some sub-contractors may try to make the agreement orally, but it is important to have all the agreement steps written in the agreement.

When the buyer party is in need for items or service it sends an offer-to-buy as called as Request for Quotation (RFQ) to the selling party. (Truong 2020, 12.) Then the selling party sends an offer which can be accepted, negotiated, or rejected by the buyer. When the offer is accepted the agreement is made. The agreement is signed with both parties, the seller, and the buyer. The signed agreement is a legal paper. The agreement needs to be prepared carefully and all the terms, requirements and conditions need to be written into the agreement. (Truong 2020, 12.)

The signed contract needs to include the next components:

- 1) Price
- 2) Quality and the requirements for the quality
- 3) Payment terms
- 4) Delivery terms
- 5) Warranties and penalties (Truong 2020, 13-15.)

#### **Price**

Van Weele 2005 expresses that both the seller and the buyer need to agree with the prices to be paid. A fixed price is very common in construction fiend where the price is determined and negotiated beforehand. Currency and

currency fluctuations need to be taken into account when purchasing from abroad. (Van Weele 2005, 54.)

The University of Chicago, 2022 discuss that purchasers need to consider whether the price to be paid is reasonable and fair. Price analysis needs to be made. If the price difference of two suppliers is more than 15 % then a price competition is to exist. If one of the suppliers presents a super low price, then the price and supplier needs to be checked to assure that the sellers understand the expectations and the margin of error does not exist.

### **Quality and requirement for quality**

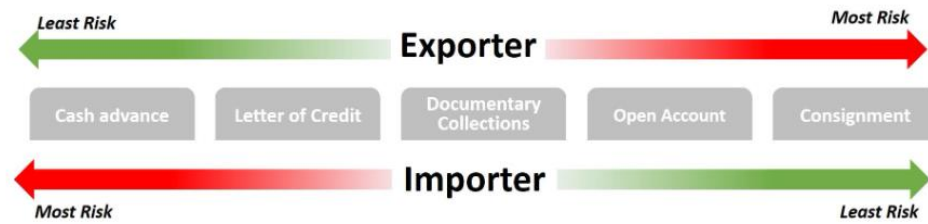
The quality and requirements for the quality of the items/services need to be written into the agreement. Technical information and drawings are a good bonus for the signed contract. A clear description of the parts, items and service is required. (Burt et al. 2012, 17.)

### **Payment terms**

The payment terms are very important to determine into the contract itself. Payment terms represent how and when the buyer will make the payment into the seller. (Truong 2020, 13.) Payment terms include for example:

- payment in advance
- letters of credit
- documentary collections
- open account
- consignment
- time-draft payment (Truong 2020, 13.)

Payment terms have pros and cons. The following figure shows how the selected payment method affects the seller (exporter) and the buyer (importer) organization.

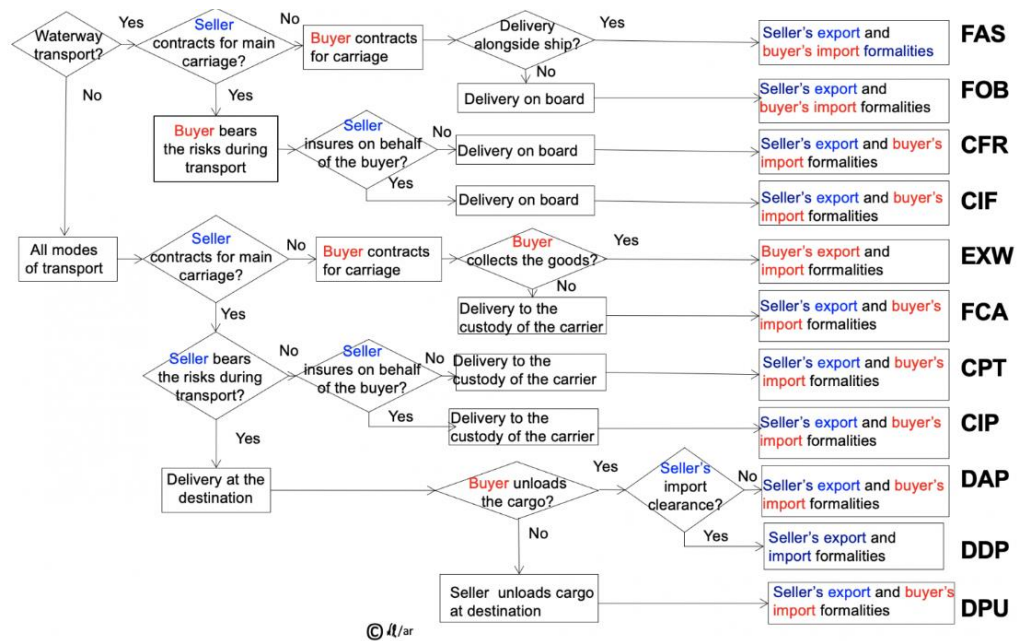


**Figure 5.** How the payment method affects the buyer and the seller. (Trade finance Global, 2022.)

As this research is interested in the buyer's side of things, the previous figure shows that the payment methods with green color have the least amount of risk to the buyer organization. These payment methods include open account and consignment. Letter of credit and cash in advance are the riskiest to the buyer organization. Buyer should avoid paying in advance and consider other payment methods.

### **Terms of delivery**

Delivery Terms are determined in the agreement as well. Delivery means how the products or items are delivered from the seller to buyer. Logistiikan Maaailma, 2022 point out that the correct term of delivery means the responsibility of whom is in charge of the goods. When the seller and the buyer agree on the delivery terms both parties can concentrate on delivery, division of costs and risks in the transfer. Logistiikan Maaailma has created a flow chart that can help companies to choose the right delivery term.



**Figure 6.** Correct term of delivery (Logistiikan Maailma, 2022.)

Incoterms (2020) are terms of delivery, these include:

- EXW (Ex Works)
- FCA (Free Carrier)
- CPT (Carriage Paid To)
- CIP (Carriage and Insurance Paid to)
- DAP (Delivered at Place)
- DPU (Delivered at Place Unloaded)
- DDP (Delivered Duty Paid)
- FAS (Free Alongside Ship)
- FOB (Free on Board)
- CFR (Cost and Freight)
- CIF (Cost, Insurance and Freight) (Logistiikan maailma, 2022.)

## Warranties and penalties

Sometimes business does not go as planned. That is why it is important to determine the warranties and penalties beforehand. Warranties are seen as promises made by the seller to the buyer about the quality or the performance of the goods or services. Van Weele 2005 point out that it is important that warranties and the warranty period is mentioned in the contract. The warranty period means that the supplier is responsible if there are problems with the goods or the services and is obliged to action accordingly.



Van Weele 2005 discusses that supplier needs to guarantee that:

- the delivered goods are the right quality and have the right specifications
- the goods are fit for the intended purpose
- the goods are new
- the delivered goods are legal and fulfill the governmental, health and safety regulations (Van Weele 2005, 55-56.)

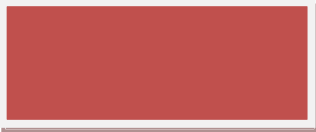
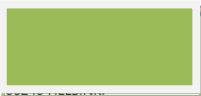



Sometimes the purchased goods do not fulfill the regulations and contract agreement details. The supplier is required to figure out what is wrong and how it is fixable. If the goods are not fixable, the supplier is required to paying resulting costs. (Truong 2020, 14.)

## **2.2.4 Ordering**

Ordering is the first activity in the operational part of the purchasing process. After the contract has been made the purchaser can place the first order to the seller. The purchases are made electronically but for example in the construction field sometimes orders are made through e-mail as well.

### **Order confirmation**

One's the supplier has received the order the seller send the buyer a confirmation of order. An example of a confirmation of order can be seen in Picture 1.

		<b>Tilauksvahvistus</b> <span style="float: right;">Sivu 1/2</span>	
		<b>Pvm</b>	28.09.2021
Finland		<b>Tilausno</b>	MT17738
<b>Laskutusosoite</b> 20066		<b>Tilauspvm</b>	26.04.22
		<b>Myyjä</b>	
<b>Tilaaja</b>		<b>Toimitusosoite</b>	
<b>Merkki</b>		<b>Suunnittelija</b>	
<b>Viiteenne</b> Tarjous 28.9.21		<b>Maksuehto</b>	Sopimuksen mukaan
<b>Viiteemme</b>		<b>Toimitusehto</b>	CPT (kuljetus maksettuna)
<b>Kohde</b>		<b>Pyydetty toimituspvm</b>	17.08.23
		<b>Vahvistettu toimituspvm</b>	
		<b>Toimitustapa</b>	DB Schenker kotimaankuljetukset

**Kiitämme tilauksestanne ja vahvistamme sen seuraavasti:**

**Picture 1.** Confirmation of order. (Case Company intra, 2021).

The confirmation includes:

- the customer information
- the customers billing address
- order number
- payment term
- delivery information
- delivery terms
- sellers' information and contact details

Van Weele, 2005 points out that the buyer needs to check the order confirmation and review it carefully.

### Expediting

The purchaser may have to expedite the order. *Expediting* refers to the action where the buyer urges the seller to complete the order as promised, to ship goods earlier than scheduled, or to speed up the delivery. Expediting results from for example poor material planning or improper supplier selection that

has ultimately failed. Activities are needed to expedite the process. (Johnson & Flynn 2015, 85.)

Three types of expediting:

- 1) Exception expediting
- 2) Routine status check
- 3) Advanced status check (Van Weele, 2005.)

*Exception expediting* refers to a situation where the buyer adopts measures when the organization notices the upcoming shortages due to for example late deliveries. The buyer can avoid this situation by frequently monitoring the suppliers' deliveries. (Van Weele 2005, 60)

*Routine status check* is an approach that is precautionary. This means that the buyer contacts the seller beforehand, so that a shortage does not happen, and the deliveries are on time. (Van Weele 2005, 60)

*Advanced status check* on the other hand is used with critical suppliers. Significant steps in the supplier's production plan will be communicated with the buyer while contracting so that during the manufacturing process, the buyer will make inspections frequently. (Van Weele 2005, 60)

### **2.2.5 Follow up and evaluation**

Van Weele 2005 discusses that in the purchasing process models final steps the follow-up and evaluation has a critical role in the purchasing cycle. At this stage the purchaser should be responsible for:

- ordering and order-handling should have a created well-working procedure between the buyer and the seller
- tracking the orders frequently
- prosecute inspections and expedite frequently

- problem-solving
- maintaining the buyers purchasing systems so that the relevant information is always up to date.

The evaluation and follow up of a supplier are a crucial part of the purchasing process. The supplier can be evaluated with different criteria such as capacity, quality, performance, environmental aspects and sticking to timetables.

### **2.3 Purchasing process development**

The development of the purchasing process is very important. The development process requires co-operation with the inner circle of the organization as well as the external operators. Iloranta & Pajunen-Muhonen 2008 point out in their article” *Hankintojen johtaminen: ostamisesta toimittajamarkkinoiden hallintaan*” that organizations need to concentrate highly on supplier relationships and supplier management.

The purchasing process development can be approached from many different angles. Iloranta & Pajunen-Muhonen 2008 discuss many ways of improving and developing purchasing process and the challenges they are facing. Purchasing process can be developed by limiting the supplier base, improving the supplier-buyer relationships, and having development projects.

The supplier base needs to be kept reasonable. Having supplier relationships can be very difficult if there are way too many suppliers with agreements. In large organizations different departments purchase from different suppliers and smaller amount purchases can lead to unnecessary large expenses. Organizations need to remember that even a small amount purchases create delivering and handling costs. Delivery and handling costs can be reduced by ordering bigger quantities from couple of suppliers. Organizations need to keep in mind that supplier base cannot be reduced too much too radical. (Iloranta & Pajunen-Muhonen 2008, 96–98.)

Supplier relationship management has a crucial role in developing purchasing processes. With competitive tendering organizations can choose the supplier that suits its operations and processes the best. (Iloranta & Pajunen-Muhonen 2008, 96–98.)

The next table (Table 3) is created by the author of this research to summarize how the purchasing processes can be developed (based on literature) and what the outcome of the development actions are. This table is done prior to analyzing the questionnaire questions sent to case company's employees.

<b>Ways of improving</b>	<b>Actions needed to be taken</b>	<b>Desired outcome</b>
<b>1. Plan purchases beforehand</b>	Purchase plan for each department and each purchaser	No unnecessary purchases, purchasing is centralized and in control. No unnecessary risks taken.
<b>2. Focus on quality</b>	Supplier selection process done carefully and step by step	Good quality products and items, long term relationships with suppliers and customers
<b>3. Having excellent relationships with core suppliers</b>	Open communication with suppliers, rewarding programs ext.	Long term and transparent relationships with core suppliers that benefits both
<b>4. Negotiating</b>	Supplier	Efficiently

	performance reviews, negotiations with suppliers	working purchase department and actions
<b>5. Centralize purchasing</b>	Purchasing strategy where purchasing is done by one department	More controlled purchases, minimize waste
<b>6. Education</b>	Educate the employees, frequently	Deeper understanding of the organizations operations and why things work the way they do
<b>7. Strategy, Development plans</b>	In the management level of the organization, strategy meetings	All employees have clear vision of the development steps in the upcoming years

**Table 3.** Summary of how purchasing processes can be developed.

Process development is an important part of management. The process development starts with identifying the problem or a fault that needs to be fixed. After analyzing the faults, action planning takes place. In action planning the company's management deliberate on:

- how the problem is solved
- what are the steps needed to be taken
- finding alternative solutions

Action planning is the longest step and sometimes can take months or even years. Next, implement plan is created and tested. Implement plan may

include training the employees, to ensure implementation is done correctly. Once the implement plan is taken into use and data gathering can start. data gathering should focus on whether the made changes are correctly working. Gathering data is important and it gives valuable information to the organization. Based on the data received, correction moves are made. The process is being constantly evaluated and monitored. (Creative safety supply, 2022.) The process development cycle can be seen in Figure 7.



**Figure 7.** The development process cycle (Creative safety supply, 2022.)

The development process is a continuous cycle meaning that it constantly goes forward and when a new problem has emerged the cycle starts a new round.

### **3 PURCHASING MANAGEMENT**

Purchasing management has many responsibilities when it comes to successful and well-organized purchasing process. Purchasing management is responsible for example planning, organizing, staffing, controlling, and directing. If purchasing management is not working properly then the whole purchasing process is at risk. Baily 1987 points out that the job of a purchasing manager includes planning, organizing, directing, and co-operating with the buyers.

Bedey et al. 2008 on the other hand discuss in their article “Purchasing Management” the main tasks related to Purchasing Management. Purchasing Management can be divided into internal and external tasks. Internal organizational tasks include collaborating with the internal network, operating the purchasing decisions, defining the purchasing strategies, and organizing the boundary interaction. External collaborative tasks on the other hand include collaborating with external network, managing supplier relationships, coordinating joint activities, monitoring, evaluating, and developing supplier relationships.

#### **3.1 The responsibilities of a purchase manager**

A purchasing manager’s responsibilities according to Van Weele, 2010 are as follows:

- Ensuring that all the items and services are available for the customers as promised and that the quality requirements are met
- Products are purchased at reasonable cost and from reliable suppliers
- Monitoring and always minimizing purchasing related costs
- Avoiding risks, maximizing value, and balancing of cost reduction
- Develop a purchasing strategy

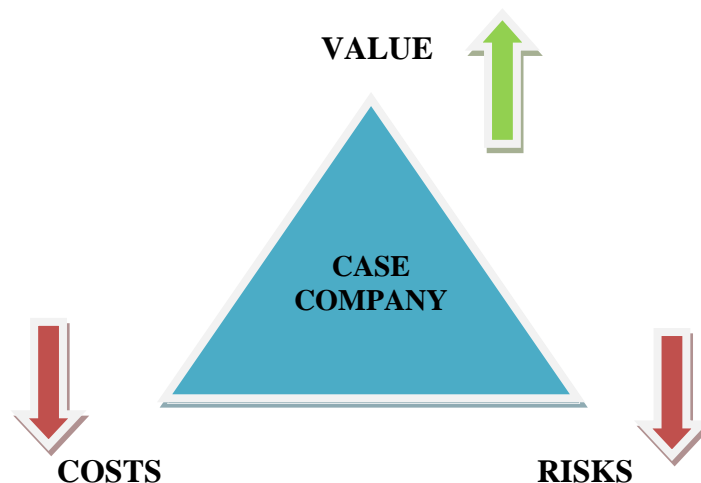
Purchasing managers also have an important role in building relationships



with the suppliers and maintaining them. The relationship with the supplier needs to be on a trustworthy base. On a daily base purchasing managers negotiate prices and have contract agreement negotiations. Purchasing managers need to have good presentation skills and to be confident in themselves. Sometimes purchasers travel to foreign countries to supplier's vendor locations or locations in the homeland to be acquainted with the supplier's way of works and procedures (van Weele, 2010)

Globalization has created a new way of work and technologies are developing all the time. Purchase managers need to be in the current of the latest technology developments and technology trends. It is important for the buying organization that the purchaser reviews the suppliers work and deliveries so that next time the supplier can be used again, or the next contract could be cancelled due to unexpected situations.

In summing up the purchase managers responsibilities, the main issue is to understand that purchase managers balance between value, costs, and risks. The Figure 8 below presents that purchase managers tend to create value, lower the costs and at the same time minimize risks.



**Figure 8.** The main responsibilities of a purchase manager. (Modified from case company intra, 2022.)

Purchase managers work for the employee, and the main interest is value creation with minimal risks and the lowest costs possible. Purchase managers need to highly pay attention into quality issues.

### **3.2 Purchasing management process**

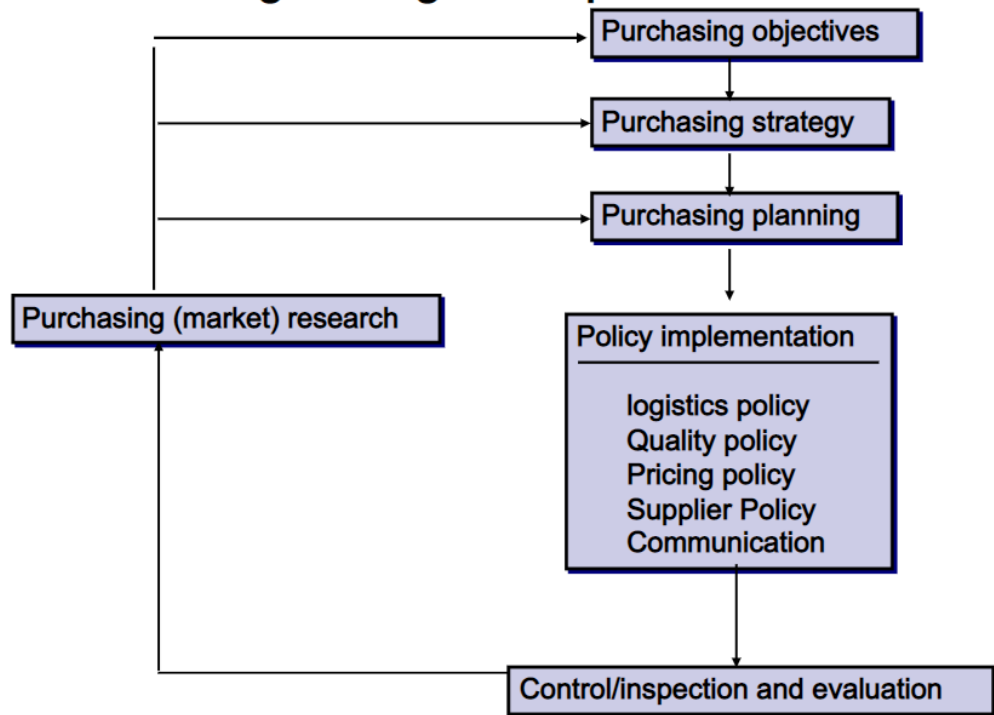
Since purchasing management has a crucial part of the company's operations, understanding the purchasing management process and its steps is important. Purchasing management process includes purchasing market research, the objectives, strategy, planning, policy implementation, and the inspection and evaluation.

Van Weele, 2005 created a process model of purchasing management (Figure 9). The first part of the process is the purchasing market research. Purchasing market research is systematic research where all the elements that may affect the purchasing activities will be collected, analyzed, and studied. Purchasing market research is an assisting part in the purchasing decision making. (Van Weele 2005, 87)

Purchasing market research can be for example:

- studying the foreign supplier and their behavior
- analyzing the supplier portfolio
- studying the cost structures of the suppliers
- researching external markets
- analyzing the trends of the current and previous markets (Van Weele 2005, 87).

## The Purchasing management process



**Figure 9.** The purchasing management process (Van Weele 2005, 87)

The objectives, strategy and planning are the next steps in the purchasing management process. Purchasing management sets objectives and goals keeping in mind the whole organizations main goals. Purchasing managements' goals can include for example improving the quality of the purchased goods or decreasing the product variety. Developing purchasing strategies is also very important for purchasing managers. They include deciding on how many suppliers is needed in each purchase category and how relationships with suppliers are maintained. (Van Weele 2005, 87-88; Truong 2020, 22-23.)

The next part of the purchasing management process is the implementation of the purchasing policy. According to van Weele, 2005 five core aspects that need to be taken into consideration when developing the purchasing policy. These include:

- 1) supply policy
- 2) product and supplier quality policy

- 3) materials cost policy
- 4) supplier policy
- 5) communication policy (Van Weele 2005, 88-89).

In supply policy, purchase managers process the purchase orders. Materials and supply planning has also an important role. Purchase managers plan the warehousing and inventory management and try to execute them efficiently. (Van Weele 2005, 88-89)

Product and supplier quality policy concentrates on product development and improving the supplier's quality performance. Product standardization, new material development, quality term negotiations with the supplier and value analysis implementation are examples of practices in this policy. (Van Weele 2005, 88-89)

Materials cost policy refers to controlling the material costs. The main idea is to decrease the prices of materials and services. The purchaser needs to understand the pricing strategy of the supplier. Purchaser can make a price-cost analysis to help in the understanding process. (Van Weele 2005, 88-89)

Supplier policy includes strategically completing the enterprise supplier base. This can include for example making decisions on whether to single source or multiple sources, or whether the company should outsource or insource its operations. Supplier policy also concentrates on improving suppliers' performance. Badly performing suppliers are eliminated and the best suppliers may be rewarded. (Van Weele 2005, 88-89)

In Communication policy the organizations internal and external contacts are shown. Many organizations use platforms, such as case company has in use the case company intra, where all the information is easily available and for every employee to see. Communication is key, information needs to move from buyer to supplier and backwards (Van Weele 2005, 88-89) The purchasing policy implementation can be seen as a summary in the Table 4.

### Implementation of purchasing policy:

Tools	Aspects
Supply Policy	Purchasing order processing. Materials and supply planning
Product and supplier quality	Early involvement in development Improving suppliers' quality performance
Materials cost policy	Control of materials cost and prices Reduction of materials cost and prices
Supplier policy	Sourcing policy Improvement of supplier performance
Communication policy	Internal contacts External contacts

**Table 4.** Implementation of purchasing policy. The five aspects. (Van Weele, 2010.)

The last part of the purchasing management process is the inspection and evaluation. Purchasing managers have an important role in inspecting and evaluating the purchasing process and the suppliers. In evaluating stage, the purchasers check whether initiatives have been fulfilled and met. Usually this is done by reflecting to cost savings reports. Van Weele, 2005 also point out that actual performance needs to be checked periodically against the organizations purchasing plans (Van Weele 2005, 90.) Purchasing policy has many benefits to organizations. ProcureDesk, 2022 expresses that after working with over 100 enterprises, the following benefits of purchasing policy arise frequently:

- Clear guidelines for all employees
- Acceptable behavior guidelines
- Increased purchasing engagement
- Norms for external engagements (ProcureDesk, 2022).

Organizations should without a doubt have a purchasing policy at hand.

## 4 INTERNATIONAL PURCHASING AND ITS CHALLENGES

International purchasing refers to purchasing raw materials, goods, and services from another country or from a foreign supplier for running and maintaining operations to gain advantages. There are many benefits and challenges when buying abroad. Companies purchase abroad because:

- costs are lower
- access advanced technology
- quality
- lack of suppliers in the domestic markets
- possible competitive advantage
- margin improvement reasons
- respond to demand
- manufacturing possibilities
- more contacts
- a greater number of suppliers to choose from (Burt et al. 2012, 421.)

In many countries labor costs are significantly lower than in Finland. In some cases, the raw materials are only available in foreign countries. The proximity to raw materials is in some cases very crucial.

Why do companies buy abroad? Organizations buy abroad because of the possibilities. These include the cost reductions, products and services are available in a foreign country significantly at a lower cost than in Finland. Sometimes international purchasing is a possibility to access more suppliers or contractors. The constantly changing markets and customer behavior can also drive companies to international markets.

Case Company would also like to extend its operations into nearby countries. Case Company's expansion is likely. Case Company would be getting access

into technology and design that are not yet available in Finland. In foreign countries the manufacturing costs are possibly lower. The situation in the world is currently changing, the costs are increasing constantly. The researcher foresees that the case company will not start purchasing abroad before the situation settles down.

## **4.1 Challenges in international purchasing**

There are multiple challenges that need to be taken into consideration when planning on purchasing internationally. The challenges include communication with the supplier, quality, cultural differences, accurate data information, issues with the logistics, legal issues, currency risks and changes in currency fluctuations and the time zone differences. The challenges will be delved into in the next under chapters.

### **4.1.1 Communication with the supplier and cultural differences**

For the supplier and buyer relationship to work excellently the communication is key. Suppliers' performance requires extensive communication and co-operation with the buyer organization for a large period. (Leenders et al. 2006, 379.) In some cases, language barriers can create problems. Is information understood the right way?

When purchasing from abroad and from a country that is geographically faraway cultural differences emerge. Purchaser should take into account the cultural differences when dealing with foreign suppliers. At these circumstances misunderstandings and mistakes can easily ruin and affect the relationship between the buyer and the supplier.

Gorodnichenko et al. 2021 discuss in their article "*Cultural Distance, Firm Boundaries, and Global Sourcing*" the fact that when asked about the challenges in globalization in business the key words emerging are *cultural*

*differences and intercultural communication.* A global survey for senior executives of multinational firms in 2012 reported that differences in cultural traditions to be the biggest obstacle in doing business with other global companies.

Purchasers should focus on several objects when doing business with multicultural companies:

- 1) spending time on doing research into the culture, habits, politics and dos and don'ts of the supplier's country.
- 2) noticing that English is not everyone's first language
- 3) using interpreters when needed
- 4) follow-up meetings to ensure that the supplier understands everything correctly
- 5) critical information and jointly decided information should be put into writing
- 6) always respect each other's values, culture and beliefs. (Truong 2020, 30.)

#### **4.1.2 Accurate data**

For buyers and suppliers' relationship to benefit both, information and data sharing has a crucial role. In international purchasing, data needs be available and correct. Naya and Morgan, 1969 discuss in their article "*The Accuracy of International Trade Data: The Case of Southeast Asian Countries*" the fact that in less developed countries the data is abundant. There needs to be a way for the buyer to check available and up-to-date information on their purchase.

In today's world, every decision is made based on data input. Pieces of data needs to be putting together to gain increased command over the supply chain. Clinton 2018 discusses in her article "*The Future of Procurement: Accurate Vendor Master Data*" that 94% of procurement executives do not



trust their suppliers master data. Unreliable and misleading data from the supplier can create a threat to the company's operations and can lead to failure.

Kafil 2022 points out how organizations can benefit from using and receiving accurate data:

- purchasing process and its seamlessness
- improved supplier relationships
- cost savings
- centralized data

Without accurate data, organizations can make huge mistakes and lose revenue.

### **4.1.3 Logistical issues**

When purchasing abroad logistics plays a large role. A lot can go wrong between the shipment leaves the suppliers country until it arrives to final destination. Supplier needs to have a plan B if the items are damaged, delayed or lost. Incoterms are in use at this stage, and it is important to understand who is responsible of the goods. One thing a buyer organization can do to minimize transportation risks is to have an excellent logistics firm to handle the shipments.

Logistics brings inevitable challenges to international purchasing and international sourcing. The biggest challenge is how to overcome them.

Logistics raises challenges such as:

- transportation costs and how to cut them
- meeting customer expectations for visibility
- driver shortages

- sustainability; being environmentally friendly
- transportation delays
- border crossing procedures
- developing countries' holistic logistic knowledge
- bad infrastructure
- inventory management (Jiang et al. 2009. 18.)

It is important to remember that when doing international purchasing, international management of logistics is a necessary procedure. (Jiang et al. 2009. 18.)

#### **4.1.4 Legal issues**

When organizations decide to purchase internationally, legal issues need to be taken into consideration. Legal issues include government laws, shares, intellectual property, localization of terms, foreign policies, politics, taxes, and data protection.

Firstly, a company needs to have its own employee in the country where the purchases are made. In these cases, the employment laws need to be taken into consideration. The employees need to have their contracts in place, where their roles and responsibilities are stated. Secondly, the tax obligations need to be considered. Thirdly, when data is transferred to another country, the data need to be protected.

#### **4.1.5 Currency risk and fluctuations**

Since two organizations abroad make business together, they can also have different currencies in use. Currency does complicate business making. Exchange rates fluctuate a lot. Exchange rate is identified as the rate at which a currency is exchanged for the other countries currency. (Truong 2020, 31.)

Exchange rates usually fluctuate due to political, economic, and psychological reasons. The currency fluctuations affect the buyer organization in a way that the buyer may need to pay more than expected and this may be risky. If there is a long wait after the contract is being made and when the price is being paid, the exchange rate may change largely and could result in significant rises or declines. To reduce the risks of the exchange rate fluctuations the buyers can:

- the price is being determined in the contract with limited extent of change in exchange rate
- goods can be priced with 3<sup>rd</sup> currency that is stable and not so volatile
- using an average exchange rate on the day the contract is signed (Leenders et al. 2006, 376-377).

#### **4.1.6 The difference in time zones**

When doing business with foreign suppliers the time zones can vary significantly. Communication and information sharing does have a large role in this as well. When doing business for example overseas workhours are vice versa.

Leenders et al. 2006 point out that the difference in time zones is critically linked to communication challenges. For buyer, it is hard to contact the seller when they are unreachable due to time difference. It is important for the buyer to understand that the sellers' workhours are different. Different communication networks may make the situation easier. Also, if the relationship between the buyer and the seller organization requires telephone calls, these may cost a lot.

When making a contract with a seller, their geographical location, and challenges due to this need to be taken into consideration. It is good to plan

together with the seller how the communication and data sharing will be distributed.

#### **4.1.7 Quality**

Leenders et al. 2006 point out that differences in quality and item specifications may result in losses for the company. Items and parts need to meet the previously specified quality standards. If the quality standards are not met, the supplier may need to produce the products or items again.

In international purchasing quality control is needed. The buyer organization can not solely rely on supplier to determine the quality of the products. If they do, the problems will emerge only when the products are already shipped to their destination. This can be prevented by doing quality inspections before the parts or items leave the suppliers country. Another way to prevent quality issues is to educate supplier on how to fulfill the required quality standards. Supplier can be taught a quality-control method.

## 5 CASE COMPANY INTRODUCTION

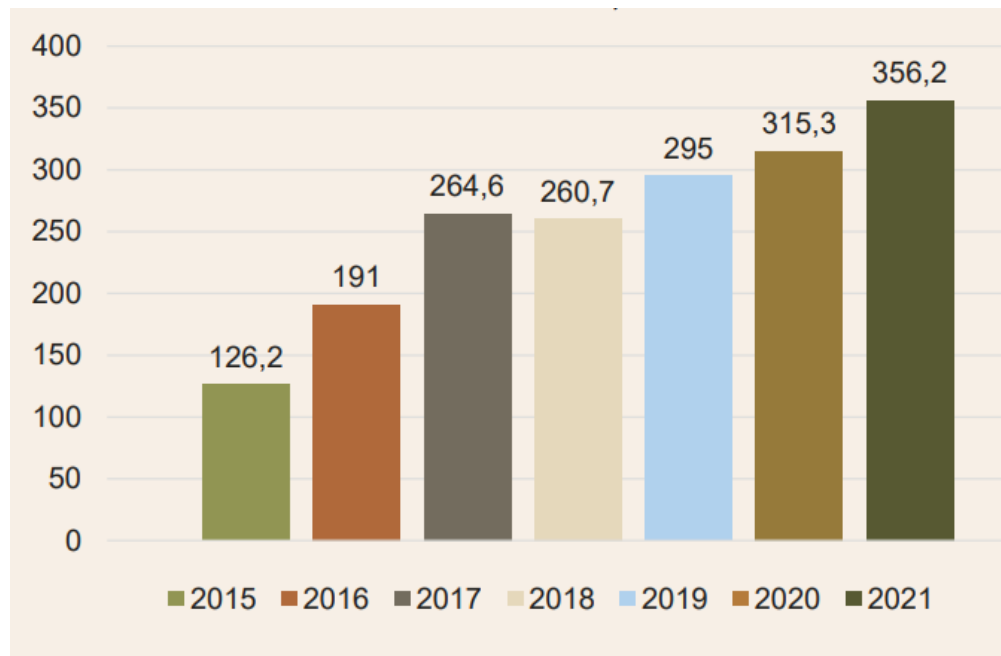
The Case Company, Company X is a Finnish Construction Company. The Case Company will be anonymous and will be referred as the Case Company in this research. The Case Company was established 1989 and has 314 employees in capital City area, Turku, Tampere, Jyväskylä, Kuopio and Oulu. The Case Company's revenue in 2021 was around 350 million Euros. Case Company is one of the rising stars in the upcoming years in the construction field. (Case Company intra, 2022.)

Case Company's motto is that a home is more than a building. The case company's aim is to build new, long-lasting, and innovative homes. Environmental aspects are important for the case company. Case Company builds and develops around 4000 homes each year that are all combined with great location, good floorplans, and excellent quality materials. Case company is one of the biggest construction companies in Finland. Case Company's values can be seen in Figure 10.



**Figure 10.** Case Company's values (Case Company intra, 2022.)

Case Company's revenue has increased over the last 10 years. The revenue increase can be seen in Figure 11 below.



**Figure 11.** The Revenue increase in Million Euros. (Case Company intra, 2022.)

As already mentioned in the background chapter, the case company has around 314 employees who work in the worksite and in the office. Little over 50% of the personnel work in the worksites. The rest of the personnel work in purchasing, development, management, and calculation. The purchasing department has only 5 employees. The personnel in the worksites do purchases as well. The worksite personnel:

- scan for the possible contractors
- send request for quotation
- compare the offers
- arrange negotiations with the most suitable contractors
- prepare the contracts (make the purchase)
- follow up and evaluation

Case Company does not have foreigner collaboration partners yet. The plan is to in the upcoming years to kick start international purchasing but at the moment covid-pandemic and the Ukrainian war have had its toll on total costs. The markets are too unsecure at the moment but hopefully in the next 5 years the situation will turn because international purchasing will possibly give benefits in the long run.

Purchasing department has a crucial role in the case company's operations. The purchasing department does all the larger purchases for each project, but each worksite does all the smaller purchases. Below is a list which purchase belongs to which department.

Case Company's purchasing department is in charge of:

- annual agreements and negotiating new ones
- larger purchases such as elevators, concrete elements and windows
- purchases that exceed a specific amount

The worksite personnel on the other hand are in charge of timetabling all the purchases so that each purchase is on worksite as needed and on time.

The worksite personnel are in charge of:

- 1) all work safety - purchases
- 2) machinery needed in the worksite
- 3) all subcontractor contracts

Since the purchasing department and worksite are doing purchases one upon the other, the communication and information sharing speak a large role.

## **5.1 The current stage of the purchasing process in the case company**

The case company's purchasing process starts with a need for some items or a service (contraction). The first very critical part of the purchasing process is the in advance request for quotations. This is strictly done for the project budget reasons. The lowest offer price is used, and the budget is created. At this stage the suppliers/contractors are informed that the request for quotations are only upfront offers and do not mean that a deal is made.

Mostly items purchased are for example concrete elements, equipment, insulating materials, windows and doors, glazing, saunas, wooding, tiling, bathroom equipment, and elevators. In addition, the purchase process of the case company does include plenty of labor-work contracting. This means the case company purchases for example the painting of the building's façade from a painting contractor who will work as a sub-contractor for the case company.

After the need has been noticed, the purchase manager gathers the material for the request for quotations. After this the supplier/contractor information is gathered, to whom is the request for quotation sent to? The information will be gathered from employees, previous history, internet, and recommendations.

Request for quotation is sent to suppliers and contractors. The request for quotation's is sent via email and the message will include all the relevant information needed. The message will also inform what is the last date of sending an offer. Offers that arrive late, are not accepted. When the offers finally arrive, the purchaser saves all the files into the company's document bank Prop. Document bank is an important tool for each employee since it allows everyone to access all the information available. The offers are compared to each other, and the costs are compared to budgets previously set.



When the comparisons are made at least 3 suppliers/contractors are invited to a contract negotiation. This does not yet mean, that the supplier has been selected. The supplier is selected after the negotiations. Once the supplier or contractor has been selected; the contract is made. Once the contract is made; the purchaser does the purchase into the case company's purchasing program. The purchasing program does give the purchaser a Purchase Order (PO) number. The purchasing program is an important tool for the purchasing program but also for the company management. Costs and cost savings are monitored through the purchasing program. An example of the purchasing program can be seen in Picture 2.

Kuvaus	Tyyppi	Vastuullinen	Til% 1-9:	Tot/Enn% 0-9:	Näkymä:	Hankinta	ryjyys	Sopimus	Toimitus	Loppuseivi	Toim.arvio	Toimittaja
<input type="checkbox"/> Vahanan Asbestitutkimus												
<input type="checkbox"/> Kattotutka HA tutkimus												
<input type="checkbox"/> Timanttityo KK HA tutkimus												
<input type="checkbox"/> Maanmittauslaitos Suomen Vi												
<input type="checkbox"/> Vesitalo												
<input type="checkbox"/> Määrälaskenta FMC												
<input type="checkbox"/> Työturvayslaitos Asbestitutk												
<b>[ - ] Pääryhmä 1</b>												
<input type="checkbox"/> Purkutytöt	TKL	MOHELAR	02702.1170	3		07-04-22	05-06-22	14-05-22	04-08-22	01-07-23		
<input type="checkbox"/> Maanrakennus	TKL	MOHELAR	02702.1200	3		05-10-21	05-11-21	11-11-21	07-12-21	08-12-21		
<input type="checkbox"/> Paalutus	TKL	MOHELAR	02702.1400	3		05-10-21	02-11-21	05-12-21	09-01-22	17-10-22		
<input type="checkbox"/> Tukiseinä	TKL	NIEMIJA	02702.1401	3		11-09-21	05-09-21	20-09-21	01-10-21	09-01-22		
<input type="checkbox"/> Pihatytöt	TKL	NIEMIJA	02702.1700	3		14-02-23	28-02-23	31-03-23	30-06-23	31-07-23		
<input type="checkbox"/> Ulkovarusteet	TKL	NIEMIJA	02702.1800	3		07-04-23	21-04-23	19-05-23	30-06-23	31-07-23		
<b>[ - ] Pääryhmä 2</b>												
<input type="checkbox"/> Paikallavarakenteet	TKL	NIEMIJA	02702.2010	3		02-11-21	08-11-21	08-12-21	12-04-22	05-04-22		
<input type="checkbox"/> Väimibetoni	TKL	NIEMIJA	02702.2122	2		17-01-22	08-01-22	19-01-22	14-03-22	02-05-22		
<input type="checkbox"/> Routa ja lämpöeristeet	TKL	NIEMIJA	02702.2270	2		05-06-22	03-06-22	20-06-22	02-08-22	23-09-22		
<b>[ - ] Pääryhmä 3</b>												
<input type="checkbox"/> Betonipintojen jälkityöt	TKL	NIEMIJA	02702.3023	3		17-10-22	21-10-22	28-10-22	06-11-22	06-01-23		
<input type="checkbox"/> Betonielementit	TKL	VANSKHA	02702.3100	2		15-11-21	05-11-21	15-02-22	06-05-21	01-08-22		
<input type="checkbox"/> Superlaatat ja parvekealaat	TKL	VANSKHA	02702.3112	2		05-09-21	03-09-21	04-12-21	15-12-21	05-12-22		
<input type="checkbox"/> Hornielementit	TKL	VANSKHA	02702.3124	2		05-09-21	03-09-21	04-12-21	15-12-21	05-12-22		
<input type="checkbox"/> Betoniporraselementit	TKL	VANSKHA	02702.3128	2		03-09-21	03-09-21	16-03-22	03-03-21	01-09-21		
<input type="checkbox"/> Elementtisäennus	TKL	NIEMIJA	02702.3150	3		05-05-22	02-08-22	25-06-22	14-07-22	14-11-22		
<input type="checkbox"/> Elementtien pystysaumajuoti	TKL	NIEMIJA	02702.3158	3								
<input type="checkbox"/> Deltat ja Petrat	TKL	NIEMIJO	02702.3300	2		05-11-21	08-11-21	21-01-22	31-03-22	17-10-22		
<input type="checkbox"/> Hirsirakenteet	TKL	MOHELAR	02702.3560	3		05-11-21	01-11-21	07-02-22	09-04-22	03-01-23		
<input type="checkbox"/> Parvekkeiteet ja lasitukset	TKL	BERLIRO	02702.3630	3		06-06-22	01-06-22	05-07-22	01-08-22	19-06-23		
<input type="checkbox"/> Yläpohjan lämmöneristeet	TKL	NIEMIJA	02702.3770	2		31-10-22	14-11-22	28-11-22	19-12-22	30-01-23		

**Picture 2.** Example of a purchasing plan (Modified from Case Company intra, 2022.)

The purchases are divided into head groups “pääryhmät”. Head group 1 for instance includes demolish work of the old buildings, earthmoving, pile-driving, yardwork, and equipment such as swings, bicycle stands and trash cans. Each purchase will be nominated to a purchaser. This is the responsible “vastuullinen” column in the Picture 2.

Each purchase is also given a timetable when the material, request for quotations, contracts and deliveries need to be executed. The program will show the purchaser with colors whether some tasks are to be done. Blue color presents that tasks are done and red color shows that timetable of the purchase is behind schedule. Once the purchase is done and PO number received, the seller “toimittaja” column will show the selected partner. This also includes all the needed information about the seller and sellers contact information.

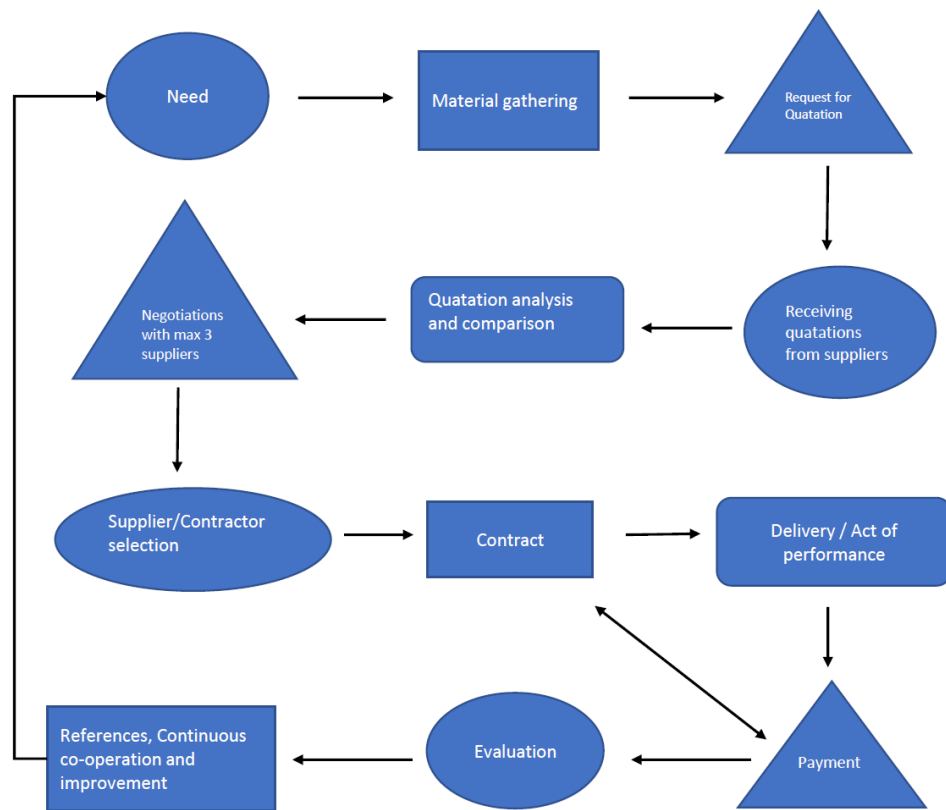
The management of the case company has created purchase boundaries based on the work title of the employee:

- production engineer or worksite foreman < 100 000 €
- purchase manager or the head of the worksite < 500 000 €
- production manager or building manager < 1 000 000 €
- director > 1 000 000 € (Case Company intra, 2021.)

Once contract is made, either the payment will be made at this point, or the delivery will be received. The last parts of the process are the evaluation of the supplier or the contractor.

- How did the supplier/contractor succeed?
- How can the co-operation be made better?
- Will the supplier or contractor be used again?

The case company’s purchasing process will be presented as a summary in the Figure 12.



**Figure 12.** The case company purchasing process. (Modified from case company intra, 2022.)

The last and one of the most important parts are the process is continuous improvement and the co-operation. The goal is to have long-term relationships with suppliers and contractors and continuously improve the relationships. Once the supplier or a contractor has finished the project, a final negotiation is held. This negotiation will include discussing how the project was executed and how the supplier could have been better. This negotiation will also include discussions about extra expenses and so on.

## 5.2 The aim of starting international procurement

The Case Company has had aims to start purchasing abroad. This aim has been postponed many times since Covid-pandemic and the Ukrainian war. The markets abroad have not been in a good place and that is why plans have been changed. The Case Company always tries to cut costs and purchasing

abroad is seen a good way of doing so. Purchasing abroad gives the case company different possibilities, more supplier possibilities and gives a change in branding the company into other countries as well.

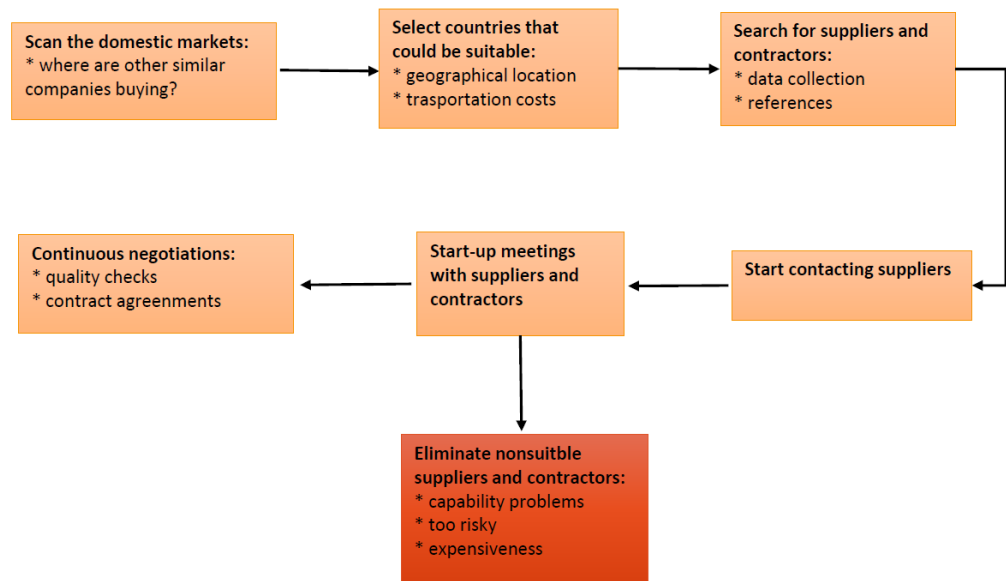
The main issue the case company is concerned are the risks associated with the international purchasing or procurement. These risks include:

- fraud risks
- quality
- delivery complications
- personnel located in the foreign countries.

Quality risk is the biggest risk arising. Case Company would need to have thorough quality checks on the suppliers' products or materials. No unnecessary risks need to be taken. Other risks the case company is concerned are the fraud risks and delivery complications. Delivery complications are very common with suppliers in foreign countries.

### **The original plan of the case company**

The case company has a plan to start international purchasing. This includes item purchases such as possible contractor contracts where the contractors are foreigners and listed to other countries such as Estonia, Lithuania ext. The plan is for starters to start looking for possible suppliers and contractors abroad. At first the search will concentrate geographically close to Finnish markets. The case company has expressed to their employees their original plan for the kick starts of purchasing abroad. The process plan can be seen in Figure 13.



**Figure 13.** The original plan of the case company. (Case Company intra, 2021)

The first step that needs to be taken is to scan the international markets. Where to buy? How the deliveries will be handled? Where are other similar companies buying. To minimize risks the case company's original plan is to purchase near Finland such as Estonia. The biggest risk is finding a suitable supplier whose quality and safety standards meet the case company's standards. In many foreign countries for example the safety regulations and standards are not as strict as in Finland. Since the case company is a construction organization the biggest concentration is in safety; safety of the buildings and the employees working on the worksites.

When the purchase countries are selected, some calculations are needed. Does the purchase from abroad fulfill the cost reduction needs? If not, then there is no point in purchasing abroad. Foreign suppliers/contractors are searched through references from other companies, through internet and through experience. All the data available will be gathered and analyzed. After data collection, the supplier and contractor contacting starts.

Suppliers and contractors will be connected, and the negotiations start. It is important for the case company to meet up face to face with the suppliers' representatives and see their facilities abroad. This will require the management and the purchase managers presence. In the meetings all requirements will be presented. Contract details will be presented, and all non-suitable suppliers and contractors will be eliminated. The case company does not want to take any unnecessary risks at this point.

The suppliers and contractors that fulfill the needed requirements are asked to continue negotiations. This part of the process includes quality checks, personnel training and so on. The case company does need to have a manager at the foreign county at times to reassure that all the safety and quality requirements are met each day.

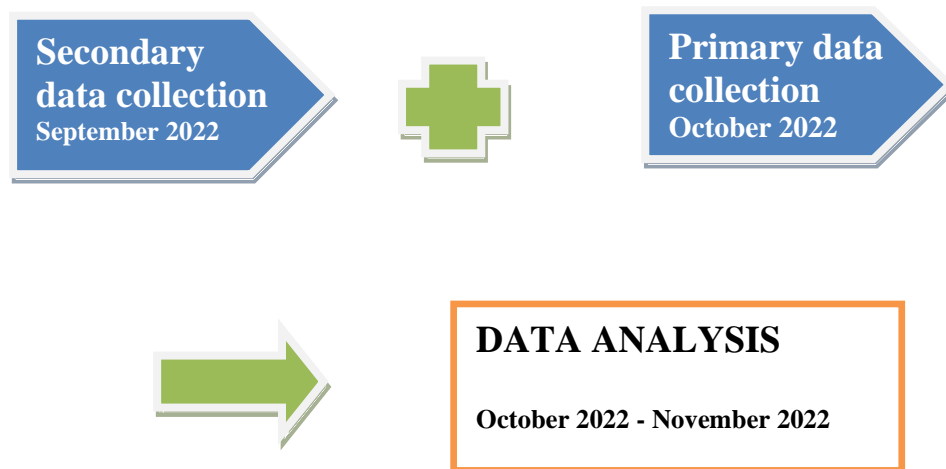
## **6 EMPIRICAL RESEARCH AND DATA ANALYSIS**

This Chapter focuses on the empirical research and analysis of the data collected. The chapter is divided into data collection and the analysis of the data. Firstly, how the data is collected is presented. Then, the timeline of the data collection is presented. When the actual data is collected the data analysis starts.

### **6.1 Data collection**

The data was collected from primary and secondary sources by the author of this research. The secondary data such as purchasing process steps and purchasing management objectives was obtained from literature, books, journals, and electronic sources. The information of the case company was collected from the case company's website.

For the primary data collection, the qualitative method was chosen. In October 2022 a questionnaire was conducted with Google Forms. The questionnaire was sent to everyone who work with purchasing at some point. The questionnaire was sent to employees working in management, purchasing department, production, and production management. The plan was to have as large as sample of the employees and their point of views on purchasing in the case company. Google Forms is a free forms tool where the questionnaire can be modified as the researcher wants. The questionnaire was included with seven questions: 6 open questions and 1 multiple choice question. The data collection timeline can be seen in Figure 14.



**Figure 14.** The timeline of the data collection process.

Good about Google Forms is that the results and answers can be seen in real time. Google Forms will give the researcher automatic summaries on the answers. The answers are also anonymous, so the researcher does not see who has submitted which answers. During the preparing the questionnaire it came clear to the researcher that the sample of the employees needs to be as large as possible. In purchasing department there not enough employees to get a clear understanding of the employee's thoughts. The most important are the production employees who execute most of the purchases in the worksite

Most of the questions presented in the questionnaire were built upon the theory of purchasing process and to figure out the mindset off the employees. The employee's mindset on purchasing and how the process should be improved to help their everyday work has a lot to do with how efficiently the employees are working. The purchasing process needs to be ideally working to start pursuing international suppliers and contractors.



The questionnaire had following questions: (Appendix 1)

- 1) *What is your work title?*
- 2) *How long have you been working with the case company/current position*
  - a) *less than a year*
  - b) *1-3 years*
  - c) *3-5 years*
  - d) *more than 5 years*
- 3) *State what does your work consist of?*
- 4) *Challenges in the purchasing process in the Case Company? (State 5 most common in your opinion)*
- 5) *What good is in the purchasing process in the Case Company?*
- 6) *How in your opinion can the purchasing process be developed?*
- 7) *Opinion on international purchasing*

The questionnaire was sent via email on 11<sup>th</sup> of October with a link to the Google Forms questionnaire. The answers were asked to be submitted latest on 21<sup>st</sup> of October 2022. The following Table 5 presents the information about the personnel who the questionnaire was sent.

<b>DEPARTMENT</b>	<b>PERSONNEL AMOUNT</b>
Purchasing	<b>5</b>
Production	<b>154</b>
Management	<b>3</b>
<b>TOTAL</b>	<b>162</b>

**Table 5.** Information about the personnel who the questionnaire was sent.

The questionnaire was sent to 162 employees who all work for the case company. The personnel work for purchasing department (5 employees), production department (154 employees) and management (3 employees). The

162 employees who the questionnaire was sent work domestically and all the geographical areas of the case company are covered. The personnel were given ten days' time to submit their answers. All answers were anonymous, so the researcher does not know, who sent which answers. All answers were downloaded to the Google Forms platform where the researcher saw them in real time as they were answered.

A notification was sent on Tuesday 18<sup>th</sup> of October to the 162 employees reminding them about the questionnaire. Covering note was sent with an explanation that by answering the questionnaire, the employees can make positive changes to the case company's operations and to make their own work easier and more efficient.

## **6.2 Data analysis**

As previously mentioned, the questionnaire was sent to 162 employees. From these employees, 2 of them were on a holiday and 4 of them had recently resigned from the case company. So, from the 162 employees only 156 (96,3%) were able to submit their answers. The case company has 314 employees in total (in 13<sup>th</sup> of October 2022). This means the questionnaire about purchasing was sent to 49,7% of the whole organization.

When the deadline 21<sup>st</sup> of October 2022 came to light, from the 156 employees able to answer to the questionnaire, 34 submitted their answers, this equals to 21,8% of the employees who received the questionnaire link. This sample of personnel equals to 10,8 % of the whole organization.

The absence of answers in the questionnaire is explained by extreme amount of work since employees do not have time to do anything extra beyond their work tasks. For further analysis, the researcher hopes a larger sample of the employees' answers.

### 6.2.1 Questionnaire, Question 1

The first question in the questionnaire was about the employees work title. Work title tells the researcher a lot. The manager title talks about work experience for several years in current or similar work tasks. The worksite management have deeper understanding on the technical aspects of construction and project engineers/worksite engineers have an understanding on the bigger picture including timetable and total costs. This question was important for the researcher because the researcher wanted to see how the different work titles and work tasks effect on the answers and how differently things are seen.

#### 1<sup>st</sup> question: *What is your work title?*

From the submitted answers, the work titles arise. These work titles include:

- sourcing manager
- production engineer
- sourcing engineer
- worksite foreman
- worksite engineer
- work chief

The submitted answers included answers from manager level to engineer level.

### 6.2.2 Questionnaire, Question 2

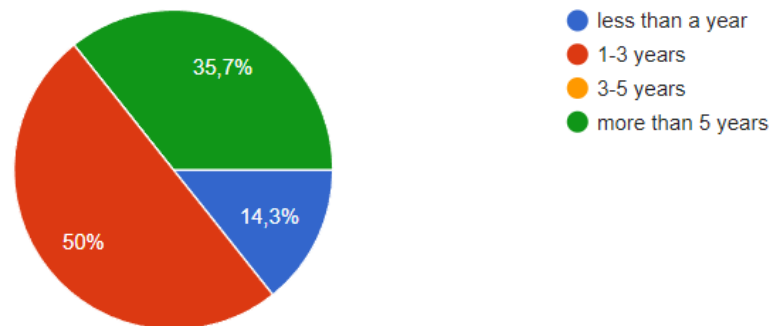
The second question in the questionnaire was about how long the employee has been working for the case company. This question will indicate how well the employee knows the case company's ways to operate and the challenges the purchasing process may involve.

#### 2<sup>nd</sup> question: *How long have you been working with the case company/current position*

- a) *less than a year*
- b) *1-3 years*
- c) *3-5 years*

*d) more than 5 years*

Based on the answers given, half of the employees have been with the case company for 1-3 years. This indicated the researcher that the employees have sufficient knowledge on the case company and the purchasing process operations. The distribution can be seen in Figure 15.



**Figure 15.** The distribution of the employees working years in the case company. (Google Forms, 2022.)

The researcher notes that only 14% of the answers given have been working for the case company less than a year. Since a new job and the new ways of working can take years to learn the researcher is convinced that the employees have great knowledge on the case company and the purchasing process. It needs to be noted that this does not mean the employee does not have knowledge on purchasing process in other companies but only in the case company.

### 6.2.3 Questionnaire, Question 3

The third question delved into the work tasks and the differences between different work titles. This question gives the researcher an understanding on how large the work tasks are, and how much knowledge is needed to manage them.

**3<sup>rd</sup> question:** *State what does your work consist of?*

Based on the answers submitted following work tasks were listed. The lists can be seen in Table 6.

Work title	Work tasks
<b>Sourcing manager</b>	<ul style="list-style-type: none"> <li>• bidding</li> <li>• evaluating received biddings</li> <li>• purchasing</li> <li>• making agreements</li> <li>• annual agreements and responsibility of them</li> </ul>
<b>Work chief</b>	<ul style="list-style-type: none"> <li>• monitoring site costs</li> <li>• participation on negotiations with suppliers and contractors</li> <li>• the main responsibility on the purchases in the work sites</li> <li>• contacting the suppliers/contractors (networking)</li> <li>• managing all the worksite personnel</li> <li>• co-operation with governmental issues</li> </ul>
<b>Foreman</b>	<ul style="list-style-type: none"> <li>• managing the work at the site</li> <li>• small purchases</li> <li>• mapping possible suppliers and contractors</li> <li>• timetabling the worksite tasks</li> </ul>
<b>Worksite engineer / Production engineer / Purchase engineer</b>	<ul style="list-style-type: none"> <li>• all purchases for the worksite</li> <li>• request for quotations</li> <li>• evaluating and comparing the bids</li> <li>• negotiations with the suppliers</li> <li>• preparing the agreement and the appendixes</li> <li>• monitoring of the purchases</li> <li>• making reclamations to suppliers</li> </ul>

**Table 6.** Work titles and tasks.

As it can be seen in Table 6, most of the purchases in the case company are done by the work site personnel. Purchasing department (including source manager) do all the negotiating with the annual suppliers/contractors. Annual suppliers are long-term relationships that benefit both the seller and the buyer long term. That is why, the negotiations and agreement terms are done with care. The foreman at the worksite is responsible for the purchases, that they are on time, right quality, and match to the budget. Foreman's superior is the Work chief. Work chief does not work in the site, but only visits the site when needed. Work chief is responsible for the purchases for the whole project and that the costs are as low as possible. Cost management is a critical part of the work chefs' tasks.

#### **6.2.4 Questionnaire, Questions 4 and 5**

The questions 4 and 5 are summarized with a SWOT-analysis. SWOT analysis stands for strengths, weaknesses, opportunities, and threats. The previously mentioned are the factors that have an impact on the business and that should be taken into consideration when making business plans. (Seth, 2015.) Strengths and opportunities are helpful for the business. Weaknesses and threats on the other hand are harmful for the business operations. Strengths are things company does well, better than others, qualities what separates company from others, are internal resources and for example tangible assets. Weaknesses are things company lacks, company does poorly, and limitations company has. Opportunities are possibilities that the company might have. Threats on the other hand are emerging possibilities for business failure. (Seth, 2015.)

**4<sup>th</sup> question:** *Challenges in the purchasing process in the Case Company? (State 5 most common in your opinion)*

**5<sup>th</sup> question:** *What good is in the purchasing process in the Case Company?*

The SWOT-analysis can be seen in Table 7.

HELPFULL	HARMFULL
<p><u>Strenghts</u></p> <ul style="list-style-type: none"> <li>* competent personnel</li> <li>* annual agreements and their helpfulness</li> <li>* personnel who work together and help each other</li> <li>* purchasing department that handles the biggest purchases</li> <li>* purchase comparison is made easy</li> </ul>	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> <li>* shortages and errors in calculation</li> <li>* no supplier and contractor lists for joint use</li> <li>* personnel do not have access to the calculation data files</li> <li>* projects are relatively unknown in the construction field</li> <li>* no enough time for suppliers calculation</li> </ul>
<p><u>Opportunities</u></p> <ul style="list-style-type: none"> <li>* Purchasing software and its use</li> <li>* Possible process description of all purchases</li> <li>* Good working tools</li> <li>* International sourcing</li> </ul>	<p><u>Threats</u></p> <ul style="list-style-type: none"> <li>* small contractors and their uncertainties</li> <li>* hurry, too much workload</li> <li>* forever changing drawings</li> <li>* project budgets</li> <li>* increasing prices due to world situations</li> </ul>

**Table 7.** The SWOT- analysis.

As it can be seen in the SWOT-table, the questionnaire arises following *strenghts* in the case company's purchasing operations. The personnel who answered the questionnaire think that the case company's personnel and management are competent and well trained. The personnel have good knowledge. It was pointed that purchasing department and its concentration on annual agreements is super helpful for the personnel working in the sites. All larger purchases are done by the purchasing department. The overall atmosphere seems positive and personnel work well together. It was also pointed out that the purchasing comparison-tool seems amazing and easy to work with.

*Weaknesses* are also notified. Calculation is seen as a large weakness in the company. When project is starting calculation department does all the pre-calculations for the project. At this point in time, it is impossible to know

how the money will last. Each project will be divided into denomination. Denominations are for example earthmoving, designing, pile-driving, concrete elements, stairs, doors and windows, steel structures and so on. It is very hard as a calculator to know how much money should be put into each denomination. All the calculations are done based on previous knowledge and pre-biddings. Usually this leads to many problems during the construction face. Budgets are super tight and there is not a lot of room for movement. Supplier lists are also mentioned. Personnel would want a joint supplier lists to be used through the whole organization.

Next the *opportunities* are listed. The questionnaire arise conversation about the purchasing software that is used in the company. The employees feel the purchasing software could be used more efficiently since it has a lot of potential as a tool. The software could be improved and used in a correct way. The software also allows the purchaser to do the purchases directly from the software, but this segment is not used. Request for quotation is for example sent through email not directly from the software. There is a lot of room to improve in the upcoming years. International purchasing is also seen as an opportunity. The employees suggest that the purchasing department could start contacting foreign suppliers and pre-negotiate with them. Materials are available everywhere; the matter is that where to buy with good quality and low cost?

*Threats* are something that prevent an organization from succeeding or complicate it. Co-operation with small contractors and suppliers are seen as a threat to the case company. Small and unexperienced suppliers are uncertain and hidden costs can arise. Employees also highlight that the workload is sometimes too much. Everything is done with hurry, and there is no time to do tasks more closely. Case company has had many projects where the errors in drawings are common, and this makes the work hard at the worksite.

Many submitted answers pointed out that the pre-made budget for the projects are always way too strict. There is no room for errors and unexpected situations. The situation in the world was also discussed, since many material



prices have risen, and availability problems are possible.

### **6.2.5 Questionnaire, Question 6**

The 6<sup>th</sup> questionnaire question was about the development of the purchasing process in the case company. This was relevant for the research because the aim of this research paper was to figure out how the purchasing process can be (and should be) developed to make employees work more efficient and easier.

**6<sup>th</sup> question:** *How in your opinion can the purchasing process be developed?*

Based on the submitted answers following opinions for the development emerged. The most common answers summarized were:

*“Purchasing process descriptions available for every employee”*

*“Purchasing department and the management could start finding suitable suppliers/contractors and materials internationally”*

*“Management should lookahead more frequently. Agreements should be done beforehand, and they could be updated every 6 to 12 months”*

*“Purchasing software’s true potential is not in use”*

*“Schedule enough time for purchasing activities: request for quotation, evaluation, negotiations and agreements”*

*“All departments in the case company should be working the same way, now different departments all over Finland have their own ways of doing activities”*

*“Contractors lists about their pros and cons”*

*“Software for biddings”*

*“Thinking ahead and avoiding draft changes at all costs”*

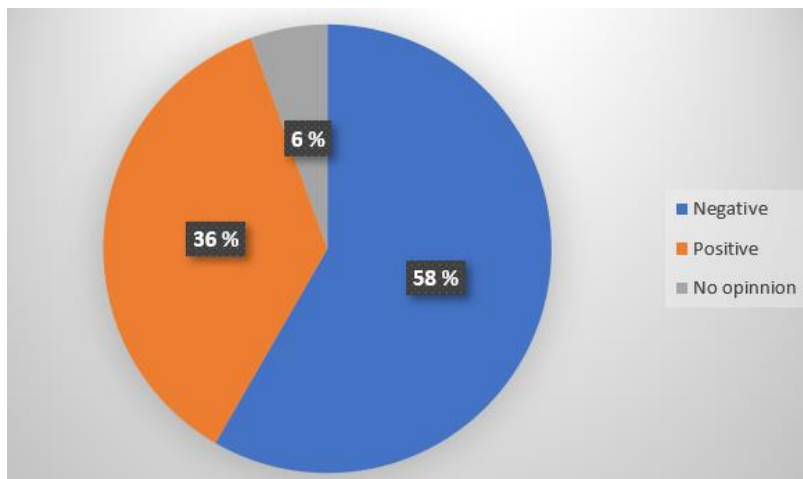
The development plan for the case company based on the answers will be presented and explained in the chapter 7.

## 6.2.6 Questionnaire, Question 7

The last question in the questionnaire was about international purchasing and the employee’s opinion on it. This question was important for this research because it gives the employees honest opinions whether the case company is ready for international purchasing.

### 7<sup>th</sup> question: *Opinion on international purchasing*

The submitted answers were categorized into positive, negative, and no opinion at all. Total of 36 answers were given. The following Figure 16 presents the distribution of the employee’s opinions.



**Figure 16.** The distribution of the opinions on international purchasing.

Based on answers submitted, over half of the employees (58%) have negative

thoughts about international purchasing. 6 % of the employees do not know whether to think positive or negative about it. Language barrier is seen as one of the biggest problems with international purchasing.

Other problems include:

- quality control and its complexity
- more workload
- communication problems
- more errors
- risk factors arise
- safety regulations in other countries
- ethical issues (Questionnaire, Google Forms 2022)

Some of the employees suggest that the case company's management could set percentages to each project that must be fulfilled with international suppliers and contractors. International purchasing could also open doors into expanding the case company's operations into other countries as well.

International purchasing is clearly seen as an unnecessary risk for the case company's operations. All unnecessary risks need to be avoided. The company must be sure about the foreign supplier and contractor before agreements are made. The pros of going global need to be larger than the negative effects.

The employees also discuss about the fact that by going global, the case company could locate voluntary personnel into working abroad. Surely, this would motivate employees.

## 7 DEVELOPMENT PLAN FOR CASE COMPANY

This Chapter gives suggestions on development areas and activities in order to improve case company's operations and motivate personnel. Table 8 summarizes the suggestions. Table is divided into two categories; change area and the needed activities.

<b>DEVELOPMENT PLAN - SUGGESTIONS</b>	
<b>Change in</b>	<b>Activities</b>
<u>Purchasing tools</u>	<ul style="list-style-type: none"> <li>* softwares total potential into use</li> <li>* request for quotation, biddings and bidding approval should be done at the software</li> <li>* automation in place</li> </ul>
<u>Purchasing process descriptions</u>	<ul style="list-style-type: none"> <li>* upgrades</li> <li>* availability for everyone</li> <li>* tools into use that helps in giving "warnings" about undone purchasing activities</li> </ul>
<u>Other Softwares and education</u>	<ul style="list-style-type: none"> <li>* new softwares into use that help the daily activities</li> <li>* software for biddings</li> <li>* personnel education</li> </ul>
<u>Point of view - The case company's Head Management</u>	<ul style="list-style-type: none"> <li>* supplier and contractor pre-scanning</li> <li>* realistic views on budgets and timetables of projects</li> </ul>
<u>Planning</u>	<ul style="list-style-type: none"> <li>* worksite personnel should be given more time for overall planning phase</li> <li>* calculation department and its calculation errors prevention</li> <li>* risk minimation</li> </ul>

**Table 8.** Development plan, the suggestions.

Change areas are divided into purchasing tools (software), purchasing process descriptions, education, and other software, head managements point of views and planning.

## **7.1 The purchasing tools**

The first area that needs to be changed/improved is the purchasing software in use. Currently the software is not used to its true potential. The software has possibility to more that it is used now. The researcher suggests that the software would be used to do the purchases directly. Now, purchases, negotiation memories, biddings, and request for quotations are sent via email. This has a lot of potential for errors and oblivion. The memory of the work tasks is only in the purchaser's head, when the software could do it all a lot easier and more efficient. Software nowadays provide automation to its users, and this decreases the possibility for human error.

The researcher suggests that the case company would contact the software provider and plan a way the purchasing tool can be used more automatically. All purchase related datafiles should be stored in the software. Software provider could also provide software education for the personnel. The personnel should be aware of the software features and how it can be used more effectively.

## **7.2 Purchasing process descriptions**

Employees feel strongly that the purchasing process descriptions are unclear. Employees noted that they have no idea where the descriptions are stored, and how often they are upgraded. Another point that the employees mentioned is the fact that even though there are "some kind of" descriptions on purchasing process they are not followed to the point. There are huge differences in case company's different projects in different cities. Some employees follow the descriptions, and some do not.

The descriptions should include:

- step by step descriptions on the purchasing process
- information on what documents is needed and where they need to

- be stored
- connection details

The researcher suggests that the case company's development department could focus on the descriptions and improve them into more efficient and easier to use. The most important issue that the personnel pointed out was the fact that different project worksite personnel work differently, and it is hard to know what the "right way" is.

### **7.3 Education and other software**

One aspect that was constant in the questionnaire answers was the aspire to educate the personnel more. The personnel are keen to understand more about the processes, tools, and reasons why operations are done the way they are. The case company offers the personnel monthly education through Teams on current issues such as winter concreting, ethics in business operations, timetabling and mental health. By educating the personnel, the personnel feel more motivated, aware of the goals and objectives and know what is expected and when.

Software for biddings would be a great help for the case company's operations. In the markets there are several software that provide "automatic" bidding comparisons. Software should be a tool that support the daily activities and company's goals. Software should guide the purchasing process from need to making assignments with suppliers.

### **7.4 Head Management's point of view**

From the questionnaire answers it was clear that the personnel are not fully satisfied with the case company's head management. It is crystal clear that the Head Management aim for success. Sometimes success goes beyond

everything else. Head Management was hoped to understand and consider that the budgets and schedules are often done too strictly. Work site personnel are not given enough time to participate in the budget and schedule making and this leads to budget and schedule crossings.

The personnel hope that the Head Management would

- give work site personnel time to make their own calculations and schedule expectations
- see projects more optimistically, not always profit front
- give some leeway into the budgets and schedules
- trust the personnel's' ability and training

The fact that the worksite personnel would be participating in the earlier stages of the process would give them more abilities to affect the planning. Usually, the personnel who make the project calculations do not have that much technical information or education.

## **7.5 Planning**

Based on the questionnaire the personnel addressed desire to participate more into the planning process of the projects. As mentioned in the Table 8, the planning time is seen as too strict. One of the biggest issues is the calculation that is done for each project beforehand. These are done by statisticians who have no knowledge on actual worksite operations. Usually, these calculations are not accurate and contain many missing pieces. For further development, the worksite foreman could participate already in the early calculation phases.

The planning process should be done following the planning process cycle (Picture 3).



**Picture 3.** The planning process cycle.

The case company's management should after determining the situation and setting the goals, asses the risks. Before starting the international purchasing, all risk factors need to be minimized. There needs to be a proper plan created before the foreign co-operation can start. Once the plan is implemented the review period starts. Based on the evaluation, changes are made to improve the operations.



## 8 CONCLUSIONS

Nowadays purchasing is a crucial part of business operations. Hallikas and Lintukangas 2016 highlight the importance of purchasing as a function towards a success. Organizations purchase services, materials, and items to full fill their business goals. In the recent years, international purchasing has become more and more popular. By purchasing abroad organizations can reduce their purchasing costs and get access to multiple suppliers and contractors. Purchasing from an international company can also be risky. Quality and safety regulations are the biggest concerns.

Purchasing process can be divided into tactical and operational purchasing. The process starts with an identification of a need for a material, items, or service. Then available suppliers or contractors are listed, and the request for quotation are sent. Once the supplier has done their own calculations the biddings are sent to the buyer. The buyer has comparisons and analysis on the biddings. Multiple suppliers or contractors are invited for a negotiation. Based on the negotiations the supplier is selected. Once the supplier is selected, the contract is made. After this, the delivery and act of performance is carried out. The buyer organization does make payments according to the contract. Supplier evaluation is done at the end of the cycle. Continuous improvement is the organizations long term goal. Hallikas and Lintukangas 2016 mention in their article *“Purchasing and supply: an investigation of risk management performance”* the importance of developing and sustaining good supplier relationships as a success factor for the future.

The research objectives were as follows:

- investigate the purchasing process in the case company
- describe the process steps one by one
- investigate how the purchasing process can be developed
- investigate the differences in international purchasing
- report the challenges in case company’s purchasing process
- create development plan

The purchasing process steps of the case company were explained, and the process steps were described one by one. The investigation of the development ideas of the purchasing process was executed with the help of the questionnaire. The challenges were listed with the help of the personnel opinions. Lastly, a development plan was created.

## **8.1 Answers to research questions and further suggestions**

The aim of this research was to answer the research questions which were as follows:

How can the international purchasing process be developed in the case company (and what are the possible improvements for the purchasing activities)?

Sub-questions were as follows:

- a. What are the challenges the company is facing
- b. How are the international purchasing activities carried out and managed

Based on the data gathered from the questionnaire following conclusions were made.

### **8.1.1 The development ideas**

It is evident that some improvements would make purchasing activities more efficient in the case company. Top improvements based on the questionnaire include:

1. Purchasing process steps and descriptions clear and available for every employee
2. Software improvements and true potential into use
3. Pre-scanning of the contractors by Head Management

4. Employee education
5. Ways of working – processes are done similarly in every project

One of the most important aspects of starting international purchasing are the foreign suppliers and contractors. The pre-scanning needs to be done carefully. The Head-Management needs to guarantee that the quality and the safety regulations are met.

Organizations personnel and employees need to be educated in a regular basis. Education is seen very positively in the personnel's minds, and they are keen on understanding the processes and why things are done the way they are. Education also keeps the personnel motivated and sharp-minded. By educating the personnel new ways of working can be taken into use. By educating the personnel, new software and other tools can be put into use. Campanini 2021 highlights the importance of education as a success factor. The importance of education is the basis for change and by educating the personnel even future leaders will be created. (Campanini, 2021. 289.)

In the case company, the software for the purchases is a good tool but it's true potential is not in use. The software is not used for request for quotation, biddings, and the agreements. All the above are sent via email to the contractors even though they could be sent directly via the purchasing software. The researcher also suggests that the personnel could be educated more on the current purchasing software so that its true potential would be in use.

One of the problems seen in the process is the fact that each project employee group work differently. Some groups handle all purchases with documents stored into the document bank. Other groups on the other hand have "oral" agreements with contractors. Employees have pointed out that a joint instruction from the head management are needed. How does the head management want processes and document to be handled and saved.

Almost 60 % of the personnel who answered the questionnaire had negative feelings towards international purchasing. International purchasing is seen to create more work tasks, into already tight schedules.

### **8.1.2 The challenges**

Starting international co-operation with a foreign country does always contain risks. These risks need to be assessed and minimized at all costs.

The challenges the case company could be facing related to international purchasing are language barriers, quality risks, safety risks and regulations, complications with deliveries and the personnel in the foreign country. When doing business in foreign country fraud risks arise as well. The most critical part is the supplier and contractor pre-scanning and pre-negotiations. The case company's head management needs to be aware about the risks and have a plan on how the risks can be minimized.

The starting of something new can always be challenging. When there is no previous knowledge on how international operations work, planning and strategies need to be done carefully. Based on the personnel answers, language barriers were seen to be the biggest risks when starting international purchasing. The personnel also expressed their worries about the delivery expenses and the quality concerns.

### **8.1.3 The managing**

The sub-research question was about the management and how the purchases are managed in the case company. In the case company there is a separate purchasing department that has 5 employees in total. These purchasing managers work tasks include negotiating annual agreements and pre-scanning new possible suppliers and contractors. The purchases are managed by the

purchase department and the worksite personnel. The main idea is to increase the value creation and decrease costs and risks. The managing process got plenty of positive feedback from the case company personnel. The personnel thought that the fact that a separate purchasing department negotiates all larger annual agreements helps enormously. Purchase management was addressed about the supplier and contractor lists to be used on all levels of the company. The researcher suggests that the purchase management would gather a supplier/contractor list based on references and knowledge. This way, the worksite personnel do not have to do their own scanning through the internet, work colleagues and work with risky contractors.

The managing processes in the case company starts with purchasing market research. Purchase managers study the (foreign) suppliers and their behavior. Supplier and contractor portfolio is being analyzed and the cost structures are studied. Purchase managers also research how the international markets operate. Current trends and the previous markets tell the purchase managers important information. The researcher suggest that the head management and the purchase department do a pre-scanning of the possible suppliers overseas.

Once the market search has been executed the objectives, strategy and planning are next on the list. The purchasing management has to set objectives and goals for the projects and the purchases. Purchasing strategy is important since it determines how the relationships with suppliers and contractors are managed and maintained. In today's business markets, relationships with other companies need to be cordial and appropriate to ensure long-term partnerships.

The next part of the purchasing management process is the implementation of the purchasing policy. Purchasing policy needs to be developed kept in mind other policies such as supply policy, product and supplier quality policy, materials cost policy, supplier policy and communication policy.

## Appendix 1

### Questionnaire 1 layout

- 1) What is your work title?
  
- 2) How long have you been working with the case company/current position
  - a. less than a year
  - b. 1-3 years
  - c. 3-5 years
  - d. more than 5 years
  
- 3) State what does your work consist of?
  
- 4) Challenges in the purchasing process in the Case Company? (State 5 most common in your opinion)
  
- 5) What good is in the purchasing process in the Case Company?
  
- 6) How in your opinion can the purchasing process be developed?
  
- 7) Opinion on international purchasing

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