Sourcing Insight
Guidelines for Commercial system, Scania CV AB
Riktlinjer för Kommersiella systemet, Scania CV AB

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ABSTRACT

Title: Sourcing Insight: guidelines for Commercial system, Scania CV AB.

The master thesis was conducted at Scania Global purchasing, Commercial system. Commercial system is a unit within Global purchasing, created 2007, responsible for all types of purchasing for aftermarket. The main targets of the department are to consolidate purchasing volumes and optimize the supply base which shall result in savings.

Research issue: At the moment automotive purchasing (AP) that refers to production purchasing, is using a tool, Sourcing insight model, helping purchasers to understand what the price consists of and how the cost elements are reflected in the suppliers reality. This knowledge strengthens negotiation position of purchasers resulting in considerable savings.

The purpose of Sourcing insight matches perfectly the goals of Commercial system. But due to certain differences between the production related purchasing and purchasing for aftermarket it has been expressed some doubts about relevance of the model as it to the reality of the Commercial system. This means that before the model can be used by Commercial system, its definition and application shall be clarified and if necessary its guidelines shall be adjusted to match the procurement conditions at the aftermarket.

Purpose: The purpose of this thesis was to explain what the model Sourcing Insight is and develop guidelines for the department if the model is applicable.

Method: The main approach of the thesis a qualitative with a great focus on practice which brings into the picture action research method. It has been used triangulation of methods and data in terms of using more than one method and sources of data collection. The qualitative information of the interviews has been even quantified. However, the quantitative method does not take a significant part in the study.

Analysis: Initially the model has been studied from the theoretical point of view in order to understand its definition, area of application and underlying condition. Next the interviews have been conducted both at the AP where the model is in use and Commercial system to get a picture of the current situation. It has been discovered a gap between AP and commercial system in knowledge and use of the model. Therefore the differences of the aftermarket purchasing have been defined and taken into account when adjusting the guideline for Commercial system.

Conclusions: Sourcing Insight is a powerful tool for a purchaser. However one must consider a time and efforts it requires when following every step included in the model’s execution. Hence depending on type and size of a purchase it is reasonable to consider price or cost analysis and which steps of the model are applicable to obtain the best result available. Taking into account differences between AP and aftermarket purchasing it has been made certain adjustments to the model guidelines to fit Commercial system.

Keywords: Purchasing, cost and price analysis, strategic sourcing, cost model, cost insight.
SAMMANFATTNING

Titel: Sourcing Insight : guidelines för Commercial system

Detta exmansarbete utfördes på Scania Globala inköp, på avdelningen Commercial system. Commercial system är en enhet inom globala inköp som skapades 2007 för att ta ansvar för alla typer av inköp för eftermarknaden. De huvudsakliga målen för avdelningen är att konsolidera av inköpsvolymer och optimera av leverantörsbas vilket i sin tur skall leda till besparingar.

Problembeskrivning: För tillfället använder automativ inköp (AP) som refererar till produktionsinköp, ett verktyg, Sourcing Insight modell, som hjälper inköporna att förstå vad priset består av och hur kostnaderna återspeglas i leverantörs verklighet. Denna kunskap stärker förhandlingspositionen för inköporna som resulterar i besparingar.

Avsikt: Med Sourcing Insight stämmer överens med avdelningen mål. Men vissa skillnader mellan produktionsrelaterade inköp och inköp för eftermarknaden födde tvetan om modellens relevans för Commercial system. Detta innebär att innan modellen kan användas av avdelningen, måste dess definition och tillämpningsområde förtydliggöras och om nödvändigt skall dess riktlinjer justeras för att passa på eftermarknaden.

Syfte: Syftet med denna exmansarbete är att förklara vad modellen Sourcing Insight är och om modellen är tillämplig, utforma riktlinjer för avdelningen, Commercial system.


Analyser: Modellen har först studerats ur teoretisk synvinkel för att förstå definitionen, användningsområdet och basförutsättningarna. Efter detta har intervjuerna genomförts både på AP där modellen är i bruk och på Commercial system för att få en bild av dagsläget. Resultatet från intervjuerna visade på ett glapp i kunskap och användning av modellen mellan AP och Commercial system. På grund av detta skillnaderna på eftermarknadsinköp har definierats och använts vid justering av modellens riktlinjer för Commercial system.


Nyckelord: Inköp, kostnad och prisanalys, strategiskt inköp, sourcing, kostnadsstruktur.
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PART I – INTRODUCTION

"Nowhere in business is there greater potential for benefit than the interdependence between customer firms and their suppliers..."

Peter Drucker, Professor and Management consultant
1. BACKGROUND

1.1 THESIS MOTIVATION

"I kunglig nåd har jag lätit tillsäga Eder att utslå tusen harneskplåtar och tiotusen pilspetsar. Detta mitt påbud haven I ej efterkommit! Vid fara att till förmöjelse för Stockholm's borgerskap någon lämplig helgeffort låta Edra huvuden falla för ytan å Stortorget, tillsäger jag Eder ånyo att rätta Eder efter mina önskningar."

(Gustaf Wasa quoted by Gadde och Håkansson 1998).

The quote dates back to XVI century describing the procurement pattern of the epoch, where the buyer strength was his/her power and one of the methods used was a death sentence. Since then procurement has undergone profound transformations, especially during the last 30 years. These days buyers grow from being 'price taker' to professionals, equipped with modern price and cost techniques.

The current changes reflect increased significance of purchasing function across organization, the way to purchase and treat suppliers. These metamorphoses in procurement and founding the ways to respond to them form, for the most part, motivation of the present thesis.

Global competition forces organizations to seek methods to stay ahead of their competitors and to reduce their costs to stay in business (Trent and Monczka, 2002). Increased global competition and turbulence in world economy created rough business conditions, placing

![Diagram](image)

**FIGURE 1.1: COSTS OF GOODS SOLD (VAN WEELE)**

procurement in the spotlight. In many industrial companies, external costs make up more than half of the costs of goods sold. (Figure 1-1, van Weele 2010) Therefore purchasing decision-making has a large impact on the company's bottom line. In the light of current events, reduction of operating cost became for some companies a matter of surviving. According to
Global Chief procurement Officer survey 2009, the impact of economic downturn was rated as either acute or significant for 67% of companies-respondents.

For the reason given the procurement professionals adopt modern pricing techniques to be able to manage supplier relationships instead of making price the central issue in negotiations. When ‘firms want to outstand they must implement strategies to achieve cost reduction, quality and delivery improvement’ (Trent and Monczka, 2002).

*The business chain is as strong as it s weakest link. One of the important links is regarded the purchasing and supply function.* (van Weele 2010) To strengthen this link purchasing organization is going through changes to be able to match its strategic denotation. Purchasing activities are becoming more and more decentralized whereas strategic procurement and common areas for the whole group are coordinated on a central level.

Along with procurement importance grows its complexity. Global sourcing serves here as a perfect example of it. This called for an increased need in operation across boundaries, both inside the organization as well as with suppliers. Global sourcing though, shall not be mistakenly used as synonym to international purchasing, operating on a tactical level compared to a strategic function of global sourcing.

Continuously searching cost-saving opportunities the companies are often concentrated mostly on core activities considering money related to the purchase of production materials and at the same time paying very little or no attention to indirect sourcing (non-product, indirect purchasing). Indirect sourcing including all goods and services that don’t belong to the company’s core activity, becomes more and more in focus and constitutes a great potential for savings. A purchaser dealing with indirect sourcing stumbles upon a lack transparency of data and processes therefore a systematic approach shall be applied and a purchaser shall be equipped with the right ammunition (skills and knowledge). One of examples of ‘ammunition’ is a centre of the present thesis, a dynamic model, Sourcing insight developed for identification of sourcing opportunities and evaluation of procurement data to drive savings.

1.2 SCANIA

Scania is one of the world’s leading manufacturers of trucks and buses as well as industrial and marine engines. A growing proportion of the company’s operations consist of products and services in the financial and service sectors, assuring Scania customers of cost-effective transport solutions and maximum uptime. Operating in Europe, Latin America, Asia, Africa and Australia, totally in 100 countries and with production facilities in both Europe and South America, Scania is employing globally more than 35 000 employees, out of about 500 work within the global purchasing.

Having insourced distributor centers and workshops, year 2007 Scania aimed at coordination of procurement activities for a.m units. One of the cornerstones of this work is to consolidate volumes in Central Contracts at Global Purchasing in Södertälje to achieve cost savings and at the same time to strengthen Scania’s negotiation position.
With the reason given, Commercial Systems department has been set up as a part of Scania Global Purchasing. The department consist of purchasers located in different Business Units and a central group located in Sweden.

Commercial system department’s primary goal is to find opportunity for and generate savings on annual basis.

One of the tasks of Commercial system is to channel all purchasing activities early carried out by any department through the purchasing function. Moreover, once the control and visibility of spend is established, the next task is to cover the purchasing volumes with contracts.

Due to the fact that every Business unit which can be one country or several used to run all purchasing activities separately, the number of suppliers at Commercial system is exceeding almost 50 times the number of suppliers at production purchasing. So one of the tasks of Commercial system is to reduce its supply base.

To secure achievement of department’s goals in cost saving and develop the organization capability, the Sourcing insight model will be implemented. Sourcing insight is a dynamic model focusing on identification of sourcing opportunities and evaluation of procurement data to drive savings.
2. PURPOSE AND TASK DEFINITION

2.1 RESEARCH ISSUE

Scania as other large companies has realized the great potential in indirect sourcing and created a department to cover this area in a professional way. On the other hand, there is pressure on the department to deliver results according to defined KPI. Therefore it is very important to have full control of its suppliers and to live up to the demands of competitive environment. At the same time, it is difficult to determine which type of analysis should be used when evaluating suppliers’ offers, and time pressure may impede the purchaser in selecting the right tool for the given situation.

At the moment automotive purchasing (AP) that refers to production purchasing, is using a tool, Sourcing insight model, helping purchasers to understand what the price consists of and how the cost elements are reflected in the suppliers reality. This knowledge strengthens negotiation position of purchasers resulting in considerable savings.

Due to certain differences between the production related purchasing and purchasing for aftermarket it has been expressed some doubts about relevance of the model as it to the reality of the Commercial system. This means that before the model can be used by Commercial system, its definition and application area shall be clarified and if necessary its guidelines shall be adjusted to match the procurement conditions at the aftermarket.

With a reference to disposition and stage of maturity of the organization of Commercial system, the Sourcing Insight model guidelines adjustment is regarded as a challenge craving extra time and human recourses for the department. Therefore it has been decided to complete the assignment as thesis project.

2.2 PURPOSE AND TASK.

The overall purpose of this thesis is to offer a framework for use of the model Sourcing insight within a context of Global purchasing at the department of Commercial systems at Scania CVAB with objectives to:

1. make purchasing within the department more effective though identifying saving potential
2. work with suppliers in more proactive way

The purpose of the thesis is broken down into following tasks deliverables:

➢ To clarify definition and purpose of the model.
➢ To outline the area of the model application and respectively area where the model is not applicable.
➢ To identify underlying condition for the model use
➢ To describe how the model shall be adapted at Global purchasing, Commercial systems.
2.3 Scope

To be able to understand and apply a cost model, aligned with a strategic role of purchasing function, an extensive knowledge of procurement is required. To enlighten the main principles of the model and to be able to give suggestion how to use it in practice, a few closely interrelated areas of the procurement study have been taken up in the present paper. Every single aspect is a vast area that could make a separate research. The present paper includes the most relevant information within selected areas of procurement, improvement of which builds up the ground for the organization to use model with the best outcome available.

The developers of the Sourcing insight model, Baker & Lasetter have outlined closely interrelated areas important for achieving a balanced negotiation position; among them are cost modelling; sourcing strategies; supplier relationships and growing global supply.

Thus, this report is limited to the aspects that are closely related to and/or critical to understand for the application of the model Sourcing insight which is a centre of the study.

2.4 Delimitations

The implementation of the model is not included in the scope of the present paper.

The object of the study is a central group within Commercial system, where the model Sourcing insight shall be implemented. The data collected from other departments are used only as a reference.

An overview of spend as well as setting of priority for the current spend segments in regards to model application are not the parts of the thesis.
PART II – METHODOLOGY

Research is to see what everybody else has seen and to think what nobody else has thought”

Albert Szent-Gyorgyi
3. METHODOLOGY

3.1 RESEARCH METHOD

One of the primary drivers in selecting research approach is the paper’s subject (Patel & Davidsen, 1994) and nature of the empirical data to be collected which are mostly of a qualitative character. Thus, the predominant method of the research is qualitative which is generally used in social studies. The central point of qualitative method is to create a deeper understanding of the subject of the study through different types of data collection. (Andersen, 1998) The qualitative method studies the how which reflects the questions of the thesis.

Qualitative studies refer to hermeneutics as its approach foundation. The hermeneutics seeks understanding of the whole picture and gain insight into the chosen subject. The hermeneutic approach establishes a connection between the material collected and the researcher’s experience (Eriksson & Wiedersheim-Paul, 2001).

However, the empirical part contains inconsequential number of quantitative data, therefore quantitative method is combined with qualitative. Opposing to qualitative method and its foundation hermeneutics, quantitative method and its foundation, positivism aims to quantify data and generalize results from a sample. Qualitative studies are characterized by flexibility, while quantitative studies are characterized by a rigid structure.

Triangulation

Combination of research methods is a distinct tradition in the literature on social science (Jick, 2006.) The form of research employing multi-method is called triangulation. Triangulation is the combination of two or more data sources, investigators, methodological approaches, theoretical perspectives (Denzin, 1970; Kimchi, Polivka, & Stevenson, 1991), or analytical methods (Kimchi, 1991) within the same study. (Thurmond, 2001). Two types of triangulation are relevant to the present thesis, namely data and methodological triangulation. Methodological triangulation refers to the use of more than one research method and data triangulation represents collecting data over different period of time or different type of people, where variance of people being source of the data for the present paper represents data triangulation.

Action research method

Another important circumstance in selection of research approach was the fact that that the author is a permanent member of the group being the object of the study, hence the action research is relevant. The founder of the action research is Kurt Lewin (1946) who contributed in its creation with his work and was followed by many scientists in USA and Europe.
(Koshy, 2005) It is also referred as insider action research (Coghlan & Brannick 2005, Zheichner, 2001 cited by Wigblad & Jonsson 2008)

*Action research is defined as a participatory process concerned with developing practical knowing in the pursuit of worthwhile human purposes. It seeks to bring together action and reflection, theory and practice in participation with others.* (Reason & Bradbury, 2008)

Reason & Bradbury state that action research is working toward practical outcome, and at the same time creating a deeper understanding of the topic. The main purpose of action research is to improve practice.

What differs the traditional approach from action research is an accent on practice but not only on empirical part. Empirical part is therefore selected with high relevance to daily practice. (Wigblad & Jonsson 2008).

The following characteristics of action research summarized by (Koshy V. 2005) contains the highest grade of relevance to the purpose of the present paper.

- Involves researching own practice – it is not about people
- Emergent
- Participatory
- It is about improvement
- Involves analysis, reflections and evaluation
- Situation based
- Deals with individuals with a common purpose of improving practice
- Contraction theory from practice

### 3.2 Conceptual Framework

Conceptual framework of the research is the perspective of the analysis, the viewpoint of the researcher in solving the task of the study. Choice of the conceptual framework of the research determines if the start point of analysis is theory, empirics or practice. (Wigblad & Jonsson 2008). The most common ways to draw conclusions on the basis of theory and empirics correspondingly induction and deduction and combination of them. Inductive perspective refers to empirics as a start point to draw conclusions seeking connection to theory. On the other hand, deduction refers to models and theories as the view point and the study aims to confirm these models and theories validity and draw parallel to the reality.

Once the conceptual framework of the research is practice on the first place, the approach to be employed is abduction which is rarely applied. (Wigblad & Jonsson 2008).

The conceptual framework of the present thesis is formed by abductive since the practice is priority. However an inductive method is used to an extent of ensuring of validity of empirical data.
3.3 DATA COLLECTION

Collected data can be classified by how they are collected and by how they are analyzed. Collected information is grouped by primary and secondary data. Primary data are collected by a researcher directly from the source e.g. interviews or surveys, whereas secondary data are obtained from literature, databases i.e. the data that have been collected by others.

In the present thesis primary data result from interviews and observations. Secondary data come from literature reviews, Scania Qlickview\(^1\) analyser, Scania InLine\(^2\). Considering primary and secondary data the conclusions of the thesis will foremost be drawn from primary data since they have to be in the first place practice-driven. Nevertheless some secondary data will be used as a back-up and confirmation of the drawn conclusion.

From the point of how the data are analyzed the distinction is made between qualitative data which are often result of unstructured interviews, questionnaires with open questions, observation and quantitative data which are analyzed numerically.

In the present paper qualitative and quantitative data are combined by quantifying during the analysis.

3.4 LITERATURE REVIEW

The starting point for the theory study was the task of the thesis. For a better understanding of the problem, the subject was scrutinized through the prism of events composing a shape of modern procurement.

The studied theoretical material was selected with intention to be useful for daily operation of the group members. The theory for the researcher aids in sharpening focus on what shall be observed and what kind of information is to be collected.

Moreover, literature review reveals not only the problem area but also give a idea of a suitable methodology to be applied. (Remenyi & Williams 1998).

3.5 PROCESS

The present research is performed as an interactive cyclical process of studying the present situation, planning, taking an action, reflecting, and taking further action. Figure 4.1

\(^{1}\) Qlickview is a business intelligence solution used at Scania that compiles data from their different applications

\(^{2}\) InLine – Scania’s intranet.
Consequently, the research takes shape while it is being performed. Better understanding of each cycle contributes into improvements when taking the next action.

**Cycle 1**

The interviews and the work process as a whole followed an iterative cycle where new ideas were evaluated continuously. During the first cycle the general information on the process, the organization and the problem area as a whole has been obtained. The study consisted of informal interviews with the management group of the department and advanced users of the model at the automotive purchasing. As well information from Scania's intranet was studied to gain greater understanding of Scania's organization and operations. In parallel the literature review on methodology has been started.

The information collected during the interviews have been summarized. Those who participated in the interviews were asked to review the notes and comment on the findings, after that some changes to the text were made.

**Cycle 2**

Using as input output from the first cycle the task was broken down into deliverables and the theoretical material has been studied and summarized. The funnel approach has been applied when studying the literature. The wide end of the funnel is where the general field of study is selected and at the end of the funnel the central point of the research is revealed. (Remenyi & Williams 1998). The review printed material has been evaluated critically and not taken as a fact.

At this stage the methods, conceptual framework and methodological techniques have be selected and defined.
Cycle 3

Throughout the cycle three, the questionnaire has been compiled and interviews conducted. The result reflected the present level of implementation of the model at the AP and NAP, and the gap between Commercial system. The AP and NAP respondents were selected from different departments to cover as many different types of product as possible. All purchasers of the central group of Commercial system have been interviewed at this stage. At the same time unstructured interview has be done with a leader of the central group.

Cycle 4

Using findings from the previous cycles and referring to context of the current situation, the data collected during interviews have been analyzed followed by conclusions and recommendations.

3.6 RELIABILITY AND VALIDITY

The concept of validity is the extent to which the measurement results match what was intended to be measured. As dominant research approach in the present paper is hermeneutics, there is a certain concern if the researcher has a full access to knowledge of the respondents. Hence, the importance of good-quality access to the data is a very important issue in non-positivistic research. (Remenyi & Williams 1998). As response to the above mentioned issues is that the researcher as insider has a better trustworthiness what secures the full access to the data needed for the research. A researcher who is both practitioner and researcher in one person gains double identity which creates a opportunity for making high qualitative contribution. (Wigblad & Jonsson 2008). As well verification of the respondents answers ensuring that it reflects their understanding of the studied problem. Providing multiple perspectives by using triangulation strengthens validity. (Denzin, 1970 cited by Thurmond, 2001). In the context of the thesis triangulation gives multiple perspective on the level of method used and source of the data collected.

A reliability reflects the degree the results are reliable, i.e. extent of correspondence of the result obtained by another researcher in the same situation. One way to increase the reliability is to use triangulation. To obtain data of high reliability, interviewees were provided with the same background information.
It is theory that decides what can be observed.

Albert Einstein (1879-1955) German-Swiss-U.S. scientist.
4. **GLOBAL SOURCING**

Development and expansion of the global economy driven by breakdown of the trade barriers makes global sourcing one of the key phenomena in this process. Global sourcing refers often to sourcing in a global environment and its connotation differs from company to company, being now and then confused with *international sourcing*.

In order to get a better understanding of the term *global sourcing* it is reasonable to start with the explanation of the word *sourcing*. Sourcing refers to our intention to find supply sources, to ensure safe delivery, to secure alternative sources and to gather knowledge about what is to be acquired i.d. the step of the purchasing process including finding and selection a supplier. (Seth Jonsson 1998).

Global sourcing in its turn is not limited to low-cost countries and shall not be confused with international purchasing. Global sourcing was a subject to extensive studies of Monczka&Trent (2002) who defined it as:

*Proactively integrating and coordinating common item and materials, processes, designs, technologies and suppliers across worldwide purchasing, engineering and operating location.*

Monczka . 2009 illustrated five levels of operation showing difference between domestic, international and global sourcing:

![Levels of Operation Diagram](image)

**Figure 4-1 Levels of Operation, (Adapted from Monczka, et al. 2009)**

Global sourcing is focused on discovering opportunities to improve quality, lower costs on a worldwide and regional basis in order to strengthen competitiveness integrating the purchasing.
as a fundamental function. A strong emphasis is on close work with suppliers to ensure that customers' needs are being fulfilled.

In contrast, international purchasing can be described as import of a product without close cooperation with a company supplying the product. A summary of the difference between international purchasing and global sourcing can be done through statement that international purchasing has a tactical connotation where global sourcing is signified by strategic implication.
5. Purchasing Organization

All organizations go through the continuous challenge of structural transformation. The placement of purchasing function in the organization has undergone considerable changes. Gaining a strategic role and being involved in decision-making, the purchasing manager is often reporting to or is a part of the board. The strategic level covers those purchasing decisions that influence position of the company on the market in the long run (van Weele 2010).

There are many factors that influence the design of the purchasing organization, such a business characteristics of the company, type of industry, the products purchased, geography of operation. One of the important aspects that significantly contributes into layout of organization is company culture (Rudzki, et al., 2006).

5.1 Types of Purchasing Organization

The literature describes different forms and contains different designation of procurement organization structures. The specific organizational drivers behind each of these structures differ but they have a common goal to deliver economic benefit as well as provide a more efficient and effective operation of the purchasing function. The most common types are: centralized, decentralized and hybrid.

Centralized organization – Decisions on product specifications and supplier selection are made centrally as well as all purchases apart of those of low value. This structure is suitable when several business units buy the same product which is of strategic purpose for them (van Weele 2010).

Decentralized – The decision-making is often on plant or business unit level. In that case a business unit manager has a formal responsibility for profit-and-loss including all purchasing activities. This approach is unit focused and therefore is more tactical overlooking benefits of the supply chain in today’s world (Rudzki, et al., 2006). The decentralized structure is suitable for the large companies with business-units purchasing unique products. (van Weele 2010).

Most of the authors discuss a classical question of centralized versus decentralized structure. Lars-Erik Gadde and Håkan Håkansson are listing arguments for the centralized purchasing activity in terms of more efficient utilization of resources, stronger negotiation position and better economical conditions through consolidation of volumes. Centralized purchasing demands personnel with high commercial and procurement competence.

However the primary challenge of a centralized model is the difficulty of interfacing with business units and end users which might create obstacles in shaping of requirements and control demand.

Most companies balance between the two poles using hybrid structure. Hybrid – is a combination of the above mentioned two types. Normally led by CPO or senior vice president
of supply, hybrid organization structure includes a small corporate purchasing staff establishing policy, coordinates cross-enterprise strategic sourcing teams. This form of organization contains more or less features of centralized and decentralized structures, where the authority for some is located centrally and the authority for other tasks is located on the business units' level. According to Van Weele hybrid organization can have the following features:

- **Voluntary coordination.** Contracts are prepared by the central department. It is up to a business unit to decide if to use the contract or not. In this case a considerable flow of information between business units has to be managed.
- **Lead buyership.** A business unit with a largest volume is responsible to negotiate agreement to be used by other business units.

Figure 5-1 outlines key characteristics of procurement organization structures.

![Diagram showing types of purchasing organization](image)

**FIGURE 5-1 TYPES OF PURCHASING ORGANIZATION (RUDZKI, ET AL., 2006)**
5.2 STRATEGIC AND OPERATIONAL ACTIVITIES

Activities performed within purchasing organization are characterized by their operational and strategic content. It is important to see the difference between them in order to avoid compromising one for another. Operational issues demand immediate reaction therefore strategic responsibilities take often the second place or are being ignored.

One way to ensure that both types of activities receive adequate attention is to separate the staff whereas a strategic group is centrally led. (Monczka, 2009) Furthermore both types of activities require different set of skills.

![Diagram showing strategic sourcing activities and operational activities]

**FIGURE 5.2 STRATEGIC AND OPERATIONAL ACTIVITIES, (ADAPTED FROM MONCZKA., 2009)**

5.3 THE LEARNING ORGANIZATION

It is important to emphasize on immaturity of the organization that is an object of the present thesis on which shall be taken into account when implementing a new tool, strategy or any other change.

Innovative organizations require new skills and new way of thinking about organizational structure. The complexity of modern supply chain and advance of technology involved in the process have considerably changed a personnel profile within purchasing function. As a result, companies face three primary challenges (Cohen & Roussel 2005):

- How to structure the organization
- Define roles and responsibilities
- Finding the right people with the right skills

Sometimes organizations have difficulty to keep up with the rapid changes in the business environment and technology. Organizations born in today's dynamic business settings operate often under pressure to deliver results having no time to think, reflect and develop capacities to reach desired results.

"Organizations work the way we do because of how we work, how we think and interact: the changes required ahead are not only in our organizations but in ourselves as well. " (Quoted by Senge 2006)

"In building learning organization there is no ultimate destination or end state, only a lifelong journey. This work requires great reservoir of patience" (Quoted by Senge 2006)

These two quotes could serve as underlying conditions for building up the learning organization.

To secure success of the learning organization Peter M. Senge outlines five components that contribute greatly in organization formation.

Instead of concentrating on the whole we do tend to concentrate too much on snapshots of isolated parts of the system which get us sometimes by the end of the day in a vicious circle of mission impossible. System thinking is a conceptual framework, that helps to make the patterns clearer.

Personal mastery is a tuning of own vision, focusing energy, seeing reality objectively.

Building shared vision – capacity to hold a shared picture of the future we want to create which is an integral part of leadership. Share vision fosters genuine commitment rather than compliance.
6. STRATEGIC APPROACH

6.1 PROCUREMENT STRATEGY

Strategy is defined by business dictionary as a method or plan chosen to bring about a desired future, such as achievement of a goal or solution to a problem.

- In today’s highly competitive environment companies adopt, adapt and implement different procurement strategies in order to make cost effective purchasing decisions in terms of selection the best suppliers delivering quality goods at lowest possible costs.
- Procurement strategy may include making savings by using centralized purchasing or seeking excellent committed service, the companies may come to a decision on a single source procurement strategy.

In relation to decision on the future strategy the company may address the questions of reduction or expansion of supply base, location of supplier, types of relationship and contract. (van Weele 2010).

Gadde and Håkansson underline the three aspects for building up procurement strategy:

- What shall the company produce itself and what shall be purchased
- What type of relationship shall be applied to the suppliers
- What are the consequences of above mentioned issues for the total supply structure

T. M. Laseter, the author of The Continuous Sourcing Cycle, has developed a model helping to implement the strategy balancing between cooperative relationships and a commitment to competitive pricing. The model was Balanced sourcing illustrated in Figure 6-1.

![Figure 6-1 Balanced Sourcing](image)

FIGURE 6-1 BALANCED SOURCING. (LASETER 1998)
Balanced Sourcing (upper right quadrant Figure 6-1) requires a broad, organization-wide perspective on purchasing and is far more difficult to achieve. (Laseter, 1998). The capabilities essential for Balanced sourcing have been listed and prioritized. The core capabilities that closely relate to the present paper are:

- Modeling total cost
- Creating course strategies
- Building and sustain relationship

6.2 STRATEGIC SOURCING

Nowadays the word strategic serves very often as an attribute to the word sourcing bearing at times little of its meaning which shall include: “cost-based, rigorous process that involves substantial internal data gathering and evolution, and extensive external data gathering and interactions, in order to select the most appropriate strategy and negotiations approach and ultimately select the right supplier.” (Rudzki R, et al., 2006.)

Strategic sourcing efforts are concentrated on accomplishing the following task:

- To understand - market analysis, suppliers, internal capabilities and needs, competitors and industries
- To decide - on tactics, which tools shall be used.
- To manage - cost, value, customers' expectations
  (Smock D., et al, 2007)

The result of strategic sourcing efforts have been expressed in dimensions pointed out by Gadde & Hakansson 1998:

- Decision to “make-or-buy”
- Establishment the right supplier relationships with the regard to the question what shall be achieved
- To balance a supply base

6.3 SOURCING STRATEGIES

The authors have paid a considerable attention discussing single and multiple sourcing and their pros and cons. (Gadde & Hakansson, 1998; van Weele 2010; Baily, et al., 2005; Schorr, 1998) On the contrary there is limited or fragmental information available on variants of sourcing located between single and multiple. In addition there is no absolute consistency in definitions and denominations of the sourcing variants in available information presented in the literature. As a example of a.m. statement can be mentioned four primary sourcing strategies, namely single, multiple, delegated and parallel, identified using Kralic matrix
(Cousins, et al., 2008) compared to 'mank-in, single, dual, multiple (Saunders M., 1997). In the present thesis through the ground for definitions will used a structure developed by S.Jonsson.

Sourcing strategy or as it sometimes referred to supply pattern appeals to a number of suppliers used at the same time for a particular product or service. (Jonsson S., 1998).

The basis of the structure is three main streams of sourcing strategies that are broken down into subtypes under each category Fig.6-2

**Different types of sourcing strategies**

![Diagram of sourcing strategies]

*FIGURE 6-2 TYPES OF SOURCING STRATEGIES, (JONSSON S., 1998)*

*Multiple sourcing* refers to using three or more suppliers for purchasing a product or a service. This supply pattern has least of strategic connotation and used mostly for purchasing of consumables.

The situation when multiple sourcing gain more strategic context is when a company using a dual sourcing has a need to launch the third supplier due to, e.g., unsatisfactory performance of one of the existing ones. S.Jonsson has listed a few reasons why multiple sourcing are used seldom as strategy:

- Volumes are regarded too small to be shared between many suppliers.
- Transaction cost are being increased due to handling simultaneously many suppliers.
Cost for maintenance, service and education are being increased when using many different brands of the product.

A number of suppliers on the market is limited.

_Dual sourcing_ is related to using two suppliers for the same product or service at the same time. Most of the companies are striving to implement dual sourcing as the main strategy due to: security of supplies, competition. Within dual sourcing S. Jonsson has defined three main groups.

- **Direct double sourcing** is defined by distribution of volume of one product between two suppliers which secures delivery and increase competition between suppliers. A very important aspect is the right allocation of the volume in order to secure cost effective production at suppliers site to reach the right quality and competitive price. The work between buying and selling companies shall be based on “open books” cooperation.

- **Parallel sourcing** differs from direct double by the allocation of volumes of similar products between two suppliers where one or the other supplier can take over the volume of the similar product in case of any problem. Sourcing of different types of tires can serve as a good example of the parallel strategy.

- **Saw saw** is a modification of direct double sourcing where a volume of a certain product serves as competition weapon i.d. distributing openly volume 20%-80% or 30%-70% between two suppliers pointing that the biggest share of volume will be assigned to the best performing supplier.

_Single sourcing_ strategy meaning purchasing from one supplier and is definitely of in the spotlight. The advantage of single sourcing is a possibility to have a good understanding of costs through establishment of close relation with suppliers. Selecting a sourcing strategy is not only cover age a need for the product or service but also allocation of risk related to the purchase. One of the disadvantages of single sourcing is dependence on one supplier which might be risky in a critical situation and costly when being forced to change this supplier to a new one.

A term single sourcing means that a company takes decision to use one source of supply. On the contrary sole sourcing means that a company is ‘forced’ to use one source due to the fact there is no other alternative available. There are the following variations of single sourcing:

- Publicly controlled sole sourcing e.g. a municipal monopoly for water and energy.
- Market related sole sourcing can be illustrated by monopoly of some raw materials where only a limited number of suppliers is presented on a market worldwide.
- Direct single sourcing refers to a decision to work closely with one supplier

Among the authors there are advocates for both single and multi sourcing strategies. (Saunders M., 1997 has referred to Ramsey and Wilson who have pointed out that the literature tends to offer the choice between short-term multi-sourcing and long-term single sourcing associated with co-operative relationship.)
6.4 SUPPLIER RELATIONSHIPS

Suppliers play a significant role in a company's performance. Supplier relationships that don't work as intended can be extremely expensive and harmful for the buyer-company. Every supplier relationship is unique and have to be handled individually, weighting the factors influencing this particular relationship.

At the same times as purchasing gained a strategic role, a sound emphasis is being made on such activities as establishing long-term relations with suppliers, supplier development, total cost reduction

Supplier relationship can create competitive advantages in terms of improved process of product development due to better shared knowledge, lower cost and prices of purchased goods and maintenance, lower number of defects etc.

Additionally, interest in close supplier relations has been stimulated by success of Japanese automotive industry which made an impact on European and US manufacturers. Supplier-buyer relationships have got a great deal of attention in the literature. Most of the authors plunge into debates about pros and cons of long- and short-term supplier relationships. (Baily, et al., 2005, Saunders M., 1997, Rudzki, et al., 2006 etc)

"In terms of managing strategic partnership a buying company must be proficient at:

1) Analyzing suppliers cost structure and engineering capabilities
2) Developing trust so that suppliers will be willing to share knowledge and make investments in dedicated assets.
3) Creating inter-firm knowledge-sharing routines to effectively coordinate activities" (Dyer, 2000)

The first above mentioned point can be supported by the statement: *Without a clear understanding of costs, supplier partnership, at best, will not focus on the largest opportunities for cooperative value creation. At worst, a customer who does not understand total costs may choose the wrong supplier - and leave money on the table.* (Laseter, 1998, p.7)

Despite of the fact that close relations with suppliers are definitely in the spotlight, a transactional approach can still be appropriate in purchasing of low-cost items. To manage the supplier relationship, the organization shall be aware of what relationship requires close partnership and what relationship benefits best while keeping the distance.

According to Pareto's principle 80% of spend will be normally with 20% of suppliers. It is likely that suppliers representing 20% will be the ones with who partnership can be considered as a an appropriate way of cooperation. A tool used to categorize suppliers and determine type of relationship is based on Krajic matrix (1983). It is often referred to by the authors (Gadde & Håkansson, 1998; van Weele 2010; Baily, et al., 2005; Cousins, et al., 2008 etc.) and adopted and adapted by many companies.
The adoption of partnership approach has led often to implementing of single source strategy and need of reducing a supply base. This process is referred to as rationalization of supply base (Saunders, 1997). Reduction of the supplier base is a common ingredient in efforts to reduce costs, since the number of suppliers is considered a cost driver. Reducing the supplier base is thus a potential tool for improving performance. (Dubois, 2003) The efforts are concentrated on getting deeper knowledge of suppliers improving at the same time quality of collaboration with them. The starting point is the evaluation of the current performance of suppliers followed by a regular assessment with a intention to identify areas of improvement. Criteria for supplier evaluation and selection are laid out in own way by different companies. These criteria can refer to the following factors: (G. Persson 2006)

- Market position
- Labour cost
- Economy
- Geographical location
- Quality and environment systems
- Ability to deliver
- Price
- Product quality
- Assortment
- Risk
- Size of the company
- Technical competence
- Development potential

General Motor’s identified five critical areas relevant to strategic supplier selection (Saunders, 1997):

1. Organizational effectiveness and commitment
2. Planning systems and documentation
3. Cost awareness, monitoring and reduction
4. Scheduling and delivery compliance
5. Technology capabilities and R&D

P.Östring (2004) recommends to monitor warning flags in four areas in order to prevent any risk connected to arrangements with suppliers. These areas are divided into: environment, company, financial figures, other. See Figure 6-3 – 6-6
Environment

- Political, economic
- Market
- Customer
- Suppliers
- Competition

Warning flags

- Drastic political, regulatory, or economic changes in supplier's country
- Radical change in market
- Loss of company's main customer
- Unexpected difficulties with supplier's quality and deliveries
- Severe competition

Company

- Size of the company
- Core business
- Management and other key personnel
- Lack of managerial depth
- Ownership
- Company structure
- Acquisitions, mergers
- Technology

Warning flags

- Quick change in number of personnel
- Unexpected change in core business
- Several key people resign within a short period of time
- A dominating person, a board with little input into decisions, or too large an administration team
- Significant change in ownership
- An unnecessarily complicated company structure
- Several acquisitions or mergers in a short period of time
- Outdated technology, low R&D investments

FIGURE 6-3 WARNING FLAGS – ENVIRONMENT, (ÖSTRING P., 2004)

FIGURE 6-4 WARNING FLAGS – COMPANY, (ÖSTRING P., 2004)
### Financial figures
- Reliability and accuracy in current financial information
- Financial information
- Changes in accounting policies
- Significant operational losses
- Equity
- Current ratio
- Assets

### Warning flags
- Business decisions may be based on wrong assumptions
- Delay in providing financial information is a symptom of financial difficulties
- In some cases, there are good reasons to change accounting policies, but changing it often indicates financial "game"
- Losses increase suddenly and are substantial compared to the size of the business
- The risk of bankruptcy increases and future funding is in danger if equity is decreasing significantly
- The risk of liquidity problem increases if current liabilities exceed current assets
- There is significant selling of assets

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### Other
- Payment terms
- Share value
- Significant asset selling
- Strong downward trend in credit rating
- Significant restructuring and organizational changes

### Warning flags
- A supplier suddenly requires significantly shorter payment terms
- There is a quick drop in share value and existing or starting financial difficulties
- A supplier tries to increase cash and pay debts
- Interest margins increase when credit rating is dropping
- A supplier downsizes its business, possibly affecting deliveries to your company
7. **PRICE VERSUS COST**

7.1 **UNDERSTANDING REASONABLE PRICE**

One of the responsibilities of the purchaser is to guarantee that the price paid for the goods and services is reasonable and in line with the contract deliverables and market value. A reasonable price is a price a professional purchaser would be willing to pay referring to analysis of prices driving data e.g.: market conditions, competition, demand etc. In order to obtain a reasonable price, a price or cost analysis is being performed.

Sourcing insight model which is the centre of attention of the present paper refers to comprehension and analysis of internal and external information that gives insight into supplier’ costs and supports a buyer-company in purchasing decision-making. To be able to apply the model it is essential to define model mechanism and understand its prerequisites. As well, a certain degree of complexity of the cost modelling process is raising the question of its relevance for every single purchase, product or supplier.

For the reason given it is important to clarify the differences between cost and price analysis and to outline a framework for their utilization. “Fundamental differences exist between price and cost analysis, and knowing when and where to apply each type of analysis is an important part of strategic supply management” (Trent, 2007, p.204)

7.2 **PRICE ANALYSIS**

Price analysis is process of comparing prices against other known prices or indicating information without a deep understanding of underlying costs fitting best for off-the-shelf items.

The most common methods of price analytics are:

- Comparison of competitive bids – two of more suppliers’ quoted prices are compared where the lowest is often selected. The price that is too low might have a negative effect on quality of the product and lead times.
- Comparison to published catalogue or price list prices
- Comparison to the prices of similar products
- Historical prices evaluation
- Market prices evaluation

As a type of a comparison of competitive bids that is worth mentioning is a method called configured supplied networks created by R.J. Trent. This method is best use for the contracts of purchasing of multiply items. Table 7-1 illustrates the situation where the buyer asked for quotation of five items from four different supplier. Such a simple picture helps to identify the best configuration for the sourcing of items at the lowest price.
Configured supply network can be extended by using volumes which gives a better support for the purchasing decision. Depending on the situation the purchase decision can be made on overall total cost of the quoted prices where Supplier 3 has the best offer or the items can be sourced from different suppliers who offered the best price for the particular item. Another scenario could be: having indication of configured supply network which is about 6% under the lowest bid, to try to negotiate a new price for some of the items from Supplier 3 and source all items from one supplier at the best price saving on logistics and administration using few suppliers.

### Table 7.1: Configured Supply Network Based on Table 12.1 (Trent, 2007)

<table>
<thead>
<tr>
<th>Item</th>
<th>Supplier 1</th>
<th>Supplier 2</th>
<th>Supplier 3</th>
<th>Supplier 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product 1</td>
<td>1,30 €</td>
<td>1,54 €</td>
<td>1,45 €</td>
<td>1,76 €</td>
</tr>
<tr>
<td>Product 2</td>
<td>3,00 €</td>
<td>3,50 €</td>
<td>2,00 €</td>
<td>2,50 €</td>
</tr>
<tr>
<td>Product 3</td>
<td>10,00 €</td>
<td>9,50 €</td>
<td>9,30 €</td>
<td>9,00 €</td>
</tr>
<tr>
<td>Product 4</td>
<td>0,40 €</td>
<td>0,70 €</td>
<td>0,30 €</td>
<td>0,50 €</td>
</tr>
<tr>
<td>Product 5</td>
<td>5,10 €</td>
<td>5,20 €</td>
<td>5,30 €</td>
<td>5,00 €</td>
</tr>
</tbody>
</table>

**Table 7.2: Extended Configured Supply Network Based on Table 12.1 (Trent, 2007)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Volume</th>
<th>Supplier 1</th>
<th>Supplier 2</th>
<th>Supplier 3</th>
<th>Supplier 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product 1</td>
<td>80000</td>
<td>104 000,00 €</td>
<td>123 200,00 €</td>
<td>116 000,00 €</td>
<td>140 800,00 €</td>
</tr>
<tr>
<td>Product 2</td>
<td>10000</td>
<td>30 000,00 €</td>
<td>35 000,00 €</td>
<td>20 000,00 €</td>
<td>25 000,00 €</td>
</tr>
<tr>
<td>Product 3</td>
<td>2000</td>
<td>20 000,00 €</td>
<td>19 000,00 €</td>
<td>18 600,00 €</td>
<td>18 000,00 €</td>
</tr>
<tr>
<td>Product 4</td>
<td>100 000</td>
<td>40 000,00 €</td>
<td>70 000,00 €</td>
<td>30 000,00 €</td>
<td>50 000,00 €</td>
</tr>
<tr>
<td>Product 5</td>
<td>3000</td>
<td>15 300,00 €</td>
<td>15 600,00 €</td>
<td>15 900,00 €</td>
<td>15 000,00 €</td>
</tr>
</tbody>
</table>

*The sum of the marked areas representing the lowest cost of configured supply network.

### 7.3 Cost Analysis and Cost Modelling

Cost analysis, in its turn, is an examination of the elements that constitute the purchasing price of a product or service procured. Cost analysis techniques are used to break down suppliers’ costs into elements in order to validate each of them which helps to see competitiveness of current prices. Data for the cost analysis are provided by supplier and/or collected by a buying-company.

#### 7.3.1. Cost Model and Its Underlying Conditions

Cost models is a purchasing tool providing the comprehension of supplier cost required to capture suppliers margin and negotiate the right level of price.
In a survey of leading purchasing organizations conducted by Strategy & Business\(^3\), cost modelling was ranked among a list of 17 purchasing skills as one of the most critical. "Understanding the cost provides the foundation for virtually everything that a purchasing organization does, from setting strategy, to simplifying designs, to improving supplier operations and negotiating piece prices."(Ask & Laster 1998)

The results of survey show though, that cost models developed in cooperation with suppliers are the most effective. Collaborative development insures the quality of the model and creates a greater probability of being fully applied.

One of the most important conditions for successful utilization of any cost model is information about spend. The approach shall include a broad baseline across all categories of the total spend as well as a deep analysis of a few select commodities. Having segmenting in place it is essential to ensure that everyone working with the commodity understands the important cost drivers.

Any cost model requires continued effort and a dynamic environment to produce expected results.

7.3.2. **Cost Model Types**

Severe global competition leaves a little or no space to improve your profit by increasing the prices. The only way to achieve better top and bottom line is to reduce and control costs. A prerequisite for any cost saving model is visibility of all input costs. To obtain this visibility of the supplier's cost a purchaser can ask for cost breakdown from the respective supplier.

A cost breakdown is an itemized list of cost elements that compose a supplier's price and its percentage of that price. Cost items or as mentioned before cost elements include material, labour, overhead and profit. Evaluation of overhead costs compared to direct labour and material can be quite challenging task and requires extra efforts. Lisa Ellram, 1996 has listed the questions to ask when analyzing a supplier's cost structure, with an emphasis on overhead:

1. Which costs are necessary and legitimate?
2. Are amounts estimated for the necessary cost items reasonable?
3. Is the overhead allocation to this item potentially subsidizing another item which the organization sells?
4. Have the correct allocation bases been used? If not, is it to our benefit to challenge the allocation methods?
5. Are only those expenses which should be allocated to our purchase so allocated?
6. Are there allowances for contingencies? Do these allowances seem legitimate?
7. Are profits reasonable enough, yet not excessive, to keep the supplier motivated?

A cost breakdown may be divided into several steps expressed into Figure 7-1

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\(^3\) Strategy+business is a magazine published quarterly by the global management consulting firm Booz & Company.
A cost breakdown is a critical part of cost analysis. This method requires that the supplying organization opens up its books, to authorize the buying company to analyze its product costs. Obtaining a cost breakdown from a supplier can be a challenge in terms of persuading to provide one. Suppliers might feel that sharing a cost breakdown will make their negotiating position weaker and therefore avoid doing so especially if they can still get the deal. An open line of communication with the supplier in the early stages and convincing that intention in obtaining cost information is not to reduce their profit might help in getting one.

Often suppliers are not willing to share their cost data. In these situations the purchaser can attempt to construct independently the supplier’s product cost structure. This approach is known as reverse price analysis (Monczka, 2009) or should cost analysis (Trent, 2009). This type of cost analysis is time consuming and often not too accurate, however it can be the basis for better understanding and information sharing in the process of negotiation.

The data required for the analysis can be obtained from the financial reports, balance sheet which give a ground for estimation of the supplier’s margin. The estimation of the material cost can be done based on consultation with internal engineers and external pricing information on a respective material. (Monczka, 2009). Labor cost can be obtained though external information on respective industry and country provided on-line e.g. http://stats.oecd.org/Index.aspx. And the last cost element, namely overhead cost can be estimated by expressing it as percentage of labor cost whereas in the labor-intensive production the ratio could be 150% and in the capital-intensive it could be as high as 600%(Monczka, 2009).

O’brian compiled a table putting together cost area and the date to collect when performing cost analysis. (Figure 7-2)
<table>
<thead>
<tr>
<th>Cost area</th>
<th>Data to collect</th>
<th>How to find the information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material costs</td>
<td>What is it?</td>
<td>Visit the factory</td>
</tr>
<tr>
<td></td>
<td>How much is used?</td>
<td>Talk to material suppliers/experts</td>
</tr>
<tr>
<td></td>
<td>Where does it come from?</td>
<td></td>
</tr>
<tr>
<td>Labour costs</td>
<td>How many man hours does it take?</td>
<td>Local labour rates</td>
</tr>
<tr>
<td></td>
<td>Who is involved?</td>
<td>Trade associations</td>
</tr>
<tr>
<td></td>
<td>What do they do?</td>
<td></td>
</tr>
<tr>
<td>Process costs</td>
<td>What is the process?</td>
<td>Annual report</td>
</tr>
<tr>
<td></td>
<td>What equipment is used?</td>
<td>Trade associations</td>
</tr>
<tr>
<td></td>
<td>Does this supplier invest in this area?</td>
<td></td>
</tr>
<tr>
<td>Distribution costs</td>
<td>How is it purchased?</td>
<td>Check with logistics company</td>
</tr>
<tr>
<td></td>
<td>Who does the distribution?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What special needs exist?</td>
<td></td>
</tr>
<tr>
<td>Overheads</td>
<td>Cost of the factory, buildings, people, sales, admin etc</td>
<td>Annual report, Estimations, Visit the factory</td>
</tr>
<tr>
<td>Profit</td>
<td>What is the profit?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What is reinvested?</td>
<td>Annual report</td>
</tr>
</tbody>
</table>

**FIGURE 7.2 INFORMATION SUPPORTING COST ANALYSIS, (ADAPTED FROM O'BRIAN, 2009)**

Even if the accuracy of this method is not so high it can provide a baseline of the suppliers cost structure.

A different type of cost analysis identifying cost beyond the standard unit price is known as *total cost of ownership analysis (TCO)*. This technique considers the costs that be broken into four categories: (Monczka, 2009)

1. Purchase price- an amount paid to the supplier for the product
2. Acquisition cost—all cost associated with bringing the product to the buyer’s site e.g. sourcing, administration, freight, taxes.
3. Usage cost—any cost arising during utilization of the product e.g. installation, warranty, inventory etc.
4. End-of-life costs—e.g. disposal costs

7.3.3. **COST MODEL KEY PRINCIPLES**

Hy Ask & Laseter identified five key principles that shall be considered to create more reliable cost model for purchased goods and services"( Ask &. Laseter 1998)

- Define *cost drivers*, which shall be distinguished from cost elements like: direct labor, materials and overhead. So cost elements are allocation of the cost whereas the cost drivers make the allocated cost change. An example of cost drivers are given in the Table 7-3
<table>
<thead>
<tr>
<th>Cost element</th>
<th>Cost drivers</th>
</tr>
</thead>
</table>
| Labour       | Utilization rate  
               | Labour cost         |
|              | Productivity   |
| Raw material | Quality        |
|              | Substitutes    |
| Transport    | Bulk and weight|
|              | Distance       |
| Energy       | Process efficiency|
|              | Unit cost      |

TABLE 7.3 EXAMPLE COST ELEMENT/COST DRIVERS (ADAPTED FROM C. BOOTH, 2010)

- Build *commodity-specific models*. Different products will have different cost drivers among commodities. While material cost can be the largest element for one product, the labor or facilities cost can constitute a lion’s share for another. For that reason, models should be commodity-specific.

- **Total cost of ownership** shall be regarded when acquiring a product. Hardly any purchasing decisions shall be made based exclusively on the purchasing price. A holistic approach to a purchasing practice recognizes that the price is only one element in a framework that includes a wider set of costs in the supply process. (Saunders M., 1997) Therefore Total cost of ownership is one key principles of any cost model. An illustration of cost representing total cost of ownership can be shipping expenses, and inventory-carrying, maintenance, quality costs. In some cases the cost of acquisition and use can exceed the purchase price and/or the supplier’s cost.

![Figure 7.3 Total Cost of Ownership for Selected Commodities (Laseter, 1998)](image-url)
- Start simple! The model is dependent on the quality of information used in the model. Therefore initial efforts should focus on a simple model that contain only the most important cost elements and drivers. Even though total ownership cost is a very important principle bringing a broad viewpoint of cost drivers, to secure the use of the model it shall be simple and grow its complexity gradually if needed.

- Triangulation of data using multiple data points to bound the numbers and improve accuracy. Triangulation benefits a great deal from using alternative indirect sources of information such as observations from facility tours, internal experts, industry related literature and official statistics etc.

7.3.4. Continuous Sourcing Cycle

The Continuous Sourcing Cycle (see Figure 7-4) is a model created to drive bottom-line improvement. The model generates knowledge of the players on the market (Competitive Insight) and value of the product through (Cost Insight).

The continuous cycle consists of four phases.

![Figure 7-4 The Continuous Sourcing Cycle Baker & Lazerer](image)

**Phase 1 - Capture margin**, the first phase of the cycle, reflecting the most common approach, attempting to get a leverage on price.

**Phase 2 - Reduce cost**, the second phase of the Continuous Sourcing Cycle, focuses on total cost of the product. One of the key factors of success is sharing of information between the

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4 Continuous sourcing cycle corresponds to Scania’s Sourcing insight
buying and selling companies and ability to use received information for the purpose of cost reduction.

The first two phases require limited assistance and contribution from other business functions and can be managed by purchasing function.

**Phase 3 - Manage demand** refer to challenging specification e.g. in terms of quantity, quality or service levels requested by their internal customers. This phase requires support of the other functions within the organization. Manage demand face proves to be equally applicable for non-production spending.

**Phase 4 - The create value phase** can be possible once the company has proven its capabilities in capturing margin, reducing cost, and managing demand. An example can be an extension of scope expressed in combining services and products — establishing conditions for cost reduction, demand management and at the same time creating value.

### 7.4 Price versus Cost Analysis

Before choosing the right cost analysis tool for a particular situation, the purchasing professional must understand the nature of the buy, in terms of:

- Is it a one-time buy, or call-off contract?
- Importance of the buy to the organization in terms of its cost impact.
- The nature of the supplier relationship

This will affect the accessibility of data, as well as reasonability of putting time into supplier analysis. It is important to consider the nature of the buy together with the type of supplier relationship, because these factors interact to create the cost analysis situation the organization faces.

Thus, cost analysis relevance can be measured using different dimensions in terms of:

- Type of goods/service – criticality of the product in terms of spend share
- Type of supplier relationships – short term or long-term relationships,
- Sourcing strategies – single, dual or multi sourcing

Once the total spend is quantified for each commodity or strategy, a portfolio matrix can be used to position the products and identify the approach to supplier relationships. A clear picture for the first, above mentioned, dimensions will show whether to use cost analysis. It is a waste of time and resources to take a cost perspective when the situation can benefit from price analysis. Purchased items of low value and part of competitive market that any analysis beyond competitive price comparisons is not worth the effort. (Trent, 2007, p.116) Cost analysis shall be applied when in the situations when price analysis cannot provide sufficient results.
On the other hand managing costs and cost drivers yield the best result for items of high importance, high value, in the situations where long-term relations are preferred. Cost identification is not only the process that leads to agreement on final price also a foundation for developing of the future cost reduction plan. Considering type of sourcing strategy as dimension for deciding on price against cost analysis a single sourcing would require a cost perspective.

Monitoring price instead of cost is more appropriate for certain types of commodities, especially if there are important individual items within a commodity group that do not fit the overall pattern, those should be analyzed separately. The results of the classification can be used to determine the appropriate cost analysis tools to use.

Monitoring price instead of cost is more appropriate for certain types of commodities, especially for market-based products e.g. steel, paper, plastic and other types of bulk commodities. In this case the prices can be compared to external indices.

A purchasing of investment equipment is a project expenditure, often of a large sum of money. It involves production equipment, major information systems, or other assets that the organization will own for an extended time period. It is worth applying total cost of ownership perspective. Thus, total cost of ownership shall used when the price does not provide a valid basis for supplier selection and Cost breakdown is not sufficient enough. The situations when total cost of ownership is worth of efforts and time are:

- Internal costs associated with a purchase are high and extend over a long period of time
- Purchasing price of the product is relatively low as compared to the ongoing cost of use of the item
- Recurring problems with the supplier
8. SPEND

8.1 SPEND MANAGEMENT

Spend management is the foundation for every purchasing strategy and the starting point of strategic sourcing (van Weele 2010, Pandit & Marmanis, 2008). Apparently it is not only the foundation but the most difficult part of it and turns to be the Achilles heel of the purchaser. Being able to deliver significant and tangible cost reduction a purchaser must be well equipped with the reliable information. Developing sourcing strategies collection of the detailed spend management information is a great challenge. "In many cases large companies do not have clue of what they purchase internationally". (van Weele 2010). When developing strategy the company has to answer the following questions:

- On what commodity do we spend the most money?
- On what supplier do we spend the most money?
- How many suppliers do we have per commodity?

The answers on these questions shall lead to success of the this strategy providing guidelines in managing supply base, i.d. reducing or not a number of suppliers, deciding on types of relationships. "Therefore a commodity plan maps out who will be responsible for each activity, supported a detailed timeframe and how the progress will be monitored" (van Weele 2010). An outcome of commodity management is, as discussed before, sourcing strategy referring to how many suppliers will be dealt with for a certain commodity in combination with supplier selection strategy.

To be able to tackle the challenge of spend management information it is important to find the roots of the problem. According to Global Chief Procurement Officer Survey 2009 the problem of the detailed spend information is broken master data where some issues can be listed as follows:

- Incomplete descriptions and classifications
- Misclassification of spend types
- Classifications and descriptions captured at too high level
- Lack of data consistency and hierarchies

The above mentioned survey showed that these particular problems are acute in non stock and services area of spend. Benefits gained from the results of spent analysis allows a sourcing organization to:

- Identify saving opportunities
- Prioritize spend categories
- Improve negotiation leverage
- Identify off-contract spend and improve procurement operations.
8.2 TYPES OF SPEND

At a high level, corporate spend can be classified into direct and indirect. Direct spend refers to buying for primary activities, can be addressed as 'production buying'. As a rule, this type of spend gets most of attention from management. Direct spend encompasses all spend associated with raw material and services that go into the actual products/services that company sells. (Pandit & Marmanis, 2008).

*Indirect spend refers all purchased materials and services that do not become part of the company’s value proposition.* (van Weele, 2010). This type is often called as non-production. Under this category fall MRO-supplies⁵, investment goods and services. Indirect spend and especially MRO supplies contain issues with data compliance due to decentralized management, maverick spend, and supplier fragmentation. MRO-supplies are a particularly complicated purchasing area where there are typically large rationalization potentials in cost rationalization through supplier relationships.

⁵ MRO – maintenance, repair and operating supplies, repetitive and often low in value (van Weele, 2010)
9. **SUMMARY**

Today's procurement calls for different strategies, restructuring its organization, tuning its approach in order to fulfil its mission in creation competitive advantage for the company. It's a complex task which requires understanding of global perspective, philosophy of cooperative supplier relationships, strategies and strategic tools.

It is not enough to learn bolts and nuts of the cost model to generate value for the business. One of prerequisites of success of any cost model is understanding of context of the buying situation: what is the nature of the purchase, what type of supplier relationship we are facing, what sourcing strategy is applicable. And of course as it was underlined a bedrock for strategic sourcing and the cost model frame work is spend visibility.

Not all purchases are of equal significance and value to an organization. Therefore, they all should neither be treated equally, nor analyzed using the same techniques, with the same efforts and resources. Further than cost and price, performance of suppliers, in terms of quality, delivery, service orientation, and other relevant factors, shall be taken into account.

Even though the methodology of cost modelling can be applied to all types of purchases in the manufacturing and service, the literature is build mostly on example related to manufacturing, whereas indirect spend was basically out of focus when discussing a cost modelling. Moreover, price perspective is recommended in the first place.

Most of the printed materials provide description of types of price/cost techniques and are short of information on application of the techniques, in terms of whether to use them, how to use, and by whom. Without a doubt cost analysis makes purchasing more proactive if it is used where it has the greatest strategic benefit to the organization.
PART IV – EMPIRICAL DATA

"The theory must not contradict empirical facts."

— Albert Einstein
10. COMMERCIAL SYSTEM

10.1. GENERAL

The purchasing at Scania is centralized, being located in Södertälje where the long-term plans and strategic activities are being performed. Operational activities and short-term planning take place at the local level.

The value of the Cost of goods sold comprises 54 504 m. SEK. (Scania Annual report 2010). Scania's spend is classified as automotive (AP) and non-automotive (NAP) which corresponding to direct and indirect spend. Besides spend may be factory- or aftermarket-related.

The aftermarket, including the secondary market, relates to the distribution, retailing of the vehicles, and installation of all vehicle parts, chemicals, tools, equipment and accessories. The aftermarket keeps vehicles on the road by providing the customers with service, maintenance or customization of the vehicles.

As it has been already mentioned Commercial system is young unit within Scania Global purchasing organization. Figure 10-1. The department consists of the central group located in Södertälje and local purchasers in about 50 countries. The present paper is focused only on the central group consisting of 11 members (Group manager, assistant and sourcing managers).

![Diagram of Scania Purchasing Organizations](image)

**FIGURE 10-1 SCANIA PURCHASING ORGANIZATIONS. (SCANIA INTRANET).**

The department is responsible, for the most part, for procurement of non-automotive products which include a wide range of items from investments to consumables for Scania's distributor centres and workshops. The department has been created with the objective of consolidation of purchasing volumes for the aftermarket for the purpose of saving potential creation and its accomplishment.
10.2. THE GOVERNING PROCESS

The purchasing activities shall be managed through the sourcing process called ‘The Blue Arrow’ Figure 10-2. The process is identical to the one used by Non-automotive purchasing. The sourcing process includes two main phases consisting of steps 1-4 outline where a strategy is selected and steps 5-8 where the selected strategy is implemented. The outcome of the process is a negotiated global contract.

![Figure 10-2 THE BLUE ARROW, (SCANIA INTRANET)](image)

At the same time as the central contracts are not mandatory for the local purchasers to use, a job of the central group is a true challenge in getting the best deal possible to make the central contract attractive on the local level.

Every step is broken down into activities see Appendix 1. Beneath step two, Data collection and analysis, it can be found activity reflecting basic ideas of Sourcing Insight, namely performing total cost analysis. In step six, Evaluation and initial negotiation, it is suggested to use the result of the total cost analysis as a base for evaluation of the quotation followed by negotiations.

To support sourcing decisions the purchased products shall be classified using the procurement matrix. The choice of strategy is based on the extent of commercial risk and financial impact. Once the products have been classified, a suitable procurement strategy is to be employed.

Financial impact is defined as the relative share of the total annual volume value. The basic rule is that 80% of the total volume value in the upper part of the matrix and consequently 20% in the lower part.

Commercial risk is defined based on the number of sourcing alternatives available during the next two years provided that a design change is not required.

Each part or component can only have one valid classification for the Scania. But in some cases, it can be required for the smaller business areas within Scania to act according to a different classification strategy. This can be applied only for parts and components that are unique.

The procurement matrix (see Figure 10-3) was adapted from Krajlic four quadrant matrix.
The examples of the products classified according to the procurement matrix are

*Leverage products:* tires, frames

The procurement strategy employed for this group of products is to utilize dual sourcing to create competition. Competitive bidding on a global base to achieve lowest total cost and continuous challenging the existing suppliers.

*Strategic products:* brake system, fuel system

In case of strategic product long-term relation and in some cases partnership based on trust is favoured for purpose of common benefits. Supplier selection based on target cost and development potential. Dual sourcing when possible is to be employed. Long-term contracts are preferred to secure suppliers and cost reduction.

*Routine products:* clips, bulbs, screws, nuts

The strategy for the routine products is to create competition through dual sourcing whereas competitive bidding on a global base is to be utilized to achieve lowest total cost. To use few suppliers challenging the existing suppliers continuously and bundle volumes. Long-term contracts are preferred in order to optimize time and optimize assortment.

*Bottleneck products:* wood-roof wedges, patents, parts that have been strategic and due to decrease in volume has ended up as an bottleneck product.

Bottleneck products require securing the supply in the short run, and in the long run find new suppliers to shift from Bottleneck. Long-term contracts are preferred to secure supplies and cost reduction.

*In house products:* cabs, gearboxes, rear axles, engines

The definition of the In-house products includes products that are not possible to purchase in competition, products with a high internal know-how in product development and manufacturing.
10.3. Supply Base and Spend Segmentation

One of the task of the department Commercial system is to optimize the supply base which for the moment encompasses more than 46 000 suppliers compared with automotive supply base of 800 suppliers. (Scania, Quickview 2010). The preference is given to the suppliers with an international footprint that are able to take on larger volumes and willing to develop a long-term relation.

Supply base reduction benefits not only in cost savings but also results in developing of an approach to act as one organisation towards suppliers in all countries.

At the same time as optimizing the supply base the great deal of attention is paid to contracted volume.

35% of the total spend is lacking contract and only 7% of the total volume is covered by the central contracts. See Figure 10-4. The target is 95% of volume shall be covered by contracts.

![Contracted/non-contracted volume](image)

**Figure 10-4 Aftermarket Contracted/Noncontracted Volume. (Scania Quickview)**

It is significant to point out a difference between factory related and aftermarket related purchasing which is represented by substantial amount of the products purchased to be sold further. In this case Scania acts as a retailer where the purchasing price and the correspondence of products to customers demands play a very important role for every single deal.

Such products can be delivered direct from the supplier to the distributors or via Scania's central warehouse in Belgium. This might create additional challenge in obtaining the right price as charges of the central warehouse comprise 10-30% from the purchasing price of a
product, plus distributors margin. Another challenge of the central group in making global contract is to meet requirements of many different countries at the same time.

At the moment the is no information available what is the share of the products to be resold from the total purchasing volume. Moreover the spend is broken down to the level of segment, consequently obtaining information on the product level is not possible. This means that classification of the purchased items according to the procurement matrix Figure 10-3 is not done.

The products purchased are grouped in seven commodities and sixty segments. Spend can be grouped by three basic dimensions: Commodity, Location, Supplier. Additional dimension is contract status. The smallest measurable unit of information on spend is sorted by Supplier, Segment and Country which can be additionally grouped by availability/non-availability of the contract.

Group member are working in eight cross-functional teams grouped by a procurement area. The procurement areas match to some extent commodities but not one to one which means one commodity might be two procurement areas and one procurement area might include items from different commodities.

Reliability of data is a challenge as the spend encompasses data from ca. 50 countries with no common system. A great deal of efforts are put into collecting the data and feeding into the system located centrally.

![Figure 10-5 The Procurement Teams, Scania Inline](image-url)

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11. **Sourcing Insight Today**

11.1. **Description**

The basic ideas behind the model designed by Baker and Laseter have attracted the interest of Global purchasing management at Scania. The model's adapted version is used now by the automotive purchasing.

Sourcing Insight is used for maximizing of cost insight, process knowledge and the creation of value when visiting suppliers' production facilities or challenging value creating processes in general.

The model based on two core capabilities and four different phases. Cycling through the four phases offers a systematic method for continuous cost savings.

**Cost Insight** - Comprehension the cost elements and cost drivers, ability to model total cost ensuring that prices reflect underlying economics. At automotive purchasing this capability is managed and enabled through the following tools and activities:

- Cost engineering
- Raw Materials Briefing
- Should Cost calculation
- Cost breakdown
- Value stream mapping
- Cost Comparison

**Competitive Insight** - Understanding of industry, its dynamics and structure. This capability is managed in practice though through the following tools and activities:

- Supplier evaluation
- Macro economics and labour cost
- Benchmarking
- Business plan, Segment Overview (AP), SSL (NAP)

**Capture Margin** - Cost understanding provides the insight to uncover excessive margins. The use of competitive threat in negotiations to reduce supplier prices. Achieve product and process cost insight and understanding of supplier financials.

**Reduce cost** - Competitive insight and cost understanding drives efforts to reduce costs through motivation of suppliers focus on productivity, simplifying the value chain and waste elimination.

**Manage demand** - Challenging specification and design to match customers demands, optimizing packaging, material control, no. of call-offs etc.
Create Value - Create changes that lead to increase of margin or/and create value for the customers through e.g. product improvements

11.2. APPLICATION STEPS

For the purpose of efficient utilization of the model it has been developed the process for its application. It contains tools and information helping to identify cost saving potential and create negotiation power and argumentation. This process contains three steps, Preparation, Supplier Visit and Evaluation/Next Step. (Scania InLine 2011)

The first step, Preparation contains activities directed on collecting of supplier and product information including:

- Financial Status
- Quality and Delivery performance
- Current business, cost development, new projects
- Previous negotiations
- Cost breakdown - Identify negotiation potential
- Process Flow Diagram and Control Plan
- Previous visit reports

The second step, Supplier visit contains the following activities:

- Quick production overview
- Process flow drawing
- Identifying of waste and non-value adding activities
- Investigation headcount, shift forms, output, capacity, bottle necks etc
- Reflection on what you have seen from a negotiation perspective
- Identifying differences between the theory (Cost Breakdown) and the actual process
- Filling in the Waste Evaluation Sheet (Appendix 4) to highlight waste and other negotiation areas
- Documentation of the findings for future visits, follow-up and handovers

The third step, Evaluation contains the activities helping in preparation of the negotiation

- Preparation of arguments based on production observations
- Identifying negotiation areas given by the cost breakdown
- Should cost calculation by Cost Engineering
- Supply Chain Development assignment to go deeper into resource efficiency
- Design adjustments (managing demand)

11.3. STRATEGIC TOOLS

At disposition of a purchaser at Scania there are several tools and resources available to support when utilizing the Sourcing insight model. Depending on the situation, the following tools and resources can be employed.
Information regarding financial status of a supplier can be obtained by The Business Analysis Group, a department helping a purchaser to get information on possible risks associated with the supplier, potential of the future business etc.

To get insight into cost, a purchaser can use cost breakdown. Cost Breakdown is a constructive tool for understanding the cost elements and cost drivers. Cost Breakdown is a top-down cost breakdown filled in by the supplier, normally in the quotation phase where the suppliers willingness to provide the information is at its best. Normally supplier's willingness to complete a Cost Breakdown depends on several factors: the relationship, the commercial attractiveness, future business.

Should cost is another tool to use and a resource available for it is Cost Engineering department. The cost engineers take apart the negotiated item, take measurements and weigh it to estimate cost and price. The price is based on the raw material price indices, production costs, overhead and profit estimations. Cost Engineering is performed by a dedicated support group at Global Purchasing, while Cost Breakdown, Cost Comparison and Should Cost are methods which can be used by each sourcing manager, with or without supplier involvement.

Should cost calculation is a bottom-up cost breakdown tool that can be used by the a purchaser. Consequently it has been designed to run with general assumptions and process data. It is used to verify and challenge the quoted or contracted price. Information on detailed level shall be collected for should cost calculation.
12. INTERVIEW INFORMATION

The interview with the group members showed that half of them works in the department less than a year which has a significant impact on the process implementation and development.

Even though sourcing process is developed and being followed, process supporting tools and resources are not known or available to all members of the group. Having responsibility for a certain commodity the purchasers don't have enough information on it or resources to obtain it. A great deal of work was done on spend segmentation, but a purchaser does not have a clear picture of the procurement area spend as it can be split between two commodities or combined with other items. A number of suppliers per procurement area or commodity is not one hundred percent clear. As well as the segment strategy is not described. The procurement matrix is more a mindset when purchasing the products. That means that actual segmentation, showing the number of suppliers or products in each quadrant, does not exist.

Being rather young and to some extent different from other departments at Global purchasing, Commercial system and in particular central group has not clear guidelines for the daily activities but on the other hand has very clear goals and targets in terms of savings - 4% per year on average implemented reported volume.

A structured interview has been conducted in order to get a snapshot of the Sourcing Insight model utilization at present time by other departments at Scania and compare it with the central group. The questionnaire is not limited to quantitative data and contains in addition qualitative information. The questionnaire contained questions on Sourcing insight process phases and tools supporting it see Appendix 2. The striking difference was that the purchaser from other departments have access to the information systems supporting a certain step of the sourcing process. On the contrary members of the central group either have no access or have no idea of existence of the available informational systems. The detailed analysis of the collected information in the questionnaire is analyzed in the next part of the thesis.
13. SUMMARY

The following features below serves as the summary of the central group of Commercial system

Maturity:

Both group in terms of building a team and process in terms of implementation are not mature due to the fact that most members of the group are quite new and the process adopted from NAP is not fully applicable.

Challenges:

To make a contract that consolidates volume across the worlds if possible with more attractive prices comparing to the local ones and at the same time meeting requirements of different countries.

Additionally if the product is delivered to the distributors via the central warehouse, the prices of the central contract can be challenged by extra logistics charges.

Difference

The main difference from other departments within Global purchasing at Scania is purchasing for aftermarket and in particular products to be resold.

Constraints/targets:

- 4% savings on annual basis
- 50% reduction of supply base
- 95% of contracted volume

Process obstacles:

- Lack of spend visibility
- Absence segment strategy description
- Access to available information systems
- Absence of supplier segmentation

What concerns the model Sourcing insight, there are clear guidelines available in terms of information on intranet. It important to point out that the information is directed predominantly to automotive purchasing.
Get the habit of analysis - analysis will in time enable synthesis to become your habit of mind.

- Frank Lloyd Wright
14. **CURRENT STATUS**

14.1 **MODEL UTILIZATION**

To visualize the current position of the model utilization it has been done interviews of employees within Global purchasing who use presently the model which results were compared with the results obtained from the interviews with central group of Commercial system. The interview output is both qualitative and quantitative information. The respondents were chosen randomly from different departments both at AP and NAP. The goal of interview was to create a snapshot showing the gap between Commercial system, central group and other departments. The gap does not mean that the group shall reach the same level of the model utilization but give signal what areas are to be investigated and implemented if they are relevant to the daily practice of the group i.e. the interview result serves as reference for the researcher. The snapshot of the model utilization reflects common answers of the respondents in terms of activities performed, tools and resources utilized during three phases of the model in scale 0-3, where 0- Never heard about it, 1- Never, 2- Sometimes, 3-always

The model is used at advanced level by AP. Central group, as it shown at the Figure 14-1, use very little of available tools and recourses available for the model support. Most of the
group members has no access to the information systems supporting the model.

14.2 WHY TO USE SOURCING INSIGHT?

Most likely the model cannot fit every commercial activity of the central group. On the contrary the competitive environment where the prices shall be not only reasonable but also better than negotiated on the local markets and in some cases remain better even after charges of the central warehouse call for a tool that could support the governing process. For the reason given the Sourcing insight model would be the ammunition for the purchasers to cope with the tasks with the best result available. In this case cost insight is a key skill to be developed within the group through learning respective industries and macroeconomics attaining, at the same time, competitive insight.

Being clearly defined and utilized correctly, every phase of the cycle can add a value to the purchasing process. Even the most common approach in traditional purchasing, capturing margin can give a better return when a purchaser has the ability to uncover excessive margins through understanding suppliers’ financial situation but only though competitive threats.

Focusing on the total cost of the product and understanding what drives every cost element will help to develop balanced sourcing, obtain the best prices and establish long-term relations with suppliers. Working with the variety of suppliers and industries, cost insight
opens awareness about their strengths and weaknesses, possibility of potential cooperation. With a general knowledge of the company set-up, material flow and understanding the concept of Sourcing insight one can apply the model in any industry and on any product. Without a previous experience in one particular industry and detailed cost breakdown, a purchaser can get a general picture of cost elements and cost drivers of the product or service during short supplier visit.

Knowing the suppliers process and customers demands, the purchaser has a possibility to challenge the specification and design though advising on packaging optimization, quality or service levels, material control, no. of call-offs etc.

Employing of tree phases of the cycle, capturing margin, reducing cost, and managing demand will open an opportunity to create value and increase margin for customer without additional investments into existing process.

Once the model guidelines are created in line with the group reality the implementation process does not require any investments or excessive resources. The biggest part of the implementation is education of the group members. Taking into account the potential the model can create for the group’s results and rather simple implementation process leaves no space for hesitations whether to put into action Sourcing insight. The only questions that shall be answered when the model shall be used and what parts are relevant to the activities being carried out within Commercial system.

14.3 UNDERLYING CONDITIONS

Before analyzing the relevance of the model activities and tools, the brief summary of underlying conditions shall be given which will differ a great deal from AP. The current conditions will serve the departing point for the model fit and utilization.

- Most of the suppliers of AP are manufacturers whereas Commercial system works with suppliers representing service companies, retailers, distributors and minor numbers of manufactures. None of the respondents, being an advanced user of the model, had experience using the model with retail or service companies. As well as the printed material contains examples of cost model utilization predominantly using a manufactured product.
- Variety of products purchased is the factor to be taken into consideration when adapting the model for the Commercial system. Spectrum of the products includes and is not limited to office supplies, work shop equipment, real estate, laundry service, oil, hard ware and software, logistics services etc.
- A number of suppliers is another challenge of the central group of Commercial system compared with factory related purchasing. It is not easy to obtain a picture of supplier relations, segmentation and supplier strategy of the supply base encompassing 46 000 suppliers in ca. 50 countries.
- 6 out of 11 people are new in the department and 4 are new to Scania which means, the group needs additional training of internal routines.
- Accessibility of tools and information systems supporting the model is an issue contributing to the difficulty of the model implementation.

Referring to the nature of purchasing activities at Commercial System it is not possible to use the model the way it is used at AP. Hence the guidelines for the model use within the commercial system shall be adjusted and clarified.
15. THE MODEL GUIDELINES FOR THE GROUP

15.1 PRICE VERSUS COST FRAMEWORK

With the definition and purpose of the model being clarified it is possible to identify when the model shall be applied and what part of the model are relevant solely in the context of the central group.

The professional purchaser is aware of degree of competition in the given situation, the market conditions and the pricing technique the supplier employed when the offer was developed. Such insight allows the purchaser to evaluate the need for the cost analysis. Although rather time consuming process of the model use, immaturity of the group as such and sometimes absence of theoretical foundation require the guidelines and understanding understand when the model shall applied or avoided. Before drawing guidelines for the model use it important to clarify when the model shall be avoided and what can be used instead.

The analysis of the practice with the literature in the ground resulted in the outline of the conditions under which the model shall not be used especially cost breakdown:

- Low financial impact
- Extensive choice of suppliers on the market
- No long-term perspective in supplier relations
- Complexity of implementation – this dimension is pertinent for the immature organization in the first place

In the conditions listed above the price perspective would be more reasonable. Taking into consideration the present situation of the group, variety of the products purchased, number of suppliers etc., the following purchasing approaches would be suggested. The summary is visualized through the Figure 15-1. The circled area is recommended best for the model use depending on nature of the product and type of supplier. For cases that are out of the circled area the model shall be avoided or used partially.
Knowledge about the segment and segment strategy is one of key element when choosing between cost and price analysis.

15.2. GUIDELINES FOR COMMERCIAL SYSTEM

The ground for developing of the guidelines for Sourcing insight model for the Commercial system is formed by existing process applied at AP described in p.11.2. During analysis every step, broken down into activities and tools, was evaluated first in terms of relevance then a grade of application. A grade of application is extended to baseline activity and optional. The baseline activity reflects mandatory knowledge for all group members and is recommended to be applied in every purchase. The optional activity may by applicable depending on the particular conditions.

As overall the first step, Preparation, of the model process is a baseline activity. While collecting the supplier and product information the following activities form a baseline.

- Financial Status – obtaining and understanding the information about financial health of the supplier is an important activity in every purchase. It reflects the information that helps to allocate the risks that might occur during cooperation with the supplier, it shows scale of the supplier, possibility to grow capacity, information about margin etc. Financial status information can obtained often directly from suppliers website, on internet or ordered from business analytics at Scania.

- Current business - before contacting the supplier it is essential to investigate if Scania has already or had business with the them. Due to the fact that Scania is a large company there is always a risk that the other purchaser is or was in contact with the same company. The case can be that the same supplier has a spend at AP and
NAP and due to nonexistence of the common information system this information is not always transparent. Within Commercial system the same supplier in one other countries could have own Id in the system or could be missing et al. In order to act as one company when contacting suppliers, a central group should have a tight communication with all business units.

Information on current business will help to understand what is the potential of the relations with the supplier. As a first source for such information within the group is application Qlikview. Secondly a colleague in the supplier's country of origin would be the one to contact. Alternatively a responsible purchaser for respective commodity could provide with the information if available in the information systems used by him/her.

The optional activity during preparation is

- Cost breakdown – depending on a product purchased a cost breakdown may be applied by a purchaser in order to simulate price and compare later with the quoted one. The examples when cost breakdown shall not be used at the preparation stage are purchase of some services within a unknown industry for a purchaser, software, etc.,

The activities that analyzed as irrelevant to the central group of Commercial system are:

- Quality and Delivery performance - the information as such is important for the group. But this particular report refers only to production. Therefore the respective information shall be collected when the current business is investigated for the sake of timesaving.
- Cost development – the report refers to the particular article within production where cost is often influenced by raw material.
- Process Flow Diagram and Control Plan – would not be not only relevant but sometimes even possible to perform this activity at the preparation stage, especially if the industry is new to a purchaser.

Depending on the nature of the goods or services purchased, organization of the supplier, the conditions summarized in Figure 15.1, the second step, Supplier visit can be used optionally. The relevant activities during this stage are:

- Quick production overview - this activity is relevant to any kind of supplier. In case of manufacturer it is worth to take a tour and follow production flow, observing number of people at production, state of equipment. Investigation headcount, shift forms, output, capacity, bottle necks etc. Since energy in some cases comprises a major cost element it is important to pay attention to the utilities. If the supplier is distributor the attention can be paid to warehouse, logistics, information systems etc. This activity would be one of the main tools for a purchaser to get a picture of suppliers performance and sometimes even understand if this is capable to deliver the right product or service today and in the future before receiving a quotation.
- Process flow drawing – would suit more for the supplier – manufacturer, mostly for own use or if the internal presentation required. It could be helpful for comparing set-ups at different suppliers.
Identifying differences between the theory (Cost Breakdown) and the actual process
Reflection on what you have seen from a negotiation perspective
Documentation of the findings for future visits, follow-up and handovers

The following activities in the second Step are found as irrelevant for the present time and shall review after the baseline activities are being employed with confidence by all members of the group.

- Identifying of waste and non-value adding activities
- Filling in the Waste Evaluation Sheet (Appendix 4) to highlight waste and other negotiation areas

The third step, Evaluation depends to a great extent on activities undertaken in the previous steps. The activities included here are mostly focussed on building negotiation arguments, helping in preparation of the final negotiations.

- Preparation of arguments based on production observations - most of the arguments are based on facts which makes a purchaser trustworthy.
- Identifying negotiation areas given by the cost breakdown
- Design adjustments

Involvement of Cost engineers and Supply Chain Development shall be the case if the supplier is critical for the company or involvement would result in substantial savings.

- Should cost calculation by Cost Engineering
- Supply Chain Development assignment to go deeper into resource efficiency

The guidelines are summarised in Appendix 3.

15.3. PRACTICAL EXAMPLES

To demonstrate the Sourcing Insight model in action it was selected a typical project for the group. According to results of the interviews the model has been never used for service providers, hence the trial was used with a certain adjustment.

Background information of the project

The central project selected for the trial is work wear and oil towels laundry. The project goal is to find a global supplier that can carry out the Laundry and Garment management across Scania's network meeting all legal requirements, applicable laws or regulations, in the most efficient and cost effective way. In some countries some ancillary services like laundry of oil towels and mats are requested. The project dates back to 2009 when the decision about a new Scania work wear collection has been made. The project's roll-out was focused on Europe.
The garment is purchased centrally and stored at Scania's central warehouse in Belgium. The company providing the laundry service will purchase the garment from the central warehouse and rent out to Scania sale and service points. The rental service includes washing, repairing, distribution of the garment.

The enormous part of the job is collecting data on current situation and requirements in every country, available suppliers on the market, volumes and type of clothes to be used in each workshop, geographical location of the service points to served by the laundry company.

To demonstrate the scale of the project such figures can be listed as follows:

- 1000 sale and service points
- 9000 technicians 2250 front desk personnel
- Turnover of the project – 4000000EUR
- Number of current supplier – 13
- Expected savings 8%

The targets of the project are to find 3 suppliers globally and two per country, providing standard conditions and services. The challenges of the project except a large amount of information are number of stakeholders involved in the project, local contracts with a different termination dates in one region, redemption fee to be paid in case of premature termination of the project, quality issues of the garment, lead times of the garments suppliers.

The project is being executed by steps. The garment is purchased by batches and implemented in different markets. The countries included into first two steps of the implementation are indicated on the Figure 15-3. The present paper is related to the implementation of the Step II. A thorough planning of logistics is one of the most important milestones when changing laundry supplier and implementing a new collection of clothes. As an example can be mentioned Holland where 15-30 people in 44 has to be measured, provided with a set of garment which is marked individually with a barcode or chip. The service points are normally located all over the country.
Execution of the projects

With sourcing insight as mindset and guideline the following steps were taken.

After the collection of the information about volumes and current situation on the local markets, the first step of sourcing insight, Preparation has begun. The list of suppliers has been compiled which contained the suppliers sharing the laundry spend.

The laundry industry was quite new for a purchaser. For the reason given a research on laundry business, benchmarking of laundry factories in Europe had been done. This knowledge became a base for cost breakdown development relevant for the laundry industry. Having information on cost breakdown, expressed as average within industry it was possible to identify negotiation potential. The main cost element is labour, which constitute 40-59% of the total laundry cost.

Financial Status has been checked mostly through annual reports. The business analysis department has not been involved at this stage. This information gave a clear position about financial strength of the supplier, its growth during the last years, capability to invest etc.

Current business with supplies has been verified on the local and the global level. There was only one central contract with one supplier acting in countries of Step I, see Figure 15-3. Previous negotiations results have been discusses with the purchasers having direct contacts with the suppliers. In case of losing the business, the reasons were verified.

The results of the first phase was a short list of suppliers. Most of them were the suppliers with European footprint. Some local suppliers were selected to be visited too. The reason for visiting a local supplier was that the supplier had a lion share of spend on the local
market or and there are no global actors in the respective country. The final activity in the Preparation phase was planning of supplier visits.

The second phase, Supplier visit became a decision-making for some of the countries. After a short visit of production units it was clear if the supplier is capable to participate in the project or not before receiving a quotation. Quick production overview was one of the main activities. The visit included the production tour, following the flow with main focus on labour cost, number of shifts, energy efficiency, etc. The fast reading of the plant having in mind the cost breakdown elements gave, the possibility to build the negotiation strategy.

Production process were built at different suppliers differently. One main difference was one production line and independent several lines. One line is more sensitive to equipment failure. Another difference is keeping different routes separately which gives a shorter throughput time and less space for the losing the piece of garment.

The efficiency of a factory highly depends on its plant layout. During the visits it was observed that not all factories have efficient plant layout. In fact, the inefficient layout leads to increased lead-time, throughput time consequently increasing the production costs. The plant layout plays a vital role in the manufacturing cycle. The efficiency of plant layouts of the visited factories has been analyzed in terms of the process flows, motion, bottlenecks, passage ways, time frames etc.

After the visits the suppliers were asked to fill in a questionnaire as the follow-up of the meetings and as a pre-RFQ activity. The questions were more or less the same as asked during the visit. The example of the question and answers is presented in Table 15-1.

The collected information were used to assist understanding of the suppliers cost, own should cost calculation, benchmarking of supplier s in terms of efficiency and capacity. During the visit one can get a clear picture of the company’s approach and working methods.

General information section shall contribute to comprehension of our negotiation position.

Utility is next biggest cost element which was observed at suppliers. Such KPIs as l/kg of processed clothes and kWh/kg were checked and compared. Process of water treatment of incoming and outgoing water and heating varied greatly from factory to factory.

As well it was requested to fill in cost break-down.
### TABLE 15: FOLLOW-UP QUESTIONNAIRE EXAMPLE

<table>
<thead>
<tr>
<th>General</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover total</td>
<td>20000000</td>
</tr>
<tr>
<td>Scania's share in turnover</td>
<td>0.50%</td>
</tr>
<tr>
<td>Number of production units in the BU</td>
<td>2.00</td>
</tr>
<tr>
<td>Total number of employees</td>
<td>200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Production</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Throughput time</td>
<td>24 uur</td>
</tr>
<tr>
<td>Number of shifts</td>
<td>1.00</td>
</tr>
<tr>
<td>Number of people/shift</td>
<td>50.00</td>
</tr>
<tr>
<td>Total number of production personnel</td>
<td>50.00</td>
</tr>
<tr>
<td>Number of maintenance people</td>
<td>2.00</td>
</tr>
<tr>
<td>Processed units per/shift</td>
<td>14 000</td>
</tr>
<tr>
<td>Processed units per/week</td>
<td>70000,00</td>
</tr>
<tr>
<td>Number of production lines</td>
<td>10.00</td>
</tr>
<tr>
<td>Plant area m²</td>
<td>2500,00</td>
</tr>
<tr>
<td>Age of equipment</td>
<td>1 year</td>
</tr>
<tr>
<td>Number and capacity of dryers</td>
<td>75 kilo - 6 pcs</td>
</tr>
<tr>
<td>Number and capacity of washing machines</td>
<td>800 kilo - 1 pc</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fleet</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] Own</td>
<td>[ ] Outsourced</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KPI</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of trucks</td>
<td>35 (ownership and operational lease combined)</td>
</tr>
<tr>
<td>Water consumption l/kg</td>
<td>1.2</td>
</tr>
<tr>
<td>Energy consumption kWh/kg</td>
<td>1.7 kWh</td>
</tr>
<tr>
<td>Production failure rate</td>
<td>0,01%</td>
</tr>
<tr>
<td>Customer satisfaction rate</td>
<td>7,90</td>
</tr>
<tr>
<td>Service level %</td>
<td>100,00%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost breakdown/ kg of processed garment/wipes</th>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>Processing</td>
<td>20,00%</td>
</tr>
<tr>
<td>90%</td>
<td>Admin cost</td>
<td>5,00%</td>
</tr>
<tr>
<td>80%</td>
<td>Maintenance</td>
<td>3,00%</td>
</tr>
<tr>
<td>70%</td>
<td>Utility</td>
<td>15,00%</td>
</tr>
<tr>
<td>60%</td>
<td>Textile</td>
<td>35,00%</td>
</tr>
<tr>
<td>50%</td>
<td>Distribution</td>
<td>14,00%</td>
</tr>
<tr>
<td>40%</td>
<td>Other</td>
<td>8,00%</td>
</tr>
<tr>
<td>30%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For avoiding misunderstanding of the cost requested and obtaining correct data, the suppliers were provided with the cost definitions.
Processing:
Direct labour costs that are applicable to the receipt, sorting, washing, drying, ironing, conveyance and preparing textiles for delivery within a laundry processing facility.

Administration:
Laundry, Secretarial, contracting administration, general foreman and non-production employees/housekeeping.

Maintenance and Repair
Processing and ancillary support equipment, carts etc.: Labour cost and materials associated with routine maintenance of applicable systems.

Utility Cost:
Electrical, Steam, Gas, Water, Oil, Sewage, Solar

Textile:
Cost of garment as share of laundry cost

Distribution:
Drivers, fees, fuel, vehicle Maintenance and Repair Cost:

Other costs
Depreciation of property and equipment
etc
Laundry chemicals, etc.

The third step, Evaluation contains the activities helping in preparation of the negotiations.

The analysis of the information collected in Table 15-1 is used as support of negotiation and grounds for decision-making when it comes to choice of the supplier.

As it can be observed in Table 15-1 Scania’s share in the supplier’s turnover is insignificant which means Scania is not the most important customer. On the other hand if the supplier is not import for Scania, no direct damaged can be caused to the suppliers activity in case it loses this tender.

The analysis of the production data and KPI’s of the visited suppliers resulted in discovering the most efficient factories. Figure 15-4 shows suppliers in one business unit. Supplier 1 is processing least of garment per person and using most of water and electricity per one kilogram of processed garment. This supplier has the least efficient production with the highest production cost, reflected later in prices to the customer, creating at the same time no additional value for the customer. Supplier 4, on the contrary, processing most kilograms per one person, compared to its competitors. Direct labour cost which is the biggest cost element of the laundry service must be lower compared to the competitors Figure 15-4. This company is in focus when studying commercial offers.
The result of the benchmarking is complemented by the report made after the production observations expressed in SWOT analysis of the company Table 15-2.

<table>
<thead>
<tr>
<th>Company</th>
<th>Strength</th>
<th>Weakness</th>
<th>Opportunity</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier 4</td>
<td>Environment focus</td>
<td>Local footprint</td>
<td>Utilization of modern equipment</td>
<td>No contingency planning</td>
</tr>
<tr>
<td></td>
<td>Low rotation at production</td>
<td>Communication with Customers</td>
<td>Possibility to improve the quality</td>
<td>International competition</td>
</tr>
<tr>
<td></td>
<td>Chemical Dosing System</td>
<td></td>
<td>Energy saving program resulting 40%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Energy saving focus</td>
<td></td>
<td>Double capacity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>New equipment</td>
<td></td>
<td>Route planning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Automation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Through put time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Preventive maintenance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Not all suppliers were willing to share their cost breakdown. Some of the suppliers as it is presented in Table 15-1 gave a percentage share of costs, where textile shares 35%. Knowing from company benchmarking and laundry reports that textile share in cost breakdown is under 20%, the rest of 15% is the space for negotiation. Furthermore, taking into consideration a high level of energy efficiency, utility share shall be about 8% giving an extra argument for the purchaser. Following Sourcing Insight philosophy and steps, the above mentioned knowledge is gained and the purchaser can be ready to receive the quotation and meet the suppliers for negotiations.
16. SUMMARY

The Sourcing insight model used by automotive purchasing on advanced level is hardly used and even some of the models parts are hardly known to the central group of Commercial system.

Working with the variety of suppliers and industries, Sourcing insight can strengthen the purchaser position by giving knowledge about suppliers strengths and weaknesses, possibility of potential cooperation.

Due to the fact that the model steps are time consuming it is vital to understand when the model is applicable to balance the time and resources invested with the outcome. Segmentation and spend visibility are key elements when choosing between price and cost analysis. In case of Commercial system, spend visibility on the product level is quite a challenge. As well as suppliers segmentation according to the purchasing matrix (strategic, routines, leverage, bottle-neck is not done) which makes department’s activities even more time consuming.

Due to significant differences of purchasing at AP and commercial system the model cannot be used the same way. That is why every activity of three steps of the model has been analysed and defined as base line or optional depending on the purchasing situation. The first step, containing activities directed on collecting information about the product and suppliers were defined as baseline. The second step, supplier visit is recommended but defined as optional.

Eventually the use of model was shown on a practical example of the suppliers of laundry service. Plants with high efficiency, short throughput time have definitely higher margin that can be captured. By following the steps of the Sourcing insight model it was identified the most efficient supplier, areas and space for negotiation.
PART VI – CONCLUSIONS

It is a capital mistake to theorize before one has data.

Sir Arthur Conan Doyle
17. **Knowledge is Power**

Sourcing insight is a powerful tool for a modern purchasing organisation. Working with the variety of suppliers and industries, Sourcing insight can strengthen purchaser position by giving knowledge about suppliers’ strengths and weaknesses, possibility of potential cooperation etc. Following the steps of the model makes it possible to employ all four phases of the Sourcing insight cycle: capture margin, reduce cost, manage demand and create value.

There is no doubts that correct utilisation of the model would benefit the activity of the commercial system. The summary of benefits of the model can be listed as follows:

- Minimizing the risk with one supplier (single sourcing)
- Provides support for long-term contract
- Giving opportunity to be proactive

Availability of cost breakdown gives a negotiating leverage for several reasons. First of all the purchaser is aware of what percentage of the price is represented by each cost element. For example, if material cost comprises only 10% of the cost of a product, the supplier cannot use an argument of inflation in the material market justifying a high price. Taking the long-term perspective, the supplier can be involved as well into joint cost reduction discussions when the purchaser knows what the costs are. By helping the supplier recognize cost inefficiencies, the purchaser can achieve a win-win negotiating result.

The success of the model utilization though is dependent on understanding when to use the model and when to avoid. The conditions where the model would be mostly applicable are:

- High financial impact
- Limited choice of suppliers on the market
- Long-term perspective in supplier relations

Underlying conditions for the successful model application is segmentation, a clear segment strategy and spend visibility. The listed aspects about the product purchased will give the answer when choosing between price and cost analysis.

There is a certain gap in knowledge of the model elements between AP and Commercial system. Figure 14-1 visualises the areas to be improved. However not all elements are applicable in everyday activities of the central group of Commercial system due to major differences of purchasing at AP and commercial system.

The three steps of the model has been analysed from the perspective of Commercial system. As a result of the analysis the first step, containing activities directed on collecting information about the product is minimum for every project run at Commercial system. The detailed guidelines are presented in paragraph 15.2.
The steps in the circle shall not be followed blindly though since every industry and relationship with a supplier is different. The most important parts of the model to keep in mind are the cost insight and the competitive insight.

By using the model in one of the typical projects of the central group it was proved that Sourcing insight can be used with all types of suppliers.
There is nothing more difficult to take in hand more perilous to conduct, or more uncertain in its success than to take the lead in the introduction of a new order of things.

Jean-Jaques Rousseau
18. Baseline Knowledge

Managing the cost of purchased goods and services continues to be one of the main points on the agenda of purchasers today. The information on Scania intranet contains an extensive description of the model and suggestions how to use it. These broad suggestions are helpful in providing direction, yet they are not specific enough to help purchasers actually analyze the situations they may face and decide on use or not to use the model, particularly when it comes to variety of the products and suppliers handled by Commercial system.

A critical beginning to any implementation process should start with a basic understanding of what is to be implemented and why. Before the relevant knowledge of the model purpose for the product range it is difficult to work with any of the concepts within the circle. Therefore baseline of the knowledge in the group shall be levelled and improved. In the line of the task of the present paper the following are activities are recommended:

1. To organize educational session for the group members with the following content:
   - Explanation the model definition and purpose.
   - When the model is applicable
   - Explanation of the content and purpose of activities within the model
   - Guidelines for the group

2. To assign to the purchasers, responsible for procurement areas, a revision of existing segments in order to outline the most suitable segments to start to work with the model. The helping tool for allocation the segments against cost and price analysis shown on Figure 15-1. This exercise would help the purchaser to improve knowledge about own purchasing area, by reviewing its spend, strategy and focus on a few segments where the model would generate the best results.

3. Step 1 would be recommended as mandatory to use for all activities held within the group. (See Figure 18-1). The activities of Step 1 would go hand-in-hand with the second step of the process Blue arrow Appendix 1.
4. Cost breakdown, if applicable, is recommended to be sent as RFI (request for information) as prequalification phase for RFQ (Request for Quotation).

During the study the matters being beyond the task of the thesis but crucial for the model use, have been observed. Discussions regarding the topics have come up over the time and therefore the following areas are recommended for further improvements.

5. As at the moment only two persons in the department have access to two different information systems. Hence provided the usefulness of the systems are proved the rest of the group members shall get access rights.

6. There are plenty of reports generated from different databases and visualised through Qlickview. But there are no standard package of reports defined and accessible for the central group at Commercial system. For the reason given such standard list of report is recommended to be compiled in order to make them accessible to all group member along with a short information session on content of the reports.

7. As long-term solution to look at possibility to improve spend visibility through automating the collection and analysis of various third party expenditure across business units. It provides the procurement organization with the ability to monitor purchase movements, obtaining predefined reports at requested intervals saving time put at the moment into manual reporting.

Retrieving the data from the different systems is a challenge requiring certain investments of times and other resources. Figure 18-2 shows the spend architecture and the different steps needed to obtain data. In case of Commercial system the presentation tool, namely Qlickview is already in place so the activity would include investigation of possibility retrieving, cleansing and storing the data.
8. An the last but not least recommendation is establishing proactive process of setting and monitoring expectations with suppliers across business units. It includes development of metrics and the process to support continuous improvement across the performance of the supply base with respect to quality, cost, delivery, development, innovation and management. Due to the fact that a few business units are trying to develop and implement their own tools, it would be logical for the central group to initiate the central activity in order to consolidate efforts and implement in all business units one common tool for supplier performance measurement.
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5. Högborg, Göran, Sourcing Manager(SR- Commercial system)
6. Håkansson, Anders, Sourcing Manager (SN - Commodity Supplies)
7. Jansson, Maria, Sourcing Manager (SDM - Commodity Forgings & Fasteners)
8. Lindblad, Jan, Sourcing Manager (SN - Commodity Investments)
9. Lindholm, Helen, Sourcing Manager, (SN - Commodity Supplies)
10. Mansikka, Olle, Purchasing manager (SR- Commercial system)
11. Motavaf, Arsalan, Sourcing Manager (SG - Commodity Sheet Metal)
12. Nilsson, Tommy, Sourcing Manager(SR- Commercial system)
13. Persson, Christian, Sourcing Manager(SR- Commercial system)
14. Stenholm, Urban, Sourcing Manager(SR- Commercial system)
15. Wu, Wei, Sourcing Manager(SR- Commercial system)
16. Zcevic, Zdravko, Sourcing Manager (SN - Dynamite)
17. Åman, Petter, Purchasing manager (SR- Commercial system)
### APPENDIX 1 THE PURCHASING PROCESS

#### Activities

<table>
<thead>
<tr>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initiation</strong></td>
<td><strong>Data collection and analysis</strong></td>
<td><strong>Sourcing strategy</strong></td>
<td><strong>Bid strategy and method</strong></td>
<td><strong>RFQ</strong></td>
<td><strong>Evaluation and initial negotiation</strong></td>
<td><strong>Final negotiation</strong></td>
<td><strong>Implementation</strong></td>
</tr>
</tbody>
</table>

### Activities

1. Receive/define assignment and collect basic information
2. Communicate cross functionally within R
3. Plan time schedule for all sourcing and quality assurance activities
4. Analyze strategies (e.g., cost reduction, contract, etc.)
5. Suggest strategies for cost reduction, risk reduction, etc.
6. Identify suppliers and review background information
7. Assess suppliers' total business with Bosch's business objectives
8. Test strategy in internal consulting teams
9. Select the best supplier based on the test results
10. Prepare RFQ and send it to the selected supplier
11. Finalize negotiations with the selected supplier
12. Finalize RFQ and send it to the selected supplier
13. Evaluate quotations (based on total lifecycle cost and fulfillment of sourcing strategy)
14. Select supplier
15. Sign contract and place order(s); check order confirmation
16. Inform responsible personnel about the selected supplier(s)
17. Document negotiation results

### Output

- Assignment is understood and approved
- Assignment is prepared for setting of sourcing strategy
- Sourcing strategy and selection to be reviewed
- RFQ content and method to be prepared
- Negotiation targets and strategy evaluated
- Quotations received
- Final negotiation targets and strategy set
- Contract signed and order placed

- Assignment is implemented
- Negotiation results evaluated
APPENDIX 2 QUESTIONNAIRE

Do you work at AP _ or NAP _ Commercial system?

How long have you been working at your current department? ____________________ ___

How long have you been employed by Scania?

What type of suppliers do you work with ____________________ 
Manufacturers __ Service __ Wholesale/Retailer __

What products do you purchase ____________________

Step 1 Preparation

Collect supplier information

Financial Status report Never __ Sometimes __ Always __ Never heard about it __

Quality and Delivery SM2 Supplier Report:SSL Never __ Sometimes __ Always __ Never heard about it __

Current business(part list from PPR in Qlikview) Never __ Sometimes __ Always __ Never heard about it __

Collect part/process information

Cost breakdown Never __ Sometimes __ Always __ Never heard about it __

Process Flow Diagram and Control Plan Never __ Sometimes __ Always __ Never heard about it __

Previous visit reports Never __ Sometimes __ Always __ Never heard about it __

Specifications eQ2 Never __ Sometimes __ Always __ Never heard about it __

Step 2 Supplier Visit

Production overview Never __ Sometimes __ Always __ Never heard about it __

Production details

Draw the process flow Never __ Sometimes __ Always __ Never heard about it __

Identify and non-value adding activities Never __ Sometimes __ Always __ Never heard about it __

Investigate shift forms, output, capacity, OPE, bottle necks etc

Step 3 Evaluation/Next step

Prepare the negotiation

Identify negotiation areas given by the cost breakdown Never __ Sometimes __ Always __ Never heard about it __

Should cost calculation by Cost Engineering Never __ Sometimes __ Always __ Never heard about it __

Raw Materials Briefing

Supply Chain Development

Do you use Sourcing insight for multi product contracts

Do you use total cost analysis
Guidelines for Commercial system

1. Preparation
   - Collect supplier information
   - Financial Status
   - Current business
   - Previous negotiations
   - Decide on focus areas
   - Cost breakdown

2. Supplier Visit
   - Production overview (Quick)
   - Follow the complete production flow
   - Get a general view of the housekeeping status
   - Fill in the Waste Evaluation Sheet to highlight waste and other negotiation areas
   - Prioritize

3. Evaluation, Next step
   - Prepare arguments based on production observations
   - Identify negotiation areas given by the cost breakdown (e.g. excessive profit, OH or material cost) and other negotiation arguments (competition, volume development, new projects etc)