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**Added Value within the Automotive Logistics  
Industry: Volvo Logistics Corporation**

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## **Abstract**

Players in the automotive industry are predicting a downturn in the business the coming years. This will affect automotive logistics service providers such as Volvo Logistics Corporation (VLC). In order to prevent being severely affected by the incoming challenges VLC is seeking a competitive niche through delivering added value services to existing and potential customers.

The purpose is to investigate what is added value from the customers' perspective within the automotive logistics industry, and what are the drivers behind it. We also look into how our findings can help VLC to better value its customers, giving more benefits to its customers, and become more competitive.

Our research has shown that there are different perceptions of added value. The findings has also revealed why VLC fails to match its customers' perception.

This report suggests that communication and marketing can contribute to narrow the gaps between VLC and its customers. The report also recommends VLC to review its current management culture, and its strategy to cope with present and futures challenges on customer related issues.

## **Key words**

Volvo Logistics Corporation, automotive logistics industry, added value, value added, customer satisfaction, customer value, and competitive advantage.

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Göteborg, January 2007

Veronica Zackrisson and Dro Gabriel Zogbe

# Abbreviations

## C

CPV	Customer Perceived Value
CSI	Customer Satisfaction Index
CV	Core Value
CVM	Customer Value Management

## E

Emballage	VLC's word for its packaging material
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## K

KPI	Key Performance Indicator
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## M

MT	Mack Trucks
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## R

RT	Renault Trucks
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## V

VBC	Volvo Bus Corporation
VCC	Volvo Car Corporation
VCE	Volvo Construction Equipment
VLC	Volvo Logistics Corporation
VTC	Volvo Truck Corporation

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**APPENDIX 3 SUMMARY OF QUESTIONNAIRE FINDINGS**

**APPENDIX 4 SUMMARY OF INTERVIEW FINDINGS**

# 1 Introduction

Today's global business is becoming more fierce and unpredictable as a result of volatile variables in the market environment. For a company to stay profitable as well as competitive in this kind of environment it has to focus on the drivers that help the specific company to be competitive. One major driver for most companies is the cost. The cost reduction is overwhelming for the business's competition.

Companies within the automotive industry today put high pressure on their logistics service providers by having suppliers and manufacturing plants scattered across the globe. The logistics service providers have to not only have an efficient global network, but must also see to keep the logistics costs down to help the individual firm in the automotive industry to stay or become competitive.

Players in the automotive industry such as Håkan Samuelsson, CEO of MAN<sup>1</sup> and Åke Niklasson CEO of Volvo Logistics Corporation (VLC)<sup>2</sup> are predicting a downturn in the business the coming years. The causes of the downturn are expected to be the rise in development costs, fluctuations in the oil price, and the introduction of new emission standards for vehicles. The expected downturn puts extra pressure on all sources of costs, for instance the workforce, the parts suppliers, and the logistics service providers. Costs savings within the supply chain are in focus where lead time reduction in order handling, more automated systems and sophisticated information technology are required alongside processing accuracy, and better transportation network. With all these cost savings in mind there is also a pressure on the logistics service providers to find solutions that at the same time exceeds customers' expectations and requirements.

VLC who handles and develops business logistics systems for exclusively the automotive and the aviation industries worldwide has understood it will be affected by the changes in the automotive industry and is consequently seeking a niche to tackle the incoming challenges.

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<sup>1</sup> Financial Times, 2 August 2006, pp14

<sup>2</sup> Volvo Logistics Corporation's Business Plan 2006, pp2



Amongst the tactics there is the delivery of added value to increase the customer satisfaction and strengthen VLC's position in the market.

## **1.1 Background**

The present research project on the concept of added value has been assigned by the department of strategic planning at Volvo Logistics Corporation (VLC) in Göteborg to address a subject believed to be a competitive differentiator. The ideas behind the initiation of this research were to stimulate the customer satisfaction and prepare the corporate for future challenges. Our research findings would be for people with interest in strategy for customer satisfaction within the automotive logistics industry or other logistics industries.

Customer satisfaction is now in focus within VLC. The reason for this is, even though the customer satisfaction index (CSI) target has been reached, it has had a negative turn for two years in a row, 2004 and 2005. This means that the distance between the target and the actual result is decreasing in a negative way. The negative trend has to be broken and one way to try to do this is to understand what is seen as added value within the automotive logistics industry.

First of all it is important to stress that there is a distinction between *value added* and *added value* services. The first term refers to any activities adding a value to the product during the operation process. These activities are easy to identify since they are cost related and their implementation during the process generally leads to an increase of the product's price. The second term is more complex because it has to take into account the receiver of the product perception. Here, the difficulty is to know what the drivers are behind the customers' perceptions in expressing their views on what is added value or not.

## **1.2 Purpose**

The purpose is to investigate what is added value from the customers' perspective within the automotive logistics industry, and what are the drivers behind it. We aim to, based on this investigation, look into how our findings can help VLC to better value its customers, giving more benefits to its customers, and become more competitive.

### **1.2.1 Problem**

VLC is experiencing difficulties to define and evaluate added value services and also understand the perception of its customers regarding this subject as the yearly customer satisfaction index (CSI) has failed to address this issue. Some services already provided are seen by VLC as added value services while the customers seen them as standard services or core service and vice versa. This situation shows a gap in the perception of added value between VLC and its customers regarding the services offered.

To some extent services currently provided by VLC might not be well marketed and valued in order for them to have a greater impact on the customers' perception. For instance we did not find any record of any other lead logistics provider (LLP) or third party logistics provider (3PL) in the automotive logistics industry offering the combined logistics services: inbound, outbound, and emballage. Neither did we notice any information from VLC of the value brought by purchasing the complete solution.

### **1.2.2 Research questions**

Our research questions which will be targeted to our research market aim to trace the route we need to satisfy our purpose, and also guide and structure our research project. By saying *our research market* we mean our research population comprising VLC, VLC's customers, and VLC's competitors. The research is built around three questions, which are:

1. What is our research market's ability to identify added value services?
2. What are the drivers behind the added value perception?
3. Which of VLC's strengths have potential for giving VLC a competitive advantage?

### **1.2.3 Report layout**

In order to fulfil the above, we intend to pursue the following structure: first of all to understand the theoretical concept of added value and the interaction with the related concepts including customer satisfaction, customer value, and competitive advantage.

Secondly, conduct interviews and questionnaires with VLC stakeholders including customers and contractors/competitors to understand the different perceptions of added value services. Look into the existence of eventual gaps between what the different customers expect and what VLC offers. Although some of VLC's contractors are also its competitors we have chosen to treat them in this research more as competitors than contractors, to receive a better market view.

Finally, to analyse the data and make recommendation to VLC regarding how the gaps eventually discovered could be addressed, and how the existing services delivered by VLC could be more valued.

### **1.3 Delimitations**

The concept of added value in this report will be treated from the customers' perspective and not the shareholders' perspective. It will then be further narrowed down in different respects including the industry, the geographical location, the choice of the market, and the organisational structure level involved. The automotive logistics industry will be the base of our report development because it is the industry in which Volvo Logistics Corporation mainly operates.

The choice of the market has been limited to VLC, its most important customers who stand for over 90 percent of VLC's turnover, and a few competitors who are also contractors of VLC. We will cover VLC's three geographical areas, however the view collected on those different markets will be for VLC and its customers wider than the competitors whose views will predominantly be based on their Swedish operations.

Our research concentrates on the strategic input of the concept of added value since the people involved in the research have a position at the level of decision making-process in their corporation.

## 1.4 Volvo Logistics Corporation

Volvo Logistics Corporation (VLC) is a third party logistics provider that started off as a logistics department within the Volvo Group to handle the logistics for the Volvo Group business areas. In 1984 it became a subsidiary wholly owned by AB Volvo. As a part of the Volvo Group Volvo Logistics has become a global company and it “design, run and develop comprehensive business logistics systems not only for the Volvo Group companies, but also for external customers in the automotive, transport and aviation industries”<sup>3</sup>.

VLC has today approximately 950 employees worldwide, and is represented in 30 places in Europe, North and South America, and Asia. VLC’s strategy is to be located near its customers’ large plants and important logistics hubs. Since the automotive industry today is so widely spread out with production sites and suppliers across the globe their logistics service providers have to be able to meet their needs by having global networks. To be able to serve its customers VLC has built up a global network of hauliers and logistics service providers that are contracted since VLC does not perform activities such as transportation and warehousing in-house. The different businesses VLC conducts are: inbound, outbound, embassage, aviation, logistics consulting, and logistics development. The ability to deliver a complete solution meaning inbound, outbound, and embassage to its customers is something that VLC sees as vital though customers tend “to seek one or few logistics providers for their entire logistics needs.”<sup>4</sup>

### 1.4.1 VLC’s vision and mission

VLC’s vision is “to be recognised as the leading logistics partner within the automotive, commercial transport, and aviation industries.”<sup>5</sup> The prime purpose of VLC is to support the Volvo Group. To fulfil this purpose VLC needs to increase its volumes. In order to do that, new businesses and new customers need to be gained. VLC is actively focusing on companies within industries that are “leading to most synergies with the Volvo Group, namely automotive, commercial transport and aviation.”<sup>6</sup>

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<sup>3</sup> Volvo Logistics Corporation’s Internet site

<sup>4</sup> Ibid

<sup>5</sup> Volvo Logistics Corporation’s Business Plan 2006

<sup>6</sup> Ibid

The mission of VLC as stated in its business plan of 2006 is to “deliver complete supply chain solutions that add value for our customers worldwide.” On its Internet site VLC states its mission as “to develop, manage and continuously improve global logistics systems that strengthens our customers' competitiveness.”<sup>7</sup> To add value to, and strengthen its customers will also reflect on VLC's competitiveness in the automotive logistics industry. This will help VLC to grow, and support the Volvo Group as stated in VLC's vision.

## **1.4.2 The Volvo Group**

The Volvo Group is made up by the following business areas: Volvo Aero, Volvo Buses, Volvo Construction Equipment, Volvo Financial Services, Volvo Penta, Volvo Trucks, Mack Trucks, and Renault Trucks. Volvo Logistics is together with Volvo 3P, Volvo Powertrain, Volvo Parts, and Volvo IT business units within the Volvo Group supporting the business areas, see figure 1.1 below. Being a part of the Volvo Group and have Volvo in the name can both help and hinder VLC. When trying to expand the business outside the Volvo Group to new external customers it might not always be good to be associated with the Volvo Group though the new customer might see a company within the Volvo Group as a competitor. On the contrary to be associated with the Volvo Group might help VLC to gain new customers or new businesses. New customers might associate VLC with the Volvo image and core values.

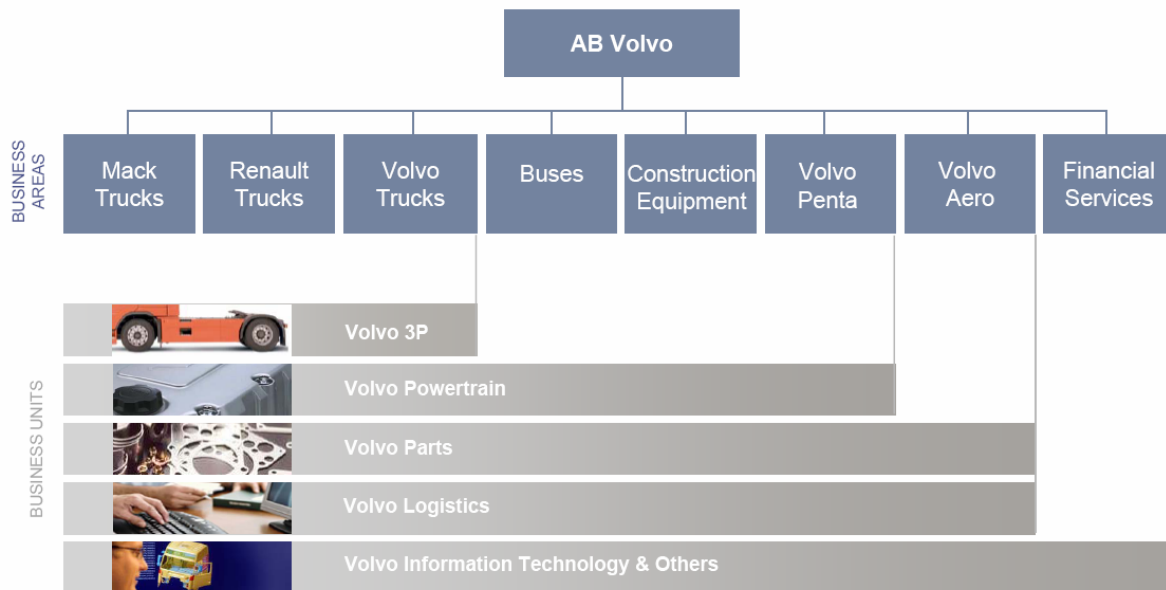
### **Volvo's core values**

As a part of the Volvo Group VLC and the other business areas and units share the same core values. These are values that all the companies in the Volvo Group identify themselves with, and they are: *quality*, *safety*, and *environment*. With safety comes now also *security*. These values are well known by customers, however their importance differ depending on where in the world the customer is located.

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<sup>7</sup> Volvo Logistics Corporation's Internet site

# Organisation

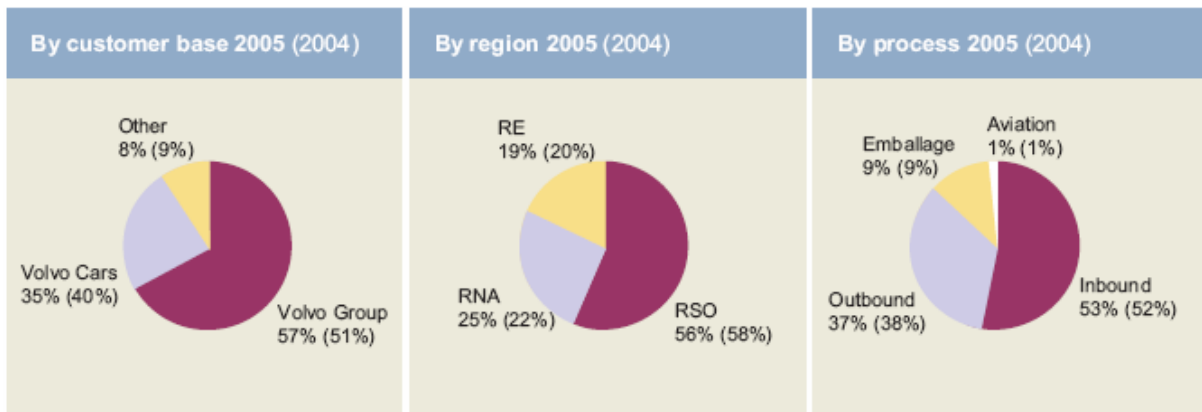


**Figure 1.1: The Volvo Group’s organisation chart: business areas and business units.**<sup>8</sup>

## 1.4.3 VLC’s processes and markets

As mentioned above VLC’s market is companies within the automotive, transport, and aviation industries. In 2005 VLC’s controlled turnover was 9.2 billion SEK, figure 1.2 below shows how it was divided looking at three different perspectives: customer base, regions, and processes. The largest customer base for VLC is the Volvo Group followed by the largest external customer Volvo Cars. Looking at the regions, the Scandinavia and Overseas region is the largest followed by North America, and Europe. The largest process is inbound followed by outbound. Emballage and aviation are still small in comparison. As shown in the brackets are the numbers from 2004 turnover split. We can see that the Volvo Group has increased in the customer base, North America of the three regions, and inbound was the process that increased.

<sup>8</sup> Volvo Group’s Internet site



**Figure 1.2: The controlled turnover split for VLC in 2005.**

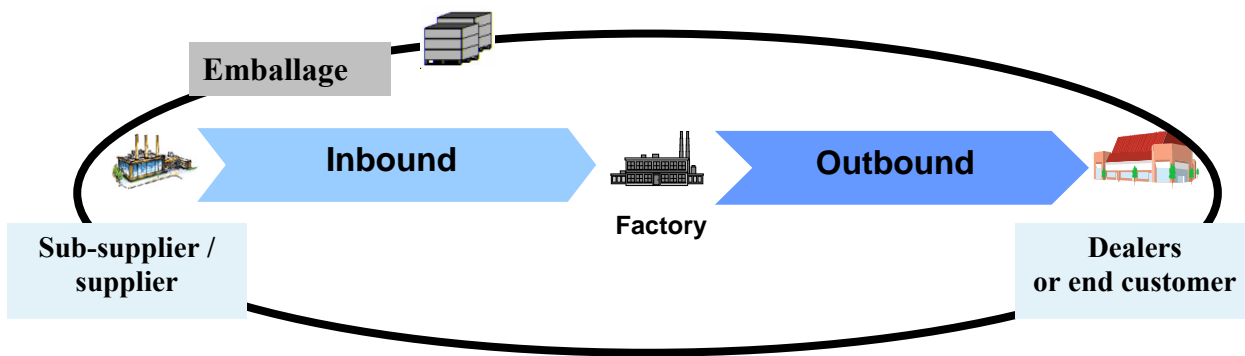
(Source: VLC's Business Plan 2006)

Looking at VLC's four processes: inbound, outbound, emballage, and aviation VLC's position in the market differs. For inbound and outbound, which represent the two largest processes, VLC is an established third party logistics provider (3PL) however VLC's size is still small in comparison to the competitors. Regarding emballage VLC is since long established and offers to its customers a total concept of emballage services. There are only a few players in this field and VLC is in the top regarding the emballage services provided, and in the middle regarding its size. When it comes to aviation VLC is quite small compared to its competitors, but this is only a minor business still for VLC so with time this might change.

One reason to why VLC is smaller than its competitors is that until 1999 when Volvo Cars was sold from the Volvo Group to the Ford Motor Company VLC only worked within the Volvo Group. With the sale of Volvo Cars VLC got its first external customer. This means that VLC is still new to non Volvo Group companies, with exception of Volvo Cars.

### **VLC's processes**

VLC offers to its customer the complete solution of inbound, outbound, and emballage services, see figure 1.3. VLC is looking at each customer's specific needs and requirements when creating the complete solution, this to be able to offer the best solution to the customer. To be able to create the best solution it is important to have a close relationship with the customer and it is preferable if VLC can be involved already in the development process of new products.



**Figure: 1.3: Complete solution**  
 (Source: Volvo Logistics One company – we deliver)

### Inbound

VLC’s major process is inbound. Inbound means the handling of the material supply to the different customers’ factories. VLC works mainly with two different flows regarding the inbound, and these are full truck loads and the so called milk rounds. The full truck loads are directly between the supplier and the VLC’s customer’s factory, whereas the milk rounds are a preset route where materials are collected from more than one supplier, and goes to either a terminal or to one or more customers’ factories.

In the inbound process VLC does not only offers the customer the transport of the material, but also additional services such as warehousing, sequencing and goods reception<sup>9</sup> to mention some of them.

VLC is now in the process of setting up a sophisticated IT tool called ATLAS (Advanced Total Logistics for Automotive Supply)<sup>10</sup> which will be a worldwide information base regarding the material flow.

### Outbound

Outbound is the second largest process for VLC, and it deals with the delivery from the customers’ factories to dealers or end customers. VLC’s internal customers work after a so called pull system, meaning that the products are build to order, which can lead to fluctuations in the

<sup>9</sup> Volvo Logistics Corporation’s Internet site

<sup>10</sup> Ibid



capacity needed, and a well functional outbound is required. The quality must be guaranteed though each finished product is unique, and cannot be quickly replaced.

In the outbound process VLC uses an IT system called A4D (Application for Distribution)<sup>11</sup>. With the A4D system it is possible to calculate the delivery date as soon as the order has been placed. If there are any changes during the completion of the order, the A4D system will automatically be updated and inform the new delivery date. This information can then be seen by not only VLC, but also the dealers around the world.

### **Emballage**

Emballage is the packaging materials that are in motion in VLC's inbound and outbound processes. With over 50 years experience regarding packaging processes for the automotive industry VLC has managed to develop a very well working global emballage pool system.

With the different emballage offerings from VLC the customers can utilise the transportations better due to the stackability of the emballage. The emballage is also one way for the customers to secure a high quality of the goods during the transportation.

Within the emballage process VLC uses a system called VEMS (Volvo Emballage Management System)<sup>12</sup>. With this integrated system support VLC can offer its customer a web-based service called Emballage Pool Online<sup>13</sup>, through which the customers can receive online statements of their emballage accounts.

### **VLC's customers**

Today VLC has both internal and external customers. Internal customers refer to the customers that are part of the Volvo Group, making the customers outside the Volvo Group the external customers. As shown in figure 1.2 the Volvo Group represents VLC's largest customer share, and the most important external customer for VLC is Volvo Cars.

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<sup>11</sup> Volvo Logistics Corporation's Internet site

<sup>12</sup> Volvo Logistics One company – we deliver

<sup>13</sup> True Business Logistics: Inbound – Outbound – Emballage, pp10

VLC would like to increase its business both with internal and existing external customers as well as with new external customers. VLC is focusing on the Ford Motor Company's Premier Automotive Group where companies such as Aston Martin, Jaguar, and Land Rover are included. Today VLC is concentrating only on the automotive, transport, and aviation industries, but maybe this will be changed in the future. As long as synergies can be made to the Volvo Group new industries might be explored.

### **VLC's contractors**

VLC does not perform the transportation or warehousing activities in-house, instead all services are bought from hauliers and other logistics providers. Some of these logistics providers are also VLC's competitors such as DHL and Schenker.

Since VLC is buying services for all the companies in the Volvo Group, VLC can consolidate transports and receive a better price per kilogram than what the companies would have been given if buying the service separate from the Volvo Group. The reason for this is that many of the internal customers have the need for the same routes. This is one of the reasons why it is hard for VLC's competitors to take over VLC business. Another reason is that VLC knows the customers inside the Volvo Group so well, and have build such a strong relationship with them that it is difficult for competitors to compete for these customers.

## **2 Research methodology**

Before doing a research it helps to design the process that the research should follow. Aaker et al. (2004, pp74) divide the research design process into three sections: *preliminary planning*, *research design*, and *implementation*. In the preliminary planning the purpose and the objective of the research are considered, and they have been discussed in the introduction of this report. The implementation includes the collection and the analysis of the data as well as the conclusion and the recommendations of the findings, which will be dealt with later on in this report. In this chapter we will be looking into the research design, where the different characteristics of the research approach and methods are presented.

### **2.1 Research approach**

When choosing which research approach to use, the nature of the research, and the degree of knowledge regarding the research topic should be considered. Aaker et al. (2004, pp75) classify a research approach into three different categories: *exploratory*, *descriptive*, and *causal*. In this report we will focus on the first two research approaches. These will then determine how the information for the research will be obtained.

#### **2.1.1 Exploratory research**

An exploratory research should be used if not much is known about the specific topic or situation that will be studied, or the researcher lacks a clear idea of the problems that will be met in the study, or if the researcher seeks insights into the general nature of a problem (Aaker et al., 2004; Cooper and Schindler, 1998; and Sekaran, 2000).

According to Cooper and Schindler (1998, pp131) the purpose of an exploratory research is to develop hypotheses or questions on which further research can be conducted. This means that all studies have elements of exploration in them.

## **2.1.2 Descriptive research**

A study can be exploratory or formal, “the formal study begins where the exploration leaves off” (Cooper and Schindler, 1998, pp131). One kind of formal study is called descriptive research.

If the characteristics of the studied phenomena are known, the descriptive research approach can be used to describe or make a profile of them. This can be done from an individual, organisational, industry-oriented, or other perspective (Sekaran, 2000, pp125). To find out the *who*, *what*, *when*, *where*, and *how* are seen by Cooper and Schindler (1998) as the objective of this approach. While the purpose of this approach is seen by Aaker et al. (2004) as to provide a true picture of the studied phenomena in the market environment at a specific point in time.

## **2.2 Research methods**

Depending on which research approach that is applicable for the study, the researcher has to consider if quantitative, qualitative, or a combination of the two methods of data collection should be used. Svenning (2003, pp73) states that it is difficult to differentiate quantitative and qualitative research methods, and that it should be the question(s) at issue in the research that should decide which method to use.

### **2.2.1 Quantitative research method**

A quantitative research method is used to determine the relationship amongst different variables of phenomena within a given population. It aims “at producing data that can be statistically analysed and results that can be expressed numerically” (Dibb et al., 1997, pp166). Quantitative research is generally more structured than qualitative research, though the questions are principally preset and closed with provided answer alternatives for example questionnaires.

Even though quantitative data can provide the researcher with statistics, it cannot give the underlying reasons for the data. To be able to find the underlying reasons qualitative data need to be used.

## 2.2.2 Qualitative research method

When it is needed to go more in-depth to understand the situation studied qualitative research method is used. In qualitative research there can be preset questions or areas of questions, however the respondent does not have any answer alternatives though it is the respondent's own views that the researcher would like to know. Interviews where there is an open communication between the researcher and the respondent are commonly used to gather the data needed.

The findings of a qualitative research method are usually presented "through narrative or verbal means" (Lodico et al. 2006, pp15). Decisions taken only from the qualitative data can have faults inserted in them due to the lacking of hard statistical data (Sekaran, 2000).

## 2.2.3 Mixed-method research

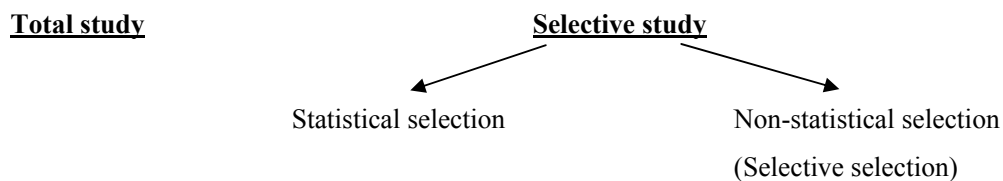
A mixed-method research is when the two research methods, quantitative and qualitative, are conducted in the same study. According to Lindblad (1998, pp25) "different methods often complement each other. The research is broadened and generates more knowledge if quantitative and qualitative methods are combined to illustrate different problems." Lodico et al. (2006, pp17) state that one method might be emphasised more than the other, but both are important for the research. They also mention that the two methods can be undertaken at the same time, or after each other.

Depending on the level of emphasis given to the two methods, and in which sequence they are conducted, the design of the mixed-method research can be divided into three categories. The *explanatory design* is where the quantitative data have been collected first, and where the qualitative data are collected to follow-up or refine the quantitative data. It emphasises on quantitative data. The *exploratory design* is the opposite, it emphasises on qualitative data, meaning that the quantitative data are collected afterwards to build on or explain the qualitative data. The *triangulation design* is when the two methods are given equal emphasis, are conducted at the same time, and are analysed together (Lodico et al. 2006, pp284-286).

## 2.2.4 Total study versus selective study

No matter if a quantitative, a qualitative, or a combination of the two methods is going to be used in the research, all of them require a population to study. How to decide the population depends not only on which method to use, but also on the time and the resources that the researcher has for the project. Either a total study with the whole population or a selective study with a selective part of the population can be studied.

To do a total study is expensive and very time consuming if it involves a large population, but it would give the most precise answers. However if the population is small then a total study is recommended. For a large population it is more common to do a selective study where a random sampling of the population is done to represent the population as a whole, a so called statistical selection. If the selective population does not have to represent the population as a whole a non-statistical selection also referred to as a selective selection is used.



**Figure 2.1: Different kind of study selections.**

(Source: Svenning, 2003, pp102)

In general the quantitative research method is to be more precise, and a total study would be to recommend, or if limited by time and resources a statistical selection. In the qualitative research method a selective study is usually done even if the population is very small, and the reason for this according to Svenning (2003, pp101) is that “qualitative researches are resource demanding.” For the qualitative research method the non-statistical selection is used.

The most common way of conducting a non-statistical selection for a qualitative research is through purposeful sampling. It “is a procedure where the researcher identifies key informants: persons who have some specific knowledge about the topic being investigated” (Lodico et al., 2006, pp140).

## **2.2.5 Research approach in this report**

When starting with this report we did not have much knowledge about the automotive logistics industry, and there were no previous written information to be found about added value within the industry. For this report we would not be able to look at the whole automotive logistics industry, so we have chosen to focus on Volvo Logistics Corporation (VLC) and its stakeholders. We intend to do a research that combines the two approaches explorative and descriptive. By conducting an explorative research through interviews, we hope to find out what is perceived as added value within the automotive logistics industry today, and what is believed to be perceived as added value in the future. With the descriptive research, conducted through questionnaires, we want to explain what VLC has today that customers perceive as added value, and what VLC needs to focus on in the future. For these two approaches we plan to conduct interviews as well as sending out questionnaires to the interviewees, so a mixed-method research particularly the triangulation design will be used. Though we will focus on VLC and its stakeholders the population of this research is related to VLC in one way or another, such as being an employee, a customer, or a competitor. The population that we will be studying has been selected through a purposeful sampling by our supervisor at VLC.

## **2.3 Methods of data collection**

“Data are any type of information collected for use in research” (Lodico et al., 2006, pp66). Data can be collected using different methods. The most common methods are: reading (literature review), interviews, surveys, observations, and experiments. When deciding what kind of data that are needed and how to collect the data aspects such as resources including time and finances, and availability have to be considered.

The researcher can have a team that is helping to collect the data, however if this is the case it is very important that they all follow the same structure and criteria to avoid introducing biases (Cooper and Schindler, 1998, and Sekaran, 2000).

The data needed for the research can be collected either as secondary data or as primary data. Cooper and Schindler (1998, pp256) explain the difference between them as follows: primary

data are collected by the researcher especially to answer the research question(s), whereas “studies made by others for their own purposes represent secondary data” to the researcher.

### **2.3.1 Secondary data**

Since all secondary data for a research have been “collected for some purpose other than solving the present problem” (Aaker et al., 2004, pp80), it is important to be able to select the information relevant to the undertaken research. Secondary data can be found for example in literature (books, journals, articles), Internet, databases, and from organisations/companies. A researcher should always start to look at secondary data available when beginning the research. To gather secondary data is the cheapest way to collect data considering both time and money, and if an organisation or a company is to be studied it is a good place to start collecting data.

Secondary data can be divided into internal and external<sup>14</sup> data if the study is conducted within, for, or about a company. Internal secondary data are collected from within the related company for example from the company’s business plan, or findings from its customer satisfaction surveys. All other secondary data gathered from sources such as libraries and databases are external.

A research can be conducted by only studying secondary data however this is mostly used in situations where a primary study cannot be conducted due to physical, legal or cost influences (Cooper and Schindler, 1998, pp257).

### **2.3.2 Primary data**

As previously explained primary data means that the data are collected by the researcher just for this specific research, and not for any other purpose. Primary data collected by asking questions can according to Kylén (2004) only be done in four ways: interviews, surveys, observations, and reading. Collecting data through the three first mentioned methods are both time consuming and expensive.

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<sup>14</sup> Steppingstones Partnership, Inc.



Primary data can be both qualitative and quantitative, where interviews and some observations fall under qualitative research methods, and other observations and surveys fall under quantitative research methods.

## **Interview**

There are three different kinds of interviews depending on the number of people that are involved: individual interview, group interview, and panel interview (Kylén 2004, pp22-23).

An individual interview is when there is one interviewer and one interviewee. In a group interview there is one interviewer and minimum two interviewees. A panel interview means that there are two or more interviewers and one interviewee.

When it comes to the interview structure most authors talk about *structured* and *unstructured* interviews referring most of the time only to the presentation of the interview questions (see for example Sekaran, 2000, and Lodico et al., 2006), and not how the answers are registered (see Hellevik, 1977). However these are the two extreme structures, there are of course other structures of interviews in between, so called semi-structured interviews. The structure of the interview also influences the length of the interview. According to Kylén (2004, pp18) an interview that is between 40 to 60 minutes can “cover many questions or areas of questions and go into depth on the most interesting ones”.

When conducting interviews a common model used is called the *funnel model* (Kylén, 2004), where the interview starts very broad then as time elapse the interview is becoming more concentrated.

When conducting an interview it is recommended to take notes to help not only remembering, but also processing the information gathered. Since most of us do not write as fast as we speak many interviewers use tape recorders or video cameras to record the interview, and to be able to revise it again afterwards. By recording the interview the respondent might feel obstructed which can lead to biases being introduced into the data.

If the interview is recorded, then Kvale (1997) states that it is common to transfer the interview into written text. How this transfer should be done, depends on who the transfer is made for, and what it should be used for.

## **Face-to-face interview**

A face-to-face interview is conducted when the researcher is in direct personal contact with the interviewee. The participation rate is usually higher when conducting face-to-face interviews compared to other data collecting methods, however it is the most expensive and time consuming way to collect data (Cooper and Schindler, 1998). Most face-to-face interviews are also limited to a specific geographical area.

When an interview is conducted face-to-face, the researcher should be aware that the environment where the interview is held as well as the interviewer can influence the respondent (Sekaran, 2000). Also depending on what kind of interview it is: individual, group or panel the interviewee can respond differently. It is therefore important, that the interviewee feels comfortable in the situation, to be able to give the researcher its genuine answers, and not to introduce bias to the data.

In a face-to-face interview the researcher has the possibility to explain or clarify questions as well as answers if needed (Sekaran, 2000). The way that the interviewee expresses its answers, through facial expressions or body movements can also be observed and studied at the same time as the interview is undertaken.

## **Telephone interview**

Telephone interviews are mostly used to conduct shorter interviews with a number of people. Compared to face-to-face interviews, telephone interviews are cheaper, they save time since no travel is needed, and they can cover a larger geographical area. The interviewee will most likely also feel more comfortable though s/he is in his/her own environment, and more anonymous towards the interviewer than in a face-to-face interview (Sekaran, 2000). One disadvantage of telephone interviews according to Sekaran (2000, pp230-231) is that the interviewee can at any time under the interview hang up the phone without any warning or explanation making it a non-response. To avoid this to happen, Sekaran (2000) suggest that the researcher contacts the interviewee in advance to request the interviewee's participation in the research, and together they set an appropriate time for the interview.

## **Questionnaire**

Sekaran (2000, pp233) defines a questionnaire as “a pre-formulated written set of questions to which respondents record their answers, usually within rather closely defined alternatives”. A questionnaire can have both open and closed questions, but it is more common to have mainly closed ones, though these are easier to analyse. The distribution of questionnaires can be conducted in different ways for example individually, sent out by ordinary or electronic mail, and be available on-line. Through questionnaires a larger population or a population that is more geographically spread can easier be covered compared to when interviews are conducted. Different languages can be used if necessary, and the answers can still be put together or compared though all questions are the same. Also with a questionnaire the respondents usually have more time to think about the questions before answering them.

One negative aspect of questionnaires is the low response rate. Some authors state that a response rate of 30 percent is acceptable (see for example Sekaran, 2000), while Wiersma and Jurs state “writers differ on suggested minimum response rates, and the rates also may vary somewhat depending on the population being surveyed” (2005, pp175). This means that the researcher should look at the specific population for this specific research to determine if the response rate received is acceptable or not. Sekaran (2000) recommends contacting the respondents in advance to increase the response rate. Cooper and Schindler (1998) agree that a so called preliminary notification can help increasing the response rate, but state that follow-ups or reminders are more efficient.

Three other negative aspects with using questionnaires are worth mentioning. Firstly, if the questionnaires are not conducted face-to-face the questions cannot be explained. This can lead to the respondent misinterprets the questions and unintentionally entails bias in the questionnaire answers. Because of this the questions should be as clear and understandable as possible for the targeted population. Secondly, it is difficult to go deep into the questions and to have follow-up questions if needed. Finally a questionnaire can not be long, cause then the respondent may be put off to fill it in. Cooper and Schindler (1998, pp305) mention a general rule of thumb regarding questionnaires; they should not take longer than ten minutes to fill in.

If a questionnaire is not conducted face-to-face it is important to attach a letter in which the purpose of the research is explained and where, if necessary, instructions regarding how to fill in and return the questionnaire are given.

### **Questionnaire design**

A questionnaire can be designed in different ways (Frankfort-Nachmias and Nachmias, 1996). Data that has been gathered through quantitative research method can be measured using four different layouts, so called scales of measurement: nominal, ordinal, interval, and ratio (Lodico et al., 2006).

<b>Scale of measurement</b>	<b>Description</b>
Nominal	Categories
Ordinal	Categories and ranking
Interval	Categories, ranking and equal spacing
Ratio	Categories, ranking, equal spacing and true zero

**Table 2.1: Descriptions of the different scales of measurement**

(Source: Lodico et al., 2006, pp72)

As shown in table 2.1, all scales include categories, and all scales except nominal include also ranking. Then it is only interval and ratio that have equal spacing between the scale steps. What differentiate the two is that the ratio scale also has a true zero answering alternative which none of the other scales have. The scale layout is decided to best suit a specific question.

Regarding the question format, which can also differ in the questionnaire, there can be different types of scales. The type of scale depends on the question format, and the question format depends on the question itself and what is expected to get out from the answers related to that question. The question formats and the types of scales that we will be using will be discussed under the section processing collected data in the empirical findings chapter.

### **2.3.3 Methods of data collection in this report**

Even before we started to collect data for this report we had to contact the people we wanted to interview. Since it is difficult to get an appointment with them, we tried to contact them well in advance, preferably before they went off on holiday. So in end of June we first tried to call them to introduce ourselves and our research project, and give them an explanation why we wanted to interview them. The ones we could not get hold of through the telephone during June and July, we sent an e-mail to with an introduction and an explanation, and then tried again in August to reach them over the telephone. In August we also called back to the interviewees, which had already during the summer agreed to participate, to set the interview dates in September.

When it comes to data collection we started with secondary data. For the external secondary data we reviewed books available from the libraries in Gothenburg, related articles and journals from different databases mainly Business Source Premier and Emerald. As internal secondary data we went through information from VLC such as VLC's business plan, other corporate reports and information leaflets, as well as some presentation files provided to us by VLC. After we had gained some background knowledge we began preparing interview and questionnaire questions that would be used to gather primary data.

We decided to conduct panel interviews, so that we both would be attending and one could focus more on taking notes while the other was mainly asking the questions. We agreed on using a tape recorder to be able to go back and listen to the interview one more time, and fill in the gaps in our notes. The structure of the interviews was semi-structure where we used a structured list of questions, but we also allowed follow-up questions, and the registration of the answers were less structured. A semi-structured interview made it possible for us to divide the time differently between the questions when one question needed to be looked at more in-depth. The interview model used was the funnel model, though we felt that it is a natural model to use when performing interviews.

For this report we knew we had to conduct interviews with people within VLC, with VLC's internal as well as external customers, and with VLC's competitors. When the interview list was given to us from our supervisor at VLC, we were also requested to interview two logistics experts that are affiliated with VLC. The interviews were face-to-face interviews

where ever possible; telephone interviews were only conducted with the people not located in Gothenburg, Sweden. The interviews were limited to maximum one hour though the interviewees are very busy.

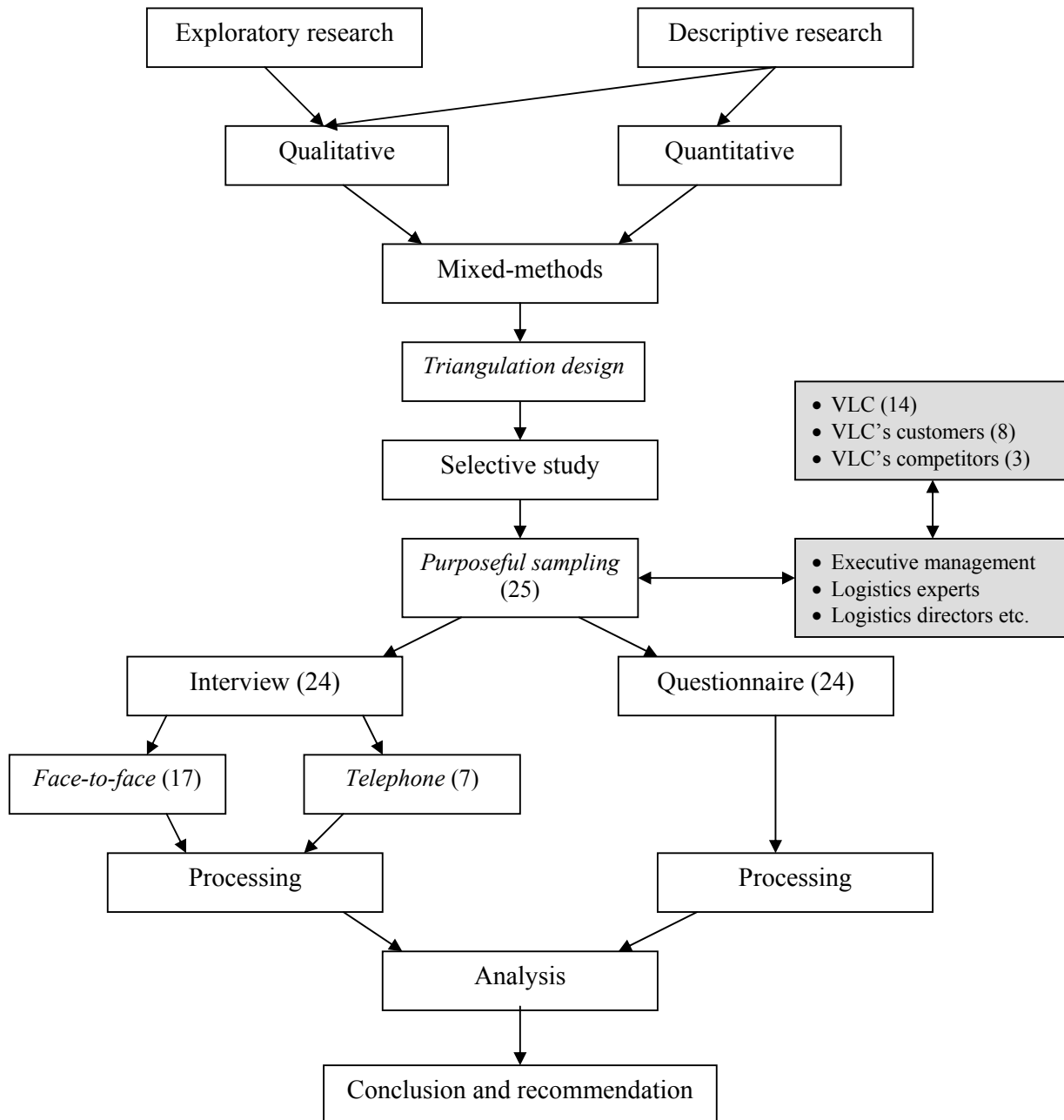
Regarding our questions for the interviews we had a base of questions which we proceeded from. The interviewees from VLC have different positions, so the questions for the personal interviews had to be adapted to the specific interviewee. Of all the interviewees there were some that were given the same questions, these can be divided into five groups: the three regional managers, the two involved in Vision 2015, the two logistics experts, the customers, both internal and external, and the three competitors. The questionnaires were in general the same only some words in the questions itself were changed depending on if the questionnaire was sent to VLC or the stakeholders. All the interviewees received a few days prior to the interview the specific interview questions and our questionnaire over e-mail. We decided to do this because all interviewees are very busy, and by providing the questions in advance they could if they felt it was necessary prepare themselves.

### **Selection of interviewees**

When it came to whom we were going to interview, we were given a list from our supervisor at VLC. The list contained names of people within VLC, VLC's internal and external customers, competitors, and two logistics experts from Linköping University that are affiliated with VLC. These people were a sample of the entire population within VLC and its stakeholders that had been chosen through a purposeful sampling. The list was put together by our supervisor at VLC after discussions and consultations with different people within the company and approved by key members of VLC. We contacted in total 25 people and we conducted 24 interviews during the weeks 37 to 41; 14 with VLC personnel including the two logistics experts, seven with customers, and three with competitors. The majority of the interviews were face-to-face interviews, only seven were telephone interviews. We also received back 24 questionnaire responses.

## 2.4 Summary of research structure

Figure 2.2 summarises the research structure in this report after the layout in this chapter.



**Figure 2.2: Summary of research structure**

(Source: Zackrisson and Zogbe)

## **2.5 Reliability and validity**

To evaluate the quality and the credibility of a research the two criteria reliability and validity can be used. Wiersma and Jurs (2005) divide validity into internal and external validity and define the two validities and reliability as follows. Internal validity deals with how the research results can be interpreted correctly and with confidence. External validity refers to which degree the research results can be generalised to other populations and/or conditions. The reliability relates to how consistent and replicable the methods that were used are, the conditions which the research was undertaken in, and also the results that were given.

Wiersma and Jurs stress that a study that lacks reliability cannot be a valid one, therefore “reliability is a necessary characteristic for validity” (2005, pp9). For a research to be of good quality and credible it should be as free of bias as possible. Sekaran states the following regarding biases: “bias refers to errors or inaccuracies in the data collected” (2000, pp226). There are however many factors that can influence the reliability of the research for example the interview form, the interviewer, or the environment where the interview is held (Svenning, 2003).

### **2.5.1 Sources of errors in this report**

We have done our best to avoid any errors or biases in this report, but one can never be hundred percent sure. Before the interview questions and the questionnaire were sent out to the participants we went through the questions to be sure we did not intentionally included any biases in the questions, nor in the answer alternatives in the questionnaire. Also when transferring the quantitative data into excel we checked and re-checked that we did the correct transfer.

Before interviewing our participants we contacted them well in advance to set the appointment to make sure that they took their time to see us, though stressed people are more likely to introduce biases (Sekaran, 2000). For the interview itself we tried to, in as many cases as possible, be at the interviewee’s office or office building so that it would be a familiar and safe environment for the interviewee. We believe that we as interviewers were consistent in all the interviews we conducted.



By using a tape recorder and going through the interview once again we reduced the influence of biases from memories. We are also convinced that our respondents were not inducing biases into their answers due to the fact that we recorded the interviews, though we made it clear that the recording was only for us interviewers to be able to fully get their answers and to fill in the gaps in our notes. None of the interviewees had any problems or objections to us using the tape recorder.

## **2.5.2 Reliability and validity in this report**

When it comes to reliability and validity in this report we believe that the reliability and the internal validity are high. External validity is not of importance here though we are looking at what VLC and mainly its customers perceive as added value, and where there are mismatches in the perceptions that need to be dealt with. We are not looking at the automotive logistics industry as a whole, and it would be wrong of us to generalise our findings related to VLC to the rest of the companies within the industry.

Why do we believe that the reliability and the internal validity are high? Well, first of all the participants have been very interested in this study, and the results of the research are in favour for all the participants, so we feel that they have been very open and honest towards us in their answers. If the interviews and the questionnaires would be conducted again in the nearest future we believe that the data gathered would be very much the same. However, it is important to remember that what is perceived as added value changes over time, so if the study would be done again in a year the data could have changed depending on different variables in the industry.

When looking at the purposeful sampling population that we interviewed, that was provided to us by VLC, one might wonder if the result of this research would be different if we would have chosen the interviewees ourselves. Well, prior to us being provided with the list of interviewees we had done a list with titles of the people that we had in mind for the research. The only thing that differed from the two lists was that we had also put some people with operational duties, such as line managers and blue collar workers. Now in the aftermath we believe that the list provided to us was a very good and representative list for this research.

### **3 Theoretical framework**

The concept of added value is diversely interpreted and means different things to different people. The confusion in the meaning of added value leads to indifferently use of *added value* and *value added* to describe the same things (Grönroos, 1997), while others distinguish the differences in the two terms (Chernatony et al., 2000). Also the term added value is perceived in different perspective.

This chapter will be divided in four main headings. The first part: *added value in different perspectives*, we will try to explain the difference between the concepts of added value and value added, and go further by explaining and distinguish the different perspectives of added value. The second part: *related concepts to added value* will be a prerequisite to better understand our approach of added value through customer satisfaction, customer value, and competitive advantage. The two last parts will deal with the concept drivers involving its sources and characteristics.

#### **3.1 Added value in different perspectives**

Under this heading we will try to make a clear distinction between added value and value added, we will go on to also explain the different perspectives of added value, to finally focus on what is of our interest in this report.

##### **3.1.1 Added value $\neq$ value added**

The terms *added value* and *value added* have been used indifferently by Grönroos (1997, pp412) to describe the additional services to the core value or core product, while Christopher (1998, pp44) refers precisely to the same additional services by only using the term added value. Of the two concepts clearly the latter concept, value added, which should be distinguished from the former, added value, refers to the additional value created at a particular stage of the production or delivery process such as time, raw material, additional services, or processing. For instance the value added time is described by Christopher (1998) as the time spent doing something which creates a benefit for which the customer is ready to

pay, while Mattsson (2000) describes value added processing as processes including for example kitting, storing, packaging and labelling.

In this regard, value added is an integrated part of the product, for instance the transportation activity provided by a manufacturer to its customers can give different perceptions. The following scenarios give a clearer picture of the differences between the concepts.

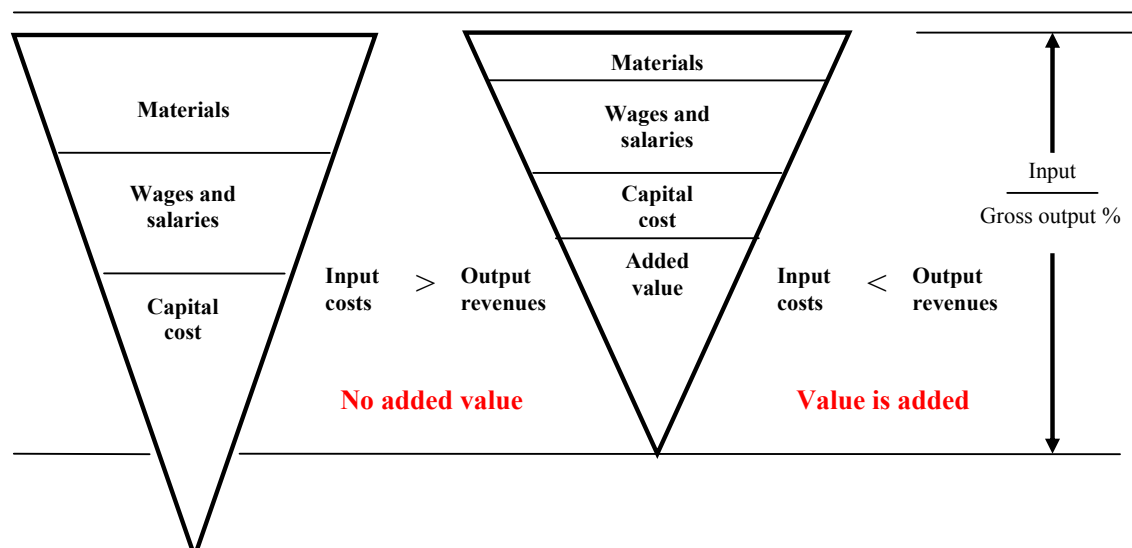
In the first scenario, the transport service is a value added services if the customer buys the product only when the product reaches its door steps. The customer would then pay the invoice of the product delivered regardless the transport distance or condition. The customer pay just for what he has received. The transport service is a part of the process which ends not at the factory, but at the doorstep of the customer. The transport cost might certainly be included in the invoice, but not specified. The transport in this specific case appears as an integrated part of the core product or service.

In the second scenario the transport service could appear as an added value service when the customer buys the goods from the manufacturing site and has to find its own transport to deliver to its doorstep. If, in that situation, the manufacturer can provide a transport service to the customer at a competitive price and competitive quality, then the customer might perceive an added value in the transport service. The customer perceive more benefits in buying the complete package from the manufacturer for at least two reasons: the time saving and the reliability by dealing with a single provider, and the relative low cost attraction as the customer finds it more beneficial to buy the transport from the manufacturer instead of contracting with a third party.

### **3.1.2 Added value from the shareholders' perspective**

Added value from the shareholders' perspective is purely economical in the sense that only shareholders' concerns matter, which contrasts with the approach we want to highlight in this report. In this regard Kay (1993) considers the concept of added value as a "key measure of corporate success" and defines it by using accounting figures such as input costs and output revenues to determine added value. Those figures include material costs, wages and salaries, and capital costs. In general terms Kay (1993) defines added value as being the difference between the comprehensively accounted value of the firm's output and the comprehensively

accounted costs of the firm's output, see figure 3.1. In that sense the concept of added value from Kay (1993) appears to be a tangible asset.



**Figure 3.1: Kay's added value perspective**

(Source: Adapted from Kay (1993))

Figure 3.1 shows clearly that added value in Kay's (1993) perspective occurs only when the output revenues are superior to the input costs. Walters (2002) describes this approach of Kay (1993) "as a proper motivation of corporate activity and the measurement of its achievement". Walters (2002) will support Kay (1993) by further emphasising the shareholders' interest by stating that: "if marketing is to play a role in the strategy direction of the organisation, it should consider where best the company can maximise its return". Walters (2002) as well as Kay (1993) basically focus on optimising shareholders' value through return on investment and return on capital employed, and not on the customer value.

### 3.1.3 Added value from the customers' perspective

Added value has been advocated as a strategic tool to achieve competitive advantage in an increasingly hostile environment. Chernatony et al. (2000) have admitted that little has been written about added value, and that it was predominantly mentioned in publications related to trade.

Our literature review has revealed that added value has been used in a more descriptive way instead of being seen as a dynamic concept with a straight forward meaning and role in the marketing and strategy literature. In their research findings, Chernatony et al. (2000) have extensively explained the difficulties of determining a consensus over the meaning of added value. The concept appears to be controversial amongst scholars and leading practitioners in market research, corporate communication, brand consultancies companies, and advertising agencies.

Added value has a multiform dimension which stretches from the operational to the strategic level. Through our literature review we have retained six areas as sources that can generate added value. These sources are: competition, management competence, process improvement, innovation, costs, and relationship marketing, see figure 3.5. In this report we will take Grönroos' (2000) view of added value as the difference between the customer perceived value and the core value.

This approach of added value, which has been deducted from Grönroos' (2000) model of the customer perceived value, has a more dynamic approach of added value in comparison with Christopher (1998) for the use of *core value* instead of *core product* to describe added value. The use of the term *core product* to describe the added value, might literally exclude service related activities and other sources of added value, and it might also give a static character to the term *core*. By preferring *core value*, we open the possibility to include core product as well as a core service, and also the management culture.

## **3.2 Related concepts to added value**

Despite the diversity in the interpretation of the concept of added value, it is widely associated to competitive advantage, a tool that assesses firms' competitiveness and furthermore should reflect on their customer value. Added value from the customer value perspective as we understand and would like to develop will require the understanding of concepts related to added value including customer satisfaction, customer value, and competitive advantage.

### **3.2.1 Customer satisfaction**

Customer satisfaction is mostly associated to its measurement which aims to measure how customers perceive the performance of their suppliers, or as Hill and Alexander (2000) put it “customer satisfaction is a measure of how your organisation’s total product performs in relation to a set of customer requirements”. Customer satisfaction measurement is viewed as one of the most important types of marketing research a firm can conduct, as it provides useful information on what needs to be improved (Naumann, 1995).

Customer satisfaction has gained such attention from firms, that the firms tend to associate customer satisfaction with customer loyalty and/or customer retention. Organisations expect to keep their customers by increasing the customer satisfaction index. We believe the correlation between customer satisfaction and customer loyalty is not always established, and depends on two main factors: the degree of competitiveness in the market, and the number of suppliers in the market.

The more the market is competitive, the less is the correlation between customer satisfaction and customer loyalty, and the less the market is competitive, the greater is the correlation. In the same way, the greater the choice for the customer with many offering companies, the more difficult it will be to secure a loyalty from a satisfied customer. According to Barlow and Maul (2000, pp256), researchers at Harvard Graduate School of Business Administration have found that it is only at the highest level of satisfaction that loyalty is created. This shows that customers’ loyalty is not guaranteed if the customer is just very satisfied, but not highly satisfied by the service provided.

Customers could be genuinely satisfied by a service provided, but might express a different view for some reasons. Either the customers make a comparison analysis with other service providers, or the customers’ expectations have changed and/or risen faster than the service provider has improved its services. A rigorous customer satisfaction measurement might address the issues previously highlighted, but fails to do a comparative value assessment across the marketplace, which could be done by collecting data from competitors’ customers, and fails to measure the performance of competitors’ services (Gale, 1994).

The previous paragraph actually highlights the limits of the concept of customer satisfaction as a predominant strategic tool to guarantee a company's competitive advantage. The reason is that "many of the customer satisfaction surveys appear to be just random data gathering of customer perceptions and opinions with little effort for intelligent follow-up and meaningful investigations" (Godfrey, 1993) quoted in Lin and Jones (1997).

Naumann (1995, pp138) advocates another serious issue in failing to conduct an effective and efficient customer satisfaction programme when he states that: "a poor customer satisfaction programme not only yields vague data, but also raises customer's expectations. If customer's expectations increase and a firm's performance do not, customer satisfaction will decrease". Indeed the way, and the fact of conducting a customer survey gives the customer the feeling that the service will be improved; consequently the customer upgrades its expectations.

### **3.2.2 Customer value**

The value of the product depends on where it is located. A product has more value in the hands of the customer, than on the production site, which means the "value of the product is not what the producer puts in, but what the consumer get out" (Doyle, 1989). The product has to solve the concerns of the customer, which could be emotional, psychological, material, as well as economical. The benefits of the customer's consumption reveal two characters: the tangible dimension which is material, and the intangible dimension which is emotional.

The tangible value results from the trade-off that the customer makes between the perceived benefits of the product, and the price the customer is willing to pay for it. The intangible dimension of the value is the feeling or emotion expressed regarding the consumption of the purchased product. The customer feels either satisfied or dissatisfied after consuming the product. The value of the product goes beyond the physical consumption to reach the feeling of the customer during the consumption process, which also includes the after-consumption. That feeling is described as emotional by Barlow and Maul (2000).

Barlow and Maul (2000, pp220) explain the emotional value by arguing that the mistake that is fixed by the company can end up adding value to customers that would never have been there if zero defect has been initially achieved. Barlow and Maul (2000) also stress that "concentrating on emotional value forces companies to look at their customers while

concentrating on quality encourages companies, in large part, turn in toward themselves...” To support that statement, Barlow and Maul (2000) refer to the ISO9000 quality certification which enables the firms to improve, and provide quality products. Although buyers are confident that what they are buying meet recognised quality specification, there is no guarantee that the purchase will meet the buyer’s needs.

The concept of customer value management (CVM) has been initiated by Gale (2000) and addresses issues which go beyond the traditional customer satisfaction measurement, and it is praised as the most reliable approach towards customers. ”There are two complementary approaches to CVM. The first attempt is to measure and evaluate the perceived value placed on goods/services by customers..., the second approach measures the value of specific customers or customer segments, to the organisation...”(Evans, 2002, pp134).

Customer satisfaction is embedded in the first approach of CVM, but what the CVM does further is to identify how customers evaluate competing offerings, and to measure the value perception of competitors’ customers to establish the market perceived quality and value relative to competitors. CVM does not just enhance customer satisfaction through quality, but relates this satisfaction to the price paid to reach the measurement of perceived value and customer value (Evans, 2002). Leszinski and Marn (1997) state in the McKinsey Quarterly that customers do not buy solely on low price, they buy according to customer value, that is, the difference between the benefits a company gives customers, and the price it charges.

Leszinski and Marn (1997) go on by stating that the customer value (CuV) is measured by the customer perceived benefits (CPB) minus customer perceived price (CPP).

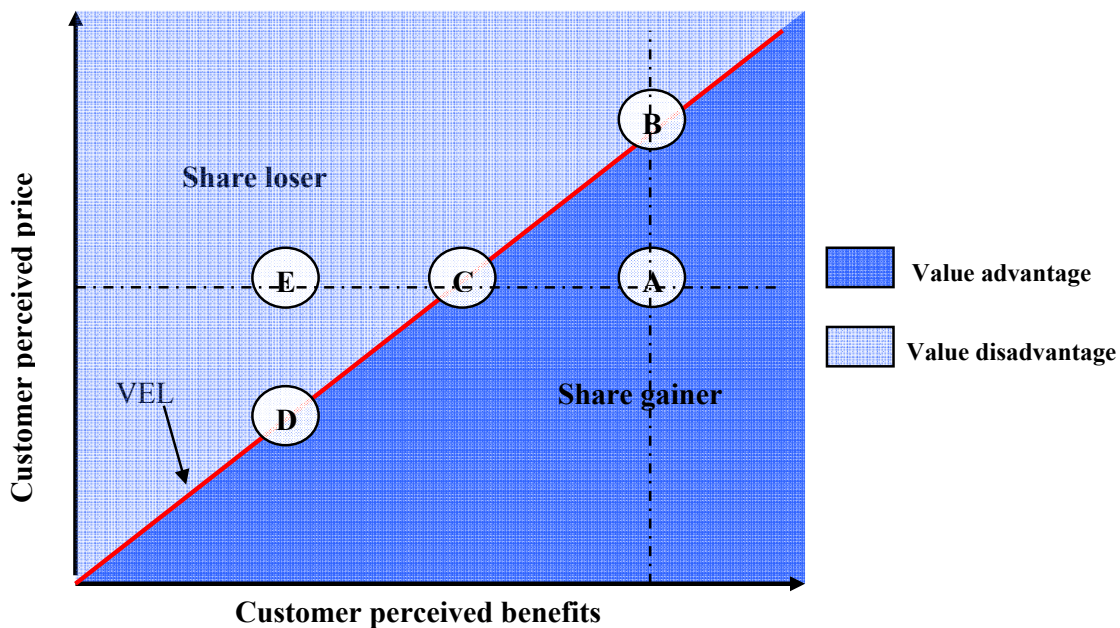
**Customer Value = Customer Perceived Benefits – Customer Perceived Price**

or

$$\mathbf{CuV = CPB - CPP}$$

Consequently, the “higher the perceived benefits and/or lower the price of a product, the higher the customer value” (Leszinski and Marn, 1997, pp100). The customer value in relations with a changing market share has been illustrated by Leszinski and Marn (1997) in the map value, figure 3.2.





**Figure 3.2: Map value**

(Source: Adapted from Mckinsey Quarterly, 1997, No1)

The present map value is based on the assumption that the market share is not static, but dynamic. The horizontal axis in figure 3.2 quantifies the benefits as perceived by the customer and the vertical axis shows the perceived price. Each dot represents the competitor's product or service. The dots that are located on the value equivalence line (VEL) represent the market situation where the customer receives what he pays for.

Based on the assumption that the market is not in a monopolistic situation, the share gainer will be positioned below the VEL because the company operating below is more competitive in terms of providing higher customer value. Indeed a customer searching for a service or product in the range of A and B, would more likely choose A since the perceived price of A is relatively lower than B for the same perceived benefits provided. In the same way the customer who has the choice between A and C, will choose A because of the relatively higher perceived benefits A provide for the same perceived price as C.

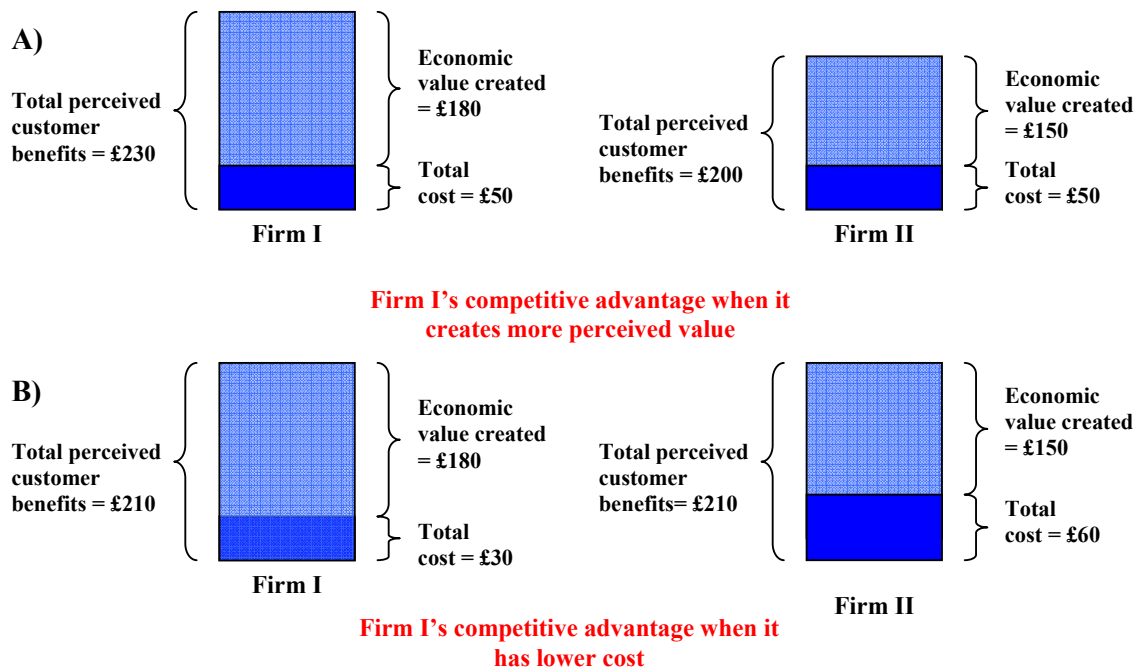
Equally, the same line of reasoning is true in the area above the VEL described as share loser. Competitor E who is offering the same level of perceived benefits to the customer as competitor D will lose market share to D since its perceived price is relatively higher.

### 3.2.3 Competitive advantage

The ultimate objective of the customers' perspective of added value is to create competitive advantage for companies. Competitive advantage is defined by Barney and Hesterly (2006) as the ability for a company to create more economic value than its rivals. The economic value is defined by the authors as the difference between the perceived benefits gained by a customer that purchases the company's products, and the full economic cost of these products. Competitive disadvantage occurs when the company creates less economic value than its rivals.

#### Sources of competitive advantage/disadvantage

According to Christopher (1998) the competitive advantage has two sources: firstly the ability of the organisation to differentiate itself, in the eyes of the customer, from its rivals consequently providing better customer perceived value, and secondly be able to operate at a lower cost. Barney and Hesterly (2006, pp12) have illustrated in figure 3.3 the different sources of competitive advantage.



**Figure 3.3: Sources of firm's competitive advantage**

(Source: Barney and Hesterly, 2006, pp12)

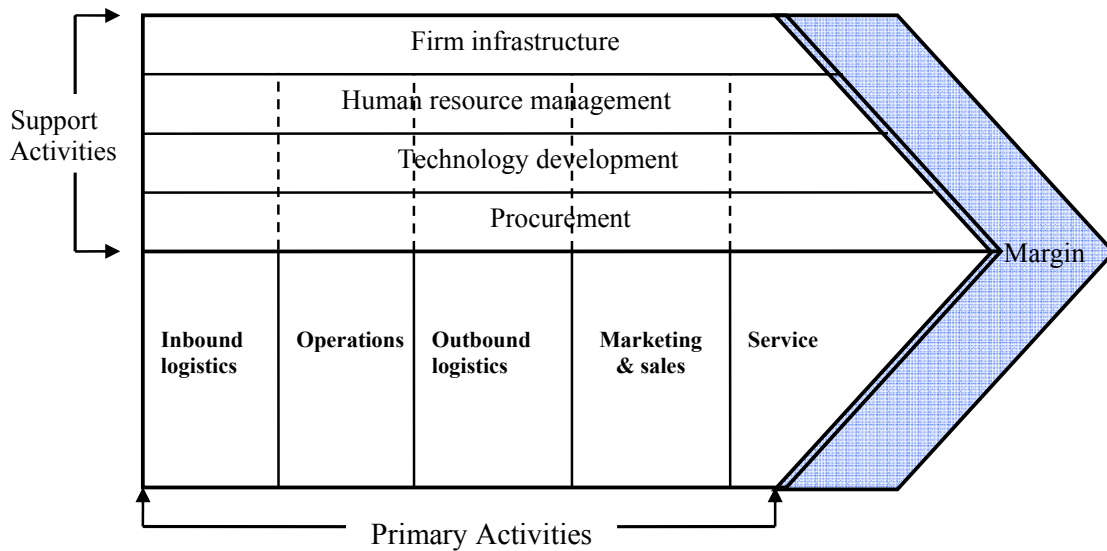
In panel A, firm I and firm II compete in the same market. Firm I generates more economic value than firm II (£180 > £150) for the same amount of cost, which means, since firm I generates more economic value each time it sells a product, it has a competitive advantage over firm II. The authors explain that the competitive advantage of firm I over firm II might come from the ability of firm I to create comparatively higher customer perceived benefits (£230 > £200).

In panel B, firm I and firm II have the same customer perceived benefits, but still firm II has a competitive disadvantage over firm I due to the comparatively lower economic value firm II has created (£150 < £180). The reason behind this situation is that firm I has managed to achieve lower cost than firm II, which has enhanced its economic value.

### **Competitive advantage through the value chain**

The value chain is according to Shank and Govindarajan (1993, pp50) a method for breaking down the chain from raw materials to end customers into strategically relevant activities in order to understand cost behaviours and the resources of differentiation. While companies competing within the same industry might have a similar chain, the value chain might differ. The value chain as a source of competitive advantage is a result of the firm's history, management culture, strategy, and approach of implementation (Porter, 1985, pp36).

Porter (1985) divides the generic value activities into two broad activities: primary activities and supporting activities see figure 3.4 below. Porter isolates primary activities from supporting activities based on the fact that they are either technically or strategically oriented. The primary activities are those involved in the creation of the service or product and include: inbound logistics, operations, outbound logistics, market & sales, and service. The support activities are divided into four generic categories: procurement, technology development, human resource management, and firm infrastructure (Porter, 1985). Each of the different activities is vital for the competitive advantage, and depends on how they can be creative and performing.

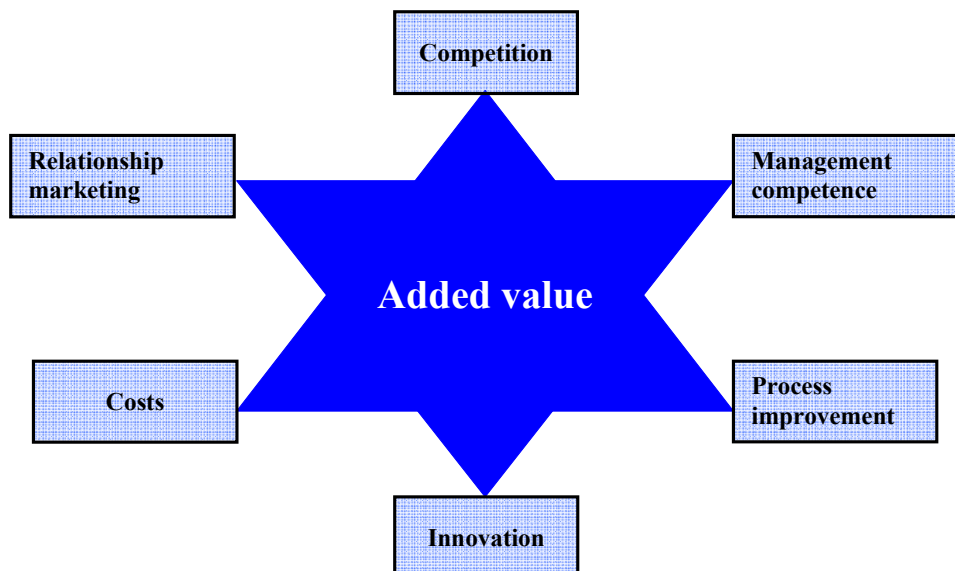


**Figure 3.4: The generic value chain**

(Source: Porter, M., *Competitive advantage*, 1985, pp37)

### 3.3 Sources of added value

The sources of added value mentioned earlier are presented in figure 3.5. They aim to find the way for a company to provide added value.



**Figure 3.5: Sources of added value**

(Source: Zogbe and Zackrisson)

### **3.3.1 Competition**

Competition as a source of added value results from the comparison the customer makes between the service received and the service provided by its suppliers' competitors. If the customer is convinced that the service he received is relatively better than what is offered in the market, then added value occurred for him. The persuasion of the customer can be achieved by image, marketing, as well as information.

Competition is also one of the most used benchmarks by companies to value the services they provide. Conceiving an added value by ignoring what the market offers might lead to question the establishment of that added value. Meaning companies should seek and examine the best practices and offers in their industry, and use that knowledge as the basis to provide added value.

### **3.3.2 Management competence**

The management competence refers to the quality of the human resources and their skills and commitment in what they are in charge of. The management competence is also about the corporate structure and its management culture. The interaction level between all the departments and services within the corporate plays a great role in the company's ability to get the customers' intimacy and strategically act upon it. The interaction includes communication frequency, information transparency, and cross-functional meetings. A close relationship with the customer might lead to implement some management techniques such as vendor management inventory (VMI).

Human resources are people from the front-line workers so called blue collar workers to the executive management who should share and believe in their corporate vision and objectives, but most importantly should take a very active role in the implementation process to achieve them. The performance of the transport activities for example can make a difference between two logistics providers. The transport activity can be described to some extent as a basic logistics service, but can be a source of added value if it is performed and exceed customers' expectations in an outstanding way comparatively to what the market offers.

People should be treated as the most important asset within the corporate culture as prescribed by the management philosophy of total quality management (TQM). The questions which arise are: how to create competence, what to expect from its performance, and how this competence should effectively be used to give value to the customer as well as to the company?

Competency is created through the attraction of competent and talented people. It is also created through a continuous monitoring of the staff performance, the provision of appropriate training to update staff skills and reinforce their commitment, and develop an appropriate reward scheme such as a pay rise. This pay rise can be a percentage linked to the employees individual performance during the past year, or a pay rise that reflects the over all performance of the company. The company would expect high skilled handling, sharing of information and knowledge about the customers' requirements, and anything else which can be of the corporate interest. The company should also benefit from its staff, more proactiveness in dealing with customers' requirements and other disturbances occurring during the operations.

### **3.3.3 Process improvement**

A process is a critical part of any business as its design and improvement can achieve significant productivity, optimisation, and costs reduction which implicitly will contribute to create value for the customer and for the company. Process is described as the way of planning, implementing, and controlling the efficient and effective flow and storage of goods, services, and related information from the point of origin to the point of consumption for the purpose of confirming to customers' requirements.<sup>15</sup>

Simply defined as "how things get done" by Jackson (1994), the process is precisely a benchmark against the way of doing things at the right time, in the right manners, at the right place, for the right target to reach the set up objectives. To do things right will involve a setting up of a dynamic structure which align with the defined objectives and supported by a system planning to reduce errors and wastes. It will also involve the acquisition of appropriate equipment, machinery, and technology to deal with customers' increasing demands.

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<sup>15</sup> Logistics dictionary

Processes in logistics are basically operational and deal with activities such as pick-up, transportation, warehousing, distribution and delivery, and network planning. The success of these different processes and their ability to be a source of added value will depend on the implementation of successful and advanced application of information technology and information system for instance the electronic data interchange (EDI) and the global positioning system (GPS) an advanced track & trace service. There are many other information technologies and systems for instance the radio frequency identification (RFID) and the warehouse management system (WMS).

The network planning process should serve as the base to implement the integrated four processes mentioned above. The network planning could be based on country, regional, continental, or global level depending on the company's willingness to be a truly global company and the logistics solutions required by its customers.

### **3.3.4 Innovation**

Innovation can be described as the ability to create and revitalise, in a distinctive way, the business idea/concept of the company to always value the customer and/or satisfy the customer, also to respond to the market competitiveness and be differentiated by using the competencies, resources, and business systems of the company. Innovation is a key factor if the company wants to grow, be ahead of the mainstream and stay in the business.

According to Lorente et al. (1999), innovation can take several forms in products, services, production processes, and management systems. They go on and explain the forms as follows: innovation in products and services is related with R&D and meeting customers' needs. Innovation in production processes relates to changes in machinery, equipments, and other elements not directly associated with the manpower; however has the aim of increasing productivity through increasing quality and reducing costs. Innovation in respect with management systems is in response with new environmental conditions and improving the way people are managed and work is organised.

Be innovative is to be creative to meet customers' expected as well as unexpected requirements with new ideas, new approaches of problem solving, and new products or solutions.

### 3.3.5 Costs

A cost reduction should in normal circumstances lead to a price cut of the service offered for the same quality. Consequently the customer perceives a relative higher benefit or value for the service received, and subsequently it is described as an added value. The cost cuts in the supply chain which do not affect the quality level of the service provided can be branded unnecessary costs. What are the sources of unnecessary costs within the supply chain which include logistics activities, and how would the cost reductions occur are two questions that should be looked at.

Unnecessary costs are associated with wastes in the supply chain and operations management literature, and have been the object of the emergence of the *lean thinking* concept. The lean thinking concept is basically a strategic and operational philosophy which aims to identify and eliminate muda (waste) in the entire supply chain. “A critical point in the lean thinking is the focus on value. Often however, value creation is seen as equal to cost reduction” (Hines et al., 2004, pp995). The concept of lean thinking emerged on the shop floor of Japanese manufacturers and particularly at Toyota Motor Corporation resulting from a scarcity of resources and an intense domestic competition on the Japanese market for automobiles (Hines et al., 2004, pp994).

Initially developed in 1995 according to Hines et al. (1998), the value stream mapping appears as a tool to achieve the aim of the concept lean thinking. The aim to determine what operation is non-value adding, what operation is necessary but non-value adding, and what operation is value adding. Toyota Production System (TPS) has defined seven wastes: overproduction, waiting, transport, inappropriate processing, unnecessary inventory, unnecessary motion and defects. Initially applied to the manufacturing activity, these seven wastes can also be true for a logistics service provider. Three of the wastes need to be explained as difference might occur when it comes to services instead of products. The term overproduction put into that context would be described as a situation where the service provided is over the necessary request. The defect as waste should be perceived as a failure in the delivery process of the service. Although being a core competence of a logistics service the transport could actually be reduced by providing hubs to shorten the distance between suppliers and customers.



Another way of determining unnecessary costs is the use of the activity-based costing (ABC) analysis. Here causes and effects relationships between inputs and outputs are identified within the supply chain, in order to define the true costs of operations and identify those which are unnecessary and unproductive. The ABC analysis implies in its first step two distinct initiatives: “identify firm resources and mapping firm activities, firm resources include direct and indirect costs of operations” (Goldsby et al., 2000, pp502). The second step is about tracing costs from resources to activities mapped out in the previous step. The aim in the second step is to identify the costs drivers per activity. The final step will be concerned with tracing the costs from activities to costs objects to identify areas of high overhead costs per unit.

### **3.3.6 Relationship marketing**

Added value is also about perception and feeling; in that sense marketing and particularly relationship marketing can play a great role. Grönroos (2004, pp99) describes the relationship marketing perspective as being based on the idea that “on top of the value of products and/or services that are exchanged, the existence of a relationship between two parties creates additional value for the customer and also for the supplier or the service provider. An on-going relationship may offer the customer security, a feeling of control and a sense of trust...” He goes on and defines three areas that are vital for the success of relationship marketing: the interaction, a planned communication, and the value process involvement.

According to Grönroos (2004, pp.102), the interaction in the context of relationship marketing implies that the service provider should shift its focus from the product to the customer’s internal value-generating processes at the centre of marketing. The planned marketing communication as he explains it, is predominantly mass marketing with a growing emphasis on direct marketing. We believe, the service provider needs to inform its industry market in general and particularly its customers on how the work is done, its results, its projects, and its distinctive competences. The service provider can improve customers’ perceptions on the services provided through information and communication, in which it can highlight and promote its services features which might have been taken for granted.

In the value process as an area of relationship marketing, Grönroos (2004) encourages the involvement of the service provider in the internal value process of the customer. To do this,

in order to have a better knowledge of the customer, and consequently align successfully its resources and competences which will eventually lead to an additional value creation. He also adds that this creation of value should be supported by a marketing communication.

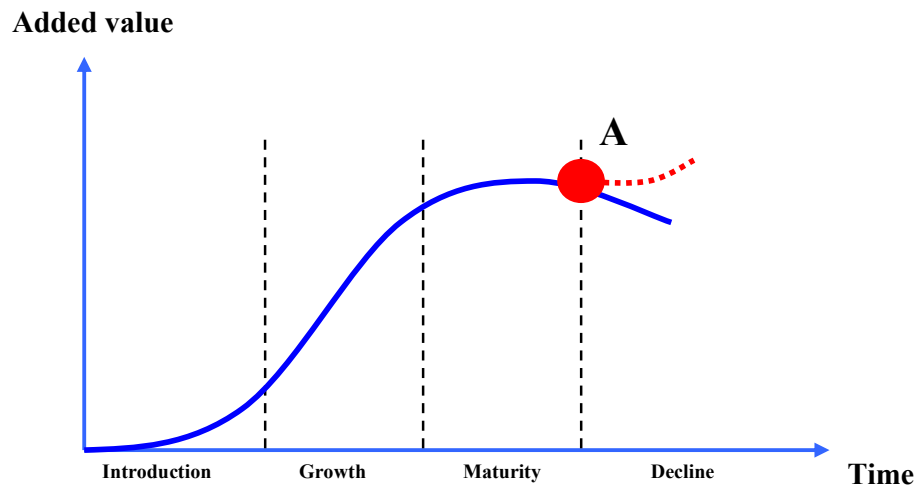
### **3.4 Characteristics of added value**

When studying the characteristics of added value we will be looking into the distinctive features of added value, and how added value can be identified over time. Knowing the characteristics of added value are particularly interesting in the sense that it will highlight the evolutive and changing dimension of the concept.

#### **3.4.1 Added value and life cycle**

The concept of added value is a dynamic concept which changes over time and over some various determinants such as customer maturity, industry competition, market development, and political & cultural development. What is seen as added value today might not be the same tomorrow depending on what the sources are.

A new product, solution or idea brought into the market can provide an added value over time until the mainstream catches the same idea, reproduce and proliferate it. Once the same solution is widely offered in the market, in the same manner, the distinctive character of innovation can no longer be prevailed. The solution falls into the range of standard solution, and therefore becomes an obsolete selling argument to value customers. Figure 3.6 shows the life cycle of added value over time.



**Figure 3.6: Life cycle of added value**

(Source: Adapted by Zogbe and Zackrisson)

From the introduction to the growth stage, the new product, solution or idea has a potential to provide added value. At the maturity stage, customers start questioning the relevancy of the added value because of the widespread availability of the idea across the market. Unless the provider of the new idea does something to revive its idea, the idea will lose all potential to create added value. For instance if the idea was in terms of process improvement, the *speed* of that improvement could be something new and distinctive if all competitors did improve their processes.

Point A in figure 3.6 shows the time where firms have to probably revive their idea or decide to focus on something else. Revive the new idea which is about to decline will be an opportunity to create further potential of added value shown by the red dotted line after point A.

### 3.4.2 Measurement of added value

The measurement of added value that we are proposing is deducted from the original formula of the customer perceived value (CPV) by Grönroos (2004, pp141):

$$\text{Customer Perceived Value (CPV)} = \text{Core Value (CV)} +/\text{- Added Value (AV)}$$

We deduct the added value formula from the above equation and write:

$$\text{Added Value} = \text{Customer Perceived Value} - \text{Core Value}$$

or

$$\text{AV} = \text{CPV} - \text{CV}$$

Core value (CV) is defined by Grönroos and quoted by Khalifa (2004) as the benefits of the core solution compared with the price paid. We understand that the core value is materialised by the product or a solution at a selling price in the market. Zeithmal (1988) defined the customer perceived value (CPV) as the consumer's overall assessment of the utility of a product based on the perception of what is received and what is given. We suggest that the assessment goes beyond the direct benefits received to also include the indirect benefits gained by buying the product or the service. As pointed out by Grönroos (2004), the relationship between the customer and the service provider might have a major effect on the total value perceived.

There is a possibility to have a negative added value depending on the weight and the performance of the CPV in comparison with the CV. For instance if the product is sold at a price higher than the benefits it provides, the core value will tend to be negative. In the same way, if the customer perceived benefits is less than expected then the customer perceived value becomes lower and tends to be negative.

## **4 Empirical findings**

This chapter will be concerned with presenting the results of the questionnaires and the interviews, which details can be found in appendix 1 and 2. We will begin with explaining the techniques used in processing the questionnaires and the interviews, and then present the questionnaire and interview findings. We will mainly focus the findings on the customers' perspectives.

All answers, both from the questionnaires and the interviews, were split into our research market's different interview groups: VLC (personnel including the two logistics experts), customers, and competitors. Out of the 25 people that we contacted we interviewed 24, only Volvo Aero was not interviewed, and we received back 24 questionnaires though VLC's HR manager declined to fill it in.

### **4.1 Processing collected data**

As mentioned in the research methodology chapter "data are any type of information collected for use in research" (Lodico et al., 2006, pp66). Lodico et al. (2006) divide data into three different types: *numerical*, *verbal* and *graphic* information. As soon data are starting to be collected by the researcher it needs to be processed, so that the data gathered can be structured before being analysed. Structuring the data collected helps the researcher to easier analyse it.

#### **4.1.1 Processing quantitative data**

Our questionnaire has been organised by using the interval scale layout and a mix of two question formats and two types of scales. The summary of the questionnaire processing in table 4.1 shows that we will use three different approaches.

Question Number	Question format		Type of scale	
	Matrix questions format	Semantic differential format	Likert scale	Numerical Scale
Question 1		X		X
Question 2-4	X			X
Question 5-6	X		X	
Question 7-8	X			X

**Table 4.1: The questionnaire processing summary**

We collected the quantitative data and transferred the information into excel. After the transfer we started to look at the measures of central tendency. According to Lodico et al. (2006) the three most common are *mode*, *mean*, and *median*. We choose to use primarily the mode, and then the median whenever a mode is lacking.

If one or more of the measures of central tendency have been used these can be compared between the interview groups. If the distribution of the data has more than one cluster of frequency, meaning the distribution has more than one mode, there will be a so called bimodal distribution. If there was a bimodal distribution we have looked at the percentage representing the occurrence of the modes to see which mode was given higher ranking.

### **Processing of question 1**

The question has been set in the semantic differential format with a numerical scale. Question 1 is a prerequisite question for the report and also for the credibility of the respondent regarding the understanding of the added value concept. The question is aiming to weigh across our three different groups of respondents the ability to identify added value based on a 7-point scale. We have used the pie chart to illustrate the findings.

### **Processing of question 2 – 4 and 7 – 8**

These questions have been set using the matrix questions format and the numerical scale. The questions are aiming to know the specific drivers of the respondents' perceptions of added value, and the intensity of those drivers in the respondents' conceptions, which naturally will lead to establish the rate of importance. We have established the ranking of the overall group

of respondents by using the mode. We have used the histogram graph to show the drivers for each group within our research market, and then used the soft line graph to compare them.

### **Processing of question 5**

This question is a combination of the matrix question format and the likert scale. It aims to establish which of the current services provided by VLC are perceived as added value services, have a potential of becoming adding value services, or are primary services. The mode (M) within each group of questions will be used as follows: if  $M \leq 4$  the service will be described as a primary service, if  $4 < M < 7$  the service has a potential of adding value, and if  $M = 7$  the service is an established added value. A table has been used to summarise the rate given by each respondent group.

### **Processing of question 6**

Question 6 has the same format as question 5, and has been summarised in the same way. The question is to find where in the order processing VLC could put more emphasis in order to deliver added value. The mode (M) will be used as follows: if  $M \leq 4$  the customers do not expect any added value, and if  $M > 4$  the expectations of added value are not yet fulfilled.

## **4.1.2 Processing qualitative data**

Processing and analysing of qualitative data will be an ongoing process from the time the data have been collected, until the researcher considers the analysis as complete. It is an iterative process (Lodico et al., 2006).

For this research we transferred each interview from the tape into a written text. This transfer was only to help us to fill in the gaps in our notes, and write down exactly what the interviewee has said. When having the interview answers written down it was easier for us to code the answers. “Coding is the process of identifying different segments of the data that describe related phenomena and labelling these parts using broad category names” (Lodico et al., 2006, pp.305).

We have two general questions that are the same to all the interviewees, and one question that is the same for VLC and its customers. These answers were grouped during the processing. The remaining questions were more specific for the individual group and have been processed separately.

## 4.2 Questionnaire findings

Our questionnaires were very much the same for all the respondents, only some minor changes related to the interview groups were made. The questionnaires were made out of eight questions using various and combined techniques as described above in table 4.1. All the underlying data to the graphs/tables related to question 2 until 8 are to be found in appendix 3.

### 4.2.1 Findings on question 1

#### **Would you be able to identify added value services?**

Our literature review and the pre-interview meetings with our VLC supervisor Johan Lindh and his colleague Eva Viktorsson, VLC manager for Global Development Outbound, gave us an idea of a discrepancy in the understanding of the concept of added value. Question 1 of the questionnaire relates to the ability of our research market to identify an added value. The question was a prerequisite to further investigate the concept in its entire dimension. The question displayed a rating scale of seven, one (1) representing *not at all* and seven (7) representing *every time*.

As presented in figure 4.1 the response of the question showed that 16.7 percent of the VLC representatives believe to identify added value *every time* it occurs against 12.5 percent of the customers, and 0 percent of the competitors. For the average knowledge of added value VLC's stakeholders feel confident while 25 percent of the customers are not sure about their ability against 16.7 percent for VLC, and 33.3 percent for the competitors.



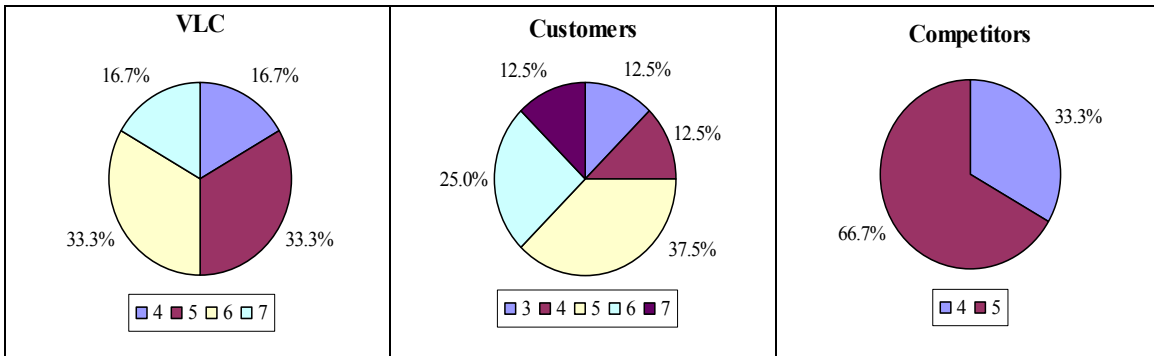


Figure 4.1: Response on question 1

### 4.2.2 Findings on question 2

**Of the below descriptions of added value service how would you grade them according to your priorities 1 = less important and 7 = most important?**

We provided our respondents with some definitions of added value, and we wanted to see how they graded them to know which one of the definitions reflect their understanding of added value the most. Every definition was emphasising a keyword so the choice could help us to determine the drivers they prioritise in their perception of added value. The keywords emphasised were: *competition*, *management/handling*, *innovation*, *processing*, and *cost*. The full text of each definition can be found in appendix 3.1. Figure 4.2 shows the pattern of our findings on question 2.

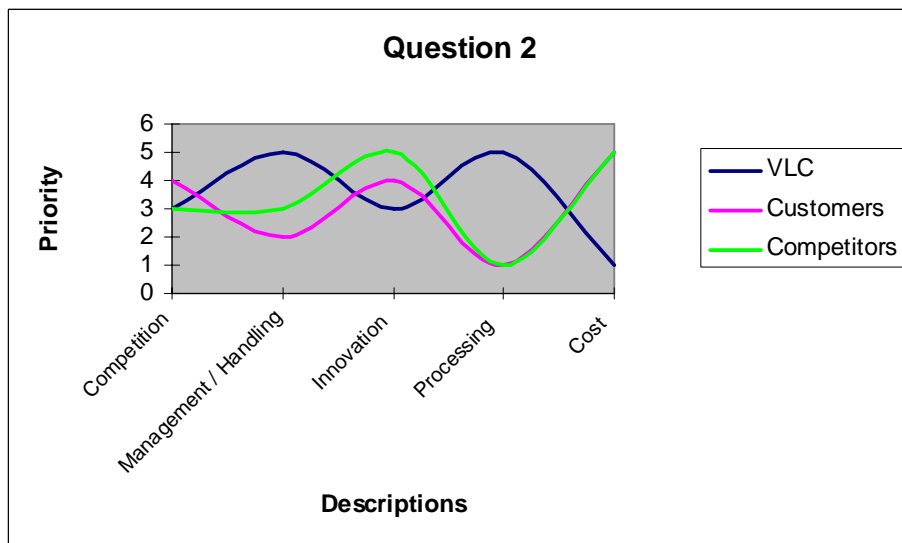


Figure 4.2: Findings on question 2

The above graph actually shows the existence of a discrepancy between VLC and its customers in terms of what counts the most when describing added value. The main priority of the customers was the definition related to *cost*, and then came equally the definitions related to *competition* and *innovation*. VLC, on the other hand, is more focused on the *management/handling* and the *processing* in its definition of added value. In addition to the above facts, the graph also shows an overall symmetric opposition between VLC and its customers, and a smooth synergy between the customers and the competitors.

### 4.2.3 Findings on question 3

#### How would you identify added value services 1 = low and 7 = high?

Once our respondents had defined added value and set the direction in terms of which areas are in focus to deliver added value, the question 3 is to know whose judgement or expertise matter when it comes to agree on the identification of added value. Five choices have been displayed which are based on: *the customers' perception*; *the respondent's personal perception*, the respondent is here considered as a logistics actor; *the comparison made with competitors' practices*; *the respondent's corporate standards*; and *the description made by the customers or suppliers*. Figure 4.3 shows the pattern of the results, and the more detailed information can be found in appendix 3.2.

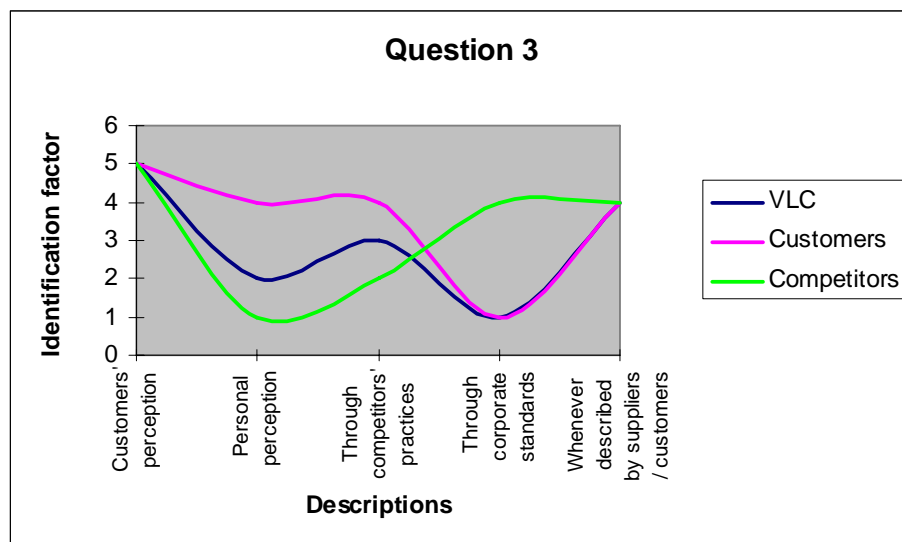


Figure 4.3: Findings on question 3

In contrary to question 2, there is a synergy between VLC and its customers comparatively to the competitors. The statements made through *customers' perception* and *whenever described by customers or suppliers* as a reflection of the added value are strongly shared by all three groups. There is however a disagreement regarding the personal perception to identify added value. The customers give more credit to their own individual opinion in making a statement over added value while VLC and the competitors do not.

#### 4.2.4 Findings on question 4

**How do you benchmark the added value services you/VLC provide 1 = low and 7 = high?**

This question aims to determine how added value is benchmarked. This question is basically to find out how a potential added value service is benchmarked to conclude its existence or not. The question might to some extent be confusing with question 3, but it should not be, because the idea behind the two questions are different. The different benchmarks proposed to the respondents were: *the corporate perceptions; the customers' perceptions; the competitors' practices; the corporate standards; and finally whenever described by suppliers or customers.* The corporate standard is different to the corporate perception, as the former is a written guideline or objectives set by the corporate, while the latter are the overall opinions of managers and directors of the corporate. Figure 4.4 shows the pattern of the results, and appendix 3.3 provides more detailed information.

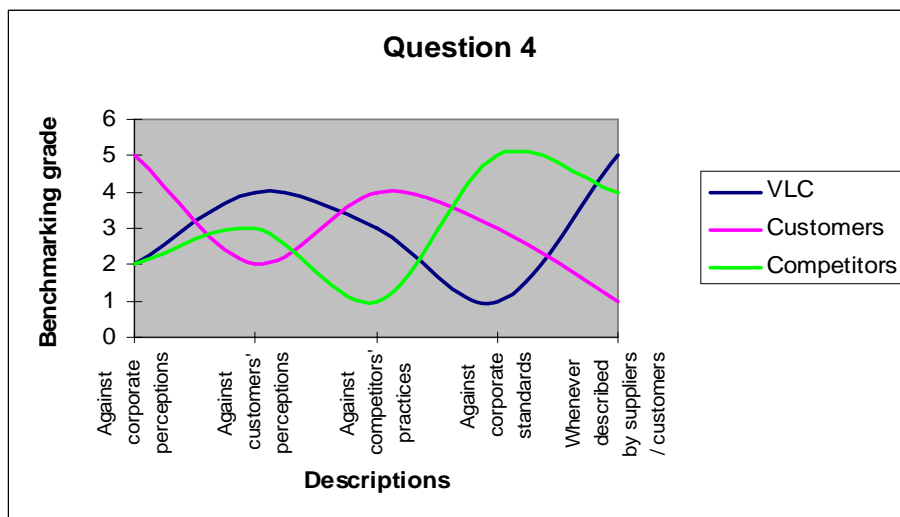


Figure 4.4: Findings on question 4

The three parties disagree on how to benchmark an added value service. For VLC, benchmarking against the *description made by the customers* and the *customers' perceptions* are the most important ones. For the customers, benchmarking against *corporate perceptions* and at a lower degree against *competitors' practices* is important, while competitors favour their *corporate standards* and *the description made by their customers*.

## 4.2.5 Findings on question 5

**To what extent do you agree or disagree that the below services provided by VLC/your company are added values?**

With this question, which actually scrutinise the services provided by VLC, we have tried to group the services based on the segmentations used by VLC. The question has been asked to competitors just to know their opinion as they might not provide the same type of services. As shown in the table 4.2 each customer has a different view on the services provided by VLC.

	VLC	Customers							Competitors		
		VAC	VBC	VCE	VTC	MT	RT	VCC	DHL	DFDS	Schenker
<b>Complete solution</b>	6	7	4	6	6	4	4	2	6	4	2
<b>Design, planning and execution</b>	5	6	4	2	7	6	6	5	7	4	5
<b>Cross-docking activities</b>	5	4	4	2	7	4	4	7	3	5	2
<b>Information flow</b>	6	7	4	4	7	4	4	7	5	5	6
<b>Management</b>	5	4	5	2	6	4	6	7	5	6	7
<b>Warehouse</b>	5	6	4	6	0	4	4	6	2	5	5
<b>Logistics services</b>	5	5	4	6	7	4	4	4	4	6	7
<b>Risk management</b>	5	5	5	2	7	4	6	7	6	6	5
<b>Others</b>	4	4	5	2	4	4	4	4	5	5	6

**Table 4.2: Findings on question 5**

The table shows that the information flow, the risk management service, and the cross-docking activities are the current services provided by VLC where at least two customers believe there is added value. VLC does not appreciate its own services at the same level as its customers. VLC sees the offer of the complete solution as a high potential added value service, a view which is not shared at the same level by all the customers, neither by the competitors. The customers as well as the competitors do not believe that providing the complete solution is on its own an added value service. Four out of seven customers do not

perceive any added value in the current services provided by VLC. They however find a lot of the services having a real potential to deliver added value. The customers who need to be convinced with regard of the VLC services to be added value are Volvo Construction Equipment, Mack Trucks, Volvo Buses and Renault Trucks.

## 4.2.6 Findings on question 6

**In which step of the order processing (from order placement to order delivery) do you believe an added value service can be provided by VLC/your company?**

The question was aiming to know where in the current services provided by VLC customers have strong expectations of improvement and where they believe potential exists to deliver added value. Once again we have grouped all the services based on VLC's segmentation, however this time some services have been split because we believe they are specific, such as track & trace, and they need to be highlighted, see table 4.3.

	VLC	Customers							Competitors		
		VAC	VBC	VCE	VTC	MT	RT	VCC	DHL	DFDS	Schenker
<b>The logistics system (IS/IT)</b>	6	6	5	6	7	7	6	6	6	6	6
<b>The JIT process management</b>	7	5	5	2	7	6	5	7	6	6	6
<b>Cross-docking and dispatch</b>	5	5	4	2	7	6	4	4	5	6	7
<b>Warehousing</b>	6	4	4	2	7	4	4	3	6	6	7
<b>Logistics services</b>	5	6	5	6	6	5	5	5	2	6	0
<b>Risk management</b>	6	6	5	2	7	6	7	7	6	6	6
<b>Customs/documentation handling</b>	6	5	5	2	7	6	4	7	5	6	6
<b>Customer service</b>	5	4	5	6	6	4	3	7	6	6	6
<b>E-business</b>	5	5	5	6	6	6	4	7	3	6	6
<b>Cost control</b>	4	6	5	6	7	7	5	7	5	6	6
<b>Secrecy transportation</b>	5	4	4	2	4	4	2	5	3	6	4
<b>Track and trace</b>	5	6	4	2	7	7	6	7	7	6	7
<b>Damage prevention/quality assurance</b>	5	6	5	2	7	7	6	7	5	6	5

**Table 4.3: Findings on question 6**

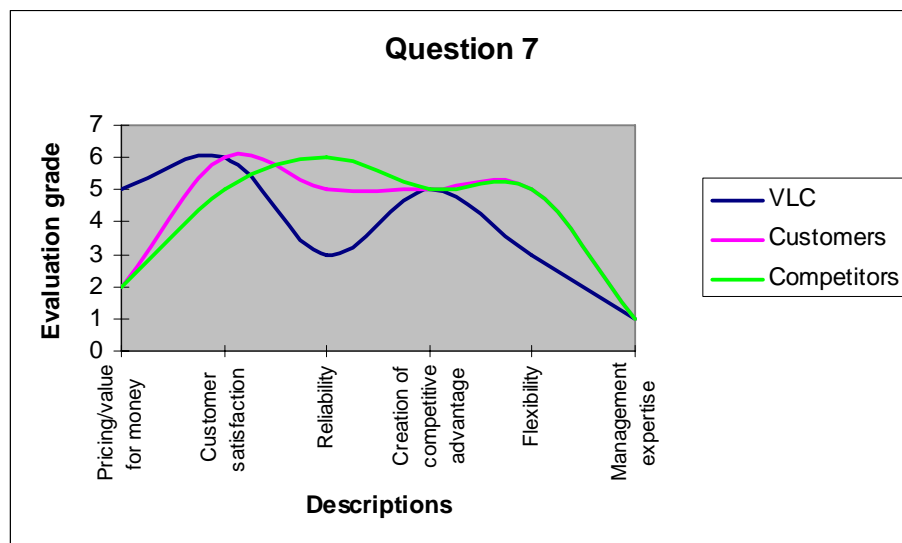
Once again customers have different views on what they expect as added value. However four out of the 13 services listed, rated by at least two customers are subject of higher expectation to deliver added value, and they are: risk management, cost control, track & trace, and the damage prevention/quality assurance. They are followed by three others services, the logistics

system (IS/IT), the JIT process management, and the customs/documentation handling. VLC does only share the customers' view regarding the JIT process management.

#### 4.2.7 Findings on question 7

**Of the below values what do you consider in evaluating the added value services 1 = less important and 7 = most important?**

We wanted to know from a list of six values which are the most important when evaluating a service as added value, see figure 4.5. Appendix 3.6 shows the underlying data.



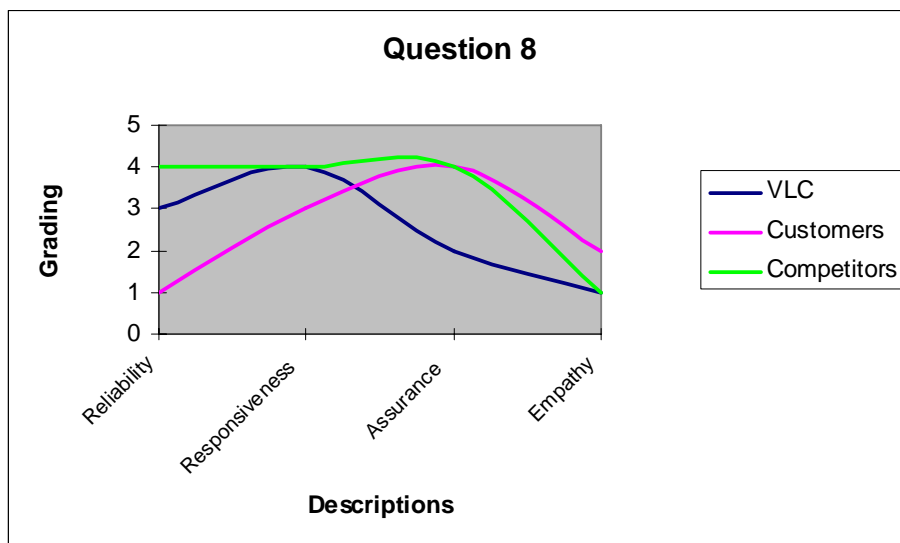
**Figure 4.5: Findings on question 7**

Customer satisfaction and creation of competitive advantage are values strongly shared by VLC and its customers as a part of the evaluation criteria of added value. Figure 4.5 show this through the intersection for the two lines. Flexibility is also an important element for customers and for the competitors but VLC demonstrates less interest in this regard.

## 4.2.8 Findings on question 8

**How would you grade your contractors/VLC on the following four dimensions of services?**

As we already mentioned in the introduction chapter, VLC contracts hauliers and other logistics service providers to provide logistics services on its behalf. Question 8 aims to know what was expecting from the contractors when performing their duties. A list of four strengths has been provided to choose from. Figure 4.6 summarise the results of the respondents, and appendix 3.7 shows the more detailed information.



**Figure 4.6: Findings on question 8**

Responsiveness is most important for VLC, and secondly comes the reliability. The assurance sounds to be the highest priority for the customers and this concern is well shared by the competitors. Unfortunately VLC in this regard lacks to back its customers' opinion as the graph shows that assurance comes only third for VLC.

## 4.3 Interview findings

As mentioned in the research methodology chapter we had a base of questions which we adapted to each individual or group of interviewees. Some interviewees were given the same questions and those were divided into five groups: regional managers, Vision 2015, logistics experts, customers, and competitors. We will present the empirical findings from the interviews per customer and per competitor against VLC as a whole. Appendix 4 provides the underlying tables used in the interview findings.

In this section we will use abbreviations related to each customer: Volvo Bus Corporation (VBC), Volvo Construction Equipment (VCE), Volvo Truck Corporation (VTC), Mack Trucks (MT), Renault Trucks (RT), and Volvo Car Corporation (VCC).

### 4.3.1 General questions to our research market

Amongst our interview questions we had two general questions that were the same to every one in our research market. These two questions were related to what the individual interviewee sees as added value activities in the automotive logistics industry today, and what s/he believes will become added value activities in the future. The questions aim to know the mindset of the interviewees regarding added value.

For these two general questions our 24 interviewees were not only divided into the original three interview groups, but also divided into ten groups though each customer and each competitor is looked at separately while VLC is seen as one unified company.

After coding all of the interview answers related to the two questions we came to six categories that summarises the answers in a presentable way. As shown in table 4.4 and 4.5 below the categories are: *general management competency & strategy*, *business relationship*, *cost reduction*, *logistics competence & strategy*, *IS/IT system*, and finally *VLC's core values*. What the categories include is listed in appendix 4.1.

Due to the high number of interviewees within VLC the chance to have widespread opinions is greater which explains why VLC is in each of the six categories for both added value



activities today as well as for the future. However, this does not mean that everyone within VLC agrees to it, but it represents a view within the corporation.

**Which activities are seen as added value activities within the automotive logistics industry today?**

As shown in table 4.4, five out of six customers believe that activities we have grouped under *logistics competence & strategy* such as proactiveness, continuously improvements, precision, and lead time reduction deliver added value today.

	VLC	Customers					Competitors			
		VBC	VCE	VTC	MT	RT	VCC	DFDS	DHL	Schenker
<b>General management competence &amp; strategy</b>	X						X	X	X	
<b>Business relationship</b>	X				X					X
<b>Cost reduction</b>	X	X		X			X	X		X
<b>Logistics competence &amp; strategy</b>	X	X	X	X		X	X			X
<b>IS/IT System</b>	X		X		X	X			X	X
<b>VLC's core values</b>	X									

**Table 4.4: Summary of added value categories today**

VBC, VTC, and VCC then consider *cost reduction* as an added value activity, particularly activities such as consolidation, utilisation, and risk management. VCE, MT, and RT mention *IS/IT system* where they all stress the ability to track & trace a shipment or parts of a shipment. All three agrees however that the track & trace service can be improved to add more value than it already does today.

If we look at the competitors there is not one out of the six categories that all three of them agree is an added value activity today. However they all agree on that *VLC's core values* are not added value activities today. This perception is, in this question, shared with all the customers, making VLC the only one with the perception that its core values do add value today.

**Which activities are believed to be seen in the future as added value activities within the automotive logistics industry?**

VLC, the customers, and the competitors all agree that added value in the future will come from the activities within the category *logistics competence & strategy* as shown in table 4.5. The customers would like to see emphasis being put on creating competitive advantage by managing long and complex supply chains, have logistics hubs to shorten the distance between the parts suppliers and the customers, as well as offering the customers vendor managed inventory (VMI).

Seven out of the ten groups, whereof four customers, then put the focus on *IS/IT system*. Information technology is a part of the future challenges, and it should be able to deliver real time information, create more transparency in the different flows, as well as give early warnings when abnormalities occur.

	VLC	Customers						Competitors		
		VBC	VCE	VTC	MT	RT	VCC	DFDS	DHL	Schenker
<b>General management competence &amp; strategy</b>	X		X	X			X			
<b>Business relationship</b>	X			X	X		X			
<b>Cost reduction</b>	X		X							
<b>Logistics competence &amp; strategy</b>	X	X	X	X	X	X	X	X	X	X
<b>IS/IT System</b>	X	X			X	X	X		X	X
<b>VLC's core values</b>	X		X							

**Table 4.5: Summary of added value categories in the future**

*General management competence & strategy* and *business relationship* are sharing the third place of importance for providing added value in the future. VLC's general management competence & strategy covers VLC's global presence, its flexibility, and its ability to innovate. The two keywords in the business relationship are communication and trust.

For the future added value activities VLC is supported by VCE when it comes to the *core values*. VCE mentions that activities related to the environment and security will increase in importance, and to offer these services will add value.

To summaries the activities that are mainly seen as added value activities today as well as in the future by the majority of our interviewees are the activities within the two categories *logistics competence & strategy*, and *IS/IT system*.

### 4.3.2 General question to VLC and its customers

#### What should VLC do to increase its customer satisfaction, flexibility, and reliability?

The question was asked to both VLC and its customers, and with this question we wanted to see where VLC and the customers put their focus. As shown in table 4.6 we coded the answers into seven different categories which speak very much for themselves. The tables related to flexibility and reliability can be found in appendix 4.2.

Table 4.6 shows that VLC stresses six of seven categories to improve its customer satisfaction. The only category that VLC do not focus on is IS/IT system. Looking at the customers responses four out of six mean that VLC should first of all focus on its *general management competence*, and secondly on *proactiveness* to be able to improve its customer satisfaction. While proactiveness speaks for itself the customers want to see VLC focus on training its personnel on problem solving.

	VLC	Customers					
		VBC	VCE	VTC	MT	RT	VCC
<b>General management competence</b>	X		X	X		X	X
<b>Business relationship</b>	X						X
<b>Cost transparency</b>	X	X				X	
<b>Processing transparency</b>	X				X	X	
<b>Proactiveness</b>	X			X	X		X
<b>IS/IT System</b>			X				
<b>Continuous improvement</b>	X			X			X

**Table 4.6: Improvements needed to increase VLC’s customer satisfaction**

Also for improving VLC’s flexibility and reliability the customers stress the importance of changes in VLC’s general management competence. Customers suggest that VLC should, to improve its flexibility, limit and define its scope of competency, and focus on doing the current services 100 percent before adding on new ones. For improving VLC’s reliability the customers mention capacity of both equipment and staff, and that VLC is today dependent on its contractors.

Four out of six customers mention that they experience VLC as reliable or even very reliable, whereas only two, VCE and MT state that they find VLC flexible. VLC personnel do believe the company is very reliable and that VLC is too flexible. To improve its flexibility the personnel state that VLC has to change and to become flexible in a smarter way in the future compared with today. With smarter they have mentioned that VLC might have to say no to some requests from the customers, though VLC knows that in the long run it will not work or it will be too high costs involved.

### **4.3.3 Findings on the questions to VLC's customers**

Since all customers interviewed were given the same questions we here want to summarise their answers to the questions related to *the top added values in their whole supply chain; their key buying criterion; added value services provided by VLC today compared to competitors; what VLC's competitors do better today; of the VLC services what is good now, what needs to be improved, and what is missing; if the customers feel that VLC is doing everything it can to best serve them; and finally VLC's core values*. Appendix 4.3 shows all the tables that have been used to process the empirical findings from the customers.

#### **Which are the top added values in the whole supply chain for your company?**

We wanted to find out what the different customers see as added value activities in their whole supply chain, not only regarding the logistics services. Our findings show that VTC only sees the manufacturing activities as added value activities and the remaining activities they believe are only adding costs. The other five customers see more activities as added value activities within the whole supply chain. The reoccurring ones can be grouped into quality, lead time in the whole supply chain, precision, material control, and relationship within the complete supply chain.

#### **What is your company's key buying criterion when dealing with VLC or its competitors?**

When looking at the customers' key buying criterion the majority of the customers see the price/costs of the service as the main buying criteria. This is then followed by quality, lead time, and flexibility.

**Which kind of added value services does VLC offer that no other company does, if any?**

We wanted to know if VLC offers any services that the customers perceive as added value that is not offered by VLC’s competitors. The answers given are presented in table 4.7. Five out of the six customers state that VLC offers added value services that no other logistics service provider do. The keyword from four of the customers is founded in business relationship, all refer to the close business relationship they have with VLC. VBC however focus on VLC’s logistics competence & strategy.

<b>Customer</b>	<b>Added value services only provided by VLC and not by competitors</b>
VBC	Better price per kilogram, due to consolidating services for the whole Volvo Group. Returnable pallets.
VCE	Better understanding of VCE Closer relationship Same core values
VTC	IT systems such as A4D and the coming ATLAS Co-ordination of the whole supply chain
MT	None.
RT	Risk management Claims handling Loading tests Delivery accuracy and information
VCC	High knowledge of VCC culture, processes, and systems Cost savings

**Table 4.7: Added value services only provided by VLC**

**In the areas/activities where your company is not using VLC, what do the VLC competitors better than VLC?**

On this question the three Volvo business areas VBC, VCE and VTC did not answer though it was not applicable for them in Sweden since they all use only VLC. However for MT, RT and VCC there were some activities where VLC could not out conquer its competitors. MT reckons that VLC’s competitors in the U.S. market have a better and more mature delivery system related to outbound. MT is also dependent on the sub-contractors for their data information. Both RT and VCC mention that the competitors are doing better when it comes to flexibility as well as relation with dealers or transporters. RT sees also that competitors are better with national call centres available for both RT and RT dealers. VCC states that VLC must benchmark more against competitors to reach the level that the competitors do today.

**Of the services provided by VLC today what is good now, what needs to be improved, and what is missing?**

This question is very essential, and with this information VLC can see what the customers appreciate today of VLC's service offerings, and what the customers would like VLC to focus on in the future for each one of them. The answers to this question have been summarised in table 4.8 below. Looking at VLC's largest external customer VCC, they are concerned about VLC's strategy. VCC would like to receive a clear direction of VLC's long term strategy to see if it is align with VCC's long term strategy. This will help VCC to decide if VLC will continue to be their main logistics service provider in the future or if they should look towards other solutions.

**Does your company feel that VLC is doing everything it can to be able to serve your company in the best way?**

Of the six customer groups interviewed only VTC feels that VLC is not doing everything it can to best serve them. VTC would like to see more flexibility and innovation from VLC. VCC does believe VLC is doing everything for them, but has chosen to exclude the IT optimisation systems where they believe VLC can do more already today.

**Do you see the quality, environment, safety and security offerings as added value services?**

VLC sees its core values: quality, environment, safety and security as added value activities which are shown in table 4.4 and 4.5. On the two general questions related to added value services today and in the future only VCE mentioned the core values as added value activities in the future specifying environment and security. However on the direct question if the customers see VLC's core values as added value services we received a different answer. The two customers VBC and RT do not see VLC's core values as added value services; instead they state that they are standard services. VCE does see the core values as added value services, but believe that they should be standard today, however so far they are not. The remaining three believe that the core values are added value services.

<b>Customer</b>	<b>What is good now?</b>	<b>What needs to be improved?</b>	<b>What is missing?</b>
Volvo Buses	<ul style="list-style-type: none"> <li>• Improvements based on the yearly survey.</li> </ul>	<ul style="list-style-type: none"> <li>• Cost/price structure development.</li> </ul>	<ul style="list-style-type: none"> <li>• A logistics hub in Europe.</li> </ul>
Volvo CE	<ul style="list-style-type: none"> <li>• Good co-operation on daily bases.</li> <li>• Very good management logistics services.</li> <li>• Good financial routines.</li> </ul>	<ul style="list-style-type: none"> <li>• Quality and capacity in the cross-docking activities in Gothenburg.</li> </ul>	<ul style="list-style-type: none"> <li>• Track &amp; trace on component/part level.</li> <li>• Marketing what has been achieved in environment and safety issues.</li> </ul>
Volvo Trucks	<ul style="list-style-type: none"> <li>• Good transportation.</li> <li>• Good operational service.</li> <li>• Good network.</li> <li>• Good global presence.</li> </ul>	<ul style="list-style-type: none"> <li>• Improvements in emballage (ISPM)</li> <li>• Cheaper emballage service.</li> </ul>	<ul style="list-style-type: none"> <li>• More active in being service provider for the customers' suppliers. VLC should show the customers' suppliers that they are capable to do the service. VLC must be more visible.</li> <li>• Take full responsibility of the contractors.</li> </ul>
Mack Trucks	<ul style="list-style-type: none"> <li>• Good business relationship.</li> </ul>	<ul style="list-style-type: none"> <li>• Cost/price transparency.</li> <li>• Activity-Based Cost analysis.</li> </ul>	<ul style="list-style-type: none"> <li>• Marketing of the service offers.</li> </ul>
Renault Trucks	<ul style="list-style-type: none"> <li>• Close relationship with VLC in Lyon.</li> <li>• Involvement in discussions and projects at Renault Trucks.</li> </ul>	<ul style="list-style-type: none"> <li>• Re-engineering traffic/transport planning. (Current routes are out of date)</li> <li>• The speed of improvement.</li> </ul>	<ul style="list-style-type: none"> <li>• More operational staff dedicated to Renault Trucks.</li> <li>• To be able to reach VLC staff better and longer hours.</li> </ul>
Volvo Cars	<ul style="list-style-type: none"> <li>• Very good co-operation.</li> <li>• Good logistics service provider management.</li> <li>• Good traffic management.</li> <li>• VLC's good relationship with Gothenburg harbour, shipping liners and transporters.</li> </ul>	<ul style="list-style-type: none"> <li>• The speed of improvement.</li> <li>• The speed of taking on new technology.</li> <li>• IT systems for transport network planning and optimisation.</li> </ul>	<ul style="list-style-type: none"> <li>• Transparency and communication regarding VLC's long term strategies, priorities and directions.</li> <li>• Systems to support a global network plan.</li> <li>• Catch new ideas and implement them.</li> </ul>

**Table 4.8: The customers' answers related to the question regarding what is good now, what needs to be improved, and what is missing**

#### **4.3.4 Findings on the questions to VLC's competitors**

The three competitors that we interviewed all received the same questions, and here we want to summarise their answers related to *the threats they see from competitors, what the most frequent requirements are from their customers, the main challenges they see in their customers' requirements, how they measure added value from their customers, and finally if they see VLC's core values as added value services*. All tables used to process the empirical findings from the competitors can be seen in appendix 4.4.

##### **What does your company see as threats from competitors?**

On this DFDS answered that they do not see competitors or their services as threats, however DHL and Schenker both see potential threats from competitors. DHL sees a threat if VLC decides to reduce its number of hauliers used today. This would lead to an even more competitive environment, and the service offerings would be very much the same amongst the remaining ones. However DHL is at the same time confident that they would be one of the remaining hauliers, though they believe they are in the top of the hauliers used by VLC today. Schenker sees new entrants in the industry that are willing to invest heavily and maybe run the business with a loss the first few years as the largest threat.

##### **What are the most frequent requirements from your customers?**

The most frequent requirements that VLC's competitors receive from their customers are first of all related to the price of the service. This is then followed by flexibility which is important in the automotive logistics industry. After the top two requirements come reliability, performance, precision, and quality.

##### **What do you generally see as the main challenges regarding customers' requirements?**

The main challenge faced by the competitors regarding their customers' requirements is first of all the ability to recognise the real requirements of each customer to be able to satisfy them. The second major challenge is flexibility when it comes to capacity. A third challenge is that it is difficult for them as logistics service providers to plan after numbers that are estimated instead of having access to true numbers.



**How does your company measure added value from its customers?**

To compare with VLC we asked the three competitors how they measure added value from their customers. All three mention that they use different KPIs to do so. Only DHL stated that they send out a yearly customer survey on top of the KPIs.

**Do you see quality, environment, safety and security as added value services?**

As mentioned above VLC sees its core values as added value services and when the customers were asked the question directly four out of six agreed with VLC. None of the competitors mentioned the activities as added value in the two general questions, however when also they were asked the question directly they all said that the activities are added value. All three competitors also mention the cost of delivering these activities, and agree on that many customers are not willing to take the costs that are attached to the core value services.

## **5 Analysis**

The structure of the data analysis is based on our research questions highlighted in the introduction chapter. The analysis will be organised under three headings: *the market's perception of added value*, *the drivers behind the added value perception*, and finally *VLC's strengths as competitive advantage*. All the data gathered during the interviews and through the questionnaires will be analysed in relation to our research purpose.

### **5.1 The market's perception of added value**

In the introduction chapter we did precise that the market was referring to our research market which is comprised of VLC, its customers, and its competitors. In this section we will analyse the empirical findings of the questions related to our respondents' perceptions of added value from a general view, as well as the view from within the automotive logistics industry.

#### **5.1.1 General perception**

General speaking, there is a common ground in the understanding of added value as most of the respondents link it to their overall satisfaction of the services they receive or provide in the sense that they can enhance their competitive advantage. What makes or creates a competitive advantage depends on the situation of each company. It depends on its strategy which is built up around its strengths and opportunities as well as its weaknesses and threats. Since the outcome of the strategy analysis varies from one company to another, it might explain why companies have a different approach towards the concept of added value.

#### **Gap in the identification**

The question related to the market's ability to identify added value has shown a gap between VLC and its customers in favour of VLC, where the average respondent was more confident to recognise an added value activity. Reasons that can be considered to explain this, are that it might depend on the respondent population from VLC outnumbering the customers, or maybe

because VLC, the one who provides the service, knows better than anybody else the resources invested in the actual service, and therefore VLC is prompt to give a value to the service. The first reason is not that relevant, since the impact of outnumbering can be influential in one way or another. So if the gap is explained by the knowledge of the resources invested in the service, then there is a serious problem related to communication between VLC and its customers regarding the information sharing on the service processing.

The perception of a service goes beyond its consumption and takes into account the pre-consumption as well as the after-consumption. The pre-consumption refers to all activities undertaken by the service provider before the customer uses or consumes the product or service. The pre-consumption includes the interaction with the customer to know its needs, transparent communication with the customer on the resources invested to satisfy its needs and the implication on the costs, the relationship marketing which deals with the product promotion and image, and the purchase which deals with the price. The after-consumption includes the after sales service, the reliability of the product, and the judgement of the product in terms of meeting promises made over its purchase. In these three different aspects of the consumption process VLC fails in the first aspect, pre-consumption, by not providing comprehensive information to its customers on the service processing.

VLC understands the value that has been put into each service, but the customers might not understand it in the same way or level as VLC. In this case, the same issue remains: the information sharing. The problem of sharing information is in first place within VLC and that is carried out externally to the customers. The understanding of the added value concept, and what is today seen as added value did not meet any homogeneous view from VLC respondents. Some of VLC respondents have shown a very good understanding of the customers, while others showed comparatively a poor understanding. This situation questions the involvement of the VLC personnel participating in the decision making-process at its strategic level on issues related to customers during their discussions and meetings.

## **Gap in the definition**

The findings have actually proved what we have already acknowledged in the theoretical framework regarding the different meanings of added value to people. The challenges which rise from that situation are for the service provider, VLC, to try to catch its customers' views on the question and find ways to narrow the gaps if any. The empirical findings showed existence of gaps between VLC and its customers on every proposed definition of added value. Another concern raised is the fact that competitors are getting more close to customers than VLC on the definition of added value, leading to a competitive disadvantage for VLC over the understanding of its customers.

A better understanding of customers can lead VLC to better deliver what the customers want, how they want it, and when they want it. By not doing so, it exposes the service provider to lose its customers. VLC's customers have emphasised cost reduction in their approach of added value in the questionnaires, and that has been confirmed during the interviews where 50 percent of the customers believed that cost reduction is important in their definition of added value. The fact that VLC does not widely share this idea, could suggest a misunderstanding of its customers concerns.

The price VLC applies to its customers might be justified however the customers do not understand it. In this case, it might be a failure of transparency in the cost development, and lack of a clear communication over the issue. If the two are improved, the customers can see that the price applied is comparatively the best offer on the market.

## **Gap in the benchmarking approach**

Benchmarking can be a source of identification as well as a tool of assessing added value. All respondents agree that it is the customers' views that should count in deciding if there is a value creation or not. The gap between VLC and its customers occurs at two levels, though VLC's customers use the competitors' practices both for identifying and benchmarking added value activities.

By focusing on customers' views to identify added value and then rely on the customers' descriptions as a benchmark of its services, VLC is undertaking an unproductive and a misleading strategy. This puts VLC in the position of a follower instead of a leader. As understood from the previous analysis of the findings VLC's customers have comparatively to VLC a poor rate in identifying added value, and therefore rely on the competitors' practices to make their opinions. VLC who shows high confidence in identifying added value, however rely on its customers' opinions and undermine competitors' practices in the market in terms of benchmarking. Finally VLC ends up with a second hand opinion from its customers in the logistics area where VLC is supposed to be the expert.

The consequences are: first of all, VLC wants to agree on all its customers' demands, therefore VLC sometimes does inappropriate concessions. This becomes a source of failure and disappointment where VLC should take full responsibility as an expert to inform and propose better solutions to its customers. Secondly, VLC will experience difficulties to be ahead of the mainstream in the sense that all the sources of improvement are based on customers' requests instead of analysing the market or benchmarking against competitors. In fact, it seems that VLC has kept towards its customers, its routine of an internal department as it has been in the past which might weaken its competitive advantage.

### **5.1.2 Perception within the automotive logistics industry**

The perception of added value within the automotive logistics industry is first of all based on the open questions during which the interviewees could freely state what really matter for their corporate, and secondly on the services currently offered by VLC presented in the questionnaire.

#### **The automotive logistics in general**

Across our market research, the focus in terms of added value is mainly on logistics competence and strategy, and particularly on proactiveness, continuous improvement, precision, and lead time reduction. Regarding proactiveness VLC does not deliver according to its customers. The customers believe that VLC fails in proposing reliable solutions when problems occur because it does not anticipate on problems and whenever they happens, VLC tend to just fix it. This attitude

which has been described by some of the customers as a *fixing attitude* instead of a *proactive attitude* is a sign of lacking expertise competence, and therefore VLC affects customers' competitiveness with more delays in the execution planning and by increasing the lead time.

Volvo Trucks judges VLC as being slow in improvements and changes, while Volvo Cars blames VLC as being slow in catching new ideas. Volvo Trucks has particularly complained on the way VLC is dealing with the wood worms in the emballage, which increases VTC's operational costs and prevents VTC to wholly use its leased emballage in the global market. Regarding the wood worms VLC is content about how the issue is being dealt with.

The precision index is a problem in the outbound process because VLC is weakening in meeting its target, and that is not to please the customers because of the costs and the bad image that can result from it. The under performance in this area is acknowledged by VLC, but a solution or a strategy has not yet been raised to reliably deal with this issue.

Another area of concern is in the cost reduction, and also the transparency in the cost development. VLC claims in its 2006 business plan the cost savings improvements from 2003 to 2005. This performance would be more appreciated if it had an impact on the customers' invoices. VCC is happy about this performance when VCC benchmarks against other logistics providers of the Ford Motor Company, who charges their customers for every penny saved. However, expectation is to see the impact on the invoice by a price reduction which is more visible and convincing.

### **VLC service-based offers**

The analysis in this section will be particularly based on the questionnaire questions 5 and 6, because these questions are specifically dealing with VLC's current operations. The complete solution (inbound, outbound, and emballage) has been rated 6 and therefore cannot be an established added value based on our data processing approach (see section 4.1.1). However we did stress (see section 4.2.5) that people within VLC believes that the complete solution is of high potential, and almost seen as an added value. To be able to sell the inbound, outbound, and emballage as a single package to a customer, will certainly generate more revenues for VLC, and

can be described as added value from the shareholders' perspective, but not necessarily from the customers' perspective as we deal with in this report. We have not been able to hear from VLC what are the real benefits gained by the customers who buy the complete solution. As far as we know, there is not a special treatment or offer such as rebate or price incentive over buying the complete solution from VLC.

VLC's services perceived as added value by at least two customers are activities related to the information flow, the risk management, and the cross-docking activities. The customers' perception of added value should be taken on a case by case basis, because of the different opinions from one customer to another. This can be explained by several reasons, amongst them we can cite the customers being subject to different treatments, the customers have different matters or issues in their agendas, and/or the customers have different priorities in relation to their strategy.

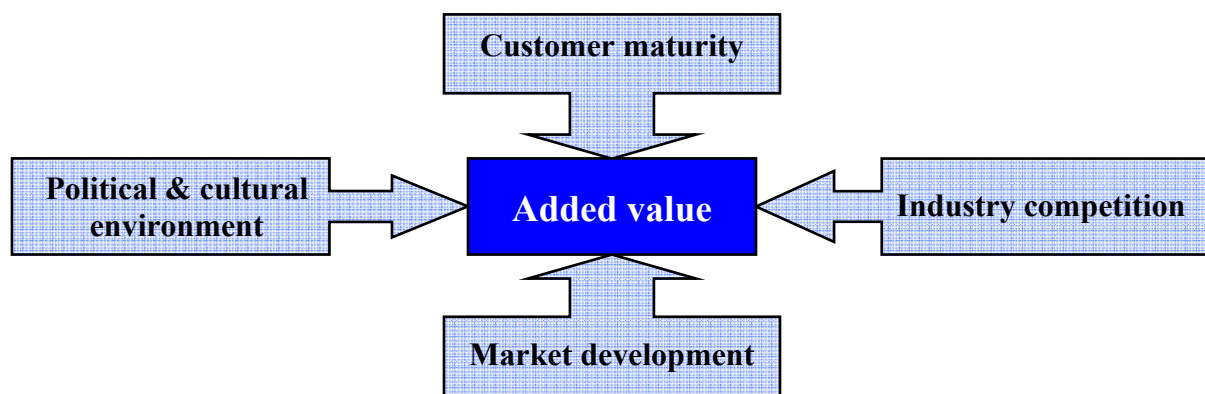
The cost control, track & trace, and the damage prevention/quality assurance are the services which require much attention from VLC because of the high expectation from the customers. The track & trace system of VLC is behind competitors, and it is not offered to VLC's customers across all regions. Although the risk management is said to be an added value in the previous paragraph, not all the customers perceive the same benefits out of it. Customers such as Volvo Construction Equipment and Volvo Buses still have some expectations towards the service which are not yet fulfilled.

## **5.2 The drivers behind the added value perception**

Our second research question relates to the drivers behind the added value perception of VLC and its stakeholders. After our data collection we believe that the drivers can be divided under three headings: *added value determinants*, *general management and strategy*, and *relationship marketing*.

## 5.2.1 Added value determinants

The analysis of our findings shows different influential factors in the perception of added value. The factors that were mentioned in the interviews are shown in figure 5.1 and they are: *customer maturity*, *industry competition*, *market development*, and *political & cultural environment*.



**Figure 5.1: Determinants of added value**

(Source: Zogbe and Zackrisson)

### Customer maturity

The perception of an activity as an added value depends on the maturity of the customer. Different customers perceive different activities as added value. As stated by VLC's European regional manager some customers see added value in VLC's logistics knowledge from a transportation standpoint, while other customers, that are more mature, need service offers such as advanced logistics engineering. An example related to VLC's emballage offerings where some customers see VLC's standard emballage as an added value, more mature customers need VLC's help to develop special emballage from which they expect added value.

The customers that we have interviewed for this research could be believed to be at the same maturity stage, but they are not. Volvo Buses state that they are several years behind other companies within the Volvo Group giving Volvo Trucks as an example. This can be illustrated by VLC's consolidation activity, for which Volvo Buses perceive an added value.



## **Industry competition**

The market that the logistics industry is working within is developed, and there are many actors in various sizes competing. However for most of VLC's internal customers, the Volvo Group business areas that share the Volvo name, it is more a monopoly market than an open market when buying the logistics services, with VLC in a monopolistic role. Since VLC has its foundation as a logistics department within the Volvo Group all the original business units of the group use VLC for their logistics services. On the Swedish market VBC, VCE, and VTC only use VLC's services even though there might be other logistics service providers that are offering similar services to a better price. Outside the Swedish market there are other logistics service providers that have been contracted, but naturally the Volvo Group wishes to see that VLC is used as much as possible for the Volvo Group to get return on its investments.

The monopolistic role in which VLC finds itself might hinder both internal customers' as well as VLC's competitiveness. On one hand the internal customers are restrained to go to the open market and find more competitive offers, and on the other hand VLC has less pressure to speed up the improvements of its services.

Two reasons why customers stay with VLC are first of all the very close business relationship that has been build up during the years. This is not easy to replace just because other logistics service providers offer similar services to better prices. The other providers cannot in a short time become as close to the internal customers as VLC already is. The second reason is the advantage resulting from sharing the same information systems, which provides an interface between VLC and its internal customers.

## **Market development**

VLC's North America region is not as developed in certain areas as VLC's other two regions. The regional manager for VLC North America informed us that in her region VLC does not use its A4D system for outbound, neither does VLC have a transportation management system, nor a track & trace system. Compared to customers in the other two regions the customers in North America do not purchase the VLC services under the same conditions.

When the systems used in the other two regions will begin to be used in North America they will most likely be seen as added value to the customers. One of the reasons for which they will not be seen as added value is if the costs related to them are perceived higher than the benefits received. Another reason is if the benchmarking against competitors reveals a competitive disadvantage. As a result of the differences between the regions there is a potential to deliver added value services in the North American market.

## **Political & cultural environment**

Finally the political and cultural environment does influence the perception of added value. It is important when doing business globally to be aware of the political situation and regulations in each country or market, and to understand the culture within it. To understand the culture in the country where business will be made is important, though business is not done between corporations, but between the people within the corporations. If the culture is not understood there will be difficulties and most likely misinterpretations within the business relationship. To have local knowledge helps. One way that VLC is trying to gain this knowledge, is by moving around some of the employees so that they can gain hands on experiences, and bring the knowledge back to their home offices when completed.

VLC's core values, that are the same for all the companies within the Volvo Group, are perceived differently around the world. Quality and safety were the first two core values and is today well connected with the Volvo name. Later environment and security were added to the core values. According to VLC's European regional manager the issue concerning the environment is more in focus in Europe compared to the rest of the world, and it can be due to the stricter European emission regulations. However within Europe there is a different view between the north and the south, where more customers in the north are asking for environmentally friendly services and are more willing to take the costs related to them. The Volvo Group and VCC have started to use environment as a selling argument in China, and it starts to become more important on the U.S. market. Security is very much in focus in North America and it received more attention after the attacks in September 2001. Security is also gaining significance in Europe where the U.S. market is used for benchmarking.

Volvo Trucks has been pushing the European market to introduce long combination vehicles (LCVs) with a length of 25.25 meters, which today is allowed in Sweden and Finland. The Netherlands is now in its second trial period of testing LCVs, and hauliers within the country hope that there will be a new legislation allowing these vehicles on the European market in the future. The European countries are working towards reducing the emission, but do not facilitate the use of the 25.25 meter LCVs. The use of this kind of vehicles will be beneficial for governments as well as companies. Countries will gain from reduced congestion through fewer vehicles on the roads, which mean less emissions of carbon dioxide. With a better flow on the roads time will be saved for logistics companies and their customers. Companies will also gain from optimising their transportation flows. An important decision is indicated by the regional manager of North America. Customers have to decide on keeping material on stock, or receive frequent deliveries. It is a decision that comes down to costs.

## **5.2.2 General management and strategy**

The corporate strategic management has an important role to play in the customers' perception of its activities. Decisions that involve the global presence of the company, how flexible VLC should be in its service offerings, how innovative the company should be, what kind of people should be hired to execute the strategy, and what training and/or education do the employees need to make VLC grow in the right direction are just a few decisions that the management takes, and which influence the customers' perception. Most important for the management is to find the most beneficial solutions that will lead to optimisation of the systems, as well as cost reductions for both VLC and its customers. As our findings showed the price/cost of the service is what the customers see as the key buying criteria.

### **Logistics competence**

To be able to find the most beneficial solutions for both VLC and its customers the right people have to be employed and they need to possess the right competence. It is crucial for VLC to have the competence to manage the global coverage that its customers demand. To meet this requirement VLC has to have skills for each market and a well established network of logistics providers and/or hauliers that can assist in the fulfilment of the demand.

For VLC to be proactive the employees need to work with scenarios through a line of questioning such as what should be done if a certain problem occurs. By having solutions for situations/problems that can arise will help VLC to faster solve the issue properly, not only fixing it for the moment. One issue can be VLC's flexibility. To be flexible towards customers, in a way that is also beneficial for VLC, requires not only logistics competence, but also the understanding that sometimes VLC might have to say no to some of the requirements from the customers. VLC employees need to know what they and the corporate are capable of doing, and not promise to fulfil the requirement just to please the customer, because in the end both might be disappointed.

### **Continuous improvement**

The continuous improvement regards not only the processes, but also the people in charge of the processes. That is why it is important to have the right people within the company, and to offer them ongoing training during their years within the company in pace with the changes that occur in the industry. VLC should focus on developing skills within problem solving. With this skill VLC can come to the customer with suggestions of solutions for a better or cheaper logistics layout instead of the customer asking VLC to solve a problem.

On the transport planning level, VLC needs to improve the current setting and the handling of the operation by keeping away from the routine culture. Renault Trucks has revealed that its current traffic/transport routes are outdated, and they also add that not much is needed to be done, to make an efficient change; it is just a matter of a review. Improvement is also expected in the cross-docking activities in Gothenburg by Volvo Construction Equipment

IS/IT systems are one major area where continuous improvements is important though new technology are always coming into the market. To be the first with a certain system will give an advantage over competitors, for instance VLC's A4D system. However having delays with these important systems as VLC has with its ATLAS system for inbound will mean a major cost for the business, and in the end it might not be adding value to the customers though competitors have similar or even better systems already in practice. The IS/IT systems are also expected to support VLC in planning and optimising its transport network.

### **5.2.3 Relationship marketing**

Relationship marketing adds value to both VLC and its customers. Drivers that add value within the relationship marketing are *trust, communication, marketing, and education*.

#### **Trust**

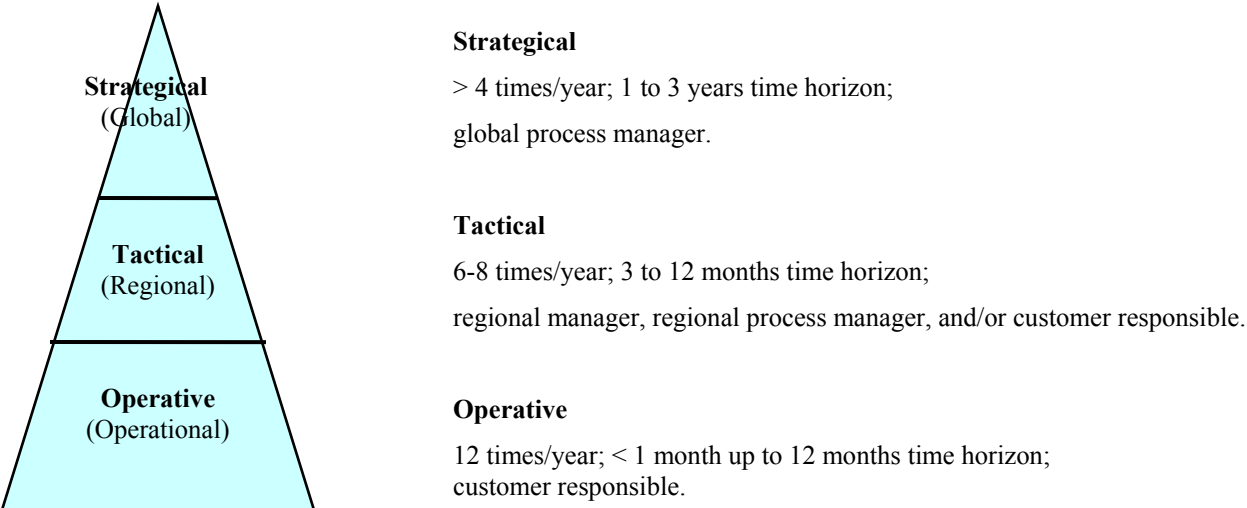
Of all the VLC personnel interviewed there is a homogeneous view regarding VLC's business relationship with its clientele. With all its internal customers and VCC, which together represent more than 90 percent of VLC's turnover, VLC is said to have a very good and close relationship. When it comes to the remaining external customers it is stressed that VLC still has to work on the relationships to reach the same level as it currently has with the others.

This well established business relationship as it has been explained to us is reflected in the fact that VLC is allowed to take part in its customers' product development. To be able to be involved in this core activity a high level of trust exists and that is the foundation of a good business relationship. Renault Trucks praises VLC on its involvements in different discussions and projects, for instance regarding the launch of a new product at the Nissan plant.

#### **Communication**

VLC's strategic IS/IT department feels that it knows what its customers expect from the systems, however the head of strategic IS/IT stresses that what her department discusses with the customers IS/IT department might not be the same as what the two corporations agree on overall. It is through open communication amongst the right people at the right level in both companies: VLC and the customer, that issues can be discussed and actions to be taken can be suggested by both parties. Equally important is it that both VLC and the customer have an open communication within its own company. Everyone within VLC that is involved with one specific customer should be aware of the discussions that are undergoing or decisions that have been made. From our interviews we have realised that this is not the situation today, and that the sharing of information regarding customers is very much unstructured.

The current integrated meeting structure between VLC and its customer, shown in figure 5.2, is today lacking the internal communication and sharing of information. From the statement made by VLC’s head of strategic IS/IT we believe that both within VLC and VLC’s customer the internal communication is lacking.



**Figure 5.2: VLC’s integrated meeting structure with customer**

(Source: VLC information)

**Marketing**

After interviewing 12 VLC personnel it was clear to us that they all were reserved to express what VLC is good at. Instead of being proud and inform the customers and the customers’ suppliers what the company is good at, they used the sentence “we are *quite* good at ...”. By doing so gives us the impression that they under value their own performance and competence. This can be seen in the failing of VLC to wholly market its services to its customers’ suppliers around the world. This concern has been raised by Volvo Trucks who does not want to take the responsibility to impose VLC to its suppliers, but however provides a list of six global logistics providers including VLC.

VLC’s head of strategic IS/IT mentions that VLC needs to market its services to its customers in the right way, and may need to convince the customers that a specific service and/or solution is right for them. This might take some time, but in the long run it is beneficial for both parties. The

head of strategic IS/IT also states that in areas where VLC today is not meeting the customers' requirements 100 percent VLC should show how it plans to proceed to fulfil the requirements.

### **Educate the customers**

One of VLC's board members that we have interviewed with regards to his logistics expertise states that "VLC has an educating role towards its customers". With this he means that VLC needs to educate its customers and show them how the services they buy from VLC add value to their own businesses. The education of the customers should also include making the customers better buyers of logistics services, which will develop their own systems. By helping the customers become more efficient when planning its logistics purchases the customers will value VLC's relationship, and might even build on it and give more business to VLC.

## **5.3 VLC's strengths as competitive advantage**

For VLC to be able to offer customers services that add value to them can be seen as a competitive tool towards its competitors. We will here look at VLC's competitiveness and some of the challenges that VLC is facing.

### **5.3.1 VLC's competitiveness**

We see that VLC has a competitive edge towards its competitors in its strengths: *complete solution, emballage, business relationship, and consolidation.*

#### **Complete solution**

We believe that to be able to provide the complete solution can be a competitive advantage for VLC in the automotive logistics industry where we have not yet found another single logistics service provider offering the three combined processes to customers. However, unless VLC turns the complete solution into a more incentive package with an aggressive marketing the customers, especially the external ones and the newest internal companies: Mack Trucks and Renault Trucks

will not see any advantage to buy the complete solution. They would instead prefer to stay with their existing business partners for each process.

Again we will come back to the importance that the internal departments need to communicate. The customers' different departments related to each process need to agree that buying the complete solution from VLC will benefit their overall business in the long run. If the customers' different departments do not co-operate internally it will be harder for VLC to convince them about the advantage of buying the complete solution from one single source.

## **Emballage**

One of the logistics experts interviewed sees the emballage service as a unique competitive advantage for VLC. Today there are few competitors for VLC when it comes to the emballage services, but by being born into the automotive industry and by having more than 50 years experience when it comes to emballage for the automotive logistics industry VLC has an advantage over its competitors, however this needs to be translated into a competitive advantage.

Customers using VLC's emballage pool system receives advantages such as cost control, global system, economies of scale, quality, and environmental care. The competitors can offer similar services however none of the two biggest competitors: Nefab and CHEP do originate from the automotive industry, nor do they specialise only in the automotive logistics industry. We see therefore that VLC has a better understanding of its customers' industry and markets, and also the specific knowledge to best develop the emballage needed compared to the competitors. However VLC faces an issue which can hinder the emballage potential on the North American market, and that is the high price charged in that region compared to the European market. This issue has to be dealt with for VLC to have a competitive advantage.

## **Business relationship**

To have such a strong business relationship that VLC has with its two major customer groups: Volvo Group and VCC, other logistics service providers might never reach. To have gone from an internal department to a business unit the knowledge of each company within the Volvo



Group as well as the industry is rooted in VLC. Many of the VLC competitors are not originally from the automotive industry instead they have grown into it from other logistics industries. The time it takes to build up an established relationship might not be given to the logistics service providers, though most contracts signed today are only valid for a time period of two years.

## **Consolidation**

With all its customers within the same industry VLC can consolidate many of its services and shipments for all the customers in its clientele. We have mentioned that the customers do receive a better price per kilogram through VLC's consolidation compared to if they buy the services individually. This is a service that would be difficult for VLC's competitors to compete with. For them to offer each individual VLC customer a better price per kilogram than what VLC is doing today would make the business unprofitable for the competitors. This however do not apply to each of the markets that VLC's customers have activity within. VLC is not able to offer better prices than its competitors to the individual customer, for instance in Finland where VBC is using Schenker as its logistics service provider.

### **5.3.2 VLC's challenges**

The challenges VLC is facing are of three orders: *the corporate long term strategy, its process assessment, and the dilemma of contractors/suppliers being competitors.*

#### **VLC's long term strategy**

We have barely seen what VLC's long term strategy is. However we know the reason of its existence, which is to support the Volvo Group business areas. The support of the Volvo Group can be explained in different ways, for instance operational support by primarily be dedicated to the Volvo Group's different business areas, and provide all the necessary resources and competences, or act like a truly independent company as the other Volvo business areas. VLC is currently in between these two commitments, and the challenge is to balance its dedication to serve the Volvo Group business areas and its ambitions to grow independently.

### **Dedication to the Volvo Group business areas**

The Volvo Group business areas can be qualified as the home market for VLC. The role of this market and the attitude of VLC can be beneficial as well as a hinder for both. If the home market can serve as a test to improve its services and for VLC to take into consideration all the requirements, complaints, and observations made by the home market, then VLC will be better prepared to compete in the open market. If VLC's attitude is to take the home market for granted and have a monopolistic behaviour, then VLC will not only fail its home market, but it will experience difficulties to compete in the open market.

### **Prospect of being a business area**

To be an independent company might be far away in VLC's agenda, but the question will rise sooner or later in this context of globalisation with fierce competition. The necessity to implement some strategies might result in overshadowing some of VLC's commitments to the Volvo Group business areas if for instance they become less profitable for VLC. The prospect of being an independent company should go hand in hand with the possibility of Volvo Group business areas to also go out on the open market for better offers. As a result VLC would have to be more competitive, and more innovative if it wants to survive and stay in business. Pressure will certainly increase the speed of improvements and better offers are more likely to come.

### **Process assessment**

A common way a corporate assess its operation processes is to use key performance indicators (KPIs). On the list of eleven KPIs that VLC is conducting, eight we believe are related to operational processes, or can have some impacts on the processes. These eight are: inbound transport precision, outbound transport precision, emballage availability, customer satisfaction index, customer cost savings, employee satisfaction index, logistics competence, and damage free vehicles. These KPIs are certainly important and maybe sufficient, but not enough for the data collection enabling a proper evaluation of the different processes, and help VLC to catch its customers' intimacy and perception over the services it provides.

The purpose of the KPIs is not only about measuring, but it also has a strategic implication for the corporate in the sense that it is helpful to redirect and correct its short term strategy, and to see which areas that need more improvements. Customers being the focus of VLC, a formal KPI on customer complaints/claims could support the customer satisfaction index analysis to make a diagnostic over VLC's service performance. We have been informed during our interviews that VLC is not conducting a KPI on its contractors' performance, but instead is using the fulfilment of the contracts as a basis to evaluate the contractors. We believe that the contract terms are not sufficient, neither is the request for quotation (RFQ) to evaluate the contractors.

### **The dilemma of contractors/suppliers being competitors**

At least two of VLC's contractors: DHL and Schenker are competitors to VLC, not only in Sweden, but also on the global market. The two competitors are established logistics services providers, and have departments specialised in the automotive industry. One advantage that the two contractors have over VLC is that they both own parts of the fleet that they use. This situation creates a competitive advantage for DHL and Schenker towards VLC in the sense that VLC depends on its competitors assets to perform its services. Whatever the competitors do will be on behalf of VLC, and it is VLC which will be countable in the eyes of the customers.

One of the drawbacks of the relationship between VLC and its contractors being competitors is the level of flexibility that the competitors can benefit from comparatively to VLC in the peak periods where demand is raising for the entire logistics service industry. In this kind of circumstance competitors might certainly try to respect the terms of their contract with VLC, but any decisions on additional demand from VLC against an additional demand from another of their customers, to whom they also sell logistics solutions, will be made on the best interest of the competitors. This actually questions the sustainability of the reliability and the commitment of VLC contractors who are competitors.

During our interviews we have understood that it has helped competitors by having VLC in their customer portfolio to market themselves towards other existing and potential customers. In other words competitors are using the Volvo name as a selling argument to gain new businesses.

## 6 Conclusion

In this final chapter we will begin with a *summary* of our findings and analysis, and particularly emphasise our research questions, followed by our *recommendations* to VLC, then our *contribution* on the concept of added value, before we conclude with our suggestion of *areas for further research*.

### 6.1 Summary

In our summary we will cover the gaps that we have found, the drivers behind the perception of added value, the activities that are seen as added value today and the ones that are believed to be added value in the future, and end with VLC's strengths and challenges.

#### Gap existence

We have through our empirical findings and our analysis found out that there are gaps in the ability of the respondents to identify, how they describe, and how the respondents define through benchmarking a service as an added value. The gap related to the identification, where VLC's personnel showed a higher ability to identify, we say depends on VLC not sharing the information about the service processing, nor marketing the full advantage of the activities to its customers.

Regarding the description of added value VLC sees added value coming from management/handling and processing, while its customers as well as its competitors see it coming from cost and innovation. That the competitors have the same understanding as the customers can be a future threat for VLC, if VLC does not start to listen to what is most important to its customers.

Finally for the gap when it comes to benchmarking VLC's customers use the competitors' practices, while VLC uses the customers' views. As stated in the analysis chapter this then puts VLC in the position of a follower instead of a leader. To be a leader for its customers VLC needs

to benchmark against its competitors and overtake them, so that the customers in the future will use VLC's practices to benchmark and identify added value services.

### **Drivers of the added value perception**

We have in our analysis showed that there are different drivers that are underlying the perception of added value. The determinants were: customer maturity which is not at the same level within VLC's clientele, industry competition where VLC has a monopolistic role, market development where the customers in the North American region do not purchase VLC's services under the same conditions, and finally the political & cultural environment where for instance VLC's core values are perceived differently around the globe.

We then continued with drivers that came under VLC's general management and strategy such as logistics competence and continuous improvement, before ending with drivers within relationship marketing. In our final section of drivers we highlight trust, communication, marketing, and education.

### **VLC's added value activities**

Activities that adds value to VLC's customers today, and activities that are believed to add value in the future are mainly activities within the category we have named logistics competence and strategy. To be proactive and continuously work for improvements, reduce lead times for instance by providing logistics hubs, reduce waste from the processes, and have market skills are some of the activities within the category, see appendix 4.1 for the complete list.

Secondly comes the IS/IT system category where real time information as well as transparency are asked for, as this can lead to early warnings and reduced costs. We also mentioned that the current track & trace system used by VLC needs to be improved, and become more advanced to be able to track each component in the shipments.

Thirdly, today activities within the cost reduction category such as VLC's ability to consolidate shipments, utilise the trailers, and constantly working with risk management are seen as added value. However for the future it is activities that are within the business relationship that are believed to add value. The two keywords here are communication and trust.

## **VLC's strengths and challenges**

We see some of VLC's strengths as services adding value to its customers, and which give VLC a competitive advantage over its competitors. These activities are the offering of the complete solution however this is not yet marketed in the right way towards the customers, VLC's emballage service offering a pool system with its returnable pallets, the well established and rooted relationship VLC has with the customers it shares the Volvo name, and finally VLC's ability to consolidate its services and shipments for its entire clientele.

VLC does also face some challenges for the future and we have focused on three. Firstly, for its long term strategy VLC should consider if the corporate should stay dedicated to the Volvo Group, or if it has the prospect of growing into an independent company and move from a business unit to a business area within the Volvo Group. Secondly, VLC needs to upgrade its current settings of key performance indicators. Thirdly is the dilemma that some of VLC's contractors/suppliers are also being competitors to VLC. This situation shows that VLC is depended on its own competitors, and its competitors' performance is reflected back to VLC's own performance in the eyes of VLC's customers.

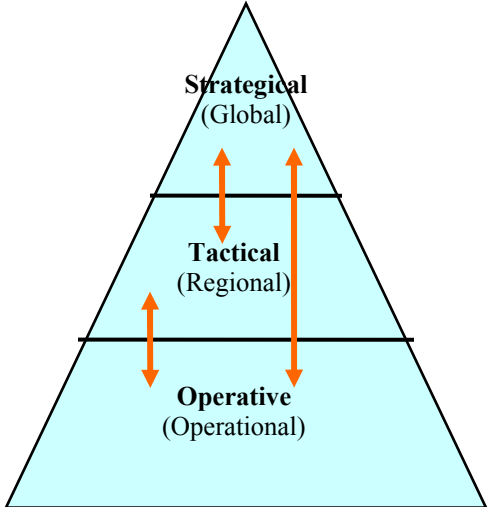
## **6.2 Recommendation**

Our recommendations to VLC are within the areas of *communication improvement*, *benchmarking*, *be a logistics expert*, and *process improvements*. We believe that if VLC focus on improving in these areas there will be potentials of providing more added value services to its clientele and new potential customers, as well as move VLC from being a follower into the position of a leader.

### **Communication improvement**

Under relationship marketing in our analysis we talked about the importance of communication both within VLC and towards its customers and potential customers. If VLC want to be seen as a unified company, one face, towards its customer the internal communication is crucial. The different levels need to communicate between themselves as shown in figure 6.1. The head of strategic planning and core values mentioned a customer relation management system, and we are wondering why this system does not already exist within VLC. We believe that with such a

system VLC’s internal communication regarding each customer would be very much improved, and each decision made can easily be shared, traced and followed up.



**Figure 6.1: Suggested integrated meeting structure**

(Source: Adapted from VLC information)

Improvement of the internal communication will lead to improvements in the external communication. With the external communication we mean VLC’s marketing of its service offers. Compared with today VLC needs to believe in its competence, be proud of its performances, and inform its customers, its customers’ suppliers, as well as sub-suppliers about its capabilities through a well defined marketing strategy. VLC needs to show how its service offers will help them improve their own businesses.

**Benchmarking**

Volvo Cars state that VLC is not benchmarking its services against competitors, and this has been confirmed in the data we collected from VLC. Instead VLC is focusing on the customers’ views, which we have said might be misleading. We recommend that VLC should get a broader view of the market instead of narrowing it down to its customers’ perceptions. This will help VLC to know what is offered on the market, what the trend is, what others are doing better, and who the best is.

### **Be a logistics expert**

VLC should believe in itself and better value its own services, and not be completely driven by the customers for the interest of both parties. VLC is the expert, which means VLC should advise its customers on the feasibility of any demand. VLC should not take on duties if it is not capable of meeting its promises.

### **Process improvement**

For VLC to break the negative trend that has occurred two years in a row, 2004 and 2005 in the measurement of its customer satisfaction index, VLC should be more proactive and improve its general management performance by speeding up project executions and catching up on new ideas and be innovative. Also VLC needs to look within itself and become more efficient if it wants to increase its customer satisfaction. Flexibility and reliability should be part of the general management competence, but the flexibility VLC is performing should be reviewed to match its capability and resources.

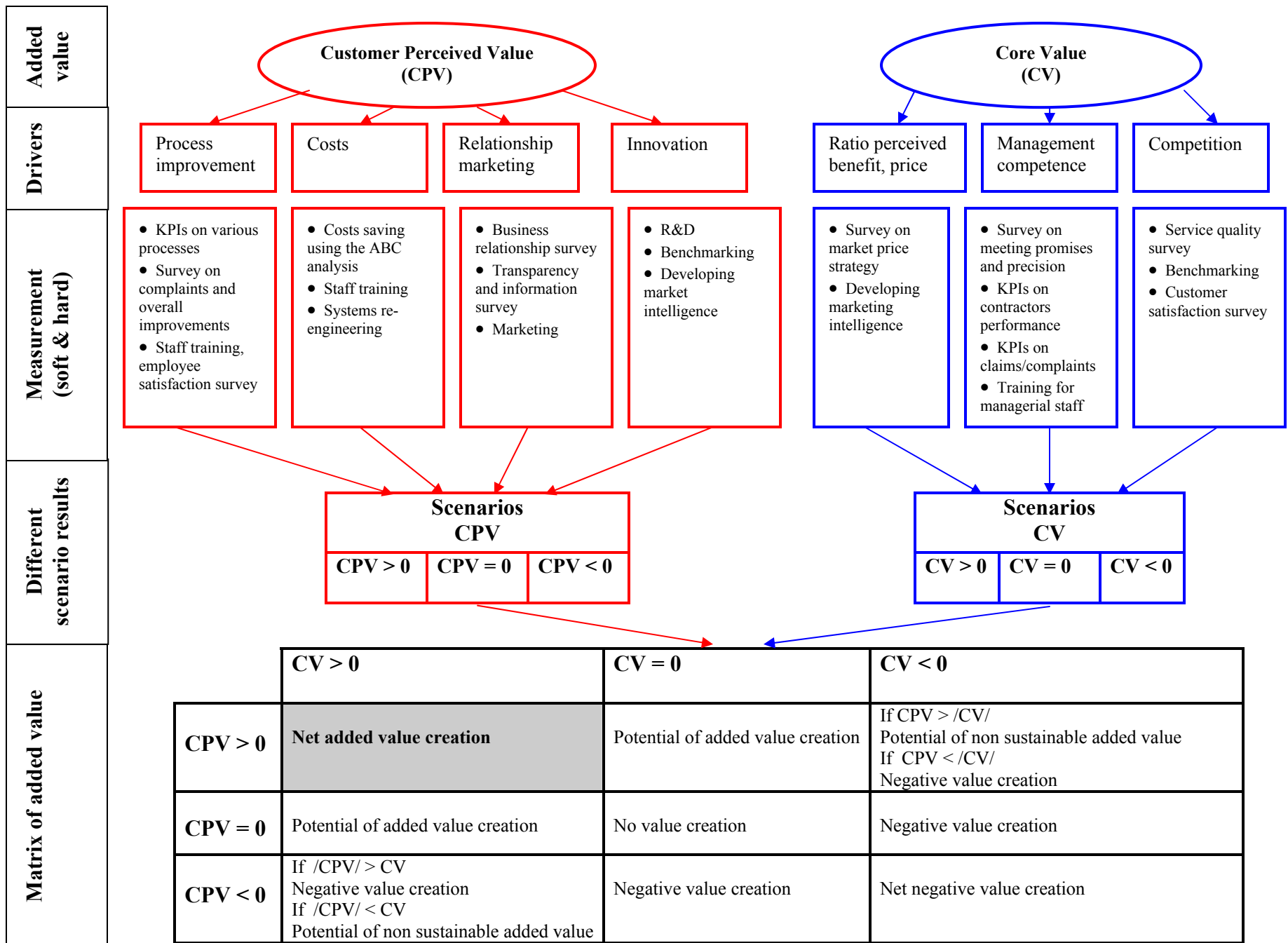
Since VLC buys services from contractors to perform its services, it should extend its current key performance indicators to the contractors' different duties, and not only evaluate them based on their contract terms. The KPIs should also be extended to the claims/complaints in order to support the customer satisfaction index.

## **6.3 Contribution**

Our contribution is on the development of the measurement of added value. This measurement is actually a framework. It has an implication on the theoretical level as well as on the practical level, where it provides a guideline to the corporate in evaluating if the services, and the products they supply, their business culture, and their management performance are align with added value creation for their customers.

In the original formula Grönroos (2000) gives a good theoretical explanation on the different terms of the formula, but does not explain how the corporate practically can determine the customer perceived value and the core value. We believe that the framework of the added value measurement we provide in figure 6.2 is another step forward.





**Figure 6.2: Added value measurement framework**

(Source: Zogbe and Zackrisson)

The added value measurement framework shows clearly that the determination of added value will go through five different steps starting by the separation of the two different components of added value: the customer perceived value and the core value.

The following step is to determine the different drivers of the added value components, and it should be related to a specific industry. As those components are dynamics they are subject to change depending on various circumstances which can influence the market, the product, and the service provider's management culture. Changes might also occur at the measurement level which could be soft as well as hard. The choice of drivers and measurements in the model are those we believe are essential for the automotive logistics industry. Those measurements are a combination of well known performance measurements such as KPIs, benchmarking, surveys such as customer as well as employee satisfaction, and other sources of collecting information: business relations and relationship marketing with the objective to know the customers' feelings and needs.

At the fourth step, the corporate should be able to establish the performance rate for each driver and sum them up per component of added value. Three possible scenarios for each component: positive, negative, and nil. The combination of the different scenarios for each component will lead to a matrix of nine outcomes, with one outcome displaying an absolute added value creation as a result of the customer perceived value and the core value being positive.

## **6.4 Areas for further research**

This section will be concerned with areas where research could be carried out for further improvement on the empirical as well as on the theoretical level. We found three domains: *the added value measurement framework*, *VLC's emballage process in North America*, and *VLC's challenges in its long term strategy*.

### **The added value measurement framework**

We believe that our measurement framework while giving a relative thorough approach to measure added value, it will need further development on how the calculation of each

driver should be set, and how the different measures, especially those which are soft can be turned in quantitative data in order to proceed.

### **VLC's emballage process in North America**

When it comes to VLC's emballage in North America it should be looked into if instead of sending the emballage broken down and empty back to Europe, the emballage might be used within other industries where European countries import goods from the U.S. market. If there can be a more efficient use of the emballage also the customer in the North America region will receive cheaper emballage and gain more added value from the service.

### **VLC's challenges in its long term strategy**

Under this section there are two areas of research: the first is related to VLC's position within the Volvo Group, and the second is the relation between VLC and its contractors, which are also its competitors. We express the different research topics as follows:

VLC's long term competitiveness, and its commitment to support the Volvo Group business areas: Volvo Aero, Volvo Buses, Volvo Construction Equipment, Volvo Penta, Volvo Trucks, Mack Trucks, and Renault Trucks.

VLC competitiveness and the power balance in its relationship with its contractors being also its competitors.

# References

## Books

- Aaker, D.A., Kumar, V., and Day, G.S., 2004, *Marketing Research*, 8<sup>th</sup> edition, John Wiley & Sons, Inc., U.S.A.
- Barlow, J., and Maul, D., 2000, *Emotional Value: Creating Strong Bonds with Your Customers*, Berrett-Koehler Publishers, Inc., San-Francisco.
- Barney, J.B., and Hesterley, W.S., 2006, *Strategic management and competitive advantage concepts*, Pearson, Prentice Hall, New Jersey, U.S.A.
- Bryman, A., and Bell, E., 2003, *Business Research Methods*, Oxford University Press Inc., New York.
- Christopher, M., 1998, *Logistics and supply chain management: Strategies for reducing cost and improving service*, 2<sup>nd</sup> edition, Prentice Hall.
- Cooper, D.R., and Schindler, P.S., 1998, *Business Research Methods*, 6<sup>th</sup> edition, Irwin McGraw-Hill, U.S.A.
- Dibb, S., Simkin, L., Pride, W.M., Ferrell, O.C., 1997, *Marketing – Concepts and Strategies*, 3<sup>rd</sup> edition, Houghton Mifflin, Boston, U.S.A.
- Frankfort-Nachmias, C., and Nachmias, D., 1996, *Research Methods in the Social Sciences*, Arnold, London.
- Gale, B., 1994, *Managing customer value*, The Free Press, New York.
- Grönroos, C., 2000, *Service management and Marketing: A customer relationship approach*, 2<sup>nd</sup> edition, John Wiley & Sons Ltd, England.
- Hellevik, O., 1977, *Forskningsmetode i Sociologi og Statvitenskap*, Universitetsforlaget, Oslo.
- Hill, N., and Alexander, J., 2000, *Handbook of Customer Satisfaction and Loyalty Measurement*, 2<sup>nd</sup> edition, Gower Publishing Ltd, England.
- Kay, J., 1993, *Foundation of corporate success*, Oxford University Press, Oxford.
- Kvale, S., 1997, *Den kvalitative forskningsintervju*, Studentlitteratur, Lund.
- Kylén, J-A., 2004, *Att få svar; intervju – enkät – observation*, Bonnier Utbildning, Stockholm.

- Lindblad, I-B., 1998, *Uppsatsarbete – En kreativ process*, Studentlitteratur, Lund.
- Lodico, M.G., Spaulding, D.T., and Voegtle, K.H., 2006, *Methods in Educational Research – from theory to practice*, Jossey-Bass, San Francisco.
- Naumann, E., 1995, *Creating customer value: The path to sustainable competitive advantage*, Thomson Executive Press, Ohio, U.S.A.
- Porter, M., 1985, *Competitive advantage: Creating and sustaining superior performance*, The Free Press, New York.
- Sekaran, U., 2000, *Research Methods for Business, A skill-building approach*, 3<sup>rd</sup> edition, John Wiley & Sons, Inc., U.S.A.
- Shank, J.K., and Govindarajan, V., 1993, *Strategic cost management*, The Free Press, New York, U.S.A.
- Svenning, C., 2003, *Metodboken*, 5<sup>th</sup> edition, Lorentz Förlag, Eslöv.
- Wiersma, W., and Jurs, S.G., 2005, *Research Methods in Education*, 8<sup>th</sup> edition, Pearson, U.S.A.

## **Journals**

- Bititci, U.S., Martinez, V., Albores, P., and Parung, J., 2004, “Creating and managing value in collaborative networks”, *International Journal of Physical Distribution & Logistics Management*, Vol. 34, No. 3/4, pp251-268.
- Chernatony, L., Harris, F., and Riley, F.D., 2000, “Added value: its nature, roles and sustainability”, *European Journal of Marketing*, Vol. 34, No. 1/2, pp39-56.
- Daniels, S., 2000, “Customer value management”, *Work Study*, Vol. 49, No. 2, pp 67-70.
- Doyle, P., 1989, “Building successful Brands: The Strategy Options”, *Journal of Marketing Management*, Vol. 5, No. 1, pp77-95.
- Drejer, A., 2006 “Strategic innovation: A new perspective on strategic management” *Handbook of Business Strategy*, pp143-147.
- Evans, G., 2002, “Measuring and managing customer value”, *Work study*, Vol. 51, No. 3, pp134-139.
- Grönroos, C., 2004, “The relationship marketing process: communication, interaction, dialogue, value”, *Journal of Business & Industrial Marketing*, Vol. 19, No. 2, pp99-113.

- Grönroos, C., 1997, "Value-driven Relational Marketing: From product to resources and competencies", *Journal of Marketing Management*, Vol. 13, pp407-419.
- Hines, P., Holweg, M., and Rich, N., 2004, "Learning to evolve, A review of contemporary lean thinking", *International Journal of Operations & Production Management*, Vol. 24, No. 10, pp994-1011.
- Hines, P., and Rich, N., 1997, "The seven value stream mapping tools", *International Journal of Operations & Production Management*, Vol. 17, No. 1, pp46-64.
- Hines, P., Rich, N., Bicheno, J., Brunt, D., and Taylor, D., 1998, "Value stream management", *International Journal of Logistics Management*, Vol. 9, No. 1, pp25-42.
- Jackson, D., 1994, "BPR: Hype or Reality", *The TQM Magazine*, Vol. 6, No. 6, pp19-22.
- Jones, D. T., Hines, P., and Rich, N., 1997, "Lean logistics", *International Journal of Physical Distribution & Logistics Management*, Vol. 27, No. 3/4, pp153-173.
- Khalifa, A., 2004, "Customer value: a review of recent literature and an integrative configuration", *Management Decision*, Vol. 42, No. 5, pp645-747.
- Leszinski, R., and Marn, M., 1997, "Setting Value, not price", *The McKinsey Quarterly*, No.1.
- Lin, B., and Jones, C.A., 1997, "Some issues in conducting customer satisfaction surveys", *Journal of Marketing Practice: Applied Marketing Science*, Vol. 3, pp4-13.
- Lorente, A.R.M., Dewhurst, F., Dale, B.G., 1999, "TQM and business innovation" *European Journal of Innovation Management*, Vol. 2, No.1, pp12-19.
- Walters, D., Halliday, M., and Glaser, S., 2002 "Added value enterprise value and competitive advantage" <<http://www.emeraldinsight.com/0025-1747.htm>> (10 July 2006).
- Zairi, M., 1996, "Competition what does it mean?", *The TQM Magazine*, Vol. 8, No. 1, pp54-59.

## **Articles**

- Milne, R., 2006, "MAN chief predicts consolidation", *Financial Times*, w. 31, 2 August 2006, pp14.

Ramberg, K., “Fewer Trucks Improve the Environment”, *Svenskt Näringsliv*, October 2004,

<[http://sn.svensktnaringsliv.se/sn/publi.nsf/Publikationerview/439AF17E1ECCFC53C1256F310036B566/\\$File/PUB200410-004-1.pdf](http://sn.svensktnaringsliv.se/sn/publi.nsf/Publikationerview/439AF17E1ECCFC53C1256F310036B566/$File/PUB200410-004-1.pdf)> (6 January 2007).

Tamme, T., 2006, “Holland testar 25,25 meter”, *Transport iDag & iTrafik*, No. 13/06, pp14-15.

“Volvo Pushes For Road Trains”, *Transport News Network*, 15 August 2005, <<http://www.tnn.co.uk/Manufacturers/plonearticle.2005-04-25.0354147078>> (6 January 2007).

## Internet

CHEP: <<http://www.chep.com/chepapp/chep>> (6 January 2007).

Nefab: <<http://www.nefab.com/>> (6 January 2007).

The Ford Motor Company: <<http://www.ford.com/en/company/about/brands/volvo.htm>> (2 December 2006).

Logistics dictionary: <<http://www.quartermaster.army.mil/ltd/logisticsdictionary.html>> (1 October 2006).

Steppingstones Partnership, Inc. – Business Reference Library:

<[http://www.steppingstones.ca/artman/publish/article\\_60.shtml](http://www.steppingstones.ca/artman/publish/article_60.shtml)> (29 December 2006).

Volvo Group: <<http://www.volvo.com/group/global/en-gb>> (18 November 2006).

Volvo Logistics: <<http://www.volvo.com/logistics/global/en-gb>> (18 November 2006).

## Reports

Volvo Logistics Corporation Business Plan 2006

Volvo Logistics One company – we deliver

True Business Logistics: Inbound – Outbound – Emballage

# Appendix 1 Questionnaire

## Questionnaire regarding Master thesis for Volvo Logistics Corporation

1. Would you be able to identify added value services?

Not at all        Every time

2. Of the below descriptions of added value service how would you grade them according to your priorities 1 = less important and 7 = most important?

Added value service is described as:	1	2	3	4	5	6	7
A) The contents or features that make the essence of the service(s) being provided better than those offered by competitors. <i>Keyword: competition.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B) The distinguished part of the service or the special handling of the service provided that enhance your customers' satisfaction. <i>Keyword: management/handling.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) The value that is added to the service as a result of the innovative process. <i>Keyword: innovation.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D) The increase in worth of the service as a result of a particular activity. <i>Keyword: processing.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E) The ratio of the perceived benefits of the service to the perceived cost created. <i>Keyword: cost.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others: ..... .....							

3. How would you identify added value services 1 = low and 7 = high?

	1	2	3	4	5	6	7
Through your customers' satisfaction or perception.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A) Through your own satisfaction or perception.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B) By benchmarking against competitors' practices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) By benchmarking against your corporate standards and requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D) Whenever described as added value by your suppliers/customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others: .....							



**4. How do you benchmark the added value services you/VLC provide  
1 = low and 7 = high?**

	1	2	3	4	5	6	7
A) Against your corporate perceptions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B) Against your customers' perceptions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) Against competitors' practices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D) Against your corporate standards or requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E) Whenever described as added value services by your customer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others: .....							

**5. To what extent do you agree or disagree that the below services provided by VLC/your company are added values?**

N.B.: If a service provided is not an added value it is considered as a standard/primary service in the industry.

	Disagree strongly		Neither agree or disagree				Agree strongly
<b>Complete solution</b>							
The combination of the Inbound, Outbound and Emballage delivered by a single company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Design, Planning and Execution</b>							
Track and Trace.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exception management (Express freight).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Freight payment/control.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Cross-docking activities</b>							

Handling.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short term storage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Time table delivery.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Information flow</b>							
Pre-advice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transparency.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Management</b>							
Order handling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help desk for dealers and factories.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Co-productive relationship to cut cost and improve management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Warehousing</b>							
Temporary responsibility of material.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Logistics services</b>							
Sub-assembly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kitting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Repacking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sequencing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Risk management</b>							

Insurance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Damage prevention.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Service after damage has occurred.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Others</b>							
The use of A4D.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transport from factory to harbour.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bespoke delivery.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secrecy transport.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delivery to VIP customer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Simulation of scenarios to enable analysis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packaging design.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**6. In which step of the order processing (from order placement to order delivery) do you believe an added value service can be provided by VLC/your company?**

	Disagree strongly		Neither agree or disagree		Agree strongly	
The logistics system (IS/IT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Just-in-Time process management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cross-docking and dispatch.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warehousing (incl. goods reception and material control).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Logistics services. (Details in Q5.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Risk management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customs/documents handling.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer service. (Order booking, help desk, follow-up etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E-business. (Internet services)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost control.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secrecy transportation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Track and Trace.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Damage prevention/quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others: .....							

**7. Of the below values what do you consider in evaluating the added value services 1 = less important and 7 = most important?**

	1	2	3	4	5	6	7
A) Pricing/value for money.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B) Customer satisfaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) Reliability.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D) Creation of competitive advantage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E) Flexibility.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F) Management expertise.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others: .....							

**8. How would you grade your contractors/VLC on the following four dimensions of services?**

	1	2	3	4	5	6	7
A) Reliability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B) Responsiveness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C) Assurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D) Empathy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others:	.....						

## Appendix 2      Face-to-face questions

### **Face-to-face interview questions to VLC personnel:**

Head of Human Resources  
Manager of Region North America  
Manager of Region Europe  
Manager of Region Scandinavia & Overseas  
Chief Financial Officer  
Executive Vice President  
Head of Vision 2015  
Vision 2015  
Head of Strategic Planning & Core values  
Global Contracting Manager  
Sales and Marketing  
Head of Strategic IS/IT

### **Logistics experts:**

VLC Board member and Logistics expert  
Logistics expert (professor)

### **Face-to-face interview questions to VLC's customers:**

Volvo Trucks	Logistics director
Volvo Buses	Logistics & SCM director
Volvo CE	Logistics director
Volvo Cars	Manager Inbound Transport Development
Volvo Cars	Logistics Purchasing Director
Renault Trucks	Logistics and Distribution Engineering Manager
Mack Trucks	Order Fulfilment Director

### **Face-to-face interview questions to VLC's competitors:**

DHL Express	Key Account Manager Automotive
DFDS	Transport Managing Director
Schenker Consulting	Key Account Manager Automotive

Day	Company	Position	I*	Q**
<b>September</b>				
11 Sep.	VLC	Head of Strategic IS/IT	F	Y
13 Sep.	VLC	Regional Manager Scandinavia and Overseas	F	Y
13 Sep.	VLC	Regional Manager Europe	F	Y
13 Sep.	VLC	Executive Vice President	F	Y
14 Sep.	VLC & Linköping University	VLC Board Member Logistics expert	T	Y
14 Sep.	VLC	Head of Strategic Planning and Core Values	F	Y
15 Sep.	VLC	Head of Vision 2015	F	Y
15 Sep.	VLC	Global Contracting Manager	F	Y
18 Sep.	Linköping University	Professor Logistics expert	T	Y
19 Sep.	VLC	Vision 2015	F	Y
19 Sep.	VLC	Chief Financial Officer	F	Y
20 Sep.	Volvo Trucks	Logistics Director	F	Y
21 Sep.	Schenker	Key Account Manager Automotive	F	Y
21 Sep.	Renault Trucks	Manager distribution operations	T	Y
22 Sep.	Volvo Cars	Purchasing Director	F	Y
22 Sep.	Volvo Cars	Manager Inbound	F	Y
25 Sep.	DFDS	Division managing director of DFDS Transport Ltd.	T	Y
26 Sep.	Volvo Buses	Logistics and SCM Director	F	Y
26 Sep.	VLC	Regional Manager North America	T	Y
27 Sep.	VLC	Sales and Marketing	F	Y
<b>October</b>				
2 Oct.	Volvo CE	Logistics Director	T	Y
2 Oct.	DHL	Key Account Manager Automotive	F	Y
4 Oct.	Mack Trucks	Order Fulfilment Director	T	Y
11 Oct.	VLC	Head of Human Resources	F	N/A
	Volvo Aero	Logistics Director	N	Y

\* I = Interview – F = face-to-face interview, T = telephone interview, and N = no interview.

\*\* Q = Questionnaire – Y = yes received completed questionnaire, N = no did not receive completed questionnaire, and N/A = not applicable to fill in the questionnaire.

### **Head of Human Resources**

- 1) A) Which activities do you see as added value within the automotive industry today?  
B) Of those activities, which do you see comes from the point of view of employee quality?
- 2) Does VLC conduct skills assessment for all employees and use the results to develop education and training performance that improve quality skills, knowledge and awareness of VLC's present and future challenges?
- 3) A) What is the full purpose of the employee satisfaction index?  
B) Does VLC have other key indicators besides employee satisfaction index such as co-operation/teamwork, participation/commitment and 6sigma that are used to evaluate and improve VLC's performance?  
C) If yes, how do you use this data? If no, is the employee satisfaction index really enough?
- 4) Would you say that VLC has good knowledge about their customers' requirements? Please give examples.
- 5) What do you think VLC should do to increase the following: customer satisfaction, flexibility, and reliability?

### **The Regional Managers**

- 1) A) In your relation with your customers or others is the term added value commonly used?  
B) What are the perceptions that are being raised in general?
- 2) Which activities do you see as added value within the automotive logistics industry today?
- 3) The added value services of yesterday are today seen as standard services, and today's added value services will tomorrow be seen as standard services. What do you see will become the future added values within the automotive logistics industry and why?
- 4) Would you say that VLC has good knowledge about their customers' requirements? Please give examples.
- 5) A) What are the frequent requirements of your customers?  
B) What do you believe differ them from other regions?  
C) What are the reasons?
- 6) What are your performance in meeting those requirements (refer. to Q5A) in the Inbound and Outbound? Please explain also the failures.
- 7) How are the Emballage activities perceived by your customers?
- 8) What do you think VLC should do to increase the following: customer satisfaction, flexibility, and reliability?
- 9) A) To win over a customer from a competitor are VLC willing to give some services away?  
B) How far are VLC willing to go?



### **Chief Financial Officer**

- 1) Which activities do you see as added value within the automotive logistics industry today?
- 2) The added value services of yesterday are today seen as standard services, and today's added value services will tomorrow be seen as standard services. What do you see will become the future added values within the automotive logistics industry and why?
- 3) Would you say that VLC has good knowledge about their customers' requirements?
- 4) We have noticed through our research that VLC is not conducting a performance assessment relative to customers' priorities, why is that?
- 5) Would you say that it is due to the VLC pricing that VLC fails to provide the complete package of Inbound, Outbound and Emballage to some of its customers i.e. Renault Truck?
- 6) What do you think VLC should do to increase the following: customer satisfaction, flexibility, and reliability?
- 7) A) To win over a customer from a competitor are VLC willing to give some services away?  
B) How far are VLC willing to go?
- 8) How does VLC measure the added value from their suppliers?

### **Executive Vice President**

- 1) Which activities do you see as added value within the automotive logistics industry today?
- 2) The added value services of yesterday are today seen as standard services, and today's added value services will tomorrow be seen as standard services. What do you see will become the future added values within the automotive logistics industry and why?
- 3) Would you say that VLC has good knowledge about their customers' requirements?
- 4) We have noticed through our research that VLC is not conducting a performance assessment relative to customers' priorities, why is that?
- 5) A) Why does VLC fail to provide the complete package of Inbound, Outbound and Emballage to Renault truck?  
B) Is your price too high in certain areas so that the relative perceived benefits of the customer i.e. Renault Truck are low, and as a result they will not outsource the complete logistics services to VLC?
- 6) Why is VLC not involved in services after sales such as car parts logistics?
- 7) A) How often and why is the offer portfolio changed?  
B) How is this change communicated to VLC's customers?  
C) How are the customers involved in the change?
- 8) A) To win over a customer from a competitor are VLC willing to give some services away?  
B) How far are VLC willing to go?

- 9) What do you think VLC should do to increase the following: customer satisfaction, flexibility, and reliability?
- 10) How does VLC measure the added value from their suppliers?

### **Vision 2015**

- 1) Which activities do you see as added value within the automotive logistics industry today?
- 2) The added value services of yesterday are today seen as standard services, and today's added value services will tomorrow be seen as standard services. What do you see will become the future added values within the automotive logistics industry and why?
- 3) Would you say that VLC has good knowledge about their customers' requirements?
- 4) We have noticed through our research that VLC is not conducting a performance assessment relative to customers' priorities, why is that?
- 5) What do you think VLC should do to increase the following: customer satisfaction, flexibility, and reliability?
- 6) We have been informed that VLC sees its core values as added value services to its customers'; however we make a distinction between their service function and their service performance. How do you relate your core values to added value services?
- 7) A) What do you believe is your current comparative competitive advantage?  
B) What will be your future comparative competitive advantage?

### **Head of Strategic Planning & Core Values**

- 1) Which activities do you see as added value within the automotive logistics industry today?
- 2) The added value services of yesterday are today seen as standard services, and today's added value services will tomorrow be seen as standard services. What do you see will become the future added values within the automotive logistics industry and why?
- 3) Would you say that VLC has good knowledge about their customers' requirements?
- 4) We have noticed through our research that VLC is not conducting a performance assessment relative to customers' priorities, why is that?
- 5) What do you think VLC should do to increase the following: customer satisfaction, flexibility, and reliability?
- 6) We have been informed that VLC sees its core values as added value services to its customers'; however we make a distinction between their service function and their service performance. How do you relate your core values to added value services?
- 7) A) Why does VLC fail to provide the complete package of Inbound, Outbound and Emballage to Renault truck?  
B) Is your price too high in certain areas so that the relative perceived benefits of the customer i.e. Renault Truck are low, and as a result they will not outsource the complete logistics services to VLC?

### **Manager of global contracting**

- 1) A) Which activities do you see as added value within the automotive logistics industry today?  
C) Do your customers share the same understanding?
- 2) The added value services of yesterday are today seen as standard services, and today's added value services will tomorrow be seen as standard services. What do you see will become the future added values within the automotive logistics industry and why?
- 3) Is the term added value mentioned in your contract terms or verbally with your customers?
- 4) Would you say that VLC has good knowledge about their customers' requirements?
- 5) A) How often do VLC's customers evolve or change their requirements to meet new demands?  
B) How do VLC cope with those changes?
- 6) What are the main selling arguments when approaching an existing customer to propose a new service and with a new customer to sell the VLC services?
- 7) What are the main concerns/requests of the companies while you are contracting a new deal? In others terms what matter to your customers?
- 8) What do you believe is your comparative competitive advantage?
- 9) What do you promise to your customer in term of: customer satisfaction, flexibility, and reliability?
- 10) A) To win over a customer from a competitor are VLC willing to give some services away?  
B) How far are VLC willing to go?
- 11) How do you value your relation with your existing customers and with your potential customers? Meaning how do you show that they are valuable for you?

### **Sales and Marketing**

- 1) A) Which activities do you see as added value within the automotive logistics industry today?  
B) Do your customers share the same understanding?
- 2) The added value services of yesterday are today seen as standard services, and today's added value services will tomorrow be seen as standard services. What do you see will become the future added values within the automotive logistics industry and why?
- 3) Is the term added value mentioned in your contract terms or verbally with your customers?
- 4) Would you say that VLC has good knowledge about their customers' requirements?
- 5) A) How often do VLC's customers evolve or change their requirements to meet new demands?  
B) How do VLC cope with those changes?
- 6) What are the main selling arguments when approaching an existing customer to propose a new service and with a new customer to sell the VLC services?

- 7) What are the main concerns/requests of the companies while you are contracting a new deal? In others terms what matter to your customers?
- 8) What do you believe is your comparative competitive advantage?
- 9) What do you promise to your customer in term of: customer satisfaction, flexibility, and reliability?
- 10) A) To win over a customer from a competitor are VLC willing to give some services away?  
       B) How far are VLC willing to go?
- 11) How do you value your relation with your existing customers and with your potential customers? Meaning how do you show that they are valuable for you?

### **Head of Strategic IS/IT**

- 1) A) Which activities do you see as added value within the automotive logistics industry today?  
       B) Do your customers share the same understanding?
- 2) The added value services of yesterday are today seen as standard services, and today's added value services will tomorrow be seen as standard services. What do you see will become the future added values within the automotive logistics industry and why?
- 3) Would you say that VLC has good knowledge about their customers' requirements?
- 4) What are the main selling arguments in IS/IT when approaching an existing customer to propose a new service and with a new customer to sell the VLC services?
- 5) What are the main concerns/requests of the companies in IS/IT while you are contracting a new deal? In others terms what matter to your customers IS/IT?
- 6) A) How often do VLC's customers evolve or change their requirements to meet new demands?  
       B) How do VLC cope with those changes?
- 7) How do you value your relation with your existing customers and with your potential customers? Meaning how do you show that they are valuable for you?
- 8) What should VLC do to increase the following: customer satisfaction, flexibility, and reliability?

### **Logistics experts**

- 1) Which activities do you see as added value within the automotive logistics industry today?
- 2) The added value services of yesterday are today seen as standard services, and today's added value services will tomorrow be seen as standard services. What do you see will become the future added values within the automotive logistics industry and why?
- 3) Would you say that VLC has good knowledge about their customers' requirements?
- 4) What should be the main selling arguments when VLC is approaching an existing customer to propose a new service and a new customer to sell the VLC services?

- 5) What should be the main concerns/requests of the companies when they are contracting a new deal with VLC?
- 6) What do you believe is VLC's comparative competitive advantage?
- 7) What do you think VLC should promise to its customers in terms of: customer satisfaction, flexibility, and reliability?

**Customers**

- 1) Which activities do you see as added value within the automotive logistics industry today?
- 2) The added value services of yesterday are today seen as standard services, and today's added value services will tomorrow be seen as standard services. What do you see will become the future added values within the automotive logistics industry and why?
- 3) What is your company's key buying criterion when dealing with VLC or its competitors?
- 4) Which kind of added value services does VLC offer that no other company does, if any?
- 5) A) Of the services provided by VLC today what is good now?  
 B) What needs to be improved?  
 C) What is missing?
- 6) A) How would you compare VLC's offerings regarding quality, environment, safety and security compared with VLC's competitors?

<b>Quality</b>	<b>Environment</b>	<b>Safety &amp; Security</b>
Management system	Reduced emissions	Road safety
Customer satisfaction	Carrier development	Transportation security
Continuous improvement	Environmental assessments	Site security
Process orientation	Site related environmental impacts	Dangerous goods

- B) Do you see the quality, environment, safety and security offerings as added value services?
- 7) Which are the top five added values in the whole chain for your company?
- 8) A) In the areas/activities where your company is not using VLC, what do the VLC competitors better than VLC? Please give examples.  
 B) Are these added values for your company?
- 9) Does your company feel that VLC is doing everything it can to be able to serve your company in the best way?
- 10) Would you say that your relationship with VLC is a high stake relationship, meaning that the service/s they offer is/are vital to your success?
- 11) What do you think VLC should do to increase the following: customer satisfaction, flexibility, and reliability?

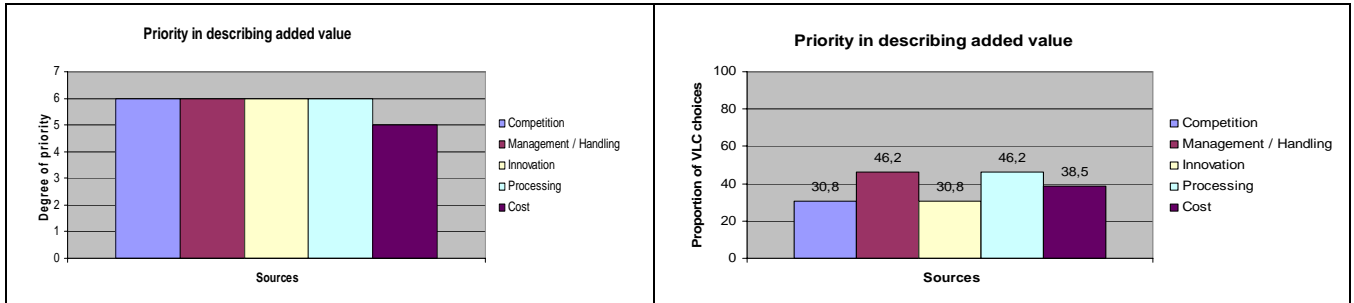
## **Competitors/suppliers**

- 1) Which activities do you see as added value within the automotive logistics industry today?
- 2) The added value services of yesterday are today seen as standard services, and today's added value services will tomorrow be seen as standard services. What do you see will become the future added values within the automotive logistics industry and why?
- 3) What does your company see as threats from competitors?
- 4) What do you generally see as the main challenges regarding customers' requirements?
- 5) How does your company measure added value from its customers?
- 6) A) What are your core values?  
B) Do you see your core values as added value services for your customers?  
C) Do your customers see your core values as added values services?
- 7) Do you see quality, environment, safety and security as added value services?
- 8) A) What are the most frequent requirements from your customers?  
B) What are your customers' priorities?  
C) What is your performance in meeting those requirements? Please explain also the failures.
- 9) A) In your relation with your customers or others is the term added value commonly used?  
B) What are the perceptions that are being raised in general?
- 10) How do you increase the following: customer satisfaction, flexibility, and reliability?
- 11) A) To win over a customer from a competitor are you willing to give some services away?  
B) How far are you willing to go?
- 12) What are the main selling arguments when approaching an existing customer to propose a new service and with a new customer to sell your services?

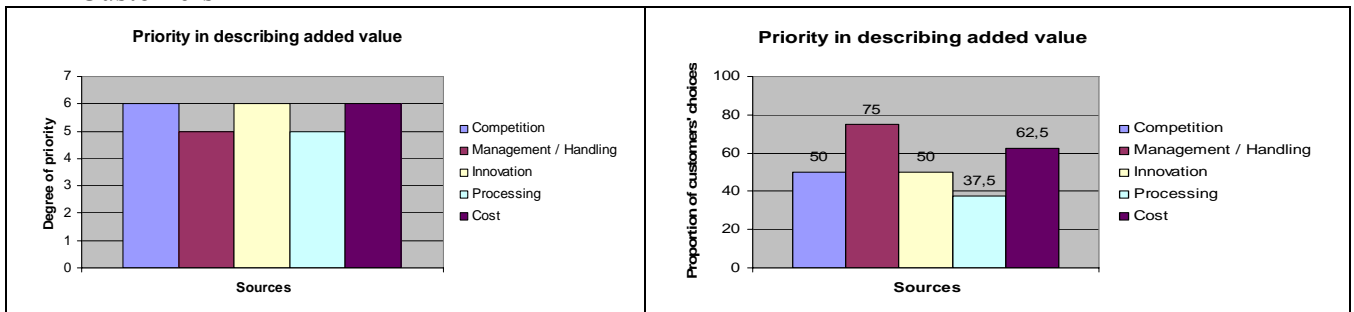
# Appendix 3 Summary of questionnaire findings

## 3.1: Question 2

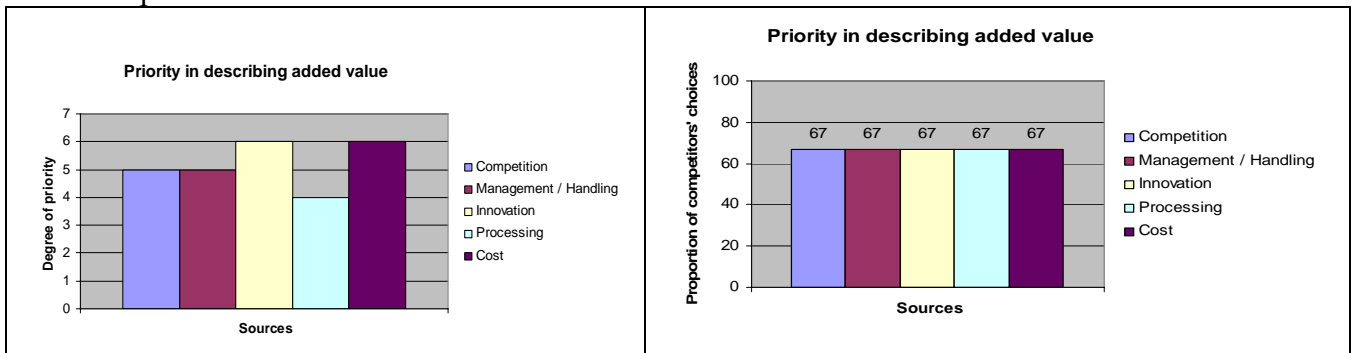
### VLC



### Customers

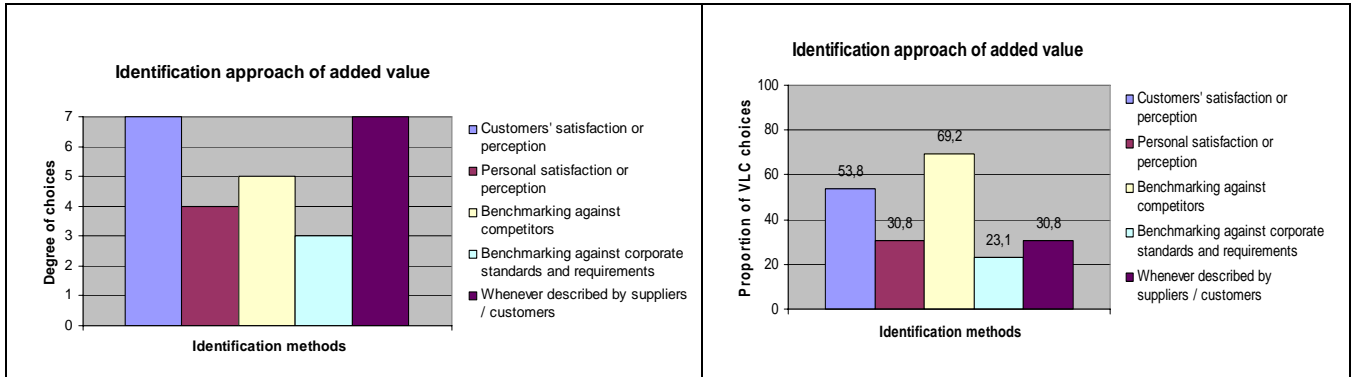


### Competitors

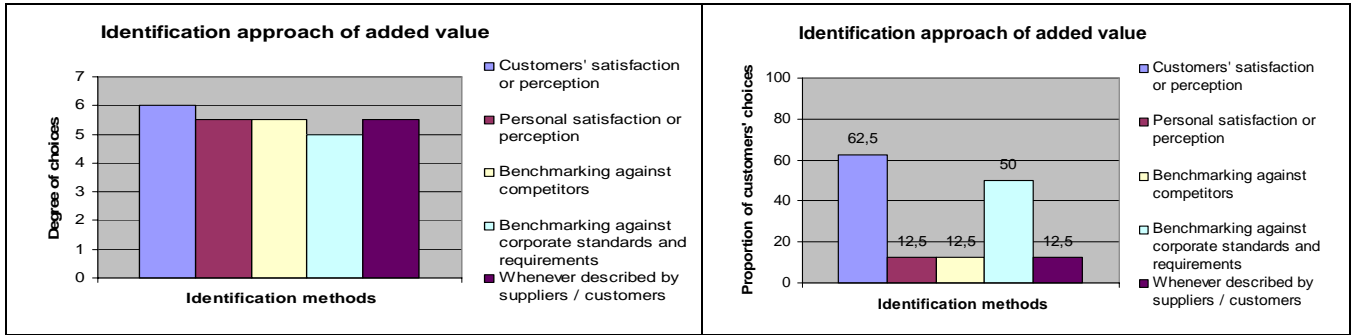


### 3.2: Question 3

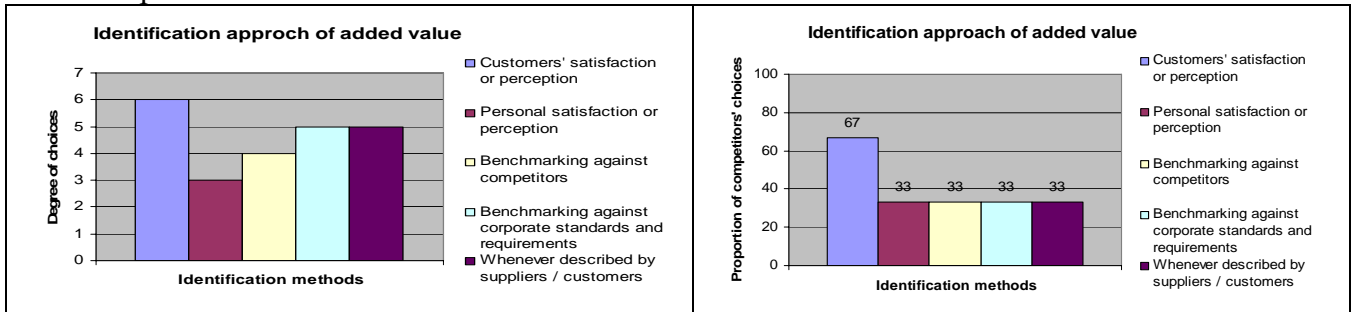
#### VLC



#### Customers



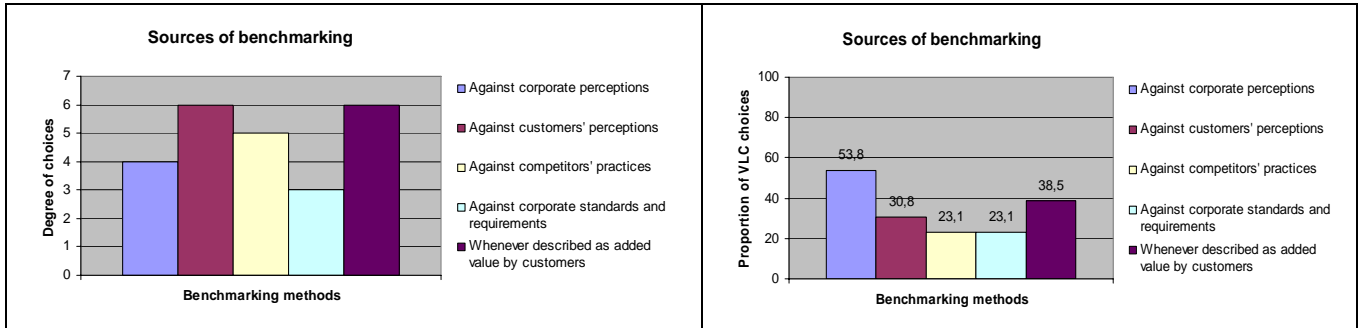
#### Competitors



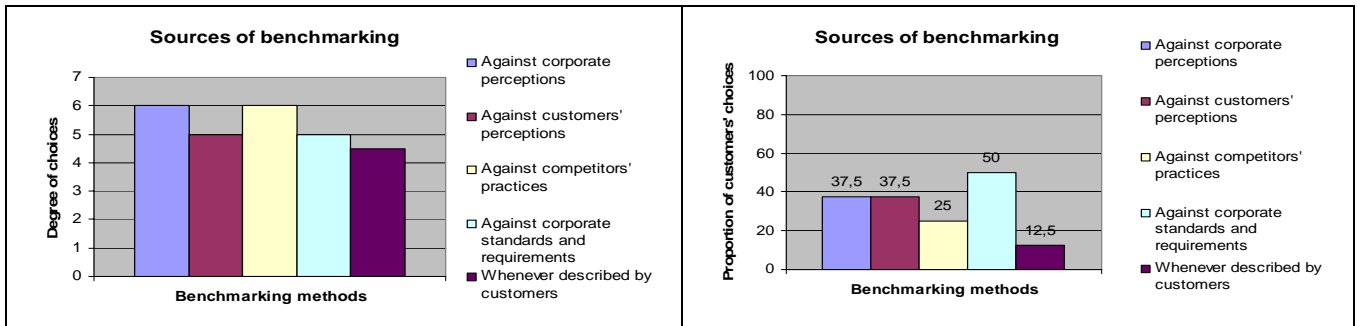


### 3.3: Question 4

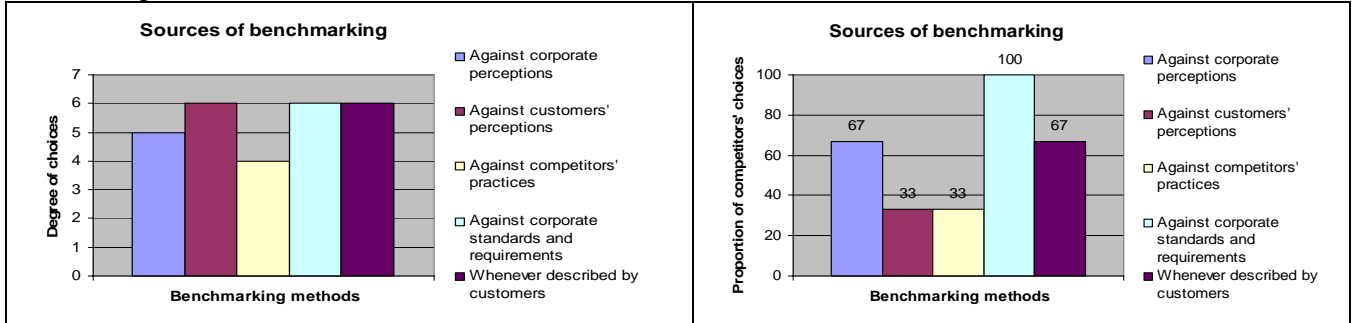
#### VLC



#### Customers

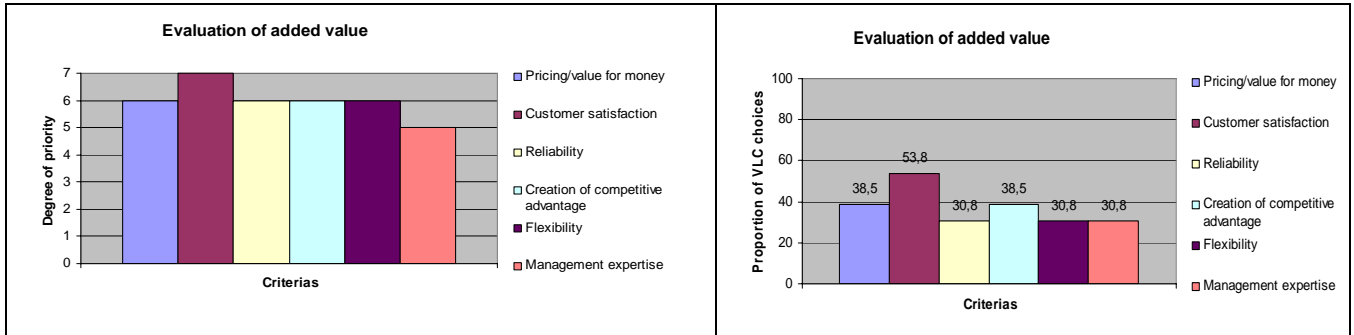


#### Competitors

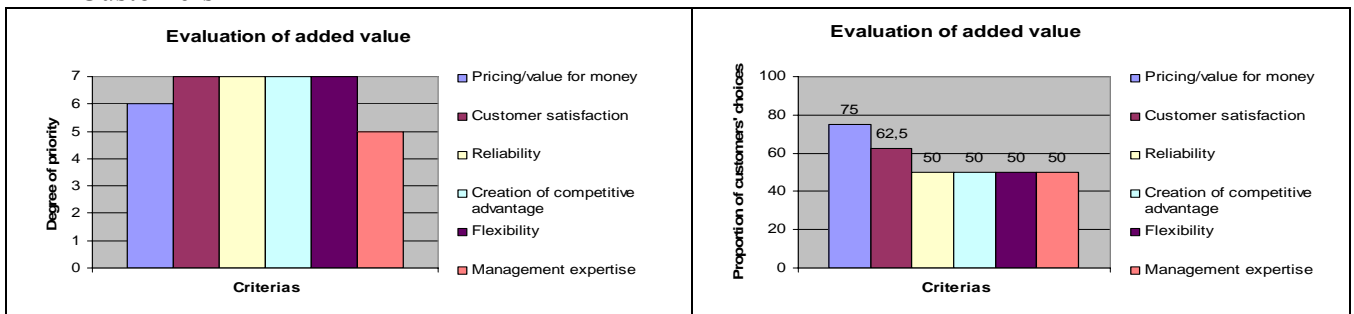


### 3.4: Question 7

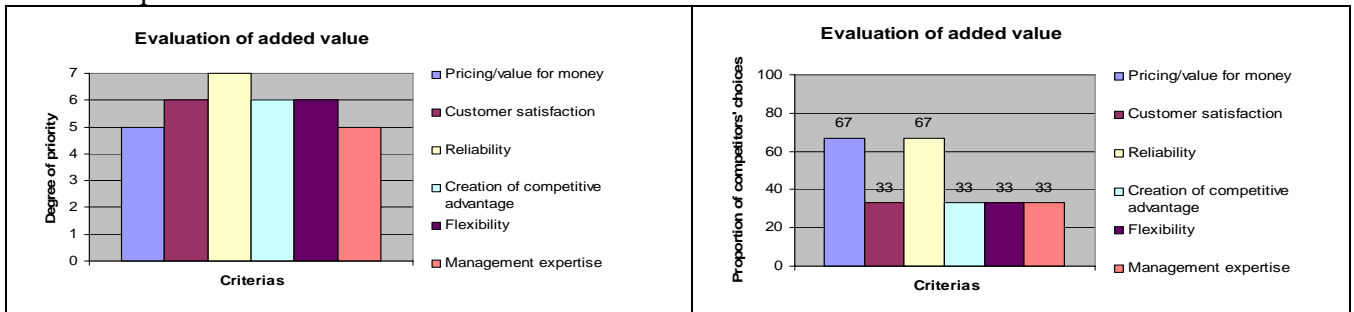
#### VLC



#### Customers

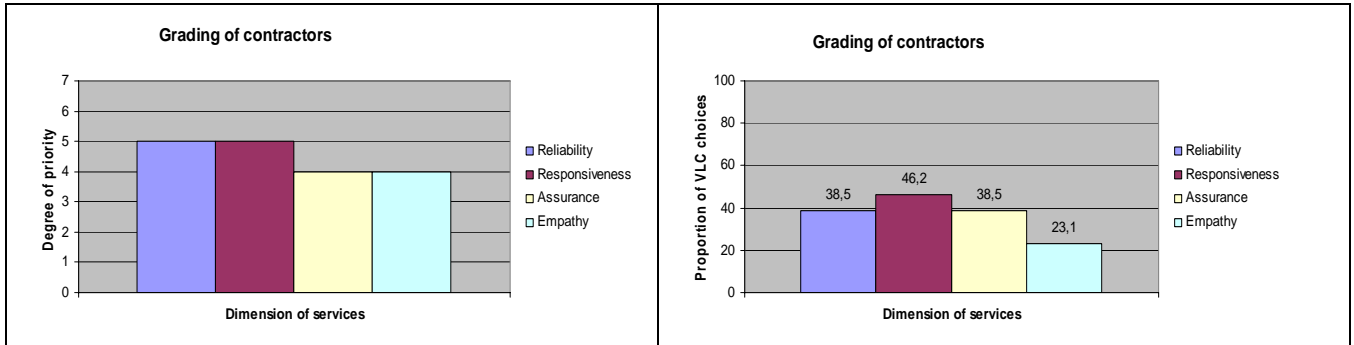


#### Competitors

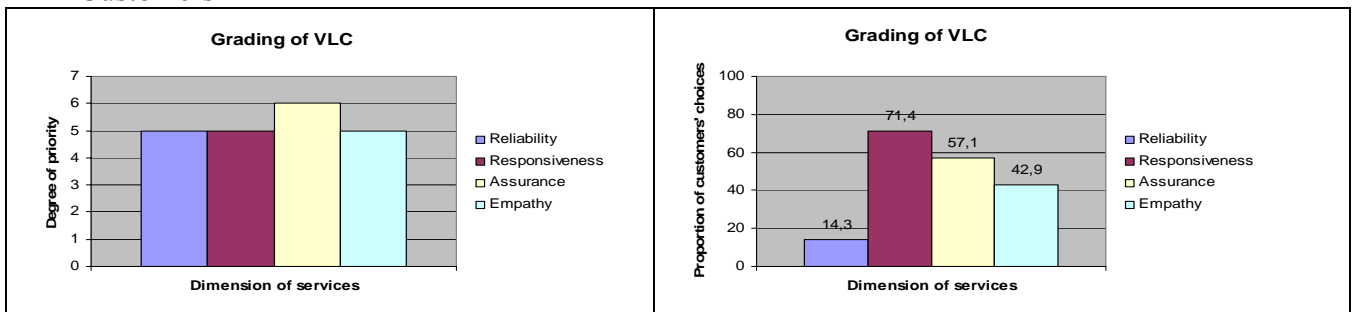


### 3.5: Question 8

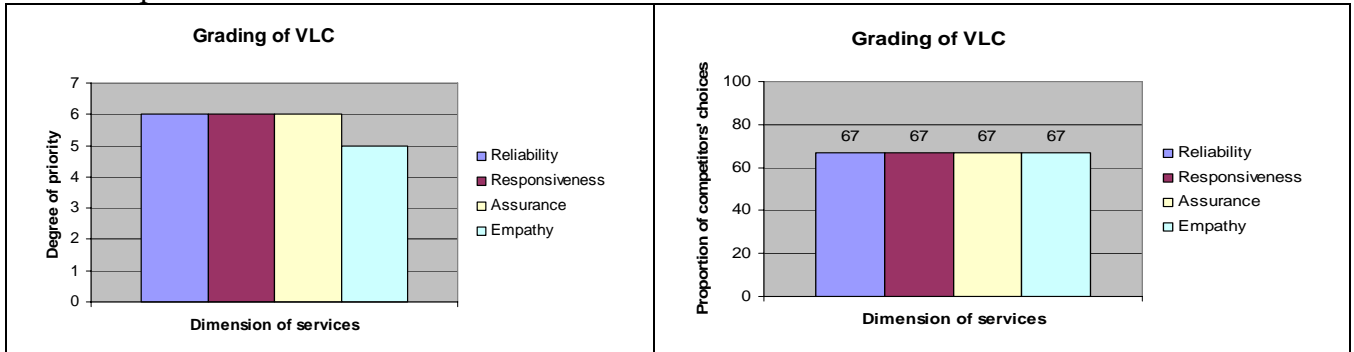
#### VLC



#### Customers



#### Competitors



## Appendix 4 Summary of interview findings

### 4.1: General questions categories

<b>Category:</b>	<b>Including:</b>
<b>General management competence &amp; strategy</b>	<ul style="list-style-type: none"> <li>Strategy.</li> <li>Management and leadership.</li> <li>Education and training of personnel.</li> <li>Innovation.</li> <li>Global network.</li> <li>Flexibility.</li> </ul>
<b>Business relationship</b>	<ul style="list-style-type: none"> <li>Communication.</li> <li>Transparency.</li> <li>Trust.</li> <li>Involvement in product development.</li> <li>Involvement in packaging or even factory design.</li> </ul>
<b>Cost reduction</b>	<ul style="list-style-type: none"> <li>Cost related issues.</li> <li>Consolidation.</li> <li>Utilisation – stackability of emballage.</li> <li>Risk management.</li> <li>Customs handling.</li> <li>Documentation handling.</li> </ul>
<b>Logistics competence &amp; strategy</b>	<ul style="list-style-type: none"> <li>Proactiveness.</li> <li>Speed – reduce lead time.</li> <li>Precision – JIT.</li> <li>Consolidation as well as deconsolidation.</li> <li>Route engineering.</li> <li>Continuous improvement.</li> <li>Have the right equipment needed.</li> <li>Trailer design.</li> <li>Take more responsibility to release time from the customers.</li> <li>Take out waste from the processes.</li> <li>Manage long and complex supply chains.</li> <li>Intermodal capabilities.</li> <li>Market skills.</li> <li>Material control.</li> <li>Warehousing.</li> <li>Logistics hubs.</li> <li>VMI.</li> </ul>
<b>IS/IT System</b>	<ul style="list-style-type: none"> <li>Real time information.</li> <li>EDI.</li> <li>Transparency.</li> <li>Track and trace systems – traceability of each component.</li> <li>Early warning systems.</li> <li>RFID.</li> </ul>
<b>VLC's core values</b>	<ul style="list-style-type: none"> <li>Environment.</li> <li>Safety and security.</li> </ul>

## 4.2: What VLC should do to increase its flexibility and reliability

### Flexibility

	VLC	Customers					
		VBC	VCE	VTC	MT	RT	VCC
General management competence	X	X			X		X
Business relationship	X					X	
Cost transparency	X						
Processing transparency							
Proactiveness				X			
IS/IT System							
Continuous improvement	X			X			
Flexible	X		X		X		

### Reliability

	VLC	Customers					
		VBC	VCE	VTC	MT	RT	VCC
General management competence	X	X		X		X	
Business relationship	X						
Cost transparency	X						
Processing transparency	X						
Proactiveness	X						
IS/IT System	X						
Continuous improvement	X		X				
Reliable	X	X		X	X		X

### 4.3: Findings on the questions to VLC's customers

Customer	When not using VLC, what do competitors do better?
VBC, VCE, and VTC	N/A in Sweden
MT	They have a more mature outbound delivery system MT is dependent on 3PL for data information
RT	Flexibility Closer relationship with the dealers National call centres for RT and the dealers
VCC	Flexibility Benchmarking against competitors Relation with all transporters

Customer	The added value services in your chain
VBC	Capacity planning Lead times Delivery precision Order quality Supply chain planning
VCE	Material control services Storage services Advanced track and trace Cost development Volvo's core values
VTC	Manufacturing activities
MT	Understanding the customer Provide technical solutions Build according to order Deliver quality Not to underestimate the customer satisfaction
RT	Lean distribution Confirmation of the order delivery Position date accuracy Quality of the product Delivery accuracy
VCC	Delivery precision Price Delivery time for the whole chain Quality of the product Use effective network solutions

Customer	Do you feel that VLC is doing everything they can to be able to serve your company in the best way today?		
	Yes	No	Comments
VBC	X		
VCE	X		
VTC		X	VLC needs to be more flexible and innovative
MT	X		
RT	X		However VLC lack transparency and dedicated staff
VCC	X		Excluding IT optimisation systems

Customer	Is VLC's core values added value services?		
	Yes	No	Comment
VBC		X	Standard
VCE	X		They should however be standard
VTC	X		They give a competitive advantage
MT	X		
RT		X	Standard
VCC	X		

#### 4.4: Findings on the questions to VLC's competitors

Competitor	What do you see as threats from competitors?
DFDS	None
DHL	Reduction of the number of hauliers used
Schenker	New entrants who are willing to invest heavily

Competitor	Frequent requirements from your customers					
	Price	Flexibility	Reliability	Performance	Precision	Quality
DFDS	X		X			
DHL	X	X		X		
Schenker	X	X			X	X

Competitor	What do you see as the main challenges regarding customers' requirements
DFDS	Recognising the customers' real requirements To satisfy the requirements
DHL	Flexibility Working with estimates, no true numbers
Schenker	Flexibility Capacity of trucks, trailers, and qualified drivers

Competitor	How do you measure added value from your customers?	
	KPIs	Yearly survey
DFDS	X	
DHL	X	X
Schenker	X	

Competitor	Are quality, environment, safety and security added value services?		
	Yes	No	Comment
DFDS	X		Social conscious. Who will pay for it?
DHL	X		It cost a lot, and customers can see it as standard services.
Schenker	X		It cost to deliver it, who should take the cost?