Balanced Scorecard as a strategic management tool:
The case of Seagull AS

By

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Abstract

Can investments in IT help a company to achieve its overall strategy and vision? Research over several years has resulted in mixed findings but several studies shows that the IT investments actually can result in better performance for companies. To achieve this it is important to align the IT investments with the overall business strategy and vision.

The aim of this thesis is to see how Porter's theories on competitive strategy and Kaplan and Norton's Balanced scorecard can help the company to specify an IT system for the Operations department. The main idea is that the IT investment will support the overall strategy and vision of the company and create better overall performance.

Kaplan and Norton introduced Balanced Scorecard in 1992. The Balanced scorecard is a performance measurement method and also a strategic management tool having four different perspectives to the success of a company. The Balanced Scorecard does not only focus on financial performance, but also includes non-financial performance measures and objectives driving towards better performance.

The main results of the thesis were that the problems of the company were identified and the corporate vision and strategic objectives were clarified. Objectives and targets at corporate, departmental and technology level have been developed to increase overall performance.

The main conclusion of this thesis is that in the case of Seagull AS the Balanced Scorecard can help the company to create better performance. The Balanced Scorecard can help the Operations department to invest in an IT system that supports the overall strategic objectives of the company.

Preface

This thesis was written for Seagull AS and is part of the Norwegian Master equivalent "Siv.Ing" degree. The work has been carried out in the period between December 2002 and May 2003 and most of the work has taken place in Seagull offices in Horten. The writing of the report has been carried out at Agder University College in Grimstad.

I would like to thank my supervisor, Qing Hu for inspiration on the subject and valuable guidance. I would also like to thank Oscar Johansen at Seagull for his valuable comments during my work.

Grimstad, May 2003

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Table of contents

Table of Figures

1 Introduction

Most companies today are very dependent on the use of IT. As the business processes get more complex and the amount of information flow increases, it is important that the IT investments are based on the overall strategic objectives of the company.

1.1 The purpose of the thesis

This study is motivated by the fact that many companies today do not align their IT investments with the overall business strategy and vision. This may result in IT investments that do not support the overall strategy and vision of the company and does not create value. The purpose of this thesis is to see how a well-defined strategy and vision and the Kaplan and Norton's Balanced Scorecard can help, in this case, Seagull AS to invest wisely in IT and align the business processes accordingly.

1.2 Thesis definition (research questions)

The company has difficulty to support all of the customers, and the IT solution does not support the information flow in a proper way. Short-term solutions and a non-flexible system make it difficult to have a reliable system and the risk of loosing data increases.

In order to solve this problem, the following questions have to be answered:

- How is the IT/IS solution and processes working in the operations department today?
- What are the goals and strategies of the company?
- Does the existing processes and IT/IS solution support the main goals and strategies of the company?
- How can the IT/IS solution and processes be improved to fully support the overall goals and strategies of the company?
- What considerations have to be done in the implementation and change process?

The first question will be answered by developing flow charts of the working processes. The other questions will be answered by using the Balanced Scorecard method, which is a method developed by R. S. Kaplan and D. P. Norton. The Balanced Scorecard method is based on Porters theories on competitive strategy and is further developed to translate the strategy into action. The Balanced Scorecard will be foundation when the company invests in a new IT solution.

1.3 Objectives

In order to answer the research questions of this thesis I had to define the primary and secondary objectives. There were two primary objectives in this thesis. The first was to clarify and develop the overall strategic objectives of the company. The second was to specify an IT system for operations department that will help the company to achieve its overall objectives. There were three secondary objectives that were defined. The first was to develop flow charts of the major business processes. The second was to develop the Balanced Scorecard, which includes, Corporate Balanced Scorecard, Technology Balanced Scorecard and Department (Operations department) Balanced Scorecard. The third secondary objective was to suggest an implementation plan for the system.

1.4 Method

This thesis will be based on the case study of Seagull AS and the main questions that need to be answered are why the company has problems and how to solve them. First of all it is important to know how the work processes is currently done. Therefore the first step is to identify and map the current work processes in the operations department. The second step will be to identify and develop the overall strategy and vision of the company. The result of this will be the foundation for the development of the Balanced Scorecard. The third step is to develop the actual Balanced Scorecard based on the overall strategy and vision of the company. Based on this I will specify an IT system for the operations department that supports the Balanced Scorecard and the overall strategies of the company. The last step is to propose how this system should be implemented into the department.

The development will be based on interviews with the top management, department managers and employees in the company. Most of the interviews will be qualitative.

1.5 Theory

The theoretical framework of this thesis is based on the competitive theory of Michael Porter (1985). This theory outlines the basic strategies for companies to gain competitive advantages by managing the five competitive forces with two fundamental strategies: cost leadership and differentiation. However, Porter did not provide specific actions that can be used to implement these strategies. In this thesis, I will use Kaplan and Norton's Balanced Scorecard method to translate the overall competitive strategies of the company into actionable initiative that the company can use. The Balanced Scorecard method focuses on four perspectives that must be considered in order to reach the overall strategies of the company. These four perspectives are the financial perspective, customer perspective, internal business processes perspective and learning and growth perspective. The financial perspective defines how the company should appear to the shareholders in order to

succeed financially. The customer perspective defines how the company should appear to the customers in order to achieve the vision. The Internal business process perspective defines which business processes to excel at in order to satisfy the shareholders and the customers. The innovation and growth perspective define the ability to change and improve in order to achieve the vision of the company. These two theories will be the main foundation of this thesis.

1.6 Main Results

The problems of the company were identified and the corporate vision and strategic objectives were clarified. Objectives and targets at corporate, technology and departmental level have been developed and this will help the company to get better overall performance and perform activities that support the overall strategy of the company.

1.7 Overall arrangement of the report

In chapter two I have described the background of Seagull AS and the problems that the company are facing. Chapter three describes the theories that will be the foundation of this thesis while chapter four describes the method that is used. The operational data is described in chapter five and this chapter also contains the flow charts of the work processes. This chapter also describes the process of the development, issues that were to be dealt with and discussion of the results. Chapter six deal with the process of identifying and developing the overall strategy and vision of the company. This chapter also describes any issues and discusses the results of the process. The seventh chapter describes the development of the Balanced Scorecards and ends up with the result of this development. In chapter eight the results will be discussed and the conclusion of the thesis are presented in chapter nine.

2 Background

2.1 Company Background

Seagull AS is a developer and provider of Computer Based Training programs for onboard training of seafarers. They also have classroom courses for training of seafarers. Seagull's customers are primarily ship owners, and today Seagull AS delivers Computer Based Training to about 1500 ships worldwide, and the number of customers still increases.

Oscar Johansen and Bjørn Braaten created Seagull AS in 1997 with a clear business concept. The business concept was to deliver Computer Based Training onboard ships that cover the increasing need for training onboard ships according to the STCW-95 convention and the ISM code.

The idea of re-training crew was adopted from the aircraft industry. The aircraft industry has been re-training and evaluating their employees for many years in order to prevent human errors that can result in plane accidents. Sten Bengtson, the director of Det Norske Veritas (DNV) in the period 1985 to 1990 wanted to adopt these thoughts into the maritime industry. He took the initiative to develop the Safety Management Class; later regulated by a system called the Safety Management System (SMS); a system to reduce the human errors. Sten Bengtson then took the initiative to consider a concept in the aircraft industry called the Flight Deck Resource Management course. This was an industry standard and the thought was to use this idea on bridge officers' onboard ships. Together with several Norwegian shipping companies and the SAS he ended up with the Crew Resource Management (CRM)- and Bridge Team Management (BTM) Courses. SAS is now the leading provider of BRM courses and this course is used by training centers all over the world. SAS has a large training center on SAS Flight Academy in Stockholm.

The International Maritime Organisation (IMO) adopted this thought and early in the 90's they released the International Safety Management (ISM) code, which is an international law. It is the shipping company's responsibility to follow the ISM code and secure the quality management, re-training and evaluation of the seafarers. Whenever there is an inspection on board, the shipping company has to document that this is done according to the ISM code.

Seagull's business concept has proved to be very successful. By providing Computer Based Training on board the ships, the crew can retrain onboard, reduce the amount of course activity on land and still have the training that is required

from the ISM code and STCW-95 convention. This greatly reduces the expenses the shipping companies have when they send the crew to courses on land.

Seagull AS is divided into five departments, Sales and Marketing, Multimedia, Operation and Support, Finance and Training Courses. The Sales and Marketing department's main goals are to market the products and perform sales activity that end up with closed contracts. The production of Computer Based Training modules is performed in the Multimedia department and this department consists of multimedia designers, programmers and project managers. The Operation and Support department takes care of all the product delivery, support, service and administration of training data for the customers. The Finance department handles all of the economy in the company, which includes accounting, salary, staff, and economy. The Training Courses department mostly performs classroom courses, but this department also produces technical content to be used in the Computer Based Training courses. The structure of the organization is illustrated below.
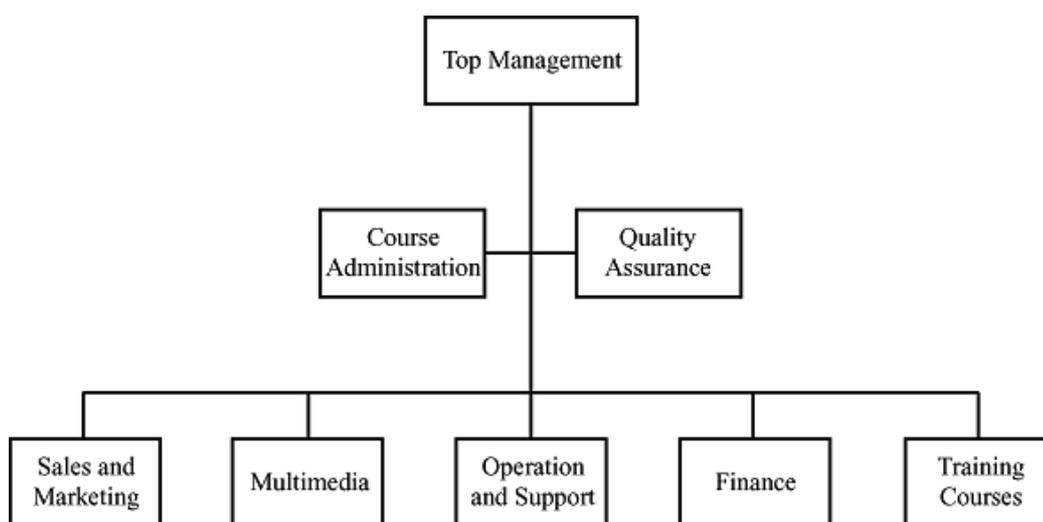
Figure 1 - Organizational Structure of Seagull AS

2.2 Issues and Problems Identified

Currently, Seagull AS has their products onboard 1500 ships and the number of customers increases rapidly. As the number of customers increases, the operations department has more difficulty in meeting the customer's true needs regards to support, product delivery and service. This has become a very critical problem for the company because the number of complaints from the customers increases. The operations department does no have the capacity to answer the support calls within the timeframe that is promised to the customers and the same happens with the product delivery and service.

2.2.1 Support problems

The number of customers is increasing and the number of support enquiries increases accordingly. The current IT and human recourses have difficulties to reply to all of these enquiries within the time that is required from the customers. This support capacity problem has resulted in an increasing rate of customer complaints that verifies that the customer satisfaction is decreasing. Some of the existing customers are reluctant to implement more of Seagull's products until the support issue is solved. The reputation of the company may also suffer if this problem is not taken care of. This is a very serious problem for the company that needs to be addressed.

2.2.2 Service problems

The company provides service to the customers that comprise configuration of training data, software updates, hardware configuration and general follow up. As the number of customers increases, it is difficult for the company to deliver proper service to the customers. Software and hardware configurations are currently based on manual processes as well as the configuration of training data. The company has both lack of IT and human recourses to perform the service in a proper way. The company also plans to provide even more service to the customers in the future but with the current situation, the operations department cannot handle any extension of the service offering.

As the requirements for training of Seafarers increases, the demand for training onboard ships increases. Seagull's business concept is to cover these needs and it is just a matter of time before other companies will try to enter this market. The increased competition and the problems with limited IT and Human resources on logistics, support and service leads to a demand for clearer vision and for the company to focus on strategic objectives. In order to stay competitive and maintain the leading role as a provider of computer based training onboard ships, the company has to define a clear vision and strategy of what they want to achieve. This makes me think that by using Porters theories on competitive strategies as guidance, the company can develop a well-defined strategy. In order to solve the problems in the Operations department the company must define how the overall strategy can be translated into action, not only at a corporate level, but also at department level. I believe that Kaplan and Norton's method the Balanced Scorecard can help the company to define these actions and solve the problems.

The problems above are very common in companies today and therefore very interesting. When investing in a new IT system, there are many considerations to make. Ideally, all investments in each level of the company should support the overall strategies and goals of the company.

3 Theoretical Foundations

3.1 *Introduction*

In this thesis I will end up with a specification of how the IT system in the operations department should function in order to create better performance for the department. This IT system will support the overall strategies of the company and improve overall performance. So, how can IT help to improve business performance? In order to answer this question, it's important to understand how a business can create competitive advantage by using IT.

3.2 *Porters theories on competitive strategy*

The structure of an industry is embodied in five forces (figure 2) that collectively determine industry profitability (Porter and Millar, 1985):

- The power of buyers
- The power of suppliers
- The threat of new entrants
- The threat of substitute products
- The rivalry among existing competitors

These forces can all be altered by the use of IT. IT may increase the power of buyers by for example make product price and information easily available through technology. By doing this the buyers can compare products and prices and make their decision of what product to buy based on this information. By choosing complex software that requires large investments, a business can make it difficult for new entrants to enter the market and create competition. Also, by using IT, it is easier to make flexible solutions and adapt the product development according to customer needs, which again will influence the threat of substitution. IT also makes it possible to automate a lot of processes. This can replace expensive work force and also increase productivity. This may have a considerable effect on the power of the suppliers.
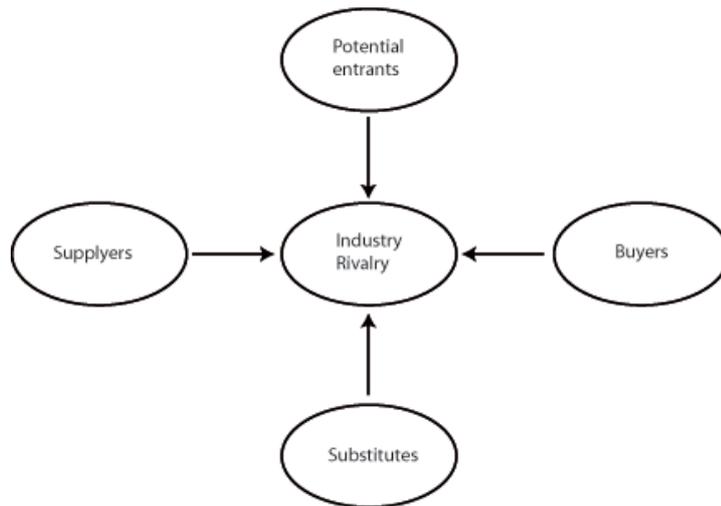
Figure 2 – The competitive forces (Porter)

So, how do we deal with these five forces and create competitive advantage through the use of IT? In order to answer this we have to look at how the IT changes the rules of the competition. The IT is affecting the competition in three ways (Porter and Millar, 1985):

- It changes industry structure and, in so doing, alters the rules of competition.
- It creates competitive advantage by giving companies new ways to outperform their rivals.
- It spawns whole new businesses, often from within company's existing operations

The use of IT in businesses permeates the value chain in all nine categories. Since IT can be used as a tool both in primary and support activities it shows that IT can be used to create competitive advantage.
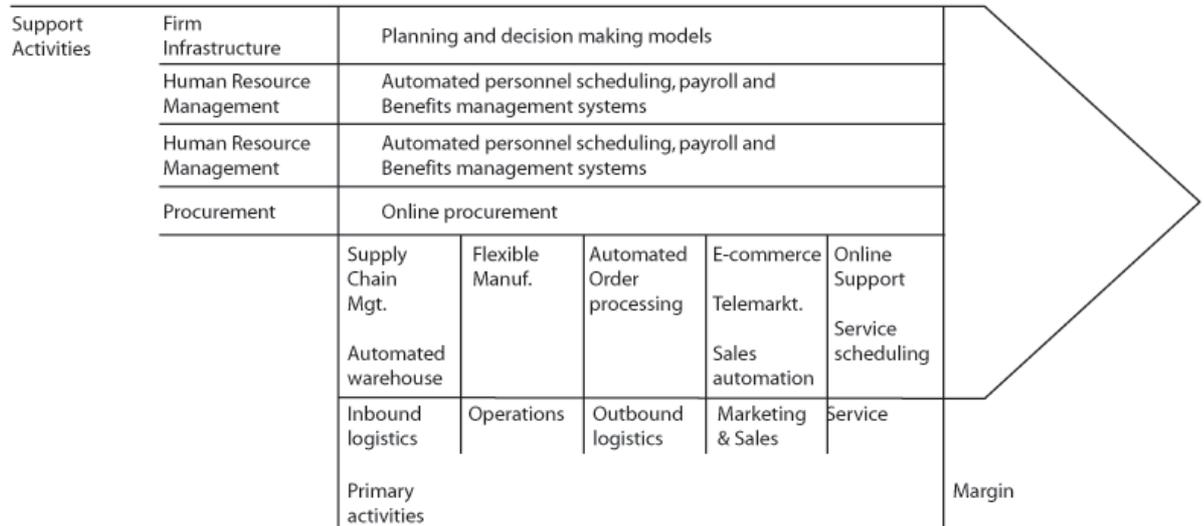
Figure 3 – How the IT permeates the value chain (Porter and Millar, 1985)

When we look at the value chain we see that a business is profitable if the value it creates exceeds the cost of performing the activities. Therefore a business can gain competitive advantage by either performing the value activity at a lower cost, or perform them in a way that leads to differentiation and a higher price. The figure below shows Porter's model on competitive advantage. This model shows how a business can focus on low cost or differentiation and choose a competitive scope. The competitive advantage of using a narrow scope may be that the company can tailor the value chain to one particular segment to achieve lower cost or differentiation. The competitive advantage by using the broad scope may be to be able to have a much wider target segment.
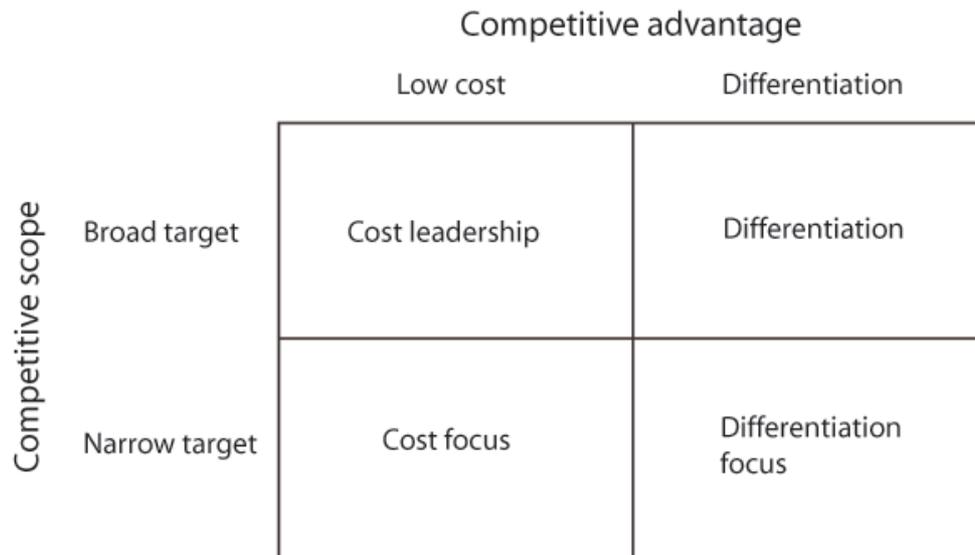
Figure 4 – The competitive strategy (Porter)

By using Porter's theory on competitive strategy, a business can develop a well-defined strategy which purpose is to create competitive advantage. So how can the company translate this strategy into actions, not only the at the top management level, but also in the individual department level, groups and even individual employee level? This is where Kaplan and Norton have developed a method called the Balanced Scorecard. This method has its base in the strategy of the company and translates the strategy into operational terms.

3.3 The Balanced Scorecard

In order to get an overall view of the goals and strategies of the company and translate these into actions, I will use the Balanced Scorecard method as the tool to do it. This will make it easier to choose the most suitable IT solution for the Operations department, which supports the company's overall strategic objectives.

As mentioned, the balanced scorecard method is developed by Kaplan and Norton and is based on Porter's theories on competitive strategy. Porter's competitive strategy theory gives the company the big vision and fundament. The Balanced Scorecard translates the vision and strategy into action.
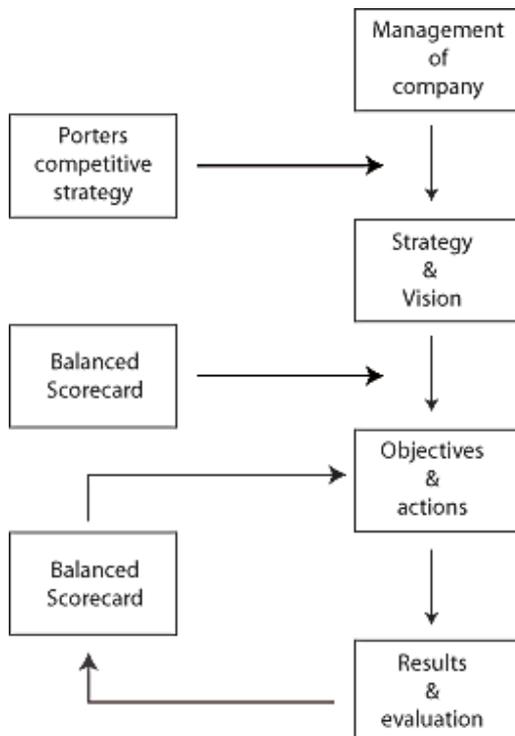
Figure 5 – From strategy and vision to actions and results

The Balanced Scorecard system helps to measure the all over performance and get a comprehensive view of the business. Since it is difficult to provide one single

measure that covers the all over performance in the business, the Balanced Scorecard system includes both financial and operational measures. The financial measures tell the results of actions already taken and the operational measures covers customer satisfaction, internal processes and the organisation's innovation and improvement activities. The operational measures are the drivers of future financial performance.

The Balanced Scorecard helps managers get an overview of the performance in several areas simultaneously. This means that the managers can see how improvement in one area affects another area by viewing view the scorecard. This is illustrated in the figure below.
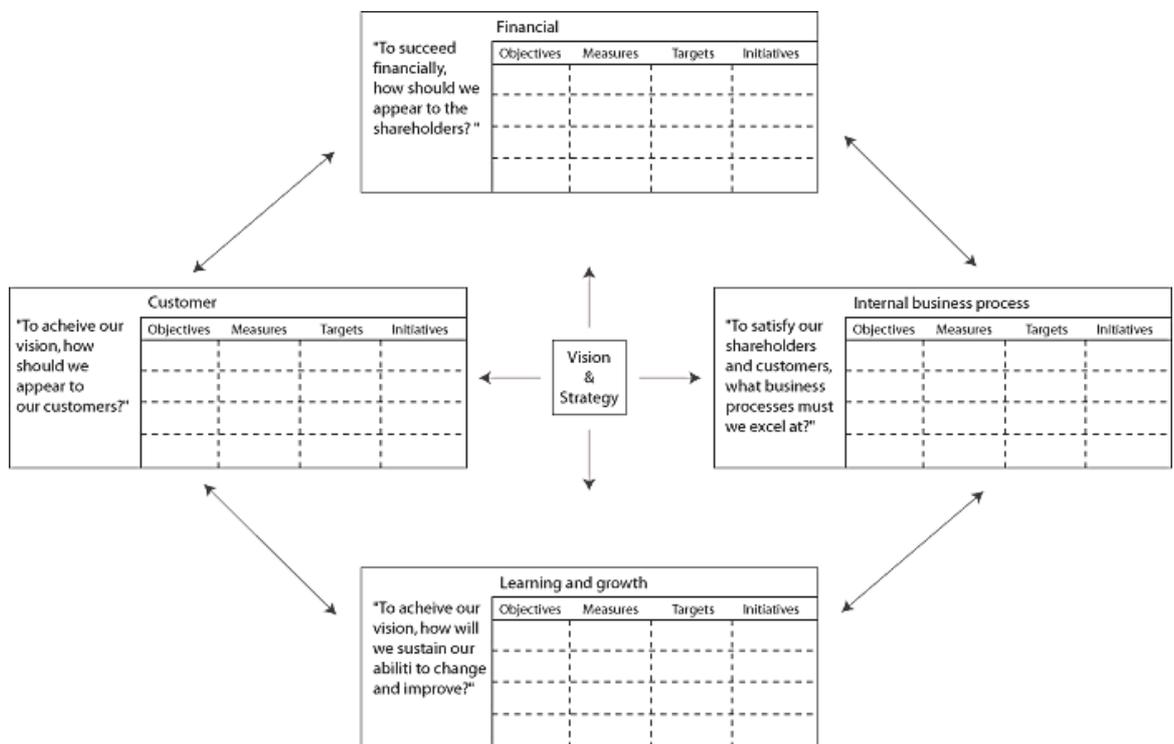
Figure 6 – The Balanced Scorecard (Kaplan and Norton)

The Balanced Scorecard allows managers to view their business from these four perspectives:
1. Customer perspective (How do customers see us?)
2. Financial perspective (How do we look to shareholders?)
3. Internal Business Processes perspective (What must we excel at?)
4. *Learning and Growth perspective (Can we continue to improve and create value)*

1. Customer perspective

In this area the Balanced Scorecard gives information about the customers. Measures of customer satisfaction is very important as well as other measures like, number of returning customers, customers referred by other customers and market share.

2. Financial perspective

Financial performance is the key factor in determining the company's worth. To measure the financial performance some of the most important values are ROI, ROA, profitability and stock price.

It is of critical importance that company's has the ability to translate operational performance to improved financial performance. To achieve this the drafters of the Balanced Scorecard needs to lay out what would become of the excess capacity, improved cycle time and other improvement that might result in better operational performance. It is important to understand the linkages between operations and finance for the Balanced Scorecard to be a success.

3. Internal Business Processes perspective

In order to satisfy the customer needs and to stay competitive there are several considerations to make. Typical measures will be downtime, work in process, rework, cycle time and maintenance expenses and these factors affects delivery time, quality and productivity, which again is important factors to stay competitive and satisfy customers needs.

4. Innovation and Learning perspective

To stay competitive it is important for the companies to make continuous improvements to their existing products and processes while at the same time introducing new products and services with expanded capabilities. Typical measures will be new products, number of patents number of employee suggestions and revenue per employee.

4 Method

4.1 Introduction

This thesis is based on the case study of Seagull. The main research questions to be answered are why the operations department has problems, how the current IT and processes work, does this support the main goals strategies of the company and how can these IT solution and processes be improved to create better overall performance? The "how" and "why" questions are very dominate in this thesis. The nature of these questions implies that this study should be based on the case study strategy (Yin, Robert K. 1994).

There are both strengths and weaknesses to the case study strategy. One of the main strengths of case studies is the access to direct observation and systematic interviewing. The case studies unique strength is its ability to deal with this full variety of evidence beyond what might be available in conventional case studies. The weakness of the case study strategy is that this approach may provide little basis for scientific generalization. Traditional prejudices against case studies also says that too many times the case study investigator has allowed equivocal evidence or biased views to influence the result of the study.

In order to answer the questions in the research, I have decided to see how Porter's theories on competitive strategy and Kaplan and Norton's Balanced Scorecard method can help the company. The collection of information will be based on mostly qualitative interviews and existing documented information.

Kaplan and Norton introduced balanced scorecard in 1992. The Balanced Scorecard is a performance measurement method and also a strategic management tool having four different perspectives to the success of a company. By not only focusing on financial indicators, the Balanced Scorecard also includes non-financial performance measures and objectives that driving towards better performance.

The method in this thesis is to first collect all of the historical and operational data based on mostly qualitative interviews. Then I will clarified and develop the overall strategy and vision of the company together with the top management and based on this, develop the Balanced Scorecard. The results will be analyzed and end up with suggestions and conclusions.

4.2 Step 1 Collect historical and operational data

Collect data on how business- and work processes work today and get historical data on how this has developed. There will be a focus on the Operations department.
The data will be based on qualitative interviews with the following people:

- Top management
- Department managers
- Employees

Based on these interviews I will develop:

- Organisation charts
- Process charts
- Historical description of the problem

4.3 Step 2 Develop the Balanced Scorecard

This method will be based on interviews with the top management and department management. The figure below shows the three stages of how to develop the Balanced Scorecard.
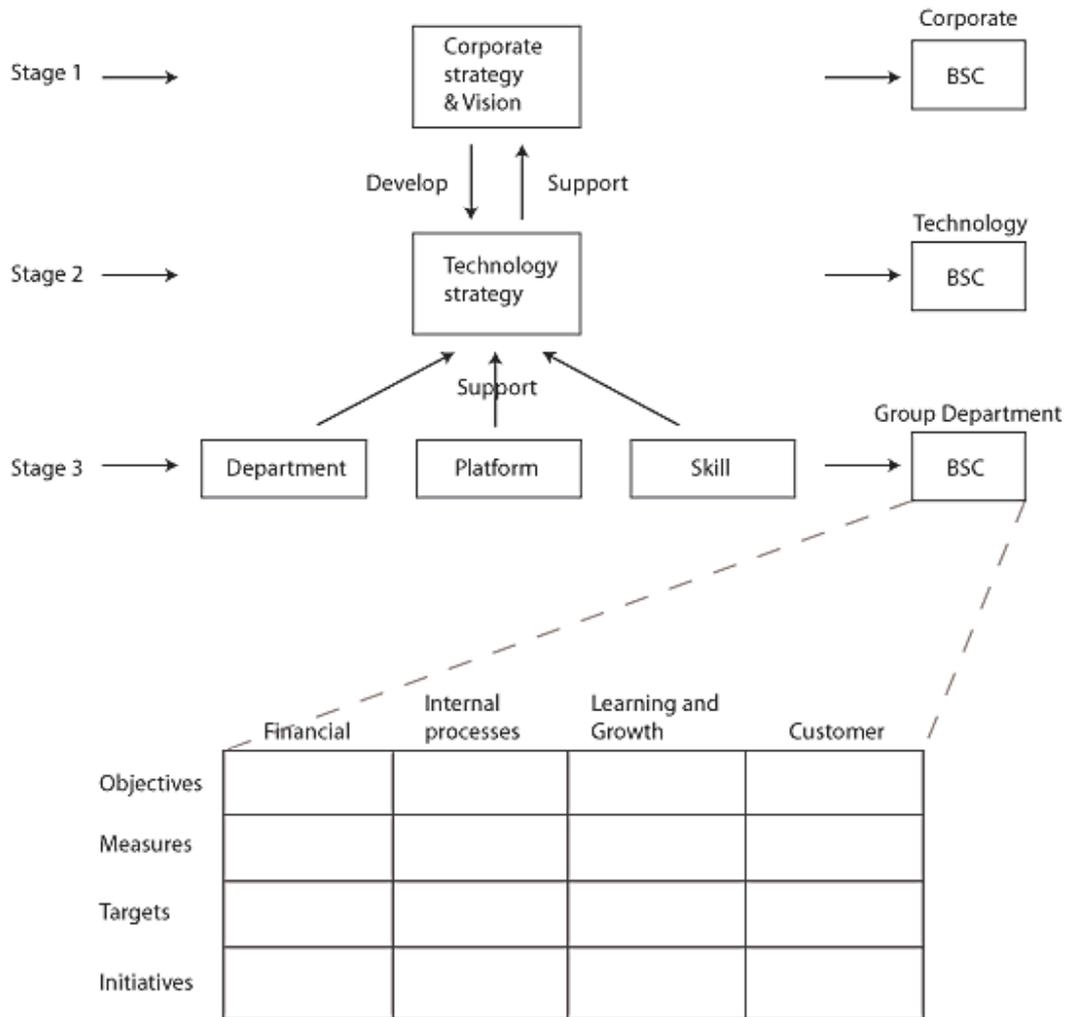
Figure 7 – The stages in developing the Balanced Scorecard

Each of the stages will have their own balanced scorecard, but it is important that the lower stages support the upper stages. Development of strategy maps will be important when developing the Balanced Scorecard in each of the three stages.

4.3.1 Stage 1

The corporate strategy and vision will be identified and developed, by performing qualitative interviews with the top management of the company.

The main questions will be:

- What are the main objectives of the company?
- How can these objectives be measured?
- What are the targets?

- What actions have to be taken to reach the targets?

The questions above will be relevant to all of the four perspectives in the Balanced Scorecard.

- Financial perspective (How should we appear to our shareholders)
- Internal processes (What business processes must we excel at)
- Learning and growth (How will we sustain our ability to change and improve)
- Customer (How should we appear to the customers)

4.3.2 Stage 2

The technology strategy will be identified and developed, by performing qualitative interviews with the top management, Operations manager and the multimedia software development manager. The questions will be very much like stage one, but they will be focused on technology.

4.3.3 Stage 3

The department (Operations department) strategy will be identified and developed, by performing qualitative interviews with the top management and the department manager and employees of the operations department. The questions will be very much like stage one but they will focus on this department only.

4.4 Step 3 Analyse and suggest possible improvements

Analyse whether the technology strategy, department strategy and processes support the corporate strategy and goals and suggest possible improvements. The method of doing this will be mostly to carry out qualitative analysis

- Define how the IS/IT and processes can be improved to support the overall strategy
- Develop a suggestion to an IS/IT requirement specification

The targets and initiatives that is developed in the Balanced Scorecard is a major part in defining possible improvements to both technology and business processes.

4.5 Step 4 Implementation plan

Use theories from Kaplan and Norton and other theories of current interest to propose a plan for implementation.

5   Business Processes at Seagull AS

5.1   Introduction

In order to answer the question "How can the IT/IS solution and processes be improved to fully support the overall goals and strategies of the company?" defined in the thesis definition, I had to find out how the internal processes and information flow is today. As mentioned in the thesis definition, the focus will be on the Operations department. Therefore, I developed the flow charts on the work processes in that specific department to see what were the operational problems. However, I developed flow charts on work processes in other departments that exchange important information with this department. The reason to use this approach is to get the total overview of how the other departments interact with the Operations department and how they share information. In this case it involves the process from when the sales and marketing department closes a contract to when the product is delivered and invoiced by the economy department.

In this chapter I describe the products, company structure and the major business processes. I describe each of the departments and the major business processes in detail and show how they fit into the overall business of Seagull. Then I identify the operational problems that occur in each of these processes.

5.2   Main Product offering

In order to understand the organization and the major business processes, I have described the product offering of the company. These are described below. (Ref: www.seagull.no).

5.2.1   Onboard Library (OBL)

The "Onboard Library" is an expanding collection of computer-based training modules that allows the crew to study and be tested in a number of subjects while never having to leave the ship. These modules starts and report results to the Seagull Administrator. The library covers subjects such as navigation, cargo handling & stowage, operation & safety, marine engineering, electronic & controls engineering, radio communications and maintenance & repair.

5.2.2   Seagull Administrator

Seagull Administrator is a database program that has been developed in co-operation with several shipping companies. The programs main purpose is to register all performed onboard training, both Computer Based Training in which results are registered automatically, and Company Specific Training, which is defined by each company. The user can configure information such as job titles, company specific training and vessel types in order to comply with each individual

companies needs and requirements. All Computer Based Training modules developed by Seagull and its collaborative companies may be started from the training library menu that is part of the Seagull Administrator. All activity in computer based training modules regarding completion rate and score is recorded. A comprehensive report generator will create a number of reports covering individuals, vessels and the entire fleet. Export and import functions will synchronies recorded data from various locations. With assistance from Seagull, Lists from the shipping companies crew personnel system can also be directly imported.

5.2.3 Competence Evaluation System (CES)

CES is a computer-based evaluation tool that consists of a database of questions for use in assessing the skills of the crew. Approved by the Norwegian Maritime Directorate, this program has become a popular way for many of today's leading shipping companies to make objective assessments of both new and existing crew.

5.2.4 Classroom courses

The classroom courses are based in the experience of professional seafarers that have specialized in teaching their skills. The participants order the courses in advance and travel to Seagull offices where there are classrooms and simulator equipment. As part of the total training concept the company also offer correspondence courses. These allow the participants to study onboard at their own pace and then, upon completion; they may take their one-day practical course and exam.

5.3 *Organizational structure and major business processes*

As described in the company background section, Seagull AS is divided into five departments, Sales and Marketing, Multimedia, Operation and Support, Finance and Training Courses. The Sales and Marketing department main goal is to market the products and perform sales activity that end up with closed contracts that can be passed on to the Operations department for delivery. The production of Computer Based Training modules is performed in the Multimedia department and this department consists of multimedia designers, programmers and project managers. When the products are finished in this department, they are passed on to the Operations department for mass production and delivery to customers. The Operations department takes care of all the product delivery, support, service and administration of training data for the customers. The finance department handles all of the economy in the company, which includes accounting, salary, staff, and economy. The Training Courses department mostly performs classroom courses, but this department also produces technical content to be used in the Computer Based Training courses.
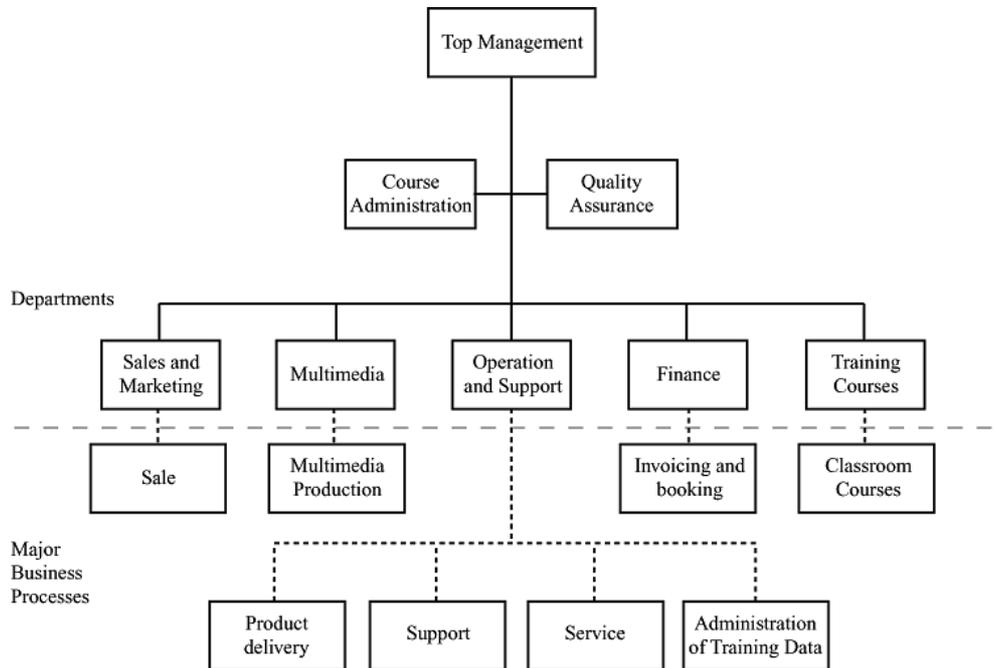
Figure 8 – The organizational structure and the major business processes

In this thesis the most important and interesting business processes will be those where the Operations department is part of the process. This is because this is where the company has problems. The Major business processes where the Operations department is involved is sale and delivery of products, customer support and customer service. The costumer service includes the administration of training data for the customers. The first of these major business processes is performed across several departments. The Sales and Marketing department do the sale and closes the contract. The Operations department handles the contract and the products are sent to the customer. Then the Finance department does the final booking of the sale. These processes are described in the next section.

The purpose of this case study is to help the operations department to specify an IT system that supports the overall strategy and vision of the company. It is therefore necessary to limit the thesis to focus on the problems that the Operations department has and see how these can be solved by using the method described in chapter four. The next section therefore describes the major business processes in the Operations department and identifies the problems for each of the processes.

5.4 Work processes in the operations department

By doing interviews with the Operations manager and the employees in the department I managed to identify all of the processes. The human recourses in the operations department consist of three employees. These are the Operations

Manager, the Senior IT Consultant and the Logistics Manager. The following processes where identified with the respective positions:

Logistics Manager

- Ordering of CBT
- Delivery
- Invoice
- Stock holding

Senior IT consultant / Department Manager

- Support
- Ordering of HW/SW
- License administration
- Set up and configuration of HW/SW
- Administration of training data

Department Manager

- After sale
- Configuration of SG Administrator and implementation at the customers
- Decisions on which type of HW to use

As the respective employees described the tasks, it quickly showed that some tasks where very simple while others where more advanced and time consuming. The most time consuming tasks for the Senior IT consultant and the Operations manager showed to be support and administration of training data. This is also where the department has problems to deliver in time. The symptoms of this are that the company begins to receive complaints from customers that don't get the support and services within the time that is agreed on in the contract. The most time consuming tasks for the Logistics Manager showed to be the process of ordering CBT, delivery of products and invoicing. I will therefore focus on these processes in this thesis, since this is where the Operations department often fails to deliver in the time that is required from the customers.

5.4.1 Sale

There is a difference between the work processes of the Logistics manager and the work processes of the other employees in the Operations department. The Logistics manager interact with other departments in much more extent than the others. First, he has to receive a closed contract from the Sales department, then deliver the requested product to the customer and send a copy of the invoice to the Economy

department. In order to get the full overview of this process, I did interviews in the sales department and the economy department. This ended up with a flow chart of the entire process from when a contract is closed, until the product is delivered to the customer and all necessary information is sent to the economy department where it is booked.

I will first look at the sales process. This is the process of where the customer is first introduced to the new concept until a contract is closed. The marketing and sales process is a very prioritized process of the company. This is much because it is important to expand the market as fast as possible to prevent other from creating any real competition. Since the focus is on the Operations department processes in this thesis, I have not described the entire sales process. The process is described from the contract is closed and all this data is transferred to the Operations department.

When the sale is completed and the contract is closed, the sales people register all the information necessary about the sale into the CRM system (Super Office). This is information about the customer and what products that shall have. The information is then sent to the Seagull secretary in paper and she copy it and sends copies to the economy department and the operations department. Other information about the sale is sent by mail directly from the sales person to the Logistics Manager. This means that the Logistics Manager receives the information about the sale through two channels, one in paper and one by mail. The sales employees feel comfortable with this process and have no problems of significance when performing their work. The CRM system works very well internally in the sales department where all of the sales persons use this common database to keep track of the customers.

```
┌─────────────────┐
│ Register the    │
│ following       │
│ customer data   │
│ into SO:        │
│ - Name          │
│ - Price         │
│ - Discount      │
│ - Address       │
│ - Nr. of ships  │
│ - Which cd's    │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│ Other Info sent to │
│ Operations dep. │
│ by mail:        │
│ - Config of Adm. │
│ - Training matrix │
│ 95% of the training │
│ matrixes are done │
│ during the sale │
│ process         │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│ Contract is sent to │
│ Seagull secretary │
│ in paper        │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│ Copy to economy │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│ Copy to         │
│ Operations dep. │
└─────────────────┘
```
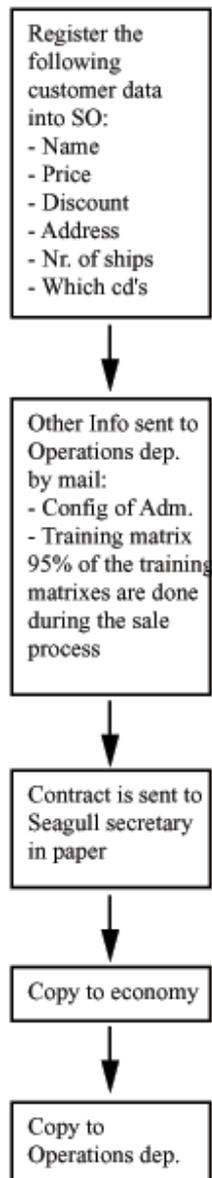
Figure 9 – The sales person closes the contract

5.4.2 Delivery

When the Logistics Manager receives a copy of the contract and the rest of the sales information by mail, he manually registers the contract information into the local database in the Operations department. This means that none of the information about the customers from the CRM system is actually shared. The contract information is manually generated from the CRM system and sent as a print out to the Operations department. The Logistics Manager then manually puts the required information from the contract into the local database. This database contains information about each customer and what products they currently have onboard

their ships. There are two very important types of data inside this database. That is the revisions that the customers have of each product onboard and how the Seagull Administrator is configured. For each ship a product content list is printed out and the recipient country is manually added to the print out. The Logistics Manager updates the database according to the contract information and specifies what products that must be sent to the customer. If it is an existing customer and a configuration of the Seagull Administrator is required, the Operations manager or the Senior IT consultant performs the configuration and sent update to the customer by e-mail. The Logistics Manager then wraps the package and sends the agreed products to the customer together with an invoice. All of the content lists is then archived and a paper copy of the invoice is archived and sent to the economy department for booking.

```
┌─────────────────┐
│ Register the    │
│ following       │
│ customer data   │
│ into the database: │
│ - Name          │
│ - Price         │
│ - Discount      │
│ - Address       │
│ - Nr. of ships  │
│ - Which cd's    │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│ Other Info rec. │
│ from sale by mail │
│ is registered into │
│ the database:   │
│ - Config of Adm. │
│ - Training matrix │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│ Print list of   │
│ content         │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│ Write the recipient │
│ country on the list │
│ of content      │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│ Wrap package and │
│ send by mail    │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│ Archive copy of │
│ list of content and │
│ Send invoice to │
│ customer with   │
│ copy to economy. │
└─────────────────┘
```

Figure 10 – The Logistics Manager delivers the product

There are several problems in this process that is worth looking at. One common problem is that the contract information from the sales department does not always contain all the necessary information required or some of the information is wrong. The process of registering the data from the contract is done manually and the result of this is that there is a certain rate of human typing errors. The internal database in the logistics department contains an overview of all existing versions of

the software and configurations onboard the customer's ships. It is critical that this database is kept updated at any time while this decides whether the customers need additional updates to their system in order to work with new products. At several occasions the department have sent out products to the customers that does not work on board the ship. The reason for this to happen is often that the Seagull Administrator onboard is not correctly configured to run the new products. A configuration of the Seagull Administrator is performed when new revisions of the existing CBT modules requires for it. As an example, it can be a new revision of the Onboard Library that can be adding of a chapter to an existing CBT module, and the Seagull Administrator will have to be configured according to it in order to display the training reports and results correctly. The result of this is that each time a customer receives a product that does not work, they address Seagull for support on the issue. The support team then have to identify the problem and re-send a new configuration of the Seagull Administrator to the customer.

5.4.3   The booking process

The Finance Manager gets confirmation about the sale from the Logistics Manager. This confirmation is a copy of the invoice sent to the customer. This invoice is then manually registered into the economy system. Then the information is printed out and archived.

Ingoing Voucher/invoice?

Yes → Get signature from responsible

No →

Enter the following customer information into economy database:
- Name
- Price
- Discount
- Invoice date
- amount total
and other data

Booking
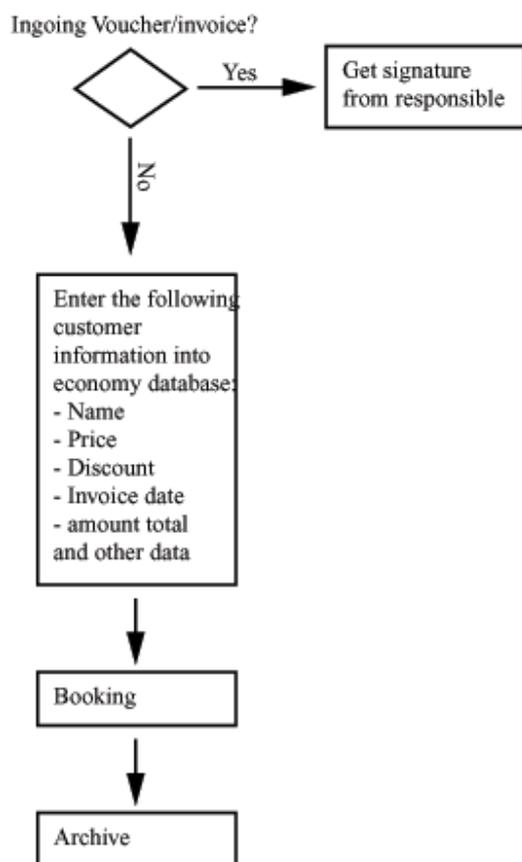
Archive

Figure 11 – The Finance Manager Books and archives the invoice

The problem in this process is that all of the information about the customer and the delivery is sent in writing. This means that all of the information will have to be registered manually by the Finance Manager.

5.4.4 Support

One of the most time consuming work processes in the Operations department is the support of the customers. I quick study done by the Senior IT Consultant showed that each year, one man-labor year is used to do support the customers and it increases as the number of customers grows. It is therefore interesting to see how the current work process is done when it comes to support of the customers. When the customers need support they mostly addresses the support team by mail. All of the enquiries have to be answered manually and this has showed to be a huge problem for the department. As the time passes, the rate of complaints increases and as the number of customers increases it is even more difficult for the support team to answer all the support enquiries from the customers. An interesting observation is that the company has no other media for support as for example support area on their web site that could answer the most common question. All of

the support has to be processed by the support team directly through mail, fax or phone.
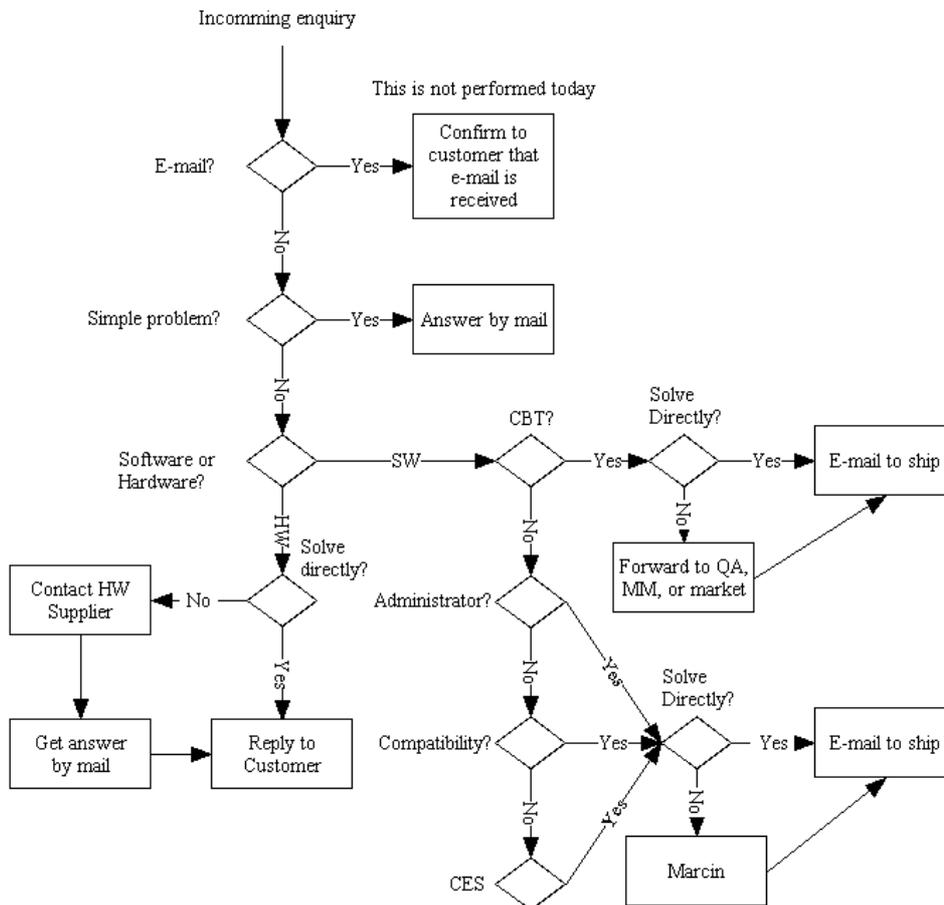
Figure 12 – Flow chart of the support process

The problems regards to support seem to be capacity issues. The Operations department does not have the capacity to answer all of the incoming support enquiries within an acceptable time limit. Most of the support enquiries are relatively simple problems, but the Operations Manager and the senior IT consultant will handle all of these. In the past years this has not been a problem because there has been only a limited number of support enquiries. During the last year the number of support enquiries has increased considerably. This means that support work consumes more and more of the Operations manager's and the senior IT consultant 's total capacity.

5.4.5 Administration of training data

The Administration of training data is an important part of Seagull's products. All the results of the Computer Based Training are stored in the Seagull Administrator. Each ship has the Seagull Administrator installed on the ship with the training results of the crew on that specific ship stored inside. A central database is located

at Seagull that contains the results and data of all of the crew in the shipping company. Each shipping company has their own central database that Seagull hosts as part of the service. All of the ships send their results to Seagull in fixed intervals so that the central database is updated. Whenever a shipping company transfers crew from one ship to another, they send a request to Seagull about the results and data of the new crew. Seagull then looks up in the central database and sends an update by mail that updates the Seagull Administrator onboard. The configuration of the administrator is currently done manually. The process starts with an incoming request from the customer by e-mail. This request contains new crew that will be transferred from one ship to another inside the shipping company. This means that all of the new crew data must be transferred to the Administrator onboard the destination ship. The central database in Seagull is updated with the crew data and the new configuration is sent to the destination ship by mail.

Incoming request Containing crew and id
on existing crew to a new ship

Open
Administrator
choose Config
and set the
correct settings

Connect to the
Company's
database

Check that all
crew is in the
database

Check if the
crew have any
training records

Generate reply
mail

Enter the following in the mail:
- the crew that is not present in the db
- The crew that is present but:
- has no tr. records
- has tr. records, the number and what type of
training

Open export

Choose crew

Generate file

Attach file to
mail

Send

Figure 13 – Administration of training data

The handling of training data is a very time consuming process and a quick study showed that three and a half hours where used each day to administer these data and send updates to the ships. The problems that the company is facing are that this process requires a lot of resources. Most of the processes are done manually and the amount of incorrect configuration sent to ships increases. This again results in support enquiries from the customers. Each time an incorrect configuration is sent to a ship the configuration process will have to be done from the beginning.

5.5 Practical Issues

The process of developing the flow charts was itself relatively straightforward. However, when it came to the internal work processes in the operations department there where some issues regards to available resources to interview. It was very difficult to arrange meetings with the Operations manager because he was mostly busy. The result of this was that we often had to cancel our appointments. The reason for this was that the Operations manager had to support and service the customers and this had first priority. This also shows that the department has difficulties to support and service the customers as they grow in numbers.

5.6 Discussion

There were several interesting observations to make when analyzing the Flow charts. After all of the interviews were finished, it was pretty clear that there were almost no automatic work processes in the various departments. It also showed that the manual processes were quite time consuming. The manual processes also results in human errors, which again increase the amount of support enquiries and re-work.

The flow chart also reveals that several departments perform some of the same processes. An example of this is that the sales departments register all of the information about the customer and the contract into the CRM system. The operations department receives only a print out of this information and thereby has to re-register this information into the internal system of the department. The Economy department has to do the same operation when it receives the sales confirmation from the operations department. This means that this operation is done three times in three different departments and shows that there is no sharing of this data among these three departments. The illustration below shows how the information has to be manually registered into each of the systems in the three departments.
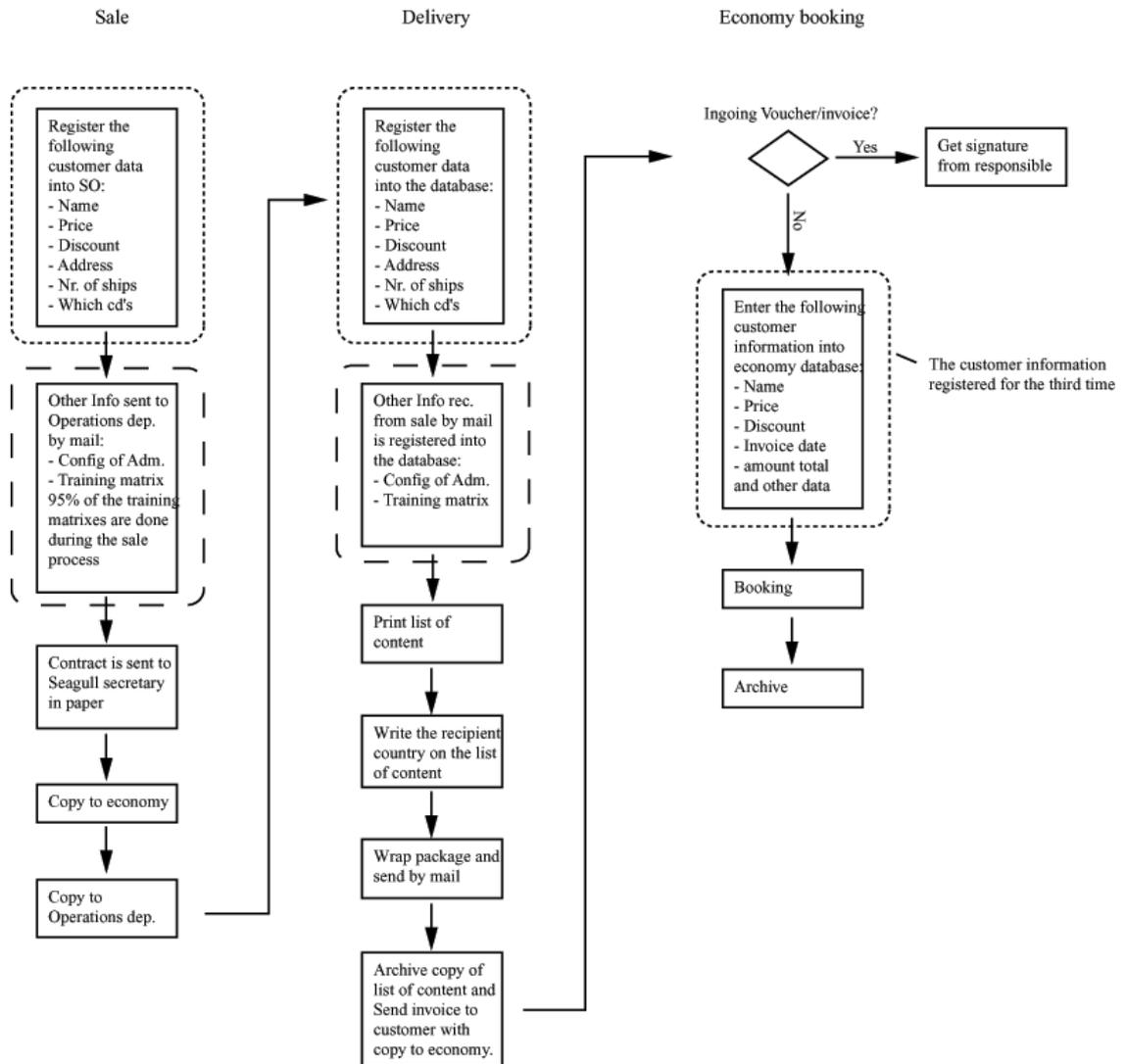
Figure 14 –How information is transferred between the departments.

Some of the main problems in the delivery process are that the sales information that is received from the sales department often contains wrong information about the customers. The result of this is that the customer may experience to receive a wrong delivery. This again, results in more support enquiries and re-work.

The support process also contains some interesting information. The only way the customers can get support is to contact the support team directly by phone, e-mail, or fax. There is no automatic service that enables the customers to support themselves, e.g. available FAQ that could cover the most common problems and release more capacity for support on more complicated problems. The entire support process is totally dependent on human manual work.

When it comes to the administration of training data, we can see similar tendency of manual operations. The requests from the customers are received by mail and have to be manually registered into the database and configured. This configuration has to be sent back to the customer. This is a very time consuming operation and at this moment the company is working on a solution that can do this job automatically.

A very interesting observation is that there is no way that the information flow is synchronized or automatically shared among the departments. During the interviews of the Operations Manager it was also evident that the purchase of software and hardware were only based on short term planning with the purpose to solve one defined problem. This implies that many of the operational problems are due to the lack of overall strategic objectives from the top management to the department level. No one in the company knows clearly where the company is heading for the next three to five years except from the top management. The result of this is that there is lack of coordination among the departments and incompatible systems are installed that does not support a flow of information through the company. I think that the Balanced Scorecard can be a helpful tool to address these problems. By using the Balanced Scorecard, the strategic objectives and actions can be defined not only on top management level, but also on department level. By developing a balanced scorecard, the strategic objectives can be communicated through all levels in the company with actions that support the overall strategy and vision of the company.

In the next chapter the corporate vision and strategy is developed. The development of the Balanced Scorecard in chapter seven will be based on this overall strategy and vision.

6 Corporate strategy and vision

6.1 Introduction

The corporate strategy and vision of the company is the foundation for this thesis. One of the most distinguished features of the Balanced Scorecard is the focus on the strategy and vision at the corporate level of the company. This means that everything starts at the top. Only after the top vision is clarified, then it is possible for such vision and strategy to be translated into action at the operational level and individual level. The development of the Balanced Scorecard will therefore be based on the overall strategy and vision of the company, and it is therefore very important that the company has a clear definition of where they want to go in the future. The important work of this chapter will therefore be to identify and clarify the overall strategy and vision of the company. In this chapter I will describe the process of identifying and defining the main strategy and vision of the company based on Porter's theories on competitive strategy. Then I will end up with a clear definition of where the company is heading.

6.2 Development of the corporate strategy and vision

Seagull AS had no well-defined written strategy and vision, but the top management knew pretty much in what direction they wanted the company to go. Therefore, a substantial part of this thesis was to identify and develop a clear overall Strategy and Vision in co-operation with the top management. Several interview sessions with the top management was a part of this work and it ended up with a satisfying result.

As mentioned earlier, the business concept of Seagull AS is to do concept sale and offer a new solution to the customers that covers the increasing needs for training onboard ships according to the STCW-95 convention. Seagull has no competitors at the present time that delivers equivalent products or services to this market; however, there exists video solutions that serve the same purpose. Seagull's products are actually substituting these other products by providing a new and more effective way to manage the training onboard. By providing both the training content and the management tools to administer the training records, it is easier to do the training onboard and keep track of it. Since the company currently doesn't have any competitors, an important part of the strategy is to increase the market share and to grow rapidly before any other company can create competition. Currently Seagull AS has their products onboard approximately 1500 ships and the goal is to reach 5000 ships within the next three to five years.

By looking at Porters theories on competitive forces, we see that there are several areas where Seagull can strengthen their leading role. By looking at this theory, we see how seagulls approach can affect these forces and strengthen the competitive advantage.
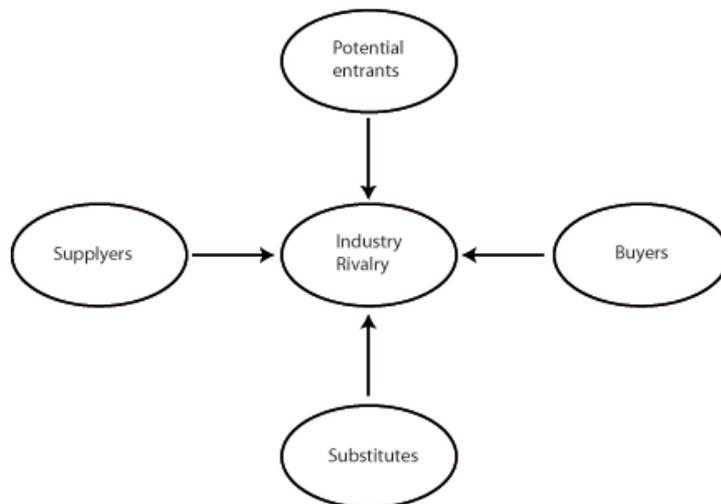

Figure 15 – The competitive forces (Porter)

Potential entrants:
One important observation is that the Internet access onboard ships are very limited. This means that each individual ship needs a standalone system that can run the training content and administer the training records. Currently there are no competitors that deliver an equivalent system to work as standalone onboard ships. This approach requires a quite complex system that can synchronize the training records among the ships and a central database at Seagull. The system itself is quite different from a web-based solution. The point is that this makes it difficult for competitors to enter the market because of the complexity of developing and delivering a similar system.

Buyers:
At this point the buyers have no other options to choose from regarding the same type of products and services which again strengthens the competitive advantage for Seagull AS

Substitutes:
Seagull's products are itself substitutes for video training of the crew. By increasing the market share quickly and making Seagull's products standard onboard the ships, it will be much more difficult for other competitors to find substitutes for the system. The reason is that it may require more risk and workload for the customers to change.

Suppliers:
All of Seagull's products are developed from scratch internally in the company. This means that the cost of doing this depends on the internal processes of the company. By having efficient internal production the company will have a competitive advantage.

Based on this research, how will seagull actually get competitive advantage and what competitive scope should they choose? Should the company focus on cost or differentiation and should the company have a broad or narrow target?

Competitive advantage

	Low cost	Differentiation
Broad target	Cost leadership	Differentiation
Narrow target	Cost focus	Differentiation focus

(Competitive scope is shown along the vertical axis)
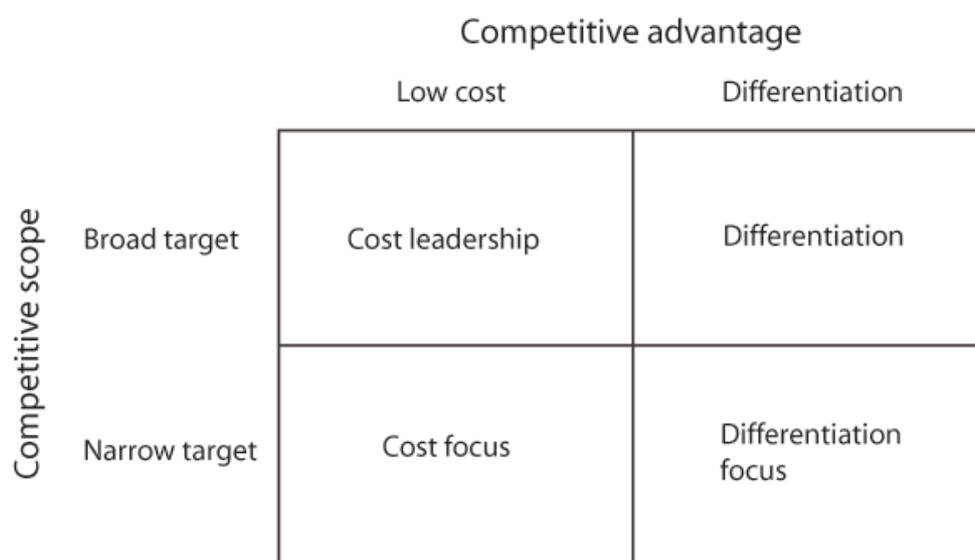
Figure 16 – The competitive strategy (Porter)

These questions can be answered by looking at the rest of the maritime industry. The management of Seagull has discovered that the service and support for products delivered to ships from other companies is poor in general. Examples of this can be support and service from the suppliers of products like, Radar systems, Electronic maps, navigation systems, cargo surveillance systems etc. The Seagull management sees that by differentiating on the quality of support and service, the customers are more interested to buy the products and experience has actually proved it to be correct. The cost focus is of course relevant, but then because of no current competitors the cost of the product can only be compared to the cost of sending the crew to land based training. Currently Seagull focus on narrow target that is to provide training onboard ships only, this showed to change a bit when we discussed what should be the vision of the company.

The vision of the company is to be established as the leading provider of technology-based training to be used by schools to educate Ships officers. This has to be taken into consideration when the primary strategy is put into action. The primary strategy of the company is to expand from 1500 to 5000 ships, but the vision is to still, at a later time have the option to cover maritime education. This means that the company may need to expand their competitive scope to broaden and suit two different customer types. The company wants to increase their leading role as providing of Computer Based Training on board ships, but they still want to have the ability to move in on other markets at a later time. This is illustrated in the figure below. The figure illustrates the current investment of the company and the potential markets. The idea with this figure is to illustrate the possibilities for the company in the future. By having a clear view of the possibilities, the strategic objectives can be defined.
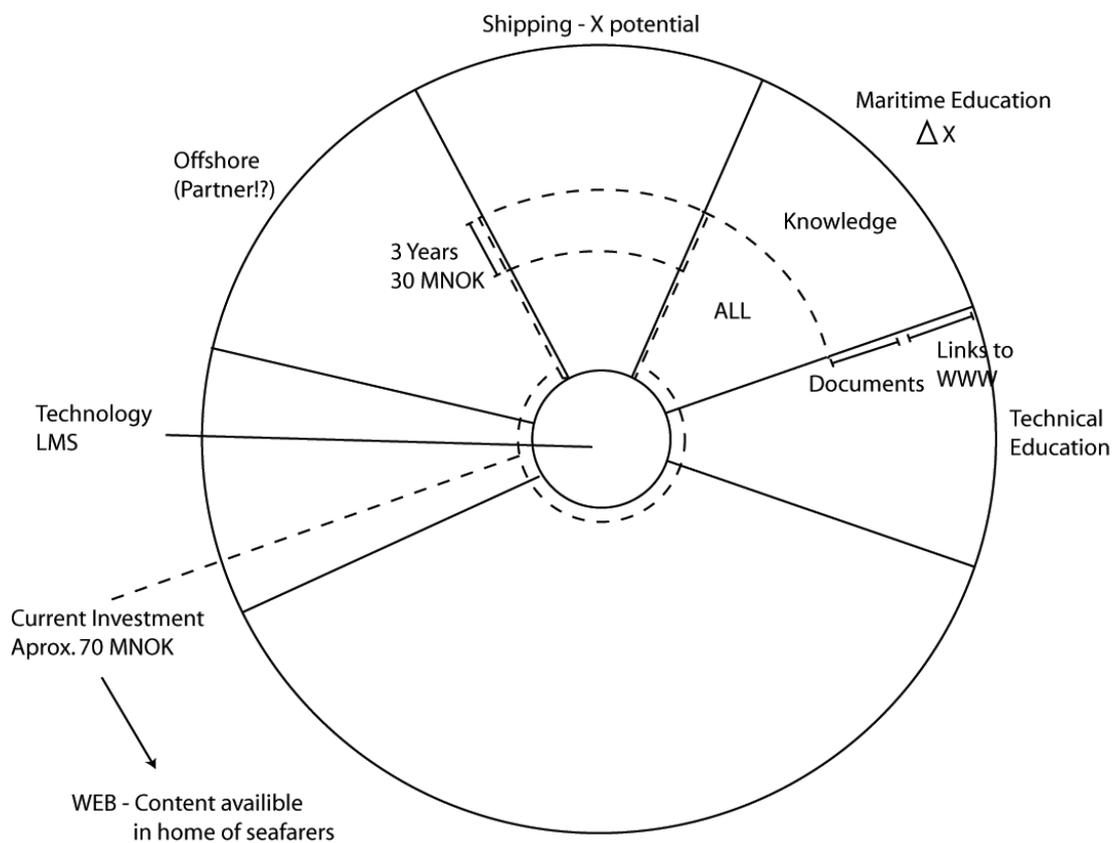

Figure 17 – Illustration of Seagull's current position and strategic possibilities

6.3 Results

In co-operation with the top management we ended up with a well-defined overall strategy and vision.

The strategy of Seagull AS:
Strengthen the leading role as a supplier of technology-based training onboard ships. The goal is to expand from 1500 to 5000 ships worldwide within three to five years.

The strategic objectives of the company are as follows:

- Be the leading provider of Computer Based Training for use onboard ships
- Provide the best training systems for this market

The vision of Seagull AS:
Be established as the leading provider of technology-based training to be used by schools to educate Ships officers.

6.4 Discussion

The strategy of the company is to increase the market share considerably. This means that the marketing and sales department will have to work effective in order to reach this goal. The idea is to grow rapidly so that it is difficult for new potential entrants to create any competition. This means that, the faster the growth of the market share is, the better it is for the company regards to keeping the market from potential entrants. In order to increase the market share as fast as possible, it is important to identify what drives the rate of growth in market share. In order to grow more rapidly, the time of the sales process from the first meeting with the customer to the contract is closed should be decreased. How I see it is that the only way of doing this is to identify which criteria's the customers have when they choose whether to buy the solution or not. If we can identify these criteria's and offer a solution that supports this, the time of the sales process will decrease because it is easier for the customer to decide more quickly if all of their needs are met.

The Customers of seagull AS are ship owners and shipping companies. In order increase the market rapidly; the company has to know what forces that drive the customers to choose Seagull's Solution.
There are two main forces that drive customers to choose Seagull's solution:

1. Seagull's Marketing and sale activity
   a. The impression that is created in the marketing and sale process
   b. Tryout of the product

2. The rub-off effect from the exciting customers and Seagull's reputation

In order to get the most out of this, we have to identify what gives most value to the customer's. To do this we have to figure out the criteria's the customers have when they choose whether to buy the product or not. By aligning the marketing, products and services to support these criteria's, I believe that we can accelerate the growth of the market share.

What criteria's do the customers have?
1. Product properties
   a. Number of cbt titles
   b. The technical and educational quality
2. Service and support quality
3. Reduced cost when compared to sending the crew to land based courses
4. Risk and workload when it comes to change to use Seagull's products
5. Available budgets

These criteria's can be very useful to understand what is actually creating value seen from the customer perspective.

Now, the company has a clear defined corporate strategy and vision. So, how can this strategy be translated into measurable actions in both corporate, Technological and department level? This is where the Balanced Scorecard comes into play. The Balanced Scorecard development and results are described in detail in the next chapter.

7 Balanced Scorecard

7.1 Introduction

In the previous chapter the company strategy and vision was developed based on Porters theories on competitive strategy. The overall strategy was that the company would expand the market share from 1500 ships to 5000 ships within a period of three-five years. The strategy does not say anything about how the company will accomplish this but that is where the Balanced Scorecard comes into play. In this chapter the strategy and vision is translated into measurable actions by using Kaplan and Norton's Balanced Scorecard. The development includes strategic objectives, measures, margets and initiatives on corporate, technology and department level. For each of the levels, strategic objectives for all four perspectives have been developed and implemented in strategic maps. Then the measures, targets and initiatives have been developed. The corporate balanced scorecard was the first to be developed and then the technology and department scorecards where developed so that they support the corporate balanced scorecard and the overall strategic objectives of the company.

7.2 Corporate Balanced Scorecard

In this section the corporate Balanced Scorecard is developed. I started to identify and develop the strategic objectives for each of the perspectives from the financial perspective on top level to learning and growth. The following strategic objectives were developed:

Financial Perspective

- Strengthen the leading role as supplier of cbt onboard ships

Customer Perspective

- Be leading in number of cbt titles
- Excellent support
- Increase cbt content quality and availability
- Excellent selling
- Excellent delivery

Internal Processes Perspective

- Increase productivity of cbt modules
- Increase automation of processes
- Understand the customer segment
- Automate information flow

Learning and Growth Perspective

- Be up to date on new technology
- Be up to date on technical content competence
- Be up to date on educational competence
- Be up to data on marketing and sales competence

The lower levels support the upper level and the strategic map below shows this.
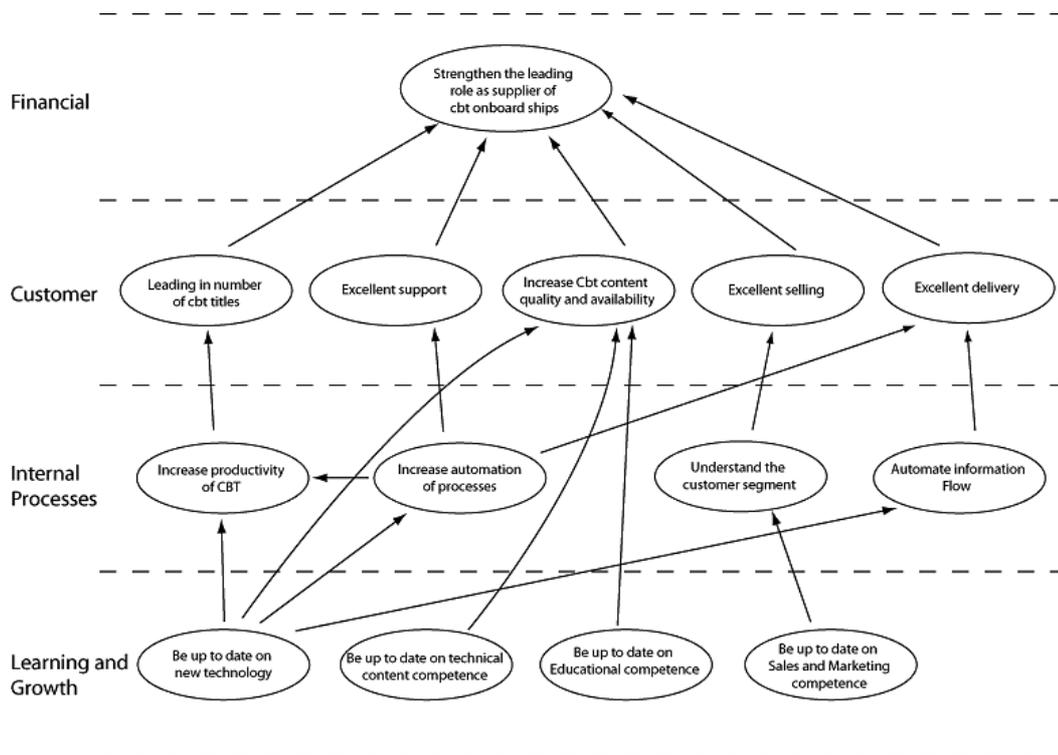
Figure 18 - Corporate strategy map

To continue the development of the Balanced Scorecard I identified and developed the measures, targets and initiative for each strategic objective in all four perspectives. The result of this is shown in the table below.

Financial Perspective			
Objectives	Measures	Targets	Initiatives
Strengthen the leading role as supplier of cbt onboard ships	Market share	Increase Market share from 25% to 50%	Increase sale staff from 2 to 5

Customer Perspective			
Objectives	Measures	Targets	Initiatives
Leading in number of cbt titles	Number of cbt titles	80 - 120	Establish partners
Increase Cbt content quality and availability	Relevance to STCW-95 and ISM, Customer satisfaction		Surveys and suggestions from customers.
Excellent support	Time to support	Answer within 24 hours	Systematize, Automate, Increase capacity.
Excellent selling	Number of complaints	Zero complaints on expectations and delivery	Regularly retrain sales personnel in: Communication with customer, Trust, Accuracy when transferring info to Operations dep.
Excellent delivery	Number of delivery errors		Automate delivery process
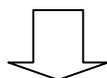
Internal Processes Perspective			
Objectives	Measures	Targets	Initiatives
Increase productivity cbt	Indirect time in projects	Decrease indirect time by 50%	Increase production of storyboard and implement better project management
Increase automation of	Number of manual processes that	Zero	Develop IT system

processes that don't require human decision	don't require human decision		
Automate Information flow	Number of retyping of the same information	Zero	Develop IT system to support this
Understand customer segment			Develop IT system to support this
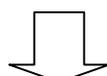
Learning and Growth Perspective			
Objectives	Measures	Targets	Initiatives
Development of new concepts	Rate of concepts	No target	Participate in Conferences and seminars
Be up to date on new technology	Number of technology experts	At least two experts	Increase the IT staff from two to three
Be up to date on technical content competence	Maritime competence	Get competence in all relevant areas of Maritime training	Get competence through new partners
Be up to date on Educational competence	Pedagogic competence	At least one person with educational and pedagogical competence	Get competence through new partners and hire one storyboard designer
Be up to date on Sales and marketing competence	Sales and marketing competence	All sales persons will have the necessary competence	Train and retrain Sales and marketing personnel

7.3   Technology Balanced Scorecard

The same procedure as in the previous section was done in this section. The following Strategic objectives were defined in the Technology Balanced Scorecard:

Financial Perspective

- Increase the business value

Customer Perspective

- Offer web based training
- Use technology to support the customers
- Improve internal and external service by using technology

Internal Processes Perspective

- Implement web infrastructure
- Standardize software and hardware platforms
- Synchronize all shared information in the company
- Increase automated work processes by use of IT

Learning and Growth Perspective

- Flexible object oriented concepts
- Research onto emerging technology
- Teach employees to use the system

The lower levels support the upper level and the strategic map below shows this.
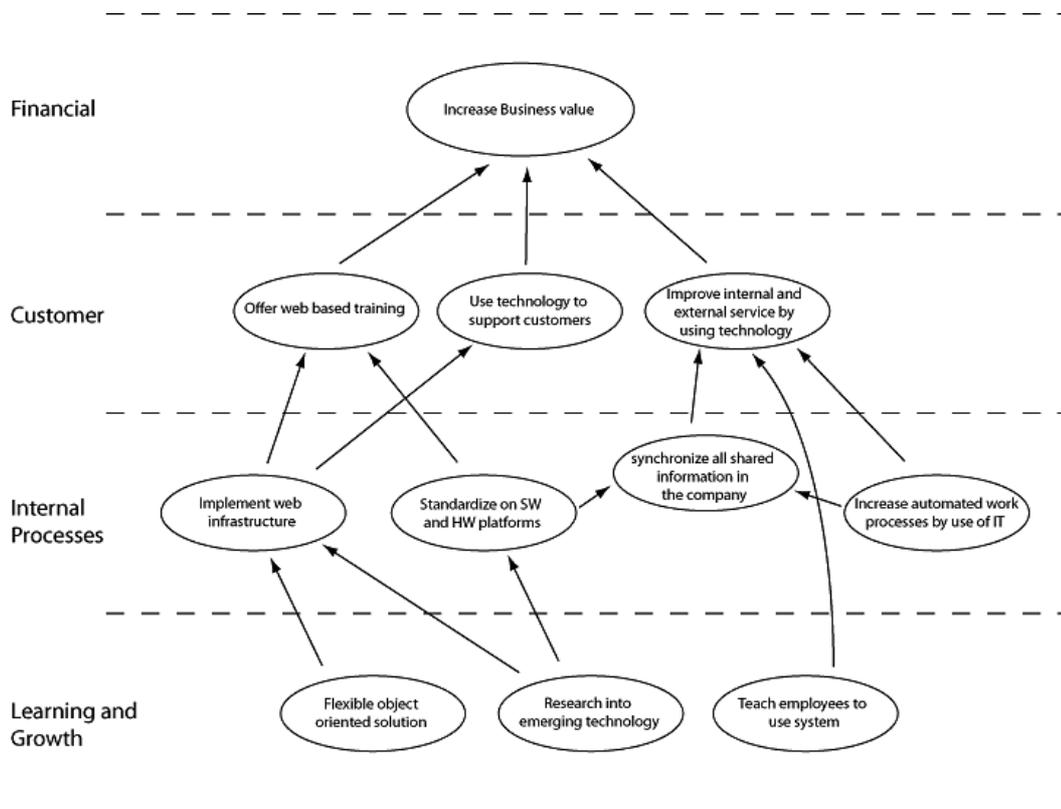
Figure 19 - Technology strategy map

To continue the development of the balanced scorecard I identified and developed the measures, targets and initiative for each strategic objective in all four perspectives. The result of this is shown in the table below.

Financial Perspective			
Objectives	Measures	Targets	Initiatives
Increase Business value			
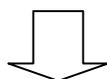
Customer Perspective			
Objectives	Measures	Targets	Initiatives
Offer web based training	Number of courses available on the web	30 cbt online within 2 years	Develop courses and Seagull Administrator services for web
Use technology to support customers	Percent of support enquiries solved by technology	No target specified	Develop system that systemizes support.
Improve internal and external service by using technology	Number of available technology based services	No target specified	Develop one common interface to access common information among departments
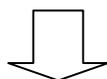
Internal Processes Perspective			
Objectives	Measures	Targets	Initiatives
Standardize on SW and HW platforms	Number of HW/SW platforms	One compatible database platform One platform to serve one purpose.	Convert existing databases to MS SQL.
Increase automated work processes by use of IT	Number of automated processes	No target specified	Develop Enterprise version of Seagull Administrator.

			This automates the administration of training data.
Technology to synchronize all shared information in the company	No measure specified	No target specified	
Implement web infrastructure	No measure specified	No target specified	Concert to MS SQL databases and web compliant technology

Learning and Growth Perspective			
Objectives	Measures	Targets	Initiatives
Flexible object oriented solution that can adapt to emerging technology	The time it takes to adapt to any given potentially technology	No target specified	Launch project to develop a specification to the object oriented solution.
Research into emerging technology	Competence and awareness of new technology	No target specified	Invest in R&D
Teach employees to use system	System competence	100% of the employees will learn to use the system	Start internal training and motivation of employees

7.4 Department Balanced Scorecard

The same method as in the two previous sections was used to develop the Department Balanced Scorecard. The following strategic objectives were defined.

Financial Perspective

- Increase the business value

Customer Perspective

- Improve delivery rate
- Improve support rate
- Improve delivery quality

- Effective post sale

Internal Processes Perspective

- Make use of common data from other departments
- Decrease amount of manual processes
- Know the customers true needs

Learning and Growth Perspective

- Teach employees how to use new technology

The lower levels support the upper level and the strategic map below shows this.


Figure 20 - Department strategy map

To continue the development of the balanced scorecard I identified and developed the measures, targets and initiative for each strategic objective in all four perspectives. The result of this is shown in the table below.

Financial Perspective			
Objectives	Measures	Targets	Initiatives

Increase Business value			

⬇

Customer Perspective			
Objectives	Measures	Targets	Initiatives
Improve delivery rate	Rate of product/services delivered	Software delivery within a week	Develop system to synchronize customer contract data. And automate process
Improve support rate	Rate of solved support enquiries	Reply to support within 24 hours	Systematize and automate processes, Increase staff with one employee.
Improve delivery quality	Support enquiries that covers delivery	Reduce the number of support enquiries that covers delivery errors to 0%	Develop system to synchronize customer contract data.
Effective post sale	Amount of post sale	Increase the amount of post sale performed by the department from 50 to 100%	Release capacity for the Operations Manager to perform After sale

⬇
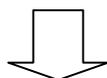
Internal Processes Perspective			
Objectives	Measures	Targets	Initiatives
Decrease amount of manual Processes	Number of manual processes	No specific target	
Make use of common data from other departments	Number of manual registering of information that already exists	No specific target	
Know the	Customer	No specific target	

customers true needs	satisfaction		

⇩
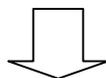
Learning and Growth Perspective			
Objectives	Measures	Targets	Initiatives
Teach employees how to use new technology		No specific target	

7.5 Overview

In the previous sections I developed the Balanced Scorecards for the three levels. In the table below I have illustrated an overview of all the strategic objectives on corporate, technology and department level.

Financial Perspective		
Corporate Objectives	Technology objective	Department objective
• Strengthen the leading role as supplier of cbt onboard ships	• Increase Business value	• Increase Business value

⇩

Customer Perspective		
Corporate Objectives	Technology objective	Department objective
• Leading in number of cbt titles • Increase cbt content quality and availability • Excellent support • Excellent selling • Excellent delivery	• Offer web based training • Use technology to support customers • Improve internal and external service	• Improve delivery rate • Improve support rate • Improve service quality • Effective post sale

⇩
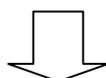
Internal Process Perspective		
Corporate Objectives	Technology objective	Department objective
• Increase productivity of cbt modules • Increase automation of processes that don't require human decision • Automate information flow • Understand the customer segment	• Standardize on SW and HW platforms • Increase automated work processes by use of IT • Synchronize all shared information in the company • Implement web infrastructure	• Decrease amount of manual processes • Make use of common data from other departments • Know the customers true needs

Learning and Growth Perspective		
Corporate Objectives	Technology objective	Department objective
• Be up to date on new technology • Be up to date on technical content competence • Be up to date on Educational competence • Be up to date on Sales and marketing competence	• Flexible object oriented solution that can adapt to emerging technology • Research into emerging technology • Teach employees to use system	• Teach employees how to use new technology

7.6 Discussion

In this chapter the Balanced Scorecard's for all of the three levels have been developed. The results are strategic objectives, measures, targets and initiatives for all four perspectives and three levels. The corporate balanced scorecard was the foundation when the technology and department Balanced Scorecards was developed. This means that the Balanced Scorecards for all three levels support the overall strategic objectives of the company. By looking at the problems the company currently have, the Balanced Scorecards were used to translate the overall strategy into actions and get better overall performance for the company. This

chapter shows that the Balanced Scorecard is a helpful tool to create an overall better understanding business.

By developing the Technology Balanced Scorecard, the there were created guidelines to follow when the company invests in a new IT system. The following overall specification if the IT system where actually developed as initiatives in the Technology Balanced Scorecard. The IT system must be able to be web compliant by converting the databases to SQL. The system must help to systemize and automate the incoming support enquiries and, the administration of training data must be fully automated by IT. The IT system must also synchronize the information flow among the departments so that no information needs to be registered twice. This specification is not very detailed, but all of the elements support the overall strategy of Seagull. This illustrates that the Balanced Scorecard actually can help the company to specify an IT system.

The department Balanced Scorecard helps the department to specify the strategic actions for this specific department and create better performance for the company.

8 Discussion

In this thesis I started to describe the company background and the problems that the company is facing. I have identified the main problems of the company and developed flow charts of the major business processes. The company's overall strategy and vision was identified and based on this, the balanced scorecard was developed.

The main problems that the company is facing are the support and delivery to the customers. By analyzing the flow charts of the major business processes the problems were identified in more detail. It showed that most of the processes are done manually and this also includes the information flow through the company. The delivery problems are often due to wrong information from the sales department or human typing errors in the operations department. This again results in more support enquiries. I think most of theses problems are due to the lack of overall strategic objectives from the top management to the department levels. That means that the departments don't have a clear view of where the company is heading for the next three to five years. The consequences are that there are purchased incompatible hardware and software and there is lack of coordination among the departments.

The Question is how did the Balanced Scorecard help the company to solve these problems? This is showed in the previous chapter where the Balanced Scorecard is developed. First, the Corporate Balanced Scorecard was developed followed by Balanced Scorecards on technology and department level. All of the three levels support the overall strategy and vision of the company and the strategy is translated into actions by the development of the objectives, measures, targets and initiatives. I think that by using the Balanced Scorecard method the operations department gets a much clearer view of the consequences when investing in a new IT system. The Balanced Scorecard enables the department to get a clear view of what they must require from an IT solution in order to support the overall strategic objectives of the company.

9 Conclusion

The purpose of this thesis was to find out if Porter's theories on competitive strategies and Kaplan and Norton's Balanced Scorecard could help to solve the problems of the company. The goals were to clarify the overall strategic objectives of the company and to help the Operations department to specify an IT system that will support the overall strategy of the company.

In this thesis we have identified the major business processes and developed flow charts of the processes. The processes where analyzed and the problems where identified. We combined the competitive theory with Balanced Scorecard in order to help Seagull AS to identify and overcome its strategic and operational issues and the Balanced Scorecard were developed in corporate, technology and department level.

The main conclusion of this research is that the Balanced Scorecard in the case of Seagull AS can help the company to specify the objectives, measures and actions based on the overall strategy and vision. The technology and department level Balanced Scorecard's will form the basis for the IT investments and business processes. By using the Balanced Scorecard, the company can communicate the strategy to all levels in the company and translate the strategy into operational terms and create better overall performance.

There are still many tasks remain to be done. Due to the time limitation of this thesis, we are unable to address many of the significant issues, such as all the details of the operational issues and a more detailed specification of the IT system and implementation concerns. If there were to be done further work on this thesis, more detailed targets and initiatives in the Balanced Scorecard should be developed.

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11 Abbreviations

CBT Computer Based Training
IMO International Maritime Organization
ISM International Safety Management
SO Super Office (The CRM system that the company use)
LMS Learning Management System
BSC Balanced Scorecard
IT Information Technology