

# **Exploring Value Potential in a Function-Focused Industry**

- A Case Study at Crawford Solutions

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- A Case Study at Crawford Solutions

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## Abstract

- Title:** Exploring Value Potential in a Function-Focused Industry  
– A Case Study at Crawford Solutions
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- Issue of Study:** In a typical red ocean - an industry with shrinking margins, overcapacity and decreasing demand - Crawford Solutions has the ambition to become what they call a solution provider. The question arises whether there is a potential for value-oriented efforts and whether customers will perceive such a value offer. There are many stakeholders involved in acquiring docking equipment but it is uncertain who the customers really are as well as who the real customer is. It is also highly uncertain whether, where and how there is a potential for value creation in this highly function focused industry.
- Purpose:** To explore the potential for value creation and delivery in a function-focused industry.  
  
To identify factors that generate value and, in doing so, present an aqueduct leading from the current red ocean to a blue ocean.
- Method:** This study is conducted through an iterative, Action-Reflection-Learning and actors approach influenced methodology. The Blue Ocean Strategy framework is utilized in both deciding what data to gather and in the analysis of it. The findings and analysis from the Initial Study lead to the final Case Study.
- Conclusion:** The term *Value of Exchange* is developed to fill the gap between the *Value in Exchange* and the *Value in Use*. By utilizing the *Buyer Utility Map*, the installation is identified as a blue ocean where *Value of Exchange* can be generated. Through a case study, we have found fifteen *Key Value Factors* that lead to the creation of *Value of Exchange*.

## Exploring Value Potential in a Function-Focused Industry

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We want to add *Value of Exchange* to the traditional two value concepts, *Value in Exchange* and *Value in Use* in order to give a clearer meaning to service dominant offers, like delivery, not labeling them as necessary evils but great contextual contributors for *Value Co-Creation*.

The presented *STACC Value Model* provides an updated view on customer interdependencies and the nature of value creation in processes involving intermediaries.

**Key words:**

Axiology, Value of Exchange, Blue Ocean Strategy, Docking Equipment, Key Value Factor, Value Co-Creation, The STACC Value Model

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Lund, May 10<sup>th</sup> 2009

John Blomsterlind & Anna Karlsson



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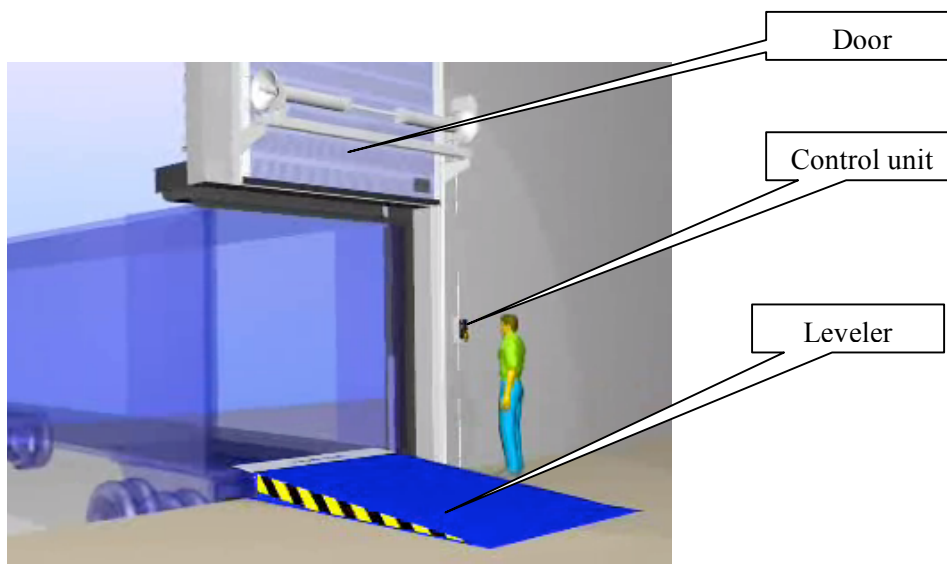
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## Abbreviations and frequently used terms

<b>SD-logic</b>	Service Dominant logic
<b>BOS</b>	Blue Ocean Strategy
<b>BUM</b>	Buyer Utility Map
<b>ViE</b>	Value in Exchange: The value connected to the mere owning of an offer, the transactional value.
<b>ViU</b>	Value in Use: The value connected to the use of the offer.
<b>VoE</b>	Value of Exchange: The value connected to <i>how</i> an offer is received and the process of exchanging the offer. (Our theoretical contribution)
<b>Docking Equipment</b>	Door + Leveler + Control unit
<b>Dock Management</b>	A computer system possible to add on to the control unit. Can be used for optimizing the logistic flows in the warehouse.
<b>Docking Bay</b>	The part of the building used for docking, a general term for that functional area.
<b>Product description:</b>	



(Docking Process 2009)



## 1 Introduction

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*This chapter will present a fairly generous background to the idea of the study. To set the scene, the main issue of study and the purpose of the thesis together with the delimitations are presented.*

---

### 1.1 Background

*A CEO of an electric drill company walks into the board meeting with bad news. "According to the latest reports nobody wants our product!" The sales manager looks shocked and replies "how can that be, we have a market share of more than 80% in all our markets and increasing sales for the last eight consecutive years". "Yes...", the CEO replies "but none of our customers really want our drill, they want a hole in the wall".*

(Inspired by Hammer 2003:38)

This story is told at business schools and, hopefully, companies around the world. Yet, the moral of it is too often forgotten as most companies identify themselves by the product or service they produce and deliver rather than the problems they solve for their customers.

Six years ago, in 2003, Michael Hammer predicted that all businesses at the end of the decade would be built around processes. These processes would enable them to deliver solutions rather than a products or services in a concept he coined More Value Added (MVA). (Hammer 2003) Without the backing of any evidence but our own experiences, we dare state that this is not yet the case. Still, Hammer's underlying motive for this statement remains; understanding a companies' own business and products is simply not enough. Instead, to deliver value to the customers, a company must understand what challenges and issues their customers are facing and relate to this in a profound way in order to solve them. In other words, a company must know what jobs there are to be done and what the unmet needs of the customer are.

Hammer's ideas are to be found in the value-oriented marketing literature. There is an ongoing shift from transactional-orientation and product-dominant logic towards a relationship-oriented and service-dominant logic. (Hammer 2003, Ravald 2008, Vargo & Lusch 2004) Management guru C.K. Prahalad (2004) has even gone so far as to develop the term co-creation of value to describe cases where customers and suppliers create value together, in that way slowly erasing organizational borders.

A framework in this area that has gained much attention the past few years and that has challenged some of the classic conceptions on strategy is Blue Ocean Strategy. The cornerstone of Blue Ocean Strategy (BOS) is that it is possible to create new markets instead of competing on existing. Therefore, BOS is especially useful in industries where value offerings in the shapes of products and services are hard to

distinguish between companies. In these cases, the only way customers can tell suppliers apart is through the price which in turn leads to price-wars and eroding margins. Such markets are referred to as red oceans by Kim & Mauborgne. Another foundation of the Blue Ocean Strategy is *Value Innovation*, the possibility of combining suppliers' cost savings and buyer value. (Kim & Mauborgne 2005) The approach of *Value Innovation* to some extent contradicts the clear separation of *Cost Leadership* and *Differentiation* that Porter (1985) suggests.

The thought of integrating value chains and bringing the customer from a passive receiving role to an active creator is intriguing to us. We also like the idea of creating new, untouched, territory instead of competing on established turf, and the concept of adding value while simultaneously cutting costs. We look forward to using and possibly contributing to these ideas while exploring the value-potential in a classically function oriented industry. The case company is found in a typical red ocean with over capacity, bidding wars and high consolidation. Is there a potential for a blue ocean?

### 1.1.1 Crawford Solutions

Global docking equipment manufacturer Crawford Solutions (hereafter Crawford) is a company qualified for all the difficulties described above concerning industry setup but also for their aspirations on changing and being in the frontier of value adding offers. They seek to be a solution provider rather than a product supplier, but the industry is highly consolidated, and the customer landscape is complex and price oriented.

As is so often the case, if their customers had a choice they would not buy these products. There is no fun in owning and using docking equipment. But fortunately for Crawford, their customers are in a position where they need docking equipment such as doors and levelers as it enables the daily logistic activities. Docking equipment is not valuable in itself. It does, however, create value for customers when they use to dock and load. Yet, it is very difficult for Crawford to differentiate themselves from other providers of docking equipment. Most companies have very similar product portfolios and almost all of them claim to have the best service agreements. The key buying criteria is often price, a simple and important factor by which customer can make sense of their purchase.

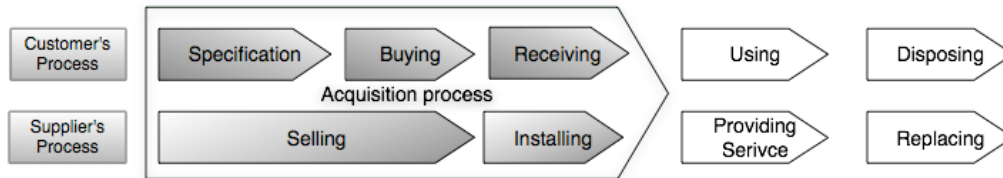
Crawford has taken steps towards providing holes rather than drills following the increasing awareness within the organization that customers need solutions rather than equipment (hence the name Crawford Solutions). However, the solution selling movement within Crawford has focused on selling, meaning it is mainly occurring and anchored within the sales force. We are interested in exploring what solution centric can mean within the entire process of selling, installing and maintaining this equipment. The process of buying (and selling) docking equipment is much more complicated than that of a drill. It involves several companies and stakeholders with varying motives, knowledge and roles.

There are also internal complexity drivers within Crawford since many different departments and entities can be involved in larger projects. Taken together, this makes for a scenario where it is difficult to communicate long term benefits for the end user as decisions are often made by those who are mainly interested in short term costs, more specifically the initial price.

The ambition from Crawford's side to become a true solution centric organization and the complex customer landscape together with a fierce competition makes us intrigued to study if, where and how there is a potential for value focus in this industry.

## 1.2 Issue of Study

The process for acquiring the docking equipment is shown below. We will study how and where value is created and delivered to customers during the acquisition of the offered solutions.



**Figure 1** A schematic picture of the process through the lifetime of the products and services provided. The framed part of the process will be referred to as the Acquisition Process and is the main focus of the thesis.

The acquisition process described in the figure above paints a schematic picture of the context for the analysis in this thesis. The use and disposal of these offers will not be carefully studied as the initial phase with selling and installing the solution sets the scope for what can later be used by the customer. However, the rhetoric of the industry and the existing competition will give some insight during the initial study as to what the use-phase can look like. Since this is an integrated process we will study more than the absolute core of our scope in order to understand the logic of the business.

The industry studied is, by BOS terminology, to be described as a typical read ocean. Growth is performed mostly through acquisitions, sales men are arguing for price discounts, the competition is fierce, the easiest way to develop is to follow competitors' moves, strategies are very similar between competitors and outsourcing is discussed as a mean to reach lower costs. The rhetoric is reactive and focused on small adjustments rather than radical changes. This awoke our curiosity; can a new way of doing business, a new approach or a new value innovation be discovered in this industry? If so: where and how?

Today, the case company has initiated solution selling; this involves combinations of products and services customized to each customer. The main arguments for value adding offers are appealing to the end user since the benefits are realized once the products are installed and up and running.

## Exploring Value Potential in a Function-Focused Industry

Our approach to solutions and providing value to customers will be one with products and services, but also process (see figure 2 and figure 3). This is based on our belief of processes being a platform for value delivery and the fact that the process of acquiring the solution starts long before the products are used and the services are needed.

This frames our thesis to the investigation of the acquisition process and more specifically the potential value-creation in that process. Since the business studied is very function-focused and has a widely used cost-plus thinking, the scene is set for a high barrier for value-focused initiatives. We will therefore need to think in new terms and show potential in otherwise neglected parts of the business; perhaps the potential lies where we usually do not look. We will commence by asking questions such as:

*Who are the customers? Is there more than one customer in each deal? How do customers perceive value? What are the jobs to be done for the customer or customers? What potential for new approaches are there? Are there value potentials that are overlooked today? And, is there any room for emotional appeal?*

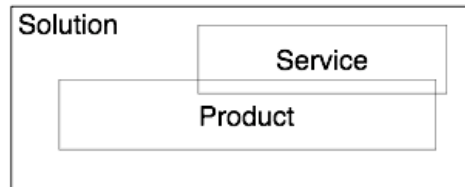
The answers to all of these seemingly uncomfortable and naïve questions will be used to answer the purpose below.

### 1.3 Purpose of the thesis

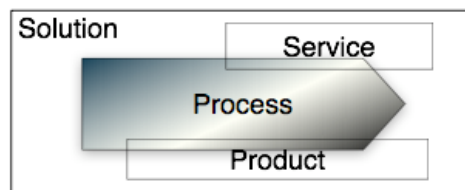
- To explore the potential for value creation and delivery in a function-focused industry.
- To identify factors that generate value and, in doing so, present an aqueduct leading from the current red ocean to a blue ocean.

### 1.4 Delimitations

The case study is performed at a manufacturing company but production and outbound logistics will not be analyzed. We recognize that the sales and installation process can be greatly affected by the performance of these entities. Nevertheless, our position is that the value that possibly can be created in the acquisition process should be enhanced regardless of these conditions.



**Figure 2** A schematic picture on the company predominant rhetoric on Solutions.



**Figure 3** A schematic picture on our view of a solution, adding the clear perspective of processes.

Furthermore, despite the potential value addition customers might enjoy through benefiting financial solutions or payment methods, these solutions will not be analyzed. Similarly, aftermarket and service agreements are naturally important factors in solution offerings to customers. In that respect they will be included in our analysis of the acquisition process. However, from an operational point of view these activities will fall outside the scope of this thesis.

The future implementation of our suggestions is considered through our choice of methodology in that we studied good, internal examples. This, we believe, will be a beneficial motivational aspect. However, apart from that consideration, recommendations will be regarding *what* and *why* rather than on *how*.

## **1.5 Target Audience**

The target audience for this thesis is academics and professionals with an interest in the concept, contextual theories and business development application of value. Additionally, our utilization of the Blue Ocean Strategy framework could be of interest as it is a relatively new and untested practice in academia. Finally, in addition to our contacts and our tutor at Crawford, other Crawford personnel are likely to benefit from our findings and analysis.





## 2 Methodology

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*This chapter aims to present the process of the study and to motivate our choices in theories and methods. Our fundamental beliefs are presented before we begun writing the thesis in what we call the Point of Departure. Thereafter, we describe of our working process and research methodology. Subsequently, we describe our approach in generating knowledge and analyzing data. Finally, we discuss our sources and their reliability and validity, how they could potentially be biased and what we have done to minimize that risk.*

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### 2.1 Point of Departure

*Show me a man who claims he is objective and I'll show you a man with illusions.*

(Henry R. Luce)

Obviously, its authors, namely us, will influence this thesis. There is always more than one way to frame a question, a problem or a reality. In this thesis we will aim to frame the case as objectively as possible. Yet, we acknowledge the influence our beliefs and assumptions will have on the framing - of what is the issue of study and how it should be studied. In a master thesis, the theoretical framework used to analyze the empirical findings is itself subject to a preceding analysis, the analysis of what tools and methods are useful for such an issue. This is where the authors' "a priori" beliefs and assumptions intrude on objectivity. The effect of these influences will be further discussed in chapter 2.3 Research Methodology on page 19.

Our view of what corporate strategy is all about can be summed up in four fundamental standpoints:

- A corporations strategy should aim at generating customer value
- Customer perceived value is the only value that matters, provide this and shareholder value will follow
- Processes are the best way to organize a company to deliver customer value
- Innovation (in processes, products and services) is essential in order to improve the value offer and create sustainable competitive advantage

These four bullets have consciously and unconsciously guided our theoretical investigation as well as our empirical study and in the working process. They have tainted it and hopefully even improved it.

## 2.2 Working Process

This thesis sprung out of a business development project at Crawford that sought out to go over the entire docking business area (see chapter 2.4.1 The Initial Study). Our thesis was part of that project but the scope and purpose of it was initially not defined. Though there were many interesting topics at hand, we felt that our contribution would be greatest by focusing of Crawford's strategy within the area of strategy development. As stated in the point of departure above, our inclination towards customer value, processes and innovation might have tainted our framing of the issue. In retrospect, it is obvious that we have been drawn to people within the organization that have shown interest in activities in line with our ideas on customer value and parts of the business where there has been a potential for value based strategy development.

Even when the purpose of the thesis was set, our scope was still very wide. Part of the thesis involved identifying which questions needed answering and thereafter posing new questions to finally arrive at the core issues. After the analysis of our initial study we decided on a second round of empirical studies through a case study with a much narrower scope (see chapter 2.4.2 The Case Study).

## 2.3 Research Methodology

The working process has been highly iterative and we have made alterations guided by results and our point of departure. In line with theories on *Action Research*, our involvement in the business development project, in the project management education and many meetings has probably affected the case itself and thus the empirical outcome. (Lewin 1946) The case we set out to study has been changed by our actions as the reflection upon the case has lead to new insights on which we have based the following actions upon. We certainly acknowledge our influence on the issue of study itself and its context. This aspect will be discussed further in our analysis and included in our conclusions.

The analytical approach where the scientist is to be considered a perfectly objective observer is not the approach used in this thesis. More so, the actors approach has been used. (Bjerke 1981) The assumption that we as scientists have not been fully objective as well as the acknowledgement of individuals' influences on the issue makes us more inclined to associate our work with this approach. We also find the assumption that the whole differs from the sum of the part, found in systems approach interesting. The actors approach aim to paint a picture of the structure of meaning when conducting research. We aim to do the same. Since we are studying the issue based on input from managers on corporate level, project mangers in different countries, sales men and customers we believe our findings to be the reality of that social construction. (Bjerke 1981) Meaning that the reality we depict is dependent upon the actors within that reality, with other actors the reality would be another.

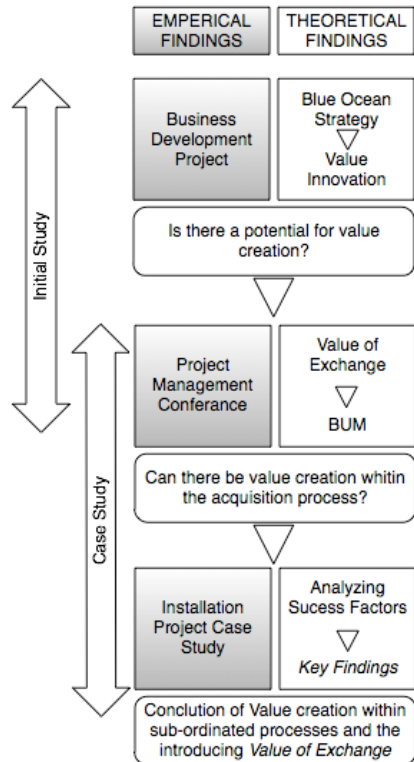
However subjective our study may be, we set out to deliver an addition to the present theoretical and methodological landscape. Therefore our ambition is to present an as nuanced picture of the reality described as possible.

## 2.4 The Sequence of the Study

The starting point for this study was the desire to analyze the potential for value-focused initiatives in function-focused industries based on BOS methodology. The process of conducting this thesis has been divided into two main phases: an Initial Study and a Case Study (see figure 4).

### 2.4.1 The Initial Study

The origin of the study is the industry of doors and levelers in the business-to-business segment (see Abbreviations and Frequently Used Terms on page 10). The industry is highly competitive with shrinking margins and a widely spread cost-plus<sup>1</sup> thinking among competitors and customers.



**Figure 4** The research approach through the thesis. A clear overlap between Initial and Case Study is shown,

The scene is set for high barriers to a more value-focused approach. To explore the mindset of the business, the study started at managerial level at Crawford. The search for relevant theories began simultaneously. The concept of Blue Ocean Strategy was an early contribution to the thesis point of departure, focusing on customer satisfaction and doing things differently when possible and beneficial. A two-day workshop where we gathered most of our data together with four conference calls and countless power point slides formed a firm picture of the business. Some additional customer interviews and a visit to the production site in Heerhugowaard, Netherlands helped us understand the industry. After analyzing the situation we focused on forming a case for value-focus within the docking business. Since the product portfolio and service offering on installed units was not the focus of the study, processes involving the customer came to be of great interest to us. Through the docking business development project, we learned about the installation process. The installation process links the buying of the product to the use of it. This process was mainly presented as a

<sup>1</sup> a pricing strategy in which the price to the customer is based on the production cost plus a fixed margin, for example ten per cent

necessary step in getting the product up and running with no value adding quality of its own. Searching for a suitable case for exploring *value co-creation* and customer perceived value in the acquisition process we decided to explore if the installation of Crawford's solutions was really a necessary evil or potentially something more.

#### 2.4.2 The Case Study

This entire thesis is based on a case study at Crawford Group AB in Malmö, Sweden. As a part of this study, five mini-cases have been studied in order to find factors that affect the value creation. In the spirit of Action-Reflection-Learning, we choose to study already finished installation projects (mini-cases) and reflect upon their success or lack of success.

*'The case study is a research strategy which focuses on understanding the dynamics present within single settings.'*

(Eisenhardt 1989)

We set out to identify which factors were related to the degree of success for each project. We wanted to understand each situation (setting) in order to extrapolate conclusions and learning from those settings. In order for the case company and us to learn, we started from former actions and reflected upon them rather than beginning with a blank sheet and draw up possible future actions. We were not interested in presenting a normative best practice but rather to suggest a new way of looking upon the acquisition process and new ways to benefit from the customer interaction this process involves. Therefore the case study research was the most suitable one. Although we studied five projects, they are all found within the same organization and have overlaps in time, staff and customers. Hence, our study is not quantitative enough to draw conclusions of general kind, but hopefully qualitative enough to conclude whether there is a potential for value creation within the projects and what factor that creation depends on.

The global installation manager identified three successful and two problematic projects for us to investigate. Interviews with sales representatives, project managers and customers of the five projects laid the foundation for the case study. The analysis of the cases can be found in chapter 7 Final Analysis. Selecting suitable cases is an important part of case study research (Eisenhardt 1989) and we choose to let a senior manager select the cases for us. We trusted his vision on value-oriented efforts to be in line with ours, and we respected his insight in the organization as well as him being sincere about the successfulness of those projects.

Searching for a process with focus on the exchange of products, services or equivalent, the installation of Crawford levelers and doors seemed suitable. The interest for this step of the acquisition process awoke since the installation was presented to us as a cost center, a necessary evil merely enabling the customer to start using the products. However, when the concept of *Value of Exchange* – the idea that the delivery of a product can add value to the customer – was conceptualized (see chapter 3.5 The Toolbox from Theory and Methodology on page 36), the sales and installation process was the natural part of Crawford for us to study more closely. The

delimitation to study big projects (€100 000 or more in order value) came to be since this is the internal limit for using the more ambitious project management approach, it is also a more professional setup from the customers' side with proper builders and project planning.

The data collection began with a three-day conference with twenty-three project managers for big projects from different European countries present; the discussions and material gave a solid foundation for the continuation of the analysis. Later we visited sites with ongoing installations and performed the central activities in the case study.

## **2.5 Empirical Gathering**

### **2.5.1 Interviews**

In total thirteen interviews have been conducted of which two are telephone interviews and one was a group interview. Altogether we have interviewed two at top management level, four customers, five project managers, two Key Account Managers and two academics. The validity in general and the group interview specifically is discussed further under 2.7 Criticism of Sources. Interviews have been conducted in a semi-structured way with open questions and in some cases the interviews have boarder lined to the dialogue that the actors approach refers to (Bjerke 1981). The interviews have been recorded and notes have been used as well. When interviewing, both authors has usually been present and if not, the recording has been used to share information.

The main objective has been to let the interviewee tell its side of the story, and letting the subjectivity out. In our analysis we have later put all interviews side by side to find discrepancies and similarities. The first set of interviewees was with customers who we found through market research independently of the case company. However, when entering the case study, the projects selected by the global installation manager led us to the people involved in the projects. These have a clear picture on the chain of events within each project and first hand knowledge of pros and cons of each case. On the other hand, having worked in these projects, they are perhaps biased as to whether it was successful or not, whether there is room for improvement and how things could have been differently. This taken into consideration, the advantage of first hand experience far outweighs the risks involved and we knowingly take these risks.

### **2.5.2 Conferences Calls**

Within the docking business development project all functions gathered for weekly conference calls. The moderator set the agenda and we mostly listened as bystanders. These calls, however, were preceded with a lot of information from all functions that was discussed. During the sessions, six top managers from four different countries were involved. The information, mostly in the shape of power point slides, gave us a good insight in the docking business and all the areas that interact within the business. These calls also made the complexity of dealing with multinational organizations and

long distances clear. Our involvement in these calls also initiated the two-day workshop described below.

### **2.5.3 Business Development Work Shop**

In finalizing the docking project, managers from all functions gathered for a two-day workshop. We held a two-hour session with interactive exercises and group tasks. The managers from the conference calls were present as well as five other managers. The end result was a *Strategy Canvas* for Crawford and their main competitor as well as an *Eliminate-Reduce-Raise-Create Grid*, an application of BOS that we used to kick-start the thought on *Value Innovation* (see chapter 3.2 The Concept of Blue Ocean Strategy on page 27). These results were used to further develop thoughts on *Value Innovation* during the Case Study. The output of the workshop is not a part of the empirical findings in the thesis, but laid a good foundation for questions, analysis and discussions.

### **2.5.4 Project Management Conference**

The global installation manager suggested our participation at the project management conference arranged by Crawford Group AB held in Falsterbo, Sweden. The twenty-three participants were project managers for big project from all over Europe and in total ten nationalities were represented. Top management, external consultants and pioneers in project management within Crawford gave a number of presentations. We received all the documentation from the conference and made many useful contacts. The wide spread opinions and experience on not only project management but also docking became clear.

Our choice of conducting the case study in Sweden was mostly based on the more developed reasoning on the importance of project management from that organization. Since we knew the language barrier would be non-existent and the travel costs much lower we found Sweden suitable in many ways. The generic relevance of our study for other European entities will hopefully remain due to our delimitation to big projects, projects that have international customers that do business more or less alike in all of Europe, as well as these projects involving major contractors and developers who also are international players.

### **2.5.5 Field Studies Heerhugowaard, the Netherlands & Helsingborg, Sweden**

A field study at the production site in Heerhugowaard, Netherlands, was arranged by the head quarter. The trip contributed to our understanding of the product complexity and the efforts being made by research and development. The trip was more than anything contextualizing to our study.

The fieldtrip to an ongoing site in Sweden was useful for us to understand the process of installation, the many interfaces with other professions and the magnitude of these projects. It also gave us a sense of the scope on a site and the parallel activities that need to take place.

### 2.5.6 Secondary Data

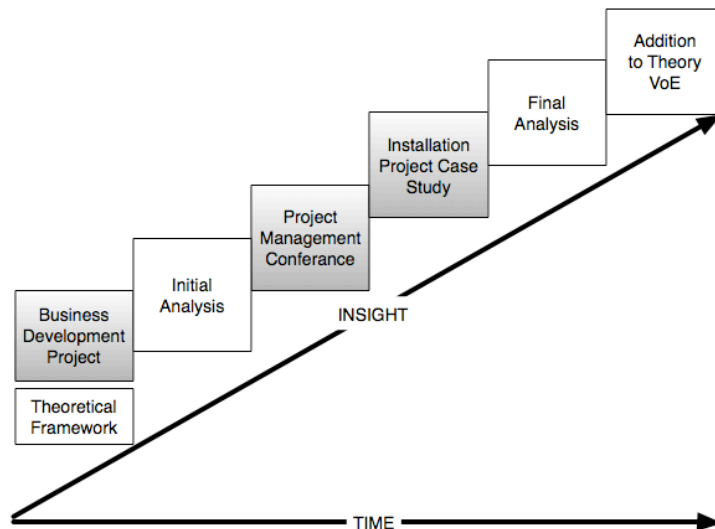
In both the initial study and the case study we have used a lot of secondary data. Most of it, we have tried to verify by own research but naturally a lot is still used. Regarding Crawford's perception on their market, competitors and own abilities we have used the subjectivity to our advantage. The fact that clear positions have been taken has been an asset; many subjective opinions together form a reality by the actors transmitting those opinions. (Bjerke 1981) It has also shaped the thesis, for example chapter 4.3.1 Crawford's View on Their Market, is as the name suggest the subjectively described market not a normative description. This has laid the foundation for our analysis.

### 2.5.7 Tutor meetings

We have had frequent meetings with our academic tutors, both one by one and together. The meetings have guided our choices of paths throughout the study, but also inspired. A master thesis is a big project and our tutors' inspiration and patience has been crucial. The Crawford organization has been very supportive and the great access has enabled us to conduct our study efficiently and effectively.

## 2.6 Method of Analysis

As we set out to gather empirical data from different levels in the organization, different functions and geographical areas, the analysis of that data had to be more conceptual than statistical. We had little, if no, chance of verifying our results in absolute numbers, but through the initial study our need for the case study became clear, and through the case study our findings became more specific.



**Figure 5** Our learning experience and the way we built up our foundation for analysis and conclusions.

The analysis has been made in two phases, an initial and a final, this in order to make sense of the complex and diverse data gathered in the business development project. (Figure 5 illustrates the knowledge curve throughout the thesis and the deepening of the insight.)

## **2.7 Criticism of Sources**

We have a clear majority of Crawford internal sources, the customer interviews have been few and our thesis' validity can therefore be discussed. However, all internal interviewees are professionals with many years of experience and they have openly debated the present way of doing business.

The group interview at Crawford Sweden AB could have been three separate interviews in order to pinpoint the questions and make all parties more at ease. We have often touched sensitive areas for both an internal and external point of view and group interviews tend to be less open than interviews one-on-one.

We do not expect our data to be objective. There are always subjectivity in stating opinions, when Key Accounts have been interviewed they obviously attribute great importance to that particular account. However, weighed together the picture should be more valid.



### 3 Theoretical framework

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*The theories we will use to treat and analyze our empirical data are presented in this chapter. Firstly, a presentation of theories regarding strategy – how businesses generate value – is presented. This is followed by an examination of axiology, the study of value. Finally, the toolbox we will utilize to categorize and analyze our empirical findings is explained.*

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*'Business is about creating value. Value, in its broadest sense, refers to the amount of money customers are willing to pay for a good or service. The challenge for business strategy is, first, to create value for customers and, second, to extract some of that value in the form of profit for the firm.'*

(Grant 2005:35)

#### 3.1 Strategy

Strategy originates from the military. The term *strategy* derives from the Greek word for “generalship”, *strategia* though the first treatise on the subject is Sun Tzu’s *The Art of War* from about 500 BC (Sun Tzu 1988 in Grant 2005:14). A strategy’s purpose is to achieve certain goals. In the military, these goals are to win the war whereas tactics regarded how to win a certain battle. (Grant 2005:14) In Business, the basic goal is to achieve a rate of return higher than the cost of capital and thereby survive. The corporate strategy stipulates where to compete in terms of industries and markets whereas the business strategy defines how to compete within these markets or industries. (Grant 2005:19)

Most classic theories on corporate strategy are based on the assumption of limited territory, where winning occurs on the behalf of someone else’s loss. Many scholars argue this is due to the heavy influence on strategy by its military origin (Carl von Clausewitz 1993 in Kim & Mauborgne 2005:6). According to Porters’ work on competitive advantage, a successful strategy is one that outmaneuvers the competition. The end goal is reaching monopolistic markets where all competition has been crushed. (Porter 1979, 1985)

Michael Porter is one of the most renowned authors and academics in modern time. He introduced the *Five Forces that Shape Competition* in 1979 and it is still one of the most widely used frameworks to describe industry logic. The basic assumption is that the market is limited and outperforming the competition is the only way to sustain competitive advantage. The generic strategies that Porter presents are based on the division of *Differentiation* and *Cost Leadership* (Porter 1985). *Differentiation* is offers that serve a price premium due to superior quality, customization or service. *Cost Leadership* is based on economy of scale and process improvement that lead to lower unit cost. The assumption that the market is limited and that a clear strategic position should be taken in order to create a sustainable competitive advantage is at the heart of Porters’ work. He also adds the aspect of scope, calling it *Focus*; the two-by-two matrix below illustrates the three generic strategies that most companies today can be categories under. If not, they are “stuck in the middle” and have failed to

achieve any competitive advantage. Since cost leaders, differentiators and focusers are better positioned for any segment, companies that are stuck in the middle will most likely perform below average. (Porter 1985:16)

		COMPETITIVE ADVANTAGE	
		Lower Cost	Differentiation
COMPETITIVE SCOPE	Broad Target	<b>1. Cost Leadership</b>	<b>2. Differentiation</b>
	Narrow Target	<b>3A. Cost Focus</b>	<b>3B. Differentiation Focus</b>

**Figure 6** Three Generic Strategies according to Porter (1985:12).

So, strategic choices aside, one single question remains: Why do companies compete? The short answer is: for survival. Regardless of Grant’s quote in the beginning of this chapter, capital will go where return on investment is the greatest making the end goal for all business to create shareholder value. Although this is the end, other means are needed in order to reach it. Unbeneficial decisions may be made if a business focuses on shareholder-value itself, trying to skip past generating customer value. A clear focus on customer-value, on the other hand, will in the end create shareholder value and lower the risk of unwanted side effects. Normann (2001:25) supports this reasoning; he states that customer value is the only value that makes sense to focus on in the long run. The topic of customer value will be further investigated later on but first we will present the Blue Ocean Strategy, a framework centered on value, more specifically *Value Innovation*.

### 3.2 The Concept of Blue Ocean Strategy

In contrast to Porter’s generic strategies, the Blue Ocean Strategy (BOS) strives to achieve *cost leadership* and *differentiation* simultaneously in what is called *Value Innovation* (see chapter 3.2.4 Value Innovation), an increase in customer utility at a lower price. Also quite the opposite of Porter, whose strategy aims to reach a monopolistic position within a predefined market, the BOS questions market boundaries. BOS assumes that there are endless opportunities to create new markets. In short, blue oceans are those areas in the market, segments or industries that are left untouched by the competition. The opposite, the red oceans, are the markets with factors that all competitors compete on; this turns the ocean red from the bloody and

fierce competition. (Kim & Mauborgne 2005) The many analytical BOS tools are helpful in questioning present industry logic and eye opening for new possibilities.

### 3.2.1 The Six Paths Framework

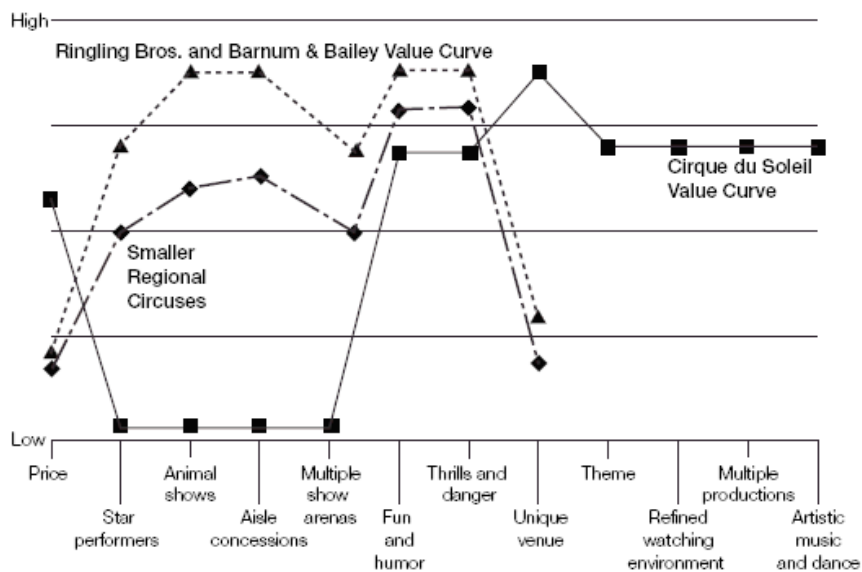
The Six Paths Framework is at the heart of the BOS and incorporated in its first principle – to reconstruct market boundaries (Kim & Mauborgne 2005:47). These six paths are patterns or basic approaches for breaking general assumptions upon which companies hypnotically build their strategies (Kim & Mauborgne 2005:48). Table 1 lists these general assumptions and their corresponding paths.

**Table 1** Red Ocean Assumptions and Their Six Corresponding Paths from Kim & Mauborgne (2005)

<b>Red Ocean Assumptions (to be found in Porter 1979,1985 Grant, 2005)</b>	<b>Corresponding Blue Ocean Paths (Kim &amp; Mauborgne 2005)</b>
Focus on rivals within the industry	1. Look across alternative industries (ibid 49)
Focus on competitive position within strategic group	2. Look across strategic groups within industries (ibid 55)
Focus on better serving the current buyer group	3. Look across the chain of buyers (ibid 61)
Focus on maximizing the value of product and service offerings within the bounds of the industry	4. Look across complementary product- and service-offerings (ibid 65)
Focus on improving price-performance in line with the current orientation of the industry	5. Look across functional or emotional appeal to buyers (ibid 69)
Focus on adapting to external trends as they occur	6. Look across time (ibid 75)

### 3.2.2 The Strategy Canvas

The *Strategy Canvas* is an analytical framework for both diagnosis and future actions (Kim & Mauborgne 2005: 25). By plotting customer perceptions of a company's and their competitors' performance on the most important industry factors it becomes evident in which areas investments are made. The value curve, as each company's curve is called, illustrates their relative performance across the industry's most important factors (Kim & Mauborgne 2005: 27). Industries, or strategic groups within industries, where all companies have similar strategy canvases are characterized by high price competition and eroding margins as this is the only point of differentiation left for customers to decide on.



**Figure 7** The Strategy Canvas of Cirque du Soleil (Kim & Mauborgne 2005:40, figure 2-7)

The *Eliminate-Reduce-Raise-Create Grid* helps companies take action and change their *Strategy Canvas*. It challenges companies to decide on which factors should be eliminated, reduced, raised and created. In order to afford to raise and create new factors, companies must reduce and eliminate the factors that are less competitive due to the heavy competition (Kim & Mauborgne 2005:29). As seen in figure 7 above, Cirque du Soleil has eliminated some of the factors taken for granted in the circus industry while reducing and raising others. They have also created some factors such as themes and a refined watching environment that are new to the industry (Kim & Mauborgne 2005:29).

### 3.2.3 The Buyer Utility Map

The *Buyer Utility Map* (BUM) is another analytical framework in BOS, which helps identifying spaces in which utility for customers can be found and delivered. This tool may be used to follow path 3 above – *look across the chain of buyers* – helping companies not to isolate their perception on the market to one buyer. As seen in

## Exploring Value Potential in a Function-Focused Industry

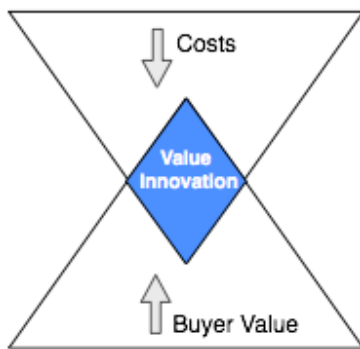
figure 8, the map consists of thirty-six utility spaces based on six *utility levers* and six stages in the consumer experience cycle (Kim & Mauborgne 2005:121). The idea is to map existing competition to find new potential value innovation and new strategic concepts.

		The Six Stages of the Buyer Experience Cycle					
		1.	2.	3.	4.	5.	6.
		Purchase	Delivery	Use	Supplements	Maintenance	Disposal
The Six Utility Levers	Customer productivity						
	Simplicity						
	Convenience						
	Risk						
	Fun and image						
	Environmental friendliness						

**Figure 8** The original Buyer Utility Map from Kim & Mauborgne (2005:121, figure 6-2)

### 3.2.4 Value Innovation

What Kim & Mauborgne (2005) call *Value Innovation* (illustrated in figure 9) is the cornerstone of Blue Ocean Strategy. *Value Innovation* means pursuing differentiation and cost savings simultaneously. (Kim & Mauborgne, 2005:16) This is an approach that fundamentally contradicts the separation of *Cost Leadership* and *Differentiation*. It also suggests that there are potential synergies between internal cost saving activities and external value perception.



**Figure 9** *Value Innovation* according to Kim & Mauborgne 2005 figure 1-2

*Value Innovation* includes customer value, since customer value can be seen as a mean to shareholder value (Normann 2001:25), that benefit can most likely be attributed to *Value Innovation* as well. The belief that customer value is the only value that makes sense focusing on in the long run is by no means new. In his article *Customer Value: the Next Source for Competitive Advantage* Woodruff (1997) states that ‘*Customer value-based competition represents the next major shift in managerial practice...*’ This suggests that customer value is linked to competitive advantages described in classic strategy theory in an inseparable way.

#### Concluding:

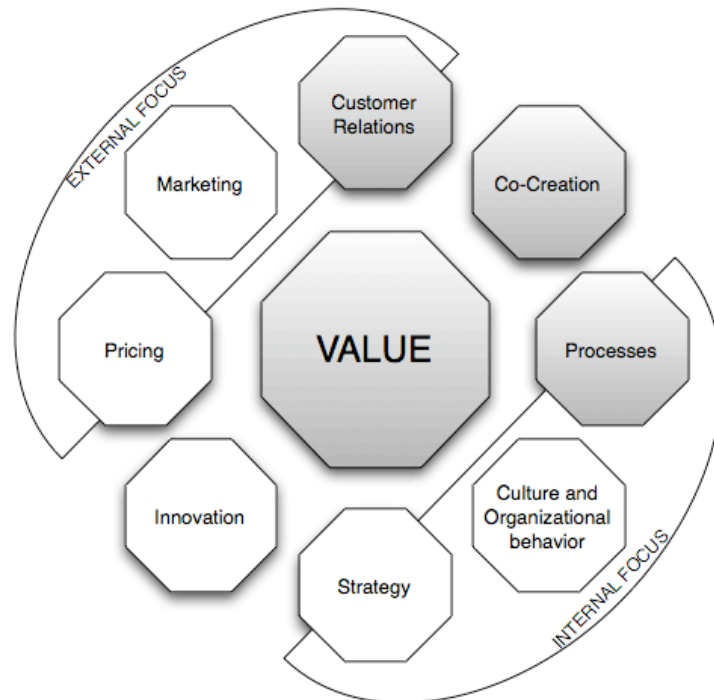
- Strategy aims to improve a company’s ability to create shareholder value
- Focusing on customer-value is the superior way to reach sustainable shareholder value. This raises two questions:
  1. What is Value?
  2. Who is the Customer?

These fundamental questions will be further elaborated on in order to reach insights that benefit our study.

### 3.3 Theories on What Constitutes Value

The thesis revolves around the concept of value. Therefore, value as a phenomenon in itself, both internal and external value creation processes, and collaborative value creation is of interest to us. In exploring value, some theories and concepts have been used to support or clarify the potential for value creation and delivery.

The initial literature study resulted in the figure below, a way for us to illustrate the more common areas of discussion regarding value. The areas of greatest interest to this study are shown in grey. These will be further developed, but firstly we wish to go to the core of the figure and sort out the essence of value and the definition to be used throughout thesis.



**Figure 10** A conceptual description of commonly used terms around value.

Above is the by us generated illustration of the context that one finds value associated literature and terms.

### 3.3.1 Axiology – the study of value

Our interest in ‘value’ or ‘goodness’ began with the questioning of some modern terms such as *Value Innovation* (Kim & Mauborgne 2005) and *Value Co-Creation* (Prahalad & Ramaswamy 2004) – terms that will be further developed. The question ‘what does value *really* mean?’ became more and more pressuring. Our initial source of enlightenment was ‘The value judgment’ by Lamont (1955). He states that the search for goodness, the striving for what is good drives the economic choices we make. He points out the difference between intrinsic value – whether a thing can be presumed good or not – and relative value – whether it is more or less good compared to other things. Furthermore, he distinguishes between the value in itself and the valuation of that value.

*‘We evaluate, and buy and sell so as to economise resources for the satisfaction of our demands as a whole. Our effective choices are determined by – or are – our relative valuations (our estimates of degrees of goodness), because our behaviour is in all cases an expression of our striving for the ‘good’ as we (truly or mistakenly) apprehend it. Challenge the truth of this proposition and you challenge the basis of all economic theory.’*

(Lamont 1955:10)

This leads to the conclusion that the valuation of values drives economic choices. The possibility for a potential supplier can thereby be twofold, (1) optimize the offered value and/or (2) affect the valuation of them. (Lamont 1955)

The offered value may also be of different types. Some of the earliest literature on value in economics is still valid today. Adam Smith wrote ‘Wealth of Nations’ in 1776 and the fundamental difference between *Value in Exchange* (ViE) and *Value in Use* (ViU) is still applicable.

*The things that have the greatest value in use have frequently little or no ‘value in exchange’; and, on the contrary, those that have the greatest value in exchange have frequently little or no value in use. Nothing is more useful than water: but it will purchase scarce anything – scarce anything can be had in exchange for it. A diamond on the contrary, has scarce any value in use, but a very great quantity of other goods may frequently be had in exchange for it.*

(Smith 1776:132 in Ravlad 2008)

The division between ViU and ViE is still valid, but most offers on the market represent a combination of both and some clarification on what ‘use’ may mean can be necessary. In addition, the ViE is obviously correlated to the scarcity of the resource, if water was as rare as diamonds, then its ViE would certainly be higher.

The difference between good-as-end and good-as-means when used is also interesting from a supplier point of view. Is the offer provided an end or a mean to an end? If a mean, then the efficiency of the offer to reach an end can be the value of interest, whereas if the offer is an end itself then the value of that end may be the only one of interest. (Lamont 1955:12)

## Exploring Value Potential in a Function-Focused Industry

As time passed, ViE came to equal price; hence value and price have often been used interchangeably over time. ViU came to be the benefit and utility of the product, less tangible for economy scholars. (Lamont 1955:23)

*'...customer value consists of the net-value – the trade-off between benefits and sacrifices – that the customer is able to utilize as a result of acquiring a physical product, a service, or a total service offering. The judgment of what value that is delivered is the customer's, hence the label "customer-perceived value".'*

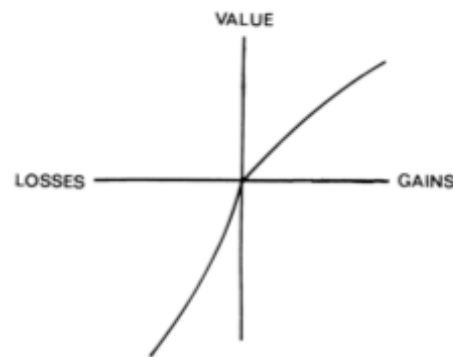
(Bovik 2004)

It may sound somewhat tautological with customer *perceived* value – obviously if the value is to be considered it has to be perceived. Nevertheless a clarification can be needed, especially when considering what value sales men subscribe their offer and what the true perception from the customer point of view is. In Harvard Business Review 2006, Gourville discusses how companies' unbiased assessment of customers' value-perception of their offerings usually deviates from the true customer-perceived value. The most important factor being that the customer perceived sacrifices are frequently underestimated.

$$\text{Customer-perceived value} = \frac{\text{Perceived benefits}}{\text{Perceived sacrifice}}$$

(Monroe 1990)

The customer will always weigh losses against gains and the change in behavior or supplier will never occur if the scale does not indisputably tip over, equilibrium is not good enough. As Nobel Prize<sup>2</sup> laureate Kahneman has shown in the *Prospect Theory*, a value function of gains and losses is influenced by seemingly irrational behavioral biases. Rationally, the decrease in value for one loss should be equal to the increase in value from one gain. Yet, the perceived sacrifice for one loss far outweighs the perceived benefit from one gain (Kahneman & Tversky 1979). (See figure 11) The intersection of the X- and Y-axis in figure 11 is what Kahneman & Tversky refer to as the reference value, meaning the offer the customer compares all alternatives against.



**Figure 11** The value function in the *Prospect Theory* (Kahneman & Tversky 1979)

<sup>2</sup> Daniel Kahneman received The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel in 2002. The Prospect Theory was developed in collaboration with Amos Tversky.



## Exploring Value Potential in a Function-Focused Industry

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In Blue Ocean Strategy *utility* is used to describe the customer-perceived benefits. The *utility levers* described are factors that are comparable to the gains that lead to the perceived benefit, or utility. *Value Innovation* is the term used to illustrate the alignment of a company's internal and external focus. (Kim & Mauborgne 2005)

*'Value innovation occurs only when companies align innovation with utility, price, and cost positions. If they fail to anchor innovation with value in this way, technology innovators and market pioneers often lay the eggs that other companies hatch.'*

(Kim & Mauborgne 2005:13)

The result of the internal focus, being aware of cost and price, means, by the above used terminology, that the company lowers the perceived sacrifice while it simultaneously raises the perceived benefits. Thus value innovation is consistent in its essence with customer-perceived value.

### **Concluding:**

- Value can be perceived in exchange and or in use (ViE and ViU)
- Value is only real when perceived by the customer
- Companies often overestimate the perceived benefit of an offer, while simultaneously underestimating the perceived sacrifices.
- Value is not linear to increased gains, nor is the decrease linear to losses.
- Losses' negative effect on perceived value are presumably greater than the positive effect of gains
- The valuation of offers is presumably made in comparison to a reference value

### **3.4 Identifying, Understanding and Pleasing Customers**

One very simple, efficient and limited way to describe a customer is a buyer. The buyer is the transactional partner who is interested in the mere change of ownership. The buyer can be the primary stakeholder in a selling process, but may also be an executor of someone else's decision.

The end user of an offer may in fact be the primary stakeholder in the long run, but have little to say about the valuation and purchase of the offer. In short, 'Who is the customer?' has no universal answer for all sales processes nor is the answer the same regardless of when during the process the question is asked. Presumably, asking the question and valuating who one's primary stakeholder is, is more important than having the answer upfront. Kim & Mauborgne (2005) suggest in path three to 'Look across the chain of buyers'. This path suggests widening the scope of stakeholders. They separate the *purchaser* from the *user* and add the *influencer*. They suggest that their interest may overlap but often differ. (Kim & Mauborgne 2005)

A nuanced picture on the customers may be beneficial in every case, but probably more so the more complex the customer setup is.

### 3.4.1 From the Product- to the Service-Oriented Value Offer

Vargo & Lusch (2004) used the term *value co-production*, when they presented their framework for the Service Dominant (SD) logic. The SD-logic has a set of eight foundational premises (FPs), one of them being FP<sub>3</sub> '*Goods are distribution mechanisms for service provision*', suggesting that the value of goods themselves can be viewed as negligible. Neither the produced artifact, nor the Goods Dominant logic (GD-logic), is highly held in Vargo & Lusch's framework; the term *co-production* is therefore to be seen as unfortunate. Production clearly brings goods to mind and when the authors 2006 revisited the topic, *co-production* was edited into *co-creation* (Lusch & Vargo 2006). *Co-Creation* of value has been thoroughly discussed by Prahalad & Ramaswamy (2004). Their book is based on the assumption that unique customer value is best created *together with* the customer rather than produced *for* the customer. They comment on the vast variety of products that customers have to choose from, that the transparency that Internet and other distribution channels have provided not necessarily improve the experience of the purchase. (Prahalad & Ramaswamy 2004) Although the focus in their work is on consumer and business interaction rather than business-to-business, the thought that more variety is not always better can be presumed to have some validity in B2B as well. This based on the fact that in the end, individuals make buying decisions. The endless choices we face can in fact be paralyzing according to some (Barry Schwartz, TED 2006). Therefore, the shift suggested by Vargo & Lusch from GD-logic to SD-logic, from product-oriented to service-oriented value offers can be of assistance. If focusing on the service and co-creation then one goal may be the simplification and assistance of choice. One example in Prahalad & Ramaswamy (2004:20) is that of buying a houseboat, a fairly rare, complex and large investment. One of the co-creation aspects is education the customer, making them feel safe and assertive in their choice. This can be put in context with reducing the feeling of sacrifice that Kahneman & Tversky (1979) raised as a reason for decreased perceived value. The co-creation can therefore be both a reason for increased gains and reduced losses, both contributing to an increased customer-perceived value.

### 3.4.2 From the Transaction- to the Relation-Oriented Value Offer

The BOS path number five in the *Six Path Framework* suggest to 'Look across functional or emotional appeal to buyers' (Kim & Mauborgne 2005:69). This means that in this clearly functional industry with rational arguments dominate, we should study possible emotional arguments. Such an argument can be that relations between individuals matter in the deciding on supplier of these products. That it 'feels better' to buy from one particular supplier, that the customer trusts the supplier and feels safe, not very far from the effect the co-creation had in the example above. With a transactional focus of value delivery, the relationship is kept to a minimum and the focus lies in transferring the offer from supplier to customer as efficiently as possible (Ravald 2008). This is typically a *Cost Leadership* (Porter 1985) approach where the costly customer relationship management is not a buying argument for the customer. However, the customer will have expectations on the offer, and those expectations have to be delivered upon for the customer to be satisfied. On the other side of the

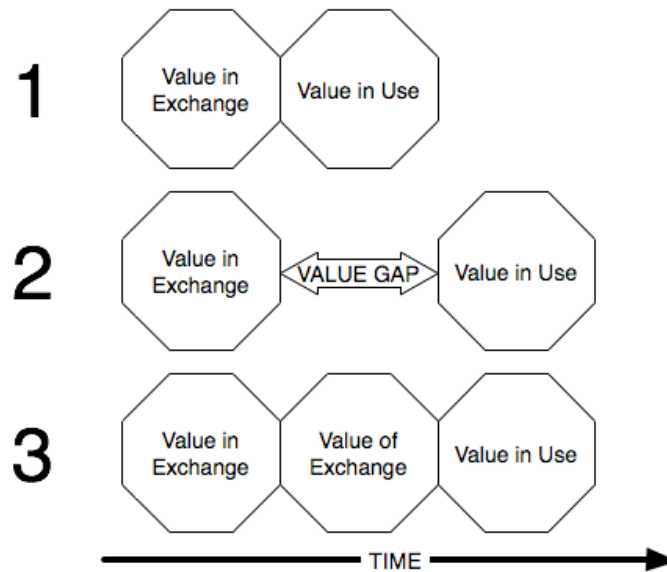
spectra there are the advanced relation oriented efforts. The expectations are higher, but so is probably also the willingness to pay. Raval & Grönroos (1996) argue that relationship marketing and relation-oriented value offers can add value by lowering the perceived sacrifice rather than increasing the benefits. The ratio of benefit and sacrifice will still increase and thereby the perceived value. A more developed relationship also increases the understanding of the customers' perception of the value offer.

**Concluding:**

- The customer is not necessarily the transactional partner, nor is the transactional partner always the customer
- Reevaluating who the customer is can be crucial to serve the right needs
- The shift to SD-logic suggests that service can be provided in various ways, shapes and forms
- The relation-oriented value offer suggest that not only the business case affects customer perceived value
- Co-Creating value can lead to both increasing gains and decreasing losses, hence a twofold effect on the perceived value

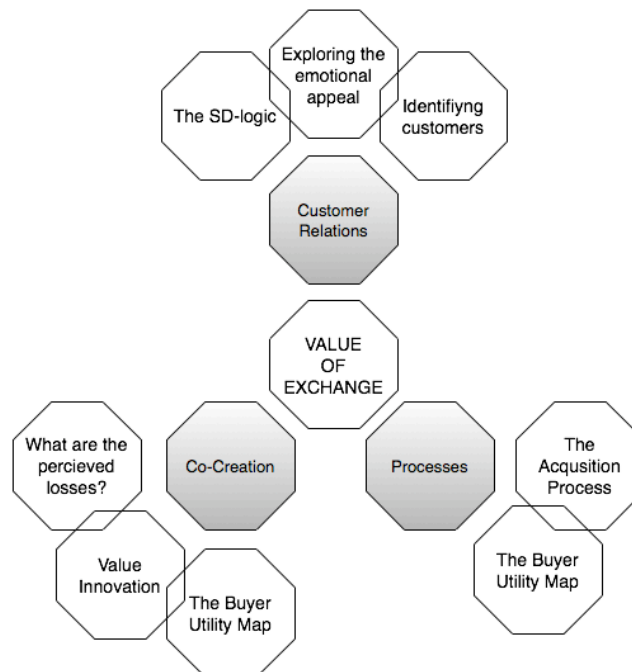
### **3.5 The Toolbox from Theory and Methodology**

We believe that ViE and ViU is to be found in all offers but in various proportions. In Crawford's case, exchange and use is separated both in time and in entity – meaning one entity can be responsible for buying and perceiving ViE, then time can pass while a building is constructed where a second entity may be active and then thirdly the end user will be active and possibly perceive ViU. The terminology is clearly too scarce for this setup. For the second entity, in Crawford's case often a main contractor or a developer, there is no clear definition on that value delivery. We suggest that the term *Value of Exchange* (VoE) should be added, and we will test its validity in the study. Figure 12 below illustrated our view on ViE, ViU and the added term *Value of Exchange*, VoE. Case 1 is a short process with exchange and use closely related both in time and entity. Case 2 is the process with time passing from buying to using, and also a difference in entity. If our assumption from the literature is correct, the possible value gap in Case 2 can add value to the entire chain and fill that gap.



**Figure 12** Our view on where *Value of Exchange* can be introduced and why it is needed.

What we feel can constitute to the idea of VoE is related to the areas of interest to our thesis shown in figure 12. A new way to describe the theoretical framework and the tools from BOS to be used is illustrated around Customer Relations, Process and Co-Creation in figure 13.

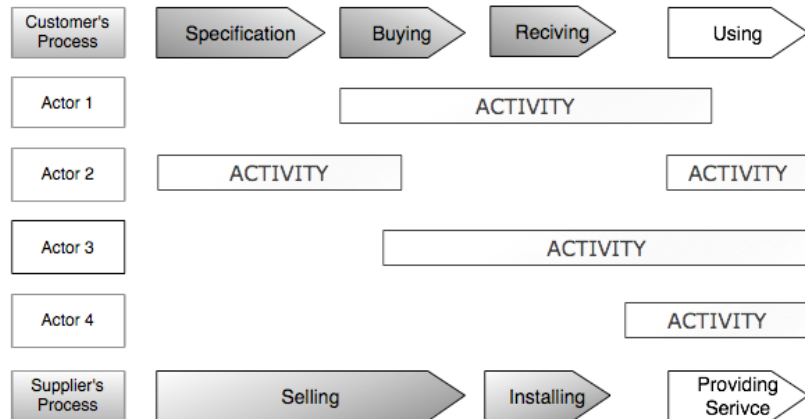


**Figure 13** The more detailed context with tools and terms for our definition of *Value of Exchange*, later to be tested and evaluated.

### Exploring Value Potential in a Function-Focused Industry

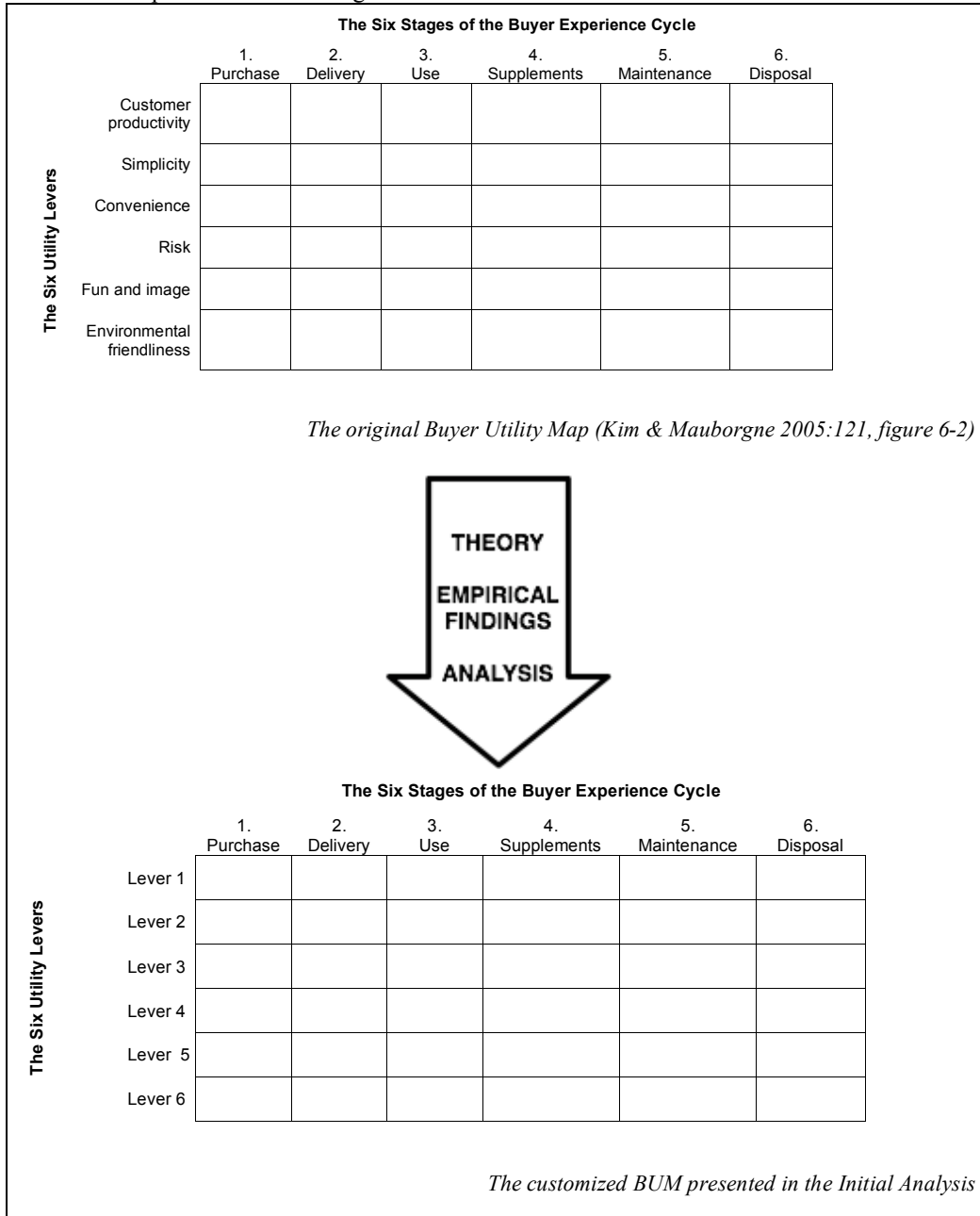
In order to make the BUM useful for our thesis, we will process the *utility levers* in a way that they will more deeply describe the current situation in the industry and tell us if there is a potential blue ocean, and where that might be.

In addition to the BUM we will use process mapping to analyze the activity of different actors within the process. What we call the *Activity Canvas* (see figure 14) will be used in the cases to analyze who is active when and who interact with whom.



**Figure 14** The activity Canvas that will be used in the Case Study to map activities for different actors within the process.

**Table 2** The process from the original BUM to the customized that will be used in the thesis.



## 4 Initial Study – Crawford Solutions

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*This chapter describes the history and current state of the case company, its competitive landscape and its customers. As it presents both the complexity drivers and the current industry logic, it sets the stage for the more narrowed scoped case study in the next chapter. At the end, a business case is presented in order to illustrate some of the potential for value-in-use creation.*

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### 4.1 Introduction to the Case Company – Crawford Solutions

Crawford Solutions is the Door and Logistics Solutions division of Cardo (Cardo AB), a global industrial conglomerate headquartered in Malmö, Sweden. As a Door and Logistics Solution provider, Crawford produce, sell and service industrial door and docking equipment. Crawford has sales companies in more than twenty countries, 3045 employees globally and a turnover of 4,816 MSEK which is about half of Cardo's turnover (9,810 MSEK). Of Crawford's turnover, 84% is from the Western European Market (Cardo Annual Report 2008:1). Levelers are manufactured in Romania and Spain whereas doors are manufactured and assembled in the Netherlands and to some extent in Denmark. Crawford has its own service and installation technicians and an internal sales force. (Cardo Annual Report 2008) In recent years, a large initiative has been taken towards what Crawford calls solution selling. The concept is to focus on the needs and pains of the customer and finding suitable solutions rather than merely providing products. (Nordberg presentation 2009-03-03)

In addition to Crawford, Cardo has three other divisions in Wastewater Technology Solutions, Pulp and Paper Solutions and Residential Garage Doors. All divisions but Residential Garage doors are business to business. (Cardo's Operations 2009)

Cardo AB was established as an investment company by Svenska Sockerfabriks AB in 1968 and included brands such as Weibulls and Hilleshög. The pumping activities, however, have a longer history and originated in 1918 in Wilh Sonesson AB. In 1986, Volvo acquired both Cardo AB and Wilh Sonesson AB but decided to keep only the food operations and dispose of the industrial operations, including pumping activities, into Investment AB Cardo, a Volvo controlled company. The years following included a takeover by Incentive who wanted to control the medical technology company Gambro, at that time owned by Investment AB Cardo. In 1995 Investment AB Cardo was re-listed on the Stockholm Stock Exchange under the name Cardo AB with industrial operations. (Cardo's History 2009) Today, Cardo AB is still listed on the Stockholm Stock Exchange, trading at 139.75 SEK (www.di.se 2009-03-31). Since 2005 the CEO of the 6014 employees within Cardo AB is Peter Aru (Cardo Annual Report 2008: 1, Nyhetsbyrån Direkt 2008). The largest owner and also the

Chairman of the Board is Fredrik Lundberg with 41.3% of the shares through L E Lundbergföretagen AB (Cardo Annual Report 2008:17).

As with Cardo AB in general, Crawford Solutions has grown through a number of mergers and acquisitions. The door-business was originally transferred to Cardo AB from Volvo in the 1980s but the brand name Crawford dates back to the 1930s in Cleveland, Ohio and the company's founder Frederick C. Crawford. Recent, significant acquisitions are those of German leveler company Hafa in 1998 and Spanish leveler company Combursa in 2006. (Crawford's History 2009)

## **4.2 Introduction to the Docking Equipment**

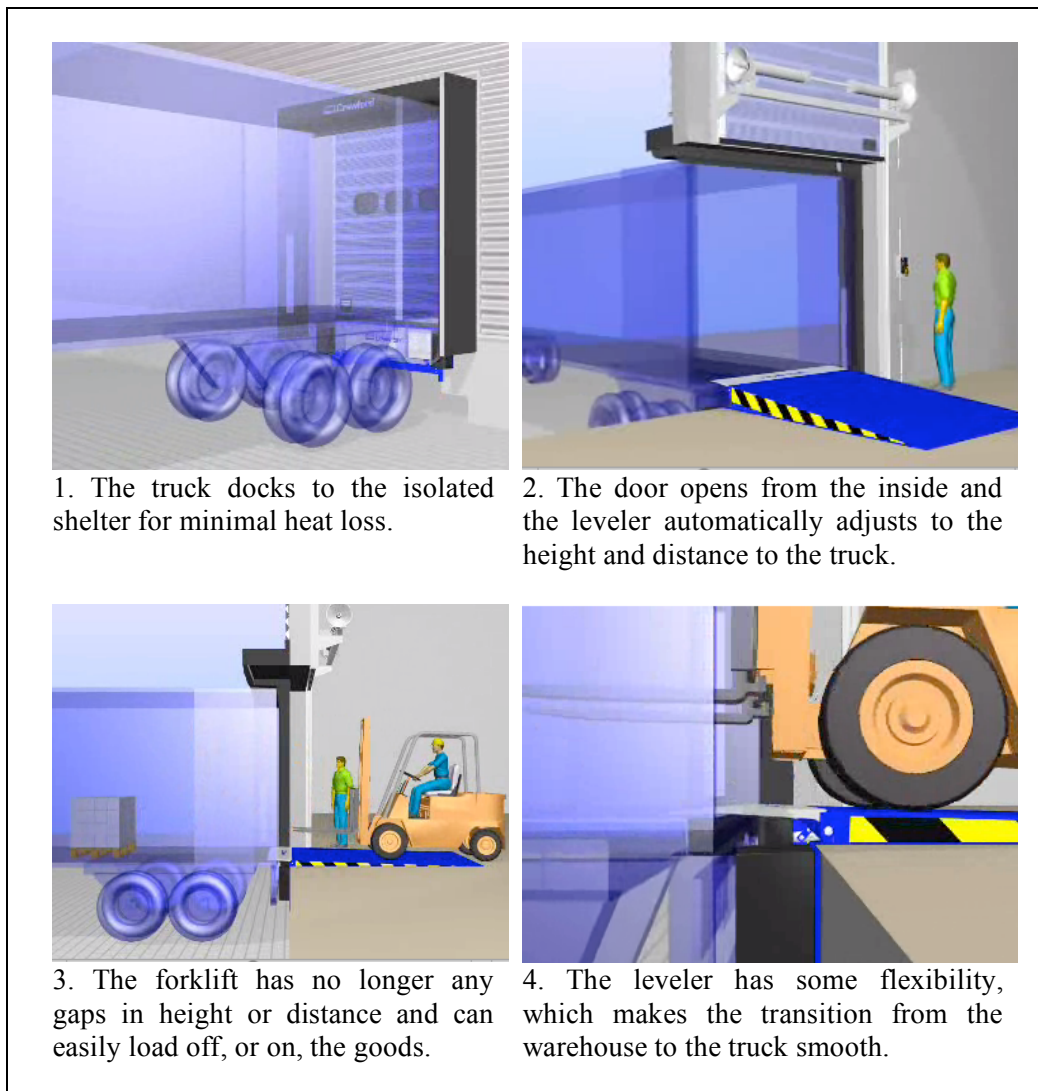
Docking equipment is used to simplify the loading of goods onto and off of trucks. (See figure 15 *The Docking Process*) Companies in most industries use doors, levelers and other docking equipment. Though logistic service providers and courier and parcel companies such as Fed Ex and DHL are large customers, most companies engaged in sending or receiving goods in some way are potential customers. Big warehouses and logistic centers can have as many as 150 docking units, each docking unit has an average order value of €10 000, meaning that some of the large orders in this business can arrive at € 1,5 million. However, those large orders are rare and the average number of units per order is less than two. This includes orders for both replacement and new builds.

Crawford Solution provides not only the hardware, but also service, spare parts and computer systems for logistic optimization. The complete portfolio is a way to become the preferred supplier of solutions not only products. Some of the countries in Crawford organization has a history of being more door-oriented, other more docking accustomed. This is mostly due to history of acquisition where for example Germany is dominated by the Hafa inheritance, a company bought by Cardo in 1998 which up until then only had traded and produced levelers. On the other hand the Netherlands has a high degree of door sales, making them more profitable but lower in volume. Docking is high cost products which long delivery time and complex installation whereas doors can be delivered within ten day of putting in an order and often be installed without any major interference with the ongoing operations. That being said, docking equipment is highly integrated components that need to work together in order for the docking to run smoothly. (Internal documentation 2009)

### **4.2.1 The Docking Process**

The docking equipment enables a smooth docking of the trucks against the warehouse wall, it is important that the tailgate of the truck does not damage the building, nor that the docking bay damages the truck. There are a lot of costs involved in repairing damaged docking equipment, and with solutions like guiding lights or better shelters some of that can be saved. In addition the leveler inside enables the forklifts from the warehouse to easily load off or on the goods. See figure 15, *The Docking Process*, for details.





**Figure 15** The Docking Process illustrated in a schematic way. (Docking Process 2009)

After the loading is complete personnel pushes the button and the leveler returns to its original position and the door closes automatically. The whole process is made to minimal personal and material damage as well as increase the productivity of the warehouse. The docking equipment is essentially an interface between two business areas: the storing and the transportation of goods. When customers own both warehouse and trucks, these two areas are two different business units and the efficiency of the interface is controlled by the docking solution.

#### **4.2.2 The Dock Levelers**

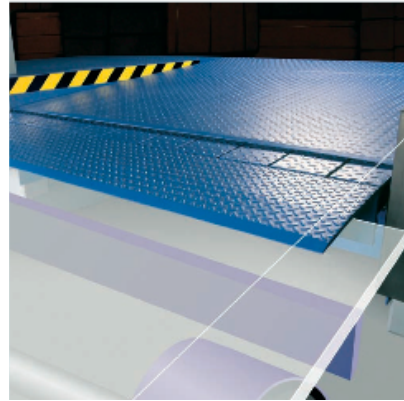
There are many different types of dock levelers. As an example, a Teledock leveler (see figure 16 and figure 17) extends its lip just far enough to bridge the without

### Exploring Value Potential in a Function-Focused Industry

risking damaging goods placed close to the edge of the truck. This is an expensive type of leveler but suitable for maximum customization for each docking.



**Figure 16** A docking bay with a Teledock leveler. (Product Catalogue Crawford 2006)

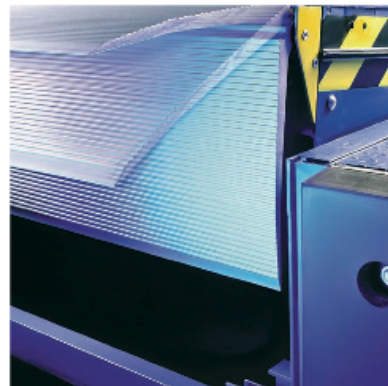


**Figure 17** The Teledock leveler in its final position docked to a truck. (Product Catalogue Crawford 2006)

Another type is the Swingdock, which is less expensive and does not require the personnel in the warehouse to adjust the extension of the lip. (Illustrated in figure 18 and figure 19)



**Figure 18** A docking bay with a Swingdock leveler installed. (Product Catalogue Crawford 2006)



**Figure 19** A Swingdock with the lip in motion. (Product Catalogue Crawford 2006)

During installation the leveler is welded onto a pit, which in turn is built in to the concrete floor. There are a number of different types of pits that fit with different types of floors and different leveler models. The complexity when adding leveler, pit, door and shelter solutions together is overwhelming.

### 4.2.3 The Overhead Sectional Doors

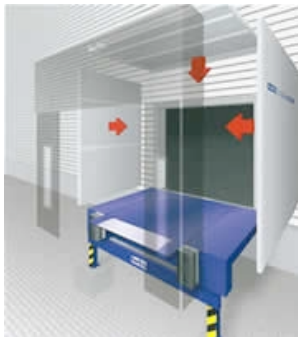


**Figure 20** An example of an overhead sectional door. (Product Catalogue Crawford 2006)

Industrial doors are docking equipment in the sense that they can be opened and provide a clear entry to the building when needed while otherwise providing shelter from wind and weather. Doors are usually opened vertically and, depending on physical requirements, they can be opened vertically or in an angle depending on the construction of the building. The overhead sectional door (figure 20) is the most frequently used door in docking bays and can be opened in a non-linear path thanks to its flexible panel structure.

### 4.2.4 Loadhouses

Loadhouses are external structures with complete docking functionality. The door is mounted on the inside of the building, but the leveler and shelter is integrated in the loadhouse.



**Figure 21** Loadhouse with telescopic or swing lip. (Product Catalogue Crawford 2006)



**Figure 22** The shelter has an inflatable frontier for maximum isolation. (Product Catalogue Crawford 2006)



**Figure 23** The inflatable shelter up close. The rubber does not damage the truck, fits a variety of sizes and ensures minimal heat loss. (Product Catalogue Crawford 2006)

Weather shelters of different types, such as the inflatable model in figure 23 are used to prevent heat-loss indoors while loading trucks. Loadhouses (see figure 21 and 22) are off-site built independent docking stations, complete with walls, leveler and weather shelters. Since loadhouses are built and often even assembled off-site, they only have one interface with the rest of the building. This results in a shorter installation time and fewer customer visits. These products are preferred by large warehouses and cross-docking centers. Cross-docking means that both on loading and

off loading takes place, typically in a logistic hub. The utilized area inside is bigger since the leveler does not occupy storage space, yet it is essential that the outside area is free and that the loadhouses does not interfere with traffic outside. Loadhouses are a more expensive solution but the optimization of the inside area together with potential energy savings usually make up for the initially higher price. However, cultural differences and experience among sales men make loadhouses dominate in the northern region and just barley existing in southern Europe. (Internal documentation 2009)

#### 4.2.5 Supplements

Dock Management System is an IT-system integrating doors and levelers to a central computer system. It is used to direct incoming trucks to the right docking bays, meaning the bay which is optimal in regard to the incoming goods on the truck and where the goods will be placed inside the building. Relevant data concerning opening and utilization of docking bays can also be analyzed to map behavior of employees and possibly increase efficiency even further. Only the slightly upgraded doors which cost an additional €100 are compatible with the Dock Management System. (Nordberg presentation 2009-03-03)

Dock Energy is an additional add-on to the Dock Management System, which only allows doors to be opened when a truck is at the bay, which eliminates unnecessary energy losses. However, for safety reasons it can be overridden through the computer system. (Direct Industry 2009)

### 4.3 Recent Crawford Initiatives

Crawford Solutions has three statements to communicate their vision:

- Trouble-free operations
- A promise is a promise
- Around-the-clock

Some business development initiatives have been taken aligned with these statements. (Cardo Annual Report 2008:23) In the sales department a big change is taking place where the ambition is to change the mindset from product centric to solution centric. The solution centric approach means understanding the customers' needs and pains and finding suitable solutions for all of them. The initiative has its focus on the selling process and lifting the discussion from function, price and delivery time to total cost of ownership, value of service agreements and enabling trouble free operations. Crawford is still very much a product-oriented company but changes have been made. The willingness from the customers' side together with the conviction of the sales representative is presented as key areas for success. (Webster interview 2009-03-24)

Within the service organization the, *Change Before it Breaks* (CBIB) initiative is one of the more recent and extensive. The idea is for the service technicians to focus on changing parts and making service visits more pro-actively and thereby avoiding failure rather than correcting them. A failure will disturb the customers' operations and can have high implications on the productivity. The service department works

with enabling zero downtime by their new way of doing business. The ideal outcome is higher service income for Crawford and better efficiency thus lower cost for the customer. (Internal documentation 2009, Søndergaard presentation 2009-02-04)

#### 4.3.1 Crawford's View of Their Market

Crawford segments the market based on the contract and thereby the transactional partner (in chapter 5 Initial Analysis we will add complexity to their segmentation). The size of the market segments is based on levelers sold since our study concerns projects that involve both levelers and doors (see chapter 1.4 Delimitations on page 15).

The largest market segment, in terms of volume, is *Developers and Contractors* with companies such as developer Prologis and contractor Skanska. This segment is made up of very few customers due to the heavy consolidation in these industries. This also results in extremely high volumes per customer. This segment, however, is considered the least attractive due to the low margins in the majority of the deals (van der Linden presentation 2009-02-04)

Following in terms of size is the *Retail Supply Chain* segment, including actors such as Lidl and IKEA. The main concern in the retail industry is the high cost of goods sold, leading to a high focus of the rate of turnover. Hence, these customers in this segment need a high level of service to avoid downtime. (Internal documentation 2009)

*Logistics Service Providers* such as DHL and Schenker tie in third place in terms of size with the *Courier and Parcel Logistic* segment with companies like FedEx and DHL Express. The latter segment is much more consolidated with fewer but larger companies, also resulting in a high volume per customer. Though these segments both are made up of logistic companies, Courier and Parcel Logistics deal directly with consumers and usually have a twenty-four hour time window, whereas Logistics Service Providers are third party logistics providers. (Internal documentation 2009)

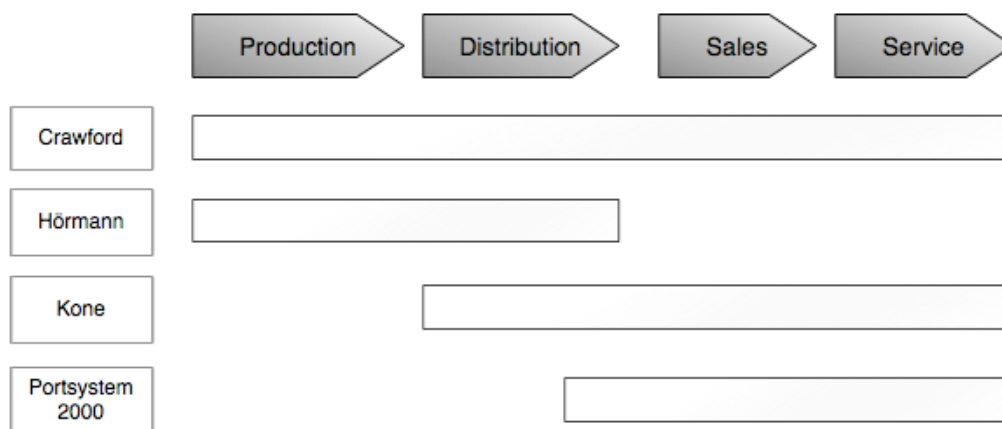
The final and smallest market segment is made up of Logistic Service Providers customers, meaning those who own their own docking equipment but have outsourced logistic activities. This segment is small and contains a very large number of companies and thereby very fragmented in terms of trends and needs. These customers usually operate one or two levelers. (Internal documentation 2009)

#### 4.4 The Industry Setup

There are a few competitors on the European market. All offer levelers and doors, but it varies whether they produce internally or source from external producers, and whether they own their service operations or not. Crawford has the largest market share in Europe for levelers whereas Hörmann is the undisputed market leader for doors, in terms of size. With 300,000 doors sold per year, Hörmann enjoys economies of scale in both production and procurement processes. Since steel is the main raw material used, a triple volume makes a huge difference in quotation. (Bengtsson

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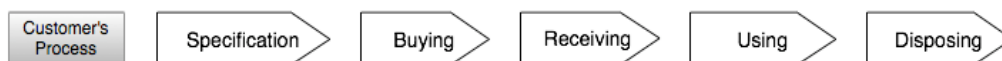
presentation 2009-03-02) Most of Hörmann's sales are done through their external resellers that are also responsible for installations. On big projects, however, Hörmann has specialized internal installation teams. In addition to Crawford and Hörmann, there are many other actors in the industry with varying focus on levelers and or doors. There are also companies such as Swedish Portsystem 2000, which do not manufacture their own doors but are specialized in the solution and IT system surrounding the docking equipment. (Internal documentation 2009) The production of docking equipment is in general inflexible, as it requires investments in machinery and production facilities. Combined with the many years of increasing market demand there is currently too much capacity chasing customers resulting in a very competitive market. To illustrate the variation in value chain control between Crawford and its competitors the figure below has been constructed.



**Figure 24** A schematic picture on the different actors' value chains. The illustrated area is where the company has own operations, Crawford being the only one with a fully integrated value chain. (Internal documentation 2009)

With a difference in value chain control from the supplying side, the variation of activity from the customers' side becomes interesting. A short elaboration on the process of acquiring these products will now follow.

#### 4.5 The Acquisition Process of Docking Equipment



**Figure 25** The customers' process of acquiring and owning docking equipment.

The activities associated with buying docking equipment are illustrated above. These activities are always performed but the companies that perform the activities can differ. In some cases the same company performs all activities and in other cases it is the complete opposite. However, a construction company is often involved and docking equipment is integrated in the building to some extent or another. Therefore the construction process is of interest.

#### **4.5.1 The Construction Process**

Installing docking equipment always involves some kind of construction work. Whether the customers regard their docking equipment as part of the building or equipment, many go about acquiring the equipment as they do any other construction job, meaning through a bidding procedure. A bidding procedure is the most frequently used way for a client/customer to select a supplier or contractor for a construction. (Persson interview 2009-02-11) In a bidding procedure, the contractor/supplier with the lowest price quoted wins the contract. The contract documents may or may not cover the means by which the construction will be carried out or what other subcontractors are to be hired. If the main contractor has won the contract for the entire construction, an example of a subcontractor to the contractor is the docking equipment supplier. The subcontractor can then either be nominated, “specified”, or not nominated in the contract documentation. Using of a nominated subcontractor has legal implications on the contract between the main contractor and the client on issues such as delays caused by the nominated subcontractor. (Byggprocessen 2000:137) In cases where there is no nominated subcontractor the main contractor usually tries to maintain flexibility in building or product specifications. By doing so they try to avoid situations where only one subcontractor can be hired and there is no room for negotiations, meaning no flexibility in prices. (Persson interview 2009-02-11)

As a result, the heavily price focused bidding procedure has brought a tremendous cost focus to the construction industry. The price, which the quotations stipulate, regards the production of the building with no consideration of future costs. The construction itself merely amount to approximately ten per cent of a buildings’ lifetime costs. The term landlord/tenant problem has emerged to describe situations where the landlords or building owners make decisions with low initial costs but high long term costs for their tenants. (Landin interview 2009-02-23)

#### **4.6 Stakeholders in the Acquisition Process of Docking Equipment**

A company’s stakeholders are everyone with a stake in the company. In addition to the company’s customer, it includes the owners, suppliers, and the environment at large and so forth. The term *process stakeholder* is used to describe anyone who is affected and/or can affect the above-described process in which Crawford’s stakeholders acquire and use docking equipment.

The terms used in this chapter are buyer, customer and end user. The *buyer* is the transactional partner who the seller signs the contract with, but is not necessarily the customer. Who the primary stakeholder – the *customer* – is can vary depending on a set of priorities. Since the primary stakeholder varies, there can be many customers in one process. The *end user* is the one who will use the solution in their daily operations and is therefore considered to be an important stakeholder throughout the entire process.

#### **4.6.1 Organizational Level Stakeholders**

There are great variations in industry logic between the different types of companies throughout the process. There are also factors on an individual level affecting the motivation and behavior in negotiations. This greatly affects how the described counterpart acts based on what it is valued by the organization or the individual.

##### **4.6.1.1 Main Contractors**

A main contractor is responsible for the construction of a building in accordance to the agreed upon contract documents and the budget agreed upon through the bidding procedure (Persson interview 2009-02-11). Bluntly put, main contractors make money by offering the lowest quote to their clients and thereafter squeeze their subcontractors' margins enough to make a profit. Thus, in cases where Crawford is not a nominated subcontractor, it is very difficult to win a bid with a main contractor and still make a profit. (Nordberg presentation 2009-03-03)

##### **4.6.1.2 Real Estate Owners**

Real estate owners manage and develop buildings. Their cash flow is generated by rents from their tenants and in the long term profitability depends on selling the property with a healthy profit. Some real estate owners, such as ICA Fastigheter AB, that have sprung out of another core business deviate from this profit focus. Their purpose is instead to specialize in real estate management and development of the retailers' stores and thereby allowing the store managers to focus on optimizing the stores operations. (Malmqvist interview 2009-03-06) At both IKEA and ICA, the real estate owners, not the end users, are involved in the specification and buying activities within the acquisition process. However, their organizations are structured so that the end users' feedback and future needs will be taken into consideration in the acquisition process (Christofersen interview 2009-02-25, Malmqvist interview 2009-03-06).

##### **4.6.1.3 Facility Managers**

As is implied by the name, facility managers are specialized in the management of facilities. Depending on client operations and needs, this can involve everything from plumbing, sanitation and service of equipment to front desk staffing. As with the role of specialized real estate owners, the clients of facility managers regard the main benefit of these services to be that their employees can focus on their own operations. (Malmqvist interview 2009-03-06)

##### **4.6.1.4 End Users**

End users are usually involved to some extent in the specification and buying of docking equipment. Either they participate themselves or the main contractor, real estate owner or developer represents them. Since the end user will be the one utilizing the products, their voice is important but sometimes hard to get through when other entities make the buying decision. (Nordberg presentation 2009-03-03)



#### **4.6.1.5 Developers**

In processes where developers are involved, their involvement spans over all activities in the acquisition process. They are similar to contractors in that they often but not always construct the building. On the other hand, regardless of their role in the construction, they have a more long-term strategy and remain the ownership of the building after it has been built. Though developers sometimes might build on speculation, meaning that they construct a building without a tenant contracted, the building is usually customized for a certain type of usage such as logistics or retail. Still, developers try to achieve some level of flexibility in the buildings for changes in future tenants' requirements. (van der Linden presentation 2009-02-04)

#### **4.6.2 Individual Level Stakeholders**

On top of the influence on behavior caused by organizational belonging, there are also a number of independent factors. Naturally, employees to a great extent act in line with the organizations' interest. There are however a number of factors that cannot be derived to the industry logic.

Initially, there is the incentive system utilized in the organization. Often, especially in procurement departments, employees are incentivized on the level of discount they are given by their suppliers. If the supplier offers a lower lifetime cost but no discount, there is very little incentive for the employee to make the deal. (Webster interview 2009-03-24)

Individual aversion or acceptance of risk is also an influential factor as many offerings made by Crawford are different than what the employee is used to and therefore brings more risk to the table (Nordberg presentation 2009-03-03).

Finally, the employee's time-horizon for rewards can be of influence. Even though a deal might be much better over five year's time, this will be of little use to an employee who will be retired in two years. Employees planning on switching company or department may act the same way. Again, acting in a different and new way in the way of doing business will only add risk and offer nothing in return for them. (Nordberg presentation 2009-03-03)

#### **4.7 Business Case Example**

There are some cases deals that have actually saved Crawford's customers more than the cost of their investment in docking equipment (Nordberg presentation 2009-02-03). Selling a solution to the customers' needs, as in these cases, is what Crawford aspires to achieve with their solution selling. Increased efficiency through dock management systems and energy savings are two common areas for great savings potential. The business case in appendix 1 illustrates how the customer can achieve cost saving in both energy and efficiency as well as decreased construction costs. It shows the initial costs, maintenance costs and construction costs of the building. The number of docking bays remains constant (100) in all four alternative solutions.

As seen in figure 26, the Ordinary Solution is only slightly less expensive than the Dock Management Solution and due to higher construction costs; it leads to a higher initial cost than Loadhouses. Through great decreases in operating and energy costs and lower rental costs, the three alternatives other than the ordinary solution generate decreases in yearly variable costs for the customer. Dock Management saves time for both truck and forklift drivers and thereby saves the customers variable costs. In addition to the energy and productivity related cost savings, the loadhouse alternative also generates savings in the construction of the building. Since the loadhouse is placed outside the building and thereby increases the operating area of the building it leads to a decrease in the required building area size for the same capacity requirement. Hence, it saves money for every square meter it replaces.



**Figure 26** A fictive but realistic and fact based business case example.



## 5 Initial Analysis

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*In this chapter, the initial findings are analyzed. Firstly, we state reasons why it could be that the business case is not enough for solution selling. The present market segmentation fails to acknowledge the co-existence of multiple customers. Through the utilization of the BUM, this view is strengthened and a blue ocean is identified. Finally, conclusions are drawn and the need for an elaboration through a case study is presented.*

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The business case in the previous chapter clearly illustrates a great theoretical potential for value creation in this function-focused industry. Despite this great potential the obstacles for delivering upon the potential seem to be even greater.

There are vast variations in customer needs based on both their industry logic and individual level factors. Further, Crawford's market segmentation is built on an assumption of mutual exclusion between customers, meaning that only one actor is considered the customer for each deal. The assumption that the market segmentation is built on leads to an inability to identify all customers' needs. Instead, in order to understand the customer complexity, it must be acknowledged that there is most often more than one customer per deal. The customers co-exist sequentially or even simultaneously throughout the process. The main contractor will never *use* the docking equipment and the end user will never construct the building though it might still be somewhat involved in *receiving* the docking equipment together with the main contractor. There is most likely only one buyer meaning that only one of the process stakeholders is paying for the docking equipment. As stated in the theory, the transactional partner is not necessarily the customer, nor is the customer always the transactional partner. Therefore, all process stakeholders, not only the end user, should still be attended to. Their activity in the acquisition process is crucial since they are a contributor to the end user's delivery. The contractor for example delivers the building to an end user, and helping the builder do that job is in the long run a deliver to the end user, therefore Crawford must not sub optimize the process by only addressing one process stakeholder throughout the entire process. A clear example of this customer ambiguity is when a contractor purchases equipment on the behalf of the end user.

The complexity of the customers' interdependencies, the landlord-tenant issue and the fact that customers rather save some money today than bet on potentially larger future savings, seem to dilute the importance of the business case itself. The calculated value in the business case is of ViU character. It is focused on the end users' benefits from the solutions, not the preceding active parties within the process. This again illustrates what must always be kept in mind regarding value; its degree is based on the customers' perception. Also, as the ViU is far away in time and often perceived by another entity than the purchasing one, it is clearly hard for Crawford to capitalize on.

The value gap that we speculated on in the theoretical framework seems to occur within this process. Thus, our hypothesis that the ViE and ViU is not the complete answer to the solution selling at Crawford is possibly correct. We will try to determine whether a potential for the so-called VoE can be isolated in the acquisition process. In order to evaluate the complete picture, the BUM has been used to process the data. This also correlates to Path 3 – *look across the chain of buyers* – in the *Six Path Framework* (Kim & Mauborgne 2005). If there is a VoE, it will most probably be delivered to some one other than the end user. The customer complexity described in the initial study together with the value analysis makes this an interesting intersection where we can analyze:

- The view on the market – Is the term “customer” used too narrowly?
- Process of value-creation – Is there a *blue ocean* in the process?
- The potential for VoE – Can exchange of goods potentially be value adding?

### 5.1 Buyer Utility Map Analysis

Two steps in the process, Supplements and Disposal, have been disregarded due to the delimitations of our scope. The identified utility levers and their corresponding effect in the studied steps of the buying experience process are discussed below and summarized in figure 27.

	1. Purchase	2. Delivery	3. Use	4. Supplements	5. Maintenance	6. Disposal
Customer Productivity	BLUE	BLUE	RED		RED	
Simplicity	BLUE	BLUE	RED		BLUE	
Availability	RED	BLUE			RED	
Safety		RED	RED		RED	
Customer Relations	RED	BLUE	RED		RED	
Customization	RED	BLUE	RED		RED	
Sustainability					RED	

**Figure 27** The BUM above is a customized version inspired by Kim & Mauborgne (2005:121, figure 6-2). The seven utility levers have been identified based on empirical findings and influenced by the theoretical framework. The BLUE areas indicate a by us identified opportunity to go outside industry standard way of doing business and potentially add value in a new way. The RED areas indicate where most competitors are making great efforts today.

- Customer Productivity

RED: The focus in the industry is clearly on end user productivity. All competitors name their key priority zero down time, trouble free operation or productivity enhancement. This is partly done through products of high quality that won't break, but also through 24-hour-service that fixes all issues fast.

BLUE: Little is said on enhancing the sales process, perhaps standardizing of product portfolio or having a tailored solution to a specific organization could ease this process. Furthermore, the productivity in delivery – or installation – is not a key selling criteria. This intrigues us since the productivity of the builder possibly can affect their preference of one supplier over the other.

- Simplicity

RED: Once again the use is considered red, this due to all aspects of the solution in use – guiding lights, buttons and foolproof displays – are made for simplifying the daily business.

BLUE: Other areas like purchase and delivery have not been subject to such simplification. The suggested customized portfolio or a tailored project model to the builder during delivery could be examples of simplifying these steps. The emerging Key Accounts on sales side is a good example of the capitalization on this step. There is also a potential to simplify maintenance by for example reducing the vast number of spare parts available.

- Availability

RED: Service, or maintenance, is typically red. All competitors that provide the equipment claim to have the best service, than an additional number of organizations like facility managers have their own service of these units. Service is a high margin business that has attracted a lot of fierce competition. When selling these products, availability and responding fast to quotes is standard. No one can afford to wait or be inattentive to the customer.

BLUE: In delivery yet again, the focus is more on get on with business and not making sure that the builder gets the same attention the end user later will get nor the buyer recently got. The middleman is not attended to in the same extent as the previous nor succeeding entity.

- Safety

RED: In all areas where safety is an issue, it is attended to with great care. These products are installed and used in extreme environments with heavy

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machinery and a lot of movement going on. Everyone takes safety seriously. We see no value potential in this segment.

- Customer Relations

RED: During the purchasing, most work with Key Accounts or at least dedicated sales men that are focused on building a relationship with the customer. The relations to the end user are also prioritized and there is little room for value potential within use.

BLUE: Although the time spent with the builder is considerably longer than the time spent with the buyer, developing relations with the builder on site is not prioritized. We are interested in understanding how the manager on site, can affect the purchase decision and what measures can be taken to ensure that only positive feedback regarding Crawford is generated.

- Customization

RED: All products are made to order, not one unit is more or less customized than the other. Nor is one service agreement or sales process a like. The standardization is non-existing, for better or worse.

BLUE: Although all installation processes are unique, the customization is not upheld as a value-adding aspect. Perhaps a tailoring to different project models or a Key Account installer that answers to a specific builder could be of interest.

- Sustainability

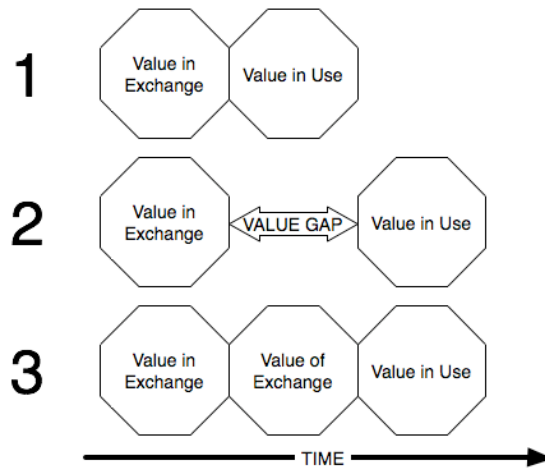
RED: This is of interest in the use phase, meaning that energy savings and so forth will be of greatest impact there. However, this is a selling argument used, as described in the business case, and often not a sure buying criterion.

In this analysis, two things are to be concluded (1) the delivery shows great potential for being a blue ocean, a new take on delivery and the view on this step of the process could potentially be valuable. (2) If the delivery shows this kind of potential then the view on contractors (almost always active in delivery) is too narrow. In order to capitalize on the *Value of Exchange*, the value in delivery, it has to be perceived by the customer. Since the contractor is the one involved in delivery, they have to be considered customers and they have to be attended to as such. This is a finding that through Path 3 there has been a potential detection of another customer in the chain of buyers.



## 5.2 The Analysis of Value Potential

Returning to the suggestion of adding a *Value of Exchange* parameter to the usage of ViE and ViU, this VoE will most probably be found in delivery and installation regarding docking equipment. Whether customers can perceive that value and whether it can be said to create a competitive advantage is far too early to say. Figure 28 illustrates the VoE suggestion. The ViE for docking equipment is hard to argue for; the mere owning of doors and levelers is not a good selling argument. However, the price and sacrifice connected with the exchange is very close and real to the customer. This is the most unfortunate combination from a seller's point of view; a clear sacrifice now with an uncertain benefit later. With this setup, the industry standard operating procedure with the three main buying criteria – price, price and price – makes sense.



**Figure 28** The illustration of the idea of Value of Exchange from chapter 3.5 The Toolbox From Theory and Methodology

The potential benefits are of ViU-character and are far away from the purchase situation. In most cases the usage takes place many months later, often in another organization with a business the buyer does not completely understand. Hence, the difficulty to reach a deal with ViU arguments is great; the benefit of the business case is too far ahead, too abstract and too uncertain for a buyer to pay a premium.

With products that will not have a realized value for a long time, where services dependent on the installed units, and products that, even when used, are not ends in themselves but means to reach a desired result we come to wonder where value can be created.

The selling process is viewed as the key in generating customer value through solution selling. Similarly, service with its “change before it breaks” initiative is crucial to provide trouble-free-operation around the clock, another customer value. The installation process, however, is commonly regarded as a cost center. The attitude at Crawford seems to be that installation can save the day but never add value. Our analysis of the BUM, however, suggests that the view on installation may be a bit limited.

### 5.3 Conclusion and Need for Elaboration

We question the modest view of the installation process within the case company, and simultaneously challenge Hammer and his statement: a good delivery and being easy to do business with is never value adding. (Hammer 2003)

To begin with, the installation process is an integrated part of the case company's business. Unlike their competitors whom of many outsource both sales and installation, Crawford can act within, reflect upon and improve their installation process. The installation process has clear interfaces with most of the customers in the complex customer environment. The additional interfaces with other actors in the building process leads to the potential to improve not only their own isolated activities but also the whole chain of events in constructing a building, meaning if Crawford develop superior project management skills, they can help identifying problems early for the builder and even suggest improvements. With a holistic view on their offer – their solution – processes should be an important aspect. Therefore, the process of installation should serve as an opportunity to demonstrate good project management and high quality of the work performed, good enough to lead the customer to believe that Crawford's service will be of superior quality as well. If Crawford already bears the cost of an integrated value chain, from sourcing to service, then they should maximize the benefits of that integration.

As stated above, the more value-focused solutions are hard to sell to this market. Yet, the low price offers that do sell more easily are not necessarily right for the end user or the most economic in the long run. To cross the chasm of uncertainty to the blue ocean of solutions, an aqueduct needs to be built. A differentiated, relation-oriented acquisition process may convince the customer in early stages to dare choosing the solution over the lowest bid. Also, a relation-oriented approach could support the builder to dare choosing a higher bid based on the comfort of knowing the process will run smoothly.

Our ambition is to explore what factors characterize a successful acquisition process and more specifically an installation project, and if the successful installation can be considered value adding from a customer point of view. By revisiting customer as a term and including the main contractor as a sequential customer and not an alternative to the end user the term *Value of Exchange* (VoE), developed in the theoretical framework, will be further analyzed. The case study to follow will explore the way to exchange the offer, the customer relations in the exchange and the adaptability to the customers' processes.

The first purpose of the thesis is now to be considered answered - there is a value potential, but the business case (ViU) is not getting through. The potential for VoE is identified through the BUM and in the delivery/installation stage. However, what specific factors, capabilities and activities are needed to capitalize on that value is not yet defined. The following case study will help determine the specifics on VoE in the studied function-focused industry.

**Concluding:**

- Rather than one customer per deal there are in fact multiple customers that co-exist
- The business case is not enough to persuade the transactional partner because the value it creates is *Value in Use* (ViU) and not sufficient for that customer
- There is a blue ocean in multiple utility levers in the delivery stage where *Value of Exchange* (VoE) can be created
- A case study will be conducted to identify what factors create VoE



## 6 Case Study – Crawford Sweden, Gothenburg

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*This chapter covers a case study of the installation in five so called big projects in Crawford, Sweden. Firstly, we present general information regarding installation routines and organizational structure. Thereafter we give a brief project summary followed by a deeper description of each of the five projects. For every project we list key findings – incidents, activities or solutions that have stood out and will be further elaborated on in the Final Analysis to come.*

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### 6.1 Introduction

In the initial study and analysis the delivery stage was found to have a potential for value creation. By studying five large projects we hope to find factors that can add value to the customers, so called *Value of Exchange*. The identified utility levers in the *Buyer Utility Map* will serve as a foundation. From the case study, we aim to identify factors adding to value creation within the levers.



**Figure 29** One of the largest logistic centers in Sweden, all docking equipment delivered by Crawford. (Internal documentation 2009)

Crawford Sverige AB, Crawford's Swedish sales company, is considered to be a good example of project management within Crawford globally (Vestman interview 2009-04-09). Today, Crawford has the ambition to have one project manager assigned to *Big Projects* (see chapter 6.2 Delimitations) in each country. The necessity of having a trained project manager is greater on *Big Projects* than on the smaller and more frequent installations of fewer units. (Vestman presentation 2009-02-05) Even though the importance of project management is well anchored in the organization, the view on whether project management and well performed installations can add to customers' perception of value varies significantly. Some have a very limited view on installation; they say project management can possibly save the day when things have gone wrong in delivery, production or on customers' sites. According to them installation is more or less a hurdle for Crawford to overcome in order to make the

end user happy and the “real” value to be created. Others mean that installation is a key process that builds trust in the eyes of the site manager, that the installation can save money for the contractor. Thereby the installation process affects the customers’ perception of value. (Internal discussions)

The global installation manager identified five projects of similar size as either successful or less successful. Their similarities and differences will be mapped with the intention to analyze what leads to a successful project and what generates customer value. In addition the general view on the installation process can be discussed and analyzed.

## 6.2 Delimitations

The projects of the *Case Study* are so called *Big Projects* meaning an order value of €100 000 or more. In these projects the supplying process and project managers’ roles are more comparable from project to project than with smaller. The importance of professionalism regarding project management is also higher in the larger projects in respect to the complexity on the site and the amount of money involved.

Swedish projects are chosen not only due to their overall higher level of performance but also to generate stringency between the projects. There are many factors, both internal and external, that vary between countries. From a pragmatic standpoint Sweden is also closer, cheaper and the language barrier is non-existing.

Another demand on the projects was that docking levelers had to be included, an important aspect for many reasons. This thesis is about complete docking solutions, not only doors. Docking is also a crucial part in providing solutions to customers; most customers do not need a door and a leveler but a way to transfer goods from the truck into their building.

## 6.3 Project Overview

A separate company handles the installation process in Crawford Sverige AB. In this company, one person is titled project manager and he is located in Örebro but he travels across the country. (Vestman presentation 2009-02-05) There are a number of field inspectors that on large projects, such as those studied, can be titled project managers of the cases studied. The project managers are responsible for the planning and execution of the installation. This includes the communication with the site manager and the installation team. (Vestman interview 2009-04-09)

The installation team varies between projects and can be one of three different types:

- Own installers are Crawford employees equipped with Crawford branded clothes and gear. By some sales men they are considered to be the best installers. However, in large projects the own installers are too few to handle the large number of units in the amount of time desired. (Group interview 2009-04-17)

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- Subcontractors are one or many external installers who are paid per job on quotation. On the site they wear their own company clothing and use their own tools and gear. Many subcontractors are former Crawford installers who have formed their own companies. (Apell interview 2009-04-21)
- The specialist team is an international team specialized in big project installations. They are trained by Crawford to install nearly all products and have been equipped with trucks, gear and Crawford branded clothes. During installation projects they live in trailers on or close to the site. Not all members of the specialist team are Swedish or English speaking. (Vestman presentation 2009-02-05)

In big projects it is most often the main contractor that is responsible to purchase docking equipment in accordance with the end user's specification. Thus, Crawford usually deals with the contractor initially and it is only when the main contractor has won the bid for the contract that Crawford knows who the end user is. At that point, the contractor has appointed a group responsible for the project consisting of a project leader, a site manager, a purchaser and one or many foreman. Once the end user is known, it is common to for Crawford to alter the specification according to the nature and needs of its business. (Persson interview 2004-04-23)

Docking equipment is a vital part of the building with many interfacing areas. Loadhouses especially are one of the last things to be installed in a construction as the floor, walls and surrounding concrete or asphalt works needs to be finished before. As a consequence of these dependencies there is a risk for the installation process to be delayed if delays occur in any of the preceding activities. Also, careful attention must be paid to the scheduling of the interrelated events. This however, requires a great understanding of the building process. The installation projects are not isolated from each other. If they occur simultaneously some resources must be shared such as the installers or project leaders. (Group Interview 2009-04-17)

### 6.3.1 Project Summary

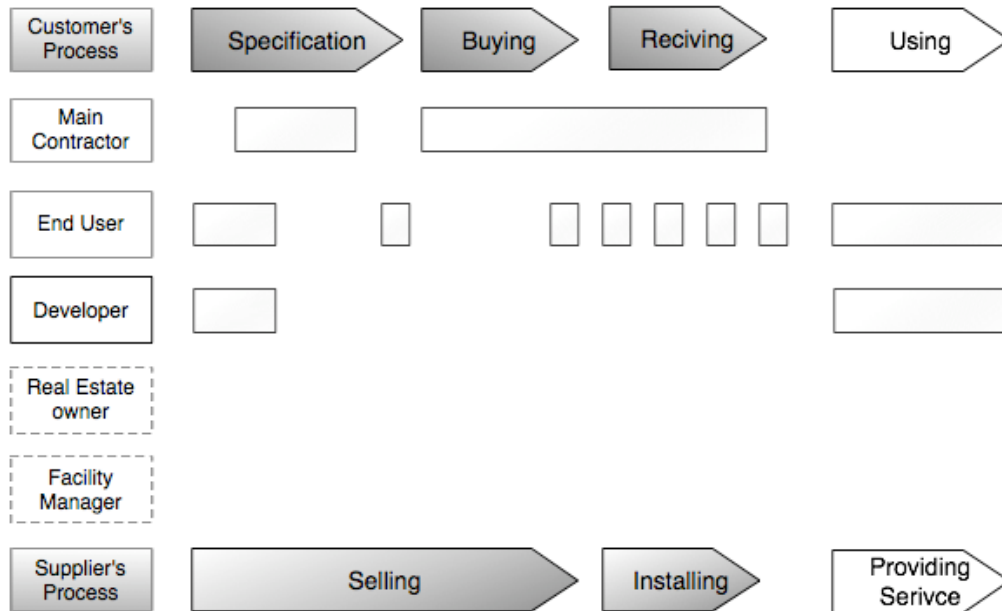
A summary of the five projects that have been studied is shown below in table 3 (Internal documentation 2009, Group Interview 2009-04-17). There are similarities and differences between the setups and no clear and simple correlation appears to exist between such factors and the success of a project. Therefore the projects will be further studied and finally discussed in context with other empirical and theoretical findings.

**Table 3** The project summary for all five cases, the key ratios and data is shown as basic facts.

	<b>Project 1*</b>	<b>Project 2*</b>	<b>Project 3*</b>	<b>Project 4</b>	<b>Project 5</b>
<b>Type of end user</b>	Logistic Company	Large Logistic Company	Large Logistic Company	Large Logistic Company	Food Service Provider
<b>Who Crawford signed the contract with</b>	Builder	Builder	Builder	Builder	Builder
<b>Type of units</b>	Loadhouses and doors	Loadhouses and doors	Loadhouses and doors	Loadhouses and doors	Loadhouses and doors
<b>Type of installer used</b>	Sub Contracted	Specialist Team	Specialist Team	Specialist Team	Specialist Team
<b>Hours spent on each unit on average</b>	7,5 h	6,5 h	9 h	6,5 h	8,5 h
<b>Project duration, from establishing on site to leaving site</b>	24 weeks	18 weeks	12 weeks	24 weeks	17 weeks
<b>Percentage of installation budget used</b>	86 %	65 %	86 %	60 %	78 %



### 6.3.2 Project 1 – Logistic Company, Southern Sweden



**Figure 30** The *Activity Canvas* on project 1 shows that the builder is the most active party from the customers' side, followed by a quite active end user who visited the site and engaged in the process as well.

The docking equipment was sold to the contractor responsible for the construction of the facility. A developer in the same corporate group as the contractor was the facility owner. After approval from the contractor, the sales man was allowed to meet with the end user who up to that point had been unknown to Crawford. At this meeting it was identified that the levelers needed to be longer and an alteration in the specification was made. A longer leveler is more expensive but is also more suitable for the larger trucks that the end-user had planned to use. The end user covered this increase in price, as it was they who had ordered the alteration. The increased functionality for the end-user improved the contractor's delivery since Crawford was a subcontractor to the contractor. (Persson interview 2009-04-23)

A few months prior to the installation began the sales man arranged a meeting where he and the project leader from Crawford met with the purchaser and site manager from the contractor. This meeting helped pass information from the sales man to the project leader at Crawford and the purchaser to the site manager at the contractor. In addition, this meeting also helped Crawford to generate an understanding of the site managers' wishes regarding routines and methodology for the construction, such as what was expected of Crawford regarding documentation and general building routines as well as a better understanding of the entire construction project ahead. *"In these meetings we try to develop an understanding of how the site manger wants his or her projects to be run."* (Persson interview 2009-04-23)

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The project leader from Crawford was at the site about once every two weeks to participate in the building meetings. This frequency was higher during the weeks prior to and the first week of the installation but decreased once it was underway (Apell interview 2009-04-21). Though the sales man's involvement from a transactional point of view was over, he visited the site on a weekly basis during the installation. The relationship between him and the site manager is very good. The site manager's influence on the selection of subcontractors is great, "... *seventy-five percent of the decision*", Persson states. "*One site manager has only had docking equipment from us [Crawford] delivered to his sites for the last three years.*" he adds. (Persson interview 2009-04-23)

The installers were external subcontractors who preformed well (Apell interview 2009-04-21). Their manager was responsible for the daily contact with the site manager. Yet, when the sale was made, terms regarding installation were not discussed to a great extent. As is common, the contractor did not know who, or how many, would install the docking equipment. (Persson interview 2009-04-23, Apell interview 2009-04-21, Group Interview 2009-04-17)

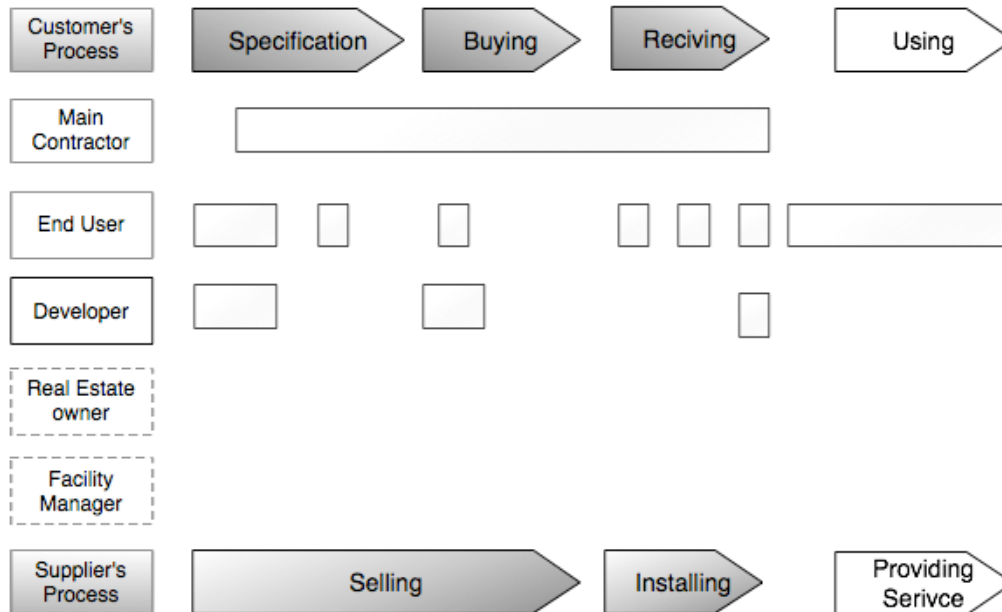
Three unplanned incidents occurred during the installation. Firstly, an electrician had used space and equipment belonging to Crawford and thereby obstructed their installation. This situation was resolved through a meeting with the project leader, the electrician, the site manager and the subcontractors. Secondly, the installation was somewhat delayed due to a delay in the ground concrete works, a step in the construction which needs to be finalized before docking equipment can be installed. The installation team noticed the lack of progress in the concrete works, which they knew they were dependent upon, and contacted the project manager who then encouraged the site manager to speed it up. The fast response helped decrease the severity of the delay and the installation finished nearly according to plan. Lastly, an on-site visit by the end-user exposed a misunderstanding regarding the specification. A docking bay at the far end of the building would not meet the end-user functionality needs of handling large trucks. After discussions with the end-user a customized solution was installed. (Persson interview 2009-04-23)

In the end both the contractor and the end-user were happy with the both the installation process and the end result (Persson interview 2009-04-23).

#### **Key Findings:**

- A relation to site manager can make or break a deal
- It is not a guarantee or standard operation procedure to meet with end user
- An initial meeting with end user resulted in a chance of specification

### 6.3.3 Project 2 – Large Logistic Company A, Southern Sweden



**Figure 31** This *Activity Canvas* shows the main contractor as a clear dominating party from the customers' side, the developer though who has commissioned the job is also involved.

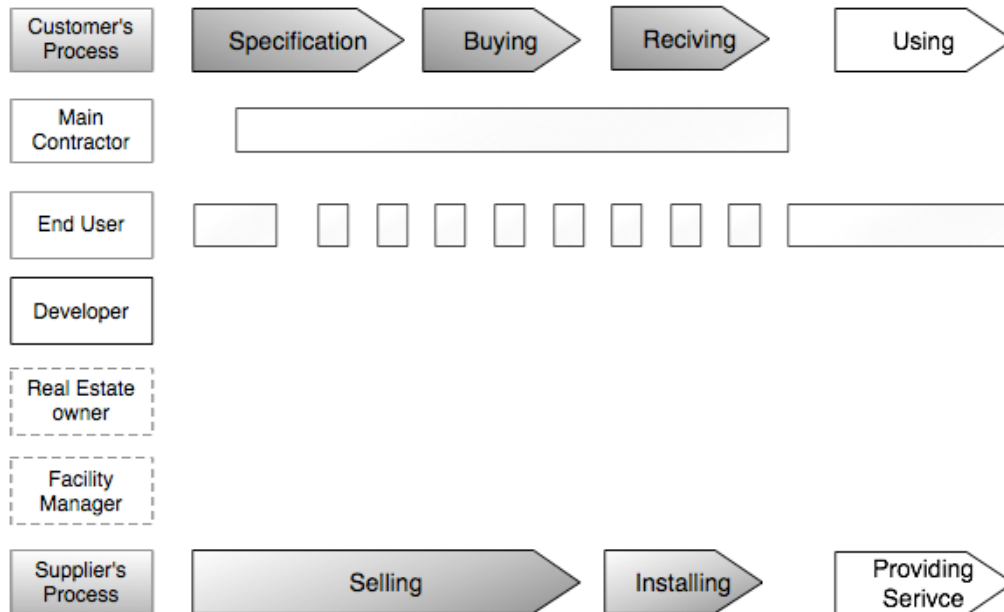
This project was sold to the main contractor but with clear involvement from the end user. All products are specially tailored to the end user's standards and that standard can later be reused in new projects. (Group Interview 2009-04-17)

This installation was performed very intensely during July. The site was almost empty due to the traditional vacation weeks being in July. *"The fact that the installation could be finished by the time all other functions returned from the vacation was greatly appreciated and the job was finished long before deadline"* (Pettersson in Group Interview 2009-04-17). The project manager responsible for the installation was on site more or less every day. As it happened, he lived nearby and could with no ado stop by. Often sites are a long drive from the project managers' work place, some times over 200 km, but the short distance made the appreciated visits to site possible. (Group Interview 2009-04-17)

**Key findings:**

- If possible, develop a tailored standard that the end user will be able to reuse when new project occurs
- The specialist team's ability to work during holidays and weekends without additional costs are to be considered a competitive advantage
- Make sure to be on site as often as possible, perhaps even every day when the installation begins, and later when all runs smoothly, once a week is enough

**6.3.4 Project 3 – Large Logistic Company B, Southern Sweden**



**Figure 32** This *Activity Canvas* shows that one main contractor together with a very active end user were the two predominant actors.

When the project manager on national level became involved in too many simultaneous projects, this one was handed over to a project manager dedicated to this project only. The sale had been made to the contractor, but the specification was tailored to the end user’s wishes. The specification was complicated and a lot of work in steel and with isolation had to be performed on site. With the specialist team and the new project manager working together this custom job was a great success in the end. (Group Interview 2009-04-17)

The idea to make one unit as a perfectly mounted unit – a prototype - finished and ready for inspection from both the site manager and the end user is supported by this project manager. The prototype is a better way to discuss changes and or acts as a model to be replicated for the following units. For greatly customized installations or units there is no installation handbook and trying to describe everything on a drawing has sometimes proven to be too difficult. (Group Interview 2009-04-17)

The builder in this case was very open-minded and flexible, but than again the project manager was on site almost every day. In the end there was not a single remark on the final survey Crawford passed all inspections. (Group Interview 2009-04-17)

The project manager has the firm opinion that the single most important thing in these projects is caring, “*Showing the builder and the end user that their business matter is that which is by far most important*” (Karlsson in Group Interview 2009-04-17). The site manager may be on this site five-six days a week for more than a year, and then Crawford has to signal that this site is important, perhaps even the most important

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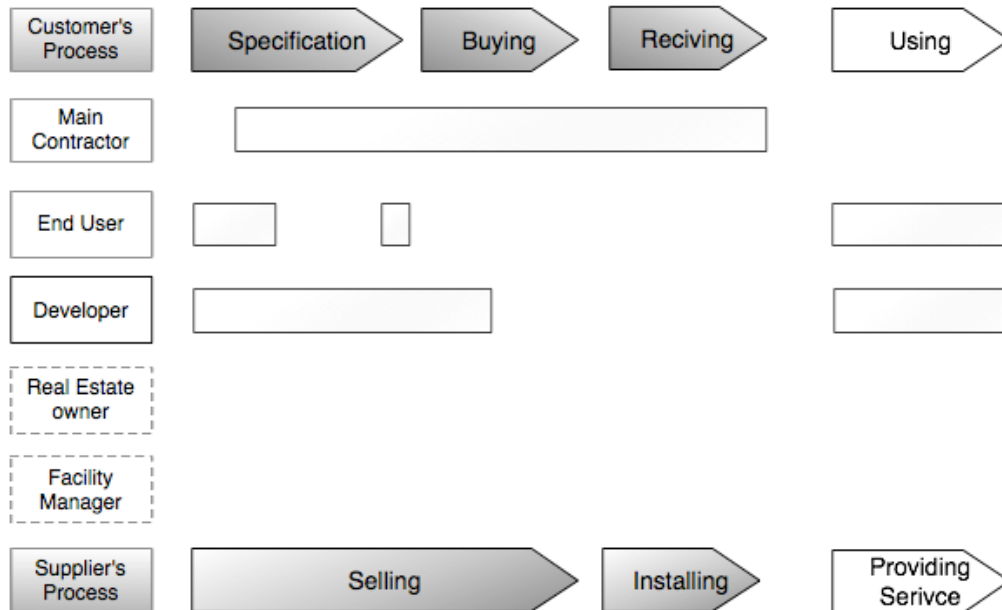
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site. Caring about and engaging in the business of the builder is crucial to building relations in this industry, the project manager says. (Karlsson in Field trip 2009-03-09, Group Interview 2009-04-17)

#### **Key findings:**

- A prototype-unit that is replicated is a good way to reduce mistakes and misunderstandings
- If a project is going down hill, extra resources should be allocated right away
- Planning is crucial, but for projects with a high degree of customization on site problems solving is equally important
- Engaging in and caring about the building process and the end user's needs builds relations

### 6.3.5 Project 4 – Large Logistic Company A, Southern Sweden



**Figure 33** During installation in this project, the *Activity Canvas* shows that the main contractor was the most active party.

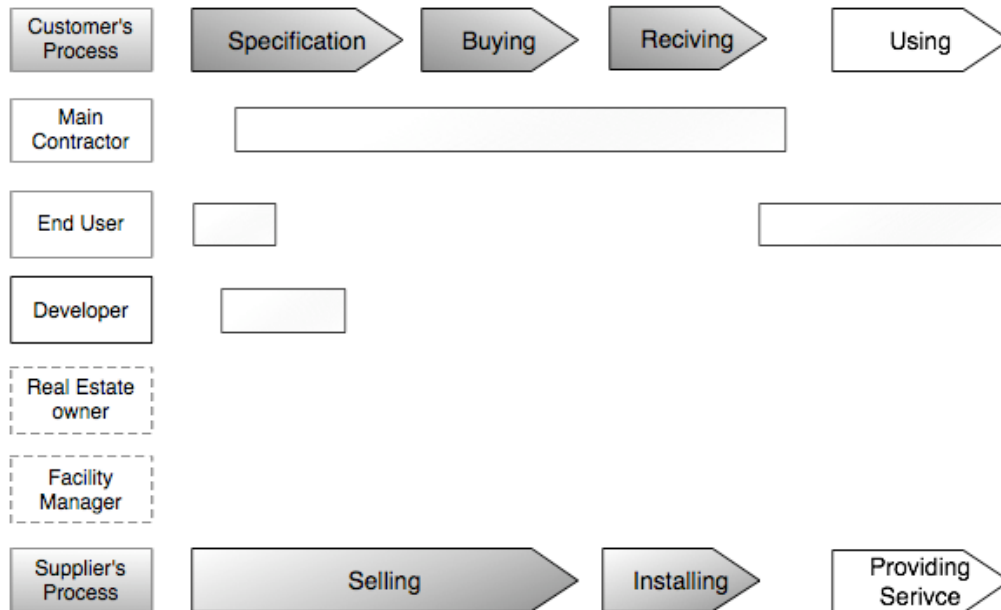
A big international developer commissioned this job. However, the deal was made with their appointed contractor in Sweden. In addition, only one third of the building had a specific tenant in mind, with its own demands, one third had a second set of specification and the last third was very far along in time undecided. The very complex situation made planning hard and specifications changed along the way. (Group Interview 2009-04-17)

In addition, the time plan was not correct to begin with. An activity that needed to be finished before the docking equipment was installed was scheduled to begin at the same time as Crawford’s installation. Either side in any division did not spot this until all units were already ordered. Since production and deliveries were already underway, postponing the delivery was impossible. Once the mistake was revealed a decision was made to remove the installation team and put them on another job. This had no negative impact on the installation itself but the site manager felt unformed and the coming and going was perceived as unserious. (Group Interview 2009-04-17) On the positive side, the order had been split. “*For capital cost reasons and so that we don’t crowd the site too much, we split the order in to quantities that are easier to handle*” (Melin in Group Interview 2009-04-17). Thus, the delay much less costly and troublesome than it could have been. (Group Interview 2009-04-17)

**Key findings:**

- Communicate plans and changed plans to the site manager
- Review the entire building plan to generate an understanding of all activities, not just the Crawford’s activities

### 6.3.6 Project 5 – Food Service Company, Central Sweden



**Figure 34** Activity Canvas for project 5 clearly shows the contractor being the primary actor in this installation.

The docking equipment was sold to the contractor responsible for the construction of the facility. A developer in the same corporate group as the contractor was the facility owner. This project is the only one studied where Crawford was not frequently summoned to site meetings. *“The contractor chose not to summon us”*, Apell states. Nor did a formal initial meeting take place where sales handed over to installation with the customer present. (Apell interview 2009-04-21)

This installation got off to a bad start when two deliveries were mixed up and the equipment intended for the first site were installed on the second site and vice versa. The mistake was revealed since colors on the shelters did not match. However, had the project manager been at the site earlier, the mistake could probably have been avoided. Also, the installation team did not react to the color difference, which the project manager did leading to the conclusion that the problem certainly would have been identified earlier had he been at the site. The specialist team performed the installation and the language difference came to bother the customer. Due to the non-existing initial meeting and lack of site meetings, the fact that non-Swedish speaking personnel would be on site was never communicated. (Apell interview 2009-04-21) In the following projects this has been communicated earlier and one of the sales men suggest it should be discussed in the sales process. A way to handle the language differences is for those installers who speak the domestic language to have differently colored vests than those who do not. (Group Interview 2009-04-17, Persson interview 2009-04-23, Apell interview 2009-04-21)

**Key findings:**

- Site meetings are a crucial way to receive information and voice concerns; if the project managers are not invited, they should invite themselves
- Communicate language differences early on so that the customer feels that Crawford is open and honest with everything concerning the project
- Use difference in clothes to signal language skills and thereby simplify and improve the productivity for the main contractor and other sub contractors



## 7 Final Analysis

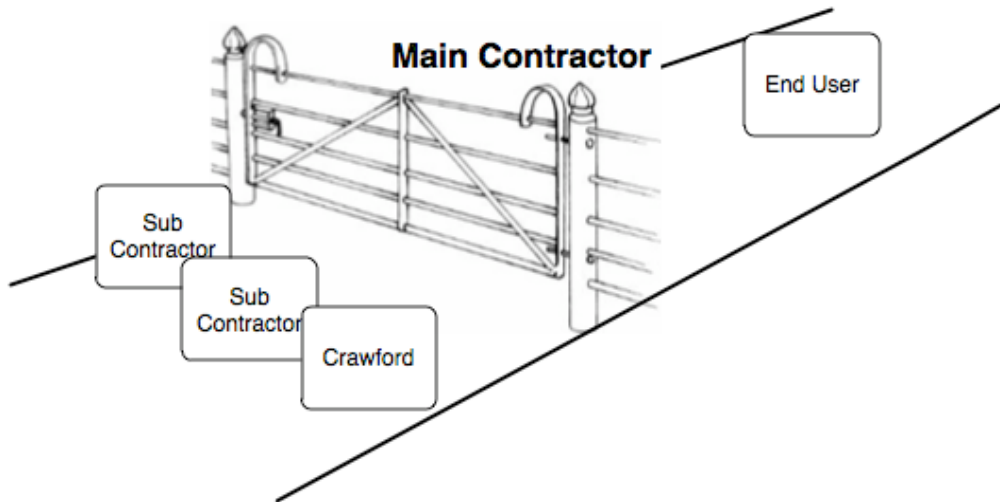
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*The Final Analysis provides a deep analysis of the Case Study but in the light of the preceding findings. The value gap and Value of Exchange (VoE) are once again elaborated on; the VoE is identified as a prerequisite to deliver Value in Use (ViU). Further, issues regarding the clothes that installers wear, reference processes and solution selling rhetoric are discussed. Finally, we present our key findings by breaking down the previously identified utility levers in the BUM.*

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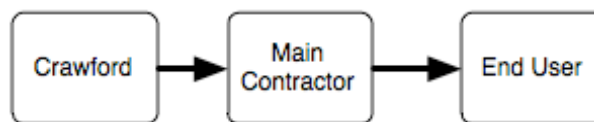
The initial analysis indicated the presence of a so-called value gap, a gap between the *Value in Use* (ViU) and *Value in Exchange* (ViE). This, we argued, might be resolved by focusing on the *Value of Exchange*, meaning the value generated by the exchange process itself, the installation (see chapter 3.5 for the theoretical discussion). By utilizing the BUM (Kim & Mauborgne 2005), this potential was further motivated, as it was evident that the delivery stage was a *blue ocean* for the vast majority of the utility levers.

Through the case study we learned that the customer, the most important stakeholder, in this stage is the main contractor and the more specifically, the site manager. The site manager is not only important during this stage but is also very influential in the preceding stage, the purchase, as he or she can and does greatly affect the selection of subcontractors. Furthermore, once Crawford has won the contract, a good relationship with the site manager enables closer contacts with the end user. Selling a solution to the end user requires knowledge about its needs. Thus, it is evident that the relationship to the site manager is not only important to increase the site manager's perceived value but also that of the end user. The view on the main contractor though, is at managerial level quite narrow. *Contractor & Developers* was also presented as the least attractive segment in the market (See chapter 4.3.1 Crawford's View on Their Market). Inside Crawford there is a widespread view of the main contractor as a gatekeeper who they need to pass in their end user oriented solution-selling quest (see figure 35). In many cases they feel that the main contractor hinders Crawford's chance to sell solutions and reduces the level of customization of these solutions. This function oriented mental view on the reality is illustrated by the figure below.



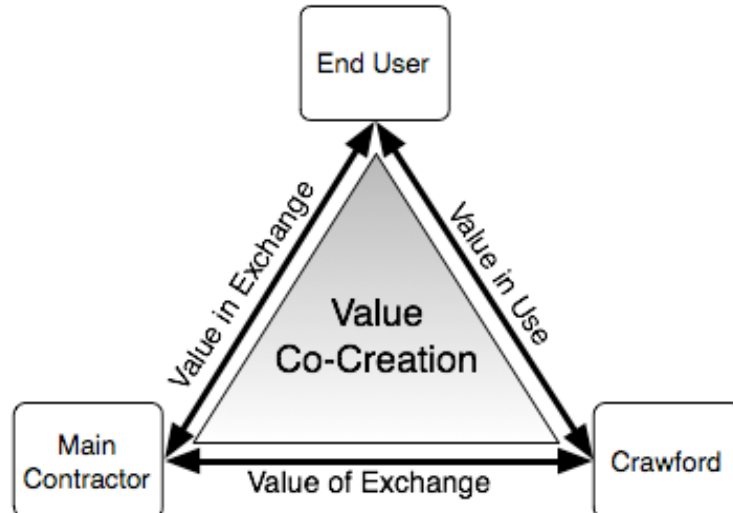
**Figure 35** The illustration above is an interpretation of the rhetoric in the Crawford organization regarding the main contractor.

The key account for contractors as well as project managers paints a different picture; the contractor is presented to be an important ally in meeting end user's needs. The view is more process oriented, illustrated in figure 36.



**Figure 36** A more nuanced picture on the interdependencies in the process of installation mostly based on project managers' and key account managers' point of view.

We can conclude that essentially the main contractor, though they purchase the equipment, what they actually “use” is Crawford’s installation, meaning that the contractor actually perceive the installation as a delivery making the case for VoE even stronger. Along with Vargo & Lush’s (2004) logic, “...that Goods are distribution mechanisms for service provision” the installation is indeed a service at least equally important as the docking equipment itself. This since the main contractor has no interest in using the products themselves. It is also the first opportunity to prove Crawford’s service capability and an important channel to sell service agreements, meaning the installation can add value in itself and contribute to long term benefits for Crawford. It is therefore both a delivery in itself and a sales opportunity.



**Figure 37** Our view on the *Value in Use*, *Value in Exchange* and *Value of Exchange* as contextual contributions for *value co-creation*.

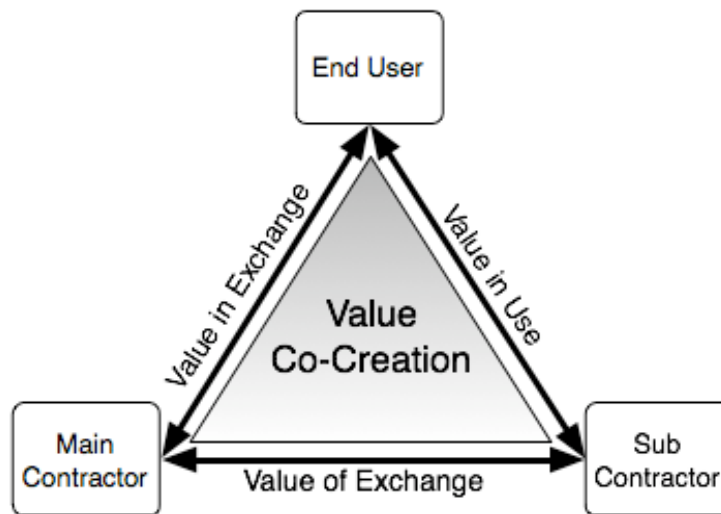
A more holistic view on the acquisition process includes the understanding of the main contractor's role in the process, oriented together with Crawford and the end user. Figure 37 illustrates this *Value Co-Creation* (Prahalad & Ramaswamy 2004) between the end user, the main contractor and Crawford. We acknowledge that this picture's validity is influenced by the behavior of main contractors, a behavior that definitely often is strictly rational. Still, we withhold that they are social constructions and that they make the relationships between Crawford employees and the site managers matter. In some of the projects above there has been a co-creation of value by Crawford, the main contractor and the end-user, for example project 1 where the altered specification generated value for all three parties. As stated above, the main contractor often determines the extent of the contact between Crawford and the end user and contact with the end user is a requirement for solution selling. Thus, *co-creation of value* (Prahalad & Ramaswamy 2004) with the end user but without the main contractor is difficult to achieve. This is mostly a question of respecting the setup and still making relationship an important add-on. A good example of the necessity of relation management and presenting their case in the right manner is the business case in chapter 4.7 on page 51. The savings the end user makes are at the expense of the construction budget, meaning that the incentive for the contractor to drive such a sale is non-existing. With our new findings on the importance of the site manager, the savings generated through the utilization of loadhouses must be revisited. As the business case illustrates, while a loadhouse is more expensive than the framed leveler with door and shelter, the higher price is more than compensated for through the decrease in construction cost. In their co-creation of value, with the main contractor and end user, Crawford must be careful in their rhetoric not to spoil relations with either party.

The challenges that Crawford face in their quest for end user-focused value delivery, while having the main contractor as the primary speaking party can be viewed as generic for most sub contractors. The illustration in figure 37 is presented in more general terms in the *STACC Value Model* below (see figure 38).

### 7.1 The *STACC Value Model*

The model below is named the *STACC* (Symbiotic Three Actor Co-Creation) *Value Model*.

Crawford is one of many sub contractors involved in three party relations with main contractors and end users. By adhering to the subjective nature of value, that it is based on customers' perceptions, it becomes clear that the three value concepts are in fact present in three different relations. Thus, we conclude that the *STACC Value Model* can help explain value creation and delivery in other contexts than that of Crawford. The model ought to be useful in environments where an intermediary is present though it is not yet examined. The extent of the *STACC Value Models* applicability is further elaborated on in chapter 8.1.1.



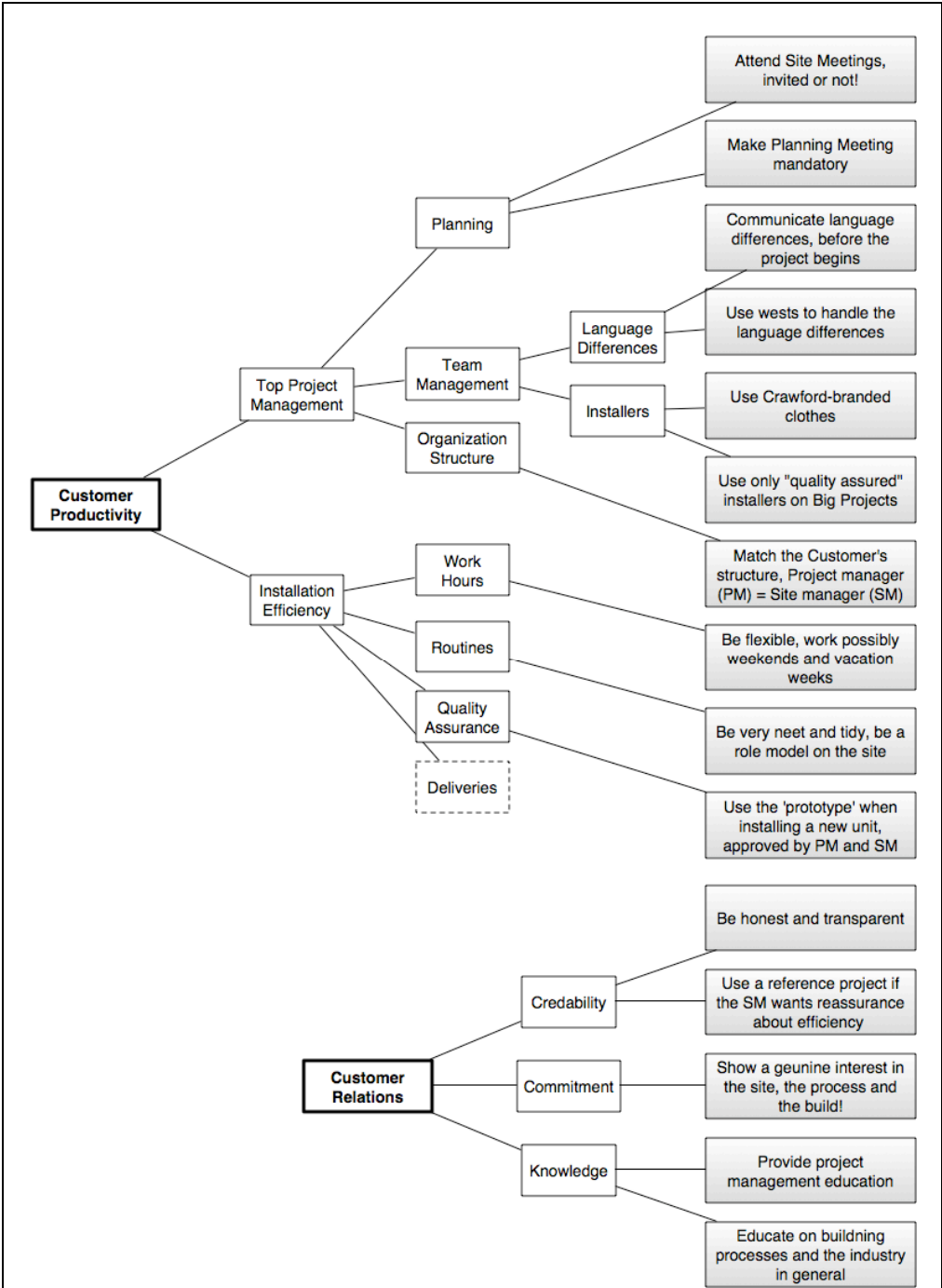
**Figure 38** The *STACC Value Model*, applicable for generic actors in the construction industry.

## 7.2 Factor Analysis and Conclusion

The project summary shows that it is project 3 that has the best installation in terms of final cost and hours spent per unit. Yet, this is one of the least successful projects. If installation is merely a cost center, then it could be managed based on such indicators. We find it clear that the installation is much too important for such measures. Today, no clear correlation on success and indicators exists. In this factor analysis we will try to break down some of our findings to specific actions, procedures or measures based on the cases and the levers from the BUM.

The case study has proven the importance of generating value for the site manager. It has shown that two of the paths in the BOS *Six Paths Framework* are applicable for Crawford; Path 3 – *look across the chain of buyers* (Kim & Mauborgne 2005:55) - and Path 5 – *in a functional industry, go emotional* (Kim & Mauborgne 2005:69). By breaking down the utility levers in the BUM we aim to show how this can be achieved. (See appendix 2 for complete complexity illustration.) The two prominent levers, *Customer Productivity* and *Customer Relations* are seen in figure 39. Some of these elements are shared between levers and some levers act as factors for other levers. The grey boxes, the *Key Value Factors*, are the factors we have identified as necessary to deliver upon in order to fully capitalize on the potential *Value of Exchange*. This analysis is the intersection of BOS and our case study, the BUM and capabilities to deliver value.

With these fifteen *Key Value Factors*, we believe to, at least partly, having answered the question of, not only if but also, how and where value can be created and delivered in this function-focused industry. We believe that there are three major categories of value created in this industry: *Value in Use*, *Value in Exchange* and *Value of Exchange*. We want to add VoE to the traditional two in order to give clear meaning to service dominant offers, like delivery, not labeling them as necessary evils but great channels for *Value Co-Creation*.



**Figure 39** The fifteen derived *Key Value Factors*. These are based on the two prominent *Buyer Utility Levers* and suggest how Crawford can capitalize on the value potential in the installation process.

## 8 Discussion

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*This chapter covers discussions regarding the entire study. By questioning some of our assumptions, methods and delimitations we aim to present alternative paths that we could have gone down instead. From this reasoning we base suggestions for both improvements of our own study and ideas for future studies*

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In this thesis we have defined a term, which we call a *value gap* and the presence of such a value gap in the initial study – more specifically in installation. Obviously, there needed to be a value gap to generate a term for it and the same is true the other way around. In that way, this thesis has had an academic and an empirical contribution.

### 8.1 Theoretical Framework and Contributions

The BOS framework has guided both our gathering and analysis of empirical data. Developed as a diagnostic tool to explain successful strategies we feel the framework is still somewhat difficult to use in the creation of new strategies. It is, however, very useful in questioning present assumptions and thereby opens new opportunities. See chapter 8.4 for suggested areas of further research.

BOS is centered on value and *Value Innovation* and it was these terms that led us to *axiology*, the study of value. Based on the many ideas in the value framework such as the *Prospect Theory*, we consider our theoretical contribution – *Value of Exchange* – to be theoretically sound.

#### 8.1.1 The General Applicability of the STACC Value Model

In chapter 7.1 we concluded that the model with Crawford as the sub contractor could be generalized, replacing Crawford with any sub contractor in a similar situation. We do not know to what extent, or even if, other sub contractors aim to generate and deliver value for the end user and/or the main contractor. Still, the *STACC Value Model* illustrates how the parties relate and what type of value is potentially created and co-created. It is likely that the *STACC Value Model* is applicable in other environments where intermediaries are common. Examples could be the consumer goods industry where producers deal with customers who sell to consumers. However, this applicability has not been examined in this study.

## 8.2 Empirical Findings and Contributions

Though we have found a potential blue ocean in delivery – installation – we do not know for how long it has existed or how sustainable it is. Crawford and their competitors might have always treated the end user as the most important, or even the only, customer throughout the process. It is more likely, however, that the end user oriented solution selling has grown as a resistance to a myopic main contractor focus. This reasoning is based on the fact that it is easier and at first glance more logical to focus on the customer than the customer's customer. Even if that is the case, that the main contractor has previously been at the focus of attention, our findings are by no means a step backwards. That Crawford should focus on the main contractor and improve the installation is rather a complement to and an enabler for solution selling.

This master thesis has been customer value oriented from its beginning. Yet, we have not confirmed our key findings through interviews with main contractors. This is probably the greatest area of improvement for our thesis. We have conducted interviews with end users and on small scale with main contractors. Still, it has not been made on a large enough scale to verify our findings completely. We do, however, rely on the insights provided by professionals working closely together with contractors and that we thereby have withheld a high level of reliability.

Two presentations of our findings will take place at Crawford, one on the May 28 and one on June 4 2009. On these events we hope to generate an internal verification of our findings. Yet again, the external validation would have confirmed our findings even better.

## 8.3 Empirical Gatherings

To gather empirical data we have used mainly individual interviews but also a group interviews where four interview subjects were present at the same time. It was striking to witness the affect this interview structure had on the quality and quantity of the data. Instead of a round table discussion where different views were shared, as we had hoped, the participants influenced each other to silence or search for consensus. Often, the first opinion that came out became everyone's opinion. We even experienced a certain level of secrecy, things we knew beforehand, were not provided as answers to the questions we asked. When we asked the same or similar questions in the individual interviews, the answers were much more openly shared without any censorship. This leads us to believe that the group interview not only tainted the data, but also decreased the reliability of it. For that reason we are certain that the best way to collect different people's opinion on the same thing is not always to put them in the same room and let them discuss it. Instead, they should be asked the same questions when separated from each other. If the interviewees had been more acquainted with us, and had had better insight in our work, perhaps the outcome would have been different.



#### **8.4 Suggestions for Further Research**

We have identified fifteen *Key Value Factors*. The next step for Crawford could be to use them in future projects and thereafter quantify the collected and individual value they amount to. This could either be done internally or through customer collaboration. The latter is recommended, as it is obviously easier for customers to decide upon what creates customer perceived value. Since the customer perspective is somewhat lacking in our empirical gathering, we suggest an external validation from trusted site managers with whom Crawford have good relations.

Even though our scope was on the acquisition process the BOS framework has helped us identify other interesting areas that could be interesting for Crawford to investigate further. Firstly, it could be interesting to explore the demand for and feasibility to lease docking equipment. This could involve mobile docking bays and/or pay-per-use payment methods. We do not think our thesis to cover the scope of all value initiatives possible within installation; we sincerely encourage new initiatives for Crawford to truly investigate the full Value Potential in their Function-Focused Industry.

The two theoretical contributions, *Value of Exchange* and the *STACC Value Model*, also need further examination and perhaps even development. It might be of interest to study their presence and applicability in other contexts such as the previously suggested consumer goods industry.



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## APPENDICES

### Appendix I – The Business Case

Business Case Calculation – Assumptions and figures are based on internal documentation but are adjusted with a factor X

	Ordinary Solution	Dock Management	Loadhouse	Loadhouse with Dock Management
<b>Docking Equipment</b>				
Leveler & door (€)	5000	5100		
Loadhouse (€)			10000	10100
Docking bays	100	100	100	100
Dock Management		5000		5000
<b>Total</b>	<b>500000</b>	<b>515000</b>	<b>1000000</b>	<b>1015000</b>

(Nbr of Docking bays x (Leveler & door) or Loadhouse + Dock Management)

<b>Construction Size</b>				
Construction area (m(2))	6000	6000	5000	5000
(Length x width)	(200x30)	(200x30)	(200x25)	(200x25)

<b>Construction Costs</b>				
Construction costs (€) / m(2)	800	800	800	800
<b>Construction costs total (€)</b>	<b>4800000</b>	<b>4800000</b>	<b>4000000</b>	<b>4000000</b>

(Construction area x Construction cost)

Rental costs (€) / m(2) / year	60	60	60	60
<b>Rental costs (€) / year</b>	<b>360000</b>	<b>360000</b>	<b>300000</b>	<b>300000</b>

(Rental costs x Construction area)

<b>Energy Costs</b>				
Energy consumption (kWh) / m(2) / year	100	100	70	70
Cost (€) / kWh	0.1	0.1	0.1	0.1
<b>Energy costs / Year</b>	<b>60000</b>	<b>60000</b>	<b>35000</b>	<b>35000</b>

(Energy consumption x Construction area x (cost/kWh))

## Exploring Value Potential in a Function-Focused Industry

Operation Costs				
Truck and Operator (€) / m	0.2	0.2	0.2	0.2
Distance traveled / year *	26100766	21360009	25769410	20953818
<b>Total Operating Cost / year</b>	<b>5220153</b>	<b>4272002</b>	<b>5153882</b>	<b>4190764</b>

(Truck and operator cost per m x Distance traveled per year)

Total				
Total Initial Costs	5300000	5315000	5000000	5015000
Total Variable Costs / Year	5640153	4692002	5488882	4525764

\* The distance traveled is based on following assumptions:

One docking takes place per docking bay and day

Each docking bay is visited ten times per day by the trucks

On average, the truck then travels one hypotenuse of half the length and the full width of the building

Without the dock management this distance is root of  $((100 \times 100) + (30 \times 30))$

With dock management the distance is instad the root of  $((80 \times 80) + (30 \times 30))$



## Appendix II – Factor Analysis: Complete Complexity

This appendix shows the complete complexity of the five blue levers from the Buyer Utility Map.

