LUNDS TEKNISKA HÖGSKOLA
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Production Management Department

SEAFLEX BUOY MOORING SYSTEM

A Market Study in Sweden

Supervisors:

Bengt Nilsson, Doctor, SEAFLEX AB in Umeå
Carl-Johan Asplund, Lecturer, Lund Institute of Technology
Håkan Gustafsson, Sales Manager Nordic, SEAFLEX AB in Umeå

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Abstract

Sweden is a country surrounded by water and consequently boating is one of the most popular spare time activities in Sweden. The active boating life, in turn, leads to a healthy boating industry in Sweden and boating production plays an important role for the Swedish industry. The company SEAFLEX AB in Umeå is one of these Swedish boating equipment manufacturers. Their new range of mooring product is SEAFLEX mooring buoy system which designed to use SEAFLEX hawser, a unique construction that gives a progressive resistance that reduce all movement in water. SEAFLEX buoy sales very low in spite of a well-established brand and high quality level, and logical property protection, such as patent and trademark. For that reason SEAFLEX needs to investigate SEAFLEX buoy's business potential in order to increase the sales and explode their business in the Swedish market.

By a comprehensively research on chairman or harbor master of private boat clubs from all parts of the country, private boat owners mainly in South and East boating resorts as well as responsible persons of public harbors, this thesis evaluates the business potential of SEAFLEX buoy mooring system in the Swedish market and provides some information that may help SEAFLEX to identify important factors that must be taken into consideration before choosing a competitive marketing strategy.

The result of the investigation indicates that in spite of the Swedish mooring buoy market is declining gradually over time and the whole mooring buoy system market is relative small and limited, SEAFLEX buoy does have a bright business potential in the Swedish market. Since the market need actually new product options that provide superior service from installation to technical support and set buoy users free from the fractious maintenance and regular inspection caused by the corroded chains.

The market for SEAFLEX buoy now is in the Early Adopter stage and their current customers are Visionaries. But the survey results indicate that it is actually on its way to "cross the chasm" into the mainstream markets. Especially, the company has reduced the price of SEAFLEX buoy. According the result of the survey, price is a decisive importance when pragmatists making their buying decisions, thus, price modification might serve as the catalyst to accelerate the adoption rate.

The next target customers for SEAFLEX buoy are typically pragmatists. They are not only individual buoy users, but also the representatives of the boat clubs and public harbours. These potential customers are most discontent or least satisfied with the service and maintenance of their current buoy systems. Thus, high quality and minimal maintenance are the highest ranked product attributes among the buoy users if firstly the price and easy installation meet the customers' need.

In order to successful cross the chasm and make an impression entry to a new and expanding market, the company may probably not only shift their marketing focus from product centric value attribute to market-centric one, but also identify and make a market plan for both individual boat owner and organizational purchasers of the boat clubs and public harbors. Moreover, besides continuing the current promotion efforts and distribution strategy, the company may pay more attention to explore new promotion channels that can effectively reach their next target customers and simultaneously**,** the company may also market SEAFLEX buoy as "easily to buy" by working on the local dealer the target customer are most likely to visit. In turn, they may reward the effort by their purchases. Furthermore, because the skeptical pragmatists do not easily believe marketing ads and they always question whether the company providing the product can deliver its promise to meet their specific needs, the company must create customer group that is referential, people who can, in turn, provide the company access to other mainstream prospects.

Key word: Buoy mooring system, business potential, Early Adopter, target customers

Preface

First, I am sincerely appreciating the SEAFLEX management gives me the opportunity to work with this interesting research in the Swedish mooring market.

Next, I am truly grateful to my supervisors Dr. Bengt Nilsson, Sales Manager Nordic Håkan Gustafsson and Lecturer Carl-Johan Asplund, who supported me from start and gave me so much encouragement and valuable advises during the process of writing this thesis. Our discussions regarding research are invaluable to me.

I further wish to thank the representatives of the boat clubs and municipalities as well as private boat owners who helped me carried out the surveys. Their friendly and helpful support creates a pleasant working environment during the fieldwork and gives me an instructive picture of the Swedish boating life.

Finally, I would like to gratefully acknowledge the financial support provided by Umeå University's Examensjobb.nu, especially I would express my gratitude to my contact person Mikael Häggström.

Lund, November 2005

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Contents

1. Introduction

This chapter will introduce the background, problem, purpose, and limitation of the work. At the end of chapter a structure outline of this thesis is presented.

1.1 Background

Sweden is one of the countries most richly endowed with lakes, numbering some 96 000 within its borders and the coastline, with all its numerous indentations, stretches for 7 600 km [10]. As a result, Sweden is one of the nations with the highest boat density in the world and there are over one million pleasure boats in Sweden [10]. The active boating life leads to a healthy boating industry in Sweden. The company SEAFLEX AB in Umeå is one of the players in the Swedish boating equipment market. 97 percent of Company's sales go to expert through traders in Europe, Asia, Australia and USA. There are several thousand SEAFLEX mooring systems in use throughout the world [29].

The company SEAFLEX has extensive experience in research, development, design and application of mooring systems and associated components. They have developed an elastic and corrosion-resistant mooring system with the special rubber hawser SEAFLEX as its mainly component. The SEAFLEX hawser consists of a homogeneous core of rubber enforced with a special braided cord. A unique construction that gives a progressive resistance that reduces all movement in water. Their new range of mooring product is SEAFLEX mooring buoy system which designed to use SEAFLEX hawser for two buoy mooring methods: swing and stern

moorings. As many other new launched products, SEAFLEX buoy sales still very low. Therefore SEAFLEX needs to investigate SEAFLEX buoy's business potential in order to increase the sales and explode their business in the Swedish market.

1.2 Situation and Problem Analysis

In spite of SEAFLEX buoy has well-established brand, high quality level, and logical property protection, such as patent and trademark. The current sales quantity for SEAFLEX buoys is only about 10 buoys per year. One possible reason might be that there are not so many customers knowing the existence of the SEAFLEX buoy and the marketing effort did not reach the right target customers. Or there is simply no market for it.

Additionally a complete SEAFLEX buoy mooring system costs twice as much as the alternative products in the market. Like many new-launched product SEAFLEX has not any direct competitor that selling the exactly same type of buoy mooring system in the Swedish market. But there are some alternative products, such as traditional mooring chains, which has been used for more than several hundred years in boating industry and still is the absolute choice for connecting mooring buoys among the customers. Where there is no competition, there is no market is a well-known market rule. As a consequence, it is difficult for sales people to persuade the pleasure boat owners that SEAFLEX buoy system is a smart investment in the long run despite the large price difference.

The situations signify that SEAFLEX buoy mooring system is somewhere in the early market of its production adoption life cycle. It has not yet achieved the mainstream market despite the fact that the product actually does work reasonable well and has some breakthrough features. Therefore the company has to know whether there is a

mainstream market and if there does have a mainstream market, what the company could do for making a successful transition from the early market to the mainstream. That means the company has to evaluate the SEAFLEX buoys business potential in the Swedish mooring buoy market and find out whether it is time to adjust their marketing and price strategy that will adapt to a new majority market. If it is the time to change, the company has also to identify the minimum competitive set of product and services the potential customers is most likely to consider as purchase alternatives. Such evaluation will hopefully give the company an opportunity to check if the current model for developing the market is appropriate and what it is going to take for the company to finally get it right.

1.3 Aims of the Research

The key purpose of this research is to help the company to make out whether there is a mainstream market for SEAFLEX buoy and if the answer is yes, then what it is going to take for the company to fulfill their target customer´ needs. A comprehensively investigation on private boat owners from all parts of the country has been performed for evaluating the SEAFLEX buoy's business potential in following aspects:

- What is the potential sales quantity of SEAFLEX buoy in the Swedish market?
- How much are customers willing to pay?
- Where do customers go for the product?
- What kinds of product attributes are most appreciated by consumers?

Additional, the result of the research provides some information that may help SEAFLEX to identify important factors that must be taken into consideration before choosing additional marketing strategy. Thus, it can be used as assistance to the strategic decision-making for company managers and enable them to develop their

corporate strategies in line with client needs, focus resources on the key issues and exploit market opportunities

1.4 Delimitations

Delimitations describe the populations to which generalizations may be safely made. Delimit literally means to define the limits inherent the use of a particular construct or population. The generalization ability of a study will be a function of the subject sample and the analysis employed. [32]. It would be impossible to design a single study that would take into account all persons, places and time periods to whom/which the researchers hope the findings will generalize [33].

Swedish pleasure boat owners cover a very widespread geographical scope. Contrary to the big population and spread geographical of pleasure boat owners, there are no mandatory boat registrations and official boat owner lists. For this reason, the Swedish boat owners cannot be simply contacted by telephone or letters. Even if the author narrows down within the boats with certain sizes and stronger engines, studying the buoy mooring system among the boat owners is still technically and economically impractical.

In order to achieve an appropriate result that would be used to generalize to the target population, the study is restricted within the scope mainly about the situation of buoy mooring system among the boat clubs and some public harbors. Thus, a practical delimitation has been made that the author only interview a selection of the target population, i.e. responsible person of private boat clubs and public harbors from all over the country and some boat tourists mainly in South and East boating resorts.

1.5 Limitations

Limitations, as used in the context of a research proposal, refer to limiting conditions or restrictive weaknesses. There are times when all factors cannot be controlled as part of a study design, or when the optimal number of observations simply cannot be made because of problems involving ethics and feasibility [32].

Mooring system is a comprehensive topic and includes a great variety of products and technologies. The time the author has hade to make this study is not long enough to explain all these mooring systems that the Swedish boat owners are using. For this reason, most of the interview questions, theories and result of the analysis that this study employs are only focused on the buoy mooring systems.

Another limitation concerns the authenticity and objectivity. As mentioned above, there are not yet official statistics published about the pleasure boat proprietors. To make up for that, the author did some data collections as a personal effort, which unavoidable lack of generalization and cover a very limited scope as well as the research objects may geographically close to the author. This may affect the authenticity of the result. The boat owners that are not included in this research may give totally different answers than those who are involved. Furthermore, because of the localization of the author's social activity, biases will exist in the study, which may affect the way information is perceived and interpreted, in spite of every effort the author has been made to ensure the objectivity.

1.6 Target Audience

Writing this thesis is the last part of the author's master degree in Computer Science Engineering and Industrial Management and Engineering. This master thesis was carried out for SEAFLEX in Umeå during the last six mouths of 2005. This master thesis targets two different groups:

SEAFLEX:

- The management at SEAFLEX in Umeå who will carry out a market plan
- The project supervisors at SEAFLEX in Umeå
- SEAFLEX employees that come in contact with marketing of the SEAFLEX buoy

Lund University:

- Students at Industrial Management and Engineering program at Lund University of Technology

1.7 Structure of the Thesis

This thesis is arranged by topic into the following chapters (See Fig.1.7.1):

Fig.1.7.1 the structure of the thesis

Chapter one covers background information which is assumed in subsequent chapters. The company's present situation and problems, objective and limitation of the work are briefly described.

Following the introduction in Chapter One, Chapter Two presents the methodology and research design of this research containing the choice of method for implementing the investigation framework and how the surveys were conducted. After that follows a discussion about how and why certain data are used as well as the selection and identification of sample survey. Finally, an analysis of validity and reliability is presented.

Chapter Three is devoted to literature reviews literatures that are most relevant to this study including the technical and economicla theories as well as some related inforamtion from the earliy researches. These theories contribute to the investigation framework which in turn help and guide the author to determine which variables should be investigated and how the variables should be operationalised and measured, as well as how the research design and sample should be designed and analyzed.

Chapter Four is data analysis and result presentation. Data analysis will reflect the research problems mentioned in the fist chapter as well as the factors mentioned in the investigation framework. A summary of important results from three survey groups as well as some considerations and recommendations is presented at the end of respective data analysis.

In Chapter Five includes the discussion on the implications of the findings in a Competitive Positioning Model and some recommendations for future research. The first two sections give some general characteristics of the adoption phase SEAFLEX buoy is subsisting in and identifies the minimum set of product characteristics that would be most appreciated by target customers in aids of Moore’s Competitive – Position Compass. Afterward, a set of recommendations derived from the study. The recommendation reflects the need for further research that would provide adequate

evidence to continually assess the product attributes that are high ranked by wide-scale customers.

2. Methodology and Research Design

This chapter presents the choice of theories that contribute to the investigation framework, selection of method for building the investigation framework as well as how the study was conducted. After that follows a discussion about how and why certain data are used as well as the selection and identification of sample survey. Finally, an analysis of validity and reliability is presented.

2.1 The Investigation Framework

When a new technological innovation, such as SEAFLEX mooring buoy, comes out, some persons embrace the changes that technology brings. They seek new applications for the innovations, while others resist and become defensive. Which factors are governing individual attitudes toward technological innovations? Is the defensive behavior of some, a symptom of a sociological system controlling the individual? What marketing efforts can accelerate the new product adoption? IN order to answer the above questions in relation to SEAFLEX mooring buoy, the elected theories that are most relevant to this study is shown in the Fig.2.1.1 The author made an effort on presenting different proceeding economical theories in a consistent way. They are equivalent and complement to each other.

Thorough Frank Nicosia´s general buyer decision process the buoy users build up exceptions and attitudes to the product, SEAFLEX buoy. According to Kolter's buyer behavior theory, the external stimuli affect and influence on each user's attitude in each steps of his decision process. Final responses of purchasing decisions are returned after external information has been evaluated and selected within the uses´ black box.

Then based on the response of the consumers purchasing decisions, a classification of target customers can be placed in Geoffrey Moore´s technology adoption framework and Competing-Position Compass, which in turn help the manager of the company to identity the business potential of their product and develop appropriate and efficient marketing strategies to the target customers.

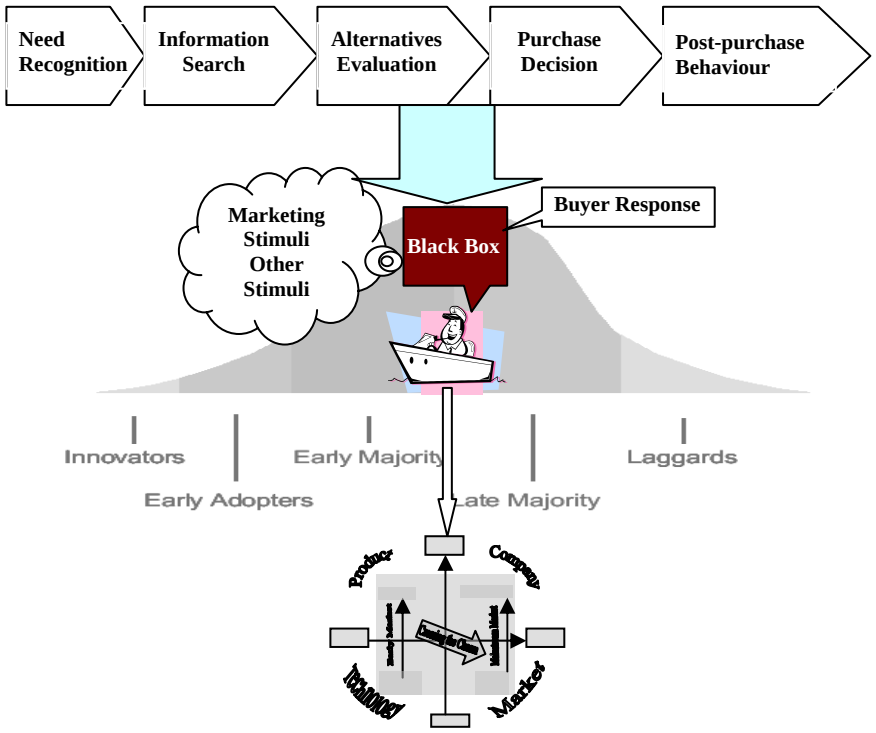


Fig. 2.1.1 A summary of theories

The objective of using these economical theories, as it relates to the SEAFLEX´s world, is to systematically recognize contributing influences on customers purchase attitude evaluate SEAFLEX buoy's business potential and identify the competitive product set, which is high ranked by potential customers.

Thus all important factors from the proceeding theories result in an investigation framework (See Fig.2.1.2). The framework consists of 4P-marketing factor, consumer internal psychological factor, other external factor concerning culture and social influence, SEAFLEX business potential, and adoption process factor.

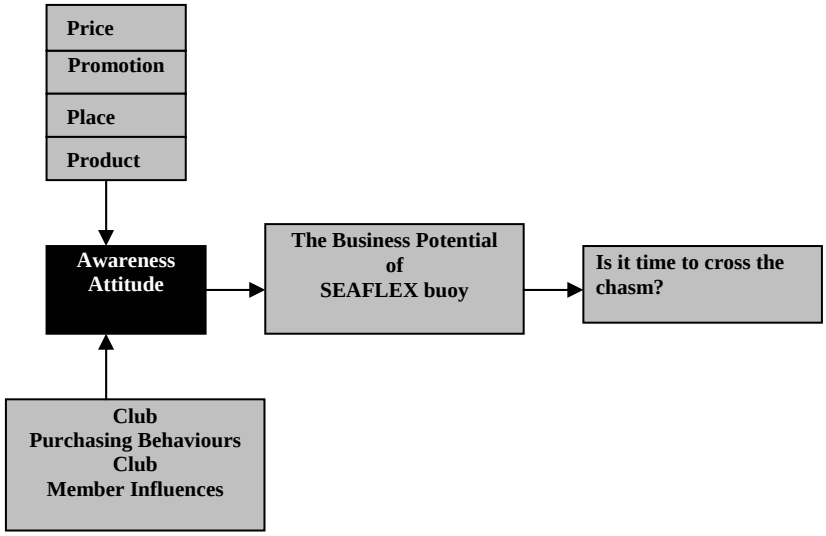


Fig.2.1.2 The investigation framework

This investigation framework enables the author to specify the most important questions or issues for this study and delimit the investigation area. It also guide the author to determine which variables should be investigated and how the variables should be operationalised and measured, as well as how the research design and sample should be designed and analyzed.

2.2 Investigation Approach

In this work cross-sectional quantitative surveys are applied. A quantitative study means that people who take part in the quantitative survey are asked by the same

questions in the same order. The advantage of this approach is that it is easier to collect and analyze amount of data at the end to give an overall picture by statistical calculations. It seeks structured responses, which can be summarized in numbers, like percentages, averages or other usable statistics. The reason to use this approach is that the target group is a population of millions of objects and it is impossible to reach even a major part of them. Although in this work the author is not going to study every object. But in order to ensure that the sample sizes are more representative of the market, it still needs a considerable quantitative data from different parts of the country. For this reason, the sampling study may be a practical choice, because it saves a lot of time and the author can then use the saved time to study the sampled items more carefully.

2.3 Sample Selection Criterion

Target population is Swedish boat owners. A boat owner is the sampling unit. Since it is improbable to survey every individual in this target population, such smaller sub-groups of the target population is surveyed, i.e. samples. One of the sample is chairmen and harbor masters in private boat clubs and the selection frame are the boat club registers from website *http://www.gulasidorna.se* and *http://www.marinan.com* as well as some small boat harbors the author has visited. Thus, a selected sub-sampling unit is a club representative with e-mail address. The second sample population is private pleasure boat owners in boat resorting and guest harbors in the South, Easter and West coast. A sub-sampling unit in this case is a systematic selected private boat owner. And the third sample is municipalities with public harbors and a sub-sampling unit is a person who is responsible for the public harbor.

2.4 Questionnaires Design

Since a good introduction or welcome message will encourage people to complete the questionnaire [27]. All questionnaires in this work start with an introduction state who the author is and why the author wants the information in the surveys. Questions are formulated both short and simple and are divided into three groups: must know, useful to know and nice to know. For example: the question that provides direct answer to the acceptable price level of SEAFLEX buoy system is a ` must to know ´ question. While the questions about respondent's demographical profile are ´ useful to know ` question. Last the question of "How many boats do you have?" is a type of "nice to know "question.

The theoretical underlying of the questionnaires is based on these important factors in the investigation framework, which described in section 2.1 "*The investigation framework***".** To be able to keep a relative high quality in questionnaires despite the time and resource limitation, the questionnaire design is focused on questions that will provide answers to the important factors in the investigation framework, these questions are:

- What is the potential sales quantity of SEAFLEX buoy in the Swedish market?
- How much are customers willing to pay? (*Price factor*)
- Where do customers go for the product? (*Place factor*)

Promotion factor:

- How well are boat owners informed of SEAFLEX buoy by the existing promotion efforts?
- Do the boat owners know the existence of SEAFLEX buoy?

Product factor:

- Do prospective customers have these needs that can be fulfilled by buying SEAFLEX buoy mooring system?
- Why will the boat owners buy SEAFLEX buoy?
- What kinds of product attribute are most appreciated by consumers? (*Product and Adoption Process factor*)

Other external factor concerning culture and reference group influence:

- How does the individual purchasing decision influenced by the surroundings?
- How is a purchasing decision on mooring buoy system made in a boat club or public harbors?

Internal psychological factor:

- Who will buy SEAFLEX buoy mooring system?
- What are the boat owners' attitudes toward the SEAFLEX buoy?

The questionnaires for representatives from boat clubs and municipalities consist of ten to eleven questions covering most issues discussed above. The questions are in form of open response question that leave much room for respondents to make up answers. But these questions provide only a general attitude toward the buoy system among the boat clubs and they will not provide as much details about the potential customers demographical information and which service the consumer may be valued as the questionnaire for private boat owner does.

The questionnaire for private boat owners is design in three blocks, totally seventeen questions and each block includes a number of sub-questions (See also Appendix 3). It is a standard questionnaire and three basic types of questions are used: multiple choice, numeric open end and text open end. These types of questions simplify response to answer the surveys and don't leave much room to make up answers [8]. A "Don't Know" or "Not Applicable" response is applied to almost all questions in to ensure the

answers represent some respondents' most honest answers. For the same reason, the answer “Other” or “None” is also allowed when the answer choices are a list of possible opinions, preferences, or behaviors. Rating scales and agreement scales are employed as well to measure the multiple-choice questions.

2.5 Survey Methods

The first quantitative study, which intended to representatives in boat clubs, is carried out by a continually email survey for achieve best possible results and increase the chance of response frequency. The main reason to employ this method is that it was intense season for boating tourism when the author tried to make telephone interviews. The people working in the boat clubs and marinas usually were too busy with the tourists and did not have time to answer the questionnaire. The telephone interviews were often end up with the interruptions and incomplete answers were made because of time press. After several trial interviews by telephone, the author decides to employ an email survey. The advantages with an email survey are both very economical and very fast. The respondents decide themselves the time to accomplish the questionnaires. The result shows that a better response obtained by email than telephone interview. For the same reason, the municipalities’ survey is carried out by the same way.

Personal interview is adapted in the private boat owner survey. The reason to use personal interview is that it is difficult to reach each individual in the target group by telephone or other contact methods. Moreover, the opinions, which are assembled from the representatives of boat clubs by the first survey method, may not fully represent the attitude of private boat owners. By use this method it is easier to find private boat owners in guest harbors and boat resorts than by calling phone numbers at random. The disadvantage of personal interview is that it is resource demanded. It takes longer time to accomplish an interview and requires a costly travel expense.

Finally, a summary of response rate and failing cases for each sub-survey group is shown in Table 2.5.1 in the next page:

	Data Collection Method	Delivered Questionnaires	Answered Questionnaires	Response Rate	Failing Cases	Valid Responses
Private Boat Owners	Personal Interview	70	53	76 %	3	50
Boat Clubs	Telephone interview, E-mail	300	135	45 %	27	107
Municipalities	E-mail	34	21	62 %	9	12

Table 2.5.1 Response Rate

2.6 Research Implementation and Field Work

First the author collected the contact information for representative in boat clubs and municipalities in a database. Then the questionnaires to representative from boat clubs and municipalities were sent out to sample population by email. Afterwards, the author organized the answers and corrected the false information about receivers in the database. After approximately 20 days, the reminder letters with the same questionnaires were sent out to the receivers who did not answered. The data collection carried out under period 10 August – 30 September 2005.

Private boat owner survey took place under period 15 July - 5 August 2005. According to the survey performed by Statistics Sweden, there are approximately 718 000 pleasure boats in Sweden. The biggest proportion of all types of boat apart from small boat of that 718 0001 boats is in the East coast and Sailboat with accommodation facilities is mainly in the South coast [10]. Thus the author visited boating resorts mainly in South and East coast. The marinas the author visited in South Coast are

small boat harbors in Kivik, Skanör, Höllviken, Limhamn, Karlskronor and Malmö. In Easter Coast and Stockholm region harbors the author have visited are Kristianopel, Kalmar, Västervik and Gustavsberg, Saltsjöbaden, Nynäshamn, Fisksätrahamner and Lindingö. In Western Coast, the visited harbors are harbours in Båstad, Kullavik, Göteborg, and Klåva. The author selected these marinas mainly because they were equipped with buoy mooring systems according to "The tourist guidebook of guest harbors in Sweden year 2004". A systematic random selection method is applied and the author tried to ask every third private boat owners who was passing by a quay (jetty).

2.7 Analysis Method

The analysis process begins with checking the collected questionnaires for completeness. The acceptable questionnaires are counted and classified and the questionnaires with problems in meeting the sampling requirement are identified, and some additional interviews performed to get better data and the poor responses are declined.

Then the collect data are cleaned and transcribed according the codebook for respective samples. The coded data in turn analyzed by the ads of the statistical software program SPSS. The major analyze method used in this work are:

- Frequency distribution: the objective of the method is to obtain a count of the umber of responses associated. A frequency distribution for a variable produces a table of frequency counts, percentages and cumulative percentages for all values associated with that variable [22]. In this work, the method is

used mainly to present the distribution on how respondents answered the attitude questions.

- Cross – tabulation: this technique describes two or more variables simultaneously and results in tables that reflect the joint distribution of two or more variable with a limited number of categories of one or more other variables [22]. The author use this method because the results provide a clear interpretation the strong link between two variables and the results can be easily interpreted and understood.

2.8 Validity and Reliability

Validity and reliability are two measurements that used to evaluate and discuss the quality of this work. Validity is the ability of a measurement instrument to measure what it is supposed to measure [20]. A survey has high validity if the questions ask what they were intended to examine [21]. The validity in this work can be defined as respond frequency. The response rate of boat club and public harbour survey are 45 % respective 62 %. The validity might have been affected by absent answers. The explanation for these absent answers may due to there is a lack of interest for survey object, i.e. buoy mooring system. The clubs and harbours may not regard them as relevant interview objects and they do not employ any mooring buoy or they may regard the survey has some commercial motive that intend to sell the product, therefore they have no attention to reply to survey. On the other hand, the strategy to meet the sample population directly in harbours works relatively well. With the great possibility the potential buoy users appear there and it also allows the respondents take their times to reply the questionnaire.

Reliability is the random error component of measurement instrument [20]. If a survey has high reliability, the same responses are given when a person completes the same survey on two separate occasions in a short time frame [21]. In this work the respondents in each sample were approached in the same way. They received the same background information about the project and the same questions. This implies that the answers will be replied under similar circumstances and that increases the reliability.

3. Theoretical Framework

In this chapter describes three parts of theory that are used as ground for research design and result analysis. The technical part describes first the basic knowledge of buoy mooring system and terminology, and then explains the unique advantages of SEAFLEX buoy system. These will give the reader a basic understanding of what kind of product the author works with in this study. The economical framework includes the review of the literature around the questions that contribute to the investigation framework. Finally, some practical theory of the geographical division and the boat type division, which based on the early researches carried out by Statistics Sweden and Swedish marine industries federation, is also presented in the last section.

3.1 Product and Technical Framework

3.1.1 Buoy Mooring System

Most private boat owners normally anchor their boats in marines with the help of mooring systems. Thus, the purpose of the mooring is to resist forces from wind, current, waves and ice and hold the boat on station. The common mooring arrangements in a marine are [7]:

- Fore and Aft Mooring: anchors or piles to which boats are attached by both bow and stem lines.
- Island Mooring (Star): a floating structure secured by an anchor or a pile to which one or more boats may be moored.

- Trot Mooring: a system for the fore and aft mooring of several boats in rows.
- Buoy Mooring: an arrangement for securing a boat to a mooring buoy which is anchored to the ocean floor for the purpose of securing a boat for storage.

This research is only focused on the buoy mooring. In Sweden buoy mooring occurs mainly in the South and East coasts as well as the inland water territory [15]. There are two different buoy mooring methods: stern mooring and swing mooring.

Stern mooring (Jetty-buoy mooring) means that boats staying there moor the bow to a quay (jetty) and the stern to a stern buoy. A typical stern mooring can look as the picture below (See Fig.3.1.1.1). It is an easy way to moor a boat if there has a direct access to the quay and the boat owner only walks a short gangway from the boat to quay. Besides the convenience of direct boarding it is possible to increase the number of moored boats along a given length of quay. Boats can also rest there without concerning about wear.

The disadvantage of the stern mooring is that the boat is constantly jerking between the bow and stern mooring. The jerks caused by waves or swells when the boat is moored can be reduced partly by the weight of chain and buoy for slow down the movement, partly by anchor rode. But if the water is deeper than six meters, the length of the conventional chains become so long that the boat can move strongly in a sideways direction [2]. If the boat is mooring alone, it does not matter. But if quay is crowded with boat, the whole mooring system will end up with chaos.

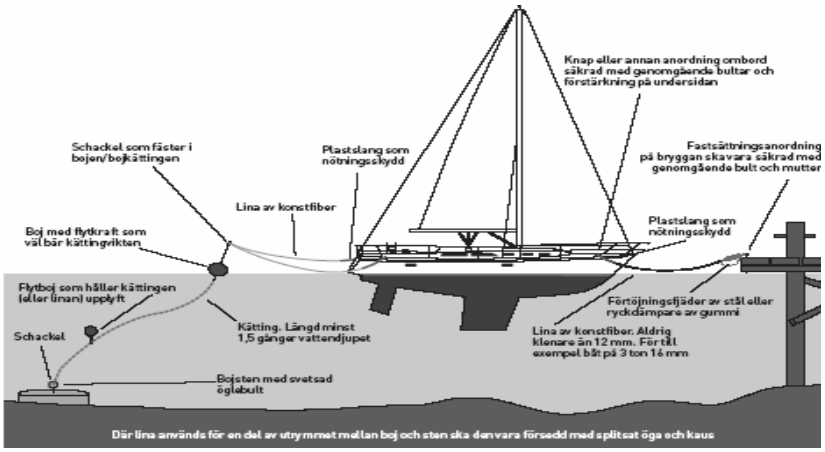


Fig. 3.1.1.1 A typical stern mooring [2]

Swing mooring means that the bow of a boat is secured to the swing buoy using specially supplied moorings that are attached to a swivel on the buoy, thus permitting the bow to swing around the buoy in response to wind and tides [5]. Fig.3.1.1.2 below shows how a swing mooring works. The stern of the boat lays always right against the nature direction of the sea and none side of the boat has to be exposed constantly by the sun radiation. Additionally we can moor boats without a quay or jetty, thus there are more space left for even more boats to anchor and moor out there.

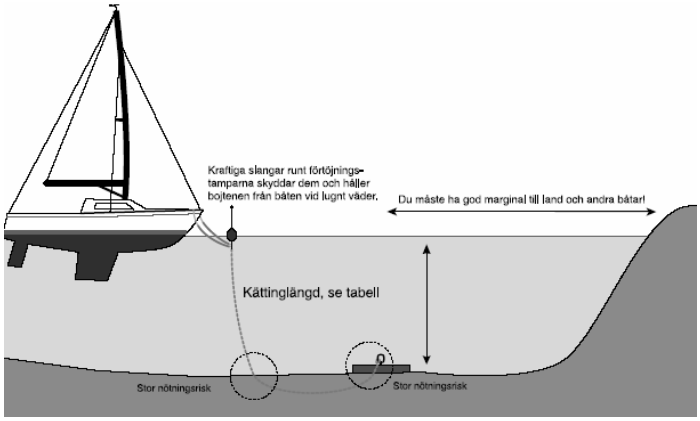


Fig. 3.1.1.2 A swing mooring [2]

The first disadvantage with the swing buoy mooring is that we have to use another boat or a dinghy to get on board. In bad weather it may be impossible to go on board. The next disadvantage is when a boat is swinging on its mooring. It moves a longer distance in comparison with stern mooring and has therefore a large amount of inertia which needs a large force to stop. In order to survive a storm, it is important to moor the boat in right way by turn the boat to the wind's eye in order to decrease its wind area and secure mooring lines [6].

A typical buoy mooring system in the current market usually consists of a mooring buoy (to float the chain and provide extra strength and weight for added stability), a mooring anchor (to provide extra weight and abrasion resistance) and a length of metal chain (running between the anchor and the mooring buoy). Also the proper ground equipment includes correct sized galvanized shackles and swivels [26]. The system may look like in the Fig.3.1.1.3.

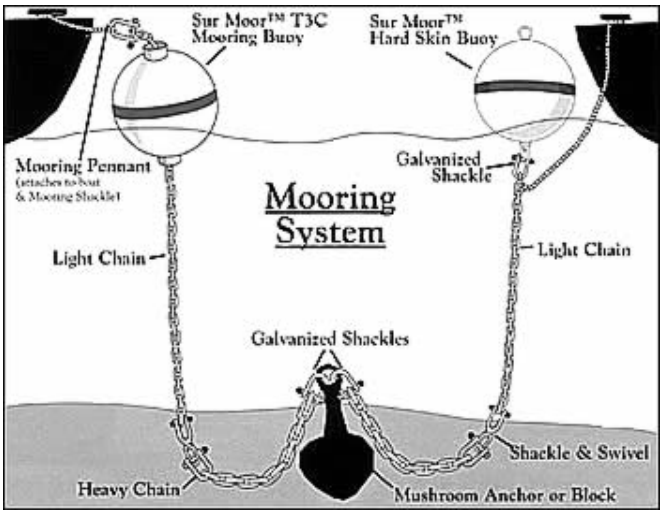


Fig. 3.1.1.3 The typical mooring system [26]

The means of connecting the anchor to a boat is called anchor rode [4]. Connecting deadweight anchor with boat by rode has been used for hundreds of years in boating

industry. Rode can be made by a wide variety of available materials. Steel chain and fiber rope are the prime candidates and are still the most popular rode materials. The rode made of fiber lasts only one or two year. Now a trend in the boating industry is to select synthetic fiber materials such as nylon, Dacron polyester, polypropylene and polyethylene. Because they are much lighter than steel and are corrosion resistant as well as the lifetimes are measured in tens of years. Chain is the most popular anchor rode which solves the abrasion problem and provides a modest elasticity effect because its weight forms a sag in the rode [4]. But Chain has some drawbacks:

- Seawater corrodes chain and must be more frequently replaced which can be expensive in the long run. The wear occurs first and foremost at the bottom and anchor. The shackles that joint the buoy and chain are also the weak points for wear.
- Due to the stiffness of the material, Chain can be easily racked by overload because of impact load. High impact load can cause catastrophic failure and actuator cracking. According to an experiment conducted by SEAFLEX, the chain has the highest impact load in comparison with other materials, such as polyester rope, dynema rope and SEAFLEX hawser [1]. Fig.3.1.1.4 shows the impact loading of different materials, specially the significant difference between the metals chains and the SEAFLEX hawsers. This experiment did not take catenary into the consideration. However, it shows what happens when chain became stretched. Normally the boat breaks its anchor chain when chain became stretched and then the boat will be stopped with a jerk.

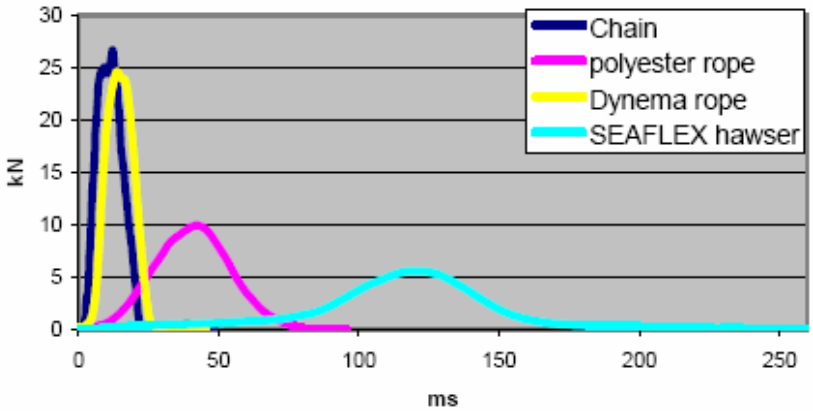


Fig. 3.1.1.4 Impact load exceeded by SEAFLEX Hawser, 10 mm Chain, Polyester Rope and Dyneema Rope [1]

- Heavy chain at the end of mooring system causes and increases abrasion and turbidity of seabed and disrupts the marine life of the seabed.
- Metal chain has certain elastic due to the catenary. It is recommended that the scope (the ratio of the length the anchor rode compared to the water depth) requires at least 3:1 when the depth of water is less than six meters. In deeper water or when we prepare the boat for surge or storm, scope may increases from 5:1 to 10:1, thus the swing diameter of a moored vessel are relatively big due to the heavy weight of chains. If the marina is crowded with boats, this will cause serious trouble, especially during the storm.

In order to eliminate these drawbacks, the market would need some innovative mooring buoy systems with better candidates of the rode. A reliable buoy mooring system should be designed first and foremost to maintain a buoy on station during even the most severe environmental conditions. It has also to be resistant to the marine environment including chemical corrosion and biological action. Finally, it has to be easily handled by the users without special equipment and it requires a minimal maintenance as well [4].

3.1.2 SEAFLEX Buoy System

A new technology in the market is using elastic rubber stretch hoses and this type mooring system seems fulfilled the market need with some great features. SEAFLEX is one of the pioneers in this field and has extensive experience in research, development, design and application of elastic mooring systems and associated components. SEAFLEX mooing buoy is their new range of product, which is designed to use elastic SEAFLEX hawser for both stern buoy mooring and swing mooring (See Fig.3.1.2.1).

Fig. 3.1.2.1 SEAFLEX Buoy Mooring System

A SEAFLEX buoy mooring system consists mainly of a SEAFLEX hawser that consists of a homogeneous core of rubber enforced with a specially braided cord. Mountings and shackle in stainless steel will resist corrosion and wear. The rope used with SEAFLEX buoy is made of polyester and withstands heavy loads. With this design, gives a progressive resistance that will dampen all movements in water nice and slow [29]. Additionally, the elastic SEAFLEX mooring system floats up and over the seabed and employs elastic polymer instead of steel chain and the elastic isn't as affected by seawater's corrosive properties.

Does this system really work better? Because SEAFLEX buoy mooring system is a rather new product in the Swedish market and there is not direct feedback about the product from respondents. However I met some customers for SEAFLEX pier (jetty) and they were appreciated of the high performance and long duration of their product.

Furthermore, I found a similar elastic mooring systems has been adapted in Florida. This elastic system looks like an underwater bungee cord, Created by Hazlet Marine of Vermont. Captain Ron Ackman of Oldport Marine Services gives the product following comments [3]:

> *"It adds considerably more moorings per acre, has a higher probability of storm survival, and it's environmentally friendly."*

> *"With moorings at a premium, this system allows for more boats to be moored than the current conventional system."*

In Chatham harbor on Cape Cod, a benthic shell-fishing farm is a million dollar business, have been used the elastic mooring system since the summer of 2004. It shows that the marine life surrounding the elastic moorings have recovered after having disappeared during use of the conventional mooring chains. Chatham Harbourmaster Stuart Smith was satisfied and he said [3]:

> "*The system has real promise to secure boats safely and not damage the environment."*

Lat but not least, a mooring system is only as reliable as the "current" conditions of the environment, which means that durability of the mooring system is depended upon many factors [4], such as:

- The salinity of the water. Freshwater applications will extend the useful life of any mooring system. Salty and polluted water will on the other hand increase the speed of corrosions.

- The feature of the seabed. Stony and uneven sea bottom will enlarge the risks of abrade.
- Dimension of the mooring system. Wrong or inappropriate dimension of the mooring system cause the unnecessary damages.
- The circumstance of the mooring place. Marine is extremely exposed for strong wind raises the rate of wear.

Therefore every mooring system has to be designed and Taylor-made to withstand the constant abuse of most mooring environments. A permanent mooring system, when properly designed, should securely position a boat so that it can be left unattended with little attention for long periods of time. In order to deliver a well-functional mooring system that meets the requirements as mentioned above, the company SEAFLEX provides not only Taylor-Made product but also a complete professional installation services.

Thus a summary of some major advantages of SEAFLEX buoy is:

- It requires less safety distance in comparison with conventional buoy, which allows more boats to anchor in marinas.
- It demands a minimum of maintenance.
- It is environmental friendly and does not cause any damager of ecological balance in seabed.

3.2 Economical Framework

3.2.1 The Technology Adoption Life Cycle

The growth of market size depends largely on the rate of consumers' acceptance to the new product. Geoffrey Moore in his book "Crossing the chasm" provides an excellent framework to analyze the life cycle of technology products and the key drivers of competitive advantage along each stage of the cycle. The technology adoption life cycle can be visualized as a bell curve segmented by certain characteristics that must exist for the product to transition throughout each stage of the cycle (See Fig.3.2.1.1).

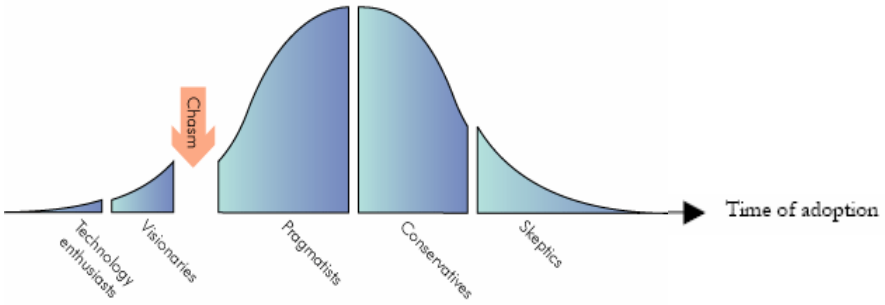


Fig.3.2.1.1 Adoption Life Cycle [25]

The bell curve consists of several phases [16]:

- Innovators are also called the Technology enthusiast. They are intrigued with any fundamental advance and often make a technology purchase simply for the pleasure of exploring the new device's properties. The total market size of the innovators phase is quite small and success in the innovators phase means very little financially to a company. But they are very important at the beginning of a marketing campaign, because they are the "goalkeepers" and their supports encourage the other players' entry to the marketplace.

- Early Adopters are also called the Visionaries. They are eager to embrace new technologies to solve their problems and exploit competitive advantage, and they have money to spend. They do not rely on well-established references in marketing these buying decisions, preferring instead to rely on their own intuition and vision and they are the keys to opening up any high-tech market segment.
- Early Majority, or called Pragmatists. They look to the innovators and early majority to see if a new product or idea works and begins to stand the test of time. They stand back and watch the experiences of others. Then there is a surge of mass purchases. Therefore it is a key to any major profits and growth.
- Late Majority, or called Conservatives, tends to purchase the product later than the average person. They are slower to catch on to the popularity of new products, services, ideas, or solutions. There is still mass consumption, but it begins to end.
- Laggards, or Skeptics, tend to very late to take on board new products and include those that never actually adopt at all. Here there is little to be made from these consumers.

The groups are distinguished from each other by their characteristic response to a discontinuous innovation based on a new technology. Each group represents a unique combination of psychology and demographics that make its marketing responded so different from one group to other. Understanding each profile and its relationships to the neighbors is a critical component of new product marketing. The model in turn says that the way to develop a new market is to work the curve left to right, focusing first on the Innovators, growing the market, then moving on to the next market and so on. In this effort, company must use each group as a reference base for going on to market to the next groups [16].

Moreover, from the last early adopters to mainstream acceptance of the product is a critical period, which is called chasm [16]. The chasm is between two distinct marketplaces for technology products, an early market dominated by Innovators and Visionaries, and a mainstream market representing all those consumers who want the benefits of new technology but do not want to take any risks. Steve, Jobs of Apple, says on the cover of another Geoffrey Moore's book "Inside the Tornado" that the chasm is where many high-tech fortunes have been lost and the Late Majority is where many have been made [17]. To cross the Chasm, Moore suggests that the company focus on the values and concerns of the target majority buyers, not on to Innovators and Visionaries, by providing minimum set of product and services necessary to ensure that the target customers will achieve their compelling reason to buy [16]. Thus, Moore provides a Competitive Position Compass to identify what to the target customers would appear to be the most reasonable competitive set and develop a value profile of them anywhere in the adoption life cycle (See Fig. 3.2.1.2).

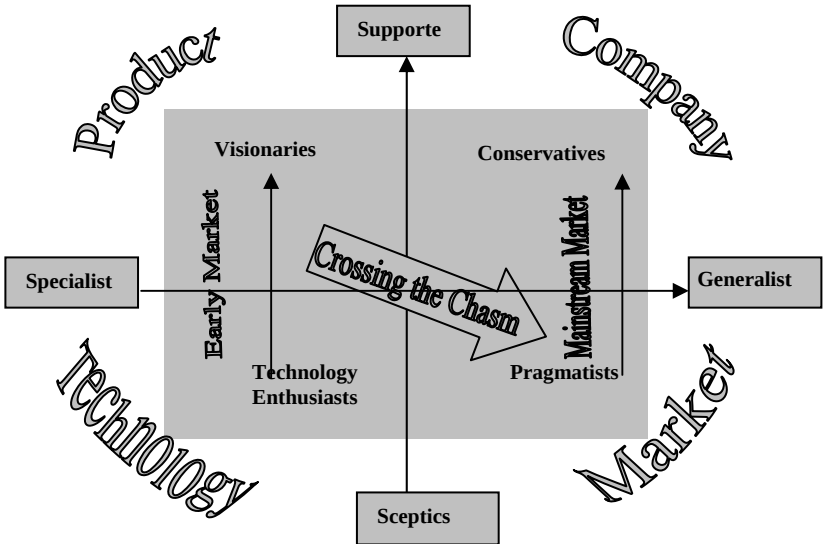


Fig. 3.2.1.2 the Competitive-Positioning Compass

This model consists of four fields: product, company, market, and technology. Technology enthusiasts and Visionaries dominate the early market. The key focuses in this market are product and technology. While Pragmatists and Conservatives dominate the mainstream market, the key focuses in this market are market and company. The horizontal axe measures buyers understanding of technical issues. For example, the Visionaries and Technology enthusiasts are more interested in technology and product issues, while the generalists are more interested in market leadership and company stability. The vertical axe measures the buyers' attitude toward the anticipated value offer, ranging from skepticism to support [16]. For example, in the early market, the technology enthusiastic innovators are the skeptical gatekeepers. If they give approve to the product, then their followings, the Visionaries feel mode to buy in.

Moore's frameworks, as they relate to the SEAFLEX buoy system, can help the management of the company to identify in which adoption phase of the life cycle SEAFLEX buoy systems currently exists, and whether the company is utilizing the appropriate strategy to ensure success along the way. In addition, despite SEAFLEX buoy system is a new range of product with some unique technical benefits and it is just in someplace of its early adoption life cycle. The management of SEAFLEX should yet be aware of the importance of the chasm and be prepared when it is time to leave the relative safety of their established present market and go out in search of a new market in the mainstream. Therefore, the work is interested in finding out in which adoption phase of the life cycle SEAFLEX buoy system currently exists, whether SEAFLEX buoy is coming to the critical point for change and what is the competitive minimum set of product characteristics would be most appreciated by target customers.

3.2.2 Buying Behavior

The central theme of Moore's book is that there is a huge chasm, or difference, between Early Adopters and Early Majority buyers [16]. In fact, this difference is extremely important to the marketers because they should use completely vary way of selling to one client or the other. If they have a profound understanding of buyer behavior and identify the type of buyer they're dealing with early in the product sales process, then they can use this information to suggest the important influences on customer decision making and create marketing programs that they believe will be of interest to customers.

How customers make decisions are extremely complex and consumer buying decisions, are affected by a variety of factors. According to Frank Nicosia, a general model of the buyer decision process consists of the following steps [18]:

1. Need recognition;
2. Search of information on products that could satisfy the needs of the buyer;
3. Alternative selection;
4. Decision-making on buying the product;
5. Post-purchase behavior.

How a buyer applies this decision process depends on the type of purchase decision he or she is faced as well as in which adoption phase of the product life cycle the individual fits. There are various factors that influence how such a model might work. Buyer behavior theory, proposed by Kotler, shows that buyer's purchasing decisions are influenced by external stimuli and internal black box [14].

Fig.3.2.2.1 in the next page shows that marketing and other external stimuli entering the buyer´ s black box and producing the response: the buyer's purchase decision.

Black box is the hidden inside of the person. External stimuli and buyer's black box offer most likely influence on the purchase behaviors. For the most part these influences are not mutually exclusive. Instead, they are all consistent and work together to form who customers are and how they behave. Thus, understanding consumer purchase behavior involves not only understanding how decisions are made but also understanding the dynamics that influence purchases.

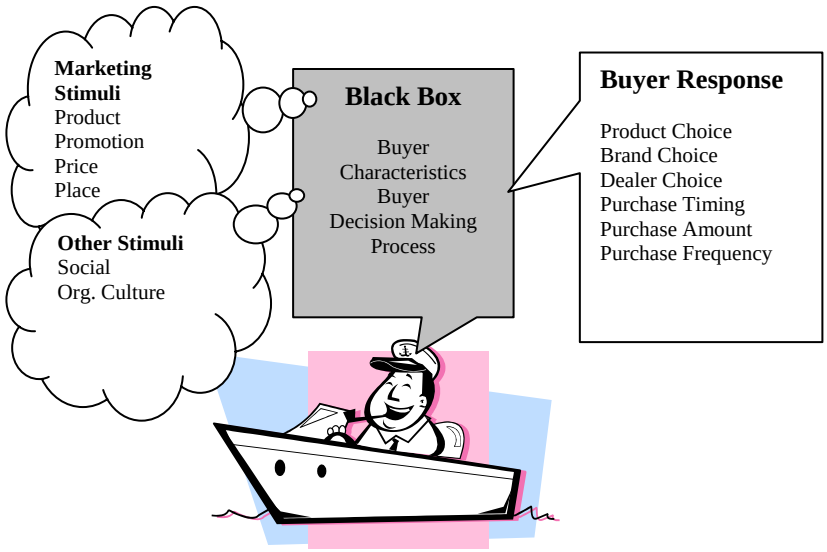


Fig.3.2.2.1 Consumer Behavior Model

3.2.2.1 Marketing Stimuli

A market is defined as an institution which - by the interplay of demand and supply - allocates resources through exchanges and thereby transactions among the firms in the industry [9]. To reach the target markets and specified objectives with the product, a marketer must apply a throughout marketing strategy. Part of a marketing strategy is the utilization of the marketing mix, price, product, promotion and place (See Fig.3.2.2.1.1). The marketing mix principles is controllable variable that is why it can be adjusted on a frequent basis to meet the changing needs of the target market and

other dynamics of marketing environment [13]. It can be used by marketers as a tool to assist in implementing the marketing strategy.

Fig. 3.2.2.1.1 Marketing Mix 4P´s Model [22]

Product

The innovator of the product, SAFLEX buoy system, has a good idea of product potential because they saw the need for the invention in the first place. But false perceptions of the market can prove a costly mistake. Maybe other people don't have the same need the inventor has projected. This is a representative question for technology-oriented people because they tend to think of the technology itself as the answer. The truth is that most of consumers buy products not technologies. Therefore it is necessary to survey potential customers for their thoughts on the supposed need. Thus, the essential questions about SEAFLEX buoy system are whether potential customers have the need that can be fulfilled by buying SEAFLEX buoy mooring system and why the boat owners want to buy their product. By analyzing the answers to theses questions allows the company to justify whether the characteristics of their product that meets the customers need.

Price

How much are the intended customers willing to pay? This is a conscious decision and forms part of the pricing strategy. Although competing on price is an old method, consumers are often still sensitive for price discounts and special offers. Price has also an absurd side: something that is expensive must be good. But there is a limit and customers will not pay any amount. The SEAFLEX buoy system costs almost as double expensive as the other buoy systems in the market because the superior technical functionalities, i.e. a value-based strategy is employed. The higher price might be one of the major reasons that leads to the sales are so small. For this reason, finding out the maximum price boundary, which the customers are willing to pay for the superior SEAFLEX buoy, is one of the central issues in this research. The result will give a concrete basis of pricing strategy for the company.

Placement and distribution

Efficient and effective distribution is important if a company is to meet its overall marketing objectives. The company must distribute the product to the user at the right place at the right time. If the company underestimates demand and customers cannot purchase their product thus the profitability will be affected. SEAFLEX is using a distribution strategy through the indirect distribution channel, such as pontoon manufactories, to distribute their buoy systems because of the SEAFLEX buoy system is a rather new product, probably highly priced, and requires the intermediary to place much detail in its sell. As SEAFLEX wants a deeper market penetration and obtains more customers, they may apply a broaden distribution strategy if they know where the target consumers are willing to store around. Therefore to study the most common purchasing places where customers purchase their mooring systems is also a part of the research and the result will help the company to effective and efficient promote and distribute their product to right target customers at right place.

Promotion

Promotion represents a various aspects of marketing communication, that is, communication of information about the product with goal of generating a positive customer response. In general, promotion consists of four major areas, advertising, sales promotion, public relations and personal selling to attract the potential consumers' attention. SEAFLEX has made many efforts to convince these customers to favor their buoys by e.g., press release, trade fair and sales force efforts mm. An affirmative and clear product image of SEAFLEX mooring buoy must be accurately delivered to the target customers by using the constructive and well-organized promotion methods. For this reason, finding out the common information resource used by the potential customers, how effective are SEAFLEX current promotion efforts as well as by which information channel those customers get to know the SEAFLEX buoy are also an objective of the research and the answer will hopefully bring out a focus of further promotion effort.

3.2.2.2 Other External Stimuli

Besides marketing stimulus, private boat owners' purchasing decision process is also affected by factors that are outside of their control but have direct or indirect impact on what they purchase and how they purchase.

Culture Factors

Culture includes the set of basic values, beliefs, and associated behaviors that are learned by interacting or observing other members of society [9]. In this work, the Swedish Boat Union (SUB) may be a society for these private boat owners. In this way much of what boat owners do is shared behavior, passed along from one member in the boat society to other. However, the boat culture or society represents a broad concept.

Every boat owner more likely is affected by what occurs within sub-cultures, i.e. boat clubs or public harbors, to which the potential customers for SEAFLEX may also belong to. Boat owner's beliefs and values from boat clubs form a basis of attitudes towards SEAFLEX buoy and its innovation adoption rate. Therefore, this work will only focus on recognizing differences in how sub-culture behaves i.e. what occurs within private boat clubs? Specifically, how the purchasing processes look like in private boat clubs?

Social Factors

Besides the forces within a culture that may affect and govern a boat owner's attitude towards SEAFLEX buoy, other group influence may also direct his opinion and attitudes. Boat owners belong to many other groups with which they share certain characteristics and which may influence purchase decisions. Other basic groups the private owners may belong to are: family, reference group and special group with certain social status. Often these groups contain opinion leaders or others who have major influence on what they purchases. Related to mooring system, the current customers for SEAFLEX buoy may have some influence on their friends because of their special interest and knowledge within the buoy mooring. Thus, to find out how much buoy purchasers´ purchase decisions are influenced by their friends or reference groups is an important survey task from this section.

3.2.2.3 Buyer's internal Black Box

Marketers usually spend a lot of efforts in an attempt to get customers to have a positive impression of their products. But the perceptual filters in each individual's black box constrict the progress of receiving all exterior information and it involves many personal and psychological factors. This means not all external stimuli end up

being stored inside the buoy consumers in a direct way. All external information has been first consciously or unconsciously filtered by the perceptual filter in one's black box. Perception may include following steps:

- Exposure – Boat owners see an ad in a trade newspaper.
- Attention – Boat owner recognize it is an ad.
- Awareness – Boat owner recognize it is an ad for SEAFLEX buoy.
- Retention – Boat owner retain some information from the ad (i.e., SEAFLEX buoy is a new variant of buoy mooring system with some interesting specification) and add them in his/her internal filter.

Boat owners of varying lifestyles, personalities, knowledge, motivations and experiences often have different perceptions of SEAFLEX buoy which give rise to different attitudes and adoption rates. And how these steps are finally carried out also depends on how easy the person can be reached and affected by the external stimuli. This is the explanation for why one boat owner may be able to focus very strongly on an ad for SEAFLEX buoy and be able to retain the information after being exposed only one time while another one may need to be exposed to the same advertisement many times before he/she even recognizes what it is.

Therefore, SEAFLEX has to use various means to deliver the product message in order to capture target customers attention and give them positive motivation to acquire the product. To do this, the company must continually monitor if their product messages have achieved expected reactions and whether the messages become misrepresented in ways that will negatively shape the image of the product. So in this work, boat owners' attitude measurements are taken on either potential or existing buoy users in order to identify their characteristics and evaluate the effectiveness of the current marketing efforts.

3.3 Group Classification

In this research, some of the information is based on the early researches carried out by Statistics Sweden and Swedish Marine Industry Federation [10] [11]. The information from the early researches has been used as the underlying for the investigation questions. This section presents how the information has been applied in this work.

3.3.1 Geographical Division of Sweden

The boat clubs, municipal harbors and private boat owners are divided in five different geographical areas: the East coast, the Inland coast, the Norrland coast, the West coast and the South coast. Same division has been used in the research *"An investigation of Swedish boat life 2004"*, carried out by Statistics Sweden. Fig.3.3.1.1 shows the five geographical areas and the respective provinces involved in this investigation are specified in detail in the Table 3.3.1.1.

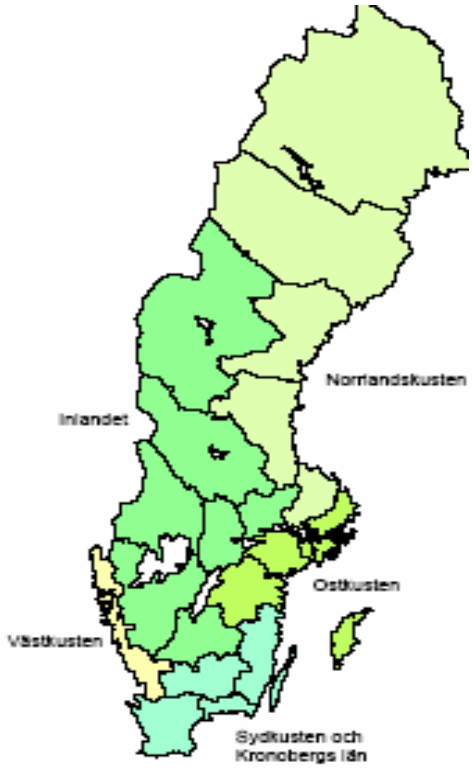


Fig. 3.3.1.1 Swedish Coast Ggeographical Division [10]

Area	Counties
The East coast	Södermanland, Östergötland, Gotland, Stockholm
The Inland water territory	Västergotland, Värmland, Örebro, Västmanland, Dalarna
The Norrland coast	Norrbotten, Västerbotten, Västernorrland, Gävleborg, Uppsala,Gästrikland
The West coast	Halland, Bohus
The South coast and Kronberg county	Skåne, Kronoberg, Blekinge, Kalmar

Table 3.3.1.1 the Geographical Classification

3.3.2 Boat Classification

Pleasure boats are divided in five classes: Small boat, Motorboat with at least a 10-horse power motor, Sailboat without or only with temporary accommodation facilities, Motorboat with accommodation facilities and sailboat with accommodation facilities. A classification of the different boat types is shown in Table 3.3.2.1.

Small boat (Canoe, Kayak, Dinghy, Rowing boat and Open boat without motor or with motor below 10 horse power)
Motorboat with motor 10 hp or more
Sailboat without or only with temporary accommodation facilities
Motorboat with accommodation facilities
Sailboat with accommodation facilities

Table 3.3.2.1 the Different Boat Type [10]

4. Analysis and Results

In this chapter the analysis and results of the factors mentioned in the investigation framework are presented and discussed in following sections (See also section 2.1 and 2.4):

- What is the potential sales quantity of SEAFLEX buoy in the Swedish market?
- How much are customers willing to pay?
- Where do customers go for the product?
- Promotion factors
- Product factors
- Other external factors
- Background information of respondents

Internal psychological factors are related to many preceding factors, thus they have been analyzed together with respective factors. In each section, some important data from private boat owners, boat clubs and municipalities survey are first analyzed. Then, a summary of important results from three survey groups as well as some discussions is presented at the end of section.

4.1 Potential Sales Quantity of SEAFLEX Buoy

4.1.1 Analysis of Private Boat Owners

The most common mooring systems among the respondents are: Jetty-Y-bar, Buoy mooring system and Jetty sternpost (See Table 4.1.1.1). Nearly every second respondents are using a Jetty-Y-bar. Less than 30 % respondents are using buoy system

and the majority of them are located first and foremost in East Coast (See Table 4.1.1.2).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Jetty-Y-bar	24	45,3	45,3	45,3
	Buoy	14	26,4	26,4	71,7
	Jetty-Stern-Post	10	18,9	18,9	90,6
	Anchor	1	1,9	1,9	92,5
	Longsides	3	5,7	5,7	98,1
	Own Jetty or others	1	1,9	1,9	100,0
	Total	53	100,0	100,0	

Table 4.1.1.1 Mooring Method (private boat owners)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	the East Coast	9	64,3	64,3	64,3
	the West Coast	2	14,3	14,3	78,6
	the South Coast	3	21,4	21,4	100,0
	Total	14	100,0	100,0	

Table 4.1.1.2 the Current Buoy Users and Regions (private boat owners)

Fewer respondents are willing to employ the buoy system in future than those who will not use it. Table 4.1.1.3 under shows the respondents' answer on question "*Will you use mooring buoy in the future"* and the statistic indicates that only 36 % respondents are willing to employ the buoy system while 56 % will not use it in future.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, Perhaps.	9	17,0	17,0	17,0
	Yes, definitely	10	18,9	18,9	35,8
	Nither yes nor no	4	7,5	7,5	43,4
	No.I need not it.	18	34,0	34,0	77,4
	No. I perfer other mooring method.	12	22,6	22,6	100,0
	Total	53	100,0	100,0	

Table 4.1.1.3. Potential buoy users (private boat owners)

The uneven division spreads all over the country. The Region and Potential Customer Cross Table 4.1.1.4 below also shows only minority of respondents will use mooring buoy regardless regions. Especially in South coast, there are over 60 % respondents are not keen to employ the buoy mooring system in future.

			Region				
			the East Coast	the Inland Coast	the West Coast	the South Coast	Total
Are youwilling to use buoy in future?	Yes	Count	9	1	4	5	19
		% within Region	37,5%	25,0%	36,4%	35,7%	35,8%
	Nither yes nor no	Count	2	1	1		4
		% within Region	8,3%	25,0%	9,1%		7,5%
	No	Count	13	2	6	9	30
		% within Region	54,2%	50,0%	54,5%	64,3%	56,6%
Total		Count	24	4	11	14	53
		% within Region	100,0%	100,0%	100,0%	100,0%	100,0%

Table 4.1.1.4. Region and Potential Customer Cross tabulation (private boat owners)

All these respondents have at least one of the following boats: motor or sailing boat with an engine of 10 Horse Power or more, motor boat with accommodation facilities, and sailboat with or without accommodation facilities (See Table 4.1.1.5).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Motorboat with an engine >=10 HP	11	20,8	20,8	20,8
	Sailing boat with an engine >=10 HP	2	3,8	3,8	24,5
	Motor boat with accomodition facilities	12	22,6	22,6	47,2
	Sailing boat with accomodition facilities	28	52,8	52,8	100,0
	Total	53	100,0	100,0	

Table4.1.1.5. Boat Type (private boat owners)

Furthermore, Table 4.1.1.6 shows how the current and potential buoy users' response to the question "*Will you use SEAFLEX buoy in the future* ". 50 % of respondents, who are the current or the potential buoy users, will probably become SEAFLEX buoy user.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, definitely	5	9,4	25,0	25,0
	Ja, perhaps	5	9,4	25,0	50,0
	Nither yes nor no	6	11,3	30,0	80,0
	No, perhaps not.	4	7,5	20,0	100,0
	Total	20	37,7	100,0	
Missing	System	33	62,3		
Total		53	100,0		

Table 4.1.1.6 Will you use SEAFLEX buoy? (private boat owners)

According to the statistic from Statistics Sweden, there are over 1 million private boats in Sweden and about 45 % of the boats have an engine of 10 Horse Power or more [10]. Suppose one pleasure boat uses one set of buoy system. Thus the potential sales quantity (PSQ) of SEAFLEX buoy in the Swedish market is shown in Table 4.1.1.7. Thus the estimation of the potential selling quantity for mooring buoy system and SEAFLEX buoy system from this survey group are probably 118867 sets respective 84905 sets.

	Number of Boats	**PSQ of Buoy**	**PSQ of SEAFLEX Buoy**
53 private owners	53	14	10
The entire country	1 000 000	$\frac{14}{53} * 1000000 * 45\% = 118867$	$\frac{10}{53} * 1000000 * 45\% = 84905$

Table 4.1.1.7 Potential Sales Quantities of SEAFLEX Buoy (private boat owners)

4.1.2 Analysis of Boat Clubs

There are totally 42471 all types of pleasure boat moored in 107 responding clubs' harbours with a mean value 442. More than 75 % of these clubs have maximum 300 moored boats in their mooring place (See Table 4.1.2.1 and 4.1.2.2).

N	Valid	96
	Missing	11
Mean		442,41
Std. Deviation		)27,067
Sum		42471
Percentiles	25	100,00
	50	200,00
	75	311,25

Table 4.1.2.1 Number of Boats (clubs)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-50 boats	15	14,0	15,6	15,6
	51-100 boats	12	11,2	12,5	28,1
	101-200 boats	23	21,5	24,0	52,1
	201-300 boats	22	20,6	22,9	75,0
	301-400 boats	9	8,4	9,4	84,4
	401-500 boats	6	5,6	6,3	90,6
	501-600 boats	2	1,9	2,1	92,7
	601-700 boats	2	1,9	2,1	94,8
	701-800 boats	2	1,9	2,1	96,9
	801-1000 boats	2	1,9	2,1	99,0
	2001-boats	1	,9	1,0	100,0
	Total	96	89,7	100,0	
Missing	System	11	10,3		
Total		107	100,0		

Table 4.1.2.2 Mapping of Registered Boats Division

According to the statistics from Statistics Sweden, there are nearly 1000 pleasure boat clubs and 1 000 000 pleasure boats in Sweden [10]. Thus, there are approximately $\frac{(442*1000)}{1000000}*100\% \approx 44\%$ of pleasure boats are moored in clubs.

Jetty-Y-bar is the most common mooring system and mooring buoy system is the next common system in Swedish boat clubs. Table 4.1.2.3 shows nearly 40 % of respondents with valid response are using this system and about 31 % of these boat clubs are using mooring buoy system.

Multiple Response of Mooring methods
(Value tabulated = 1)

Dichotomy label	Name	Count	Pct of Responses	Pct of Cases
Jetty-Y-bars	Q2P1	59	38,1	61,5
Jetty-buoy	Q2P2	48	31,0	50,0
Jetty-stern posts	Q2P3	24	15,5	25,0
Anchor	Q2P4	5	3,2	5,2
Longsides	Q2P5	9	5,8	9,4
Rope or elastic wire	Q2P6	9	5,8	9,4
Between two Jetties	Q2P7	1	,6	1,0
Total responses		155	100,0	161,5

11 missing cases; 96 valid cases

Table 4.1.2.3 Mooring Methods (clubs)

These 31 % of the responding clubs are totally using 3336 sets of buoy system with a mean value 65 (See also Table 4.1.2.4). Further, only 33 % of respondents among the 31 % clubs, which are using buoy system, give a positive answer to SEAFLEX buoy and 809 sets of other buoy system are used today in these SEAFLEX - positive clubs (See Table 4.1.2.5 and 4.1.2.6). This means the boat owners in these clubs probably need 809 sets of SEAFLEX buoy system in future.

N	Valid	51
	Missing	56
Mean		65,41
Std. Deviation		91,262
Sum		3336
Percentiles	25	10,00
	50	30,00
	75	100,00

Table 4.1.2.4 Number of Used Buoys (clubs)

N	Valid	14
	Missing	0
Mean		57,79
Std. Deviation		67,666
Variance		4578,643
Sum		809

Table 4.1.2.6 Number of Buoys used in SEAFLEX Positive Clubs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes to Seaflex	14	29,2	33,3	33,3
	Vi are not sure	5	10,4	11,9	45,2
	No to Sealfex	23	47,9	54,8	100,0
	Total	42	87,5	100,0	
Missing	System	6	12,5		
Total		48	100,0		

Table 4.1.2.5 How many buoy-equipped clubs go for SEAFLEX buoy?

To sum up, the complete estimate of potential sales quantity is presented in Table 4.1.2.7 and the potential selling quantity for mooring buoy system and SEAFLEX buoy set from this survey group are probably 78548 sets respective 19048 sets.

	Number of Boat	**PSQ of Buoy**	**PSQ of SEAFLEX Buoy**
107 clubs	42471	3336	809
The entire country	1 000 000	$\frac{3336}{42471} * 1000000 = 78548$	$\frac{809}{42471} * 1000000 = 19048$

Table 4.1.2.7 Potential Sales Quantities of SEAFLEX buoy (clubs)

4.1.3 Analysis of Public Marinas

There are 12 municipalities, which have small boat harbors, answered the questionnaire with valid replaies and they are located in the east, south, and west coast (See Table 4.1.3.1).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	East coast	3	25,0	25,0	25,0
	Inand coast	1	8,3	8,3	33,3
	West coast	4	33,3	33,3	66,7
	South coast	4	33,3	33,3	100,0
	Total	12	100,0	100,0	

Table 4.1.3.1 the Geographical division of the municipalities

There are totally 10 977 private boats are moored in their harbors with a mean value 914 (See Table 4.1.3.2). Most of these boats are equipped with an engine of 10 Horse Powers or more (See Table 4.1.3.3).

N	Valid	12
	Missing	0
Mean		914,75
Std. Deviation		797,778
Variance		636449,1
Minimum		19
Maximum		2500
Sum		10977

Table 4.1.3.2 Number of boats (municipalities)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	More than 90 % boats with a motor > 10 hk	6	50,0	66,7	66,7
	About 80 % of boats with motor > 10 hk	1	8,3	11,1	77,8
	Not specified	2	16,7	22,2	100,0
	Total	9	75,0	100,0	
Missing	System	3	25,0		
Total		12	100,0		

Table 4.1.3.3 Boat Type (municipalities)

Jetty Y-bar and mooring buoy are the most common mooring method among the respondents´ public harbors and nearly on third of the respondents´ harbors are using each of two mooring systems (See Table 4.1.3.4).

Group $Sum2 Mooring Method
(Value tabulated = 1)

Dichotomy label	Name	Count	Pct of Responses	Pct of Cases
Jetty-Y-bar	q2p1	8	28,6	72,7
Jetty-buoy	q2p2	8	28,6	72,7
Jetty-stern posts	q2p3	4	14,3	36,4
Anchor	q2p4	1	3,6	9,1
Longsides	q2p5	2	7,1	18,2
Rope or elastic wire to the ring in jett	q2p6	3	10,7	27,3
Between two Jetties	q2p7	2	7,1	18,2
Total responses		28	100,0	254,5

1 missing cases; 11 valid cases

Table 4.1.3.4 Mooring methods in city harbours (municipalities)

There are 570 buoys employed in the responding harbours with a mean value 47 buoy per harbours (See Table 4.1.3.5). Further, about 70% the respondents among the 28 % public harbours that are utilizing the buoy system are willing to use SEAFLEX buoy (See Table 4.1.3.6). This means 458 buoys may change to SEAFLEX buoys one day among these SEAFLEX positive public harbours, which are using other buoy mooring systems today (See Table 4.1.3.7).

N	Valid	12
	Missing	0
Mean		47,50
Std. Deviation		65,059
Variance		4232,636
Minimum		0
Maximum		200
Sum		570

Table 4.1.3.5 Number of Used Buoys

N	Valid	7
	Missing	0
Mean		65,43
Std. Deviation		77,961
Variance		6077,952
Minimum		0
Maximum		200
Sum		458

Table 4.1.3.7 Number of buoys in S-positive

(Answered by harbors using buoy system)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, absolut.	2	25,0	28,6	28,6
	Yes, Of the price is as same as current one.	3	37,5	42,9	71,4
	No,absolutly not	2	25,0	28,6	100,0
	Total	7	87,5	100,0	
Missing	System	1	12,5		
Total		8	100,0		

Table 4.1.3.6 Yes or No to SEAFLEX buoy? (Answered by harbors using buoy system today)

By the same way, the estimation of potential sales quantity is presented in Table 4.1.3.8 below. It shows that the potential selling quantities for mooring buoy system and SEAFLEX buoy systems from this survey group are probably 51926 sets respective 41724 sets.

	Number of Boat	**PSQ Of Buoy**	**PSQ of SEAFLEX Buoy**
Public harbors in 12 cities	10977	570	458
The entire country	1 000 000	$\frac{570}{10977} * 1000000 = 51926$	$\frac{458}{10977} * 1000000 = 41724$

Table 4.1.3.8 Potential Sales Quantity (municipalities)

4.1.4 Result and Summary

In order to get a more precise estimation, the final results are the mean value of all results from these three surveys (See Table 4.1.4.1). Let's sum up the final results in Table 4 and round off the mean values to nearest thousand. Thus, the potential sales of all mooring buoy system are approximately 8 3000 and the potential sales of SEAFLEX buoy are probably 4 9000. Suppose there are 5 % of buoys need to changed

out yearly, so 83000 * 5 % = 4150 sets of buoy systems will be needed. Assume that probably 2 % of yearly changed buoy systems are SEAFLEX buoy systems, the potential annual sales quantity for SEAFLEX buoy system is approximately 4150 * 2 % = 83 sets. And a potential market share for SEAFLEX buoy is possibly $\frac{49000}{83000} * 100\% = 59\%$

	Survey Sub-Group				Entire Country	
	Number of Boats	**Number of Buoys**	**Potential sales of SEAFLEX buoy**	**Percentage of SEAFLEX buoy**	**Potential Sales of Buoy**	**Potential Sales of SEAFLEX buoy**
Private Boat Owners	53	14	10	19 %	118867	84905
Public Harbors	10977	570	458	4 %	51925	41724
Boat Clubs	42471	3336	809	2 %	78548	19048
Mean Value	17834	1307	426	2 %	83113	48559

Table 4.1.4.1 the Final Results for Potential Sales Quantity of SEAFLEX buoy

There are vast differences among the survey results. The results in the Table 4 indicate that the potential sales quantity declines as the numbers of boats increase from sample to sample. The differences may partly cause by the sample size. The bigger the sample, the smaller the margin of error will get. If a survey sample size is 50, the margin of error is approximately 14 %. While if the sample size increase to 2000, the margin of error will approximately reduce to 2 %. The margin of error has a "confidence level," usually 95 percent. That means that if you asked a question from the sample population 100 times, 95 of those times the results would be within 3 percentage points of the original answer. Of course, this means that the other five times you ask the question, you may get answers that are completely off the wall [23]. For this point of view, the result of boat club survey is more credible. The boat club survey covers much more private boats in more widespread geographical area than the private boat owner survey

do. The municipality survey proves the same trend that the more boats are involved, the less SEAFLEX buoy will needed.

On the other hand, the analysis shows that only approximately 40 % of private boats are moored in the 1000 boat clubs and there are considerable more boat clubs are keen to use Y-gate system. In addition, many responding clubs and municipalities are only responsible for purchasing Jetty, Y-gate system and other smaller mooring accessories. As a consequence, the attitude from the club representatives and municipalities may not fully represent all private boat owners attitude to SEAFLEX buoy. There is probably more private boat owners like to use buoy mooring system and are more open to the new product than the clubs and municipalities do. In that case, the result from private boat owner survey is probably more close to the reality. However, an additional research in bigger scale is recommended.

4.2 How much are customers willing to pay?

4.2.1 Analysis of Private Boat Owners

Table.4.2.1.1 shows more than half of answered respondents will not accept a price level that is 29 % higher than their current systems. Only 5 % of them accept a price, which is 100 % higher than their present systems.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 9 %	3	5,7	15,0	15,0
	Less than 19%	3	5,7	15,0	30,0
	Less than 29%	5	9,4	25,0	55,0
	Less than 49%	2	3,8	10,0	65,0
	Less than 59 %	5	9,4	25,0	90,0
	Less than 69 %	1	1,9	5,0	95,0
	More than 100 %	1	1,9	5,0	100,0
	Total	20	37,7	100,0	
Missing	System	33	62,3		
Total		53	100,0		

Table.4.2.1.1 Which is acceptable price? (private boat owners)

The average price of their present current buoy systems is 3660 SEK (See Fig 4.2.1.1) and 70 % of current buoy users buoy system cost less than 3000 SEK. The Fig.4.2.1.2 shows the average acceptable price level is approximately 30% higher than the respondents´ present buoy systems with a mean value 4.1. This indicates that the price level of SEAFLEX buoy should not be higher than 30 % of price of the current buoy systems in the market.

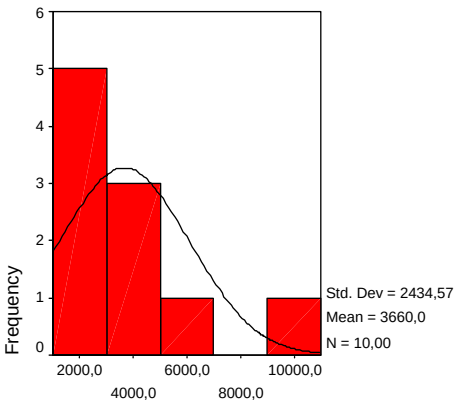


Fig.4.2.1.1 Price of Respondents´ Buoy (private boat owners)

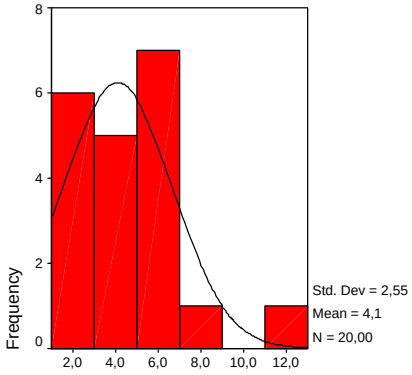


Fig. 4.2.1.2 Price Level of S-buoy (Private boat owners)

4.2.2 Analysis of Boat Clubs

Table.4.2.2.1 shows 50 % of the answered clubs will not accept a price level that is 9 % higher than their current systems. Only 10 % of them accept a price, which is 100 % higher than their present systems.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Do not accept higher price	9	8,4	30,0	30,0
	1-9 % higher than the average price	6	5,6	20,0	50,0
	10-19 % higher than the average price	2	1,9	6,7	56,7
	20-29 % higher than the average price	5	4,7	16,7	73,3
	30-39 % higher than the average price	2	1,9	6,7	80,0
	50-59 % higher than the average price	3	2,8	10,0	90,0
	More than 100 % higher than the average price	3	2,8	10,0	100,0
	Total	30	28,0	100,0	
Missing	System	77	72,0		
Total		107	100,0		

Table 4.2.2.1 which is the acceptable price level? (Clubs)

Fig.4.2.2.2 shows that how the answers spread from scale 1 to 12 with a mean value 3.8. This indicates that in average the price level should not exceed 19 % higher than respondents present systems.

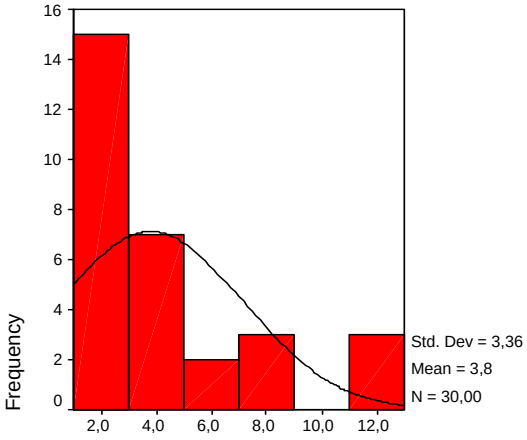


Fig.4.2.2.2 the Acceptable Price Level (clubs)

4.2.3 Analysis of Public Marinas

Table.4.2.3.1 shows more than 70 % of the respondents will not accept a price level that is 9 % higher than their current systems. Only 14 % of them accept a price, which is 100 % higher than their present systems.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Do not accept higher price	2	16,7	28,6	28,6
	1-9 % higher than the average price	3	25,0	42,9	71,4
	10-19 % higher than the average price	1	8,3	14,3	85,7
	100 % or more higher than the average price	1	8,3	14,3	100,0
	Total	7	58,3	100,0	
Missing	System	5	41,7		
Total		12	100,0		

Table 4.2.3.1 which is acceptable price? (Municipalities)

Fig.4.2.3.1 shows how the answers spread from scale 1 to 12 with a mean value 3.3. This indicates that in average the price level should not exceed 14 % higher than respondents' present systems.

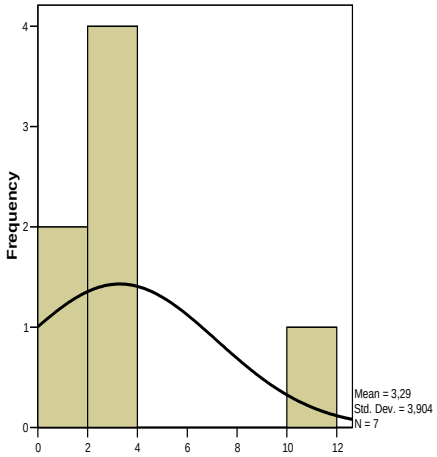


Fig. 4.2.3.1 the Acceptable Price Level

4.2.4 Result and Summary

Table 4.2.4.1 summarizes the results from each survey sub-group. Let's round off the mean value to nearest ten.

	Private Boat Owners	Public Harbors	Boat Clubs	Mean Value
Acceptable Price Level	30%	14%	19%	21%

Table 4.2.4.1 the Final Result of Acceptable price Level

Thus the company would probably charge their customer as high as 20 % or maximum 30 % as the price of customers´ current buoy system. For example: If the average price for a mooring buoy system is 3660 SEK, thus a potential selling price is between 3660 * 1.2 = 4392 SEK.

There is a bigger difference between the results of the private boat owners and other two survey groups. It is caused possibly by the design of questionnaires. In the questionnaire for private boat owners, the price level is given as fixed multiple choices from 1 % to 100 % and more. The answer like “Not accept a higher price” has been treated as optional answer “Others” in the end of fixed answers. The respondents seems do not think on the option in “Others” than just select one from the fixed answers. On the other hand, the questions for other survey groups are designed in open question and there is no fixed answer to select. Therefore the respondents answered freely and many of them chosen “Do not accept higher price “as first and foremost alternative.

4.3 Where do Customers go for the Product?

4.3.1 Analysis of Private Boat Owners

Table 4.3.1.1 shows that the most common purchase place for boat owners is local boat equipment store. Whenever they need to purchase some equipment, they go to the local stores for evaluating the product alternative and colleting some information from the dealer. Other common purchase places among the respondents are boat equipment stores, like Hjertman, Watsi, Herman Gotthardt and Byggplast & Båtprylar. 17 % of respondents rent a place from a club or local marina. In this case, they usually do not buy any mooring system by themselves.

Moreover the purchasing places for the respondents, who are current buoy users, are also analysed in Table 4.3.1.2. It shows the most common purchase place for these buoy users are local boat equipment store, Byggplast & Båtprylar and Hjertman.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Herman	5	7,7	7,7	7,7
	Byggplast & Båtprylar butik	5	7,7	7,7	15,4
	Hjertman butik - postorder butik	9	13,8	13,8	29,2
	Watski butik	6	9,2	9,2	38,5
	Annan lokal båttillbehör återförsäljare.	18	27,7	27,7	66,2
	Internet butik.	1	1,5	1,5	67,7
	Rent a boat plat	11	16,9	16,9	84,6
	Repslageri	1	1,5	1,5	86,2
	Direkt från tillvarkare.	2	3,1	3,1	89,2
	Erlandssons brygga	2	3,1	3,1	92,3
	Other shops	3	4,6	4,6	96,9
	Baltic	2	3,1	3,1	100,0
	Total	65	100,0	100,0	

Table 4.3.1.1 where do you purchase? (Private boat owners)

Group $PLACE Purchasing place (for buoy users only)
(Value tabulated = 1)

Dichotomy label	Name	Count	Pct of Responses	Pct of Cases
Buy fr.Byggplats	Q5P2	2	14,3	14,3
Buy fr.Hejtman	Q5P3	2	14,3	14,3
Buy fr. Local boat equipment shop	Q5P5	8	57,1	57,1
Buy directly fr. manufacture	Q5P9	1	7,1	7,1
Buy från Baltic	Q5P12	1	7,1	7,1
Total responses		14	100,0	100,0

0 missing cases; 14 valid cases

Table 4.3.1.2 Purchasing place for buoy users (private boat owners)

4.3.2 Analysis of Boat Clubs

Table 4.3.2.1 shows that local boat equipment store and supplier are the most popular purchasing places according to these responding clubs and 16 % of them admit that they will first go to these local dealers when they need to buy some equipment. Most of clubs have no regular purchasing place because either the clubs which let the boat owners do the purchasing themselves or the clubs will make collective purchasing by

first making a market scan by ring around and ask for product information and price among the different suppliers, and then they choose one from the offers.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Y-gate supplyer	2	1,9	3,3	3,3
	Special dealer	2	1,9	3,3	6,7
	Biltema	1	,9	1,7	8,3
	Baltic	1	,9	1,7	10,0
	Navigationsteknik AB	1	,9	1,7	11,7
	Robship	2	1,9	3,3	15,0
	Boat shop	1	,9	1,7	16,7
	Local iron shop, local supplier or local wood product sh	9	8,4	15,0	31,7
	Manufactured by club members	4	3,7	6,7	38,3
	DACO AB,DACO-bryggan /Ponton	5	4,7	8,3	46,7
	Optional choice by Boat owner	18	16,8	30,0	76,7
	Used equipment from other clubs	1	,9	1,7	78,3
	Choosing among offers	10	9,3	16,7	95,0
	Eurocoast Marine	2	1,9	3,3	98,3
	Optional	1	,9	1,7	100,0
	Total	60	56,1	100,0	
Missing	System	47	43,9		
Total		107	100,0		

Table 4.3.2.1 where do you purchase? (Clubs)

Additionally the purchasing place where those clubs, which currently use buoy mooring systems, are also analysed in Fig.4.3.2.1. Besides the optional shopping places, the following places are also mentioned more frequently among the answers: local dealer or suppliers, some of bridge and pontoon suppliers, like DACO AB.

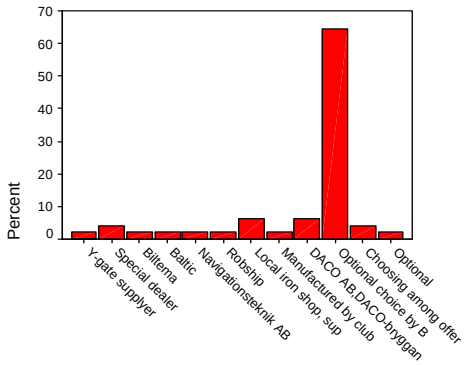


Fig. 4.3.2.1Which purchasing place do you chosen? (Answered by clubs that have buoys)

4.3.3 Analysis of Public Marinas

Table 4.3.3.1 shows the most common purchasing place, the purchasers from municipal harbors are most likely to visit, is the local stores and suppliers. Besides that, the other common purchasing places are Flytarmar. SF-Marina, NF-Bryggan because the municipalities are generally responsible for arranging the Jetty (pier), Y-gate and Jetty-stern post system in public harbors.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	local supplier	6	50,0	50,0	50,0
	Choosing among offers	1	8,3	8,3	58,3
	SF-Marina, NF-bryggan, Najba	1	8,3	8,3	66,7
	Flytarmar - Svenska flytblock.	2	16,7	16,7	83,3
	Optional	2	16,7	16,7	100,0
	Total	12	100,0	100,0	

Table 4.3.3.1 where do you purchase? (Municipalities)

In addition, the purchasing places for those public harbors that use buoy mooring systems now are analysed in Table 4.3.3.2. The result verifies also that the local equipment is the first and foremost choice.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	local supplier	5	62,5	62,5	62,5
	Flytarmar - Svenska flytblock.	1	12,5	12,5	75,0
	Optional	2	25,0	25,0	100,0
	Total	8	100,0	100,0	

Table 4.3.3.2 which purchasing places do you chosen? (Answered by public harbors that have mooring buoys)

4.3.4 Result and Summary

A summary of the results from each survey sub-group is shown in Table 4.3.4.1. The result presented in the table is only focused on the answers from the current and potential buoy users.

	Private Boat Owners	Public Harbors	Boat Clubs
the Most Common Purchasing Place	Local Boat Equipment Shop	Local Boat Equipment Shop	Indefinite Place
the Second Common Purchasing Place	Byggplats & Båtprylar, Hejtman	Bridge and Pontoon Suppliers	Local Boat Equipment Shop
the Third Common Purchasing Place	Manufactures, Baltic	Indefinite Place	Bridge and Pontoon Suppliers

Table 4.3.4.1 the most popular purchasing places among the current buoy users

The table outlines the local boat equipment stores and suppliers are the most popular places for buoy users. Bridge and pontoon suppliers and some well established boat equipment stores, such as Hejtman, Baltic and Byggplats & Båtprylar, are also well-liked by buoy users.

4.4 Product Factor Analysis

4.4.1 Analysis of Private Boat Owners

The reasons the buoy users prefer the buoy mooring system are analyzed in different regions (See Table 4.4.1.1). Buoy users from the east and south coast consider that mooring buoy system is a better way to prevent their boats away the damage caused by storm and collision by other boats, while most of buoy users from the west coast think on the other hand that the crowdedness in the marina is the major reason to use mooring buoy. The crowdedness causes trouble for them to get access to the bridge or

other mooring systems. For that reason a buoy mooring system is a supportive alternative.

Region			Frequency	Percent	Valid Percent	Cumulative Percent
the East Coast	Valid	Short of place	1	4,2	11,1	11,1
		Rent a mooring place	2	8,3	22,2	33,3
		A simple better method	4	16,7	44,4	77,8
		In connnection to my house	2	8,3	22,2	100,0
		Total	9	37,5	100,0	
	Missing	System	15	62,5		
	Total		24	100,0		
the Inland Coast	Missing	System	4	100,0		
the West Coast	Valid	Short of place	2	18,2	50,0	50,0
		Protct the boat from quay	1	9,1	25,0	75,0
		A traditional method	1	9,1	25,0	100,0
		Total	4	36,4	100,0	
	Missing	System	7	63,6		
	Total		11	100,0		
the South Coast	Valid	An eviromental friendly mathod	2	14,3	40,0	40,0
		A simple better method	2	14,3	40,0	80,0
		Closer to the nuture	1	7,1	20,0	100,0
		Total	5	35,7	100,0	
	Missing	System	9	64,3		
	Total		14	100,0		

Table 4.4.1.1 the Reasons for Buoy Users to Use Buoy (answered by respondents who is buoy users)

Absolute majority of the buoy users think the corrosion and wear to the chain between the anchor and buoy is the major cause of buoy changing (See Table 4.4.1.2). The drawback of chain causes 47 % of these respondents to change their system once every four to five years (See Table 4.4.1.3).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chanin damage	15	23,1	83,3	83,3
	Buoy damage	1	1,5	5,6	88,9
	Lifting buoy damage	1	1,5	5,6	94,4
	Rope damage	1	1,5	5,6	100,0
	Total	18	27,7	100,0	
Missing	System	47	72,3		
Total		65	100,0		

Table 4.4.1.2What is the most common damage? (answered by respondents who is buoy users)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 time/less than 5 years	7	13,2	46,7	46,7
	1 time/ less than 9 years	2	3,8	13,3	60,0
	1 time/ less than 12 years	3	5,7	20,0	80,0
	1 time/ less than 15 years	1	1,9	6,7	86,7
	1 time/ longer than 15 years	2	3,8	13,3	100,0
	Total	15	28,3	100,0	
Missing	System	38	71,7		
Total		53	100,0		

Most buoy users consider the duration and price of their current buoy are fine (See Fig. 4.4.1.1- 4.4.1.2). The service and maintenance are on the other hand less pleased. No one gives a positive answer to the service of his current system and installation and there are more respondents, who are not content for the maintenance of their current systems, than those are pleased (See Fig.4.4.1.3-4.4.1.4). Additionally, no buoy users consider their buoy system are environmental unfriendly. (See Fig. 4.4.1.5)

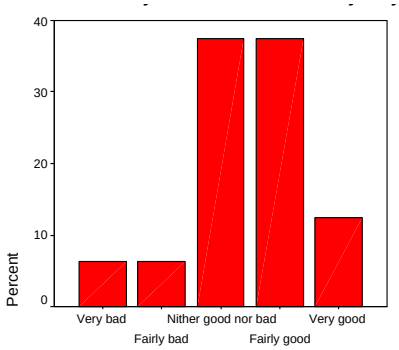


Fig.4.4.1.1 Performance of current buoy

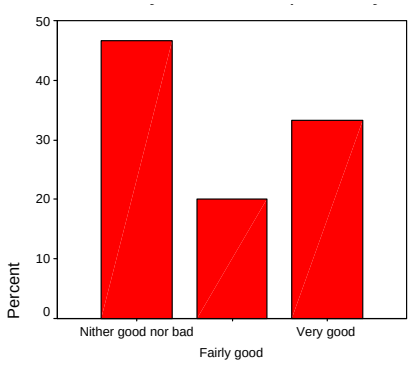
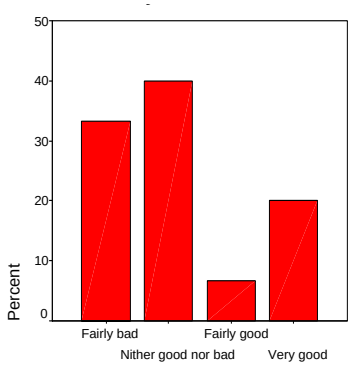
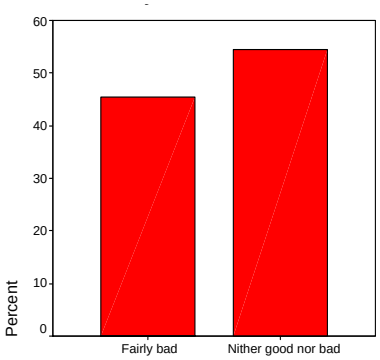


Fig. 4.4.1.2 Price of current buoy





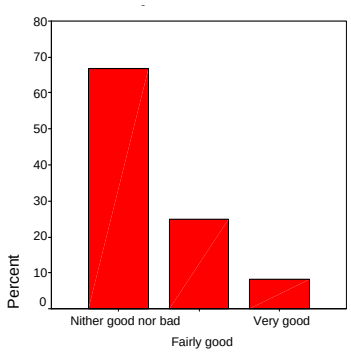


Fig.4.4.1.5Environmental aspect of buoy

In consequence, it requires extra technical support and frequently maintenance as well as inspection because the wear and tear of chain in the traditional mooring buoy system. Many buoy users are not pleased with the service and maintenance of their current buoy systems. The market does want some new options that provide superior service from installation to technical support and set buoy consumer free from the discontented maintenance and regular inspection caused by corroded chains.

Quality and maintenance are two most important product attributes that affect predominantly the buoy users´ purchase decision. In addition, these buoy consumers consider availability and most up-to-date technology play more important roll on their purchasing decision than price, installation and environmental friendly product (See Table 4.4.1.4).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Price	8	11,3	11,3	11,3
	Quality	15	21,1	21,1	32,4
	Technology	10	14,1	14,1	46,5
	Maintenace	12	16,9	16,9	63,4
	Enviornmental frendly	8	11,3	11,3	74,6
	Installation	8	11,3	11,3	85,9
	Availability	10	14,1	14,1	100,0
	Total	71	100,0	100,0	

Table 4.4.1.4 which factors influence your purchase?
(Answered by respondents who is buoy users)

Additionally, good price and easy to install are two most highly regarded product characteristics a good buoy system should according the result in Table 4.4.1.5.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Realiability	1	1,5	10,0	10,0
	Easy installation	2	3,1	20,0	30,0
	Maintenace free	1	1,5	10,0	40,0
	Possibility to controll	1	1,5	10,0	50,0
	Visible Ad.	1	1,5	10,0	60,0
	Technical description	1	1,5	10,0	70,0
	Good price	3	4,6	30,0	100,0
	Total	10	15,4	100,0	
Missing	System	55	84,6		
Total		65	100,0		

Table 4.4.1.5 which characteristics a good buoy system should have? (Answered by respondents who is buoy users)

To sum up, the buoy users from the South and East coast think the buoy mooring system is a good method, whereas the buoy users from the West coast think it more as a subordinate method, a changeover to other mooring method. As chain corrosion is the major withdraw of buoy users' current mooring systems, the buoy users have to compensate more resources on the regular maintenance and inspection to minimal the damages caused by metal chain. Based on that, most buoy users are most discontent with the service and maintenance of their current system. Therefore the market does need a product that requires a minimal maintenance and superior service. Buoy users think a good buoy system should first and foremost have a good price and an easy installation. Based on that, they consider also quality, maintenance as well as availability have most effect on their purchase decisions.

4.4.2 Analysis of Boat Clubs

Among the responding clubs that utilize mooring buoy systems, the most common problem of their current buoy mooring system is the metal chain, especially the part used to connect the deadweight anchor, are easy to be cracked by overload. The corrosion is another common problem that requires a regular maintenance. Therefore there is a need for a new alternative product that has long durability and requires

minimal maintenance in the market. SEAFLEX buoy with its unique product characteristics are the main motivations that attract the respondents to choose SEAFLEX buoy can actually fulfil their needs. Some responders give following answer to why they will use SEAFLEX buoy in future:

> *"Yes, it is fairly conceivable for us to have the rubber cable mooring buoy as an alternative because the lifetime is longer than the product we used today."*

> *" It should be nice to have the product because the system we are using today requires a lot maintenance. "*

Besides the positive answers, there are also respondents who are doubt about the products durably and performance. Here are their considerations:

> *"If it really does as it promise, then it is a good product. But we have difficult to believe that this product can compete with the traditional chain, which feels much stronger."*

> *"It sounds Ok. But we are not sure. Sometimes 3 boats may be connected to same buoy and the heavy weights of the boats will pull the mooring sets very hard, especially in extreme bad weathers. Kan you guarantee that the rubber rope will be well maintained?"*

As most of those responding clubs that utilize buoy system often let their club members to do their own purchasing. Thus the question "*Which product attributes are most appreciated by consumers?"* cannot simply answered by these club

representatives. But the author does get some clues from the replies. Besides duration and maintenance mentioned above, quality in combination with price are often concerned by respondents. Some statements, which are generally concerned by price-sensitive clubs, are like following:

> *"It seems SEAFLEX buoy is a good and expensive product. But can it really resist the attack from strong wave and wind?"*

> *"We are interested in this product and we do have some problems with chains …..…but the price is always a question."*

> *"We will of course pay more if we really know the product has the quality as it promised. Who can guarantee that?"*

Thus, the product attributes that are most concerned and probably most appreciated by respondents are long duration, minimal maintenance and reliable quality. Although the company has used these product attributes as selling arguments for SEAFLEX buoy and those potential SEAFLEX buoy users seem to have an approved approach to the product, but they are still not convinced simply by word and promise. The company may find the solution from a suggestion from a respondent and use it to eliminate the uncertainty for the new product among the buoy users. This respondent said, *"Yes. We are considering using this product if some practical using experiences are available and the price is Ok"*.

4.4.3 Analysis of Public Marinas

There is no obvious message from this survey group that indicates they have any problem with their buoy mooring system. But the author feels a state of positive

openness for SEAFLEX buoy from these respondents even with the small sample size. Some respondents who are already customer to SEAFLEX Bridge and they are satisfied with their purchase. Therefore they fully appreciate the quality of the rubber cable. Even the respondents from the public harbours, in which are using mooring buoy systems with chains, are interested in the idea of product. One respondent answered definitively that they are willing to pay 100 % higher than the price of their current buoy system that uses chain.

Despite the positive attitudes, there have some concerns from these respondents who are interest in the product as follows:

> *"We are willing to use the product if it coasts the same as our present system. Otherwise, we are forced to raise the rent for mooring place and it is not so popular by our tenants."*

> *"As it looks today, we can not to use it because of the coasts and the extra works needed to put out just SEAFLEX buoys."*

> *"A marginal price rising is of course acceptable. Bit it is important to compare the price with the time that one will use the product. How long is the product's lifetime guarantee?"*

Thus, if it meets the precondition of an acceptable price, so duration, maintenance and installation are the most important product attributes for the buoy users in this respondent group.

4.4.4 Result and Summary

Customer dissatisfaction for the service and maintenance of their current system is mainly caused by corrosion of the chain. The market does need for a product alternative that primarily has reliable quality and requires a minimal maintenance. Thus the product quality and minimal maintenance are the highest ranked value attribute by mooring buoy users. However in most case, the price is a decisive importance for customers´ purchase decision. At same time, easy installation and easy to buy provide a good start to attract the customer's attention on this new product.

The company has located SEAFLEX buoy as a market alternative to compete with the traditional chain in existing mooring buy systems. They have already created a competitive selling argument that claim the product attributes in a category that clearly distinguishes the SEAFLEX buoy from the current buoy system. Such as "demands a minimum of maintenance and allows several years between inspection", and "no pollution mooring" [29]. But, the current selling arguments, unfortunately, may not seem credible and attractive enough to convince the potential customers. Their potential customers do not know whether the technology or SEAFLEX providing the products can deliver its promise to meet their specific needs. Besides that, most of them do not think their current buoy system have any environmental problem either.

Thus, to create a referential customer group and spread their positive experiences for SEAFLEX buoy by efficient communication channel may be the key to position SEAFLEX buoy as the undeniable correct buying choice.

4.5 Promotion Factor

4.5.1 Analysis of Private Boat Owners

Most respondents do not purchase same brand, either from the same manufacturers or the same dealer (See Table 4.5.1.1). This purchase pattern indicates that a throughout information research is most likely carried out before the customers make their final purchase decisions.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Same brand from same manufacture	3	4,2	9,1	9,1
	From same dealer	2	2,8	6,1	15,2
	At same price level	3	4,2	9,1	24,2
	Varying brand and manufactoires	10	14,1	30,3	54,5
	Varying dealers	9	12,7	27,3	81,8
	Choose the best regardless price	3	4,2	9,1	90,9
	Cheapst alernative	3	4,2	9,1	100,0
	Total	33	46,5	100,0	
Missing	System	38	53,5		
Total		71	100,0		

Table 4.5.1.1 how do you purchase? (Private boat owners)

Furthermore, the most used information channel by buoy users is advertisements in the boating trade press. Trade fair or exhibitions, product cataloguers and Internet are also widely used by buoy users (See Table 4.5.1.2). By using these information channels, the buoy buyers collect all possible product information, and then make their buy decision based on the information study.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ads in the trade press	14	21,5	35,0	35,0
	Friends	4	6,2	10,0	45,0
	product catalogure and brochure	7	10,8	17,5	62,5
	Web	6	9,2	15,0	77,5
	information sheet from insurance company	1	1,5	2,5	80,0
	trade fair	8	12,3	20,0	100,0
	Total	40	61,5	100,0	
Missing	System	25	38,5		
Total		65	100,0		

Table1 4.5.1.2 which are the information channels? (Private boat owners)

Moreover, the promotion efforts of SEAFLEX buoy are evaluated. Boat trade fair is the most effective promoting place, where the most of the respondents get to know the product. Dealer, boat friends and Internet are other common information resources for the buoy users getting the information of SEAFLEX buoy (See Table 4.5.1.3).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	dealer	2	3,1	15,4	15,4
	friends	2	3,1	15,4	30,8
	Web	2	3,1	15,4	46,2
	boat trad fair	3	4,6	23,1	69,2
	technical literature	1	1,5	7,7	76,9
	Newspaper	1	1,5	7,7	84,6
	Ads	1	1,5	7,7	92,3
	We have already Seaflex bridge	1	1,5	7,7	100,0
	Total	13	20,0	100,0	
Missing	System	52	80,0		
Total		65	100,0		

Table1 4.5.1.3 where did you get to know SEAFLEX buoy? (Private boat owners)

Only one third of all respondents with valid responses know the existence of SEAFLEX buoy. Moreover 35 % of respondents, who are the current buoy users, know SEAFLEX buoy (See Table 4.5.1.4 and 4.5.1.5). The results indicate that the current promotion efforts have probably not reached to target customer group.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	14	26,4	70,0	70,0
	Yes	6	11,3	30,0	100,0
	Total	20	37,7	100,0	
Missing	System	33	62,3		
Total		53	100,0		

Table 4.5.1.4 Do you know SEAFLEX buoy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	9	64,3	64,3	64,3
	Yes	5	35,7	35,7	100,0
	Total	14	100,0	100,0	

Table 4.5.1.5 Do you know S- buoy among the buoy users?

4.5.2 Analysis of Boat Clubs

First the information resources used by the responding boat clubs before the purchase are studied. Friends or reference persons are the most used information resource. Trade fair, Internet, trade newspaper and direct send advertisements and cataloguers are also mentioned as most common information resources. Few clubs answer that insurance company and Swedish Boat Union are used as their information resources. And only vary few clubs do not make information research at all (See Table 4.5.2.1).

Multiple Response of Which information channels do you use? Q6
(Value tabulated = 1)

Dichotomy label	Name	Count	Pct of Responses	Pct of Cases
Boat dealer	Q6P1	4	5,6	10,8
Boat friend	Q6P2	16	22,5	43,2
Internet	Q6P3	10	14,1	27,0
Trade fair	Q6P4	11	15,5	29,7
Trade newspaper	Q6P5	9	12,7	24,3
SBU	Q6P6	1	1,4	2,7
Visit the local boat store	Q6P7	6	8,5	16,2
Direction send Ads & catalogue	Q6P8	9	12,7	24,3
Offers	Q6P9	3	4,2	8,1
Insurance company	Q6P10	1	1,4	2,7
No information research at all	Q6P11	1	1,4	2,7
Total responses		71	100,0	191,9

70 missing cases; 37 valid cases

Table 4.5.2.1 which is the information channel? (Clubs)

Then, the answers to the question " *Where do you get to know SEAFLEX buoy system*?" are analyzed to check by which information channel the existing promotion effort on SEAFLEX buoy have reached these respondents. Table 4.5.2.2 shows that nearly 90 % of respondents get the product information from the trade fair and trade newspapers. Contrary to the result from the general information source in Table 4.5.2.1, only 5 % of clubs gets the information about SEAFLEX via their boat friends.

Multiple Response of information channel of SEAFLEX (Q7P)
(Value tabulated = 1)

Dichotomy label	Name	Count	Pct of Responses	Pct of Cases
Dealer	Q7P1	1	2,9	3,7
Friends	Q7P2	1	2,9	3,7
Internet	Q7P3	2	5,9	7,4
Trade fair	Q7P4	17	50,0	63,0
Trade newspaper	Q7P5	13	38,2	48,1
Total responses		34	100,0	125,9

80 missing cases; 27 valid cases

Table 4.5.2.2 which is the information channel for SEAFLEX buoy? (Clubs)

There are only 50 % all respondents with valid reply know the existence of SEAFLEX buoy (See Table 4.5.2.3).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	36	33,6	50,0	50,0
	Yes	36	33,6	50,0	100,0
	Total	72	67,3	100,0	
Missing	System	35	32,7		
Total		107	100,0		

Table 4.5.2.3 Do you know SEAFLEX buoy? (Clubs)

The most important purchase decision makers are boat committees, boat owners and municipalities (See Table 4.5.2.4). When the author examines closer the clubs that let their members to purchase the buoys themselves, the result reveals that 76 % of these clubs are actually utilizing the buoy mooring system, but 50 % of these boat-owner-purchase clubs, which are using buoy system, do not know the existence of SEAFLEX buoy and only 25 % of them are willing to use SEAFLEX buoy system in future. (See Table 4.5.2.5- 4.5.2.7)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Club committee	35	32,7	43,2	43,2
	Municipality	12	11,2	14,8	58,0
	Boat owner	21	19,6	25,9	84,0
	Harbour company	5	4,7	6,2	90,1
	Harbour captain	5	4,7	6,2	96,3
	On a club meeting	2	1,9	2,5	98,8
	Others	1	,9	1,2	100,0
	Total	81	75,7	100,0	
Missing	System	26	24,3		
Total		107	100,0		

Table 4.5.2.4 who is the purchaser? (Clubs)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	5	23,8	23,8	23,8
	Yes	16	76,2	76,2	100,0
	Total	21	100,0	100,0	

Table 4.5.2.5 Buoy Consumption of Boat-owner-purchase clubs
(for self-purchase clubs with existing buoy system)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	8	50,0	57,1	57,1
	Yes	6	37,5	42,9	100,0
	Total	14	87,5	100,0	
Missing	System	2	12,5		
Total		16	100,0		

Table 4.5.2.6 Do you know the SEAFLEX buoy? (Clubs)

(for self-purchase clubs with existing buoy system)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	4	25,0	28,6	28,6
	Nither yes nor no	4	25,0	28,6	57,1
	No	6	37,5	42,9	100,0
	Total	14	87,5	100,0	
Missing	System	2	12,5		
Total		16	100,0		

Table 4.5.2.7 Will you use SEAFLEX buoy? (Clubs)

It may possibly be a warning point and additional marketing effort should focus on this group of potential customers. Although in this case, club committee may not make any purchase decision for mooring buoy system, but they do give advice to their members and have influence on members' purchasing decision making. There is still great business potentials in the market in relation to the group with "neither yes nor no" answers. If this group can get more product information and get involved in

understanding the product benefits, they may change their attitude from sceptics to supporters. Then it will be a huge breakthrough for the company.

Then the promotion efforts on the clubs, in which the purchase decision maker are committees, are also examined. Table 4.5.2.8 shows that more than half of these clubs have buoy systems as well. Awareness about SEAFLEX buoy among the response clubs is high, nearly a half of these clubs answered that they have heard of the product before and have a positive attitude toward the product. (See Table 4.5.2.9-4.5.2.10)

(committee is the decision maker)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	16	45,7	45,7	45,7
	Yes	19	54,3	54,3	100,0
	Total	35	100,0	100,0	

Table 4.5.2.8 the Utilization of Buoy among the Committee-Purchase Clubs

(committee is the decision maker)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	17	48,6	51,5	51,5
	Yes	16	45,7	48,5	100,0
	Total	33	94,3	100,0	
Missing	System	2	5,7		
Total		35	100,0		

Table 4.5.2.9 Do you know the SEAFLEX buoy? (Clubs)

(committee is the decision maketer)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes to Seaflex	16	45,7	50,0	50,0
	Nither yes nor no	1	2,9	3,1	53,1
	No to Sealfex	15	42,9	46,9	100,0
	Total	32	91,4	100,0	
Missing	System	3	8,6		
Total		35	100,0		

Table 4.5.2.10 Will you use SEAFLEX buoy? (Clubs)

The result shows that the promotion effort works better on these clubs. It may depend on the boat committees or harbour master are active information researchers and they are more interest in technology and constantly update their knowledge in boating branch. Therefore to identify committee as an important potential customer group and recognize the needs from the clubs these committees are representing for will give a great guidance for further marketing activity.

4.5.3 Analysis of Public Marinas

The most widely used information resources for these groups of respondents are trade fair and Internet. Other widely used resources are local store or supplier, direction send advertisement and product catalogue, and offers. (See Table 4.5.3.1)

Group $Sum6 General information resources
(Value tabulated = 1)

Dichotomy label	Name	Count	Pct of Responses	Pct of Cases
Contact	q6p2	2	10,0	18,2
Internet	q6p3	4	20,0	36,4
Trade fair	q6p4	4	20,0	36,4
Trade newspaper	q6p6	1	5,0	9,1
Visit the local supplier	q6p8	3	15,0	27,3
Direction send Ads & catalogue	q6p9	3	15,0	27,3
Offers	q6p10	3	15,0	27,3
Total responses		20	100,0	181,8

1 missing cases; 11 valid cases

Table 4.5.3.1 which is the information channel? (Municipalities)

The information resource, which spread the information about the SEAFLEX buoy to these respondents, are trade fair, direct send Ads and catalogues and dealers. Some respondents are already customers, so they do know the product by previous purchases of other SEAFLEX product. (See Table 4.5.3.2)

40 % of respondents know the existence of SEAFLEX buoy (See Table 4.5.3.3). Further 38 % of harbors, which utilize the buoy systems, know the product (See Table 4.5.3.4)

```
Group $sum7q1  Information resources for SEAFLEX buoy
     (Value tabulated = 1)

                                                    Pct of  Pct of
Dichotomy label                 Name       Count  Responses  Cases

Dealer.suppliers                q7p1           1     20,0     25,0
Trade fair                      q7p4           1     20,0     25,0
We are already customer.        q7p5           2     40,0     50,0
Direction send Ads & catalogue  q7p9           1     20,0     25,0
                                            -------    -----    -----
                       Total responses          5    100,0    125,0

8 missing cases;  4 valid cases
```

Table 4.5.3.2 which is the information channel for SEAFLEX buoy? (Municipalities)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	6	50,0	60,0	60,0
	Yes	4	33,3	40,0	100,0
	Total	10	83,3	100,0	
Missing	System	2	16,7		
Total		12	100,0		

Table 4.5.3.3 Do you know SEAFLEX buoy? (Municipalities)
(answered by public harbors that use mooring buoy)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	5	62,5	62,5	62,5
	Yes	3	37,5	37,5	100,0
	Total	8	100,0	100,0	

Table 4.5.3.4 Do you know SEAFLEX buoy? (Municipalities)

4.5.4 Result and Summary

The three most widely used information resources among the boat owners for information research are presented in the Table 4.5.4.1. Table 4.5.4.2shows on the

other hand the three most effective channels the boat owners received the information about SEAFLEX buoy. As we see, the information channels used for marketing SEAFLEX buoy match more or less the most widely used information resources used by the boat owners.

	Private Boat Owners	**Public Harbors**	**Boat Clubs**
the Most Widely Used Information Resource	Ads in trade press	Trade fair, Internet	Friends
the Second Widely Used Information Resource	Catalogue & borsches	Ads &cataloger, local supplier, offer	Trade fair
the Third Widely Used Information Resource	Internet	Friend	Internet

Table 4.5.4.1 the Most Widely Used Information Resources for Boat Owners

	Private Boat Owners	**Public Harbors**	**Boat Clubs**
the Most Effective Information Channel	Trade fair	Trade fair, dealer, Ads & catalogue	Trade fair
the Second Effective Information Channel	Internet, friends, dealer		Trade press
the Third Effective Information Channel	Ads & cataloguer		Internet

Table 4.5.4.2 where did boat owners get to know SEAFLEX buoy?

To sum up, the results indicate that the company has applied a relative effective promotion approach, practically by presenting their product at the trade fair. Most boat owners, who are aware of SEAFLEX buoy, declare that they get the product information from trade fair. But additional promotions effort is needed because there

are only approximately one third of respondents have been informed by current promotion attempt, especially for individual buoy purchasers. Since a boating world can be characterized as a typical self-referencing market, in which the information and experiences have been transferred and shared by boat owner's personal contact. New promotion effort may work on spread the product information deeper and broaden through these communication channels that are most used by the boat owners, that is to establish a strong world-of –mouth reputation among the buoy users.

4.6 Other External Factors Analysis

4.6.1 Analysis of Private Boat Owners

Boat owners' purchasing decisions depend partly on the advices and recommendations from their friend. It means that if a boat owner has a positive experience of the product then a good reputation spread quickly among his friends. The study result proves that these respondents, who received information about SEAFLEX buoy through their friends, get actually positive influence from their friends and they are willing to use the product in future (See Table 4.6.1.1).

(respondents get to know Seaflex through friend)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, definitely	1	50,0	50,0	50,0
	Ja, perhaps	1	50,0	50,0	100,0
	Total	2	100,0	100,0	

Table 4.6.1.1 Will you use S-buoy? (Private boat owners)

4.6.2 Analysis of Boat Clubs

The result of promotion effort on the responding clubs tells that boat friend is the most common information resource before purchasing. This gives a strong evidence for that the references and relationships are very important to boat owners. Boat owners are willing to wait and see how other boat friends are making out the product before they buy in themselves. Discontentedly, no many boat owners get the information about SEAFLEX buoy by this way.

Further, in order to find out how an individual purchase decision is actually influenced by culture aspect, the mechanism of purchasing process within the club in relation to culture are examined.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Club committee	35	32,7	43,2	43,2
	Municipality	12	11,2	14,8	58,0
	Boat owener	21	19,6	25,9	84,0
	Harbour company	5	4,7	6,2	90,1
	Harbour captain	5	4,7	6,2	96,3
	On a club meeting	2	1,9	2,5	98,8
	Others	1	,9	1,2	100,0
	Total	81	75,7	100,0	
Miss	System	26	24,3		
Total		107	100,0		

Table 4.6.2.1Who is responsible for purchasing? (clubs)

43 % of responding clubs with valid responses answer that it is committee who determine which product the club will pay for, usually after a club meeting or proposal from person who is in charge of clubs boats (See Table 4.6.2.1). Therefore club committee is the biggest decision maker and the most important customer whom is the one often buys a quantity of products for the club. As one of these clubs answered:

"We purchase chains, buoy stones and other small essentials in big quantities, and then the club members can buy them from us. So the only thing the boat owners have to buy by themselves is buoy. It is up to individual which kind of buoy he wants."

Besides the committee, the next biggest decision maker is boat owners themselves. In 26 % of all responding clubs with valid responses, it is boat owners themselves taking responsible for their mooring systems and purchasing decisions. An individual purchase process may basically go on like this. First, the club committee may assign some rules and regulations about the valid mooring system in clubs harbour, for example, it is forbidden to use drop anchor in club's harbour or big boats must use Jetty-Y-bar system mm. Then it is up to boat owners to follow the rule and fix suitable mooring systems for their own boats, and finally the club will make a final inspection. Thus an individual decision is strongly depended on and interrelated to the decisions made by clubs. Although in this case, club committees may not make any direct purchase decisions, but they do give advice to their members and have influence on members' decision making.

4.6.3 Analysis of Public Marinas

More than 70 % of respondents with valid responses answer that it is responsible department in the municipality determining which product the public harbours will purchase. They usually elect the best offer to purchase through a public bid opening (See Table 4.6.3.1). Further, the public harbours that are using buoy system are also studied. In these public harbours, an absolute majority of decision makers are also responsible departments in municipalities (See Table4.6.3.2). As a result, the responsible departments are the biggest decision makers and the most important potential customers in this survey group.

Additional, in some case, these decision makers may have important influence on the individual buoy purchasers' decision making by some regulations or rules of mooring buoy system. But this effect is not so strong now, there is only one municipality that forbidden to use mooring buoy because of the environmental aspects. (See Table 4.6.3.3)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Kultur & Fritid Municipality	2	16,7	18,2	18,2
	technical department Municipality	4	33,3	36,4	54,5
	Boat owner	3	25,0	27,3	81,8
	Harbour captain Municipality	2	16,7	18,2	100,0
	Total	11	91,7	100,0	
Missing	System	1	8,3		
Total		12	100,0		

Table 4.6.3.1 who is responsible for purchase? (Municipalities)

(answered by public harbors that use buoy)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Kultur & Fritid Municipality	2	25,0	28,6	28,6
	Technical department Municipality	4	50,0	57,1	85,7
	Boat owner	1	12,5	14,3	100,0
	Total	7	87,5	100,0	
Missing	System	1	12,5		
Total		8	100,0		

Table 4.6.3.2 who is the responsible purchaser? (Municipalities)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	10	83,3	90,9	90,9
	Yes	1	8,3	9,1	100,0
	Total	11	91,7	100,0	
Missing	System	1	8,3		
Total		12	100,0		

Table 4.6.3.3 Do you have any regulation or rules about mooring buoy

4.6.4 Result and Summary

The results verify that boat owners´ attitude and purchasing decisions are affected by their culture and surroundings. Boat owners want to see a well-established reference before investing. Early adopters' positive experiences do give encouragement for the relative conservative majorities.

At same time, the regulation, rules from clubs and public harbours may direct buoy purchasers option for mooring system. The results indicate also that clubs and municipalities are also important potential customers. If they are pleased with the product they purchased, then their positive experience will provide very credible references for rest of buoy users.

4.7 Background Information

4.7.1 Private Boat Owners

Most of the respondents, who are using mooring buoy, are living in the East and South coast, and are approximately 30 to 50 years old (See Table 4.7.1.1-4.7.1.2).

(answered by buoy users)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	the East Coast	9	64,3	64,3	64,3
	the West Coast	2	14,3	14,3	78,6
	the South Coast	3	21,4	21,4	100,0
	Total	14	100,0	100,0	

Table 4.7.1.1 Geographical Divisions of Respondents (private boat owners)

(answered by buoy users)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	30-	3	21,4	21,4	21,4
	40-	5	35,7	35,7	57,1
	50-	5	35,7	35,7	92,9
	60-	1	7,1	7,1	100,0
	Total	14	100,0	100,0	

Table 4.7.1.2 the Age of Buoy Users (private boat owners)

Most of the buoy users have one boat, the most common boat type they own are sailing boat with accommodation facilities and the most used buoy type is stern buoy mooring (See Table 4.7.1.3- 4.7.1.5).

(answered by buoy users)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Motorboat with an engine >=10 HP	2	14,3	14,3	14,3
	Sailing boat with an engine >=10 HP	1	7,1	7,1	21,4
	Motor boat with accomodition facilities	2	14,3	14,3	35,7
	Sailing boat with accomodition facilities	9	64,3	64,3	100,0
	Total	14	100,0	100,0	

Table 4.7.1.3 Boat type (private boat owners)

(answered by buoy users)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	one boat	10	71,4	71,4	71,4
	two boats	1	7,1	7,1	78,6
	three or more than three boats	3	21,4	21,4	100,0
	Total	14	100,0	100,0	

Table 4.7.1.4 Number of owned boats (private boat owners)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	akterboj	11	20,8	84,6	84,6
	svajboj	2	3,8	15,4	100,0
	Total	13	24,5	100,0	
Missing	System	40	75,5		
Total		53	100,0		

Table 4.7.1.5 Buoy Type (private boat owners)

4.7.2 Boat Clubs and Municipalities

Nearly 50 % of respondents, whose clubs are using buoy mooring system, are from the East coast (See Table 4.7.2.1).

(Answered by resondents, whose club are using mooring buoy)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	East coast	23	47,9	47,9	47,9
	Inand coast	5	10,4	10,4	58,3
	North coast	10	20,8	20,8	79,2
	West coast	4	8,3	8,3	87,5
	South coast	6	12,5	12,5	100,0
	Total	48	100,0	100,0	

Table 4.7.2.1 Geographical Division of respondents for boat clubs

Respondents from municipalities, whose public harbours are using buoy system, are mainly from the west and south coasts (See Table 4.7.2.2).

(Answered by respondents, whose public harbours are using buoy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	East coast	2	25,0	25,0	25,0
	West coast	3	37,5	37,5	62,5
	South coast	3	37,5	37,5	100,0
	Total	8	100,0	100,0	

Table 4.7.2.2 Geographical Division of respondents for public harbours

5. Conclusion and Recommendation

This chapter presents the main results and conclusions resulting from the market study of SEAFLEX buoy business potential in the Swedish market. The first three sections give some general characteristics of the adoption phase SEAFLEX buoy is subsisting in and identifies the minimum set of product characteristics that would be most appreciated by target customers in aids of Moore's Competitive – Position Compass. While the last section gives a set of recommendations derived from the study. The recommendation reflects the need for further research that would provide adequate evidence to continually assess the product attributes that are high ranked by wide-scale customers.

5.1 Is it the time for cross the chasm?

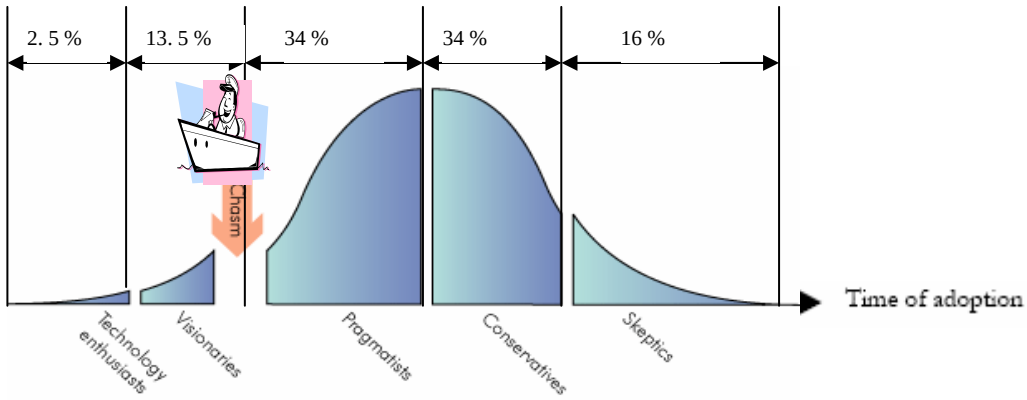


Fig.5.1.1 Adoption Life Cycle [25][28]

SEAFLEX buoy does have a bright business potential in the Swedish market. Despite the market for SEAFLEX buoy is in the Early Adopter stage and their current

customers are Visionaries. This conclusion is verified in two ways. Firstly, according to the method of adopter categorization proposed by Everett Rogers [28], Technology enthusiast represent the initial 2.5 % of the population, Visionaries the next 13.5 %, Pragmatist the next 34 %, Conservatives the next 34 % and Skeptics and the remaining 16 % (See Fig.5.1.1). If we determine the percentage of the target current customers based on the annual sales quality. The current annual sale for SEAFLEX buoy is 10 sets and the result in section 4.14 shows that the potential annual sale is 83 sets. Thus, the current annual sales is representing 12 % of the total sales, and suppose a set of buoy system purchased by a customer, then target customers are representing 12 % of the population and they belong to the category " Visionaries or Early Adopters". Secondly, Moore characterized Visionaries as the "specialists " who are more interested in product and technology issues and see the potential for a breakthrough product. Because they see such vast potential for the technology they have in mind, they are the least price-sensitive of any segment of the technology adoption profile [16]. Applying Moore's definition to SEAFLEX buoy, their customs, at the time of this work began, were not price sensitive at all despite the price of a SEAFLEX buoy was almost twice as expensive as traditional chain mooring system. They are obviously Visionaries.

Generally, the Swedish mooring buoy market is declining gradually over time. More and more boat clubs and public harbors strongly favor the Jetty Y-gate system and many of them have already changed out their mooring buoy system to Y-gate system or Y-stern post system. The tendency will directly affect the private boat owners' attitudes to mooring buoy system, which in turn will dangerously limit the market potential of mooring buoy system. Although today the mooring buoy system still is the second most common mooring system among the Swedish private boat owners, but the quantity is very few and there are approximately seven buoys are used among the 100 private pleasure boats. But this does not necessarily mean that the mooring buoy

system is going to disappear. Many boat owners, particularly from the East and south coast, still think mooring buoy system is a better way to moor their boats. Despite that, the management of SEAFLEX must be aware of the whole mooring buoy system market is relative small and limited.

Nevertheless, the results indicate that the SEAFLEX buoy does have a mainstream market, and their target customers are typically pragmatists. The Swedish mooring buoy consumers may approximately need over 80000 mooring buoys and the potential market share for SEAFLEX buoy in the total mooring buoy system might exceed 50 % if the company is prepared to provide a complete solution for target customer's compelling reason to buy SEAFLEX in the nearest future. It is actually on its way to "cross the chasm" into mainstream markets. Especially, the company has recently reduced the price of SEAFLEX buoy. The price modification might serve as the catalyst to accelerate the adoption rate. Despite price is not the only consideration, but it is a decisive importance when pragmatists making their buying decisions according the findings of this study. The market for SEAFLEX buoy is just ahead of the critical point to changing and the time for "cross the chasm "is coming soon.

5.2 Who will be the target customers?

The target customers for SEAFLEX buoy are first and foremost all of the current buoy users as well as potential buoy users. They are not necessarily only individual buoy users, but also representatives from the boat clubs and public harbours. These potential customers are most discontent or least satisfied with the service and maintenance of their current buoy systems. Therefore the market does need new product option that provides superior service from installation to technical support and sets buoy users free from the fractious maintenance and regular inspection caused by corroded chains. Assume first the price and easy installation meet the customers' need, then high quality

and minimal maintenance are the highest ranked product attributes among the buoy users.

From the marketing mix point of view, SEAFLEX mooring buoy has a well-established brand and high quality level, and logical property protection, such as patent and trademark. In addition, the company has already created a competitive set that claim the product attributes in a category that clearly distinguish the SEAFLEX buoy from the current buoy system, such as “demands a minimum of maintenance”, and “allows several years between inspection” and “no pollution mooring” [29]. But they are not yet credible and attractive enough to convince their potential customers. Moreover, almost no buoy users actually consider their current buoy system are environmental unfriendly. So the current selling argument like “no pollution mooring” would not have much effect on their target customers either.

Thus, the most common problem for SEAFLEX to cross the chasm and entry the market is market uncertainty and resistance. The uncertainty can contribute to a failure for “Cross the chasm” and slow down the rate of adoption process. Market uncertainties come first and foremost from the target customers fear, uncertainty, and doubt about what needs or problems the SEAFLEX buoy system deal with, as well as how well it will meet their needs. All these provide a clear sign that the target customers are going to be pragmatists. Here are the some characteristics of the target customers the company SEAFLEX is going to deal with:

- They are reasonably price sensitive and they expect to pay a premium-based price for SEAFLEX buoy system relative to a comparison with their current mooring buoy system, in average as high as 20 %.

- They have enormous concern of what quality and duration for SEAFLEX buoy they are going to buying, the reliability of the minimal maintenance they are going to get as well as how easy it is for installation.
- They are unwilling to buy until they have credible reference to compare. As a result reference and relationship are very important for them.
- They want to keep minimal distribution relationships that allow them to have control if anything should go wrong. Therefore the local boat equipment stores and suppliers are the most popular distribution channels for them. They also like to purchase from well-established specialists in the boating industry. For that reason, Bridge and pontoon suppliers and some well established boat equipment stores, such as Hejtman, Baltic and Byggplats & Båtprylar, are well-liked by these buoy users.

Until now the company has applied an effective promotion approach, practically by presenting their product at the trade fair. But it works better on the organizational purchasers, such as representatives of the private and public which have larger probability attending the trade fire. In general, the current product marketing does not really reach their target customers, especially the private buoy users. There are approximately one third of boat owners and same percentage of the current buoy users have been informed by current promotion efforts.

5.3 What is the competitive product set for the target customers?

After identifying the potential problem, let’s try to make out what to the target customer would appear to be the most reasonable completive set and effectively

delivering the product message to them are the particular important marketing decisions made in the battle to enter the mainstream. So Moore's Competitive – Position Compass may give us some clue [See Fig.5.3.1].

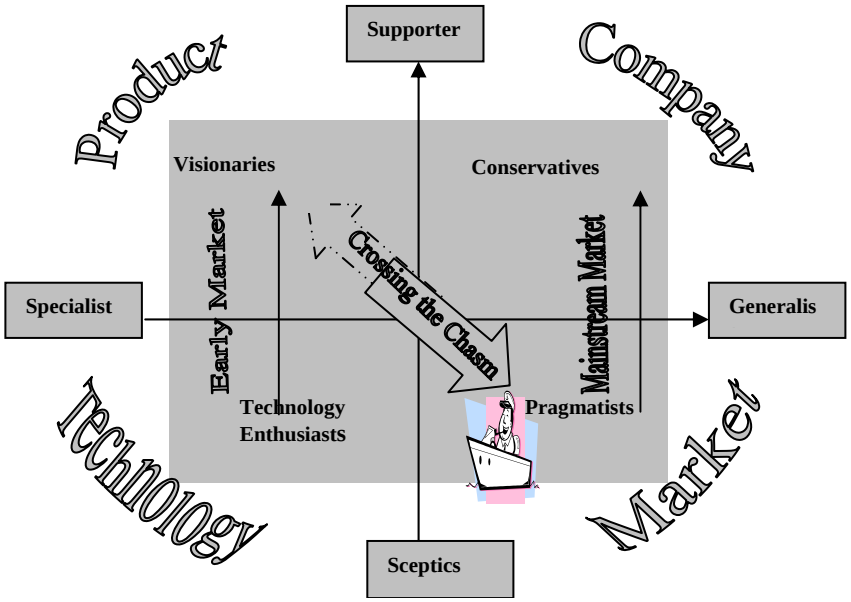


Fig. 5.3.1 the Competitive-Positioning Compass

As SEAFLEX buoy is going to in winning over the skeptical pragmatists, the company may shift their marketing focus from product centric value attribute to market-centric one. This is the basis for the value profile of the skeptical pragmatists. As Moore suggested, addressing "quality of support "instead of "unique functionality", or "coast of ownership" instead of "product price" [16].

Skeptical pragmatists are not willing to purchase in an unknown company, but they are interested in new market development [16]. So the company may focus on making SEAFLEX to be familiar with their target customers. Besides continua current promotion efforts on trade faire and direct send Ads and borsches, they need also to be

mentioned in articles that run in the magazine they read and to be referred to in other partner or alliance or boat associations' websites that they frequently visit.

In addition, the pragmatists are unwilling to buy until they can compare and they trust the market leadership. Competition, therefore, became a fundamental condition for purchase [16]. Moore points out in his theory that a company with new product needs to create two kinds of competitors, market alternative and productive alternative, as reference to help the market identify the new product. Market alternative help the customers to identify what you have in common and product alternative tells where you differentiate [16]. SEAFLEX have no competition come from competitive product so munch as from alternative modes of operation. So to carefully choose a competitive set of reference will be helpful to help target customers position SEAFLEX buoy in their heads. SEAFLEX has chosen the traditional steel chain as market alternative and addressed a problematic limitation in the traditional offer. Then they need also to find a proper product alternative that gives credible evidence or sign that now it the time to obtain a new technique.

Because the skeptical pragmatists do not easily believe marketing ads and they always question whether the company providing the product can deliver its promise to meet specific needs, the company must create customer group that is referential, people who can, in turn, provide the company access to other mainstream prospects. To capture this reference base, the company must ensure that their first set of customers completely satisfies their buying object, not only the product, but also services needed to achieve the desired result. Since the boating world can be characterized as a typical self-referencing market, in which the information and experiences have been transferred and shared by boat owner's personal contact.

The target customers are very resistant selling but they do enjoy buying and they want to buy the best of this type of product in the market. The product availability is high valued by them. The company may also focus on making SEAFLEX buoy as “easily to buy” by working on the local dealer the target customer are most likely to visit. In turn, they may reward the effort by their purchases.

5.4 Recommendation

One of the primarily objective of this work is to estimate the potential sale for SEAFLEX buoy. Because of the limitation of the personal effort and resources, the results from private boat owner survey and boat clubs survey have a relative large variation. Therefore additional surveys for big-scale private boat owners with more resource involved are recommended.

A verification of the potential sale for mooring buoy from the most well established boat equipment stores may make the estimation more realistic. Unfortunately, the author did not get any information from these companies. They may think it is business secret, or they are not having intention to help me with this information. However a confirmation from these market players is suggested.

Additionally, the company should recognize and understand the difference between the consumer buying behavior and organizational buyer behavior and make an appropriate marketing plan for both types of buyers.

Last but not least, the regulation, rules from clubs and municipalities may direct buoy purchasers option for mooring system. Despite in this work, only one among the twenty responded municipalities has such a regulation that forbidden mooring buoy because of the environmental aspect. It could be more authorities have such regulations. Therefore a further investigation may be beneficial.

6. List of References

6.1 Articles and Reports

[1] Bengt Nilsson. “Dynamic SEAFLEX Experiment”. Copyright SEAFLEX AB 2005.

[6] Bengt Nilsson. “Swing buoy: Norrtälje Experiement”. Copyright SEAFLEX AB 2004. P.2

[10] “An investigation of Swedish boat life 2004”. Statistics Sweden. 2004. P.4

[11] “Boating Industry Statistics, 1994–2003”. SWEBOAT (Swedish marine industries federation)

[15] “Safety guide”. Atlantica Yacht Insurance. 2005. P.6

6.2 Books

[4] Hinz. Earl R. “The complete book of anchoring and mooring”. Cornell Maritime Press. 1986.

[5] Oil Companies International Marine Forum. “Effective mooring”. Witherby. 1989. p.40-42.

[8] Landers. Ren e M., James B. Rebitzer. and Lowell J. Taylor. "Rat Race Redux: Adverse Selection in the Determination of Work Hours in Law Firms". American Economic Review 86:3. June 1996. p. 329-346.

[9] Kotler Philip and Gary Armstrong. “Principles of Marketing”. 4th edition. Englewood Cliffs. New Jersey: Prentice Hall International Editions.1989. p. 12 -63

[13] Quester, P.G., Mcguiggan, R., McCarthy, E. and Perrealt, W., “Basic Marketing: A Managerial Perspective, 4th”, Australia, Irwin/McGraw Hill. 2004.

[14] Segal, S.P. & Kotler, P.L. “Sheltered -care residence and personal outcomes ten years later”, American Journal of Orthopsychiatry, 63(1). 1993. P.164.

[16] Moore, G. A. “Crossing the Chasm, Harper Business”. Oxford. Capstone, 1999.

[17] Moore, G. A. “Inside the Tornado”. Harper Perennial. 1999.

[18] Nicosia, F. “Consumer Decision Processes”, Prentice Hall, Englewood Cliffs, 1966. P. 9-21

[19] Ram, S. and Jung, Hyung-Shik. “ Innovativeness in Product Usage: A Comparison of Early Adoptors and Early Majority”. Psychology & Marketing. 1994. P.5-13.

[20]V.Kumar, David Aaker and George S.Day. “ Essentials of marketing research ”. John Wiley & Sons, INC. 1999. P.610.

[21] Lekvall P., Wahlbin C., “ Information för marknadsföringsbeslut”, IHM Förlag AB, 2001.

[22] Malhotra, Naresh K."Marketing research : an applied approach / Naresh K. Malhotra, David F. Birks ". Harlow : FT Prentice Hall, 2003.

[23] McCarthy. E. Jerome. “Basic Marketing: A Managerial Approach”. 6th Ed. Holewood. IL:Richard D. Irving. 1978

[28] Rogers, E. “Diffusion of innovations". 3rd ed. New York: Free Press; London: Collier Macmillan. 1983

[30] Kotler, P., Stewart, A., Brown, L. and Armstrong, G. “Principles of Marketing” , 2nd edn, Australia, Prentice Hall. 2003

[31] Miller, K. & Layton, R., “Fundamentals of Marketing”, 4th edn, Australia, Irwin/Mcgraw-Hill. 2000

[32] Locke, F.L., Spirduso, W.W., & Silverman, S.J. “Proposals that Work -A Guide for Planning Dissertations and Grant Proposals”. Newbury Park, CA: Sage Publications. 1987. P.28

6.3 Internet References

[2] http://www.atlantica.se. “Atlantica - tidning för våra båtägare”. 2002. P.11-14.

[3] http:// www.eastBayRI.com, “The mooring waiting game in Newport Harbor”.2005.

[7]http://www.gbrmpa.gov.au/corp_site/info_services/publications/misc_pub/misc_013/mp_013_introduction.pdf, “Introduction - Environmental Guidelines for Marinas in the Great Barrier Reef Marine Park”

[12] http:// www.algonet.se/~hogman/swe_provinces_map_eng.htm. “On-line Swedish map”

[23] http://www.publicagenda.org/polling/polling_error.cfm, “Best Estimates: A Guide to Sample Size and Margin of Error”

[24] http://www.netmba.com/marketing/mix, “The Marketing Mix”

[25] http://en.wikipedia.org/wiki/Crossing_the_Chasm, "Crossing the Chasm", From Wikipedia, the free encyclopedia

[26] http://www.sailboatstuff.com/mor_moorbuoy.html, “Mooring Buoys”

[27] http://www.surveysystem.com/sdesign.htm. “The survey system”

[29] http://www.seaflex.nu, “SEAFLEX AB“

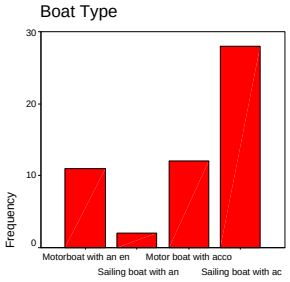
[33] http://www.tele.sunyit.edu/reading3-3-1.html, “Research Methods in Telecommunications”

Appendix 1

Frequency Table of Private Boat Owner Survey

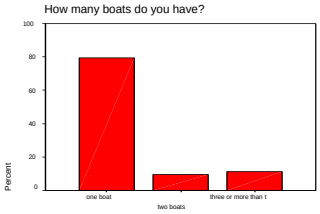
Boat Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Motorboat with an engine >=10 HP	11	20,8	20,8	20,8
	Sailing boat with an engine >=10 HP	2	3,8	3,8	24,5
	Motor boat with accomodition facilities	12	22,6	22,6	47,2
	Sailing boat with accomodition facilities	28	52,8	52,8	100,0
	Total	53	100,0	100,0	



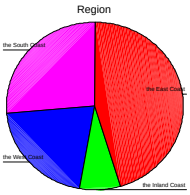
How many boats do you have?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	one boat	42	79,2	79,2	79,2
	two boats	5	9,4	9,4	88,7
	three or more than three boats	6	11,3	11,3	100,0
	Total	53	100,0	100,0	



Region

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	the East Coast	24	45,3	45,3	45,3
	the Inland Coast	4	7,5	7,5	52,8
	the West Coast	11	20,8	20,8	73,6
	the South Coast	14	26,4	26,4	100,0
	Total	53	100,0	100,0	

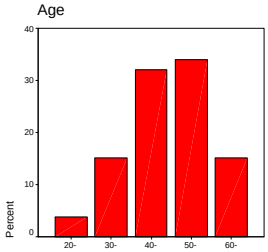


Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	52	98,1	98,1	98,1
	female	1	1,9	1,9	100,0
	Total	53	100,0	100,0	

Age

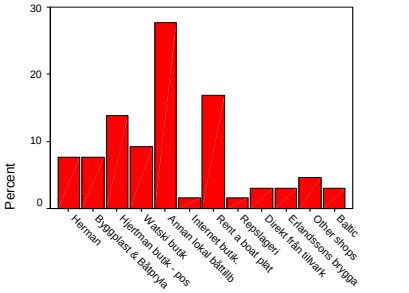
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-	2	3,8	3,8	3,8
	30-	8	15,1	15,1	18,9
	40-	17	32,1	32,1	50,9
	50-	18	34,0	34,0	84,9
	60-	8	15,1	15,1	100,0
	Total	53	100,0	100,0	



Where do you often buy the mooring

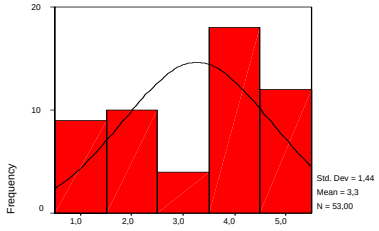
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Herman	5	7,7	7,7	7,7
	Byggplast & Båtprylar butik	5	7,7	7,7	15,4
	Hjertman butik - postorder butik	9	13,8	13,8	29,2
	Watski butik	6	9,2	9,2	38,5
	Annan lokal båttillbehör återförsäljare.	18	27,7	27,7	66,2
	Internet butik.	1	1,5	1,5	67,7
	Rent a boat plat	11	16,9	16,9	84,6
	Repslageri	1	1,5	1,5	86,2
	Direkt från tillvarkare.	2	3,1	3,1	89,2
	Erlandssons brygga	2	3,1	3,1	92,3
	Other shops	3	4,6	4,6	96,9
	Baltic	2	3,1	3,1	100,0
	Total	65	100,0	100,0	

Where do you often buy the mooring syst



Potential customers

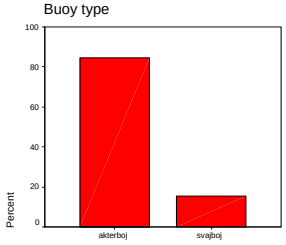
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, Perhaps.	9	17,0	17,0	17,0
	Yes, definitely	10	18,9	18,9	35,8
	Nither yes nor n	4	7,5	7,5	43,4
	No.I need not it.	18	34,0	34,0	77,4
	No. I perfer othe mooring method	12	22,6	22,6	100,0
	Total	53	100,0	100,0	



Buoy type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	akterboj	11	20,8	84,6	84,6
	svajboj	2	3,8	15,4	100,0
	Total	13	24,5	100,0	
Missing	System	40	75,5		
Total		53	100,0		

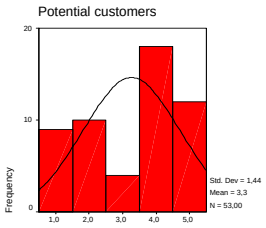
Buoy type



Potential customers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, Perhaps.	9	12,7	17,0	17,0
	Yes, definitely	10	14,1	18,9	35,8
	Nither yes nor no	4	5,6	7,5	43,4
	No.I need not it.	18	25,4	34,0	77,4
	No. I perfer other mooring method.	12	16,9	22,6	100,0
	Total	53	74,6	100,0	
Missing	System	18	25,4		
Total		71	100,0		

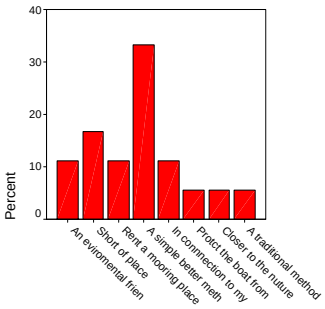
Potential customers



Why do you use buoy?

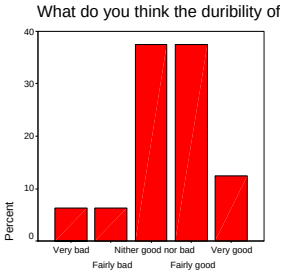
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	An eviromental friendly mathod	2	3,8	11,1	11,1
	Short of place	3	5,7	16,7	27,8
	Rent a mooring place	2	3,8	11,1	38,9
	A simple better method	6	11,3	33,3	72,2
	In connnection to my house	2	3,8	11,1	83,3
	Protct the boat from quay	1	1,9	5,6	88,9
	Closer to the nuture	1	1,9	5,6	94,4
	A traditional method	1	1,9	5,6	100,0
	Total	18	34,0	100,0	
Missing	System	35	66,0		
Total		53	100,0		

Why do you use buoy?



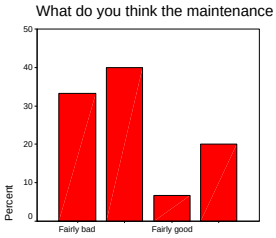
What do you think the duribility of your current buoy system?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very bad	1	1,9	6,3	6,3
	Fairly bad	1	1,9	6,3	12,5
	Nither good nor bad	6	11,3	37,5	50,0
	Fairly good	6	11,3	37,5	87,5
	Very good	2	3,8	12,5	100,0
	Total	16	30,2	100,0	
Missing	System	37	69,8		
Total		53	100,0		



What do you think the maintenance of your current buoy system?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fairly bad	5	9,4	33,3	33,3
	Nither good nor bad	6	11,3	40,0	73,3
	Fairly good	1	1,9	6,7	80,0
	Very good	3	5,7	20,0	100,0
	Total	15	28,3	100,0	
Missing	System	38	71,7		
Total		53	100,0		

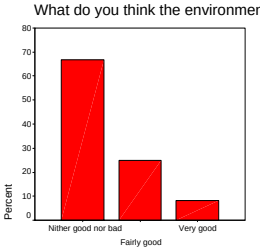


What do you think the price of your current buoy system?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nither good nor bad	7	13,2	46,7	46,7
	Fairly good	3	5,7	20,0	66,7
	Very good	5	9,4	33,3	100,0
	Total	15	28,3	100,0	
Missing	System	38	71,7		
Total		53	100,0		

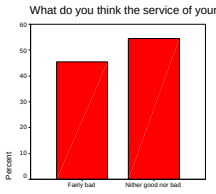
What do you think the environmental aspect of your buoy system?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nither good nor bad	8	15,1	66,7	66,7
	Fairly good	3	5,7	25,0	91,7
	Very good	1	1,9	8,3	100,0
	Total	12	22,6	100,0	
Missing	System	41	77,4		
Total		53	100,0		



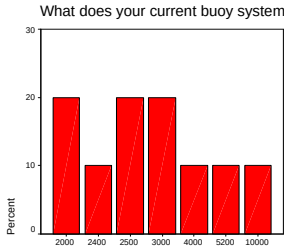
What do you think the service of your current buoy system?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fairly bad	5	9,4	45,5	45,5
	Nither good nor bad	6	11,3	54,5	100,0
	Total	11	20,8	100,0	
Missing	System	42	79,2		
Total		53	100,0		



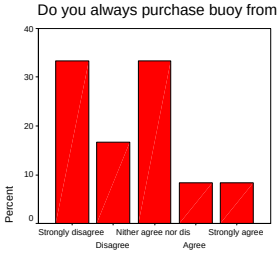
What does your current buoy system cost?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2000	2	3,8	20,0	20,0
	2400	1	1,9	10,0	30,0
	2500	2	3,8	20,0	50,0
	3000	2	3,8	20,0	70,0
	4000	1	1,9	10,0	80,0
	5200	1	1,9	10,0	90,0
	10000	1	1,9	10,0	100,0
	Total	10	18,9	100,0	
Missing	System	43	81,1		
Total		53	100,0		



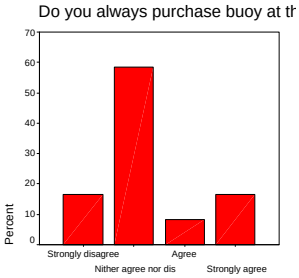
Do you always purchase buoy from the same dealer?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	7,5	33,3	33,3
	Disagree	2	3,8	16,7	50,0
	Nither agree nor disagree	4	7,5	33,3	83,3
	Agree	1	1,9	8,3	91,7
	Strongly agree	1	1,9	8,3	100,0
	Total	12	22,6	100,0	
Missing	System	41	77,4		
Total		53	100,0		



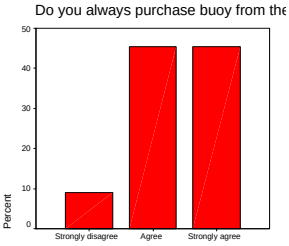
Do you always purchase buoy at the same price level?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	3,8	16,7	16,7
	Nither agree nor disagree	7	13,2	58,3	75,0
	Agree	1	1,9	8,3	83,3
	Strongly agree	2	3,8	16,7	100,0
	Total	12	22,6	100,0	
Missing	System	41	77,4		
Total		53	100,0		



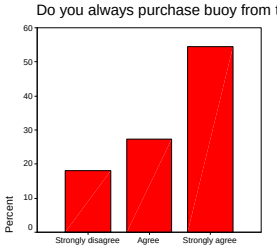
Do you always purchase buoy from the different manufacture?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	1,9	9,1	9,1
	Agree	5	9,4	45,5	54,5
	Strongly agree	5	9,4	45,5	100,0
	Total	11	20,8	100,0	
Missing	System	42	79,2		
Total		53	100,0		



Do you always purchase buoy from the different dealer?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	3,8	18,2	18,2
	Agree	3	5,7	27,3	45,5
	Strongly agree	6	11,3	54,5	100,0
	Total	11	20,8	100,0	
Missing	System	42	79,2		
Total		53	100,0		



Do you always purchase the best alternative regardledd the price?

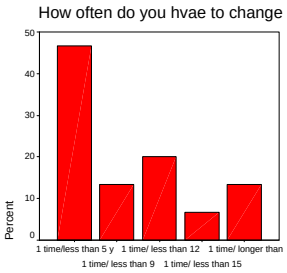
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	3,8	18,2	18,2
	Disagree	4	7,5	36,4	54,5
	Nither agree nor disagree	2	3,8	18,2	72,7
	Agree	3	5,7	27,3	100,0
	Total	11	20,8	100,0	
Missing	System	42	79,2		
Total		53	100,0		

Do you always purchase the cheapest alternative?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	8	15,1	72,7	72,7
	Agree	2	3,8	18,2	90,9
	Strongly agree	1	1,9	9,1	100,0
	Total	11	20,8	100,0	
Missing	System	42	79,2		
Total		53	100,0		

How often do you hvae to change your buoy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 time/less than 5 years	7	13,2	46,7	46,7
	1 time/ less than 9 years	2	3,8	13,3	60,0
	1 time/ less than 12 years	3	5,7	20,0	80,0
	1 time/ less than 15 years	1	1,9	6,7	86,7
	1 time/ longer than 15 years	2	3,8	13,3	100,0
	Total	15	28,3	100,0	
Missing	System	38	71,7		
Total		53	100,0		

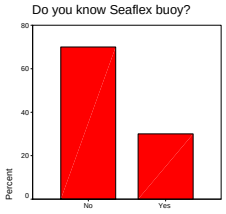


What is the most common damage in your buoy system?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chanin damage	15	23,1	83,3	83,3
	Buoy damage	1	1,5	5,6	88,9
	Lifting buoy damage	1	1,5	5,6	94,4
	Rope damage	1	1,5	5,6	100,0
	Total	18	27,7	100,0	
Missing	System	47	72,3		
Total		65	100,0		

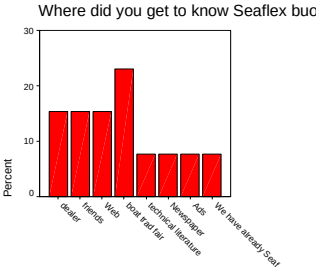
Do you know Seaflex buoy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	14	26,4	70,0	70,0
	Yes	6	11,3	30,0	100,0
	Total	20	37,7	100,0	
Missing	System	33	62,3		
Total		53	100,0		



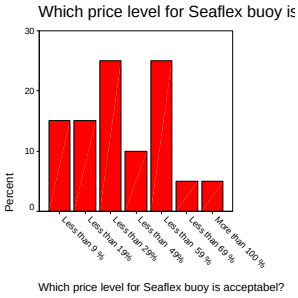
Where did you get to know Seaflex buoy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	dealer	2	3,1	15,4	15,4
	friends	2	3,1	15,4	30,8
	Web	2	3,1	15,4	46,2
	boat trad fair	3	4,6	23,1	69,2
	technical literature	1	1,5	7,7	76,9
	Newspaper	1	1,5	7,7	84,6
	Ads	1	1,5	7,7	92,3
	We have already Seaflex bridge	1	1,5	7,7	100,0
	Total	13	20,0	100,0	
Missing	System	52	80,0		
Total		65	100,0		



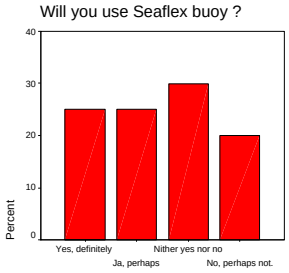
Which price level for Seaflex buoy is acceptabel?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 9 %	3	5,7	15,0	15,0
	Less than 19%	3	5,7	15,0	30,0
	Less than 29%	5	9,4	25,0	55,0
	Less than 49%	2	3,8	10,0	65,0
	Less than 59 %	5	9,4	25,0	90,0
	Less than 69 %	1	1,9	5,0	95,0
	More than 100 %	1	1,9	5,0	100,0
	Total	20	37,7	100,0	
Missing	System	33	62,3		
Total		53	100,0		



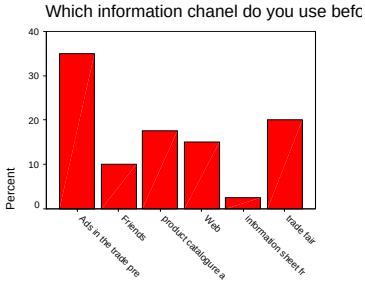
Will you use Seaflex buoy ?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, definitely	5	9,4	25,0	25,0
	Ja, perhaps	5	9,4	25,0	50,0
	Nither yes nor no	6	11,3	30,0	80,0
	No, perhaps not.	4	7,5	20,0	100,0
	Total	20	37,7	100,0	
Missing	System	33	62,3		
Total		53	100,0		



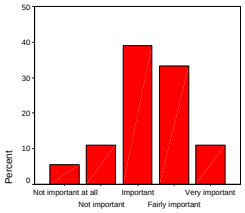
Which information chanel do you use before you purchase?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ads in the trade press	14	21,5	35,0	35,0
	Friends	4	6,2	10,0	45,0
	product catalogure and brochure	7	10,8	17,5	62,5
	Web	6	9,2	15,0	77,5
	information sheet from insurance company	1	1,5	2,5	80,0
	trade fair	8	12,3	20,0	100,0
	Total	40	61,5	100,0	
Missing	System	25	38,5		
Total		65	100,0		



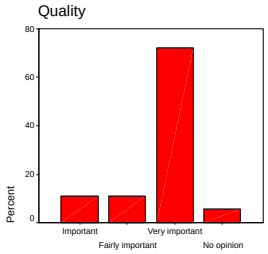
Price

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not important at all	1	1,9	5,6	5,6
	Not important	2	3,8	11,1	16,7
	Important	7	13,2	38,9	55,6
	Fairly important	6	11,3	33,3	88,9
	Very important	2	3,8	11,1	100,0
	Total	18	34,0	100,0	
Missing	System	35	66,0		
Total		53	100,0		



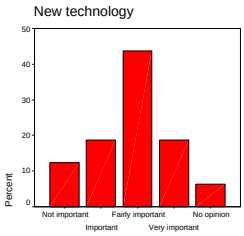
Quality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Important	2	3,8	11,1	11,1
	Fairly important	2	3,8	11,1	22,2
	Very important	13	24,5	72,2	94,4
	No opinion	1	1,9	5,6	100,0
	Total	18	34,0	100,0	
Missing	System	35	66,0		
Total		53	100,0		



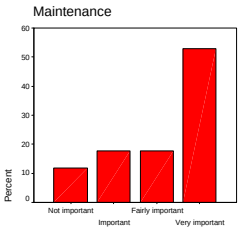
New technology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not important	2	3,8	12,5	12,5
	Important	3	5,7	18,8	31,3
	Fairly important	7	13,2	43,8	75,0
	Very important	3	5,7	18,8	93,8
	No opinion	1	1,9	6,3	100,0
	Total	16	30,2	100,0	
Missing	System	37	69,8		
Total		53	100,0		



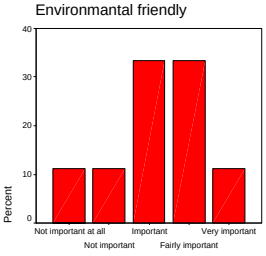
Maintenance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not important	2	3,8	11,8	11,8
	Important	3	5,7	17,6	29,4
	Fairly important	3	5,7	17,6	47,1
	Very important	9	17,0	52,9	100,0
	Total	17	32,1	100,0	
Missing	System	36	67,9		
Total		53	100,0		



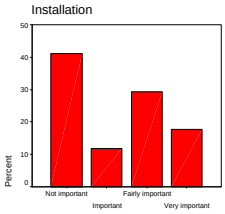
Environmantal friendly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not important at all	2	3,8	11,1	11,1
	Not important	2	3,8	11,1	22,2
	Important	6	11,3	33,3	55,6
	Fairly important	6	11,3	33,3	88,9
	Very important	2	3,8	11,1	100,0
	Total	18	34,0	100,0	
Missing	System	35	66,0		
Total		53	100,0		



Installation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not important	7	13,2	41,2	41,2
	Important	2	3,8	11,8	52,9
	Fairly important	5	9,4	29,4	82,4
	Very important	3	5,7	17,6	100,0
	Total	17	32,1	100,0	
Missing	System	36	67,9		
Total		53	100,0		

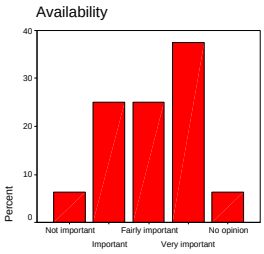


Well-known brand

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not important at all	5	9,4	29,4	29,4
	Not important	3	5,7	17,6	47,1
	Important	8	15,1	47,1	94,1
	No opinion	1	1,9	5,9	100,0
	Total	17	32,1	100,0	
Missing	System	36	67,9		
Total		53	100,0		

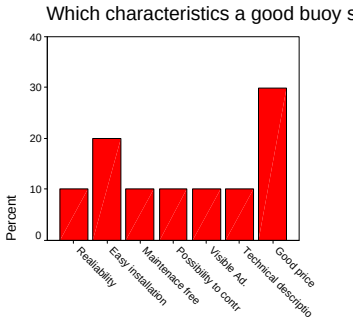
Availability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not important	1	1,9	6,3	6,3
	Important	4	7,5	25,0	31,3
	Fairly important	4	7,5	25,0	56,3
	Very important	6	11,3	37,5	93,8
	No opinion	1	1,9	6,3	100,0
	Total	16	30,2	100,0	
Missing	System	37	69,8		
Total		53	100,0		



Which characteristics a good buoy system should have?

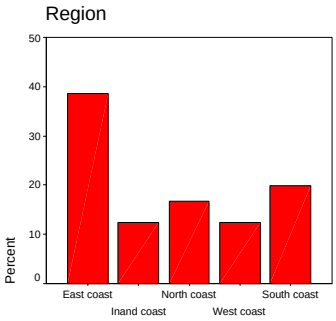
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Realiability	1	1,5	10,0	10,0
	Easy installation	2	3,1	20,0	30,0
	Maintenace free	1	1,5	10,0	40,0
	Possibility to controll	1	1,5	10,0	50,0
	Visible Ad.	1	1,5	10,0	60,0
	Technical description	1	1,5	10,0	70,0
	Good price	3	4,6	30,0	100,0
	Total	10	15,4	100,0	
Missing	System	55	84,6		
Total		65	100,0		



Frequency Table of Boat Club Survey

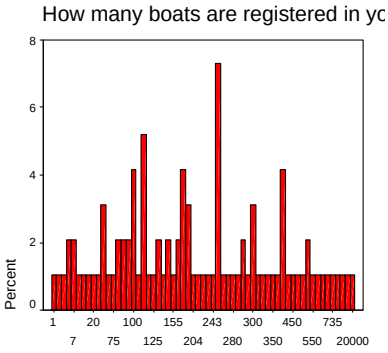
Region

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	East coast	37	34,6	38,5	38,5
	Inand coast	12	11,2	12,5	51,0
	North coast	16	15,0	16,7	67,7
	West coast	12	11,2	12,5	80,2
	South coast	19	17,8	19,8	100,0
	Total	96	89,7	100,0	
Missing	System	11	10,3		
Total		107	100,0		



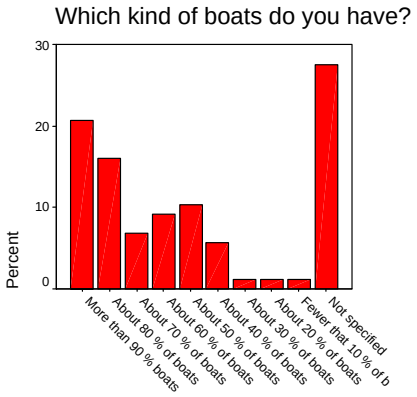
How many boats are registered in your club?

N	Valid	96
	Missing	11
Mean		442,41
Std. Deviation		2027,067
Sum		42471
Percentiles	25	100,00
	50	200,00
	75	311,25



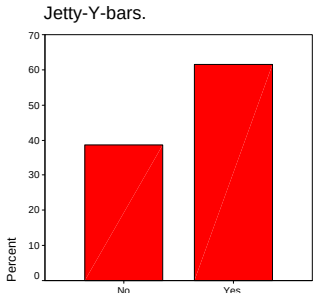
Which kind of boats do you have?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	More than 90 % boats with a motor > 10 hk	18	16,8	20,7	20,7
	About 80 % of boats with motor > 10 hk	14	13,1	16,1	36,8
	About 70 % of boats with motor > 10 hk	6	5,6	6,9	43,7
	About 60 % of boats with motor > 10 hk	8	7,5	9,2	52,9
	About 50 % of boats with motor > 10 hk	9	8,4	10,3	63,2
	About 40 % of boats with motor > 10 hk	5	4,7	5,7	69,0
	About 30 % of boats with motor > 10 hk	1	,9	1,1	70,1
	About 20 % of boats with motor > 10 hk	1	,9	1,1	71,3
	Fewer that 10 % of boats with motor > 10 hk	1	,9	1,1	72,4
	Not specified	24	22,4	27,6	100,0
	Total	87	81,3	100,0	
Missing	System	20	18,7		
Total		107	100,0		



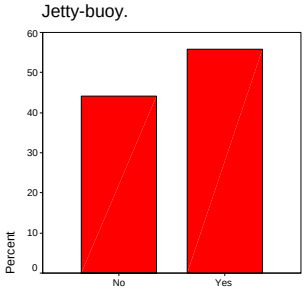
Jetty-Y-bars.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	37	34,6	38,5	38,5
	Yes	59	55,1	61,5	100,0
	Total	96	89,7	100,0	
Missing	System	11	10,3		
Total		107	100,0		



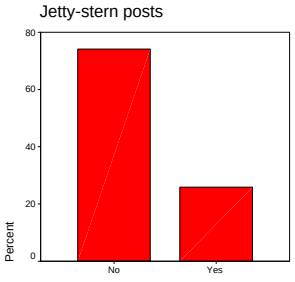
Jetty-buoy.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	41	38,3	44,1	44,1
	Yes	52	48,6	55,9	100,0
	Total	93	86,9	100,0	
Missing	System	14	13,1		
Total		107	100,0		



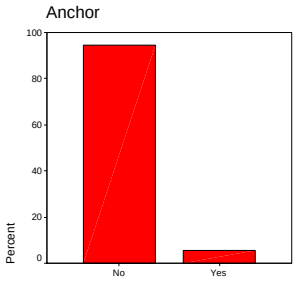
Jetty-stern posts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	69	64,5	74,2	74,2
	Yes	24	22,4	25,8	100,0
	Total	93	86,9	100,0	
Missing	System	14	13,1		
Total		107	100,0		



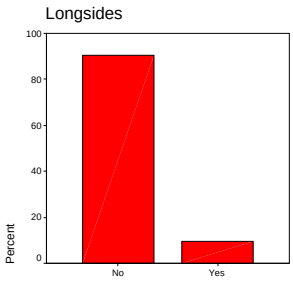
Anchor

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	88	82,2	94,6	94,6
	Yes	5	4,7	5,4	100,0
	Total	93	86,9	100,0	
Missing	System	14	13,1		
Total		107	100,0		



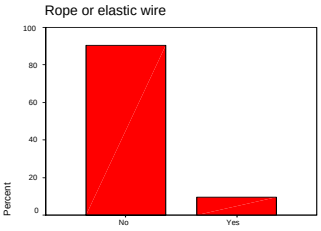
Longsides

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	84	78,5	90,3	90,3
	Yes	9	8,4	9,7	100,0
	Total	93	86,9	100,0	
Missing	System	14	13,1		
Total		107	100,0		



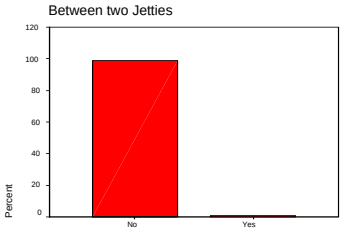
Rope or elastic wire

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	84	78,5	90,3	90,3
	Yes	9	8,4	9,7	100,0
	Total	93	86,9	100,0	
Missing	System	14	13,1		
Total		107	100,0		



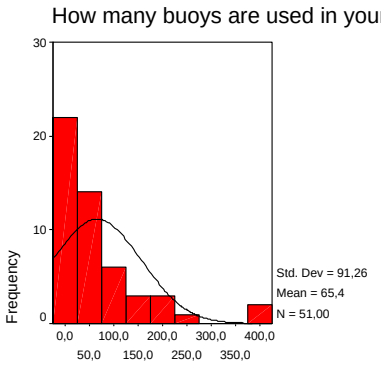
Between two Jetties

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	92	86,0	98,9	98,9
	Yes	1	,9	1,1	100,0
	Total	93	86,9	100,0	
Missing	System	14	13,1		
Total		107	100,0		



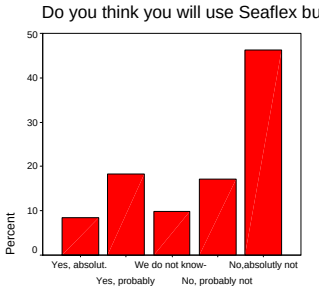
How many buoys are used in your club?

N	Valid	51
	Missing	56
Mean		65,41
Std. Deviation		91,262
Sum		3336
Percentiles	25	10,00
	50	30,00
	75	100,00



Do you think you will use Seaflex buoy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, absolut.	7	6,5	8,5	8,5
	Yes, probably	15	14,0	18,3	26,8
	We do not know-	8	7,5	9,8	36,6
	No, probably not	14	13,1	17,1	53,7
	No,absolutly not	38	35,5	46,3	100,0
	Total	82	76,6	100,0	
Missing	System	25	23,4		
Total		107	100,0		

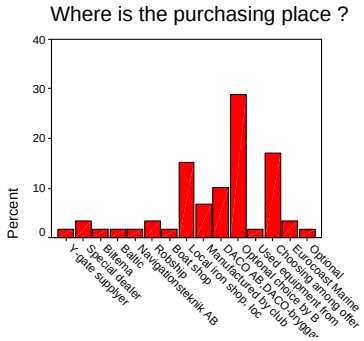


Which price level is acceptable?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Do not accept higher price	9	8,4	30,0	30,0
	1-9 % higher than the average price	6	5,6	20,0	50,0
	10-19 % higher than the average price	2	1,9	6,7	56,7
	20-29 % higher than the average price	5	4,7	16,7	73,3
	30-39 % higher than the average price	2	1,9	6,7	80,0
	50-59 % higher than the average price	3	2,8	10,0	90,0
	More than 100 % higher than the average price	3	2,8	10,0	100,0
	Total	30	28,0	100,0	
Missing	System	77	72,0		
Total		107	100,0		

Where is the purchasing place ?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Y-gate supplyer	2	1,9	3,3	3,3
	Special dealer	2	1,9	3,3	6,7
	Biltema	1	,9	1,7	8,3
	Baltic	1	,9	1,7	10,0
	Navigationsteknik AB	1	,9	1,7	11,7
	Robship	2	1,9	3,3	15,0
	Boat shop	1	,9	1,7	16,7
	Local iron shop, local supplier or local wood product sh	9	8,4	15,0	31,7
	Manufactured by club members	4	3,7	6,7	38,3
	DACO AB,DACO-bryggan /Ponton	5	4,7	8,3	46,7
	Optional choice by Boat owner	18	16,8	30,0	76,7
	Used equipment from other clubs	1	,9	1,7	78,3
	Choosing among offers	10	9,3	16,7	95,0
	Eurocoast Marine	2	1,9	3,3	98,3
	Optional	1	,9	1,7	100,0
	Total	60	56,1	100,0	
Missing	System	47	43,9		
Total		107	100,0		

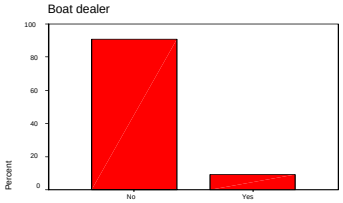


Who is responsible for purchasing?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Club committee	35	32,7	43,2	43,2
	Municipality	12	11,2	14,8	58,0
	Boat owner	21	19,6	25,9	84,0
	Harbour compan	5	4,7	6,2	90,1
	Harbour captain	5	4,7	6,2	96,3
	On a club meetin	2	1,9	2,5	98,8
	Others	1	,9	1,2	100,0
	Total	81	75,7	100,0	
Missing	System	26	24,3		
Total		107	100,0		

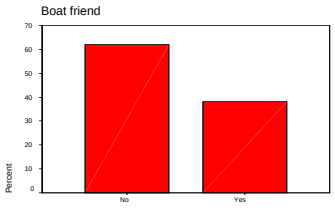
Boat dealer

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	39	36,4	90,7	90,7
	Yes	4	3,7	9,3	100,0
	Total	43	40,2	100,0	
Missing	System	64	59,8		
Total		107	100,0		



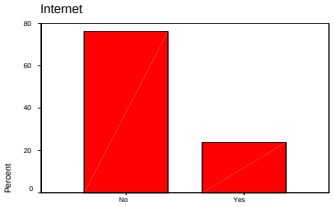
Boat friend

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	26	24,3	61,9	61,9
	Yes	16	15,0	38,1	100,0
	Total	42	39,3	100,0	
Missing	System	65	60,7		
Total		107	100,0		



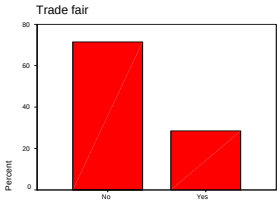
Internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	32	29,9	76,2	76,2
	Yes	10	9,3	23,8	100,0
	Total	42	39,3	100,0	
Missing	System	65	60,7		
Total		107	100,0		



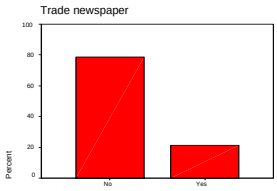
Trade fair

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	30	28,0	71,4	71,4
	Yes	12	11,2	28,6	100,0
	Total	42	39,3	100,0	
Missing	System	65	60,7		
Total		107	100,0		



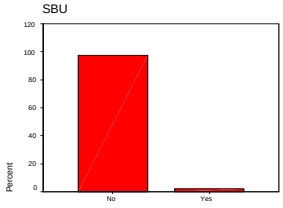
Trade newspaper

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	33	30,8	78,6	78,6
	Yes	9	8,4	21,4	100,0
	Total	42	39,3	100,0	
Missing	System	65	60,7		
Total		107	100,0		



SBU

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	41	38,3	97,6	97,6
	Yes	1	,9	2,4	100,0
	Total	42	39,3	100,0	
Missing	System	65	60,7		
Total		107	100,0		

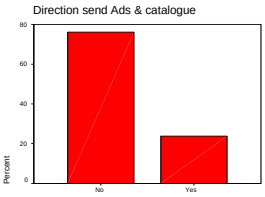


Visit the local boat shop or other harbour

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	36	33,6	85,7	85,7
	Yes	6	5,6	14,3	100,0
	Total	42	39,3	100,0	
Missing	System	65	60,7		
Total		107	100,0		

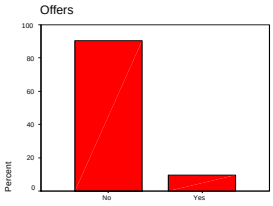
Direction send Ads & catalogue

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	32	29,9	76,2	76,2
	Yes	10	9,3	23,8	100,0
	Total	42	39,3	100,0	
Missing	System	65	60,7		
Total		107	100,0		



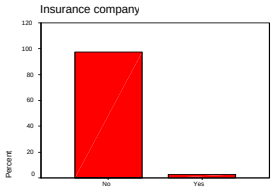
Offers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	38	35,5	90,5	90,5
	Yes	4	3,7	9,5	100,0
	Total	42	39,3	100,0	
Missing	System	65	60,7		
Total		107	100,0		



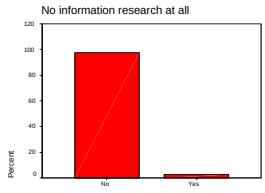
Insurance company

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	40	37,4	97,6	97,6
	Yes	1	,9	2,4	100,0
	Total	41	38,3	100,0	
Missing	System	66	61,7		
Total		107	100,0		



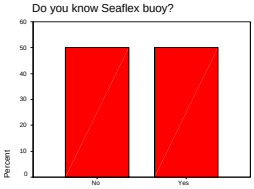
No information research at all

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	39	36,4	97,5	97,5
	Yes	1	,9	2,5	100,0
	Total	40	37,4	100,0	
Missing	System	67	62,6		
Total		107	100,0		



Do you know Seaflex buoy?

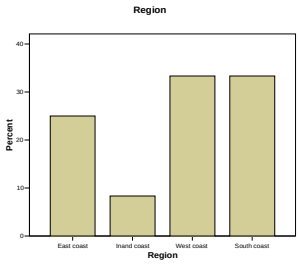
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	36	33,6	50,0	50,0
	Yes	36	33,6	50,0	100,0
	Total	72	67,3	100,0	
Missing	System	35	32,7		
Total		107	100,0		



Frequency Table of Municipality Survey

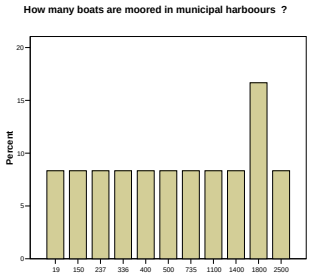
Region

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	East coast	3	25,0	25,0	25,0
	Inand coast	1	8,3	8,3	33,3
	West coast	4	33,3	33,3	66,7
	South coast	4	33,3	33,3	100,0
	Total	12	100,0	100,0	



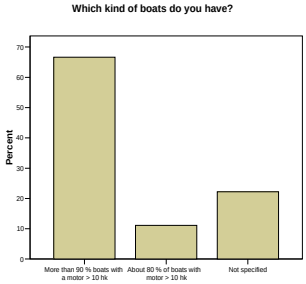
How many boats are moored in municipal harboours ?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	19	1	8,3	8,3	8,3
	150	1	8,3	8,3	16,7
	237	1	8,3	8,3	25,0
	336	1	8,3	8,3	33,3
	400	1	8,3	8,3	41,7
	500	1	8,3	8,3	50,0
	735	1	8,3	8,3	58,3
	1100	1	8,3	8,3	66,7
	1400	1	8,3	8,3	75,0
	1800	2	16,7	16,7	91,7
	2500	1	8,3	8,3	100,0
	Total	12	100,0	100,0	



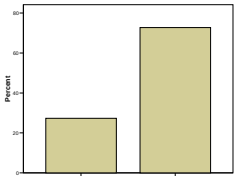
Which kind of boats do you have?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	More than 90 % boats with a motor > 10 hk	6	50,0	66,7	66,7
	About 80 % of boats with motor > 10 hk	1	8,3	11,1	77,8
	Not specified	2	16,7	22,2	100,0
	Total	9	75,0	100,0	
Missing	System	3	25,0		
Total		12	100,0		



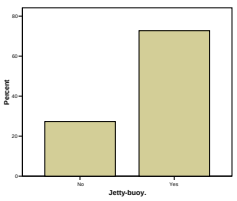
Jetty-Y-bars.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	3	25,0	27,3	27,3
	Yes	8	66,7	72,7	100,0
	Total	11	91,7	100,0	
Missing	System	1	8,3		
Total		12	100,0		



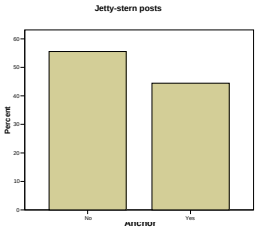
Jetty-buoy.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	3	25,0	27,3	27,3
	Yes	8	66,7	72,7	100,0
	Total	11	91,7	100,0	
Missing	System	1	8,3		
Total		12	100,0		



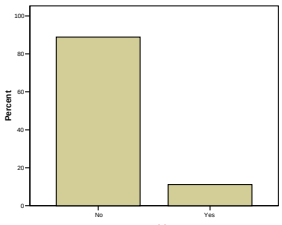
Jetty-stern posts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	5	41,7	55,6	55,6
	Yes	4	33,3	44,4	100,0
	Total	9	75,0	100,0	
Missing	System	3	25,0		
Total		12	100,0		



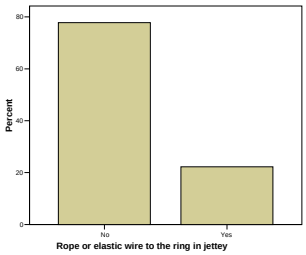
Anchor

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	8	66,7	88,9	88,9
	Yes	1	8,3	11,1	100,0
	Total	9	75,0	100,0	
Missing	System	3	25,0		
Total		12	100,0		



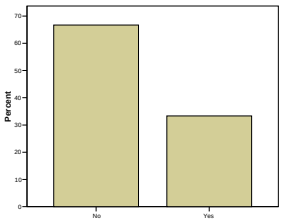
Longsides

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	7	58,3	77,8	77,8
	Yes	2	16,7	22,2	100,0
	Total	9	75,0	100,0	
Missing	System	3	25,0		
Total		12	100,0		



Rope or elastic wire to the ring in jettey

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	6	50,0	66,7	66,7
	Yes	3	25,0	33,3	100,0
	Total	9	75,0	100,0	
Missing	System	3	25,0		
Total		12	100,0		



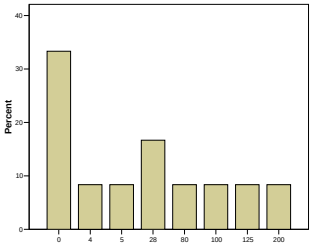
Between two Jetties

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	7	58,3	77,8	77,8
	Yes	2	16,7	22,2	100,0
	Total	9	75,0	100,0	
Missing	System	3	25,0		
Total		12	100,0		

How many buoys are used in your club?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	33,3	33,3	33,3
	4	1	8,3	8,3	41,7
	5	1	8,3	8,3	50,0
	28	2	16,7	16,7	66,7
	80	1	8,3	8,3	75,0
	100	1	8,3	8,3	83,3
	125	1	8,3	8,3	91,7
	200	1	8,3	8,3	100,0
	Total	12	100,0	100,0	

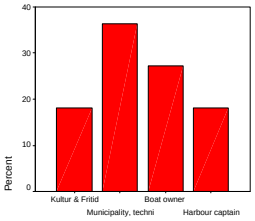
How many buoys are used in your club?



Who is responsible for purchasing?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Kultur & Fritid Municipality	2	16,7	18,2	18,2
	technical department Municipality	4	33,3	36,4	54,5
	Boat owner	3	25,0	27,3	81,8
	Harbour captain Municipality	2	16,7	18,2	100,0
	Total	11	91,7	100,0	
Missing	System	1	8,3		
Total		12	100,0		

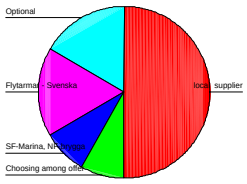
Who is responsible for purchasing?



Where is the purchasing place ?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	local supplier	6	50,0	50,0	50,0
	Choosing among offers	1	8,3	8,3	58,3
	SF-Marina, NF-bryggan, Najba	1	8,3	8,3	66,7
	Flytarmar - Svenska flytblock.	2	16,7	16,7	83,3
	Optional	2	16,7	16,7	100,0
	Total	12	100,0	100,0	

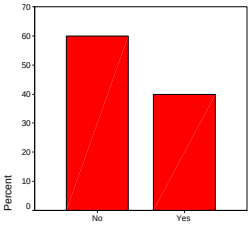
Where is the purchasing place ?



Do you know Seaflex buoy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	6	50,0	60,0	60,0
	Yes	4	33,3	40,0	100,0
	Total	10	83,3	100,0	
Missing	System	2	16,7		
Total		12	100,0		

Do you know Seaflex buoy?



General Information Resources

Group $Sum6 General information resources
(Value tabulated = 1)

Dichotomy label	Name	Count	Pct of Responses	Pct of Cases
Kontact	q6p2	2	10,0	18,2
Internet	q6p3	4	20,0	36,4
Trade fair	q6p4	4	20,0	36,4
Trade newspaper	q6p6	1	5,0	9,1
Visit the local supplier or other harbou	q6p8	3	15,0	27,3
Direction send Ads & catalogue	q6p9	3	15,0	27,3
Offers	q6p10	3	15,0	27,3
Total responses		20	100,0	181,8

1 missing cases; 11 valid cases

Information Channels for SEAFLEX buoy

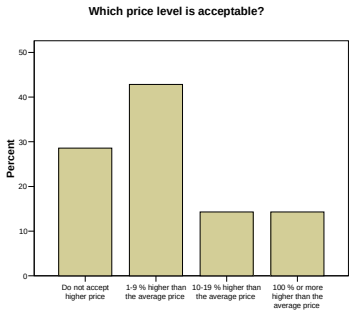
Group $sum7q1 Information resources for SEAFLEX buoy
(Value tabulated = 1)

Dichotomy label	Name	Count	Pct of Responses	Pct of Cases
Dealer&suppliers	q7p1	1	20,0	25,0
Trade fair	q7p4	1	20,0	25,0
We are already customer.	q7p5	2	40,0	50,0
Direction send Ads & catalogue	q7p9	1	20,0	25,0
Total responses		5	100,0	125,0

8 missing cases; 4 valid cases

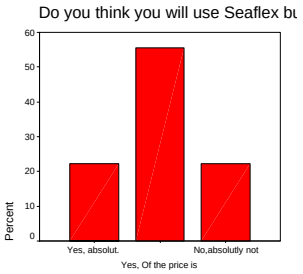
Which price level is acceptable?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Do not accept higher price	2	16,7	28,6	28,6
	1-9 % higher than the average price	3	25,0	42,9	71,4
	10-19 % higher than the average price	1	8,3	14,3	85,7
	100 % or more higher than the average price	1	8,3	14,3	100,0
	Total	7	58,3	100,0	
Missing	System	5	41,7		
Total		12	100,0		



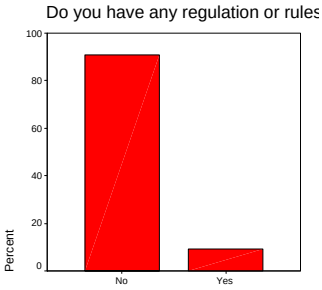
Do you think you will use Seaflex buoy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, absolut.	2	16,7	22,2	22,2
	Yes, Of the price is as same as current one.	5	41,7	55,6	77,8
	No,absolutly not	2	16,7	22,2	100,0
	Total	9	75,0	100,0	
Missing	System	3	25,0		
Total		12	100,0		



Do you have any regulation or rules about mooring buoy ?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	10	83,3	90,9	90,9
	Yes	1	8,3	9,1	100,0
	Total	11	91,7	100,0	
Missing	System	1	8,3		
Total		12	100,0		



Appendix 2
Private Boat Owner Questionnaire

Frågeformulär angående boj-förtöjningssystem

Hejsan ! Mitt namn är Wei GU och jag läser till civilingenjör vid Lunds Tekniska Högskola. Jag gör mitt examensarbete, som handlar om boj-förtöjningssystem. Jag ska kartlägga konsumenters åsikter om boj-förtöjningssystem i Sverige. Jag skulle bli väldigt tacksam om ni skulle kunna hjälpa mig, att besvara frågorna på detta formulär.

Ditt svar kommer att behandlas anonymt.

Filter Frågor

0.1 För att kunna genomföra intervjuer, är det viktig att ni har motorbåtar eller segelbåtar
Äger ni någon båt som tillhör följande båttyp ?

0.11 ☐ Motorbåt med motor på 10 hk eller mer.
0.12 ☐ Segelbåt, utan eller med möjlighet till enbart tillfällig övernattning.
0.13 ☐ Ruffad motorbåt avsedd för övernattning
0.14 ☐ Ruffad segelbåt, motorseglare avsedd för övernattning
0.15 ☐ Nej. Jag äger inte sådan båt. ⟶ Tack för din medverkan.

Potential Kunder

1 Hur många båt/båtar äger ni ?

1.1 ☐ 1 båt.
1.2 ☐ 2 båtar.
1.3 ☐ 3 eller fler båtar.

2. Vilket geografiskt område bor ni ?

2.1 ☐ Ostkusten.
2.2 ☐ Inlandet.
2.3 ☐ Norrlandskusten.
2.4 ☐ Västkusten.
2.5 ☐ Sydkusten och Kronobergs län.

3. Kön
3.1 ☐ Man
3.2 ☐ Kvinna

4. Ålder
4.1 ☐ 20 - 29 år.
4.2 ☐ 30 - 39 år.
4.3 ☐ 40 - 49 år.
4.4 ☐ 50 - 59 år.
4.5 ☐ 60 - 69 år.
4.6 ☐ 70 år - .

5. Var brukar ni köpa ert förtöjningssystem?

5.1 ☐ Herman Gotthardt butik
5.2 ☐ Byggplast & Båtprylar butik
5.3 ☐ Hjertman butik (postorder butik för båttillbehör)
5.4 ☐ Watski butik
5.5 ☐ Annan lokal båttillbehör återförsäljare.
5.6 ☐ Internet butik.
5.7 ☐ Annat, nämligen:_____
5.8 ☐ Något mer:_____

6. På vilket sätt förtöjer ni båten ?

6.1 ☐ Y-bommar vid brygga.
6.2 ☐ Boj. Ange vilken sorts:
6.21 ☐ Brygga-boj-förtöjning, sk. akterböj. (Försätts till nästa sektion frågan 8)
6.22 ☐ Svajförtöjning vid boj. (Försätts till nästa sektion frågan 8)
6.23 ☐ Annat, nämligen_____ (Försätts till nästa sektion)
6.3 ☐ Förtöjningspålar.
6.4 ☐ Ankare.
6.5 ☐ Långsides.
6.6 ☐ Annat, nämligen:_____

7. Är det troligt att ni kommer att använda bojförtöjning i framtiden?

7.1 ☐ Ja, kanske. ⟶ (försätts till nästa sektion **frågan 8**, sedan fortsätts från **frågan14 till slutet**)
7.2 ☐ Ja, definitivt. ⟶ (försätts till nästa sektion **frågan 8**, sedan fortsätts från **frågan14 till slutet**)
7.3 ☐ Vet ej. ⟶ Tack för din medverkan.
7.4 ☐ Nej. Vi har ingen behov att använder boj-förtöjning. ⟶ Tack för din medverkan.
7.5 ☐ Nej. Vi föredrar annat metod än boj-förtöjning.. ⟶ Tack för din medverkan.
7.6 ☐ Nej. Det är förbjudet att anordna böj-förtöjnig på grund av föreskrifter för naturreservatet. ⟶ Tack för din medverkan.
7.7 ☐ Annat, nämligen_____ ⟶ Tack för din medverkan.

Potential Marknad

8. Vilket/vilka av följande påstående tycker ni stämmer in på anledningen till att ni använder / kommer att använda boj-förtöjning ?

8.1 ☐ Det är ett miljömässig alternativ för skydda ekosystemet på havsbotten.
8.2 ☐ Det är trångt i marinan och jag har inte tillgång till brygga eller andra alternativ.
8.3 ☐ Det är billigt och bekvämt att hyra en boj-förtöjning från marinan eller hamnen.
8.4 ☐ Det är ett bättre sätt att skydda min båt från att skadas av kraftig vind och andra båtar.
8.5 ☐ Annat, nämligen _____
8.6 ☐ Något mer _____
8.7 ☐ Något mer _____

9. Vilken uppfattning har ni om nuvarande boj-förtöjningssystem som ni nu använder avseende:
(Skala 1-5 där 1 är mycket dålig och 5 är mycket bra)

	Mycket dåligt 1	Ganska dåligt 2	Normal 3	Ganska bra 4	Mycket bra 5	Ingen åsikt 6
9.1 Systemets hållbarhet och stabilitet.	☐	☐	☐	☐	☐	☐
9.2 Systemets underhåll.	☐	☐	☐	☐	☐	☐
9.3 Priset.	☐	☐	☐	☐	☐	☐
9.4 Miljö aspekt.	☐	☐	☐	☐	☐	☐
9.5 Service och installation.	☐	☐	☐	☐	☐	☐

9.6 Annat, nämligen _____
9.7 Något mer _____

10. Ungefär vad kostar ditt nuvarande boj-förtöjningssystem ?

10.1-10.9 _____

11. Köper ni alltid samma typ av boj-förtöjningssystem?
(Skala 1-5 där 1 är instämmer inte alls och 5 är instämmer helt)

	Instämmer inte alls 1	Instämmer delvis 2	Normal 3	Instämmer nästan helt 4	Instämmer helt 5	Ingen åsikt 6
11.1 Ja. Samma märke från samma tillverkare.	☐	☐	☐	☐	☐	☐
11.2 Ja. Från samma återförsäljare.	☐	☐	☐	☐	☐	☐
11.3 Ja. I samma prisnivå.	☐	☐	☐	☐	☐	☐
11.4 Nej. Jag brukar variera mellan märke och tillverkare.	☐	☐	☐	☐	☐	☐
11.5 Nej. Jag brukar variera och köpa från olika återförsäljare.	☐	☐	☐	☐	☐	☐
11.6 Nej. Jag brukar leta efter bättre alternativ oavsett pris.	☐	☐	☐	☐	☐	☐
11.7 Nej. Jag brukar leta efter det billigaste alternativet.	☐	☐	☐	☐	☐	☐

11.8 Annat, nämligen _____
11.9 Något mer : _____

12. Ungefär hur ofta byter ni ert boj-förtöjningssystem ?

12.1 ☐ 1gång/år 12.3 ☐ 1gång/(4-5år) 12.5 ☐ 1gång/(8-9år) 12.7 ☐ 1gång/(13-15år)
12.2 ☐ 1gång/(2-3år) 12.4 ☐ 1gång/(6-7år) 12.6 ☐ 1gång/(10-12år) 12.8 ☐ 1gång/(15år-)
☐ Annat,nämligen _____

13 Den vanligaste anledningen till att byta en komponent i boj-förankrings systemet:

13.1 ☐ Förslitning (nötning, rost) på kättingen.
13.2 ☐ Förslitning på förtöjningsbojen.
13.3 ☐ Förslitning på lyftbojen.
13.4 ☐ Förslitning på repet.
13.5 ☐ Förslitning på tågvirket, bojten, eller schackeln.
13.6 ☐ Annat, nämligen _____
13.7 ☐ Något mer _____

14. Det finns en ny variant på boj-förtöjningssystem i marknaden som använder elastiskt gummikabel istället för traditionella kätting som kopplats mellan bojen och ankaret. Med den unika konstruktionen, är förtöjningssystemet extra säkert. Samt det kräver mindre säkerhetsavstånd och minimalt underhåll. Det är också miljövänligt eftersom gummikabeln inte rostar och alltid är stäckt mellan ankaret och bojen så att det varken skadar eller förorenar havsbottens ekosystem.

14.1 Har ni någon kännedom av en sådan produkt ?

14.11 ☐ Ja. Det har jag. Ange informationskälla _____
14.12 ☐ Nej. Det har jag aldrig hört om.

14.2 En sådan produkt har många fördelar och i längden är produkten kostnadseffektiv för att man inte behöver byta komponenterna lika ofta som andra traditionella boj-förtöjningssystem. Därför är priset naturligtviss högre än andra produkter i början.
Vilken prisnivå kan du acceptera ?

14.2.1 ☐ 1 - 9 % högre än nuvarande bojsystem.
14.2.2 ☐ 10 - 19% högre än nuvarande bojsystem.
14.2.3 ☐ 20 - 29 % högre än nuvarande bojsystem.
14.2.4 ☐ 30 - 39 % högre än nuvarande bojsystem.
14.2.5 ☐ 40 - 49 % högre än nuvarande bojsystem.
14.2.6 ☐ 50 - 59 % högre än nuvarande bojsystem.
14.2.7 ☐ 60 - 69 % högre än nuvarande bojsystem.
14.2.8 ☐ 70 -79 % högre än nuvarande bojsystem.
14.2.9 ☐ 80 - 89 % högre än nuvarande bojsystem.
14.2.10 ☐ 90 - 99 % högre än nuvarande bojsystem.
14.2.11 ☐ 100% - högre än nuvarande bojsystem.
14.2.12 ☐ Annat, nämligen _____

14.3 Kan du tänka dig att pröva på en sådan produkt till nästa inköp?

14.31 ☐ Ja, definitivt. Därför _____
14.32 ☐ Ja, troligen. Därför _____
14.33 ☐ Vet ej.
14.34 ☐ Nej, troligen inte. Därför _____
14.35 ☐ Nej, definitivt inte. Därför _____

Avslutning:

15. Genom vilken/vilka informations kanal/kanaler söker du information inför inköpet av bojsystem ?

15.1 ☐ Reklam & artikel i båt fackpressen.
15.2 ☐ Genom bekantskapskrets.
15.3 ☐ Affisch & annons från båtvaruhus eller båtklubb.
15.4 ☐ Kataloger och produktbroschyrer.
15.5 ☐ Internet.
15.6 ☐ Broschyr och informationsblad från försäkringsbolag.
15.7 ☐ Mässa.
15.8 ☐ Inget. Jag köper direkt produkten utan förundersökningen.
15.9 ☐ Annat, nämligen _____
15.10 ☐ Något mer: _____

16 Vad är det för faktorer som avgör vilket boj-förtöjningssystem du köper?
(Skala 1-5 där 1 är inte alls viktigt och 5 är mycket viktigt)

		Inte alls viktigt 1	2	3	4	Mycket viktigt 5	Ingen åsikt 6
16.1	Priset.	☐	☐	☐	☐	☐	☐
16.2	Bra kvalité och lång hållbarhet.	☐	☐	☐	☐	☐	☐
16.3	Ny teknologi som ger högre prestation.	☐	☐	☐	☐	☐	☐
16.4	Lätt att sköta och är nästan underhållsfri.	☐	☐	☐	☐	☐	☐
16.5	Det är miljövänlig.	☐	☐	☐	☐	☐	☐
16.6	Enkelt att installera & bra service.	☐	☐	☐	☐	☐	☐
16.7	Välkänd varumärke som har intensiv reklamkampanj.	☐	☐	☐	☐	☐	☐
16.8	Lätt tillgängligt och produkten finns i de flesta båttillbehörsbutiker i landet.	☐	☐	☐	☐	☐	☐
16.9	Annat, nämligen _____						
16.10	Något mer: _____						

17 Vilka egenskaper anser du en bra boj-förtöjningssystem bör har ?

17.1.1-17.1.9 Produkt & Underhåll & Miljövänlighet& Installation : _____

17.2.1-17.2.9 Tillgänglighet & information : _____

17.3.1-17.3.9 Pris: _____

17.4.1-17.4.9 Annat, nämligen _____

17.5.1-17.5.9 Något mer: _____

Tack för din medverkan !

Boat Club Questionnaire

Hej, Mitt namn är Wei GU och jag läser till civilingenjör vid Lunds Tekniska Högskola. Jag gör mitt examensarbete, som handlar om boj - förtöjningssystem. Jag ska uppskatta hur många boj- förtöjningssystem användes i Sverige. Därför vänder jag till er som jobbar i marina och båtklubb. Jag skulle bli väldigt tacksam om ni skulle kunna hjälpa mig, att besvara frågorna på detta brev.

1. Hur många båtar är förtöjd hos er? Vilka båttyper tillhör dessa båtar, t.ex. Ruffad motorbåtar och segelbåtar, Motorbåtar eller segelbåtar med motor på 10 hk eller mer?

2. På vilket sätt förtöjer ni båtar?

3. Hur många bojar använder ni?

4. Vem är det som bestämmer vilket förtöjningssystem klubben ska köpa?

5. Var brukar ni köper era förtöjningssystem?

6. Genom vilken/vilka informations kanal/kanaler söker ni information inför inköpet av förtöjningssystem?

Det finns en ny variant på boj -förtöjningssystem i marknaden som använder elastiskt gummikabel istället för traditionella kätting som kopplats mellan bojen och ankaret. Med den unika konstruktionen, är förtöjningssystemet extra säkert. Samt det kräver mindre säkerhetsavstånd och minimalt underhåll. Det är också miljövänligt eftersom gummikabeln inte rostar och alltid är stäckt mellan ankaret och bojen så att det varken skadar eller förorenar havsbottens ekosystem.

7. Har ni någon kännedom av en sådan produkt och varifrån fick ni informationen?

8. En sådan produkt har många fördelar och i längden är produkten kostnadseffektiv för att man inte behöver byta komponenterna lika ofta som andra traditionella boj - förtöjningssystem. Därför är priset naturligtviss högre än andra produkter i början. Vilken prisnivå kan ni acceptera om man sätter priset från 10 % till 100 % högre än nuvarande förtöjningssystem?

9. Vad tycker ni att använda en sådan boj - förtöjningssystem istället nuvarande förtöjningssystem i framtiden?

Municipality Questionnaire

Hej, Mitt namn är Wei GU och jag läser till civilingenjör vid Lunds Tekniska Högskola. Jag gör mitt examensarbete, som handlar om boj - förtöjningssystem. Jag ska uppskatta hur många boj- förtöjningssystem användes i Sverige. Därför vänder jag till er som jobbar i kommun som är ansvariga for kommunal bår hamnar. Jag skulle bli väldigt tacksam om ni skulle kunna hjälpa mig, att besvara frågorna på detta brev.

1. Hur många båtar är förtöjd i kommunens småbåtshamnar? Vilka båttyper tillhör dessa båtar, t.ex. Ruffad motorbåtar och segelbåtar, Motorbåtar eller segelbåtar med motor på 10 hk eller mer?

2. På vilket sätt förtöjer ni båtar?

3. Hur många bojer använder ni?

4. Vem är det som bestämmer vilket förtöjningssystem klubben ska köpa?

5. Var brukar ni köper era förtöjningssystem?

6. Genom vilken/vilka informations kanal/kanaler söker ni information inför inköpet av förtöjningssystem?

Det finns en ny variant på boj -förtöjningssystem i marknaden som använder elastiskt gummikabel istället för traditionella kätting som kopplats mellan bojen och ankaret.

7. Har ni någon kännedom av en sådan produkt och varifrån fick ni informationen?

8. En sådan produkt har många fördelar och i längden är produkten kostnadseffektiv för att man inte behöver byta komponenterna lika ofta som andra traditionella boj - förtöjningssystem. Samt är det miljövänligt eftersom gummikabeln inte rostar och alltid är stäckt mellan ankaret och bojen så att det varken skadar eller förorenar havsbottens ekosystem. Vilken prisnivå kan ni acceptera om man sätter priset från 10 % till 100 % högre än nuvarande förtöjningssystem?

9. Vad tycker ni att använda en sådan boj - förtöjningssystem istället nuvarande förtöjningssystem i framtiden?

10. Har ni något speciellt miljöpolicy som påverka båtägare att välja boj-förtöjningssystem?