



HELSINKI METROPOLIA UNIVERSITY OF APPLIED SCIENCES

Master's Degree in Industrial Management

Master's Thesis

**DEVELOPMENT IDEAS BASED ON CURRENT STATE ANALYSIS IN HIGH-VARIETY
TURNKEY PROJECT SALES**

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PREFACE

I am privileged to work in a challenging environment; shipbuilding is a complex process starting from a consultant's desk and ending in disintegration of a vessel. Like in business, I had no problem in the start. I knew that something was wrong, but I did not know what. Thus, I struggled a lot with the topic and current state analysis. But, in the end, I am satisfied with the results. The road I took was rocky and multidimensional, but I am glad I made it.

First, I wish to express my gratitude for my employer and my colleagues in the case company, especially for Maarit who checked my language. I had plenty of fruitful discussions on how I should proceed and what are our improvement points. Now, I truly believe that the best knowledge lies in our company. No matter what we sell – we can deliver it.

Secondly, I am greatly impressed about the guidance of Thomas Rohweder, the instructor of my thesis. Thomas was able to give me the target – all I needed was to find the path. When I got results Thomas helped me with interpretation and clarification. Subsequently, I thank Marjatta Huhta, who had objective eyes and helped me a lot in simplifying and writing. Also, I thank Taina Tukiainen, whose sentence was haunting in my head: "What does this all mean?" Now I know – thanks.

Finally, thanks to my wife, family, and friends who patiently supported my progress.

Vantaa, April 25, 2010

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ABSTRACT

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<p>The case company operates in an environment where the high-variety of main components does not reflect the systems which the case company is selling, and therefore, hampers performance of turnkey project sales. In addition, the case company's segmentation is leading to heterogeneous customer segments. Since sales projects are perceived as unique, price variation is substantial and leads to a situation where projects are often lost on early stages.</p> <p>Therefore, a constructive case study was initiated to assess weak spots of the case company and improve its sales performance in the early rounds of turnkey sales projects. The study focuses on the case company's internal marketing arena. A total of sixteen people were interviewed for positioning and setting targets to the case company. Internal sales data was analyzed to gain profound view to performance. The study is qualitative, but contains also quantitative elements, such as the case company's data analysis.</p> <p>Based on the interviews, the case company's supplies were categorized into nine system level products. Subsequently, microsegmentation was created to reflect the primary purchase criteria of customers and customer profitability.</p> <p>Consequently, the microsegmentation was tested with internal statistical data and found useful. Then a framework was created to the sales process to illustrate the distinctive stages in project sales.</p> <p>The outcome of the study improves the case company's knowledge on pricing and sales performance and provides frames for further development of business operations.</p>	
Key words: Segmentation, microsegmentation, pricing, price range, project sales process	



OPINNÄYTETYÖN TIIVISTELMÄ

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<p>Kohdeyritys toimii ympäristössä, jossa pääkomponenttien erilaisuus haittaa avaimet käteen –projektimyynnin tuottavuutta, koska pääkomponentit eivät vastaa järjestelmiä, joita kohdeyritys myy. Lisäksi nykyinen segmentointi tekee asiakasryhmistä heterogeenisiä. Koska projektit nähdään yksilöllisinä, hinnoittelu on vaihtelevaa ja johtaa usein projektien häviämiseen alkuvaiheessa.</p> <p>Kuvatut ongelmat ratkaistiin suorittamalla konstruktiiivinen tapaustutkimus. Tutkimuksessa keskityttiin sisäisen markkinoinnin alueelle. Kohdeyrityksen kuuttatoista työntekijää haastateltiin yrityksen asemoimiseksi ja yrityksen tavoitteiden asettamiseksi. Yrityksen myyntitietoja analysoitiin kattavamman näkökulman saamiseksi. Tutkimus on luonteeltaan laadullinen, vaikkakin osa materiaalista on määrällistä, kuten esimerkiksi kohdeyrityksen tietojen analysointi.</p> <p>Haastatteluiden jälkeen kohdeyrityksen kokonaistoimitukset rajattiin yhdeksäksi mahdolliseksi toimituskokonaisuudeksi. Seuraavaksi yritykselle luotiin mikrosegmentaatio, jonka perusteina oli asiakkaiden ensisijainen ostokriteeri ja asiakkaan tuottavuus.</p> <p>Mikrosegmentaation kelpoisuutta testattiin sisäisten tilastojen avulla ja mikrosegmentaatio todettiin hyödylliseksi. Seuraavaksi kehitettiin viitekehys kuvaamaan projektimyyntiprosessin toisistaan poikkeavia vaiheita.</p> <p>Lopputulokset parantavat kohdeyrityksen tietoa hinnoittelun ja myynnin suorituskyvyn osalta ja antavat kehukset tulevaisuuden liiketoimintojen kehittämiseksi.</p>	
Avainsanat: segmentointi, mikrosegmentointi, hinnoittelu, hinnoittelualue, projektimyyntiprosessi	

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ABBREVIATIONS / ACRONYMS

B2B	Business to business market; a market where one company sells something to another company
B2C	Business to consumer market; a market where one company sells something to a consumer
BTO	Build to order; low volume product that is reasonable to manufacture after order, not to a stock
CRM	Customer Relationship Management; an information system consisting of a company's customer and sales data
ERP	Enterprise Resource Planning system; an information system consisting of informations about a company's operations
ETO	Engineered to order; product requires tailored engineering before manufacturing
NPS	Net Promoter Score; a customer ranking system by likelihood of recommendation to another
POC	Points of contention; an issue that is disagreed between two parties
POD	Points of difference, an issue that positively and negatively differentiates a company from its rivals
POP	Point of parity; an issue that is shared or similar with a company's competitor
RP	Recommendation Point
R&D	Research and development; dedicated unit in a company for research and development
VAR	Value adding reseller; a company reselling several products of several companies
VM	Versatile manufacturing; manufacturing products that consist high-variety

1 INTRODUCTION

“It is like they have cut all the fat out of the business” says sales-representative Ken Greer to his friend Thomas Friedman when his sales are in downturn (Friedman, 2007:257). Greer continues: “but the fat is what gives meat its taste. The leanest cuts of meat don’t taste very good. You want it marbled with at least a little fat”.

The shipbuilding industry is living its biggest crisis ever according to STX Finland’s CEO, Martin Landtman (Helsingin Sanomat, 2009), and the crisis is over by earliest at 2011, if trust to the global economy recovers (Helsingin Sanomat, 2010a). The recession has affected significantly the shipbuilding industry: only 400 new vessels were ordered in 2009, whilst the three predecessor years accumulated 4500 new orders per year (Helsingin Sanomat, 2010c). Finnish government intends to provide funding for shipbuilding industry to prevent unemployment (Helsingin Sanomat, 2010b) and aims to assist STX Finland to achieve 500 million euro’s order book (Helsingin Sanomat, 2010d; Kauppalehti, 2010b). The shipbuilding contracts are moving to Asia (Figure 2, page 6) and the value of the orders has decreased 15-30 percent (Kauppalehti, 2010a). Korean company, Samsung Heavy Industries, is luring companies from Finland’s supply chain (Kauppalehti, 2010a). Thus, it could be fair to state that shipbuilding industry has lost its fat.

The pace of change has been slow in shipbuilding – like it has been in automobile industry. Three attributes: efficiency, quality, and commanding the supply chain differentiate companies operating in automobile business (Doz & Kosonen, 2008). The same attributes apply to shipbuilding, which this study focuses on.

The financial crisis in late 2008 created turmoil in every industry. Businesses had not been stagnated before the financial crisis. Several flattenings have happened in the past ten years and businesses in industries are changing rapidly. First, great products and technologies are insufficient to guarantee success – what counts the most is business design (Slywotzky et al. 1998). Second, competition in service business has proliferated (Harmon et al. 2006). Third, the proliferating competition tightens the battle over customers and drives companies to make customer promises and value propositions that cannot be kept (Rubanovitsch & Aalto, 2007; Anderson, Narus, van Rossum, 2006). Fourth, global completion and customer expectations make the product quality and customer value important strategic priorities (Hutt & Speh, 2007).

Consequently, this thesis is about finding competitive advantages that can make a company successful in a market where the company intends to operate. In another words, the thesis argues that fat still exists.

The business domain of the thesis focuses on a case company operating in the shipbuilding industry. In line with the shipbuilding industry, the case company has heavily suffered from the recession and number of orders has slumped significantly. The mission of the case company is to be the most desired propulsion segment where the case company operates, but it is not crystal clear how to achieve the mission. Furthermore, the case company finds it hard to understand why the sales does not flourish in certain segments, whilst the sales is thriving in some other segments. Structure of shipbuilding industry is continuously changing and currently contracts are moving to Asia.

The case company delivers turnkey projects that lead to high variety of main components and related services. Each project is seen as unique and customers are complaining about high prices. Consequently, operations lack systematical analyses and sales data is not systematically collected. Therefore, a holistic view to the case company's sales is missing; each sales project gets equal attention, and sales projects are not screened out due to unsuitability or low profit. Additionally, there is no Customer Relationship Management system (CRM), and sales force has background experience in engineering, but is less experienced in selling.

In another words, the case company is offering everything to everyone. Accordingly, there are three objectives for this study. First, to internally position the case company with its offerings. Secondly, to propose customer segmentation that ranks effectively the customers and divides them to distinctive groups. Thirdly, to enhance pricing knowledge to ease up access to final negotiation rounds.

Therefore strategy, marketing, sales, and project execution of the case company are explored to decipher the current state of the company. After the analysis, the case company is positioned in the market and proposals are given how the case company could find a competitive advantage, improve sales and – at the same time – be more attractive in the market. This is done by utilizing the latest theory and applying the best academic research results. The outcomes are new microsegmentation, a pricing range of concepts and a framework describing the project sales process in the shipbuilding industry, and recommendation to open distribution channels.

Major trends and obstacles

Existing knowledge on industrial management argues that the worldwide competition forces companies to shift to closer, more collaborative ties with fewer suppliers than they have used in the past. For the case company this would mean increasing collaboration with shipyards. Business marketing programs involve a customized mix of products, service support, and ongoing information services both before and after sales. Customer relationship management makes up the heart of business marketing (Hutt & Speh, 2007). But, markets are always changing and companies slip out of alignment (Day, 2006).

Unfortunately, there is not much latitude for any company; the company must do the right things and the company must do things right – otherwise business dies as can be seen in Figure 1.

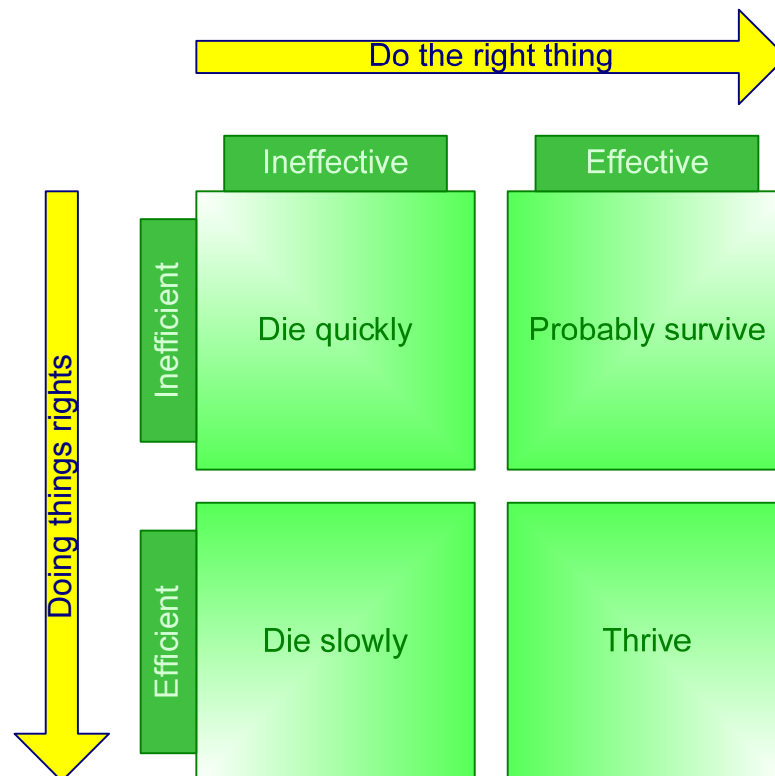


Figure 1 The Brown's efficiency/effectiveness matrix (adopted from Adcock, 2000:103)

This creates a dilemma; a company should be customer-oriented, but it should find compromise in customer satisfaction (effectiveness) and costs (efficiency). In a financial perspective a company should offer standardized products, but those are total counterpoint, what buyers seek and get from customized offerings (Adcock, 2000:102-104; Danese & Romano, 2004). Some scholars propose one-to-one marketing (Peppers, Rogers & Dorf, 1999) and mass-customization (Salvador, de Holan, Piller, 2009) to beat the problem.

The case company can collaborate with shipyards, but how to know the projects that are most likely to be won? Shipyards are aggressively utilizing bargain power of buyers and try to squeeze profits of suppliers. Rivalry in shipbuilding industry is not benefitting suppliers. Furthermore, collaboration increases the selling costs as shipyards are typically located in a foreign country, but on the other hand, collaboration improves customer satisfaction and is prerequisite for sustainable relationships.

How can a company thrive in business when circumstances are what is described above? This thesis tackles these issues in the following sections and picks up key theories from vast literature that are applicable to shipbuilding industry and to the case company. Before going into details, the case company, the research problem, scope and structure of the thesis and research method are presented.

1.1 Case Company

The case company is a local business unit in a large enterprise. The case company's organization is divided into two branches: a product organization and to a project organization. Elements of ambidexterity according to O'Reilly et al. (2004) and Moore (2005) are found in the case company, but the case company has not yet turned the ambidexterity to a competitive advantage. This thesis focuses only on the project organization branch, which delivers turnkey projects to shipyards.

The project organization branch of the case company sells two distinctive systems to vessels utilizing diesel-electric propulsion. Typical scope of the case company's offering contains 10 to 20 main components. Part of the main components formulate system A, whilst the other main components formulate system B. System level functionality is the value added that the case company achieves by integrating individual main components into a system.

The case company buys its main components as engineered products from the enterprise's other business units or from outside the enterprise. The case company makes system level engineering and assures system level functionality through three tier testing; individual main components are tested at factory, systems are tested after installation into the vessel and operational functionality is tested at sea.

The case company has high variety in its product portfolio and has low volumes; overall there are approximately fifteen main components from approximately 50 sub-suppliers, and about ten system projects are won in a fiscal year. Typical transaction is seven or eight figures in euro. The case company could be considered as versatile manufacturing

(VM) company. Each individual main component is either engineered to order (ETO) or build to order (BTO) due to high power rating.

In brief, the case company is a project organization offering tailor-made turnkey projects in high-variety shipbuilding environment.

1.2 Research Problem

The first problem of the case company is that **information is not collected from segments and definition of a segment is not clear**. Therefore the case company needs to start collection of information and clear segmentation methods. The current segmentation is based on vessel type. This segmentation type is de facto in shipbuilding industry. When all competitors are utilizing the same segmentation, there is no competitive advantage for anyone. Furthermore, vessel type based segmentation is not clear; number of segments varies depending on categorizer. The author has used six segments in current state analysis, whilst the sales tool recognizes about 15 different vessel types that are under responsibility of the case company. Thus, no-one cannot clearly state actual number of segments.

The second problem is deriving from fresh workforce of sales; **understanding of prices is lacking or unevenly distributed between the workforce**. Therefore the case company needs to enhance knowledge on pricing and share that information among the workforce of sales. The case company wants to improve sales in all segments, but only few people understand how price elements influence on each others. If wrong products are selected for a customer, the customer will likely kick-out the case company at bidding stage due to high sales price. Because segmentation is unclear and prices are not profoundly known, effective marketing and sales strategies are not in place at the case company.

The third problem is the structure change of shipbuilding industry. The whole shipbuilding industry boomed from the beginning of 21st century as can be seen in Figure 2. Global recession from the end of 2008 shrunk the shipbuilding market. Suddenly, the shipbuilding industry shifted from suppliers' market to buyers' market.

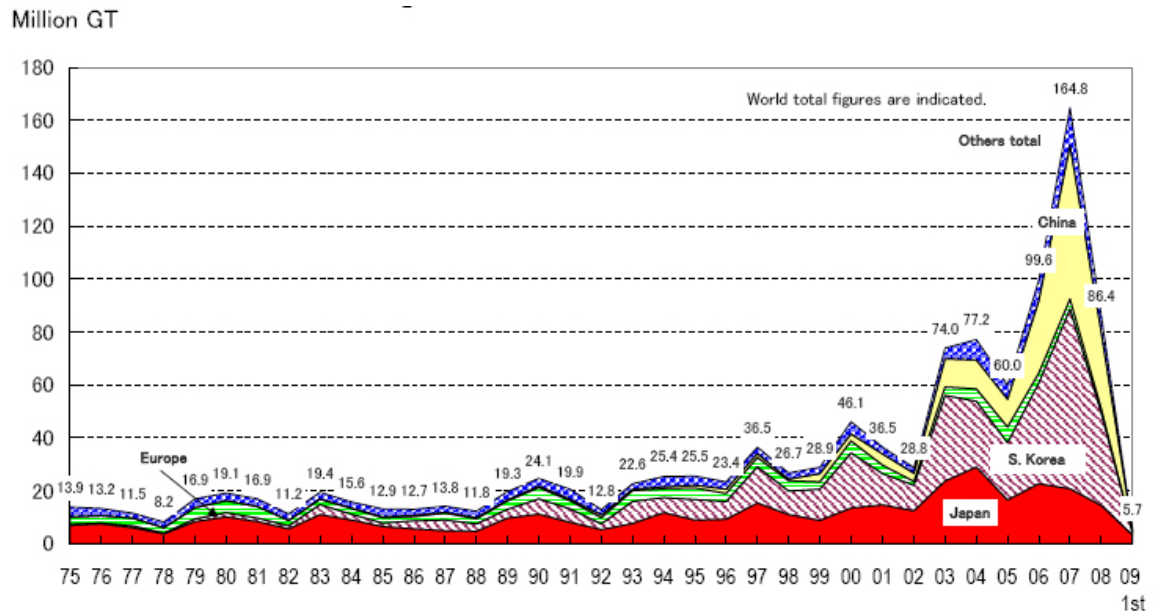


Figure 2 World new orders (adopted from *The Shipbuilders' Association of Japan, 2009*)

Figure 2 shows that market was booming from 2000 to 2007. Thus it is impossible to assess, whether the case company have made right decisions in the past in resulting to current situation. Deep decline in the case company's hit rate (i.e. offered projects divided by orders received) initiates the demand to seek out causalities leading to poor performance that occurred before recession in certain segments. In some of the segments, the case company is the market leader, in some segments, the case company has strong position, and in some segments, the penetration has not started.

The case company cannot affect on the recession, therefore the recession is excluded even though the recession can cause dramatic changes in short time. Instead, internal alignment is urgently needed: the current segmentation in use is not leading to homogeneous customer groups and prices of the case company are too high. Too high prices lead to losing sales projects in early rounds. A vessel is large investment and sometimes vessel orders can be cancelled. For the case company it is frustrating to lose in early rounds, because likeness of delivery increases during the process. If the case company is able to pass the long-list and short-list points, the company has a strong chance to win a project. Consequently, the research questions are:

- How to microsegment customers to distinctive groups?

The objective is to categorize customers to distinctive groups by utilizing two distinctive segmentation methods; one enabling customer ranking and one reflecting purchase decision criteria. There are two side terms for microsegmentation. The first, customer segments need to be homogenous to enable further sales control and planning. The second,

segmentation must meet the current marketing mindset of the case company, because too advanced segmentation is not likely to be implemented. Therefore, segmentation must be clear and simple, and preferably arranged through numbers or other easily measurable or separable elements.

- How to enhance knowledge on pricing and sales performance?

Currently sales project information is scattered under individual sales projects. Therefore, second objective of this study is to collect sales data to one location and process the existing data to enhance understanding of prices and sales performance. Enhancement is achieved through clarification of sales operations and product portfolio.

1.3 Scope and Structure

This thesis focuses on strategic marketing in the internal arena of the case company. That means searching competitive advantages from the case company's internal structures and realigning internal elements when necessary.

The thesis consists of two parts reinforcing each others; the theory and business parts. The theory part consists of segmentation. Furthermore, some pricing and positioning theories are included, since pricing and positioning have a significant impact on a company's short- and long-term success, and the case company operates in a project business where transactions are rare but costly. Proper positioning and pricing are the only ways to survive to final negotiation rounds – even if other elements of offerings are in order. On the other hand, proper pricing and positioning do not help, if a company's products and distribution channels are misaligned.

Data is collected by interviewing sixteen people. Thirteen workers of the case company were interviewed one-to-one and three workers were interviewed via email.

Figure 3 describes how the study is structured.

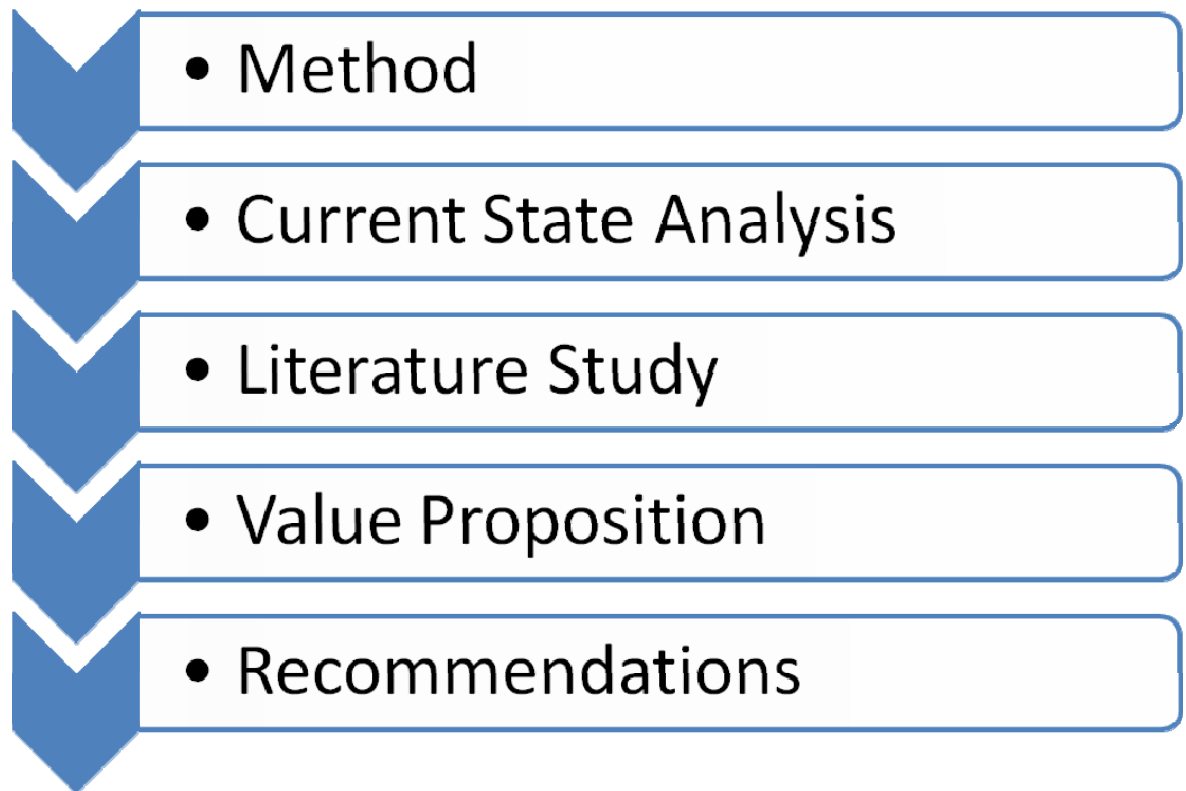


Figure 3 Structure of the Thesis

As Figure 3 shows, first the method and material collection is described. Second, current state analysis is executed to assess the most urgent problems of the case company. Third, literature is studied to build a foundation for value proposition. Fourth, value propositions are presented, in another words, the assessed problems are solved. Finally, further recommendations are given to the case company for next steps.

The thesis focuses only on strategic planning and on managerial domains. Leadership issues are excluded.

1.4 Method and material

This is a constructive case study mainly involving qualitative methodology, such as interviews. Quantitative methodology is used partly, for example, in the case company's data evaluation and processing, but not enough to describe the whole study as quantitative. Instead, focus only on statistics oversimplifies the complexities of the real-world phenomena and interviewees' experiences, misses major factors that are not easily quantified, and fails to portray phenomena and impacts of phenomena as a whole (Patton, 2000:59). At the end, the study captures the essence of the case company's sales and business models, and sums up the findings under central unifying principles. This thesis is executed between September 2009 and April 2010.

The backbone of the thesis comprises of interviews and statistical data analysis. Interviews put faces to statistics that provide rational information compared to empirical information received from the interviewees and observations (Patton, 2000:10-11).

All persons were interviewed individually. All one-to-one interviews were semi-structured. Three interviews were conducted by email due to long distance, and then, only answers to specific questions were asked. Thus, email interviews were structured. The case company's data was collected from the old and the new enterprise resource planning system (ERP) and from scattered sale's data.

Material for the literature review was collected from academic journals and books. Some theses were studied and interesting references were used to get a deeper insight into the existing knowledge. Couple of times an interesting reference referenced to a previous study, which lead to reference tiers.

Field notes and to collected data were re-evaluated several times, and the analyses and interpretations were data driven, and therefore, the thesis is inductive (Patton, 2000:58). There was no existing theory about improving sales to be tested as such.

At first, the case company's current state was analyzed. The hit rate was assessed by gathering information from internal market analysis. The internal analysis of market was compared to the orders received. The data pointed out that financial recession was not the source for poor performance in specific market segments. Subsequently, the case company's sales price calculation was re-evaluated and the calculation of cross margin was discussed internally. As there were no hidden costs in cost calculation, and hit rate did not provide adequate information for assessing reasons for the poor sales, the aim focused to internal strategy and business models. The internal strategy and business models were inadequately documented and communicated, and thus, did not help in assessing the sale's problem. As a result of hasty strategies, a two-step plan was initiated for analyzing the case company's sales and for making internal marketing decisions. The first step involved assessing historical factors impacting on the current situation of the sales. The step enabled assessing of the biggest problems of sales. The second step was to assess the sales targets, segments, product solutions, competitive advantages and sales process.

Sales data was collected from enterprise resource planning systems (ERP), sales databases, from internal documentation and by interviewing as shown in Figure 4.

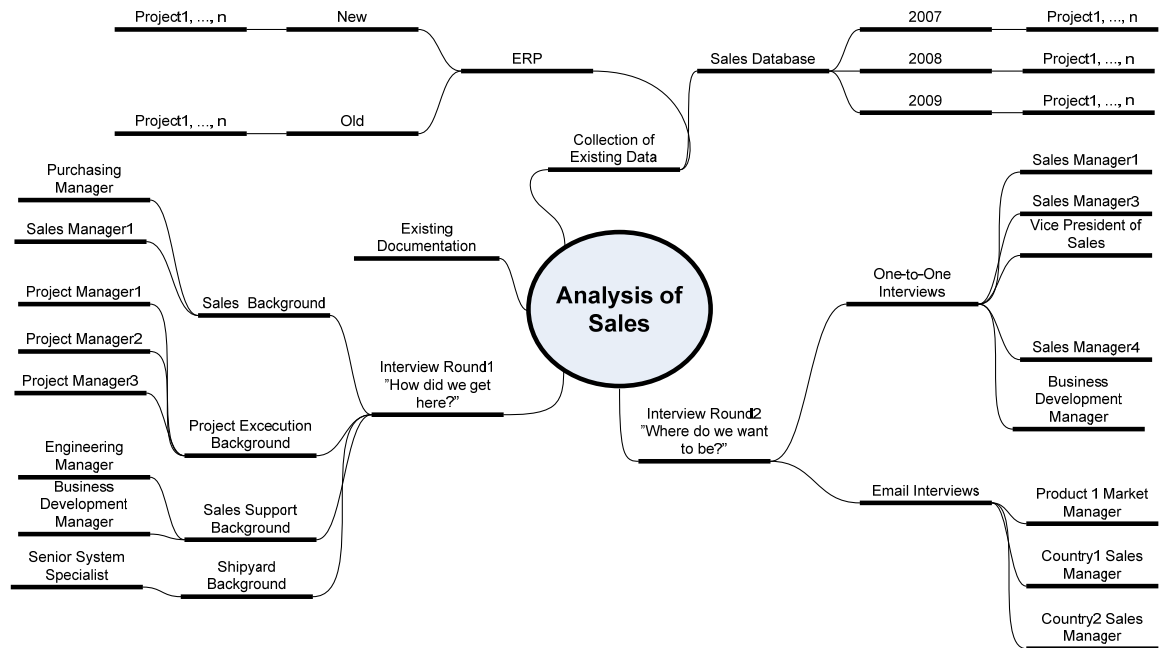


Figure 4 Analysis of the Case Company's Sales

First, Figure 4 shows, there were two interview rounds; “How we get here?” and “Where do we want to be?” Second, existing data and documentation was collected from several sources.

The most experienced people from the case company were interview for mapping the prevailing situation in sales and historical encumbrance of the sales. Then, the sales people were interviewed to achieve a deep understanding of the sales process, and to assess the customers’ value for the case company and to assess the customers’ primary purchase decision criteria.

Interviews and theories drove to the analysis of existing numerical data, and defined the sorting criteria of the numerical data. The first step was to study the case company’s services, i.e. assessing how much services are needed to deliver a project. Analysis lead to heavy dispersion and realization of heterogeneousness of the segments.

Secondly, literature was studied to get a holistic understanding of segmentation and pricing. Information was sought through key words, references and recommendations.

Then, current offerings were categorized under three concepts and three systems variations, and thus, forming nine possible supply elements from the case company’s existing product portfolio. Thereby, nine system level products were created to illuminate the case company’s product portfolio.

Fourthly, it was discovered, that the systems involved had only minor impact on the concepts sales price, and therefore, the systems were discarded from deeper examination.

The fifth step was to assess the footprint of the existing concepts. The sixth step assessed customer value according to a sales revenue potential. Four customer value categories were formed and statistical testing showed that the categories are reasonable.

Finally, the interpretations of collected information and data enabled to give out further recommendations to the case company.

1.5 Qualitative Material

Business strategy and business plans of the case company were studied. Appropriate material was asked from Vice President of Sales and Marketing, Vice President of the Local Business Unit and from the Business Unit's Technology Manager. The Intranet pages of the case company were studied also.

Totally thirteen one-to-one semi-structured interviews were conducted to gather information from the case company. Three interviews were done by email. Interviewees were divided into two groups and different questions were addressed to each group. One interviewee attended both groups, whilst rest of the interviewees belonged only to one group.

Interview Round 1

The first interview round consisted of eight experienced people from project execution, engineering, sales support, sales, and one interviewee was a former shipyard's representative. Each interviewee had been working in the shipbuilding industry at least ten years and in close relationship with the case company. The interviewees were asked two questions about the case company's history:

- Where the case company has succeeded?
- Where the case company has not succeeded?

The questions were not delivered before the interview. The questions were asked from three perspectives; interviewee's own opinions, interviewee's perceptions about shipyards' perspective and interviewee's perceptions about ship owners' perspective.

Each interview took about an hour. Findings are based on notes made during interviews. All interviews were recorded. All interviewees that were invited attended the interview. As

interviewees have strong experience with the case company, the sample can be considered reliable enough.

Interview Round 2

The eight interviewees of the second round were from sales and from a supply factory. Three sales managers out of four were interviewed. One business development manager out of two was interviewed. The sales and marketing Vice President was interviewed, also. Totally five out of seven local sales persons were interviewed one-to-one.

Two country managers out of four were interviewed via email. One enterprise's Product Manager was interviewed to have an external view to the case company's operations. The Product Manager represents the supplier of a one main component.

All interviewees received a PowerPoint presentation introducing the topic, the case company's product portfolio and ten questions before the interview. The ten questions dealt with the case company's performance, the most important customers, categorizing customers according to primary purchase decision criteria, categorizing customers according to profitability, the case company's points of parity (POP), points of difference (POD) and points of contention (POC), and ship owners' role in the commerce.

Each one-to-one interview lasted approximately two hours. There was a list of supplementing questions during the interviews, but that list was not shown to interviewees, not before or during the interview. The findings are based on the notes made during each interview. All interviews were recorded. Two invitees did not find time to attend the interview; yet, the size of the sample is big enough to consider it reliable.

Country managers that were interviewed via email responded only to the ten questions, listed in Appendix 1.

1.6 Quantitative Material

The data was collected from the case company's old and new enterprise resource planning system (ERP). Sales data was collected from years 2003 to 2009. As the data was updated all the time, the data was up to date only at the time of exporting, but changes are considered as minor, and it is impossible to freeze the case company's information systems.

There were different sources for numerical and written data; orders received and respective data was collected from ERP systems, won projects were collected from the case

company's project register, sales data was scattered to under individual sales projects. Thus, the latest cost calculations were collected to a database file, which was used for sales data analysis.

The data was processed from several Excel files and bundled together in Excel. Excel functions, such as "IF", "LINEST", "SUM", "COUNTIF", "MEDIAN", and "AVERAGE", were used for processing the data. Excel's trendlines and regression analysis were used. Regression and correlations were empirically known or regression was tested with R^2 value to find the best explanation. Multivariable linear regression was tested as well.

The R square explains how much of the variation does the regression equation explain. The better the R^2 value is, the less there are other explanations than the variable that was used to regression analysis. For example, if $R^2=75\%$, then the variable x explains 75% of y's variation. (Silbiger, 2005:193; Holopainen & Pulkkinen, 2006:232-233; Pulkkinen 2005;352)

1.7 Reliability and Validity

All interviews were recorded and the recordings are in possession of the author. Interviews were planned, and the same questions were asked during the interviews. Due to high dispersion of answers, the author has interpreted the answers to reflect the terminology of industrial management. Furthermore, the author has wide and extensive experience in shipbuilding industry with the case company, and he knew all the interviewees beforehand. Thus, purely objective study is impossible and the author's knowledge has affected on results. However, vast experience enables focusing on root causes rather than pseudo-explanations. The interviewees were carefully selected and each interview was structured in a similar way.

The key contributions base strongly on the author's experience. The second interview round justified different segmentation methods, and feasibility of adaptive scope of supply, but did not result in clear categories. It is possible that another person finds other explanations and other frameworks to be applied. However, the author has been extremely open-eyed and tried to avoid all biases.

2 ASSESSING PROBLEMS AT THE CASE COMPANY

There was no clear problem at the time of starting the thesis. Thus, there was nothing to be solved and therefore, the current state of the case company was studied for assessing the biggest problems that needed an urgent attention.

As a starting point, it was clear that the sales did not flourish in low propulsion power range, whilst success increases proportionally with the propulsion power. Consequently, a current state analysis was executed for positioning the case company and to address the problems that hinder the success of the case company. The following sections discuss hit rate assessment, direct personnel costs, product portfolio, price calculation, and the case company's history. As result, the problems are assessed and described.

2.1 Hit rate of the Case Company

The hit rate is formulated by dividing offered projects by orders received. The hit rate of the case company was assessed through comparison of vessel deliveries versus orders received. Vessel deliveries were shifted two years backwards to enable comparison. The Figure 5 shows development since 2003 to 2009.

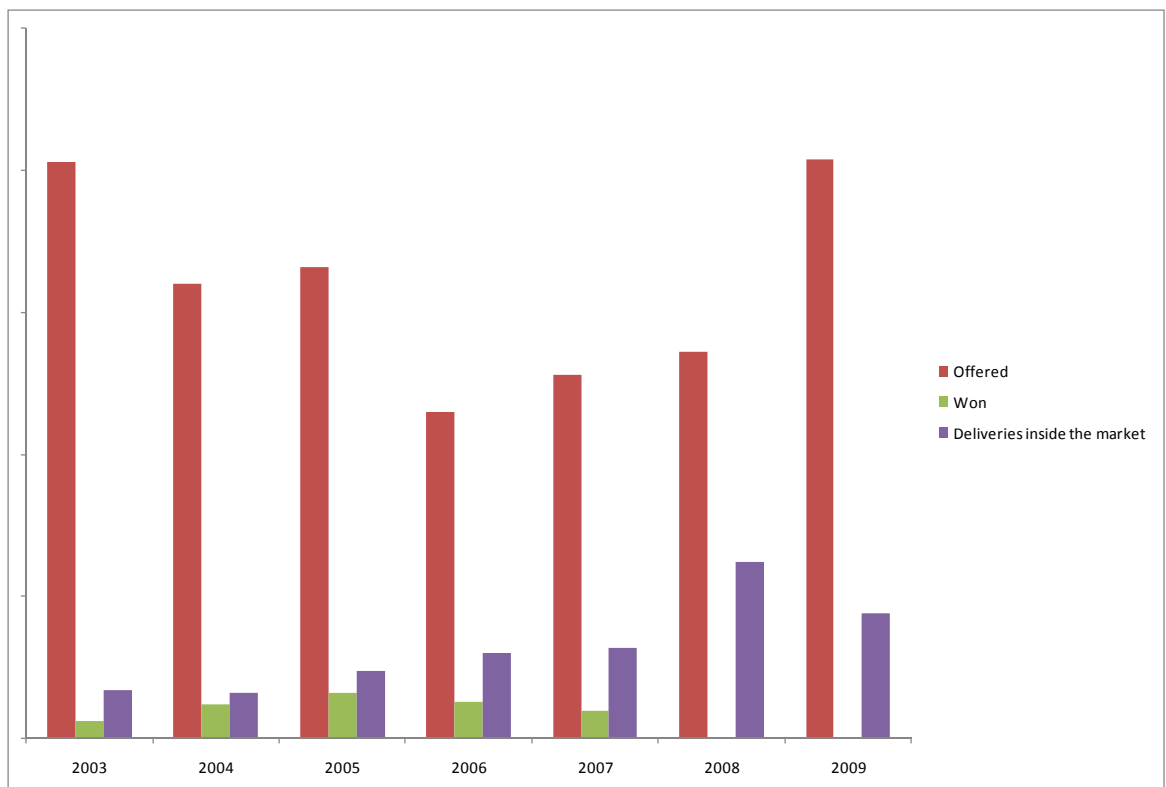


Figure 5 Hit rate of the case company

Figure 5 shows two things. First market share (i.e. deliveries inside the market divided by won) decreased drastically from 2005's peak value in 2006 and 2007 before the total lack of orders of 2008 and 2009. Second, is that the sales decreased before financial crisis that hit the shipbuilding market at the end of 2008. Thereby, poor performance in sales is not strongly related to financial crisis.

2.2 Cost-to-Serve Matrix

The first positioning idea derived from Schmenner's (2004) article about theory called *the theory of swift, even flow* that was created in 1980s. Schmenner (2004) used a four quadrant matrix, and coined quadrants as service factory, service shop, mass service and professional service. The axes of the matrix are the degree of variation and the relative throughput time. Schmenner (2004) argues that a company can be profitable in each quadrant, and diagonal movements towards less variation and towards faster throughput time increase productivity.

A matrix (Figure 6) was created for the sales of the case company. The axes are customized solution and customer willingness to pay. Customized solution means how much a customer requires services and assistance during a project. Willingness to pay indicates how much the customer is willing to pay from the assistance and services. Quadrants are coined volume market, low profit market, high profit market and complex market. Volume market requests least customization and customers are price sensitive. Customers are price sensitive in low profit market also, but differ from volume market by requiring vast amount of services from the case company. Customers in complex market require a lot of services too, but instead like low profit customers, are willing to pay for the services received. High profit customers pay premium price, but do not consume the case company's services considerably. The case company's six existing market segments were positioned empirically. Additionally, market entrants and consultants were positioned to decipher prospect customers. The empiric setup pointed out that the case company has no high profit customers and customer needs in different segments differ substantially. As the setup was the authors own empirical view, many case company's interviewees disagreed about the positioning of some individual segments. As a whole, the matrix was accepted in the case company.

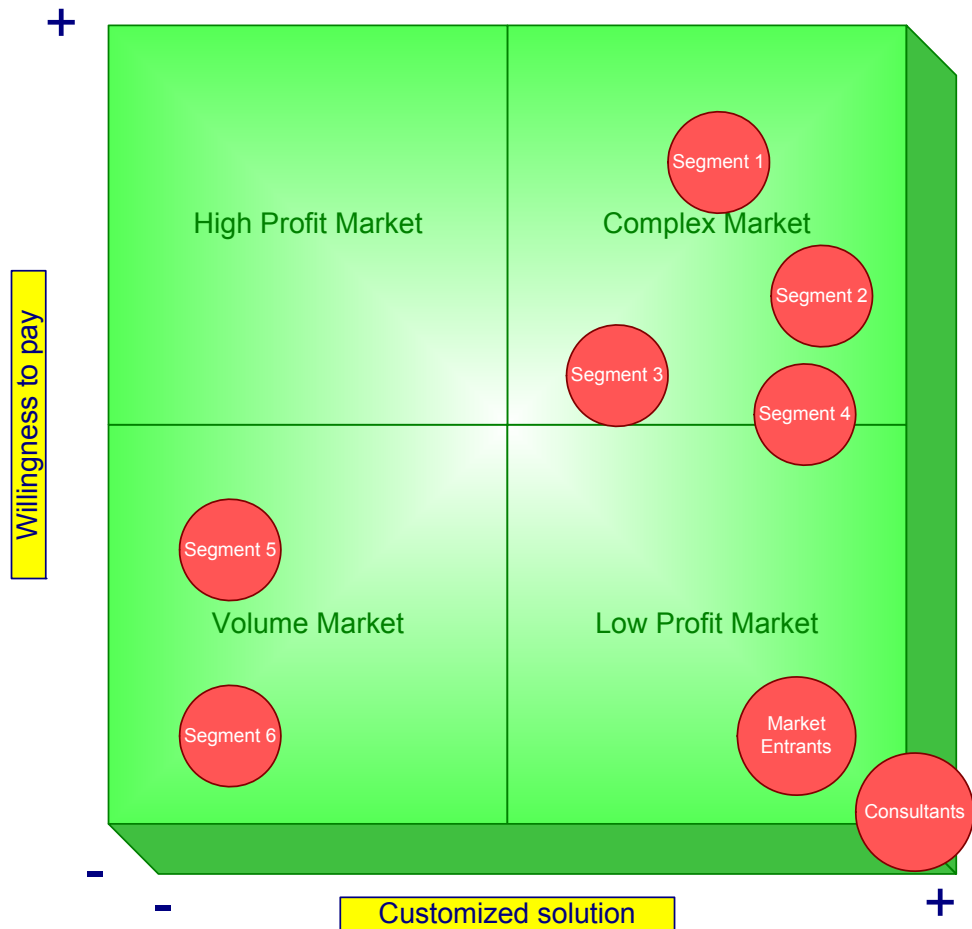


Figure 6 The case company's market matrix with empirical setup

The Figure 6 shows that segments 1, 2, 3 and 4 are in the complex market and segments 5 and 6 in the volume market. Market entrants (i.e. shipyards entering to diesel electric propulsion market) and consultants (i.e. design and engineering companies) are located in the low profit market, since they require a lot of assistance but are willing to pay only as much as expert shipyards.

After the empirical positioning matrix was created for the case company, an article about the same type of positioning was found. Shapiro et al. (1987) re-coined the four quadrants; the volume market as bargain basement, low profit market as aggressive, high profit market as passive, and complex market as carriage trade. Due to the analogy to the supporting theory, previous customized solution was changed to cost to serve. Direct labor costs for a project, such as engineering, commissioning and project manager costs were summed and defined as cost to serve. Willingness to pay was changed to sales price. Shapiro et al. (1987) argued that cost to serve should involve presales costs, production costs, distribution costs, and post sales service costs. Addressing presales costs

and post sales services costs was impossible in the case company's matrix, due to lack of adequate data. The quadrant labels were kept as original.

Shapiro et al. (1987) concluded that carriage trade (i.e. complex market) customers are willing to pay for services, whilst bargain basement customers (i.e. volume market) are sensitive to price and relatively insensitive to service and quality. Passive customers (i.e. high profit market) require less service, whilst passive customers are willing to pay high prices. Therefore, passive customers generate highly profitable orders. On the other hand, aggressive customers (i.e. low profit market) demand the highest product quality, the best service, and low prices. Aggressive buyers are typically powerful.

Furthermore, Shapiro et al. (1987) propose that companies knowing their costs and using cost-plus pricing schemes will find most of the customers from bargain basement and carriage trade. Dispersion of profits is not a bad thing, only not knowing dispersion exists is.

Subsequently, data from the case company's 50 orders received were positioned according to cost to serve and sales price to form a statistical matrix (Figure 7). Orders were divided into prevailing segments and the size of the segment bubble reflects the number of orders. Sample is not complete and orders were picked to depict services according to whole sales price range, in another words array of broadest sales prices were selected to the analysis.

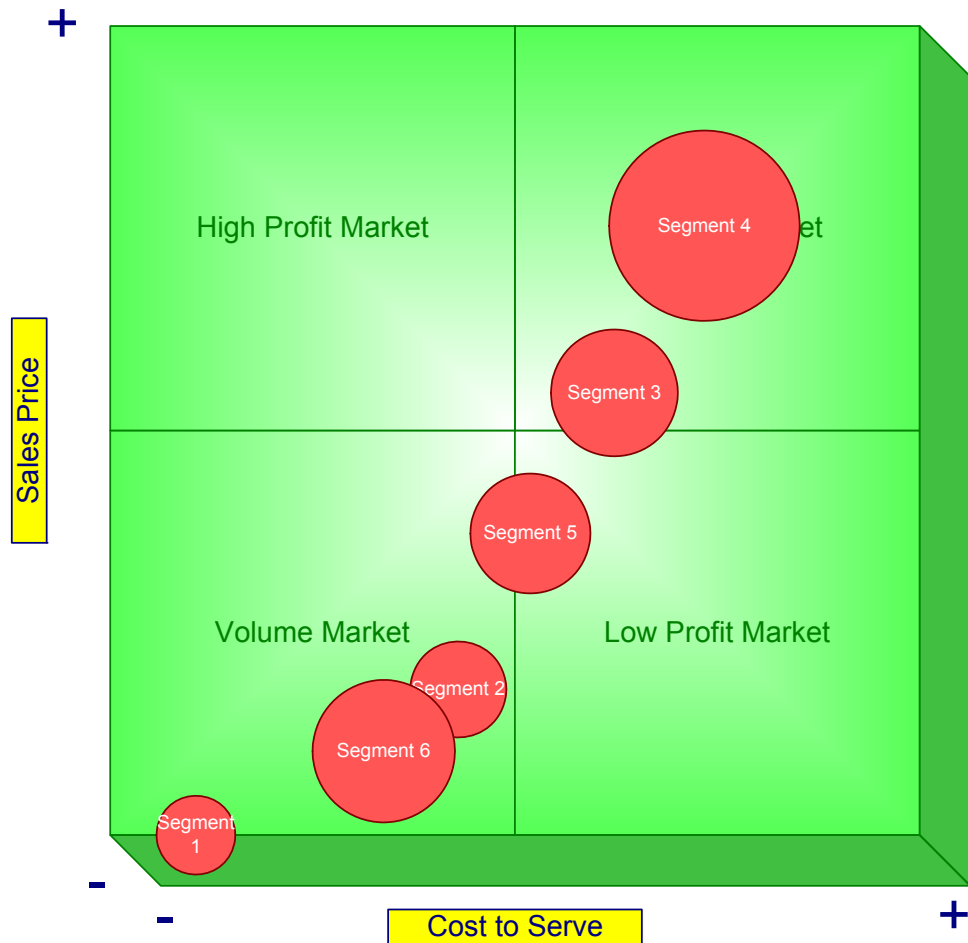


Figure 7 The case company's cost-to-serve matrix with statistical setup and revised axis labels

Then, the statistical market matrix (Figure 7) was interpreted; segments 1 and 2 shifted from complex market to volume market, segment 6 moved more to the right and segment 5 moved to low profit market quadrant, and segment 4 gained significantly stronger position in complex market. Change in segments 3's position was minor. Sales price followed exponential curve as a function of cost to serve, even though Dolan (1995) proposed an equity axis; a line from bottom left corner to top right corner. Thus, the curve should be straightened in volume market range. Due to sample and segmentation according to vessel type, dispersion of data was substantial ($R^2=0,7195$ for exponential and $R^2=0,648$ for linear), consequently, it was desired to re-segment the market. Furthermore, when data was not averaged, seven projects out of 50 were in high profit market. An uniform thing for all the projects in high profit market was that they all were repeats. Therefore, repeats need to be taken into account, when individual prospect projects are ranked.

Some existing sales projects were inserted to the matrix, to discover the trends of current sales price calculation methods. The curve was still exponential, but, surprisingly had

moved to far right. This kind of behavior can be explained, since cost-plus calculation adds more costs to sales price each time, when a budget of one cost element is exceeded in actual project. If there is no feedback from the market – like there is no in cost plus method – price escalates when the phenomenon occurs several times and leads to a situation where the case company prices too high. Interviews supported the view; too high pricing was one of the strongest inputs from interview round 1. Thereby, the case company had walked to the pitfall of cost-plus pricing; in fierce competition cost plus might lead to unfavorable position. The results partly confirm Shapiro's et al. (1987) view that cost-plus puts customers to volume market (i.e. bargain basement) and complex market (i.e. carriage trade), but also disagree, since cost-plus is shifting customers to low profit market (i.e. aggressive) in the long run.

The second problem of this matrix and respective segmentation was that those broke the basic rule of segmentation; market segments were not homogeneous. In fact, some segments contained sales in bottom left and top right corner. When sales prices vary from six digits to eight digits, the dispersion is significant. Segmenting according to the vessel type is de facto in shipbuilding industry, and competitors utilize the same segmentation. This segmentation explains some of the customers' needs and wants, but not the primary. On the other hand, vessel type segmentation enables clear contact for a customer in the case company, but the case company itself cannot use the information from the segments effectively.

2.3 Product Portfolio

Then, it was needed to form a product portfolio to illustrate the main components and their prospect manufacturers. The idea was to demonstrate to the sales managers the selection possibilities, and the elements to be used when bundling up a turnkey project. The product portfolio is depicted in Figure 8.

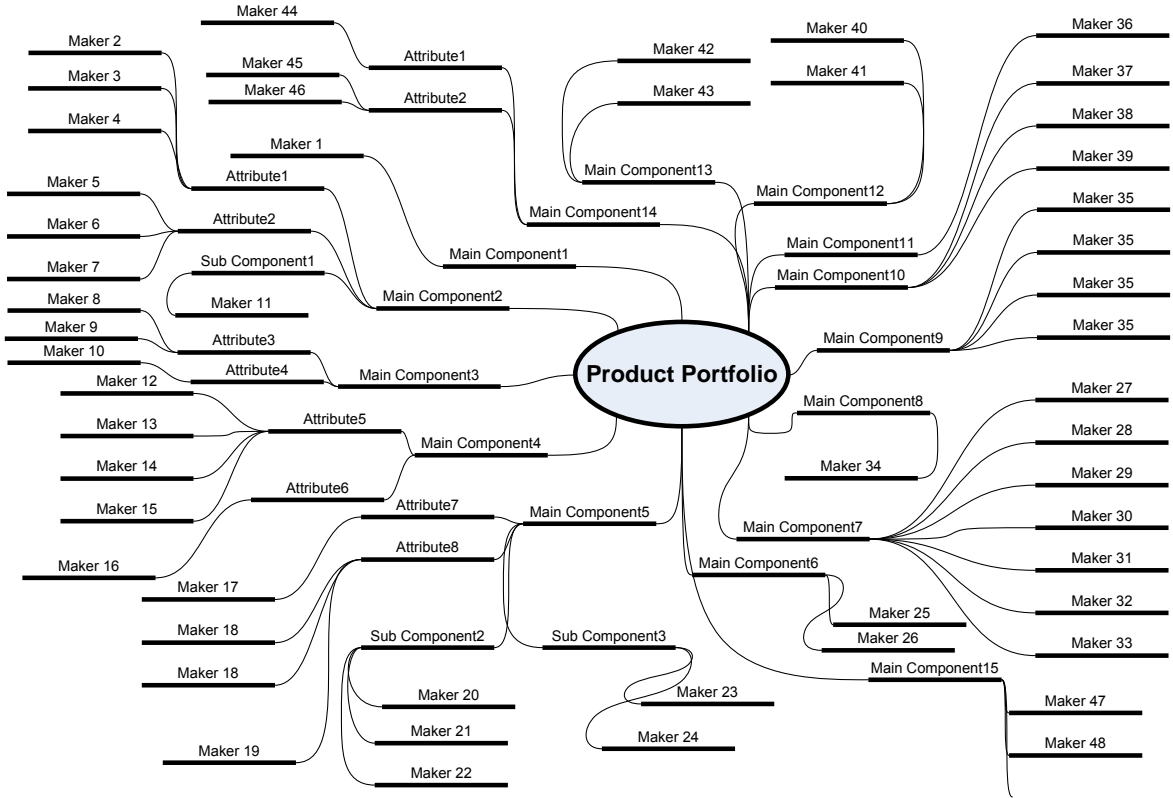


Figure 8 The Case Company's Product Portfolio and Prospect Makers

The exercise indicated that the main company utilizes 15 main components and three sub components from 49 different makers. The portfolio was opaque and scattered as Figure 8 shows, and thus, there was a need for further clarification.

2.4 Sales Price Calculation

Since neither the cost-to-serve matrix nor the product portfolio provided pricing information, different sales price estimations were tested, because sales prices were highly dispersed as Figure 9 indicates.

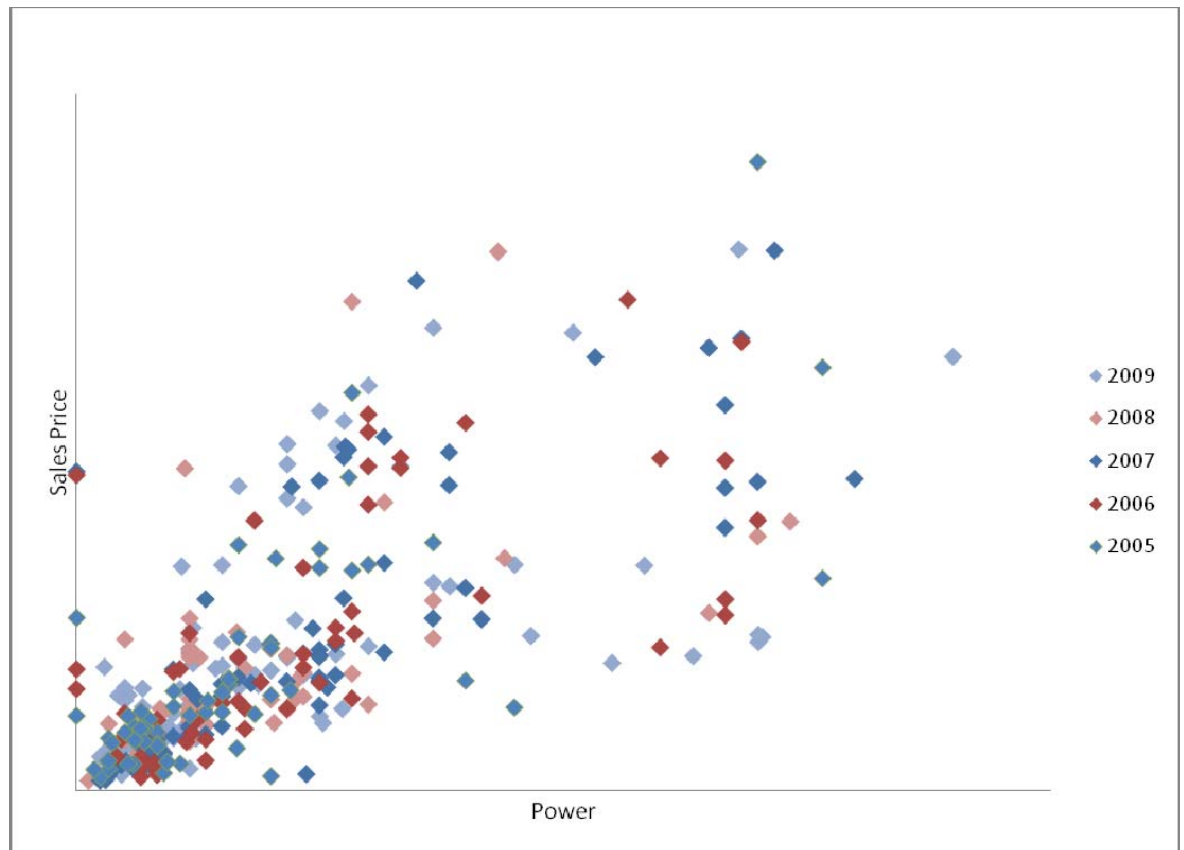


Figure 9 Different Sales Prices from 2005 to 2009

Figure 9 shows that the majority of sales projects are located in lower left corner when power is x-axis and sales price is y-axis. Furthermore, there is no clear pattern to indicate sales price according to power due to high dispersion of dots.

Sales price estimates were used to reflect power, which would – anyhow – explain most of the price variation. Estimates were compared to the actual sales price deriving from cost-plus calculations. The significance of power was empirically known. Estimate 6 utilized four variables. Testing indicated that the case company's end price could not be explained with single variable or with few variables. Regression analysis indicated only 80% match to the sales price in several estimates listed in the Table 1, whilst the main component costs could be explained with one variable's regression of 90% or better listed in the Table 2.

Estimate	Regression type	R ²
1	Power	0,8097
2	Second degree polynomial	0,4034
3	Power	0,8112
4	Power	0,833
5	Power	0,8326
6	Power	0,8376

Table 1 Variations of calculated system sales price vs. estimated system sales price

Main Component	Regression type	R ²
1	Linear	1
2	Exponential	0,907
3	Linear	0,9344

Table 2 Variations of calculated main component purchase price vs. estimated main components purchase price

What can be concluded is that price variation is acceptable in sales price, but not in cost. Thus, costs need linearization. Another finding is that curves should be linear, instead of power or exponential pattern. Empirically can be stated that customers expect linear price trend, rather than exponential.

2.5 Interviews for Mapping the History of the Case Company

Apart from statistical information, eight people were interviewed about the case company's sales history. Since the case company is a project organization, people from project execution, sales and sales support were interviewed to gain a holistic view. The same questions were asked in round 2, but the round's focus was more on the future than on historical strengths and weaknesses.

Comments from the discussions were arranged under attributes of similarities, since exact sentences did not repeat. Those similarities are grouped to domains to reflect what theories and fields affect on the issue. Brand stands for intangible perception of the company, technology/industry means parity with other competitors, relationships refer to contacts with customer and ship owners. Product means tangible and intangible elements included in a turnkey supply. Organizational issues relate to the case company's structure. Strategy reflects business plans of the case company and sales process involves issues related to selling. Strengths and respective mentions are presented in Table 3. Weaknesses and respective mentions are presented in Table 4.

Domain	Attribute	Number of times mentioned		
		Round1 (n=8)	Round2 (n=8=	Total (n=16)
Brand	Brand, imago	4	4	8
Technology / In- dustry	System provider	4	3	7
“Product”	Unique Main Component	5	1	6
Relationships	Good collaboration and/or relationships	5	-	5
“Product”	Good products	4	1	5
“Product”	Good competence	3	2	5
“Product”	Reference list / proven solu- tions	4	1	5
Relationships	Old Customer	4	-	4
Price	Pricing	3	-	3
“Product”	Low Competition with Unique Main Component	2	-	2
Relationships / “Product”	Thrust from ship owner / sa- tisfied owner	2	-	2
Sales Process	Flexibility / right timing	2	-	2
“Product”	Good services	2	-	2

Table 3 Strengths according to interviews

Domain	Attribute	Number of times mentioned		
		Round1 (n=8)	Round2 (n=8=	Total (n=16)
Price / Sales Process	Pricing / Flexibility	7	2	9
Organization	Internal politics / preferences	4	3	7
“Product”	Technical deviation	3	1	4
Organization	Inadequate organization structure	1	2	3
“Product”	Inadequate scope	2	1	3
“Product”	Alternative concept	3	-	3
“Product” / Pricing	Lift-cycle costs	3	-	3
Price	Internal Costs	1	1	2
“Product”	Service costs	2	-	2
Relationships	Relationships	2	-	2
Strategy	No focus	2	-	2
Sales Process	Poor knowhow	-	2	2
Organization	Product-centric view	-	2	2
Organization	Lack of holistic view	-	2	2

Table 4 Weaknesses according to interviews

Interview round1 indicated that the case company has been operating in this format about fifteen years. Thereby, it is sometimes unfair to compare the case company to other business units of the enterprise that have existed more than one hundred years. As the case company is a project organization, it is natural that good competence is emphasized.

According to the interviews, the case company's strengths are its brand, product and relationships. The company holds a strong brand according to the interviewees. Many interviewees expressed that good relationships are the key to new sales. One of the main components is unique and has opened doors to the case company.

Shipbuilding industry accepts system providers as such, but the case company faces tough competition caused by other system providers. The main product weaknesses are related to the case company's scope and concepts – not to individual main components. The case company has lost sales projects to higher vertical and wider horizontal integration and to lower vertical and narrower horizontal integration. Horizontal integration means main components in the case company's scope of supply, and vertical integration means systems in the case company's scope of supply. Lower horizontal integration means the main component sales as individual components. The case company is perceived as expensive in capital expenditures as well in operational expenditures. Price and pricing were the most mentioned items. It was also noted that losing happens in early rounds. Many interviewees complained about organizational weakness and internal policies or preferences. Since there was no clear strategy in place, it is understandable that operations seem to be myopic. A couple of interviewees claimed that the case company's mindset is product-centric and perceived that as a conservative approach.

2.6 Conclusions on Problem Analysis

Firstly, the hit rate indicated that the **recession was not the reason for poor performance**. Hit rate decreased before the financial crisis, and therefore, the financial crisis can be excluded from the thesis.

Secondly, **cost-to-serve matrix indicated heterogeneous segmentation**. Before cost-to-serve analysis it was empirically known that there was no data collection from segments. Analysis indicated that there is high dispersion inside each segment, albeit averaged data in Figure 7 might look reasonable. When segments are heterogeneous, effective pricing or product strategies cannot be utilized. The prevailing segmentation is good for shipyards, because the case company can address a clear contact person according to a vessel type. Therefore, the segmentation was left untouched.

Thirdly, **product portfolio was too complex and did not reflect systems**. The idea of selling systems was diluted. Fuzzy portfolio and variety of main components and their suppliers had led to a situation where it was not anymore clear what the case company sells. It was clear that offerings needed clarification.

Fourthly, **sales price analysis indicated high dispersion of pricing**. Accordingly, interviews indicated price as a reason for losing a sales project as well a reason to win a sales project. Value of orders received is left out from Figure 9 due to confidentiality, but dispersion of orders received was smaller than in offered projects. When the case company prices properly, it is an attractive supplier and chances of winning contracts increase. Therefore further enhancement of pricing knowledge is needed.

Consequently, recession was left out from further analysis. Segmentation and product portfolio needed renewal. Pricing was almost random, thus pricing needed further positioning and internal benchmarking. As losing on the early rounds was mentioned as weakness, it was necessary to emphasize the correct pricing at the beginning. Therefore, the next sections dwell into literature of segmentation and pricing, respectively.

3 SEGMENTATION

The objective of the study was to gain competitive advantage through microsegmentation, therefore literature of segmentation was studied. This section summarizes the findings.

Companies cannot address their marketing, sales and promotion actions to all customers in large, broad, or diverse markets. Instead, companies can divide such markets into groups of segments with distinct needs and wants. (Kotler & Keller, 2009:247)

Segmentation means dividing actual and potential customers to homogenous groups according to specific classification criteria (Hutt & Speh, 2007:135). When the offering is focused to preselected target groups, the company can earn more profit compared to a company addressing its offerings to all potential customer groups (Rope, 2000:154) and optimize the scarce company resources (Anderson, Narus, van Rossum, 2006).

A company operating in business-to-business markets has better possibilities to select its customers compared to a company operating in business-to-consumer markets (Rubanovitsch & Aalto, 2007). The essence of B2B-sales is to select customers and map the customers' needs carefully.

A market can be seen through distinctive segments. A company must make a decision which segments the company intends to conquer, because "all things to all customers" is actually "nothing to no-one" (Frei, 2008; Rope, 2000:88). One attribute could be primary for one customer group, whilst the same attribute could be meaningless to another customer group (Rope, 2000:97).

Hutt and Speh (2007:118) advocate customer segmentation and argue that companies should select well-defined group of potentially profitable customers, develop distinctive value propositions that meet customers' needs better than the competitors' and focus marketing resources on acquiring, developing, and retaining profitable customers.

Hutt and Speh (2007:119) refer to a study that found out that top 20 percent of customers contributed a median 75 percent of sales volume and 50 percent of typical company's sales came from just 10 percent of its customers. Another study showed that 15 to 20 percent of customers generated 100 percent of the profits (Hutt & Speh, 2007:119).

There are several benefits deriving from segmentation (Hutt & Speh, 2007:112). First, segmenting forces a company to be attuned to the unique needs of customer segments. Second, knowing the needs of individual market segment helps the company to address

product development efforts, develop pricing strategies, select appropriate channels of distribution, develop and target advertising messages, and train and deploy the sales force. Thereby, market segmentation forces the foundation to a company to assess effective and efficient marketing and sales strategies. Third, market segmentation provides valuable knowledge for allocating marketing resources. As markets are constantly changing, companies should monitor their attractiveness and performance. As costs, revenues and profits must be evaluated segment by segment, market segmentation provides a basic unit of an analysis for marketing planning and control.

Furthermore, a company must carefully evaluate which market segments the company can serve effectively. Such a decision requires deep understanding of customer behavior and careful strategic thinking. To be able to develop the best marketing plans, managers need to understand what makes each segment unique and different. (Kotler & Keller, 2009:247)

Finally, it is essential to understand if the customers can influence each other. Moore (2002:28) defines that 'market' is *"A set of actual or potential customers for a given set of products or services, who have a common set of needs or wants, and who reference each other when making a buying decision."*

Moore (2002) claims that the first three points are commonly understood, but the last one is not. When the customers have no way to reference each other or have no reasonable basis for influencing with each other, they are not part of the same market. Market can be combined from oranges and apples for describing macroeconomic system, but, then market cannot be the focus of marketing. This is why marketing professionals break up "the market" into isolable "market segments". Segments are preferred, since marketing professionals realize that no meaningful marketing program can be implemented across a set of customers who do not reference each other.

3.1 Process of Segmentation

According to Rope (2000:155-156), segmenting as a term is simple in business; a company selects the most profitable customer group from market. But in actual business, first difficulty is the selection itself: selecting some customers means relinquishing of other potential customers. On the other hand, a segment should be as small as possible. Narrow segment selection creates a problem, since business success is directly related to the success of the segment selection. Furthermore, there is no universal way to define segments – as it is demonstrated in the following sections – because one segment cannot be best in all domains or in all criteria. When a company defines segments, the company

must assess its potential, resources and capability to achieve dominant position and competitive advantage in the segments that are to be selected.

Rope (2000:218) packs customer-oriented segmentation process to six steps:

1. Product billet
2. Definition of target group
3. Defining contents of a product (the core product, add-ons, image product)
4. Definition of pricing foundation (costs, market price, pricing window)
5. Pricing decisions (splitting/bundling, pricing units, discounts)
6. Marketing description (description of history, product and price)

Price is included in this process, because without a price tag, a product is not ready for the market.

3.2 Segmentation in Business Markets

Consumer-goods are typically segmented according to customer profiles (demographic, lifestyle, benefits sought), but business markets profile segments according to organizations (size, end use) and organizational buyers (decision style, criteria) (Hutt & Speh, 2007:122). Thereby, a business market can be classified into two categories: macrosegmentation and microsegmentation. In brief, macrosegmentation focuses on characteristics of buying organizations and microsegmentation focuses on characteristics of purchase decision making unit.

Macrosegmentation

Macrosegmentation comprises the base of segmentation according to the characteristics of the buying organization, product/service application or characteristics of purchasing situation (Hutt & Speh, 2007:124) as can be seen in Table 5.

Variables	Illustrative Breakdowns
Characteristics of Buying Organization	
Size (the scale of operations of the organization)	Small, medium, large: based on sales or number of employees
Geographical location	New England, Middle Atlantic, South Atlantic, East North Central, etc.
Usage rate	Non-user, light user, moderate user, heavy user
Structure of procurement	Centralized, decentralized
Product/Service Application	
End market served	Varies by product or service
Value in use	High, low
Characteristics of Purchasing Situation	
Type of buying situation	New task, modified re-buy, straight re-buy
Stage in purchase decision process	Early stages, late stages

Table 5 Macro level Bases of Segmentation (adapted from Hutt and Speh, 2007:124)

As Table 5 shows, characteristics of buying organizations include size, geographical location, usage rate, and structure of procurement. Product/service application bases on end market served or value in use. Characteristics for a purchase situation are type of buying situation and stage in purchase decision process.

Microsegmentation

When a company has found its macrosegments, the company can move to microsegmenting. Microsegmenting defines the characteristics of decision-making units. Often one macrosegment contains several microsegments. Hutt and Speh (2007:127) propose the microsegments gathered in Table 6:

Variables	Illustrative Breakdowns
Key criteria	Quality, delivery, technical support, price, supplier reputation, supply continuity
Purchasing strategies	Optimizer, satisfier
Structure of decision-making units	Major decision participants (for example purchasing manager and plant manager)
Importance of purchase	High importance, low importance
Attitude towards vendors	Favorable, unfavorable
Organizational innovativeness	Innovator, follower
Personal characteristics	
Demographics	Age, educational background
Decision style	Normative, conservative, mixed mode
Risk	Risk taker, risk avoider
Confidence	High, low
Job responsibility	Purchasing, production, engineering

Table 6 Microlevel Bases of Segmentation (adapted from Hutt and Speh, 2007:127)

As Table 6 shows, the key criteria for microsegmenting can be based on quality, delivery, technical support price, supplier reputation, or supply continuity. Purchasing strategies can be categorized into optimizer and satisfier. The structure of decision making unit can be centralized or de-centralized and the importance of purchase can be favorable or unfavorable. The buying organization can be innovative or follower. Personal characteristics can be categorized into demographics, decision style, risk, confidence and job responsibility. Demographics mean age and educational background. Decision style can be normative or conservative or mixed. Risks can be taken or avoided. The confidence of a buyer can be high or low and job responsibility can be for example in purchasing, production or engineering.

3.3 Segmenting According to Customers

Moore (2002) concludes that the first point in segmenting is to divide all possible customers into market segments. Then, the attractiveness of a segment is to be evaluated. Then, the company must select finalists, make estimates – like niche’s size, accessibility to distribution, and degree of defend towards competitors. Finally, the company picks and goes after.

According to Moore (2002), this is not relatively easy. When a company has selected its strategic target segments, but not yet penetrated into, the company has no experience of that specific market. If the company is penetrating into a specific market, no one knows for sure what will happen. Furthermore, one problem of this is that the established case studies are based on segmenting of existing markets and there are no good examples about penetrating into a new market. At this point, the most fatal thing for a company is to rely on numeric information.

Another problem is that companies focus too much on target segments. Instead, companies should be focusing on target customers. Target-customer characterization is a formal process for absorbing individual ideas together into a marketing plan. As many characterizations as possible should be targeted. That enables to discover that there are total 8 to 10 distinct alternatives - rest just resemble one another. (Moore, 2002)

The following paragraphs decipher the distinctive microsegmentation methods. Two of the methods are finally selected to be utilized in the case company.

Segmenting According to Cost-to-Serve

Some customers are more expensive to serve than others (Hutt & Speh, 2007:98). High-cost-to-serve customers demand customized products, frequently changing orders, and lots of support before and after sales. Conversely, low-cost-to-serve customers purchase standard products, place orders, and need less support before and after sales. Hutt and Speh summarize the distinctive characteristics in Table 7.

High-Cost-to-Serve Customers	Low-Cost-to-Serve Customers
Order custom products	Order standard products
Order small quantities	Order large quantities
Unpredictable order arrivals	Predictable order arrivals
Customized delivery	Standard delivery
Frequent changes in delivery requirements	No changes in delivery requirements
Manual processing	Electronic processing
Large amounts of presales support (i.e., marketing, technical, and sales resources)	Little or no presales support (i.e. standard pricing and ordering)
Large amounts of post sales support (i.e., installation, training, warranty, field service)	No post sales support
Require company to hold inventory	Replenishes as produced
Pay slowly (i.e., high accounts receivable)	Pay on time

Table 7 The Characteristics of High- versus Low-Cost-to-Serve Customers (adopted from Hutt & Speh, 2007:98)

First, as the Table 7 shows, high-cost-to-serve customers order custom products in small quantities and in random pattern. Low-cost-to-serve order standard products in large quantities and in predictable pattern. Second, high-cost-to-serve customers expect customized delivery, make frequent changes, force to manual processing and consume large amount of presales support, whilst low-cost-to-serve customers are satisfied to standard

delivery, make seldom changes, enable electronic order processing and require little or no presales support. Furthermore, high-cost-to-serve customers require a lot of post sales support, inventories and pay slowly, whilst low-cost-to-serve customers require no post sales support, no inventories and pay on time.

Segmenting According to Potential Customers

Hutt and Speh (2007:121) refer to a proposal that categories prospect customers in three groups: undershot customers, overshot customers and non-consuming customers. Undershot customers do not see appeal in the company's current offerings and are willing to buy new product versions at steady or increasing prices. Overshot customers think that the current offerings are too good and are reluctant to buy new product versions. Non-consuming customers lack the skills, resources, or ability to benefit from the existing solutions.

Segmenting According to Net-Promoter Score

Net-promoter score (NPS) is Reichheld's (2006) solution to categorize customers. NPS defines a company's score with a single question "How likely it is that you would recommend us to a friend or colleague?" in zero-to-10 scale. Customers are put in three categories that are promoters, passively satisfied and detractors. Promoters are the ones with a score of nine or ten and they are seen as free sales force for the company. Passively satisfied customers repurchase less than 50% of promoter purchases. Detractors are the source of negative word-of-mouth and the least likely to repurchase or refer.

A company's NPS is percentage of promoters minus the percentage of detractors. Reichheld (2006) refers to studies which show a correlation between NPS and the bottom line. One case showed that 12 percent increase in NPS corresponds doubling of a company's growth rate. Another case showed that an increase of seven percent equals one percentage increase in growth rate.

Calculations of the lifetime value of an average customer are the starting point. Second step is to go beyond the average customer. Promoters and detractors distinguish clearly in retention rate; margins spend annually, cost efficiency and word-of-mouth. The retention of a detractor can be determined according to the lifetime of the current customership and the score of NPS. When the customer stays longer with a company, then the life-time value of a customer increases. Promoters are less price-sensitive for margins and on the contrary, detractors are more price-sensitive. Promoters spend more annually and increase their purchases faster than detractors. Customer acquisition costs are lower for

promoters because of two things: promoters stay longer with a company and they refer the company in positive sense increasing the attractiveness of the company. Detractors are more likely to complain and consume customer service resources. Promoters account for 80% to 90% of positive referrals, while the detractors account the same percentages, but in negative word-of-mouth. Reichheld (2006) proposes companies to focus on negative comments because a single comment can dilute ten positive ones.

A company shall map its customer base and divide customers into promoter-passive-detractor scale and divide categories in high-profit and low-profit customers (Reichheld, 2006). The company's own analysis is in the key role when selecting a strategy while the proposed grid can – already – spark targeted actions. The grid helps to determine which customer segments are important, how resources should be allocated and what values should be proposed. A company shall invest in profitable promoters and address the detractors. Simple rules apply for detractors: up or out. The company must find an effective way to serve the detractors or discard them. Finally, a company must try to find additional promoters by turning the passives into promoters or by selling more services to the passives. The company must learn why some customers are not enthusiastic about the company and how to delight them.

Segmenting According to the Key Criteria

It is possible to a company to categorize customers according the primary criteria affecting the purchase decision. In that case, the market segments are (i.e. customer profiles), for example, high quality, prompt delivery, premium price versus standard quality, less-prompt delivery, and low price (Hutt & Speh, 2007:127).

The key criteria-based segmentation is efficient since the segmentation method reflects accurately the strongest needs and wants of the customers.

Segmenting According to Value-Based Strategies

Many customers expect the supplier to be able help the company to create more value to gain competitive edge in their markets. Hutt and Speh (2007:128-130) refer to a study that found three distinctive value-based groups:

Innovation focused customers attract new customers by being first in the market. Their targets are reached through new technologies, new product development and innovative solutions.

Customers in fast-growing markets seek proven technology, manufacturing and supply-chain management. They are forcing the pressure of the market-growth.

Customers in highly-competitive markets seek cost-effective solutions that keep overall costs down. They produce mature products, center on process efficiency and effectiveness in manufacturing. (Hutt and Speh, 2007:128-130)

Segmenting According to Technology Adoption Life Cycle

Technology adoption life cycle is divided into five distinct stages (Moore, 2002) which are Innovators, Early Adopters, Early Majority, Late Majority and Laggards that can be seen in Figure 10. First, Moore (2002:10) makes a distinction between innovations in technology adoption life cycle. Two types of innovations are separated in academic literature; *continuous innovations* and *discontinuous innovations*. Product upgrade that does not require change of behavior is an example about continuous innovation. Conversely, discontinuous innovations force a change of behavior or require modification of other products or services.

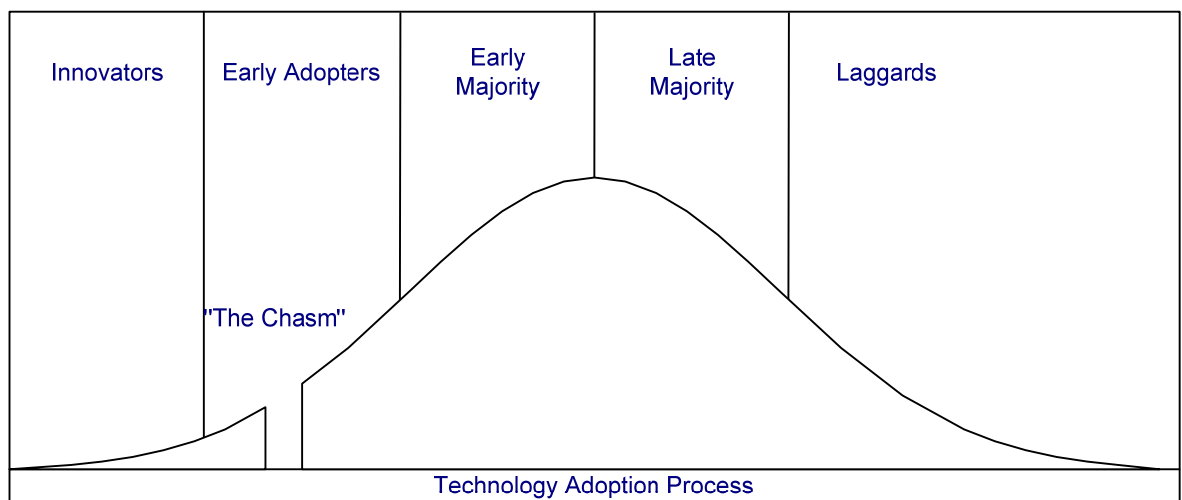


Figure 10 Technology Adoption Life Cycle (adapted from Moore, 2002:12)

According to Moore (2002) **innovators** accept new technology aggressively. Technology is a central interest for innovators. There are not many innovators in market segments, but those are the key customers in a sense that they are pioneering and showing to other customers that the product does work.

Early adopters follow the innovators and adopt new product concepts very early in the concept's life cycle. Early adopters find it easy to imagine, understand, and appreciate the benefits of new technology. Early adopters do not require existing references; instead,

they rely on their own intuition and vision. Thereby, they play a key role in opening up a high-tech market segment. (Moore, 2002)

The **early majority** shares some characteristics with the early adopters, but is fundamentally different due to strong practicality. The early majority wait until the references are available before making a buying decision for a new technology. The early majority captures roughly one third of the whole customer base, and is, thereby, a very interesting group for marketers. (Moore, 2002)

The **late majority** is waiting that a product is coming to standard before buying decision can be made. The group captures one third of the whole customer base. The late majority is profitable; profit margins have decreased due to mature along with selling costs and R&D costs have been amortized. (Moore, 2002)

The last group is **laggards**. The laggards are reluctant to new technology due to personal or economical reasons. Laggards buy new technology only when the technology is integrated irrevocably to another product – like microprocessor in a car's braking system. If the group is minority and last in the life cycle, the group is not considered worth pursuing. (Moore, 2002)

Moore (2002) pointed out that there is a crack between innovators and early adopters and a crack between the early majority and the late majority. Those are insignificant, because the real problem lies between the early adopters and early majority. Moore coins the crack to "the chasm". The buying process between the early adopters and early majority is totally different, and thereby, the chasm must be recognized. The early adopters buy to get a jump on the competition, whilst early adopters expect improvements in the productivity. The early adopters expect lower product costs, faster time to market, more complete customer service, or some other comparable business advantage. The early majority expects evolution rather than revolution and they want technology to enhance the product. Most of all, the early majority wants to be sure that they receive a properly working product. The problem is that early majority can't use early adopters as reference. The only feasible reference is another early majority. Thereby, it is difficult to penetrate into a highly reference oriented market, when there is no reference base.

Another difference between the early adopters and early majority is communications. The early majority, also called pragmatist, tend to be vertically oriented. This means that they communicate more with others within their industry than technology enthusiasts and early adopters who are more likely to communicate horizontally across industrial boundaries. This is one more reason that makes selling difficult to the early majority. But, when a

company has penetrated to the early majority's market, the market tends to be quite loyal and help succeeding. This decreases sales costs and the leverage on incremental R&D goes up. This is one of the reasons for the early majority to make a great market.

The early majority prefers to keep the number of distribution channels as low as possible. This allows them to maximize their buying leverage and to maintain a few clear points of control. One good path is an alliance with an entrepreneurial company. Value-added-reseller (VAR) shall focus on timely quality work delivered in budget, since that is an attractive type of solution to a pragmatist. VARs can provide turnkey answers and represent a single point of contact to the early majority.

One final characteristic about pragmatic buyers is that they like to see competition. They want to assure themselves that they are buying from a proven market leader. The early majority are reasonably price-sensitive. They are willing to pay for a modest premium for top quality or special services, but in case of lack of differentiation, they select the best deal. Patience is the key with pragmatic buyers: one must be patient and conversant with the issues dominating in the early majority's business.

When a company is about to cross the chasm, the company must take a niche market approach. The company must be market-driven, not sales-driven. A sales-driven company is pursuing any sale at any time for any reason. A market-driven company is not. When a company is crossing the chasm, then the company's target is to reach beachhead in a mainstream market. That is a reference point enabling access to other mainstream prospects. This is why the first set of customers must be completely satisfied. It is important that a customer receives that the product and the expectations related to the product are met. Another benefit of this approach is its captivity. Once the pragmatist buyer is lured, he will conspire to keep the seller and in that way cause barriers for competitors. Mainstream customers will complain about lack of features, but they are on the seller's side, and like to be lured. As a conclusion, it is important to have a narrowly bounded market segment, when a company is about to cross the chasm. Furthermore, a niche may be a good target after the chasm has been crossed, but it is not a good target for the crossing itself.

Hutt and Speh (2007:131) concur that some companies are more innovative than others, and willing to purchase more new industrial products than others. A supplier company can then identify segments that should be targeted first when the company introduces new products. Additionally, forecasting accuracy improves when diffusion pattern are estimated segment by segment. Hutt and Speh (2007:235) refer to Moore's theory that each

market segment is like a bowling pin, and hitting one segment successfully carries over to the surrounding segments. This “bowling alley” occurs when a company hits the mainstream markets. “Main Street market” represents a period after the market development, when the adoption of the product begins to subside (Hutt & Speh, 2007:237). At this stage sales are coming from niche-specific extensions rather than basic commodity.

Segmenting According to Customer Profitability

By categorizing customers by profitability tiers a company can improve on traditional market segmentation. When a company knows the characteristics of profitable customers, the company can address marketing efforts to the segments that are most likely to yield profitable customers (Hutt & Speh, 2007:134). A company must evaluate near-term and long-term profitability, when assessing the categories.

Zeithaml, Rust and Lemon (2001) argue that many customers are too costly to do business with and have little potential to become profitable. It is neither practicable nor profitable to meet all customers’ expectations. Thus, it is essential to understand different levels of customer profitability and adjust services accordingly.

A customer pyramid that can be seen in Figure 11 is a tool to supplement traditional segmentation (Zeithaml et al., 2001).

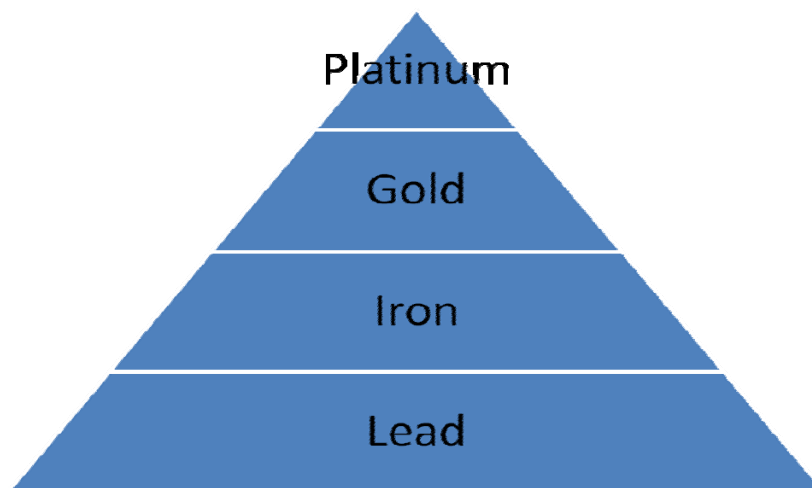


Figure 11 The Customer Pyramid (adopted from Zeithaml et al., 2001:125)

As Figure 11 shows, customers are divided into different tiers according to their profitability. The levels can be identified, motivated, served, and expected to deliver differential levels of profit. There are four mandatory conditions for implementing customer pyramid (Zeithaml et al., 2001:121); tiers have different and identifiable profiles, customers in different tiers view service quality differently, different factors drive incidence and volume of

new business across tiers and the profitability impact on improving service quality varies greatly in different customer tiers.

The customer pyramid is a powerful tool in the following conditions (Zeithaml et al. 2001):

- If the company has customers that differ in profitability, but the company delivers the same kind of service to all customers.
- If service resources, including employee time, are limited.
- If customers want different services or service levels.
- If customers are willing to pay for different levels of service.
- If customers define value in different ways, for example in low price, in product or service feature or in quality divided by price.
- If customers are separated from each other (a customer should not know that the tiers exist and entitle to different service levels).
- If service differentials can lead to upgrading customers to another level.

Zeithaml et al. (2001) argue that customers can be turned from less profitable into more profitable by becoming a full-service provider, providing outsourcing, increasing brand impact, creating structural bonds, offering service guarantees, reducing customers' non-monetary costs of doing business, utilizing meaningful brand names, being customer expert through technology or leveraging intermediaries, developing frequent programs, creating service recovery programs, raising prices, reducing costs or by trying to get the lead tier customers out. Different methods are appropriate to different tiers.

Segmenting According to Service Buyers

A service company needs to meet the customers' needs and wants effectively. Like segmenting with product strategy, first, the target segments must be selected, and then the offerings must be tailored to the expectations of each segment. The four special elements belonging to the marketing mix are: development of service packages, placing, pricing, and distribution. The key elements hinge on the needs of a relatively homogenous group of customers – segments are typically narrower in services. This is due to the customers' requirements; the customers expect the services to be customized – not standardized.

Second, the service segmentation is done according to the customer expectations rather than what customer needs. Assessing the buyer's expectations has a major role in selecting the target marketing strategy and addressing a targeted service package. This assessment is critical, since many studies have shown that customers and suppliers define and rank differently the service activities. Because expectations are in a key role, attuned companies segment customers accordingly.

Finally, segmenting reveals the total demand and enables a service company to address its capacity and resources effectively. (Hutt and Speh, 2007:277-278)

3.4 Implementing a Segmentation Strategy

Well-developed segmentation is not the key to success. If a company fails to pay attention to implementation, the whole strategy fails. Hutt and Speh (2007:135) define the following to be sorted out in the company:

- *How should the sales force be organized?*
- *What special technical or customer service requirements will the organizations in the new segment have?*
- *Who will provide these services?*
- *Which media outlets can be used to target the advertising at the new segments?*
- *Has a comprehensive online strategy been developed to provide continuous service support to customers in this segment?*
- *What adaptations will be needed to serve the selected international market segments?*

The astute business marketing company must plan, coordinate, and monitor the implementation in detail.

Rope (2000:169) proposes three steps in segmentation:

1. Customers are segmented according to their purchase criteria.
2. The criteria that enable the best functionality of segmentation are implemented.

3. Customers are segmented internally into sufficient number of homogenous groups.

Furthermore, Rope concludes (2000:174) that segmenting is not one-level process, but instead, diverges hierarchically to several branches. A company's structure, size, industry and markets define how many layers are suitable.

3.5 Requirements of Segmenting

There are five criteria according to Hutt and Speh (2007:117) for evaluating the potential market segments:

1. *Measurability – The degree to which information on the particular buyer characteristics exists or can be obtained*
2. *Accessibility – The degree to which the company can effectively focus its marketing efforts on the chosen segments*
3. *Substantiality – The degree to which the segments are large or profitable enough to be worth considering separate marketing cultivation*
4. *Compatibility – The degree to which the firm's marketing and business strengths match the present and expected competitive and technological state of the market*
5. *Responsiveness – The degree to which segments respond differently to different marketing mix elements, such as pricing or product features*

Rope (2000:165-166) concurs with sustainability, measurability and accessibility and concludes that a segment should be big enough to make it reasonable to address marketing activities. When the whole market is small, it does not make sense for segmentation. Wider markets shall be divided into segments. In some cases, one customer can be one segment - example one ship could be one segment for a shipyard. Segmentation must be profitable through additional sales or overall profitability compared to costs that the new segment produces.

A company must carefully select its target segments. It is quite typical that segmentation is done according to segmentation of other mainstream companies and special segments are screened out. Actually, most of the time the special segments are more profitable and the operation in mainstream segments tend to lead to heavy price competition (Rope,

2000:88). One B2B giant corporation had a traditional segmentation, but managed to boost its sales after reframing segmentation to differentiate from mainstream. New segmentation enabled the B2B giant corporation to see what customers valued most (Harrington & Tjan, 2008).

When the segments are assessed, defining contents of a product is the third step of segmentation (see section 3.1). The next section focuses on products.

3.6 Definition of a Product

There are distinctive definitions of product layers as can be seen in Figure 12.

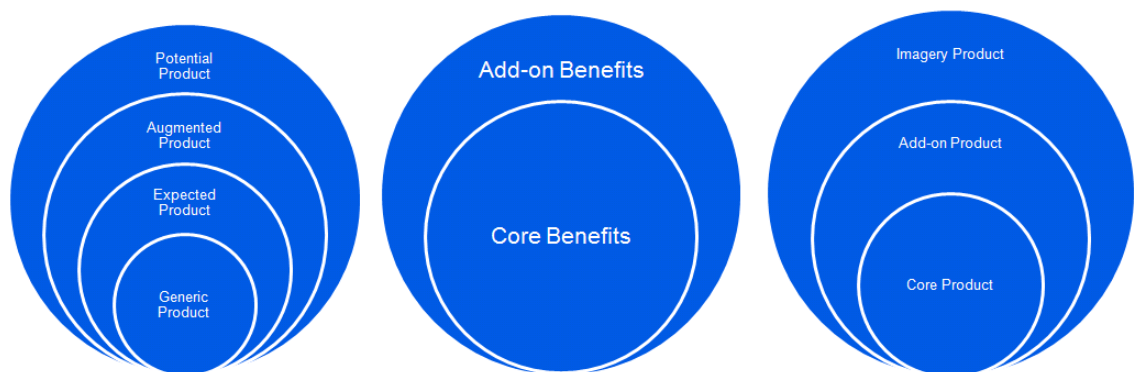


Figure 12 Different Product Layers (adapted from Moore, 2002:109; Hutt & Speh, 2007:222-223; Rope 2000:209-211)

Product can be divided into four different perceptions (Moore, 2002:108-110), which are **generic product, expected product, augmented product and potential product**. These can be seen on the left side of Figure 12. Generic product is covered by purchasing contract and something tangible that can be shipped. Expected product is the product that the customer thought he was buying when he bought the generic product. It is the minimum configuration of products and services that have any change of achieving a satisfied customer. Augmented product is the product supplemented to provide the maximum customer satisfaction. Potential product is the product's capability to grow or absorb ancillary products and services, or ability to implement customer-specific enhancements.

Hutt and Speh (2007:222) split product benefits to **core benefits** and **add-on benefits** that are on the middle of the Figure 12. Core benefits are the core requirements that suppliers must fully meet to be included in the customers considerations set. Add-on benefits are attributes that differentiate the suppliers, and create added value in a commerce relationship. Hutt and Speh (2007:223) refer to a research contributing that add-on benefits influence more to customers' decisions than core benefits. All companies perform well in core competencies; thereby value added becomes the differentiator.

Rope's (2000:209-211) comprises three layers; **the core product, add-on product and imagery product** that can be found on the right side of Figure 12. The core product is the thing that the company sells. Add-ons involve, for example, warranty, installation, training, and delivery. The purpose of add-ons is to lower the level of purchase decision and positively differentiate from competitors. The core product and add-on product together form a functional product. The problem of a functional product is that its distinct characteristics are volatile and tend to commoditize fast. Thereby, the company's ability to increase the attractiveness of the imagery product becomes crucial. Branding is centric in imagery product layer.

Segmentation and product definition knowledge form the foundation for product offerings of the case company. But, if a product is not properly positioned and priced, it is not ready for market. Thus, the next section discusses the pricing and positioning that would be suitable for the case company.

4 PRICING

Pricing decisions are among the hardest decisions that management groups have to do (Moore, 2002). The problem is that there are many perspectives competing. Hutt and Speh (2007:366) conclude that the understanding how customers define value is the essence of the pricing process, and pricing decisions complement the company's overall business strategy. If companies do not coach their sales representatives, and if sales representatives do not master the sales process, it is likely that the company ends up into a price war (Rubanovitsch & Aalto, 2007). When the company focuses on service instead of price, the company leaves less latitude for low cost competitors. Rubanovitsch and Aalto (2007) observe that customers know that sales costs are exposed to the end price and the customer is willing to pay higher price, only when it is sure that the company fulfills its promises.

Rope (2000:72,229) concludes that the importance of price is misunderstood – especially in business to business markets – because price is overemphasized during final negotiations where the preceding purchase criteria have already discarded unsuitable offerings and purchaser's role is only to focus on price reduction. Professional buyer can bargain effectively, and the conclusion, that price is the only purchase criteria, shall not be generalized. Adcock (2000:95) argues that there are many situations where price is not a major determinant in the buying process.

Furthermore, Rubanovitsch & Aalto, 2007 notice that price competition sinks margins and profitability, whilst good customer service enables companies to sell more and more expensive products. On the other hand, the more there are competitors, the more significant role the price receives in decision making (Rope, 2000; Porter; 2008). In a situation, where many companies are offering, the company's sales representative is in the key role (Rubanovitsch & Aalto, 2007). Conversely, the deeper relationship between the buyer and seller, the higher is the end price and the less there is competition. The customers accept higher prices when they know that the seller is able to deliver its marketing promise. Rubanovitsch and Aalto (2007) observe that the price can be up to 15-20% higher, when the customer can focus the purchase to one company.

Many sales representatives claim that prospect contracts are lost due to marketing, bad image, poor brochures, internal communication, slow systems or the buyer's lack of money. Rubanovitsch & Aalto (2007) have heard the common sentence: "It is hard to sell, because the competitor has better prices". In reality and in commerce, price is just one issue, and most of the times a secondary issue. Instead of price, the primary things could

be disappointment to the selling company and the behavior of the seller's sales representatives (Rubanovitsch & Aalto, 2007).

Rubanovitsch and Aalto (2007) list three reasons why customers make counter-arguments related to price:

- The customer has not completely understood the entity of the sellers offering and the advantages of the product or service.
- The customer is trying to get a discount using a (fictitious) benchmark price.
- The customer does not compare the seller's offer to a similar offer, or compares the seller's offer to the competitor's price of one product or service, not to a comprehensive solution

As a summary, there are always customers complaining about the price. Bargaining is a principle for an organizational buyer. A seller should neither give discount too easily nor try to buy customer via discounts. A seller should indicate that its offerings are worth the money, desired, and leading to deals. Discontinuous pricing hampers a company's brand and teaches the buyers to bargain and look for other solutions. (Rubanovitsch & Aalto, 2007)

Hutt and Speh (2007:12-13) mention the price sensitivity's effect on demand. Demand elasticity means responsiveness of the quantity demanded to change the price. When change in price accumulates higher change in demand, the demand is elastic. When change in price accumulates less change in demand the demand is inelastic – that means that the demand is less sensitive to price. Hutt and Speh (2007:13) remind that:

Final consumer demand has a pervasive impact on the demand for products in the business market. Being sensitive to trends in the consumer market, the business marketer can often identify both impending problems and opportunities for growth and diversification.

Porter (2008) concludes that a buyer is price sensitive when the product he purchases represents a significant fraction of the buyer's cost structure or procurement budget, the buyer earns low profits or is otherwise needed to cut its purchasing costs, the quality of buyer's product is less affected by the product, and when the product has little effect on the buyer's other costs. Price competition in industry occurs likely when products or services of competitors are nearly identical and switching costs are low, fixed costs are high

and marginal costs low, capacity must be expanded in large increments to be efficient, and if the product is perishable (Porter, 2008). Thereby, Porter (2008) proposes competition on other dimension than price to prevent eroding of profitability; for example on product features, support services, delivery time, or brand image.

4.1 Price as Competitive Advantage

Rope (2000:222-223) finds several functions for price. Price is

1. A metric of a product's value
2. An element for forming product's value
3. An element affecting on competition
4. An element for profitability
5. An element for positioning a product

Price indicates the product's value to the customer. If a company, for example, values quality that must be indicated in price. On the other hand, price builds and forms the desired image. Price is a centric numinous element in value and image, when price is properly used. But, high price might prevent sales volume. Low price can prevent entrants, if the entrants are incapable to compete with low price. Every cent earned through pricing is profit. Therefore, price is trade-off between volume and profitability. Also, pricing must be aligned with competition. Low or high pricing will cut sales volume. (Rope 2000:222-223)

4.2 Price Range

Size, similarity, stability and readiness of market affect on the price. When competitors, competitors' position, markets' commitment to competitors and competitors' pricing is added to the equation, the pricing becomes complex. Rope (2000:86-87) opens this complexity with a few principles:

- The more there are competitors, the more likely it is to end up in price competition
- The more dominant foundation the competitors have over the market, the more harder it is to penetrate with price. In turn, the weaker the links are between suppliers and buyer, the more likely it is to penetrate to the market without price being the determinant factor.

- The more aggressive operation principles the competitors have, the greater the risk to price level reduction. In turn, in stable markets price levels are less volatile and more insensitive for changes in demand or competition
- Similarity in suppliers' pricing ranges produces market pressure that disable price variations between suppliers.

In brief, Rope (2000:95) claims that price is dependent on time in market and a customer's perspective. Accordingly, a company can get different price with the same product from different markets. As well, a company can get different price from its product in different times in the same market. Furthermore, different target groups are willing to pay different price from the same product. Overall, price is determined by value added and attractiveness that company has managed to evoke.

Furthermore, Rope (2000:223-225) claims that costs are not a pricing principle, since the markets set the price levels. When a company is defining its products, the company must expand the price range. Price range describes the latitude that the company has for being competitive. An example of pricing is presented in Figure 13.

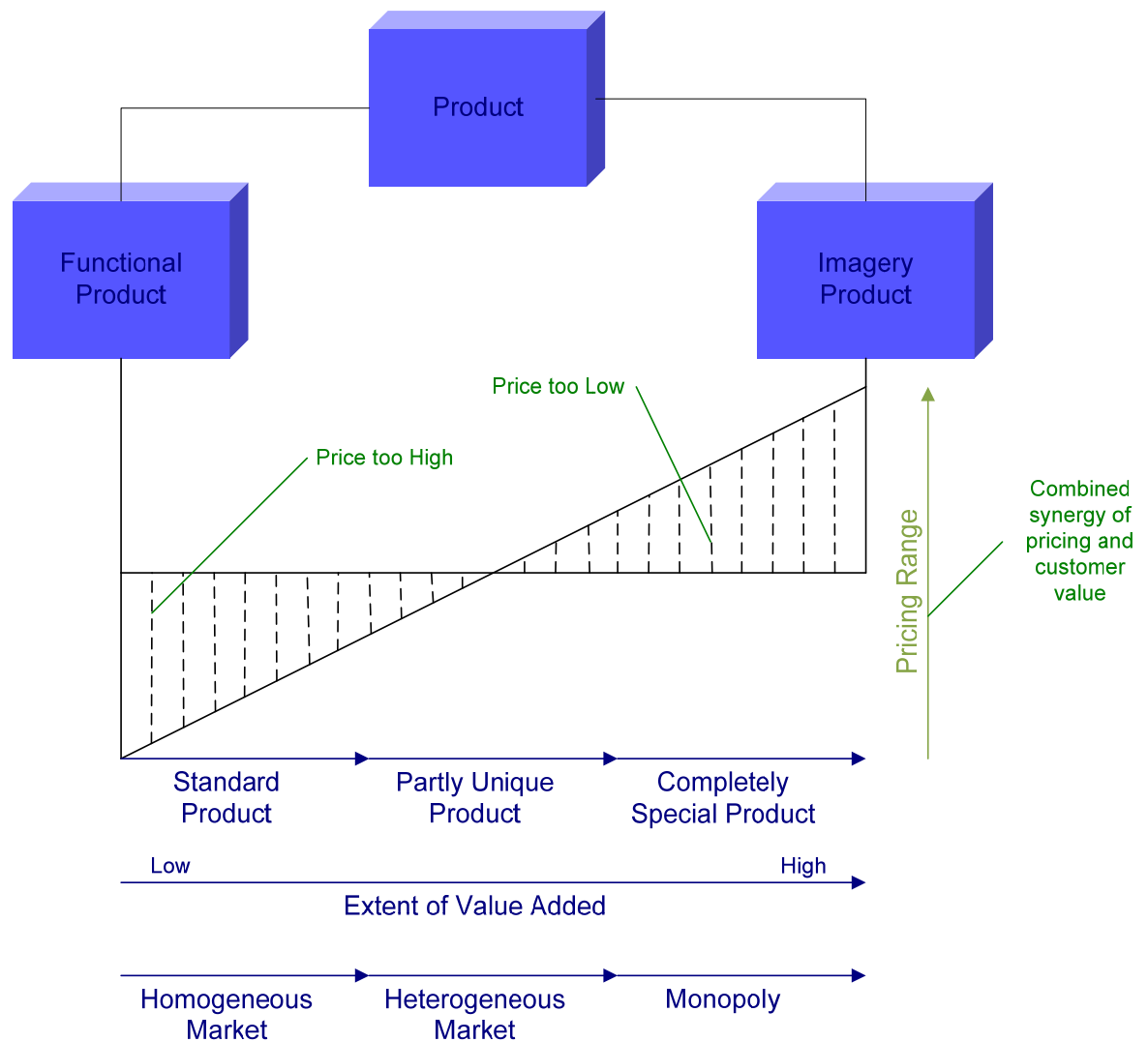


Figure 13 Price Range (adopted from Rope, 2000:224)

When a company operates in monopoly market, the company has wide freedom in pricing, but other competitors will try to enter the same market (i.e. heterogeneous market) and even create similar products (i.e. homogeneous market). If a company is unable to propose value, the company's success depends more on price. In turn, if a company is able to propose high added value, the company has more latitude in pricing. If a company bases its competitive advantage on the price, the company must be capable to produce products with lower costs per units than the competitors are capable of. Figure 13 summarizes that price is dependent on markets, competition, customers, extent of value added, and the company's product.

On the other hand, a company must be careful in pricing. When incoherent pricing is discovered, the company might lose its reputation too (Rope, 2000:404).

4.3 Pricing Process

Pricing process can be divided to two categories; pricing policy and pricing technique. Pricing policy is always first, but it links to pricing technique. Pricing policy means setting price proportionally to competitors. Pricing can be higher, on the same level or lower than the competitors' prices. Most of all, price policy relies on positioning of quality. If the quality is not indicated with price, the perception of quality fades in the customer's eyes. The idea of pricing techniques is to avoid price comparison. The marketers' goal is the situation, where products are not directly comparable in price. This status can be reached by refining the product in a way, that the product and other products are not considered identical. Another way is to utilize a pricing technique that is not identical with the one that the competitors utilize. The latter way is important when a product does not significantly differ from the competitors' products. On the other hand, pricing techniques are standardized in industries, and if a company utilizes different pricing technique, it is likely that the company's pricing technique encounters heavy resistance. (Rope, 2000:227-232)

Dolan (1995) argues that proper pricing comes from a myriad of issues carefully and consistently managed. Dolan (1995) forms an eight-step model for a company for better pricing:

1. A company should assess what value customers place on product or service.
2. A company should look for variation in the way customers value the product.
3. Customers' price sensitivity should be assessed.
4. An optimal pricing structure should be identified.
5. Competitors' reactions should be considered.
6. Realized transaction prices shall be monitored.
7. Customers' emotional response shall be assessed.
8. A company should analyze whether the returns are worth the cost to serve.

Also, the pricing process shall complement the overall marketing strategy and be coordinated and holistic (Dolan, 1995).

4.4 Pricing Models

Pricing can be cost structure or market based. Market based pricing can be split to competition, demand or to perceived customer value based pricing (Anttila & Fogelholm, 1999). Cost-plus pricing is safe and profitable in the long run, but can lead to too high pricing in though competition. Since cost plus is passive calculation, it does not take into account competition and characteristics of market. Cost plus is a simple method that just summarizes all costs and profit.

Target costing, presented in Figure 14, differs by acknowledging the market price.

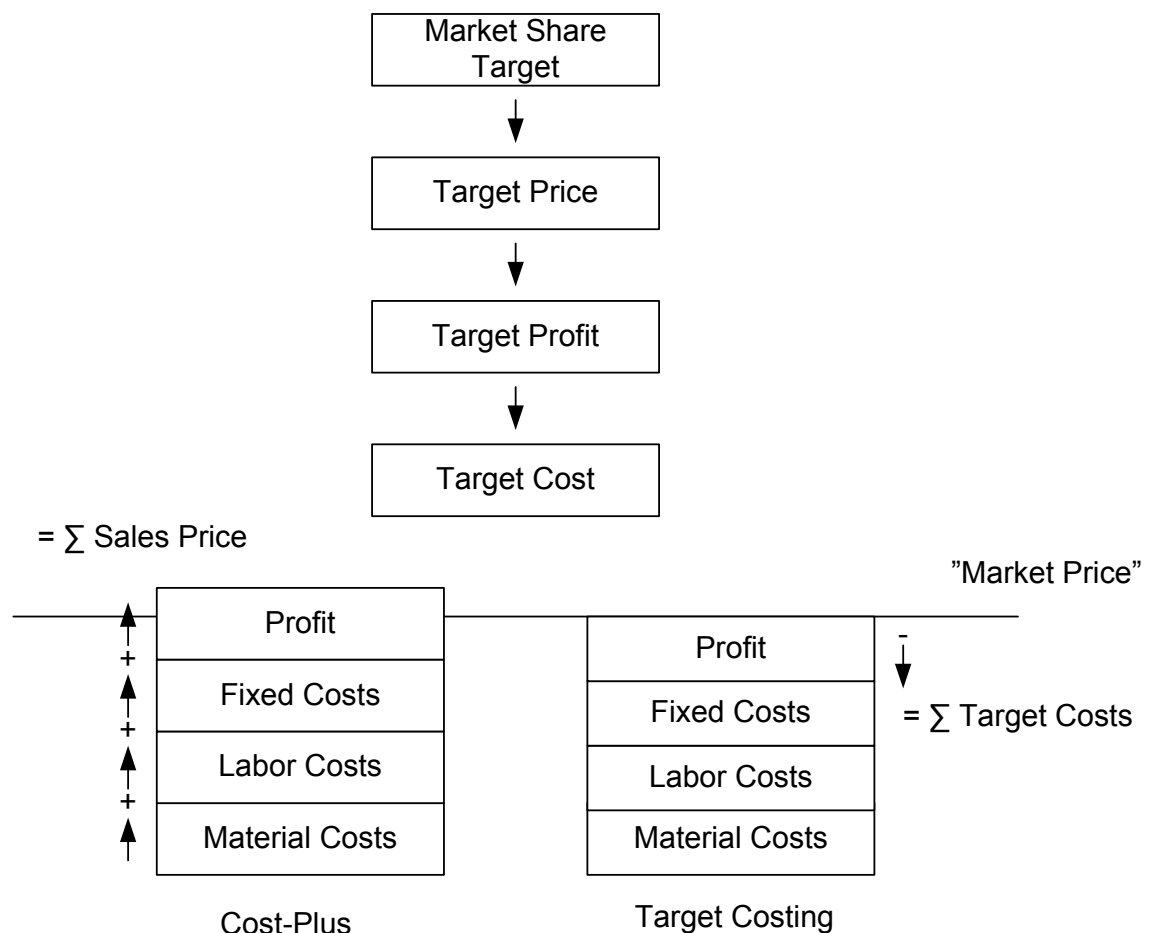


Figure 14 Cost-Plus Pricing vs. Target Pricing (adapted from Anttila & Fogelholm, 1999:42)

First step of target costing is to evaluate and set acceptable market price, which eventually leads to sale. Second step is cascading down the maximum costs of for each element in cost structure. Figure 14 illustrates how target pricing takes into account competition and market.

Target pricing is more difficult than cost-plus, since target pricing requires understanding of the customer's perception of value (Hutt & Speh, 2007:375-376). The market price is set to a level, which enables a company to achieve its market share target (Anttila & Fogelholm, 1999). Kotler and Keller (2009) conclude that companies need to examine each cost element to bring down costs to final target range. If target costs cannot be achieved, a company must stop developing the product because the company cannot sell for the target price and make the target profit.

Roegner et al. (2001) ask: "How can supplier figure out the right premium and the pricing model that will suit their customers?" (2001:94). Roegner et al. (2001) recommend collaboration with the customer to achieve distinctive offering – better than any alternative. Roegner et al. (2001) report about a company, which started with calculating the minimum and maximum price for their delivery. Then the company compared its offer to the competitor's alternative. Thirdly, the company carried out bottom-up analysis and got justification for their solution to be viable. Fourthly, the company defined what price level it would achieve. Finally, the case company sold both the price and value to a customer's senior management and by-passed traditional sales channels. For the case company it was essential to know the customer's business system, economics and risk/return system profile.

4.5 Positioning

A company should systematically analyze the company's and competitors' competitive position in hypercompetitive markets (D'aveni, 2007). If companies do not know what they are charging for and if customers do not understand what they are paying for, it is difficult to a company to position itself. Furthermore, companies tend to overestimate the benefits of their offerings and underestimate the benefits of competitors.

Mainstream markets expect comparison of products. Pragmatist buyers loath to buy until they can compare. That is why competition becomes a fundamental condition for purchase. Any company aiming to mainstream markets should be making decisions on how to create competition. Creating competition begins by locating the company's product to buying category that has already some established credibility between pragmatist buyers (Moore, 2002).

First step is to define the product market in which a company is interested (D'aveni, 2007). When a product market is defined, a competitive and attractive position for the product must be secured (Hutt & Speh, 2007:227) by choosing the price and by determining the primary benefit of the product (D'aveni, 2007). Product positioning depicts a place that product occupies in a particular market (Hutt & Speh, 2007:227).

Hutt and Speh (2007:227) argue that product positioning is found by measuring organizational buyer's perceptions and preferences for a product in relation to its competitors. Hutt and Speh conclude (2007:227): "*because organizational buyers perceive products as bundles of attributes (for example, quality, service), the product strategist should examine the attributes that assume a central role in buying decisions.*" To assess the company's position, a company can utilize a six-tier model described in Figure 15.

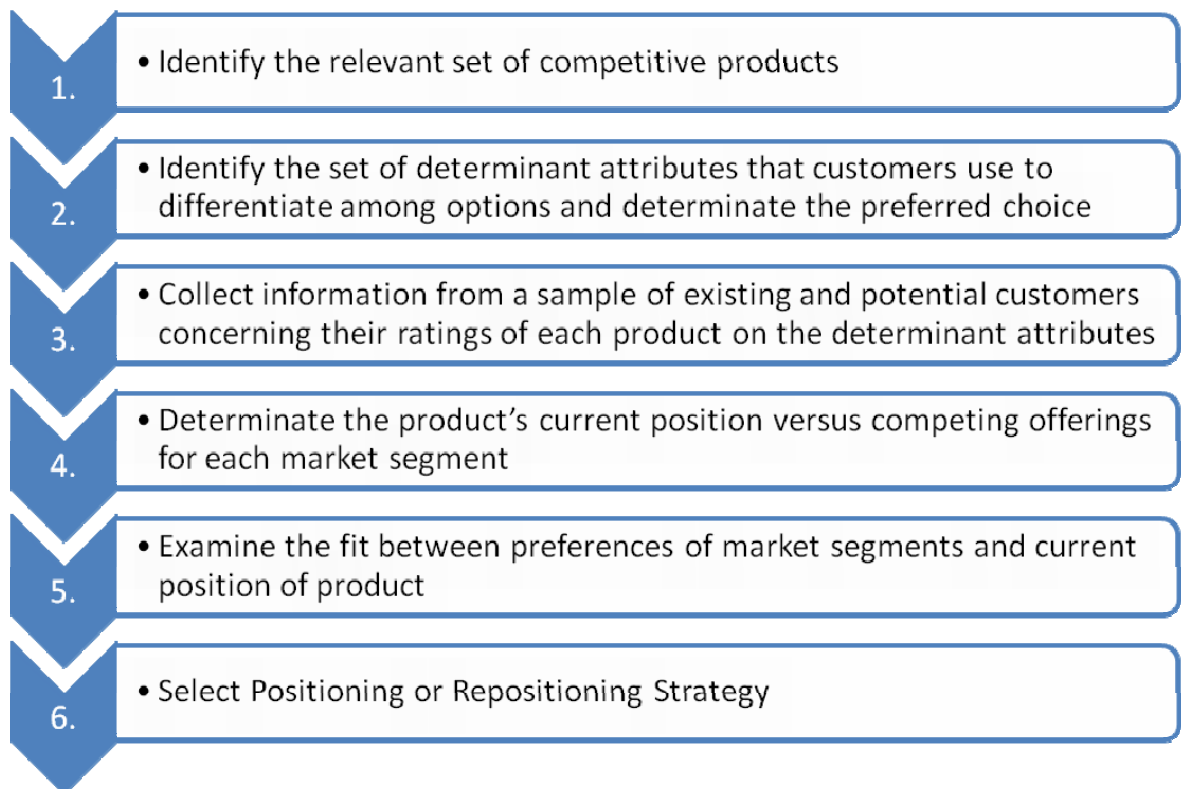


Figure 15 Steps in the Product-Positioning Process (adopted from Hutt and Speh, 2007:228)

First, a company identifies the relevant set of competitive products and set of determinant attributes that customers use for differentiation of options, and then, determinates the preferred choice. Second step is to collect information on the potential customers and their ratings of each product and determinant attributes. Subsequently, the company assesses the products' current position and fit among competing products in each market segment. Finally, the company selects the positioning or repositioning strategy.

D'aveni (2007), instead, argues that regression analysis will found out which benefit explains most of the variance in products' prices and regression analysis is more reliable than asking from people. A company should plot positions and draw expected-price lines. The expected price-line demonstrates how much customers expect to pay on average to get different levels of the primary benefit. Almost in all industries – according to D'aveni (2007) – straight line rising to the right fits data best. Furthermore, many companies in

industrial markets offer intangible benefits without knowing if customers want them enough to pay for them (D'aveni, 2007).

Segmentation and pricing knowledge form a solid foundation for further microsegmentation in the case company. The next section describes microsegmentation and pricing policy of the case company.

5 RESULTS

After literature study of segmentation and pricing the sales representatives were interviewed. Interviews were carried out to set the directions to the case company and to gain understanding about sales process.

Then, scope of supply was condensed to nine system level products. Nine system level products reflect more accurately what the case company is selling than high-variety of main components. Subsequently, microsegmentation was created to categorize to homogeneous groups to make distinction to macrosegmentation that led to heterogeneous customer groups. Then feasibility of microsegmentation was tested with existing statistical data.

Rope's (2000:50) decision making order was followed in the segmentation process (see section 3.1). First, product portfolio was condensed to concept billets (i.e nine system level products), and then, the market was microsegmented. Secondly, statistical and pricing data was used to reflect offering portfolio and microsegmentation. Finally, a framework was created to describe the case company's sales process.

There was no need to influence the pricing techniques, since those relate to operative sales and cannot be squeezed under one unifying principle. Product perceptions were not measured and no customers were interviewed due to shortage of time, instead, the offerings were positioned according to regression by relying on D'aveni's (2007) theory that regression analysis shows how much a customer is willing to pay for.

The next sections discuss how results were achieved and what was discarded or considered inapplicable.

5.1 Interviews on Segmentation and Adaptive Scope of Supply

There were four primary targets for the second interview round; to assess the customers' profitability, to address the primary purchase criteria, to study the feasibility of adaptive scope of supply, and to define points of parities (POP), points of difference (POD) and point of contention (POC). Several background questions were asked to open up the discussion. Background questions were related to strategy, sales process, customer selection, purchase signals, customer service, personal sales behavior, and to the mapping of customer needs.

Unfortunately, there was no unity in answers of the interviewees. Therefore, the primary targets of interviews did not come true. Contributions for new segmentation and adaptive scope of supply lacked. There was no preferred number of tiers for classification of the customers according to their profitability. Also, there were no uniform sales price levels for such a classification. Some primary purchase decision criteria were given before the interviews, but there were no uniform purchase criteria that could be condensed from interviews. The following issues were mentioned during the interviews as primary purchase criteria; space and weight, reliability, price, service, technology, project performance, good project execution, a vessel's life-time costs, local existence and local support, special solutions, delivery time and company size.

In the beginning of the interview all interviewees were asked to list their five most important customers as well the strengths and weaknesses of the case company. Strengths and weaknesses are discussed already in section 2.5. Many interviewees listed shipyards as well as ship owners as the most important customers, but almost all listed were existing customers. This confirms Shapiro's and Rosner's (2006) view that companies see the best prospects in their current customers. Thus, customers were well known, but the case company has neither customer relationship management system (CRM) nor proper sales tool. That hampers efficient data collection about customers, scheduling, planning and reporting to top management.

Only one of the primary targets came true. Points of parity, differentiation and contention were discovered and those can be used to enhance knowledge of sales performance. While selling the case company can differentiate with points of difference, be careful with points of contention and dilute competitors arguments with points of parity.

Points of parity (POP) according the interviewees were engineering, main components, sales structure, diesel electric propulsion, technology of one main component, quality, standard features of main components, sizing of standard components. Points of differentiation (POD) were quality image, worldwide service and support, R&D competence, wide range of product portfolio, unique competence in certain vessel types, single maker for all components, the most reliable technology supplier, good customer relationships, long history, overall technical competence, single point of contact, a global product portfolio, and monopoly market of one of the main components. Points of contention were technology, concepts, redundancy, main component characteristics, life-cycle costs, the case company's role as high-end maker, and value for price. Results are summarized in Table 8.

Points of Parity (POP)	Points of Difference (POD)	Points of Contention (POC)
Engineering	Quality image	Technology
Main Components and their standard features and sizing	Worldwide service and support	Concepts
Engineering	R&D competence	Redundancy
Sales Structure	Wide and global range of product portfolio	Characteristics of main components
Diesel Electric Propulsion	Unique competence in certain vessel types	Life-cycle costs
Technology of one main component	Being a single maker for all main components	The case company's role as high-quality maker
Quality	The most reliable technology suppliers	Value for price
	Good customer relationships	
	Long history	
	Overall technical competence	
	Single point of contact	
	Monopoly market of one main component	

Table 8 POP, POD and POC of the case company

The second interview round indicated that finding customer tiers and primary purchase criteria is difficult. Therefore the author utilized his empirical knowledge on creating micro-segments.

All interviewees favored adaptive scope of supply, but maybe the current sales tools and processes are not agile enough to adapt such a change in scope. In addition, it was noticed that adaptive scope of supply requires productization of different services. Productization time would have been too long, and therefore, adaptive scope of supply was left out of the study. Thus, adaptive scope of supply needs further development. As well, building up service concepts is a time consuming process.

5.2 Revised Scope of Supply and Microsegmentation

All interviews were conducted before processing the internal data. After the current state analysis and interviews, it was still unclear how to microsegment the customers and how to enhance pricing and performance knowledge. Therefore, statistical analysis of the sales and execution data was carried out and the author created microsegmentation and price range. This section discusses the microsegmentation, whilst the next section focuses on price range.

As the current state analysis had indicated, the product portfolio needed clarification. According to Rope's (2000) theory, clarified portfolio (i.e. product billet) was a prerequisite for segmentation. Since the vessel type based segmentation was macrolevel segmentation, it was not discarded, instead, a new, microsegmentation was created. As a result, the case company has now three distinctive views to customers; vessel type perspective, key decision criteria perspective and customer profitability perspective. The three distinctive views will provide profound data for marketing planning and control.

Revised Scope of Supply

The clarification was started from product portfolio. Consequently, product portfolio was condensed to three concepts (1, 2 and 3) and to three system combinations (system A, system B, and System A + B). Thus, nine possible supplies, in other words, system level products, were formed. They are illustrated in Table 9.

	Concept1	Concept2	Concept3
System A			
System B			
System A + System B			

Hidden potential

Current offerings

Table 9 Revised Scope of Supply

With the revised scope of supply matrix it was obvious that there is hidden potential, since the case company is chasing only projects with system B. Sales projects without system B get no attention currently. Furthermore, each concept originates from distinctive propulsion type (i.e. one specific main component), and concepts do have sub-variations, but due to simplicity, only three concepts were selected to the final review.

In brief, the propulsion type differentiates the concepts. The rest of the main components can be identical between concepts in order to meet system A or system B requirements. System A and B are total counterpoints and do not compete against each other, whilst the concepts compete against each other.

New Microsegmentation Matrix

Two segmentation methods were selected for the case company for microsegmentation: the key criteria and customer profitability. The key criteria based segmentation was selected because of the high variety of supplied main components. Softer issues, for example, customer behavior, reliability or good project performance were tested in the second round interviews, but as there were no uniform opinions, the author realized that the concepts are the key decision criteria. Therefore, the key criteria based segmentation utilizes concept, not softer elements that are difficult – or even impossible – to measure. In brief, due to high variety in the main components and wide sales price range, there was no room for more discreet segmentation with softer values or with customer behavior patterns.

The customer profitability based segmentation was selected because of wide sales price range. Customers needed ranking due to limited sales resources. Both segmentation methods divide customers into significantly distinctive groups.

The idea of combining two segmentation methods to one matrix was tested in interviews. Since the primary purchasing criteria (section 3.3) did not crystallize in interviews, the au-

thor made the decision to categorize customers according to the concepts. The concepts form the first segmentation method, because the three concepts truly meet distinct needs and wants of customers. The second segmentation criterion was customers' profitability (section 3.3). Customers were split to four groups according to the sales revenue potential.

When system A's and B's sales prices were analyzed, it was discovered that system A's price was insignificant compared to system B's price. Due to the imbalance, systems A and B were replaced from scope of supply matrix (Table 9) by customer tiers. As a result, the revised internal market matrix was born. The matrix is illustrated in Table 10.

	Concept1	Concept2	Concept3
First Class			
Business			
Tourist			
Cargo			

Table 10 Revised internal market matrix

Cargo, tourist, business and first class are groups of customer profitability based segmentation and concept1, concept2, concept3 are groups of the key criteria based segmentation. Two segmentations can be used independently, but in combination, the segmentation methods provide more valuable information.

The concepts were categorized as in revised scope of supply (Table 9). Four customer tiers divide customers according to sales revenue potential. Cargo and tourist groups are of identical size in euro, business is same size as the sum of cargo and tourist. First class is everything that goes above business. A single vessel can be in tourist class, but if the same vessel has sister vessels, the status moves up in profitability classes. Thus, re-buys are taken into account.

Sipilä's (1998) classification of customers met the criteria in the case company. Classification is illustrated in Table 11.

Cargo	Tourist	Business	First Class
Not providing profit	Buy once in a while	Good paying capacity	Strategically important
Exploit the company's resources	Small transactions, but maybe with volume	Great resources	Pay in time
Bad reputation, pay poorly	Sensitive to price	Place valuable single orders	Have a good image and reputation
		Early majority of industry	Strong and continuous demand
			Collaborative
			Innovators or early adopters of the industry

Table 11 Characteristics of the case company's customer groups

The first class customers are strategically important, pay in time, have good image in shipbuilding industry, have strong and continuous demand, are collaborative and are the innovator and early adopters of industry. Business customers have good paying capacity, they are industry's early majority, have great resources, and place valuable single orders. Tourist customers buy once in a while with relative small transaction figures, but possible with higher volume and are really sensitive to price. Cargo customers are not providing profit, exploit case company's resources and have bad reputation and pay poorly.

Anyhow, the following performance analysis, the data is ranked only from single project's perspective, since the current sales tool does not recognize repeat projects nor there was comprehensive data about the customers' actual profitability.

There are other important reflections in the microsegmentation matrix; when going up in the matrix, the customer's profitability increases and when to moving to right, the sales

price increases. Thus, Rope's (2000) price range model (Figure 13, page 50) can be utilized for overlapping revised internal market matrix. The intersecting of the internal market matrix and Rope's (2000) pricing range is illustrated in the Figure 16.

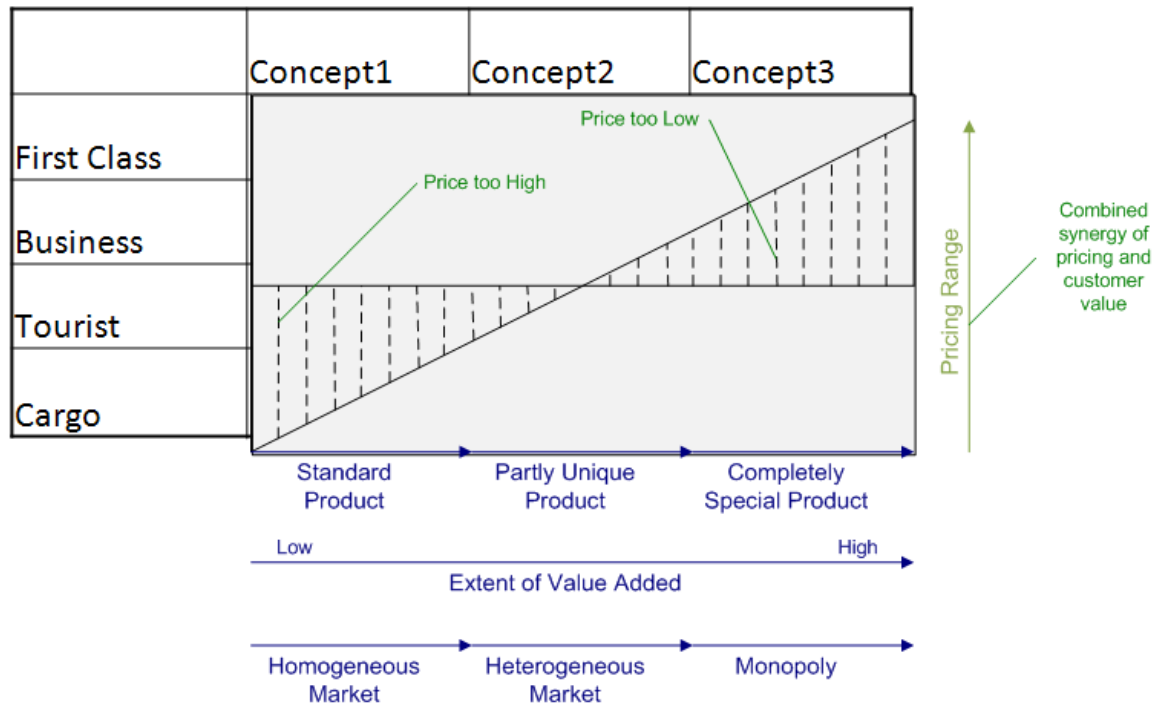


Figure 16 Revised internal market matrix reflecting price range and type of customers

Furthermore, as Figure 16 indicates, the axes describe adequately concepts and single project sales prices. Concept1 is a standardized solution and commoditized solution in shipbuilding industry. Thus, the case company faces fierce competition and low margins due to commoditization – just like Porter (2008) argues. Since the extent of value added is low, there is less latitude for pricing and competitiveness. Concept2 is a partly unique concept and involves one completely special main component, but the market in concept2's power range is heterogeneous, since the competitors have other types of main components fulfilling the same needs and wants. Anyhow, there is some latitude for concept2 in pricing and competitiveness. Concept3 involves one completely special main component leading to monopoly market, since there are no alternatives in the market. There is great latitude for pricing, but since there are also more costs involved with concept3 the latitude decreases. The value added is following Rope's (2000) model, because with concept1 the ship yard needs to purchase many other main components and systems to finish the vessels' maneuvering capability. With concept2 and concept3 such a need does not exist. Concept3 differentiates from concept2, since it covers high power ranges, which are unobtainable in concept2.

Many interviewees complained about the case company's pricing. Figure 16 can be used as an explanation; the current pricing leads to homogeneous gross margins, rather than in value based gross margins. In Figure 16 this shows as a horizontal line from left to right. Thereby, it was further analyzed and discovered that there is no correlation between the sales price and gross margin. Instead, some tourist customers have yield even higher profits than the first class customers. Value based pricing would lead to incremental line as argued by Rope (2000). The disadvantage of Rope's (2000) model is that it argues that the base costs are equal in each concept. This is not the case with the case company's concepts. Delivering more value means more base costs, since the base costs increase when moving to right in the internal market matrix. Thus, the optimal value based pricing line for the case company is somewhere between the two main lines in Figure 16.

Performance in Revised Internal Market Matrix

The segmentation process has been faithful to Rope's order discussed in section 3.4; the primary purchase criterion was used along with customer profitability. Thus, the next step was to test the feasibility of microsegmentation matrix to the current operations and customers.

First, only new segmentation is viewed in cost-to-serve matrix according to orders received. Second, the success, business potential and market behavior is analyzed. Then the concepts are inserted to the cost-to-serve matrix illustrated in Figure 17.

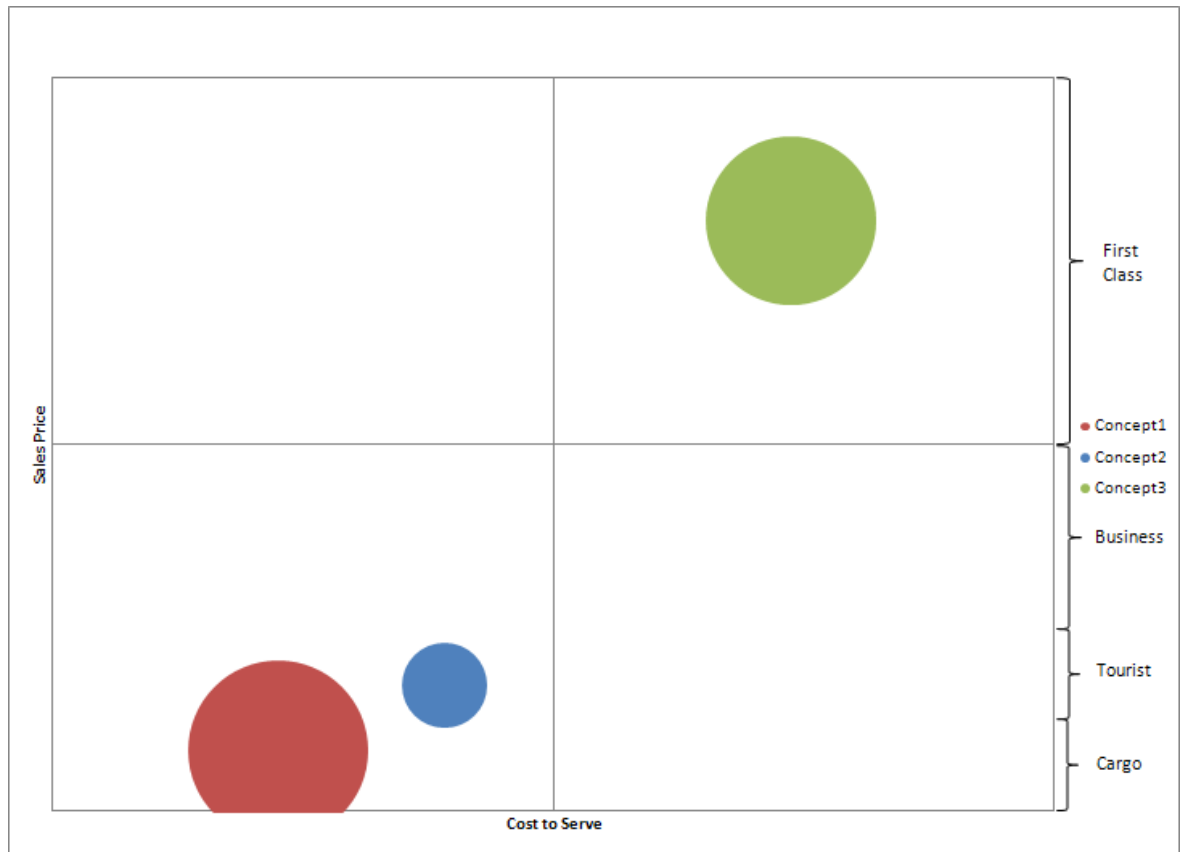


Figure 17 Cost-to-serve matrix according to new segmentation (Orders received, $n = 50$)

As Figure 17 shows, it was proven that concepts belong to different quadrants; concept1 and concept2 belong to volume market and concept 3 to complex market. Again, the size of the bubble indicates the number of orders received. Customer profitability groups are indicated far right in Figure 17.

Setting boundaries for cost-to-serve matrix is quite difficult and the current version does not take into account repeat projects. Thereby, the only interpretation is that concept1 and concept2 require totally distinct marketing compared to concept3.

Next it was discovered that there are prospect areas, especially with repeat vessels, that the case company has missed. The prospect areas are illustrated in Figure 18.

Orders Received

	Concept1	Concept2	Concept3
First Class			
Business			
Tourist			N/A
Cargo			N/A

Prospects

	Concept1	Concept2	Concept3
First Class			
Business			
Tourist			N/A
Cargo			N/A

No orders
Won

Orders received
Prospect

Figure 18 Prospect areas that need focus

As Figure 18 indicates, the case company has not received significant repeat projects in concept1 and concept2. Instead, with concept3 the case company has received many significant repeat projects. Thus, the case company needs to recognize sales projects providing high total revenue. Focusing only on single transactions creates undesired distortion.

Furthermore, the sales project can be ranked with offers versus orders received or absolute number of orders received. Figure 19 below indicates that different hit rate metrics lead to different performance. It is recognized that concept3 has been successful, but good performance in cargo and tourist levels with concepts 1 and 2 was a bit surprising.

"Hit rate" (offered 2009 / won)

	Concept1	Concept2	Concept3
First Class			
Business			
Tourist			N/A
Cargo			N/A

"Hit rate" (won)

	Concept1	Concept2	Concept3
First Class			
Business			
Tourist			N/A
Cargo			N/A

Poor hit rate / none
Tolerable hit rate
Excellent hit rate

Poor hit rate / none
Tolerable hit rate
Excellent hit rate

Figure 19 Different Hit rates with new segments with different metrics

Subsequently, the sales data of year 2009 was inserted into the new segmentation to reflect the market size and focuses. This reflection is illustrated in Figure 20.

Market size (offered 2009)

	Concept1	Concept2	Concept3
First Class			
Business			
Tourist			N/A
Cargo			N/A

No market
Something
Focus

Figure 20 Market size according to the case company's bids from 2009

As Figure 20 shows, the market is moving from bottom left corner diagonally to top right corner supporting the Rope's (2000) price range models. The lack of data is that it only counts individual projects and does not recognize the value of repeat projects. Another analysis indicated that the median of sales prices has been quite stable, and depending on the year, located either in cargo or in tourist group. That means that the case company should really focus on projects in cargo and tourist range. Another possibility is to screen out those projects and focus on other customers. Moore (2002) argues that it is not important that the target customer is the most optimal, the importance is that the company wins the customer the company is aiming for.

As the above performance analysis shows, the microsegmentation matrix divides customers into more homogeneous groups than the vessel type based segmentation. Furthermore, the microsegmentation matrix enables further sales controlling and planning, because traffic lights indicate where there is high market or low hit rate. Therefore, the case company should focus on improving the hit rate where the hit rate is lowest and focus on marketing and sales where there is most activity. On the other hand, the microsegmentation does not address price levels. Therefore, the next section shows the minimum and maximum prices of the concepts.

5.3 Price range

As discussed in section 2.4, the statistical data enables visualizing the price as function of power, but results in high dispersion as indicated in Figure 9 (page 21). When the concepts are inserted to the analysis, the footprint of the concepts is discovered and shown in Figure 21.

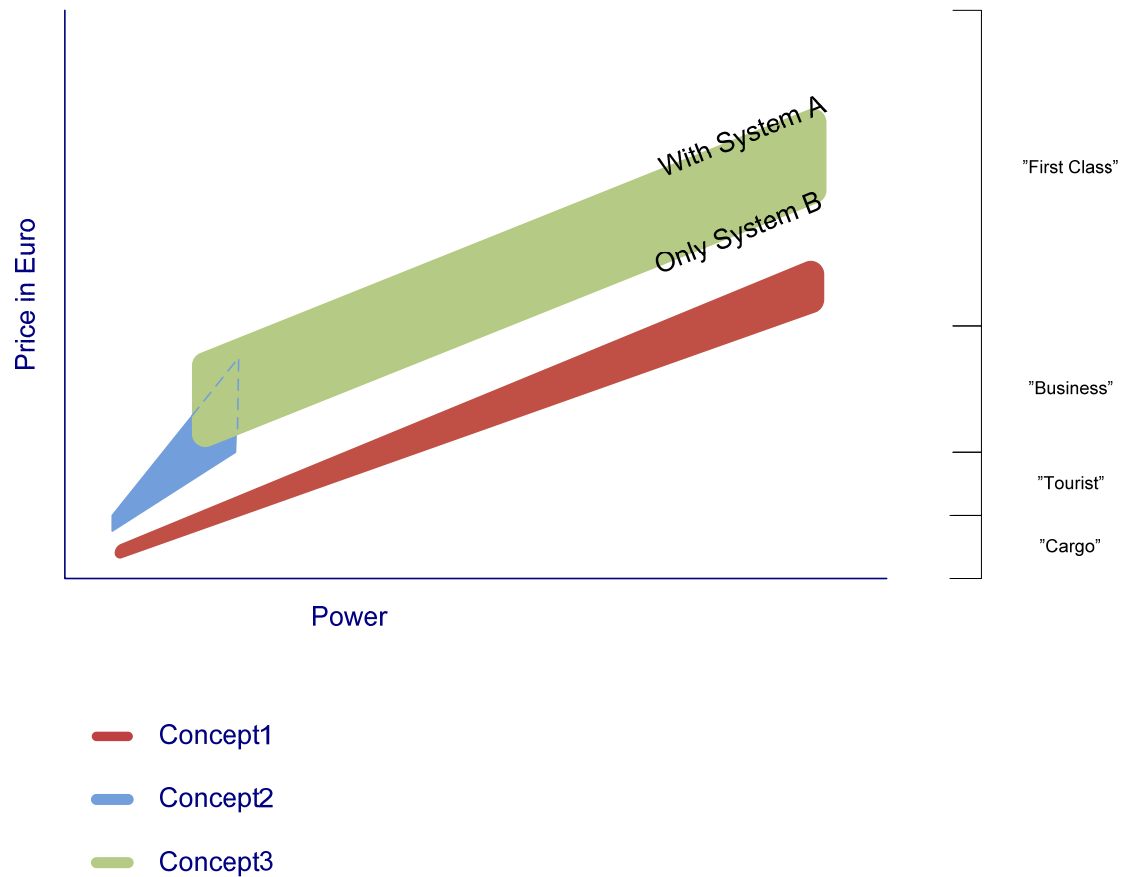


Figure 21 Price range, footprint of concepts and customer value

Consequently, several issues are illustrated in Figure 21. First, the areas covered with blue, red and green form the footprint of the case company's concepts. As Day (2006) predicted, the price range is quite linear. Secondly, concepts 1 and 2 require repeat vessels to be able to achieve the first class customer value. Thirdly, there is a price gap in concept1 compared to concepts 2 and 3. The case company's problem is that if the gap is too wide, customers change to concept1, even though concepts 2 or 3 provide superior value. Fourthly, as concept2 and concept3 are designed for different power ranges, but inherently derive of the same concept, it is natural that they overlap in the linking point. Such area is difficult for the case company since three concepts compete against each other and addressing proper marketing is extremely difficult. Fifthly, the lowest price range of each concept means that only system B is involved, whilst the highest price range means that system A is involved too. Thus, the price range of concepts supplements the scope of supply where it originates.

5.4 Sales Process

It was addressed during the interviews that the case company loses sales projects during early rounds. Neither the microsegmentation nor the price range solved the problem.

Therefore, the sales project is described next and the behavior of sales price is tied to the sales process.

The author created a framework for project sales process of the case company. The framework is based on Cova and Holtius' (1993) article and is supplemented by the selling process of the case company.

The case company had recognized the phases of a sales project, but not that different phases need different marketing and argumentation approach. When there is no holistic understanding, it can be confusing to work on a project, whilst other projects are running parallel and in different phases. With a holistic view, project sales process can be harmonized and actions adjusted to the needs of customers. The framework, Figure 22, illustrates how sales process starts and ends in the case company.

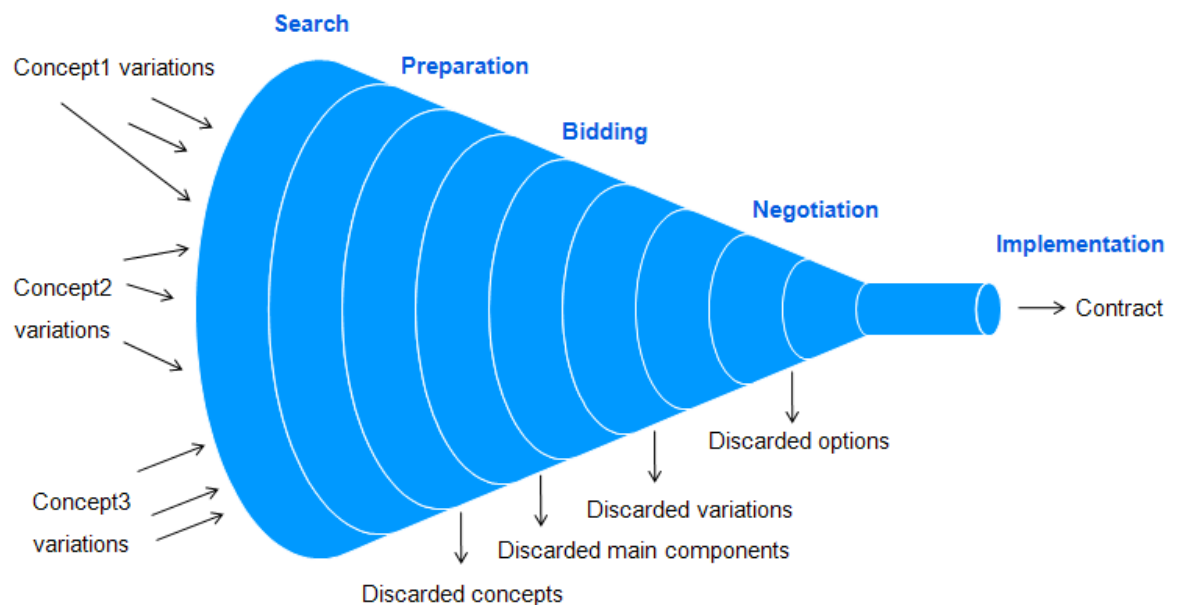


Figure 22 A Framework of a Sales Process in Shipbuilding Industry

The funnel in Figure 22 describes iterative process. The customer proceeds with buying process, indicated with blue letters (search, preparation, bidding, negotiation, implementation), whilst the case company is processing with selling process, indicated with black letters. First, the concept level decisions are made and then followed with decisions on the main components. Subsequently, variations are eliminated. That means fixing sizes and powers. At the end, the customer is pleased with the customization of small items. During the process, the suppliers are first long listed, then short listed, and at the end one supplier gets a contract.

The case company offers all concepts in search and preparation phase and possibly in bidding phase. It would be in the interest of the case company to limit the number of concepts and their variations already in the bidding phase. Buyers, instead, tend to continue the rivalry of concepts until the final negotiation rounds. To beat the problem of high variations in project environment, the case company needs to kill the concept variations as early as possible and create preliminary concepts for the search phase to allow quick response times. If a customer is in the bidding phase and chooses concept1, it is pointless to try to sell concepts 2 or 3. Therefore, the sales must obey the buying process of a customer. It is empirically known that premium concepts 2 and 3 can be argued during search and preparation phase, but shifting from concept1 to another is almost impossible during and after the bidding phase. Another weakness is currently that the concepts are not productized and tailoring happens in every phase. This consumes drastically the working time of resources.

Interviewees pointed out a pricing problem. The objective of the study was to enhance pricing knowledge. Figure 23 was created to bundle the buying process and the fluctuation of pricing during the buying process.

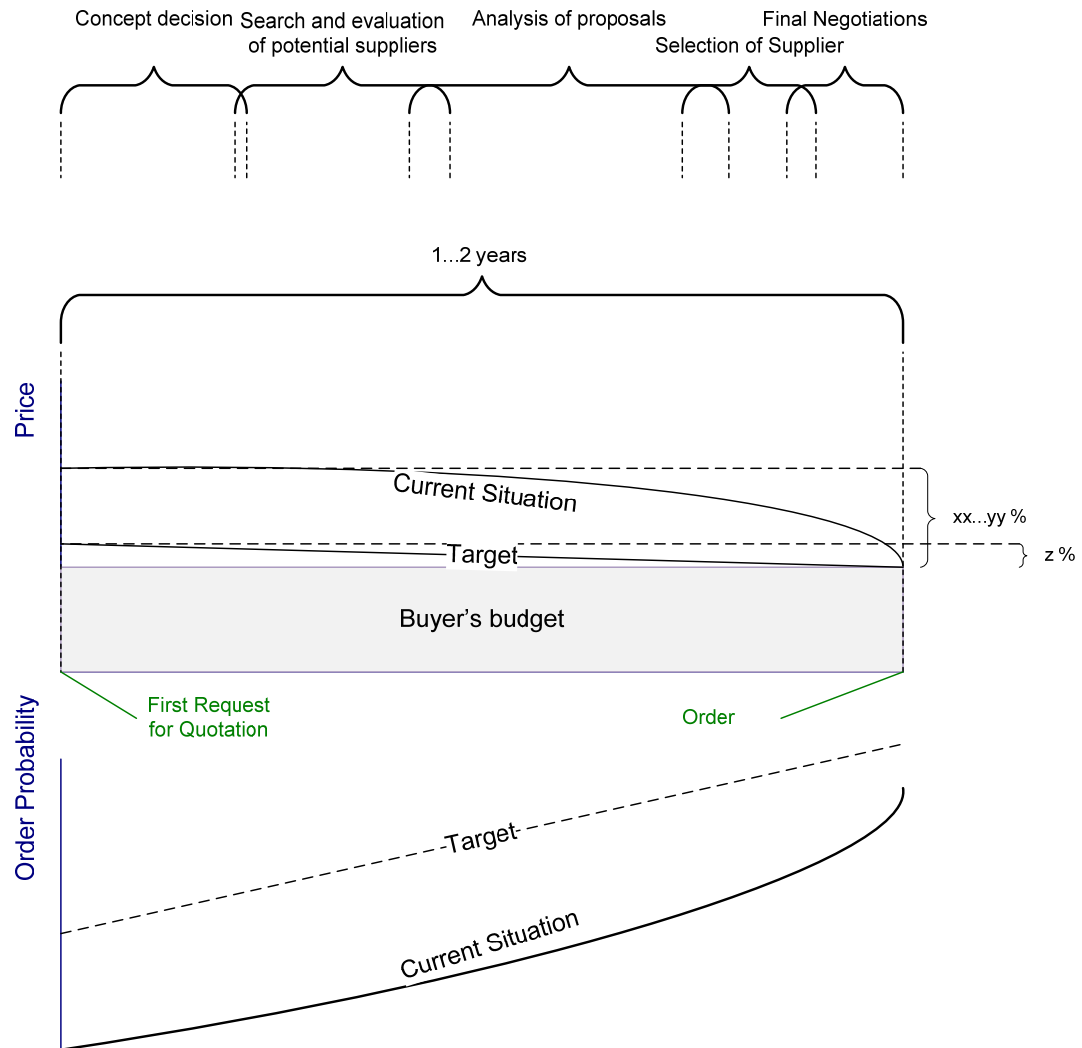


Figure 23 The Case Company's Pricing in Sales Process

As Figure 23 indicates, it is unacceptable to start with too high price, even though it is psychologically easier to come down with price. Furthermore, shipyards set their budgets according to the early bids in concept decision phase. When the case company prices moderately in concept decision phase, the order probability increases. Currently, the order probability is low until the analysis of the proposal phase, and increases significantly during the selection of supplier and final negotiation rounds.

During the interviews, it was discovered that the case company loses sales projects at early rounds. Too high price could explain that. But, if the case company achieves to negotiation rounds, the case company most likely gets the contract – irrespective of the concept in question – due to excellent competence and strong brand. It seems that the case company has products in order and improvement is needed in cost and sales price calculation. That is a good thing, since pricing cannot compensate poor products. The target is

to be close at the acceptable price at early rounds to improve overall order probability. Price range (Figure 21) can and shall be used in internal benchmarking before giving prices out in a sales project.

5.5 Key Findings

The key findings summarize the already discussed results. Due to wide data and information collected during the study, the last two findings are not tightly linked to the preceding results, but are yet important to the case company.

Vessel type based segmenting does not lead to homogenous groups of customers.

The segmentation method is customer friendly, allowing logical and single point of contact to customers. The method does not provide information for a competitive advantage, since the segmentation is de facto in shipbuilding industry. Instead, the new microsegmentation matrix supplements the prevailing segmentation of the case company.

Microsegmentation matrix and price range give extensive perspective to the sales operations and can be used to enhance knowledge of the workforce.

Price range, concept footprint and customer value categories position the case company's portfolio and performance. Microsegmentation matrix enhances the case company's knowledge about its offerings and forms a foundation for strategy development by pinpointing strengths and weaknesses. Rather than starting internal competition, the company can now turn towards the customers by adjusting proper concept to meet the customer's needs and wants. Conceptualized offerings provide a fruitful basis for sales managers for starting discussions with customers and ship owners.

Numerical data is available, but scattered. The case company has stored data. Unfortunately, the data is only valuable after processing and analyzing. No similar exercise has been made in the case company. When the data is centralized and filtered, it can be used in business planning and control. Scattered data is not useful.

Cost-to-serve needs linearization in cargo and tourist segments. Too high costs are exposed to engineering, commissioning and project managers. There will always be initial costs and the line does not start from origin, but the supplier's power should be leveraged instead of letting buyers to bargain. Conceptualized services can help to meet the distinctive customer requirements. Services can be conceptualized for example to three levels: low, intermediate and premium. If the customers notice that they receive a lot of service relatively free, they will exploit the supplier.

Concepts meet the demands of very distinctive markets; the footprint does not need to be expanded. Instead, the case company can try alliances and consortiums to fight against suppliers with wider scope. Figure 21 shows that there is no room for other concepts; concept2 and concept3 share the maximum paying capacity and concept1 meets the minimum paying capacity in diesel electric propulsion. Thus, with current concepts the case company can cover the maximum footprint.

The case company has a strong brand according to the interviewees. The interviewees claim that the case company has a vibrant brand. But, like Kotler and Pfoertsch (2006) argue, the brand is vibrant only if the customers decide so. The case company should leverage its brand more effectively. The case company can argue that it minimizes customers risks with proven technology and effective engineering.

Workforce is competent and motivated. Selling and delivering turnkey projects is not an easiest task in business and demands interdisciplinary specialties. Competent people are one of the key issues of success. Any company can purchase tools and services, but after all, the people distinct thriving companies from those who do not succeed. The case company must foster its workforce, because competent people are desired in the eyes of competitors. Huuhka (2004) and Frei (2008) advocate that companies' greatest asset is workforce - this applies to the case company, too.

Now all the results and respective findings are presented. The next section discusses and draws conclusions based on the preceding issues, and finalizes the study.

6 DISCUSSION AND CONCLUSIONS

Day (2006) argues that companies with fragmented information systems have great difficulty coordinating their offerings. This applies perfectly to the case company; firstly, the case company does not have centralized historical data – not even though there is a supporting function in the sales tool. Secondly, similarities are difficult to detect due to project business and high variations – even though applications remain the same. Thirdly, business with long lead times needs long time commitment from workforce. On the other hand, Day (2006) concludes that many managers are aware of the fragmented information system and take actions to deal with them.

The case company operates in high-variety environment where customers buy the case company's systems, mainly because the customers cannot solve the problems by themselves. The role of the case company is to listen to the customers, and then address a solution with its offerings. The business requires deep domain specialty of the workforce in the case company. The customers do not necessarily know what they want or need. There is an analogy to medical science; doctors do not thrust a patient's diagnosis, but instead, make their own. The same applies to the case company; customers need to be heard, but ultimately, the case company needs to find proper cure for a problem. Balancing between listening and imposing can put the case company to a difficult situation; the customer cannot address its needs and/or wants in a way, which the case company does not consider as the best solution. (Sipilä, 1998)

There are lots of potential in the case company. The case company's business is similar to aero engines (Olins, 2003:76) where the service ultimately differentiates companies; the case company holds superb brand and its workforce is competent. Therefore special fostering is needed for the case company's workforce and brand. Motivated workforce enables long term success.

Furthermore, the main components that form systems are perceived as high quality. The customers are pleased to the services they receive. The foundation for further attractive pricing strategies is set. Anyhow, there are many points that need improvement; knowledge is needed around business strategy, marketing and product portfolio management is weak, and the case company could leverage its size and buy power more effectively.

As the lead time of a sales project is between one to two years and related execution time of a turnkey project is from one to four years, one full project cycle can last even six or seven years. This means that only three longest cycles will fit to fifteen years, thus it is

reasonable that there have not been many evolutions in the case company. Furthermore, since the cycle times are long, it is difficult to build sustainable strategies, since daily operations easily lead to myopic views.

Before the final recommendations, it must be reverted to the research questions to see and understand how extensively the research questions were answered.

6.1 The Key Contributions and Links to Research Questions

The thesis tackles efficiently the research questions with three key contributions:

- the microsegmentation matrix
- the price range of concepts
- the framework for project sales process

The case company's key persons were interviewed to gain a holistic view of the case company's business operations. The literature study enabled addressing the weak points of the case company. Statistical analysis confirmed theories that were created based on the interviews and literature. The framework of project sales process enhances understanding of the requirements of distinct stages of turnkey project sales, and interacts with the price range of concepts and with the microsegmentation matrix. The price range of concepts defines the footprint of the case company's offerings and enables benchmarking frame against competitors. The microsegmentation matrix illustrates where the case company's internal focuses should be.

The price range and project sales framework are continuous innovations that are easier accepted than the microsegmentation, which is a discontinuous innovation, and requires longer digesting in the case company. The leaps are not too long and are suitable for the current business environment. The next thing for the case company is to digest and implement the three contributions of this thesis. The shifting cannot be too fast or too long leaped, otherwise the case company slips out of the pace and the development creates confusion instead of progress.

The price range of concepts is a scratch of surface of how the case company can turn concepts as cornerstones of effective sales process. The microsegmentation matrix shows where productization of the concepts could lead, and project sales framework surrounds all important elements needed in successful turnkey project selling. For summary, it is necessary to go back into the research questions:

- How to microsegment customers to distinctive groups?

Segmentation according to vessel type was not leading to heterogeneous segments. Therefore, segmentation was revised. The new microsegmentation utilizes two distinct segmentation methods; the customer profitability and the key purchase criteria. Microsegmentation clearly categorizes customers into homogeneous groups and enables addressing distinct needs of customers. Adequate microsegmentation is a prerequisite for further pricing and sales strategies. The microsegmentation is used to reflect the case company's attractiveness and performance. As well, the microsegmentation reflects only customers, which the case company is currently capable to serve.

The weak point of current customer tiers is that they do not reflect the actual profits, since such data was not available. First, the case company must capture the current and prospect customers to current tiers, and then, in the long run, start actions to align tiers to reflect actual profitability and other qualitative elements that cannot be measured with numbers. Meanwhile, digesting microsegmentation is a proper step for the case company. The shift does not happen in one night. There is one dilemma left; a customer purchasing premium concept³ might be unprofitable, then it is difficult to address if the reason is in the case company's pricing or costs, or the customer is just not willing to pay the required price. Then the case company must decide, whether the customer earns strategic relationship and lower price or if the customer must be screened out. Such a decision will never be easy. However, microsegmentation forms a foundation for business planning and control.

- How to enhance knowledge on pricing and sales performance?

There was no single solution on enhancing knowledge. Four different elements were needed to illustrate the sales operations; price range, points of parity, differentiation and contention, sales project framework and revised scope of supply. All elements are priming information and enable the workforce to understand what happens during a project sales process in the case company.

The price range of concept illustrates the case company's offering possibilities effectively and shows the difference between the concepts. Figure 21 describes is each concept's price range and how the concepts can be used to cover different total propulsion power ranges. As well, Figure 21 shows how the concepts are positioned against each other. It is vital to the managers of the case company to understand the cost structure like Shapiro and Rosner (2006) argue.

Figure 21 can be expanded to cover concept1's items that the shipyards buy from other distribution channels to achieve the same kind of maneuverability than with concepts 2 and 3. The main components and cost-to-serve are the most important cost elements in an individual sales project.

Points of parity, difference and contention enhance the understanding of the case company's positioning in customers' perceptions. Points of difference must be emphasized. Points of parity can be used to dilute arguments of competitors or boost the image of diesel electric propulsion. Points of contention need discreet discussion and must be clarified with customers.

The framework about project sales process depicts what happens in different phases of a sales project and emphasize that different actions are applicable in different phases. Selling projects require a lot more effort than selling products. Furthermore, marketing and selling actions must be aligned with each phase. The case company must allocate resources to cover the whole sales process funnel coherently and comprehensively.

A revised scope of supply shows what the case company is actually selling. Rather than having a complex variety of main components, the case company is selling systems. When the sales managers focus on selling systems A and B, they can free the resources by screening out projects that are not either system A or B. Alternatively, resources can be freed, if unprofitable customers are screened out.

When concept billets and pricing is understood in the case company, it can successfully improve hit rate by being attractive already in early rounds. The main components or technical features do not limit the success. Only proper pricing opens the door for further discussion with customers.

6.2 Recommendations for the Case Company

The key findings lead to recommendations that are grouped according to responsibilities. Respective recommendations are given in recommendation points (RP). The importance of recommendation points is neither ascending nor descending, due to inherent intersecting and overlapping characteristics. The case company must improve in all to gain overall development. Fine tuning of one recommendation is not a key to success.

Recommendations for long-term strategic targets

RP1: Customer-centric marketing mindset needs to be pursued. The marketing mindset of the case company is demand-centric, and like Rope (2000:23) argues, the case company cannot jump directly to holistic or system-centric mindset, instead, the case company should try to implement the customer-centric view. As well, changing the mindset is a slow process. Thus, the case company shall initiate a shift towards a customer-oriented view. Ramírez and Wallin (2001:134) illuminate targets:

- Purpose of marketing is to create a customer
- Sales is the beginning of a relationship: profit is the metric of success
- Customer relationships determine business operations
- Price is set by negotiations and co-operation; price is an outcome
- Communication is focused on and adapted to individuals
- Target is to satisfy the present customer by supplying superior value and growth on market share

As the mindset is detected, assistance from outside consultants can be purchased to ease up the transfer. Furthermore, consultants selling too advanced ideas are to be turned away.

Furthermore, the customers' role in innovation processes of the case company shall be recognized and defined. Customer innovations make sense, when many iteration rounds are needed before a solution is found (Thomke & von Hippel, 2002). It is unlikely, that the case company can innovate better without than with the customers.

RP2: Differentiation of concepts and their main components needs to be developed. The case company shall differentiate products and services that the customers value. Technical arguments are not the strongest, since diesel electric propulsion has commoditized. The case company can use points of differences discovered during interviews (section 5.1). Functional, add-on and image levels of the concepts are to be discussed and argumentation shall be based on imago and add-on layers, since functional differences are volatile and commoditize fast.

Recommendations to the Top Management

The top management sets the targets for the case company and addresses the use of resources and money. Transformations must be driven from top down. Thus, many recommendations require top management's meticulous attention.

RP3: The case company needs to communicate its priorities and preferences more effectively to the workforce. Vague communication leads to a situation where the workforce is confused and do not know what is expected from them. Lack of priorities and preferences has led to unsystematic operations that are not profitable.

The priorities and preferences shall involve a business model, description about customer focus and description about the combination of products and services. Clear goals clarify the atmosphere in a high-variety environment and provide fertile ground for further growth.

RP4: Customer Relationship Management needs to be established to value profitable customers. Retention of the existing customers needs to be maintained. The case company has no Customer Relationship Management system (CRM). The user of the CRM is sales, but the top management must approve the investment. Without proper tools the case company cannot turn towards the customer or rank them effectively. The case company must shift from single transactions to maximizing customer lifetime value.

Lack of proper sales tool hampers the case company's sales. Proper CRM will indicate to the case company's profitable customers and exploiting customers. Customers are the feeding source of the case company, but the customers shall not be allowed to dictate the case company's business performance by too strong bargaining.

Day (2006) argues that long-standing customers who are costly to serve are going to resent being relegated to a lower status. Therefore, the case company must design strategies for dealing with the issue early to avoid jeopardizing the new internal differentiation. The case company can stay aligned with the market by being responsive both to customer opportunities and competitive cost pressures.

Recommendations for the Sales

Even though the top management is responsible for many issues, sales is the department responsible for execution of those issues under top management's supervision. Some of the recommendations could be allocated to other departments, but since sales is the key beneficiary, the following recommendations are allocated to sales.

RP5: The microsegmentation matrix needs to be integrated into the information systems. The sales is the owner of the segments and segmentation. Only when the data is centralized and properly filtered, the data becomes useful. The collection of data must be started immediately. Systematical data collection helps and eases the daily and long term decisions. Also, the information system can indicate the exact position of each individual customer.

RP6: The sales unit needs to initiate a study for shifting from cost-plus pricing to target-based pricing. Today's marketing literature advocates long-term relationships with customers and promoting whichever of the company's products the customer would value most at any given time (Rust et al., 2010). In shipbuilding industry, the re-buys and repeats need to be taken into account. Some projects do not bring profit, but prevent competitors to get a contract. When market is sensed in pricing, it is likely to achieve more sales. Furthermore, understanding the pricing enables skimming and penetration of the pricing techniques when necessary.

RP7: The sales unit needs to initiate a study for understanding how customers perceive the image of the case company. Ultimately, customers design how the case company's brand is perceived. Brand needs continuous care, otherwise the brand image fades away. Only by knowing how the brand is perceived, the case company can realign its brand equity.

RP8: Scope of supply needs to be tailored to meet the customers' maximal / optimal / minimal expectations. Especially, with concept1 and concept2 the adaptive scope of supply is needed due to fierce competition. A correct bidding price can be achieved by adapting the scope to the customer's needs – not providing the full package every time. Sales shall put pressure on product management to further development of the adaptive main components and service elements as well as collaborate in development. By using service concepts, the case company can straighten the curve in the cost-to-serve matrix's volume and low profit market quadrants. There are cases where a customer is not expecting a turnkey delivery. Consequently, conceptualized services shall be designed to meet this requirement.

RP9: Requests for proposals need to be matched to the customer need with response time and level of detail. Marketing and argumentation activities should be aligned with the stage of the customer's buying process. Enhancement in the mapping of customers needs to be done, for example with a systematical questionnaire. A customer's stage in the buying process is to be discovered. The case company receives sometimes a

specification of many hundred pages or a request for proposal with only propulsion power as input data. Consequently, the buying processes are in distinct stages, even though both cases are the start-up for the case company. Due to different stage of buying process, different marketing and bidding is needed from the case company. Therefore, it is essential to discover the customer's stage in the buying process and align the case company's offerings to the stage.

RP10: The sales unit needs to benchmark the case company's concepts against competitors continuously. Price range of concepts is an excellent tool to be used in benchmarking other competitors. The competitors' offerings and price levels can be discovered with systematical approach. How competitors are positioned and how their moves are anticipated shape the case company's sales and product strategy.

Recommendations to Product Management

There is no clear product management function in the case company. The R&D department has recently been integrated to project execution. Thus, product management function is needed urgently. The product management has a close collaboration role with sales.

RP11: Standardizing of the concepts and their main components is needed. Standardization frees resources to the right side of the project sales funnel, but the whole funnel must be covered coherently and comprehensively. Cost-to-serve matrix indicates that the case company lets small buyers to bargain lot of services. Service concepts need to be designed for addressing proper amount of services in relation to customer value and sales price. Different response times are needed during different sales process stages. Conceptualizing and productization of the main components and services form the basis for tailoring and mass-customization. If there are no concept platforms, too much work is needed to specify in individual projects each time. Lack of concept platforms leads to a situation where the funnel turns to a cylinder. In such a case, high dispersion of concepts and prices starts to proliferate.

Recommendations to Supply Management

The case company's supply management is the opposite to sales. If the case company excels in buying, the case company can excel in selling. When the purchase functions effectively, the case company can increase gross margins and have positive compensation over the costs. Insufficient buying power leads to a situation where the gross margin is used to compensate high costs.

RP12: Supply Management theories need to be utilized in purchases. The price variation of the main components must be eliminated. The case company's target is to kill price variation and to start using gross margin to distinct poor and good sales performance. With stabilized and predictable costs it is not likely that the case company prices too high. The case company can start with classifying all purchases in terms of profit risk and supply risk as proposed by Kraljic (1983).

6.3 Evaluation of Research Process, Method and Outcome

The research process was striving to find out how to win a sales project rather than how to win a specific project. As a result, the microsegmentation was created and sales process was described with the framework. The project sales process framework can be generalized, since the framework already leans strongly to the existing frameworks of Cova and Holstius (1993).

Focus on internal marketing arena was a correct decision. In the beginning, the sales proposed a following formula for describing the success of sales:

$$\text{Sales} = \text{Visibility} \times \text{Feasibility} \times \text{Hit Rate}$$

Sales argued that visibility is the only element in the formula, where influence – currently – makes sense. This thesis demonstrates, that actually, the focus was needed on feasibility and hit rate. They both belong to internal marketing arena. Feasibility is improved through conceptualizing and by mapping the customer needs. The hit rate can be improved by matching the customer expectations with scope and price. Visibility belongs to external marketing arena and was screened out in the beginning.

The second interview round was a bit disappointing, since there was only little contribution from the interviewees. Some interviewees had great ideas, but in overall, the answers related to customer tiers and the key purchase criteria lacked. In that sense, the validity of the second interview round is weak.

The thesis could be rerun by another researcher, but if the other researcher meticulously follows the proposals of the existing knowledge, the researcher ends up in the internal marketing arena and to segmentation. Study of internal data would be fuzzy to a person, who does not understand the distinct characteristics of three main concepts. That part clearly needed previous knowledge about the deliveries of the case company. A researcher with same level of knowledge would end up to similar results, and thus overall validity of the thesis is good.

Furthermore, segmentation can always be questioned, but making commitment to segmentation points out courage to make decisions. Determination is needed to zigzag in high-variety shipbuilding environment, where the right path can be confirmed after the target is reached.

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ONE-TO-ONE INTERVIEWS

Round 1

- Case company representative: Project Manager 1, 17th of November 2009
- Case company representative: Business Development Manager, 18th of November 2009
- Case company representative: Engineering Manager, 30th of November 2009
- Case company representative: Project Manager 2, 2nd of December 2009
- Case company representative: Sales Manager 1, 8th of December 2009
- Case company representative: Senior System Specialist, 8th of December 2009
- Case company representative: Project Manager 3, 9th of December 2009
- Case company representative: Purchasing Manager, 14th of December 2009

Round 2

Case company representative: Sales Manager 2, 12th of January 2010

Case company representative: Sales Manager 3, 14th of January 2010

Case company representative: Vice President of Sales, 19th of January 2010

Case company representative: Business Development Manager, 21st of January 2010

Case company representative: Sales Manager 4, 28th of January 2010

EMAIL INTERVIEWS**Round 2**

Case company representative: Country1 Sales Manager, 19th of January 2010

Case company representative: Country2 Sales Manager 25th of January 2010

Enterprise representative: Product 1 Market Manager 9th of February 2010

QUESTIONNAIRE OF THE INTERVIEW ROUND 2

1. What is the case company good at in sales and marketing?
2. What needs improving?
3. What are the five most important customers in your segment(s)?
4. Why?
5. The first fundamental idea of the thesis is to categorize customers according to their profitability. How many categories should be formed? Three ("first class" / "business class" / "tourist class")? Five? More?
6. The second fundamental idea is to categorize customers according to their buying profile. What are the distinctive buying behaviors that you have observed (categories could be such as quality-oriented, price-oriented, service-oriented, space & weight-oriented, etc.)? How many categories can be formed?
7. The third fundamental idea is to build adaptive scope of supply. When we know the customers profitability and the buying profile (by asking what the customer wants, expects and prefers), then we can build up the adaptive scope of supply. What are the services (or other more or less intangible issues) that we "normally" include, but the customer should pay for? Do you think we can implement this "tailor-made offerings / adaptive scope of supply"?
8. What are the points-of-parity and points-of difference of the case company? Do we have points of contention?
9. What is the role of end-users (=ship owners) in this equation?
10. Do you have another perspective or supplementing issues to be considered?