Implementing an IBX e-procurement solution

- Are there any success factors?

School of economics, Växjö, Linnaeus University VT10

Bachelor thesis, 15 ECTS

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Acknowledgement

It was interesting and informative to write this thesis. We feel that we have obtained more knowledge about logistics in general and the importance of e-procurement solutions.

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Abstract

Title: Implementing an IBX e-procurement solution – are there any success factors?

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Background: One of the major problems that organizations face today is how to bring home savings. E-procurement solutions can be a tool to reach efficiency and reduce costs within organization. One of the biggest spend issues companies wrestle with are indirect material, also defined as MRO products (maintenance, repair, operations).

Purpose: The thesis will examine why companies decide to implement an e-procurement solution and what their expectations are. The purpose of the research was to identify which the success factors are when implementing this type of solution. Eventual problems that may emerge during the implementation and benefits that the implementation might lead to, will also be presented.

Methodology: The thesis has a survey design which studies variables in an e-procurement implementation. The scientific perspective is positivistic and has a deductive approach. The sample contains customers to IBX which use the entire solution, from planning to follow-up. The data has been gathered through a post-questionnaire.

Result /Conclusion: When deciding to implement an e-procurement solution companies base this decision on a number of reasons. The most common reasons are to increase the internal efficiency and reduce the supplier base. There are also other encouraging reasons to the implementation which all concerns saving time and money. Once the decision has been made, expectations on the solution arise and companies expect the solution to bring benefits. Most common expectations are much alike the reasons concerning saving time and money on purchases of MRO-products. Besides the reasons and expectation companies must consider the critical success factors, both before, during and after the implementation. These factors will determine whether or not the implementation will be a success and they can be divided into factors that affect all companies and factors that just affect some. The key factors, affect all, are defining an e-procurement strategy, change management and training and education. Secondary factors will affect some companies, and depending on the situation organizations must take them into their perspective. These factors are i.e. well defined steering group and communication. If companies don’t consider the success factors problems may emerge, where change management is one of the most common problem. This is an organizational
problem just like lack of information from external parts and lack in project management skills internally. Besides the organizational problems companies can also experience technical problems, which are directly associated to the solution that’s implemented. Some of these problems are complex usability, complicated to communicate and integrate. By avoiding the problems companies can expect to see more benefits from the solution, the most experienced benefits are compliance savings, reduced supplier base and lowered administrative costs. These benefits mainly considers time saving and are all associated with the reasons to the implementation and expectations on the solution.
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1. Introduction

The introduction chapter will give the reader acquaintance to the thesis focus of content. This chapter includes a background, a presentation of the company which provided information and help, a discussion about the problems with ending research questions, a presented purpose, the research limitations and future disposition of the thesis.

1.1 Background

The development in logistics during several years has meant shifting, leading companies to implement new or elaborate existing strategies. Globalization, deregulations, IT-development and demand on faster information exchange are just some of the factors in the supply chain that has forced companies to develop and restructure. (Baily et al. 2008)

The world market is expanding and becoming more competitive to work in. Companies are increasing their focus on activities that previously weren’t as important. One of the functions that have gotten more attention is the purchasing function. Earlier the only objective for the purchasing function was to acquire the right material, at the right time, in the right quantity, from the right source to the right place. (Baily et al. 2008) Although since the function has gotten more attention, organizations are starting to realize that the purchasers can contribute with much more. To see more exactly how and where development and improvements can be made, the purchasing function can be divided into six activities.

Figure 1 The Purchasing Function

Every activity in the function has different actions and supports the next step in the process. Together they provide the organization with goods, materials, services etc. and are therefore very
important to the company. (van Weele, 2010) Ever since the purchasing function got more attention it has moved from being seen as a support function to have a more central and strategic role. The function has gotten more responsibilities that should contribute to sustainable competitive advantage. (Quayle, 2005) With more focus and responsibilities the development has moved forward and new opportunities have emerged. One factor that has led to new possibilities is the ability to use internet in purchasing. By using internet companies can save money, offer high service to customers and suppliers and focus on value adding activities. (Boer et al. 2003)

Internet has expanded the e-trade business for companies and private customers during the last years. E-trade is a transaction through the internet with help from electronic technique, which is called e-procurement in business to business transactions. With the development of internet it’s now possible for companies to search and compare suppliers, products and services much easier and faster. (Baily et al. 2008) By using the new electronic technique and internet in the purchasing function companies expect to see savings (Kennedy & Deeter-Schmelz, 2001).

Earlier research points to several advantages of using e-procurement. However when implementing an e-procurement solution, companies need to define on which products or suppliers this type of purchases should be used. (Smeltzer, 2001) One common differentiation that has been presented is the Kraljic matrix. The Kraljic matrix is a portfolio analysis where either a company’s products or suppliers can be divided into different segments. When categorizing the products it’s based on two dimensions, purchasing impact on financial results and supply risk. This results in a two-dimensional matrix with four quadrants represented by four categories of products and different strategies for each segment. (van Weele, 2010)
In the Kraljic matrix it’s shown that routine products should be solved with e-procurement solutions. Many of today’s e-procurement solutions support these products. Simultaneously these products are often defined as MRO products (maintenance, repair, operations). (Rajkumar, 2001) In other words many of the e-procured products are products that doesn’t have any direct connection to the production. These products are necessary for keeping the organization running and for the support activities in general. Examples of these products are; office supplies, cleaning materials and copy paper but also maintenance materials and spare parts. (van Weele, 2010) It is not unusual that these kinds of products are purchased by any employee at a regular store, even though the companies have an agreement with another supplier. Therefore the established contract may not be used and unnecessary time and money will be spent. (Caridi et al. 2004)

There is great potential for companies to save time and money in implementing an e-procurement solution for their MRO products (Kennedy & Deeter-Schmelz, 2001). At the same time there are some requirements for implementing the solution. When implementing an e-procurement solution handling MRO products there aren’t many differences from implementing a regular business system. Therefore the solution must be in phase with the company’s object, strategies and specifications. (Rajkumar, 2001) Many companies have seen problems in implementing an e-
procurement solution. Companies have to consider many different aspects and effects which can occur before, during and after the implementation. By identifying the critical success factors, which are the factors that generate a successful implementation, companies can simplify their implementation process. If the implementation isn’t successful this will lead to a non efficient e-procurement solution. (Quayle, 2005) IBX Group AB is a company who provides e-procurement solutions. The company wants to make the implementation process effective by helping the customers to identify the critical success factors.

1.2 IBX Group AB presentation

IBX is one of the market-leading companies in the business of providing e-procurement solutions. The company helps organizations to rationalize and lower their costs by developing new solutions and supply the organization with effective tools. IBX is relative new on the market and has only been in the business for a decade. The company was established on initiative from SEB and Ericsson. To keep up with the technology and development IBX have acquired competitors and started cooperation to be able to expand. Today IBX has 240 employees and converts 318 MSEK yearly. The company have offices in Stockholm, Frankfurt, Helsinki, Copenhagen, Paris, Oslo and Oxford. (IBX Group AB, 2010)

IBX vision is to be the leading supplier of services and effective procurement solutions in Europe. By building a strong relationship with their customers they want to create additional value for their customers. IBX sees themselves as a partner and supplier that provide useful solutions for their customers. By doing this they want their customers to perceive them as reliable and professional. Even though the company is relative new they want to be perceived as a competent organization that has great experience in the field. (IBX Group AB, 2010)

IBX offers e-procurement solutions based on a system called “eSourcing Suite”. The system is an online solution which objective is to give companies support in their purchasing function. The solution will simplify and make the purchasing process easier to handle. A great focus for IBX is to improve the knowledge when implementing and changing system. The IBX e-procurement solution is a web-based on-demand solution which supports the entire procurement process, from requisition to order. (IBX Group AB, 2010)
The e-procurement solution streamlines the entire process by automating requisition and purchase order generation. IBX e-procurement solution has a catalogue of suppliers which can be added on by each company. The catalogue contains possible suppliers to the specific company and all of the items available for the employees to buy. The solution can be used by anyone in the company and all orders are routed to authorized personnel which place an order of all assembled requisitions. (IBX Group AB, 2010)

1.3 Problem discussion

The use of internet and electronic techniques is by many seen as a radical and beneficial change on the market. There are however some problems that may emerge when implementing an e-procurement solution. When companies decide to change their purchasing function and implement a new solution there are several factors to be considered and taken into perspective. E-procurement is by many seen as effective when it comes to saving time and money, but many companies experience problems when implementing this kind of solution. Very little is purchased through internet and companies are having problems integrating the e-procurement solution with the overall business strategy. (Quayle, 2005) How are companies going to avoid the potential problems implementing an e-procurement solution and reap the benefits?

When implementing an e-procurement solution companies often picture the benefits, but they don’t take into perspective the potential problems that may emerge. Companies need to have a clear strategy and consider the critical success factors when implementing an e-procurement solution.
(Rajkumar, 2001) What do companies need to think of and what are the critical success factors that have to be considered? If the company is trying to implement an e-procurement solution and doesn’t succeed, the purchasing function can be even more problematic and the intended advantages absent. Implementing an e-procurement solution often costs time and money, and if the system isn’t used as it should be, the investment may be unnecessary. (Rajkumar, 2001)

So what do companies have to do when implementing an e-procurement solution? What are the success factors that have to be considered and taken into perspective? What are the common problems and how can organizations avoid them?

1.4 Research questions

➢ Why do companies implement an e-procurement solution handling MRO products and what are their expectations?

➢ Which are the success factors when implementing an e-procurement solution handling MRO products?

  o Which common problems have the companies experienced when implementing the solution?
  o Which benefits have the companies experienced after the implementation?

1.5 Purpose

The purpose of this research is to examine what the success factors are when implementing an e-procurement solution from IBX. The research will also identify why companies decide to implement an e-procurement solution handling their MRO products and what their expectations are. As a result of this the thesis will present eventual problems that may emerge during the implementation and benefits that the implementation might lead to.

1.6 Limitations

This thesis is limited to IBX customers which have implemented their e-procurement solution.
1.7 Future disposition

After the introduction chapter the thesis will continue. The future disposition is presented in the figure below.

**Figure 4 Future disposition of the thesis**

- **Method**: A description of the methods used in the thesis.
- **Theory**: A description of appropriate theories when implementing an e-procurement solution.
- **Empirical Data**: A presentation of the gathered empirical data from companies.
- **Analysis**: An analysis of the theory and gathered empiricism
- **Conclusion**: A conclusion of the research and a presentation of reached results.
2. Methodology

This chapter describes the methodology of the thesis and explains our selection. Methodology is a tool that can help with guidelines, solve problems and to reach new knowledge. The selection of the methodology depends on what knowledge is going to be obtained. Before explaining which methodology that was chosen, a deeper explanation of our line of action is described.

2.1 Line of actions

The starting point in this thesis was to examine companies’ strategies when handling their strategic products. In consultation with the tutor we changed the direction and turned to what Kraljic defined as routine products. The motivation to this was that the routine products area had been less examined.

Through the tutor we got in contact with IBX group AB who handles these types of products and offers e-procurement solutions for these products. They agreed that we write the thesis for them, a project concerning which the “success factors when implementing an e procurement solution” are. We started to design research questions in co-operation with IBX, who had specific requirements. One requirement was that it should contain customers which have the entirely e-procurement solution, i.e. planning to follow up. IBX selected customers that were appropriate for the thesis. Another requirement was that the thesis had to be quantitative, where we gathered the information about the e-procurement solution implementation through a questionnaire.

An additional aspect in the thesis was the theoretical framework, which should give a deeper understanding and theoretical aspect. A theoretical framework endures information search, critical review and gather literature within the chosen area. The research should be current and relevant. The theoretical framework was performed in several steps and included problem and purpose of the thesis. Literature was collected in form of scientific articles, books and a specially designed questionnaire.
2.2 Scientific perspective

The theory of science describes how knowledge comes into existence and which role it has to the society. Since the beginning of 1900s there have been two theories of knowledge which differ when it comes to form knowledge. These two epistemological perspectives are positivism and hermeneutics. (Wallén, 1996)

After the late 1900s, positivism has been the foremost epistemological approach which primary feature is scientific rationality. (Wallén, 1996) A positivistic approach claims that real knowledge is knowledge which can be confirmed through the senses. (Bryman & Bell, 2003) Positivism also believes that the researcher doesn’t affect the object and that the objective is to explain and predict. (Björklund & Paulsson, 2003) The objective knowledge should be obtained through empirical experiments and assessments should be replaced by measurements. Some criticism has been directed against the positivism. The criticism doesn’t think the human should be seen as an object and it will not illustrate good overview. (Wallén, 1996)

The second epistemological approach is hermeneutics which, in contrast to positivism, holds that the observer cannot be distinguished from the object. Hermeneutics also holds that knowledge is generated by understanding and not by falsifications or verifications. (Björklund & Paulsson, 2003) The hermeneutics relates to the interpretation theory, which concerns understanding of the meanings in texts, symbols, documents and experiences. (Bryman & Bell, 2003) It also contains finding underlying factors. (Wallén, 1996)

Scientific perspective of this thesis

This thesis had a mainly positivistic perspective since the research method was quantitative with an objectivistic approach. Data was gathered through a questionnaire with questions that wouldn’t lead the respondents and gave the opportunity to make measurements. Consequently there was little room for own values.

2.3 Scientific approach

There are two generally methods when generating data and theory in a study. A deductive is one of the two methods, whose approach is to first gather theories and then use them in the empirics and
analysis. The other method is called induction. Inductive methods hold that empirics first should be obtained and thereafter generate relevant theories. This type of method is often used when new research areas are studied, which never has been examined before. (Halvorsen, 1992) The goal with the inductive method is to make generalized conclusions through observations. (Bryman & Bell, 2003)

Figur 5 The relation between the different scientific approaches

Scientific approach of this thesis

The method which has been used in this thesis was deductive. It was chosen because we had to be familiar with the subject before empirical data could be gathered. After reading material from IBX, scientific articles and books, information was generated about the subject. A questionnaire was designed after the analysis of the theories so empiricism could be fundraised and later analyzed. When the empiricism was compiled and analyzed a conclusion was presented. Another aspect which was considered was that an inductive perspective was inappropriate when applicable a quantitative approach. An inductive perspective demands more closeness and engagement.

2.4 Research method

The research method is very important for the study since it pervades the whole thesis. (Ejvegård, 2009) There are two kinds of methods when designing thesis. There is either a quantitave or a qualitative approach. The selection of method is mainly affected by the purpose of the research. (Björklund & Paulsson, 2003)
A quantitative method focuses, in general, to generate numerical data and approach a deductive method, i.e. first collect theory and then test the theories against the empiricism. A quantitative research also relates to a positivistic perspective because it focuses on an explanation rather than to find a phenomenon. This type of method also requires high demand on the measurement. Other aspects that a quantitative research focus on is that it have an explanatory focus, can be generalized to other environments and that own values are not being included. (Bryman & Bell, 2003) The information in a quantitative method has a large number of units in the survey and generates little information. (Halvorsen, 1992)

The qualitative method is a strategy which focuses on words instead of numbers. The method is in an epistemological perspective hermeneutics, which believes that focus is on an understanding of the social reality finding how participants interpret the environment. The process is inductive which means that theory is generated after empiricism. (Bryman & Bell, 2003) The quality method gathers data through a close relationship where the two methods are by interviews or observations. The observations are unstructured or semi-structured. (Halvorsen, 1992)

*Research method of this thesis*

The research method of this thesis was quantitative since we focused on measurements and used existing theories, a deductive method, and then presented empiricism which later was analyzed. The empirical data was gathered through questionnaires with a semi-structured layout. By interviewing IBX customers different reflections emerged. A questionnaire doesn’t generally influence the interviewed person which is correlated with the positivistic perspective. The thesis also included subjective values, but in limited range, which conducted into a qualitative perspective.

2.5 Data collection

The method of data collection is a meaningful feature when writing a thesis work since it affects the selection of research method and design. It’s generally a quantitative or qualitative method which decides the data collection. Except from these factors, data collection is also dependent on primary and secondary data. Primary data are data which are collected directly by the researcher through a quantitative or qualitative method and secondary data is already collected and printed from other researchers. (Halvorsen, 1992)
In a quantitative method, structured interviews and questionnaires are the most adopted approaches. Structured interviews are interviews where the respondent answers predetermined questions from the researcher. (Bryman & Bell, 2003) Questionnaire doesn’t have any interviewer; instead the respondent is sent a formulary with a number of questions, both of opened and closed character. This reduces cost and time. It also makes it possible to reach out to a larger amount of respondents because of the simplicity. (Halvorsen, 1992)

A qualitative method on the other hand has other strategies when it comes to gather data. The strategies are either through observations or interviews. In the observations the researcher is studying an object in its own environment and is related to a close relationship. Interviews are on the other hand made through either a semi-structured or unstructured way. (Bryman & Bell, 2003)

After decided which data collection is going to be used, types questions have to be selected. This is an important aspect, how questions are going to be formulate and how these are questioned. There are two types of questions open or closed. Open questions characterizes of that the respondent can answer with it’s own words and interprets. There are no leading questions that can lead the respondenant to wanted answers. Disadvantages with this type of questions is that it’s time-demanding, answes have to be coded and themes have to be found. Closed questions are designed with different alternatives that the respondent can choose from. Advantages with closed questions are that they’re easy to compile and the answers are easier to compare. On the opposite, closed questions can be limited, leading and hard to get extensive answers. (Bryman & Bell, 2003)

Data collection of this thesis

On behalf of the requirements by IBX and the time saving a questionnaire was designed for this thesis. The questionnaire included both open and closed questions. By using open questions, the customers could answer with own words which generated unexpected and different answers from IBX customers, which was the purpose. The questionnaires also contained closed questions which enabled the opportunity to deal with and compare the answers. These questions were illustrated and formulated relative to the research questions. We avoided general and leading questions in the questionnaire. Primary data was consequently gathered through the questionnaires. Secondary data was also contained by different books and articles. The theory was gathered from the Linnaeus
University library and different databases as ELIN and Business Source Premier. We have also received secondary data from IBX.

Table 1 Summary of IBX customers, which answered the post-questionnaire

<table>
<thead>
<tr>
<th>Companies</th>
<th>Position</th>
<th>Data collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company A</td>
<td>Range Communication Manager</td>
<td>Post-questionnaire</td>
</tr>
<tr>
<td>Company A</td>
<td>CFO</td>
<td>Post-questionnaire</td>
</tr>
<tr>
<td>Company A</td>
<td>E-procurement Manager</td>
<td>Post-questionnaire</td>
</tr>
<tr>
<td>Company B</td>
<td>Purchasing Manager</td>
<td>Post-questionnaire</td>
</tr>
<tr>
<td>Company B</td>
<td>Change Manager</td>
<td>Post-questionnaire</td>
</tr>
<tr>
<td>Company C</td>
<td>Supplier Activator</td>
<td>Post-questionnaire</td>
</tr>
<tr>
<td>Company C</td>
<td>CFO</td>
<td>Post-questionnaire</td>
</tr>
<tr>
<td>Company D</td>
<td>E-procurement Manager</td>
<td>Post-questionnaire</td>
</tr>
<tr>
<td>Company E</td>
<td>Sourcing Development Manager</td>
<td>Post-questionnaire</td>
</tr>
<tr>
<td>Company F</td>
<td>Senior Sourcing Adviser</td>
<td>Post-questionnaire</td>
</tr>
</tbody>
</table>

2.6 Research design

According to Yin (2006) every empirical research has an implicit research design, which couples empirical data with the research question and with the conclusions. The concept is quite complex because many factors have effects, one definition is:

“A plan that guides the investigator in the process of collecting, analyzing, and interpreting observations.”

(Yin, 2006, s. 39)

There are several types of research designs. Some examples are case-study, longitudinal design and survey design.

A case study is a research method which focuses on an individual case or a company. It’s connected to the qualitative method because it uses participant observation when it comes to collect data.

(Halvorsen, 1992)
A longitudinal design is a method which researches a sample during a long time horizon where the purpose is to find changes. (Bryman & Bell, 2003) The problem is that it’s time demanding. The method has other failures like loss, which tends to be huge. (Halvorsen, 1992)

The survey design is another form of research design whose purpose is to compare the relation between two variables at one specific time. The method is suitable when it comes to describe phenomena and generalize. (Halvorsen, 1992) Quantitative data guides the researcher so a comparison is possible. Questionnaires are very suitable and popular in a survey design. (Bryman & Bell, 2003)

**Research design of this thesis**

The selection of research design in this thesis was a survey design, since it’s more preferable to a quantitative method and the data collection method which are through questionnaires. The questionnaires were sent out on a specific time and the goal was to identify different angles from the customers referring to e-procurement implementation.

2.7 Sample

The researcher can use two methods when he makes a sample from the population. These two methods are probability sample and non-probability sample. Probability sample is a method where the researcher makes a randomly sample and where every unit in the population has the same chance to be selected. Non-probability is the other sample method where the researcher decides in advance which individuals that will be interviewed. There are three sample methods in a non-probability sample, which are; convenience sample, snowball sample and quota sample. (Bryman & Bell, 2003)

Convenience sample is a non-probability sample where the researcher selects individuals which are available and easy to contact. The problem with this method is that it’s hard to generalize. (Bryman & Bell, 2003)
Snowball sample is another method where the researcher contacts relevant people for the survey and then uses them to reach out to more. The problem with this method is that it’s also hard to generalize. (Bryman & Bell, 2003)

A quota sample is the third method which makes a sample in a non-randomly way. The objective is to get a sample which represents the population in terms of the relative distribution of individuals in various categories. The sample is often applicable on market surveys. (Bryman & Bell, 2003)

Sample of this thesis

Six companies were selected together with IBX in the thesis. They had to be localized in Scandinavia and use the entirely IBX e-procurement solution to be included in the sample. After the determination of companies we decided which employees that should be interviewed. These employees, with relative high positions in the company, were interviewed through questionnaires. They also had to be involved in the implementation process of the e-procurement solution to be selected into the sample.

The sample turned out to be a non-probability sample because of the predetermined companies. The sample became a quota sample since the objective was to find a sample which reflected the entirely population. We also chose a quota sample because we had to decide in advance which criteria’s that had to be met.

2.8 Scientific credibility

When it comes to judge the quality of a study, there are usually four criteria’s which are used. These four tests are generally concerning validity and reliability, where three of them concerns validity. (Yin, 2006)

*Construct validity* is one criterion which is about establishing accurate operational measures for the concept. The criterion is generally used in a quantitative method and in the process of data collection. It’s also important that the measure is reliable. (Yin, 2006)
**Internal validity** considers a causal relationship where some conditions leads to other conditions. This validity applies only to explanatory and causal studies, which means that it isn’t suitable for a survey design. (Bryman & Bell, 2003)

**External validity** is the third form of validity which considers in which degree the conclusions from the study can be generalized beyond the specific study. Generalization of statistical data is specifically important in surveys and analytical generalizations are important in case studies. (Yin, 2006)

**Reliability** is the last test when it comes to judging a study. It considers whether the results would be the same if the study was made again, which means that the research design must be illustrated evidently. Reliability becomes important in quantitative studies because of the importance of consistent measurements. (Bryman & Bell, 2003) Reliability is important in the process of data collection. (Yin, 2006)

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**Scientific credibility of this thesis**

The construct validity, which focuses on the measurement of a concept, was fulfilled since reliable data was gathered from IBX customers. Through discussion with IBX and great insight in the theories we chose to consider variables that could measure the concepts. IBX also reviewed the questions in the questionnaire.

The internal validity was in this thesis commonly low since it didn’t concern causal relationships. There is a conflict since a survey design usually generates a different conclusion in contrast to causality.

The sample of this thesis was key customers to IBX which used the entirely solution. We did a quota sample which goal was to generalize to the whole population. Bryman & Bell (2003) criticise the external validity in a survey design. The objective was to enable a high degree of generalization to other areas. This thesis focused on big companies with the entirely solution which means that it was hard to generalize to a huge area. It was however generally applicable on companies that wanted to implement an e-procurement solution from IBX and with similar size.
We analyzed the questionnaires and the theories critically so the measurements became accurate for the thesis. The companies which were interviewed were chosen by IBX because of their knowledge. They had the knowledge on which companies that used the entirely solution and that could generate accurate data for our measurements. The measurements were chosen by IBX, but we have reviewed them against theories so the right measurements were declared.

2.9 Summary of methodology

The figure below will describe our methodology briefly.

- **Scientific perspective**: Positivism
- **Scientific approach**: Deduction
- **Research method**: Quantitative
- **Data collection**: Questionnaire
- **Research design**: Survey design
3. Theoretical framework

This chapter describes appropriate theory to the thesis purpose. It presents an introduction with the purchasing function and then an explanation of Kraljic’s matrix. This continues with an explanation and description of e-procurement and its benefits and problems. The chapter then describes the implementation phase and what companies need to consider when implementing an e-procurement solution.

3.1 The purchasing function

Purchasing is a process between two parties with the exchange of services or goods against money. A general objective of the purchase is that it should: acquire the right quality of material, in the right quantity from the right source, at the right time. This statement is criticized of being simplified. (Baily et al. 2008) To easier understand the purchasing function it can be divided into several steps and actions. One common way that is described by van Weele (2010) is that the procedure can be categorized into six different activities.

![Figure 6 The Purchasing Function](image)

Each of these steps then includes several actions that also support the next step in the function. Specification means that the buyer defines the required quantity and quality of the goods or services that needs to be acquired.

Selecting the supplier is where the buyer determines the supplier who can meet the requirements best and is therefore supported with the defined specifications.

Contracting is then done with the supplier to establish an agreement and a legal contract.

Ordering is where the buyer places the order or establishes ordering routines for future supply.
**Expediting & evaluation** is carried out to make sure the supplier fulfils his job. The buyer monitors and controls the order to secure the supply.

**Follow-up & evaluation** is done to measure the quality of the supplier. The buyer reviews the suppliers to identify in what content they should be used again or if it was a onetime deal. (van Weele, 2010)

Every activity in the purchasing function is experienced in very few purchases, and can be simplified in routine orders or reorders (straight rebuy). Every purchase situation is different, where the time spent varies depending on the specific situation. Some products require a lot of time, in the first three steps in the purchase function, while other products requires less time. By differentiating products and suppliers companies can establish specific strategies and routines for their specific purchase situation. One common used procurement tool is the Kraljic’s matrix which helps companies to differentiate products and suppliers into four categories. (van Weele, 2010)

### 3.2 Kraljic’s matrix

Kraljic starting point is that companies needs purchasing strategies for two dimensions. The first is the purchase impact on financial results and the second is the supply risk. Each dimension is divided into two groups, high and low. On the basis of this a matrix is created with four categories; leverage products, strategic products, routine products (in this thesis called MRO products) and bottleneck products. (van Weele, 2010)
As seen in the figure there are different strategies for each segment. Every product has a specific impact on the companies and therefore can they use strategies which are suitable. Some general strategies for the four products are according to Kraljic:

- Competitive bidding for leverage products.
- Strategic partnership for strategic products.
- Secure supply and search for alternatives for bottleneck products.
- System contracting and e-procurement solutions for routine products.

E-procurement is a relative new solution that has emerged during the last decade. Van Weele (2010) suggests this method for MRO products because they’re simple to obtain and their low impact on the financial result. Simultaneously these purchases compose a big number of the total purchases. With well established routines companies can reduce the time spent on these orders. (van Weele, 2010)
Companies are starting to realize that purchases can contribute to sustainable competitive advantage with properly strategies (Baily et al. 2008). With new techniques like internet, room has emerged for innovation and flexibility in the purchasing function. The internet has created a new way of purchasing products where e-procurement is a big influence. (van Weele, 2010)

3.3 E-procurement

An e-procurement solution means that companies use electronic techniques in every stage of the purchase function i.e. from specification to follow up. (Baily et al. 2008) With e-procurement companies use the internet to support them through the entire buying process (van Weele, 2010). By using e-procurement the buyer have easy access to information and comparison (Kennedy & Deeter-Schmelz, 2001). Internet gives any employee access to information and companies can therefore use it in their search for products, services and suppliers. E-procurement is then a support system to the regular business system that helps purchaser’s easier find information and place orders. (Rajkumar, 2001)

Figure 8 The basics of e-procurement

![Diagram of e-procurement](source)

(Rajkumar, 2001, s. 53)

*The purchasing software is integrated with the ERP system and company A places an order on company B’s system. The order is then received by an e-commerce server which is integrated with company B’s back end ERP system. Therefore the e-procurement solution becomes a development from the already existing system and gives the purchaser support in the purchasing function. (Rajkumar, 2001)*
E-procurement solutions facilitate and automate the purchasing process and shift the focus from human labour to information technology. Neef (2001) means that the e-procurement process computerize the requisitioning, shipping, reciving process and payment systems, and provides for automating routing and tracking capabilities. Another aspect of e-procurement is that the focus on management shifts to horizontal processes and the purchasing of MRO products can be handled by any individual employee. E-procurement enables for the supply chain to become a continious, uninterrupted process extending from buyer to supplier. Further on can and should the e-procurement process comprehend the whole chain, from planning and forecasting to the selling organization no matter which product or service. (Neef, 2001) The e-procurement solution also contains a catalogue which helps the companies to find and compare suppliers. These catalogues are often customized to the specific organizations request and can enable different purchase patterns. (Rajkumar, 2001)

E-procurement is often divided into two main groups: indirect and direct. Indirect procurement doesn’t result in finished goods and this group can further be divided into two additional groups; ORM – Operating Resource Management (e.g. office products) and MRO – Maintenance Repair and Operations (e.g. replacement parts) materials. Direct procurement involves material that’s directly connected to the production of the finished goods. Today most companies focus on indirect materials, because of the possibility to bring home savings. This type of material represent a high volume in the purchasing process, often between 30 -50 percent of the total spend and they’re often very easy to automate. (Neef, 2001).
The features with an e-procurement solution are important to consider before an implementation. These features will develop the company and bring advantages. To understand what the solution can do, companies need to know its features. According to Neef (2001) some of these features are:

- Improve efficiency and reduce labour costs
- Enforce on contract buying
- Gather accurate and meaningful data on the total spending, both on the supplier and type of purchase
- Using supplier performance, select preferred suppliers for strategic sourcing
- “Smooth out” the supply chain: integrate process and systems, internally and with suppliers

(Neef, 2001)

3.4 Benefits with e-procurement

E-procurement should obviously contain features that will generate benefits for a company. Many authors mention several benefits of implementing an e-procurement solution on MRO products. Baily et al. (2008) mentions different benefits with e-procurement solutions such as:

- Reducing purchasing cycle time
- Enhancing budgetary control
- Eliminating administrative errors
- Increasing buyers’ productivity
- Lowering prices through product standardization and consolidation of purchasing power
- Better information management

(Baily et al. 2008)

Baily et al. (2008) points to these benefits that a successful implementation of an e-procurement solution should lead to. Other authors concur with this by arguing that e-procurement should lead to reduced time and costs, which are the main reasons in implementing this kind of system. (Kennedy & Deeter-Schmelz, 2001) At the same time some other advantages are mentioned, Kennedy & Deeter-Schmelz (2001) also mentions that it’s easier and faster to get information. Quayle (2005) claims that implementing an e-procurement solution will erase the eventual time-zone difference
that can cause problems between buyer and supplier. Simultaneously companies eliminate much paperwork and the risk of administrative errors that paperwork brings. (Attaran & Attaran, 2002)

Companies’ can’t only focus on the benefits and believe everything is all right. The benefits with e-procurement must be measured accurately. This is a problem because companies tend to measure annually instead of measure during the projects process. The companies can measure benefits which are either direct or indirect. The directly benefits are those which demonstrate a return on the investment of e-procurement. Some of the directly benefits are approximately mentioned above such as price savings, process cost reduction, cycle time reduction and inventory reduction. The indirectly benefits are benefits like supplier and contract development which are benefits that increases the available individual time. There are also additional benefits that are hard to measure like benefits in cultural changes. (Baily et al. 2008)

3.5 Problems with e-procurement

It’s common known that implementing an ERP or e-procurement solution involves time, money etc. which in turn often creates problems. Implementing a new system is a complex process because it requires changing management, rethinking and renegotiating relationships. (Neef, 2001) Implementing an e-procurement solution takes time, costs money and requires patience and good knowledge. (Quayle, 2005)

When implementing an e-procurement solution it’s important that companies take into perspective their back-end ERP system. The new e-procurement solution must be integrated with the existing ERP system. If it isn’t done the e-procurement solution tends not to be used and employees will complain about complication with several non-integrated system simultaneously. Companies must therefore have patience with the implementation instead of expecting positive effects immediately. The integration will take time and cost money for companies. Companies must be aware of the initial investment cost that will occur when implementing a new e-procurement solution. The implementation requires; education and training, supplier negotiations and assistance, consulting fees etc. These requirements can entail high costs for companies as well as the actual investment. (Neef, 2001)

Another aspect to consider is according to Neef (2001) the fundamental changes to procurement business processes and company culture. Bringing a new system into a company will affect many
different areas, internally and externally. Companies need to be able to change and adapt to use the system effectively. If companies wants to implement an e-procurement solution they need to consider the requirements and the organizational changes that an implementation would bring. Some of the aspects to consider are the critical success factors that will be presented later on in this thesis. (Neef, 2001)

- Takes time and costs money
- Change management
- Rethinking and renegotiating relationships
- Integrate with back-end ERP system
- Technical issues
- Consider critical success factors

(Neef, 2001); (Quayle, 2005)

3.6 Implementation

Many companies experience these problems even though a lot of resources are spent on the solution and the implementation process. Studies have shown that over 90 percent of business systems implementations either exceed the time plan or the economic budget. Therefore the implementation process is very important and companies need to have a great focus to make it successful. (Martin, 1998); (Parr & Shanks, 2000)

Parr & Shanks (2000) argues that companies should see the implementation of a business system as a project and not as an installation of software. One model which simplifies the process is the project phase model (PPM). This model defines the different steps in the implementation process to simplify the implementation. (Parr & Shanks, 2000)

The project phase model focuses on the different specific steps in the implementation process instead of the implementation as an entire process. This facilitates the work with the implementation by clearly showing what has to be done before proceeding to the next step in the implementation process. The model defines three different steps which are shown in the figure below. (Parr & Shanks, 2000)
Planning – The plan phase is before the actual implementation and includes the selection of business system, choosing of steering group, determination of high-level project scope and broad implementation approach, choice of project team leader and determines what resources should be spent on the project. (Parr & Shanks, 2000)

Project – The project phase extends from identifying the business system to the actual installation, and is divided into five different steps. (Parr & Shanks, 2000)

In the set up phase a project group is chosen, which should consist of a mixed group with technical and business expertise. The group’s integration and rapport processes become established and the guiding principles are developed or affirmed. The re-engineer phase involves an analysis of existing business processes, installation of the business system, mapping of the business processes on to the business systems functions and training of the project team. (Parr & Shanks, 2000)

The design sub-phase entails high level design and then detailed design subject to user acceptance. This is followed by interactive prototyping which is accompanied by constant communication with users. The major activities of the configuration and testing sub phase are the development of a comprehensive configuration, population of the test instance with real data, building and testing interfaces, writing and testing reports and system and user testing. Finally, the installation sub-phase includes building networks, installing desktops managing user training and support. (Parr & Shanks, 2000)
**Enhancement** - The enhancement phase often extends over several years and includes different stages of system repair together with extension and development of the system. (Parr & Shanks, 2000)

All these stages are important for the company when installing a new system. Every stage must be executed carefully so that the whole process becomes efficient. An important aspect that has to be considered before and during the process is the critical success factors. These factors determine if the implementation will be successful. (Parr & Shanks, 2000)

### 3.7 Critical Success Factors

The success factors will affect the implementation process and how efficient the system will work after the implementation. At the same time it’s difficult to define what a success factor really is, this because it’s a wide concept with many elements. To generate a successful implementation it’s important to consider and identify these success factors carefully. The factors have to be considered before the actual installation of the system. If not, the system might not be used as expected and the anticipated advantages can absent. (Rajkumar, 2001)

Magnusson & Olsson (2005) mentions a number of critical success factors which are divided into four different dimensions. These dimensions have four different influences that affect them.

*Figure 11 Critical success factors in different dimensions*

(Magnusson & Olsson, 2005, s. 96)

All these factors affect whether or not the implementation will be successful. When a company is going to implement a new business system they’ll have to take all these factors into account.

(Magnusson & Olsson, 2005)
Management

When a company decides to change their business system it’s often the management that takes the decision. What’s important in this first step and sub steps is to select a group which will be responsible for the change and declare the expectations. (Rajkumar, 2001) This group should also be aware of the overall strategy and the company’s goals, so that the business system corresponds with the overall strategy and the goals. (Magnusson & Olsson, 2005) Companies need to have a well defined strategy which are a combination of a technology and business strategy. The chosen group of people that are therefore responsible for the change needs to know the objective of the change and how this can be done without opposing the business strategy. The personnel in the steering group need to have both technical and business expertise. (Magnusson & Olsson, 2005)

It must also be defined in which areas procurement is most likely to provide improvements and create competitive advantages. The company needs to identify the core competence and how the procurement can support this. The technology then needs to support these core competencies. (Rajkumar, 2001)

Project

The implementation is then carried out through one or a series of projects. With this approach the company can use earlier experiences in projects and apply this experience in the forthcoming project. The project group might experience a series of potential problems which are related to how well the company can handle projects. To avoid these problems Magnusson & Olsson (2005) mentions four different factors which often occurs and affects the project. The first one is to compose a team with the right individuals which has the right competence and can intermediate the results out to the whole organization. Thereafter the management needs to see the implementation as a total change and not only as a technical change. The change affects the whole company and its structure, and is not only a technical change. The project group also needs to determine a plan, method or routine of how the implementation should be done. At last the group that are responsible for the project has to decide if they should bring in external help and in which magnitude. (Magnusson & Olsson, 2005)

Other authors like Attaran & Attaran (2002) claims that the procurement process needs to be reengineered and that the change should not only automate the existing methods. The procurement
process should also for example be reviewed concerning supplier relationships. (Attaran & Attaran, 2002)

**Organization**

Since a change of business system affects the whole organization it’s very important to take into perspective which organizational aspects that could cause problems in the implementation process. Magnusson & Olsson (2005) mentions that the company needs to welcome the new system if the functionality should work well. The companies culture needs to be open for changes and should have a learning culture to implement the system successfully. Another aspect that also needs to be taken into account is that the communication needs to be clear. The companies have to know what will be communicated and what they want to communicate through the new system. (Magnusson & Olsson, 2005)

**System**

The adoption of a new business system is a very complex and technical commitment where the company has to know on to which product and supplier segments the new system will be used for. (Rajkumar, 2001) The companies must know which system is used now and how the new system will work. When implementing an e-procurement solution companies have to make sure that this new system can be integrated with the back-end ERP system. (Attaran & Attaran, 2002) The new solution must also work with the supplier so that orders can be processed through the new system. Therefore companies needs to have good control over what the system requires and which skills the user’s needs. (Magnusson & Olsson, 2005)

Implementing a new system is often a big change and companies’ employees might need training to be able to use it. It’s important to start the training early, since it can create a sense of “it’s my system” feeling. If the employees that are going to use the system are comfortable with it, then it will be used efficiently. Although if the users aren’t comfortable the system may not be as effective and all its features may not be used. It’s also important that the training and education is ongoing, so that the employees know how the solutions latest updates work. (Rajkumar, 2001)

All these factors have to been taken into perspective before the actual installation, but there’s also work that has to be done after the installation. Once the new business system is installed the companies needs to proceed. The new system needs maintenance and management, which could be
in form of repairs or installing new features, that in turn requires new training for the employees. (Magnusson & Olsson, 2005)

E-procurement is a revolution in purchasing which is expected to lead to many advantages. The implementation of an e-procurement solution is a complex situation that requires much effort from companies. It’s important to consider the critical success factors, the solutions features and all the work that a new system will bring. If companies take all the critical success factors into perspective and have clear definitions of what needs to be done, they can make the implementation successful and expect to see advantages. (Magnusson & Olsson, 2005)
3.8 Analysis Model

Research questions

Research question 1
Why do companies implement an e-procurement solution handling MRO products and what are their expectations?

Research question 2
Which are the success factors when implementing an e-procurement solution handling MRO products?
- Which common problems have the companies experienced when implementing the solution?
- Which benefits have the companies experienced after the implementation?

The theories are compared to the empirical data from the companies. As a result of this comparison the research questions will be analyzed.

Analysis

The theories are compared to the empirical data from the companies. As a result of this comparison the research questions will be analyzed.

Empiricism

Questionnaires regarding the theories have been responded by the following companies provided by IBX.
- IBX Group AB
- Company A
- Company B
- Company C
- Company D
- Company E
- Company F

Conclusion

The research questions will be answered.

Research question 1
Results

Research question 2
Results
The analysis model illustrates how the thesis will be structured and later analyzed. The model begins with the research questions which were developed with IBX. The questions pervade the entire thesis because they will be answered in the conclusion.

When the research questions were determined, theory was gathered. This chapter observed important areas when implementing an e-procurement solution. Areas such as critical success factors and problems with an e-procurement solution are examples which are regarded. The objective with the theoretical chapter was to gather reliable data which could be compared to empiricism and result in an analysis.

The empiricism was gathered through a questionnaire from the customers to IBX. The answers were compiled into texts and diagrams. When the theory and empirical data were gathered the analysis was performed. The analysis of the thesis compared the theory with the empiricism and focused on the research questions.

The conclusion was thereafter performed, which answered the research questions based on the analysis. This last part of the thesis regarded the main reasons why the customer had implemented an e-procurement solution, expectations on the solution, the success factors, problems which had emerged during the implementation and experienced benefits of the e-procurement solution.
4. Empirical Data

This chapter presents the empiricism that has been gathered from the examined companies. The chapter begins with an introduction to the questionnaire and its design. The chapter proceeds with a presentation of the respondents’ answers to reasons, expectations, critical success factors, benefits, measurements and problems.

4.1 Questionnaire

A questionnaire is an effective way of collecting data since it fast to administrate and can collect data from a big geographic area. (Bryman & Bell, 2003)

A post-questionnaire was designed especially for this thesis, see appendix 1. The questionnaire endured of 24 questions based on the e-procurement solution from IBX. It consisted of mostly closed questions were the respondent got to choose between predetermined answers. Questions of closed characteristics were either yes/no- or multiple-choice questions, but also rank-questions were included in the questionnaire. The respondent answered several alternatives on the basis of their references. (Fink & Kosecoff, 1985) The open questions gave the respondent opportunity to express themselves with their own words and thoughts. An aspect when using that type of questions was that the respondents’ shouldn’t be led in any directions, to be as objective as possible. (Bryman & Bell, 2003)

The questionnaire was parted into three different parts to make it easier for the respondent to guide through the questions and easier to compile. The first part endured of five background questions, which examined how, why, when and by whom the e-procurement solution was implemented. The second part consisted of nine system related questions concerning; satisfaction/dissatisfaction with the solution, guidelines, support from consultants etc. The third and last part consisted of ten questions regarding evaluation, measurement and improvement.
4.2 Pilot Study

To examine the questionnaire’s validity, a pilot study was performed with the intention to improve the questionnaire and to increase the answer frequency. The questionnaire was sent out in the beginning of April to IBX different departments. The employees were selected by our contact person at IBX, and they had different positions within the organization. The employees were chosen because of their knowledge within the area of e-procurement and implementation. The reason that the pilot study was performed on the employees of IBX was that the questionnaire had to be designed according to IBX outlines.

4.3 The result of the questionnaire

The questionnaire was sent out to six of IBX customers, with a total of fourteen persons in different management positions. All the respondents were directly connected with the solution from IBX and most of them were involved during the entire implementation process. All of the respondents worked at companies which were located in Scandinavia. From the fourteen persons asked, ten answered the questionnaire. Of the four people that didn’t answer the questionnaire, one was sick-listed, one didn’t want to participate and two didn’t reply.

Totally ten questionnaires have been analyzed which resulted into an answering frequency on 71, 42 %. From the questionnaire, information was gathered and compiled. Overall there’s a theme in the respondents’ answers and few of them differed from each other.

4.4 Main reason to implement the IBX e-procurement solution

All the companies in the research have used the IBX e-procurement solution for a number of years. For every company in the research this was at least four years ago, except for one who implemented the solution two years ago. When the companies decided to implement the new solution it was top management who were the initiative takers.

When the initiative takers took the decision to implement, it was based on a number of reasons. The respondents’ couldn’t mention only one main reason for the implementation, instead several motivation factors caused the change. The two reasons that were most frequently mentioned by the
respondents were; increased internal efficiency and reduced supplier base. Simultaneously other factors mattered and were important reasons for the implementation in some companies.

Table 2 Main reason to implement the IBX e-procurement solution

<table>
<thead>
<tr>
<th>Main Reason</th>
<th>Nr. of answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice Matching</td>
<td>5</td>
</tr>
<tr>
<td>Shorter Lead Times</td>
<td>3</td>
</tr>
<tr>
<td>Ensure a High-Quality Purchase</td>
<td>6</td>
</tr>
<tr>
<td>Process</td>
<td>5</td>
</tr>
<tr>
<td>Reduce the Supplier Base</td>
<td>8</td>
</tr>
<tr>
<td>Increased Internal Efficiency</td>
<td>7</td>
</tr>
<tr>
<td>Lower Purchasing Costs</td>
<td>4</td>
</tr>
</tbody>
</table>

This table represent the respondents answer to what their main reasons were when they decided to implement the e-procurement solution from IBX. The respondents could give multiple answers and didn’t rank their reasons. Every staple therefore represent the number of respondents which stated this as a reasons to their implementation.

Apart from the two reasons that were mentioned by almost everyone, were lower purchasing costs and ensure a high-quality process most pointed out. Except from the predetermined options the respondents also mentioned other reasons to the implementation. One respondent claimed that the solution should simplify the purchasing process and make every employee use the right supplier, while another respondent declared that the solution should make it easier to standardize. Once the companies decided to implement the new solution, expectations arise.

Every company in the research had very similar expectations to implement the solution. Overall the two main expectations that were mentioned by almost every respondent were to reduce time spent on purchases of MRO-products and eliminating costs from these purchases. Through bundled
purchases the companies expected to save money and by having clear rules for approval they wanted to make their purchases easier. An additional expectation that also was mentioned by the respondents was process efficiency. Through the e-procurement solution the companies wished to make the whole chain more efficient.

4.5 Satisfaction/Dissatisfaction from the e-procurement solution

In the spring of 2010 the companies have had the solution for at least two years and could therefore give their opinion on whether or not they were satisfied. The majority of the respondents were satisfied with the e-procurement solution from IBX, however with a slight differentiation in the information management feature. More than fifty percent of the respondents stated that they were unsatisfied with the information management in the e-procurement solution. The three respondents which claimed that they weren´t satisfied with the solutions overall functionality were the same as those who weren´t satisfied with the supplier management, call off and information management. Simultaneously the respondents who were satisfied with the overall functionality were also satisfied with almost all the features in the solution.
Table 3 Satisfaction/Dissatisfaction from the e-procurement solution

<table>
<thead>
<tr>
<th></th>
<th>Don’t Know</th>
<th>Very Unsatisfied</th>
<th>Unsatisfied</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reporting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Call off</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Functionality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 represent the respondent’s satisfaction with the solution and its features. The respondents ranked their answers on every feature and the staples represent the number of respondents which gave that answer.

To understand why the respondents’ weren’t satisfied they got the opportunity to clarify. The main reasons for the dissatisfaction were that the solution wasn’t user friendly and complex to use. Most of the respondents that were unsatisfied complained about the usability. They mentioned that the solution was complicated to administrate and that the language alternatives were narrow. Besides these technical issues that were caused from the system itself there were also organizational aspects that needed to be considered. These organization aspects are often compiled into critical success factors, factors that affect the success of the implementation.

4.6 Critical success factors in an e-procurement implementation

There are a number of success factors that affect the implementation and the respondents also mentioned several factors which affected them. Although, the respondents who weren’t satisfied with the solution also claimed that they haven’t experienced or considered any success factors, and therefore didn’t determine any factors that affected their implementation process. The respondents
which were satisfied with the solution argued for several success factors, where two factors were mentioned by almost everyone; training, education and defining an e-procurement strategy.

Table 4 Critical Success Factors when implementing the IBX e-procurement solution

<table>
<thead>
<tr>
<th>Critical Success Factors</th>
<th>Nr. of answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Defined Steering Group</td>
<td>4</td>
</tr>
<tr>
<td>Supplier Integration/co-operation</td>
<td>5</td>
</tr>
<tr>
<td>Manage Expectations</td>
<td>2</td>
</tr>
<tr>
<td>Identify Useful Measures</td>
<td>5</td>
</tr>
<tr>
<td>Focusing on Segments</td>
<td>3</td>
</tr>
<tr>
<td>Training and Education</td>
<td>4</td>
</tr>
<tr>
<td>Reengineering the Procurement Process</td>
<td>2</td>
</tr>
<tr>
<td>Defining an E-procurement Strategy</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 3 represent critical success factors that the respondents considered or experienced to be important. The respondents’ didn’t rank their answers and were also given the opportunity to give several answers. Therefore the every staple represent the number of respondents who considered that factor to be a critical success factor.

The companies established that training and education were very important to make the implementation successful. Additional to this, all the examined companies have used consultants from outside of the firm for a few days to train the employees. After this training almost every company have trained new user from educated personnel within the firm. The respondents also mentioned that the companies needed to have a well defined e-procurement strategy that has to interweave with the overall strategy in the company. Besides these two factors that extend from the others, the respondents also mentioned that the management needs to support the new solution, have a well defined steering group, identify useful measures and that companies must be open for change. Especially open for change was a factor that was mentioned by almost every respondent. Therefore the change management factor was something that companies needed to take into account.
The respondents were also asked if they used consultants to help them with the implementation and education. The consultants can help the companies in the implementation and therefore it might be accounted as a success factor. As earlier mentioned all the companies bought training from external consultants to help them understand the solution and they also felt like the consultants contributed with value adding activities during the implementation process. Simultaneously no respondent claimed that the use of external help was a success factor, and only two of the companies in the research have ongoing training from outside consultants.

Besides using consultants to train the employees for the e-procurement solution, the respondents also mentioned that most of them bought guidelines for the implementation. These guidelines should assist the company in the implementation and guide them through the process. The most applied guidelines that were bought from consultants were; set-up an e-procurement strategy, having the right suppliers in the system, content, education and training. Those who decided not to buy guidelines from external consultants created own guidelines and some of them benchmarked.

4.7 Benefits with the e-procurement solution

After the implementation the companies might experience benefits. The respondents claimed that they have experienced several benefits with their implementation; were all of them have seen compliance savings (costs savings). Overall the companies experienced benefits in saved costs and time, but also more control over budget and information.
Table 4 consists of benefits that the respondents have experienced after the implementation. The respondents also had the opportunity to give multiple answers and therefore the staples represent the number of respondents which have experienced that benefit.

The respondents stated that they have experienced benefits in reduced supplier base which were one of the main reasons. The second most frequently mentioned main reason was increased internal efficiency, which all companies experienced through compliance savings. Overall most of the companies experienced the benefits that they wanted and expected to see.

What’s also important to consider is how the companies have measured these savings. Every company in the research does measurement of the solutions effects, which are mainly done by either a project group or the procurement department. Only one company used external help in the measurement, but they also measured internally. The respondents measured parameters that thoroughgoing were about saving time and money.
Table 6 Measurement parameters of the e-procurement solution

Table 5 represents parameters from which the respondents measure benefits. The respondents could give multiple answers and therefore the staples represent the number of respondents which measure that parameter.

Another aspect to consider is that these were the only parameters that the companies measured. Beside these the companies have still seen benefits in other areas, even though they didn’t perform ongoing measurements there.

4.8 Problems with the e-procurement solution

Many companies experienced problems with the implementation, which could be both organizational and technical problems such as unstructured organizations and bad usability. Problems that occurred in many of the companies were that the solution was complex to use and that the language alternatives were limited. The solutions complex usability also made it hard to communicate for some of the companies, and especially the communication to end-users. Further problems were; hard to integrate with back-end ERP system, having a competent project group, lack of information from external parts and lack in project management skills within the organization.
Besides these problems, one extended from the others. Almost every company in the research stated that change management was the biggest problem. Thoroughgoing the respondents mentioned that changing the employees’ way of thinking was a very big issue when deciding to implement a new solution. Many employees were set in their old ways and didn’t want to change. An additional aspect to consider within the change management is how welcomed the solution was by employees. For the companies in the research most of the employees thought that the new solution would be good, while others were sceptical. Simultaneously most of the sceptics changed their mind after a while, and perceived the solution as good later on. Although companies were satisfied with the solution and declared it functional, they still have experienced organizational and technical problems.
5. Analysis

This chapter will compare the theories with the empiricism. It will present the basic theory so that the reader easier can follow the arguments and thoughts when the theories are compared with the empiricism. The research questions will therefore be analyzed and answered individually.

5.1 Why do companies implement an e-procurement solution handling MRO products and what are their expectations?

Main reasons to implement an e-procurement solution

Since an e-procurement solution enables an efficient supply chain and has become more popular, companies consider implementing the solution. Kennedy & Deeter-Schmelz (2001) argues that the two main reasons to implement an e-procurement solution are to save costs and time. Other authors explain the reasons more thorough by breaking up the two main reasons into additional causes. Neef (2001) pronounces some features with an e-procurement solution, such as; improved efficiency, sourcing and contract buying, which can be accounted as reasons. The benefits mentioned in the theory could also be reasons to why companies implement the solution. Baily et al. (2008) states benefits like: reduced purchasing cycle time, increased buyers’ productivity and better information management.

The questionnaire contained examples of main reasons from different authors in the theory. The reasons weren’t defined identical in the questionnaire compared to the theory, but they had the same content. The reason to the different definitions was that the authors had different definitions for the same main reason. To see the questionnaires definition, see appendix 1.

The empiricism showed some similarities with the theory’s reasons to implement an e-procurement solution. Kennedy a & Deeter-Schmelz (2001) states that saved cost and time are main reasons while Neef (2001) argues for improved efficiency, which all are associated with the most mentioned reasons by the respondents. The two most frequent answered reasons from the companies to
implement the solution were increase the internal efficiency and reduce the supplier base. Except from these two, the companies wanted to reduce the purchasing costs, ensure a high-quality purchasing process, improve invoice matching and reduce lead time. All the respondents’ reasons therefore consider time and costs savings.

By increasing the internal efficiency companies will improve different areas in the organization. An insufficient process, such as administrative errors, can be eliminated and information management can be improved by faster information exchange. When all these unnecessary activities are eliminated, labour costs will decrease and more time will become available, which is associated with the time reason mentioned by Kennedy & Deeter-Schmelz (2001).

The second main reason was to reduce the supplier base which also improves areas like sourcing suppliers and bundle purchases to a specific supplier. When companies bundle purchases they strengthen their purchasing power, which means that they can negotiate more beneficial contracts with the suppliers. As mentioned earlier these two main reasons engender cost and time savings for companies, which also are the main reasons according to Kennedy & Deeter-Schmelz (2001). For instance, a better information management generates time savings and bundled purchases to cost savings. This means that approximately all reasons in the end will be cost and time efficient but where companies focus on different reasons.

It can be seen in the empiricism that some reasons weren’t that important as increased internal efficiency and reduced supplier base. Lower purchasing costs and a high-quality purchase process were two reasons which came after. Simultaneously by reducing the supplier base companies can lower their purchasing costs and therefore this is a reason that might not be as important. The other reason, that was to ensure a high-quality purchasing process, is a wider concept which regards to rationalise the entire purchasing process while the other reasons focused on specific segments. An explanation to why the companies had different reasons to their implementation is because of specific situations and goals.
Based on the features and anticipated benefits of an e-procurement solution companies will have different expectations. Some might for instance expect shorter lead times while others will expect a better control of the budget or a better information management. Baily et al. (2008) argues that it’s important to measure the benefits accurately so that companies can see if the expectations were met. Magnusson & Olsson (2005) also declares that it’s important for the project group, which is responsible for the implementation, to inform the expectations to the employees. The expectations have to be reliable and corresponded with the overall strategies and goals. It is important to measure the benefits accurately since it’s a challenge to see if the expectations were achieved.

The respondents answered which their expectations were with the solution. Two expectations which occurred frequently were to reduce time on MRO purchases and eliminate the costs from these. To summaries, the companies wanted to save costs and time for MRO purchases, which are mentioned as reasons by Kennedy & Deeter-Schmelz (2001). There was also another common expectation with the solution which was process efficiency. Which objective was to rationalize the supply chain and, as a result, save cost and time.

The expectations from the companies with an e-procurement solution were very similar to the main reasons to implement the solution. The main reasons were to save costs and time which also the expectations were. Companies therefore build up expectations from their reasons to implement the e-procurement solution.

5.2 Which are the success factors when implementing an e-procurement solution handling MRO products?

According to Rajkumar (2001) are success factors one of the most important aspects to consider when deciding to implement an e-procurement solution. The success factors will determine whether or not the implementation will be successful. To make sure that the solution will be used as expected these factors needs to be considered early in the implementation process.

The success factors can according to Magnusson & Olsson (2005) be divided into four different dimensions which are; management, project, organization and system. All these include factors that influence the implementation process. The management dimension is characterized by factors such
as support from top management, well defined steering group and well defined e-procurement strategy. The project dimension includes factors such as having the right people, external help, have a well defined plan and strategy. The organization dimension focuses on change management and communication. The system dimension consists of factors like focusing on segments, training and integration with back-end ERP system and suppliers. There are also additional success factors that might affect companies, and every company needs to define the success factors which will affect them.

The respondents in the research confirmed that every company has different success factors depending on the organization and situation. This is further verified by the three respondents who weren´t satisfied with the solution, which didn´t considered or identified any success factors. By identifying success factors companies have a greater chance to make the implementation successful. The respondents in the research, which in overall were satisfied with the solution from IBX, have determined a number of critical success factors, were three of them is mentioned by the majority. These three are defining an e-procurement strategy, change management and training and education.

Defining an e-procurement strategy is a management dimension and was mentioned by five of the respondents. According to almost everyone who identified success factors this factor will affect the implementation and also the structure of the process. The e-procurement strategy also needs to interweave with the overall strategy (Magnusson & Olsson, 2005). By determining a well defined e-procurement strategy companies have created objectives and specifications for the change. After defining an e-procurement strategy companies needs to transmit this to the employees.

According to all the respondents the transition is very important for the solutions usefulness in the organization. This is also defined as change management which is connected to the organizational dimension. The respondents claim that this is very complicated to accomplish since employees have an ability to stay in old habits. According to Magnusson & Olsson (2005) companies needs to be open for changes to make new e-procurement solution work as expected. Companies must therefore make sure that the employees will use the new solution by any means possible. Since an implementation of a new e-procurement solution is a big change it´s important to make sure that the employees know how to use it.
By providing the employees training and education in the solution they might get an “it’s my system” feeling and be more open for change. This is a success factor that’s also mentioned by all companies which have determined success factors. Through training the employees get more comfortable with the solution and can use it more efficiently. For all the companies in this research the training has been done by external consultants at first and thereafter handled by educated personnel within the company. The training from the external consultants has helped the companies to know the solution and its features. According to Magnusson & Olsson (2005) it’s important for companies to determine whether or not they should bring in external help, since implementing a new e-procurement solution can be complicated to perform in the own company. All the companies in this research have brought in consultants to help them with different tasks in the implementation. Although, none of the respondents claimed that this was a success factor, and consultants may therefore be seen as a support for the implementation and not as a key factor.

The three success factors (well defined e-procurement strategy, change management, training and education) are according to the respondents factors that need to be taken into account by everyone when implementing an e-procurement solution. These factors can be determined as key factors that will affect all companies regardless the situation. Other factors that affect various companies and are mentioned by some respondents are; reengineering the procurement process, identify useful measures, manage expectations, supplier integration/co-operation and well defined steering group. According to the answers given from the respondents these are factors that will affect some companies, but not all and can therefore be classified as secondary factors. Since the theory points out additional success factors that weren’t mentioned by the respondents, these factors may affect companies that weren’t in the research. They can therefore also be accounted as secondary factors.

5.3 Which common problems have the companies experienced when implementing the solution?
Since e-procurement is meant to lead to several benefits it’s easy for companies to only focus on these. Although companies also need to consider the eventual problems that may emerge during the implementation process. According to Neef (2001) the implementation is very complex and requires changing management, rethinking and renegotiating relationships. Other problems that are also mentioned are the training and initial investment cost. Implementation of a new system takes
time and costs money, and companies need to be prepared for this. Neef (2001) states that companies need to have patience and be aware of eventual technical issues that might emerge.

A problem that’s pointed out especially is the changing management. Neef (2001) declare that companies need to be able to adapt to new situations and make sure that the new solution will work in the organization. Change management is also a success factor that Magnusson & Olsson (2005) state to be important to consider. Neef (2001) mentions that the success factors needs to be considered or they might create problems in the future. This is also something that’s clarified by the respondents, who stated that change management is a problem that everybody experienced.

The respondents claimed that they had trouble in changing their way of thinking. Many employees are set in their ways and it could be hard to make them change. Simultaneously many of the respondents claimed that the new solution was welcomed as a good change, which is something that could make the change management easier. If most of the employees think that the new solution will be good for the company and are anticipated for the change, then this might make it easier to change the sceptics to also see the change as good. That is why it can be important for the management to inform the employees about the expected benefits, since it could generate more motivation. Besides the change management problem, the respondents also stated that lack of information from external parts and lack in project management skills internally as two organizational problems. These problems could also be associated to the success factors; external help and well defined steering group mentioned by Magnusson & Olsson (2005). Neef (2001) mentions that the success factors might create problems and by being less independent from external consultants companies might not experience lack of information from external parts. The other problem is something that might appear internally. Magnusson & Olsson (2001) mentions that companies needs to have a well defined steering group that has both technical and business expertise. The management therefore needs to choose a group with the right individuals which have the right expertise.

Besides these organizational problems there are also technical problems that might occur. According to the respondents is IBX e-procurement solution complex to use and the language alternatives in the solution is limited. By its complex usability the solution complicates the end-user communication. These are problems which aren´t especially mentioned in theory and might therefore be accounted as direct technical issues with IBX e-procurement solution. Another problem that is mentioned in the theory and also by one of the respondents is the integration with the back-
end ERP system. Neef (2001) claims that the e-procurement solution must be integrated well with
the ERP system to work. If this isn’t done, problems may emerge and the solution may not be used
as expected. Therefore the anticipated advantages may also absent, and the investment can be
unnecessary. The integration is an aspect that companies needs to consider but there’s no evidence
that this problem occur for the majority of the companies which implement the e-procurement
solution from IBX.

5.4 Which benefits have the companies experienced after the
implementation?
Companies are having different expectations when they’re implementing an e-procurement
solution, but they can’t be sure if all the expectations will be met. Often are the expectations based
on the anticipated benefits and Baily et al. (2008) claims that it’s important to measure if these
expectations and benefits have been experienced. Some benefits mentioned in the theory are
reduced purchasing cycle time, reduced supplier base, enhanced budgetary control, eliminated
administrative errors and improved information management.

According to the theory these are benefits that the implementation of an e-procurement solution
should lead to. Although, the companies in the research claim that there are only one benefit that all
of them have experienced. This was the compliance savings, which is an umbrella term for general
savings in money. This is a commonly used term in the business language and could therefore be an
explanation to why compliance savings were the most frequent experienced benefit. The companies
also declared that they had experienced other benefits with IBX solution such as; reduced supplier
base and lowered administrative costs.

The other most experienced benefits, which were lowered administrative costs and reduced supplier
base, were also expected before the implementation from the companies. Lowered administrative
costs are gained from the solution which eliminates unnecessary work and transactions. Reduced
supplier base is obtained due to the system sources and eliminates the inappropriate suppliers.
Therefore the companies can get a greater negotiation position and obtain lower prices on their
purchases. This in turn can lead to lower costs and more efficient purchases.
Reduced supplier base and compliance costs were also two of the main reasons to the implementation. The companies in the research have then experienced the benefits that were their reasons to implement. The e-procurement solution from IBX is providing the companies with advantages that motivated their investment, but also additional benefits. Most of the companies claimed that they implemented their solution because it should reduce their supplier base and increase the internal efficiency. Simultaneously most of the companies have experienced benefits that correspond with these reasons, but also additional benefits that weren´t expected, such as improved information management.

When the companies declared their expectations, both costs and time saving were important. The empiricism showed that the three most mentioned benefits were all concerning cost savings. Since the benefits from the IBX e-procurement solution mostly concerns money, companies doesn´t experience the time saving that they expect to see. Companies have therefore not experienced all the expectations that they anticipated, and e-procurement solution from IBX saves money in greater extent than time for companies. This contradicts the theory which in general argues that saved costs and time are benefits that companies should experience when they implement an e-procurement solution.

Authors argue about the importance of measurement with the benefits. The objective with the measurement was to identify if the solution led to improvements, in form of cost and time savings and a more efficient purchasing process. Those parameters which were most measured were price savings, the number of purchasing orders and thereafter process cost reduction. What characterises these are that the main focus is on costs, where only the number of purchasing orders involve both time and money. Price savings regards for example costs on purchased goods and process cost reduction rationalizes the process by eliminating insufficient cost generated activities. The second most measured parameter was if the purchasing orders were reduced. The purchasing orders regard both time and money. It is saving time through decreasing the number of purchasing orders and costs by increased buying power. An explanation to why companies experienced the expected benefits could be that they measured these well. But there´s also a possibility that other benefits have been obtained but not measured, for example is it hard to measure ensure a high-quality purchasing process.
6. Conclusion

The conclusions are based on previous chapters and shall answer the research question. Further it will present reflections that will involve thoughts and criticisms to the thesis. In the last part examples of further research will be made.

6.1 Why do companies implement an e-procurement solution handling MRO products and what are their expectations?

Reasons for implementing an e-procurement solution

Regarding the current research, increased internal efficiency and reduced supplier base are two prominent reasons to implement an e-procurement solution. These are two reasons which occur in many companies and they’re two definitive motivation factors to why companies decide to implement an e-procurement solution. This might lead to improvements concerning; information management, labour cost and strengthen purchasing power against suppliers. Other reasons like; lower purchasing costs, ensure a high quality purchase process, improve invoice matching and reduce lead time are reasons which encourage the implementation, but aren’t main reasons to the implementation.

Expectations with the e-procurement solution

The most common expectations when implementing an e-procurement solution, according to the result of the collecting data, are to reduce time and costs when purchasing MRO-products. The expectations on the e-procurement solution are fairly related to the main reasons for the implementation. Companies expect to reduce the time and money spent on MRO-products, which also represent a big percent of the total expenditure. The expectations on the e-procurement solution also depend on the specific situation and company. While saving time and money are the two main expectations some companies expect to rationalize the supply chain by process efficiency.
Before implementing an e-procurement solution there are many expectations of the achievements of the solution. To see if the expectations were achieved, measurements of the benefits are often used.

6.2 Which are the success factors when implementing an e-procurement solution handling MRO products?

Our research identified that the identification of success factors is an important aspect to a successful implementation. It was stated that, if companies doesn´t identify and consider critical success factors, the implementation may not be successful.

The research showed that the most considered and identified success factors are defining an e-procurement strategy, change management and training and education. With a well defined e-procurement strategy, which should interweave with the overall strategy, objectives and specifications are created for the change. Change management works to integrate the employees with the solution. With a constant change, both organizational and technical, constant training and education are needed. Since the implementation is extensive companies often use external consultants for support.

To assure the highest functionality with the solution companies need to define their core competence and the success factors which are most applicable in their organization. All success factors aren´t applicable in all companies. Companies need to determine the success factors that they will consider during their implementation of an e-procurement solution. Defining an e-procurement strategy, change management and training and education are factors that will affect everyone while other factors like reengineering the procurement process, identify useful measures, manage expectation, supplier integration/co-operation and well defined steering group only affects some companies. These secondary factors can also be added on by factors earlier mentioned by Magnusson & Olsson (2005), Rajkumar (2001) and Attaran & Attaran (2002). In the figure below success factors are illustrated into three different categories, key factors that affect every company and secondary factors brought up in empiricism and theory which affect some companies.
6.3 Which common problems have the companies experienced when implementing the solution?

Problems often occur when implementing new solutions or systems and an e-procurement solution is no exception. The research showed problems of both organization and technical characteristics. Change management, which was seen as a success factor according to the research, was shown to be the biggest obstacle. To change employee’s attitudes and routines to something new is problematic where an optimal way doesn’t exist. Getting people to both use an e-procurement solution and at the same time replace their current buying behaviour is complicated at best.

Other organizational problems, which were resulted by the research, were lack of information from external parts and insufficient project management skills internally. The dependency of consultants and their information could be problematic to handle, likewise if the project management wasn’t structured and indistinctness in their decisions.
Technical problems that were shown in the research were that the e-procurement solution was inflexible and not user-friendly. The complex usability makes it complicated for some companies and especially in the communication with the end-users. For international companies alternatives for different user-language are limited. Other technical problems are that the solution is hard to integrate with the back-end ERP system. The e-procurement solution from IBX has many technical difficulties and many of the companies have experienced some of these technical problems.

6.4 Which benefits have the companies experienced after the implementation?
Implementing an e-procurement solution often leads to several benefits for those who chose to implement. Shown by the research, the most significant benefit was compliance savings. Companies experienced that most of their reasons and expectations turned out to benefits, such as saved costs. Advantages like reduced supplier base and lowered administrative cost are additional benefits which are seen by many companies. Most of the benefits from the e-procurement solution from IBX concerns cost savings and the solution doesn´t generate as much time savings as expected. The e-procurement solution from IBX generates benefits for all companies; one benefit that all companies can expect to see is compliance savings, while lower administrative costs and reduced supplier base are benefits that most companies will see.

The research showed that it was of a big importance to measure the success and improve when companies fall behind. The measurement was performed through the parameters price savings, number of purchasing orders and process cost reduction.

6.5 Reflections
The thesis has tried to answer the research questions by identifying the specific areas regarding e-procurement. Since e-procurement is a wide concept, different parameters haven´t been covered. Since the focus was to identifying the main reasons, critical success factors, experienced benefits and problems with an implementation of an e-procurement solution, there was a limited focus. This means that some parameters which also could be involved in the implementation weren´t regarded. For instance aren´t the economic affects taken into perspective, since we didn´t measure specific profits and returns of investment with the solution. Another reflection is that all the answers from
the questionnaire haven´t been presented and analysed because some of them weren´t of interest to the thesis research questions.

The thesis is also suffering when comes to generalizing. The sample of this thesis is selected with IBX who had some requirements. Since we haven´t been able to affect the sample, different criteria’s aren’t regarded. The companies in the sample have for instance different turnover, number of employees and size, which the thesis doesn´t take in consideration. Another aspect to consider is the size of the sample, which is rather limited. This means that the thesis external validity is suffering because it can be generalized in limited extent. The thesis can however be generalized to customers to IBX and companies which uses a similar e-procurement solution.

6.6 Suggestions for further research

Main suggestions for further research is to do a follow up research of the economics affects that might occur when implementing an e-procurement solution. Many companies chose to implement e-procurement solutions because of its ability to reduce costs and often, both direct and indirect, costs are saved. Thereby an interested aspect is to examine which economic affects comes as a result of the implementation and also how they influence the companies.

Since this thesis has focus on the implementation process, its factors and functions it would also be interesting to examine the help functions influence. Many companies use consultants when implementing and interesting aspects to study are which activities they perform, what they contribute to and if the companies actually take advantages of the help and these activities the consultants offer.

A further aspect is to include a bigger sample which has randomly been selected. Factors such as the size of the companies, turnover and which sectors they´re belonging to should be added to the questionnaire to make comparisons. The research could also be generalized with a wider sample. This could give another aspect and a different result.
7. References

7.1 Books


7.2 Scientific Articles


Martin, M. (1998, 137 (2)). An electronics firm will save money by replacing six people with one and lose all the paperwork, using the enterprise resource planning software. *Fortune*, pp. 149–51.


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8. Appendix

8.1 Appendix 1, Questionnaire to IBX customers

To whom it might concern

One of the major problems that purchasing organizations face today is how to bring home savings. The simple solution can be to implement e-procurement solutions that expose the agreement to the people in the company and increase contract compliance; yet getting the overall solution to fly is still a major challenge.

14 of IBX Group AB‘s customers are randomly selected to participate in a survey and you are one of them. The study aims to examine the success factors of implementing an e-procurement solution system. You are entitled to abstain from the questions if you do not wish to answer. There is a code in the right corner. This code keeps the survey answers anonymous. Please attach the questionnaire in the attached envelop.

The survey is part of a bachelor thesis work in logistics, which deals with the advantages of implementing an e-procurement solution, why companies choose to procure buy these solution and the problems that can arise when companies chose to implement? We are four students, Max, David, Linus and Emma behind this study in collaboration with the University Linnaeus, Växjö and IBX Group AB. We would highly appreciate your input on the survey and if you have any questions please don’t hesitate to contact us on below details. The survey is voluntary, but it would be of great value for the study if you would answer on behalf of your company.

To show our appreciation answering our survey, we will send you an copy of the result. Please attach your address.

Thank you for participating!

David, Max, Linus & Emma

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David Skoglund – dskep07@student.lnu.se
Linus Jönsson - ljoep07@student.lnu.se
Background questions

1. What was considered as the company’s main reason to implement an e-procurement solution? (Multiple options possible)

   Lower purchasing costs
   Increased internal efficiency
   Reduce the supplier base
   Ensure a high-quality purchase process
   Shorter lead times
   Invoice matching
   Other purposes, if so clarify below

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. Which were your company’s expectations on the e-procurement solution?

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
3. Which were the success factors when implementing the e-procurement solution?  
(Multiple answers possible)

- Defining an e-procurement Strategy
- Reengineering the Procurement Process
- Training, evaluation, education
- Focusing on specific segment
- Identify useful measures
- Manage expectations
- Supplier integration/ co-operation
- Well defined steering group
- Other, if so please clarify below.

________________________________________________________________________________
__________________________________________________________________________

4. When did your company choose to implement this e-procurement solution?

- 1 > years
- 1 -2 years
- 2-4 years
- 4 -6 years
- 6< years

5. Who took the initiative to implement this e-procurement solution?

- CEO/President/Managing Director
- CFO/Controller
- COP/Head of Procurement
- Procurement Executive/ Procurement Manager
- CIO/Technical Director
- Supply Chain Director
- Other C-level Executive
- Manager
- Purchaser
- Category Manager
System related questions

6. How satisfied are your company with the e-procurement solution today?

<table>
<thead>
<tr>
<th></th>
<th>Very satisfied</th>
<th>Satisfied</th>
<th>Not satisfied</th>
<th>Very unsatisfied</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall functionality</td>
<td>✗</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Supplier Management</td>
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<td>❌</td>
<td>❌</td>
<td>❌</td>
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<tr>
<td>Call off</td>
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<tr>
<td>Information Management</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
</tbody>
</table>

7. If your company is unsatisfied with the e-procurement solution, what are the main reasons?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
8. Did your company receive/buy any guidelines when implementing the e-procurement solution?

Yes ☐
No ☐

a) If yes which guidelines did you buy/receive?

Set up an e-procurement strategy ☐
First introduce the e-procurement solution, and then focus on the buying pattern. ☐
Have the right suppliers in the system ☐
Resources ☐
Standards ☐
Content ☐
Measurements ☐
Education & Training ☐
Others, if so please clarify below. ☐

b) If you did not receive any guideline, have your company designed your own guidelines when implementing and if yes which?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
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9. Did your company buy services by consultants when implementing the e-procurement solution?
   Yes ☐
   No ☐

a) If yes, did the consultants contribute to value creating activities?
   Yes ☐
   No ☐

b) If no, why didn’t your company use consultants when implementing?
   To expensive ☐
   Have own resources for this purposes ☐
   Others, if so please clarify below. ☐

10. If your company chose to use a consultant when implementing the e-procurement solution, after the implementation how was the transition to handle the solution on your own?

________________________________________________________________________________
________________________________________________________________________________
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11. How have your purchasing routines changed since implementing the e-procurement solution?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

67
12. Is the e-procurement solution being used in the whole company or in a specific department?

<table>
<thead>
<tr>
<th>Option</th>
<th>☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole company</td>
<td></td>
</tr>
<tr>
<td>Specific department</td>
<td></td>
</tr>
</tbody>
</table>

If specific department, which?

________________________________________________________________________________
________________________________________________________________________________

13. If specific department, why?

<table>
<thead>
<tr>
<th>Option</th>
<th>☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Different departments using different systems</td>
<td></td>
</tr>
<tr>
<td>The solution is recently implemented</td>
<td></td>
</tr>
<tr>
<td>Specific geographic places</td>
<td></td>
</tr>
<tr>
<td>Others, please clarify below</td>
<td></td>
</tr>
</tbody>
</table>

________________________________________________________________________________
________________________________________________________________________________
14. To which extent is the e-procurement solution used today?

- Totally
- Partly
- Only in a little extent
- Only for indirect materials
- Other

**Effects when implementing**

15. When implementing, what was the outcome of the implementation cost?

- Over budget
- As per budget
- Below budget

16. Have this e-procurement solution given your company any advantages after the implementation? (Multiple alternatives possible)

a) If yes, which?

- Reduced purchasing cycle time
- Lower transaction costs
- Compliance savings
- Enhanced budgetary control
- Lowered administrative costs
- Increased buyers’ productivity
- Lower prices through product standardization and consolidation of purchasing power
- Reduced supplier base
- Improved information Management
- Others

Further comments, if so clarify below.

________________________________________________________________________________
__________________________________________________________________________
b) If no, why? (Internal = inside your company, External= help/consulting from people outside the company). Both internal and external are possible alternatives.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td>We have the solution but no resources to administrate the solution</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Lack of information when implementing</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Lack of education</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Unstructured organization</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Lack in project management skills</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Lack in communication skills</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Increased costs</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>As before</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Further comments, if so clarify below</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

________________________________________________________________________________
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17. What was the outcome of the implementation time plan?

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over time</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>On time</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Before planned time</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Further comments, please clarify below</td>
<td>☐</td>
<td></td>
</tr>
</tbody>
</table>

________________________________________________________________________________
________________________________________________________________________________

Evaluation, measurement and improvements

18. Is there continuous evaluation, measurement and improvement of the e-procurement solution?

<table>
<thead>
<tr>
<th>Component</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Measurement</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Improvement</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
a) If yes, how is this performed?

<table>
<thead>
<tr>
<th></th>
<th>Planned</th>
<th>Ongoing</th>
<th>Sporadic Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvement</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Further comments please clarify below.

________________________________________________________________________________
________________________________________________________________________________

19. Who performs the evaluation/measurement/improvement?

- External (Consultants)
- Internal Project group
- Our Purchasing department
- Others, please clarify below.

________________________________________________________________________________
________________________________________________________________________________

20. From which parameters are the e-procurement solution valuated for?

- Price savings
- Process cost reduction
- Number of purchasing orders
- Reduction in cycle times
- Consequent reduction in inventory holdings

If others, please clarify below.

________________________________________________________________________________
________________________________________________________________________________
21. Have the users received any training for handling the e-procurement solution?

Yes ☐

No ☐

22. How long and extensive was the training?

Ongoing ☐

Half day –One day ☐

One day- 7 days ☐

7 days or more ☐

23. How was the e-procurement solution received by the users? (Multiple answers possible)

Good ☐

Bad ☐

With anticipation ☐

With skepticism ☐

Other ☐

24. Which were the biggest obstacles?

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________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

MANY THANKS FOR YOUR PARTICIPATION!