



UNIVERSITY OF  
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BODØ GRADUATE SCHOOL OF BUSINESS

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# MASTER THESIS

*Entering the high tech offshore service vessel market*

*Entry strategies for ERRV-providers to the High North*

*EN310E, Energy Management*

By Mats Falk-Petersen and Truls Oterhals  
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## Abstract

The Norwegian offshore service vessel (OSV) industry is always seeking new markets to conquer, and while most of the companies are finding these opportunities in Brazil or other emerging markets, some are shifting their focus northwards. With the expanding petroleum activity in the Arctic areas, new opportunities are arising. There are, however, expected to be challenges related to operations and the choice of optimal entry strategies in the relatively new petroleum province. The choice of entry strategy will be a factor of external and internal influences, dependent on the current situation of both the company and industry as a whole. Hereunder the competition intensity, technology level demands and regulatory factors. The totality of these will decide the relation between choice of entry strategy as to the resource base, entrepreneurial orientation and business models.

With a long history of maritime activities, the shipping companies located in northern Norway have a solid knowledge and competence related to the maritime challenges in the area, but is considered relatively underrepresented in the OSV-industry. The current market leaders, mostly situated in the western part of Norway, have direct experience from years of operations and close ties to the customers and suppliers, but may lack experience in Arctic conditions.

In this study, we discuss how small to medium sized OSV-companies may enter the Arctic areas by offering Emergency Response and Rescue Vessels (ERRVs) in a market with high demands as to certifications, technology and regulations.

The Arctic environment calls for a specific set of skills, and a competence that is best acquired through experience. In a harsher climate, the need for emergency capacities and specific technology increases. Statoil list emergency response capabilities such as response time and oil recovery as the greatest challenges related to operations in the Arctic, and the role of the ERRVs will be vital to the future of the industry. Hence, the mainstream fleet operating further south may not be capable of meeting the demands in a satisfactory fashion, and customized vessels carrying new technologies will be in higher demand.

The requirements to necessary equipment and competence do, however, add a cost premium to Arctic operations. The companies seeking to operate here must find the optimal entry strategy to fully utilize their strategic capabilities, while keeping the price down.

## **Preface**

This Master Thesis represents the end of our Master of Science in Business, Energy Management at Handelshøgskolen in Bodø. The study is about the offshore service vessel industry on the Norwegian Continental Shelf, with a special focus on the High North.

We would like to thank everyone that helped us, first and foremost our academic advisor Odd Jarl Borch that contributed with valuable help and advice throughout the process. We would also like to thank the companies that took time to answer our questions and invited us to their offices. Last, but not least, we would like to thank our families for the unconditional support they have offered throughout our studies.

## Sammendrag

De norske offshorerederiene er kontinuerlig på utkikk etter nye markeder. Mens de fleste selskapene finner slike muligheter i Brasil og andre fremvoksende markeder, vender noen blikket nordover. Med en voksende petroleumsaktivitet i Arktis, er det nye muligheter i fremvekst. Dette innebærer derimot utfordringer i forhold til operasjoner og valget av en optimal inngangsstrategi i det relativt nye petroleumsdistriktet. Valget av inngangsstrategi vil være en faktor av eksterne og interne innflytelser, avhengig av den nåværende situasjonen i forhold til både selskap og industrien som en helhet. Inkludert her er konkurranseintensiteten, teknologinivået og lovmessige forhold. Helheten av disse vil bestemme forholdet mellom valg av inngangsstrategi opp imot ressursbase, entreprenørisk orientering og forretningsmodeller.

Med en lang historie innen maritime aktiviteter har redere fra Nord-Norge tilegnet seg kunnskap og kompetanse i forhold til maritime utfordringer i området, men er generelt underrepresentert i offshore-næringen. De nåværende markedslederne, for det meste lokalisert på Vestlandet, har direkte erfaring fra flere år med operasjonell aktivitet og har knyttet nære bånd til både kunder og leverandører, men mangler muligens erfaring fra Arktiske strøk.

I denne studien diskuterer vi hvordan små til middels store offshorerederier kan entre markedet i Arktis, ved å tilby områdeberedskapsfartøy i et marked med høye krav i henhold til sertifisering, teknologi og regulering.

Det Arktiske miljøet stiller krav til spesifikke egenskaper, og en kompetanse som best opparbeides gjennom erfaring. I et klima som etterlater seg mindre rom for feilsteg vil behovet for krisehåndtering og spesifikk teknologi øke. Statoil nevner krisehåndtering som responstid og oljeopphenting som de største utfordringene i området, og rollen til områdeberedskapsfartøy vil dermed være avgjørende for framtiden til industrien. Derav vil flåten som operer lengre sør muligens være ute av stand til å møte disse kravene i en god nok grad, og tilpassede skip med ny teknologi vil være mer etterspurt.

Kravene til både utstyr og kompetanse vil derimot øke prisen på operasjoner i Arktis. Selskapene som vil operere her må finne den optimale inngangstrategien som utnytter deres strategiske evner til det fulle, samtidig som prisen holdes lav.

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## **Definitions and abbreviations**

*High North:* The Norwegian Barents Sea. Sub and low Arctic waters north of Hammerfest

*Alphabetic order:*

*AHTS:* Anchor Handling Tug Supply

*ERRV:* Emergency Response and Rescue Vessel

*E&P companies:* Exploration and production companies

*FPSO:* Floating Production, Storage and Offloading unit

*FRC/MOB:* Fast Rescue Craft/Man Over Board

IMO = International Maritime Organization

MPV = Multi-purpose vessel

*NCS:* The Norwegian Continental Shelf

*OSV:* Offshore Service Vessel

*PSV:* Platform Supply Vessel

*ROV:* Remotely Operated Vehicle

*R&D:* Research and Development



# 1. Introduction

## 1.1 Background

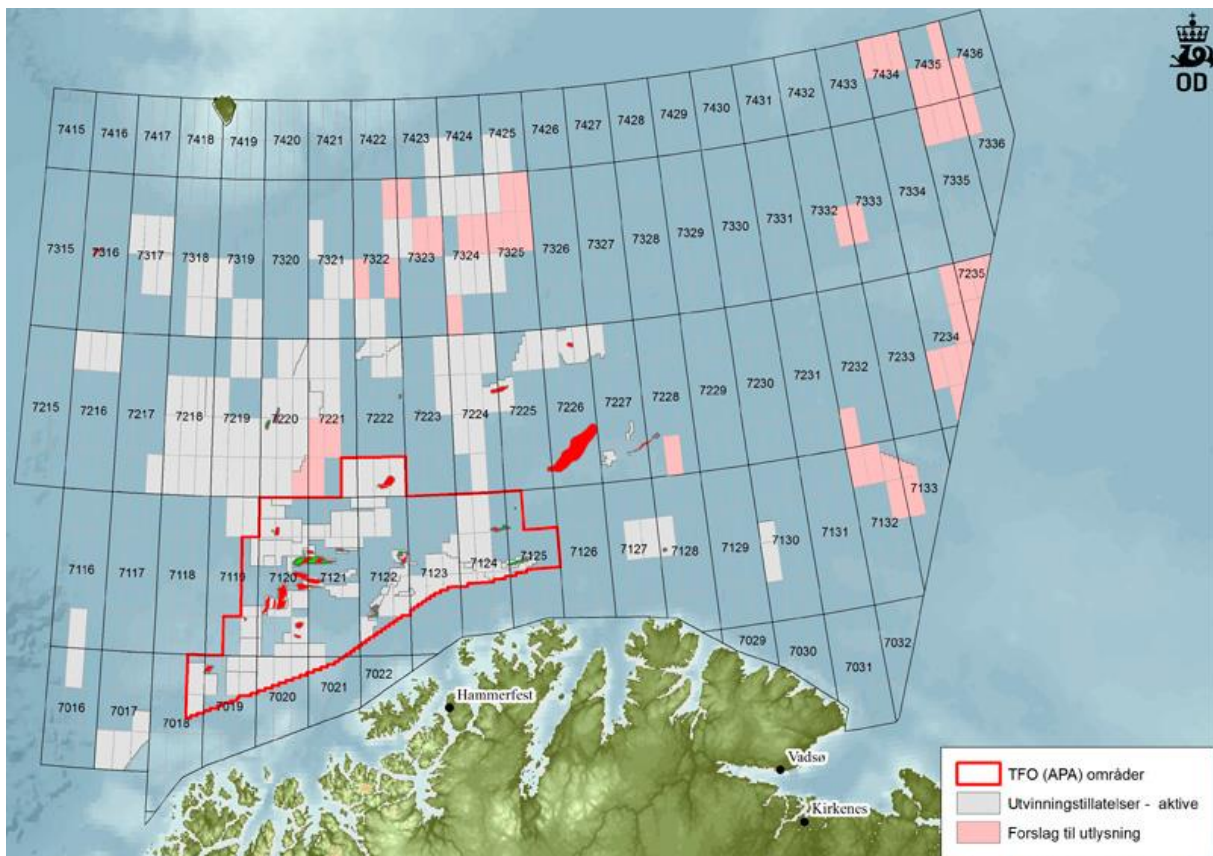
In 2009 ENI officially announced their intention to initiate the Goliat project. Despite the first oil discovery being made as early as 1981 (Oljedirektoratet, 2013), the Goliat FPSO would signalize the first oil extraction ever in the Norwegian Barents Sea (Oljedirektoratet, 2009). The field is expected to be operational by the end of 2014, and the reserves have been calculated to last for a minimum of 15 years.

A new market was emerging, and the OSV-industry was ready to jump at the first possibilities for a long-term contract. To deal with the challenges of Arctic waters, a high-tech, cost-effective, versatile emergency preparedness vessel was needed. Several companies competed for the first tenders issued from ENI, with Esvagt from Denmark and Simon Møkster Shipping from Stavanger coming out on top.

While other ship owners sought towards easier climates and foreign markets in the warmer South-America and Africa, some saw the opportunities presented in the colder waters to the north as the most tempting. Atlantic Offshore from Bergen and Chriship from Sortland are other companies that will seek to enter the market in the future, given that they can locate the competitive advantages needed to compete against their counterparts.

Although the Goliat field signalizes the first FPSO in the Norwegian Barents Sea, it will not be the last. The distance to shore is relatively short (50km), however, while future findings are likely to be significantly longer offshore, with the increased challenges that this may entail.

The border deal that was signed between Norway and Russia in 2011 set the stage for a new chapter in the Norwegian oil history. The parliament finalized their assessment in 2013, giving the green light for Norway's third oil- and gas province to be opened.



*The Norwegian Barents Sea/Source: Miljødirektoratet (2014) 1*

With this development in mind, we wished to explore:

*How can a small- or medium sized offshore shipping company become a supplier of ERRV vessels to the petroleum industry in the High Arctic?*

The OSV-industry is continuously searching for new markets. With the expanding petroleum activity in the north, new opportunities are present. Several companies are assessing the opportunities, meanwhile the transition into Arctic waters increases the need for high tech equipment in an already technology intensive industry.

The conditions demands new solutions to deal with everything from icing to extreme darkness, and a lack of logistic systems. The risks are higher, both related to delivery time, oil spills, and damage to equipment and personnel. The low density of platforms and offshore operations also requires the OSVs operating in the remote locations to be more multi-functional. Emergency Response and Rescue Vessels (ERRVs), Anchor Handling Tug Supply

(AHTS) vessels and Platform Supply Vessels (PSVs) overlap each other and serve as multi-purpose vessels (MPVs), altogether able to serve all the imposed duties related to supporting oil and gas activities offshore. An accident may also become a game changer for exploration and production in the North. Thus, the margin for error is minimal. Combined with a harsher and more vulnerable environment this requires extraordinary precautions and abilities to solve emergencies. The standby vessels must be fitted with top of the line equipment, providing ice management, oil recovery, and be able to initiate search and rescue operations (Borch, 2012).

This opens opportunities for newcomers that may meet the challenges by providing innovative solutions to the market. This requires a strategy that eliminates the barriers present as to customer demands, regulatory factors and competition.

## 1.2 The purpose of this study

The main problem in this study is as follows:

*What are the entry barriers to the High North, and how do they influence the choice of entry strategy?*

The area is still young in an industrial perspective, meaning that there are few incumbents. Given the uniqueness of the environmental factors, there is a new set of rules and regulations related to operations in the area. The government and other institutions are still working on several specific criteria that must be fulfilled for the entrants, so the political influence can be described as uncertain, especially by Norwegian standards. The climate also indicates the need for local competence and experience, which may not be transferable from operations in the North Sea, the Norwegian Sea and similar environments. In the same regard, new technologies might be necessary to mitigate these new challenges.

The potential entrants must then develop a viable entry strategy. The strategy that is chosen should contribute to creating the most favorable solution for their customers, in order to become the chosen supplier in the new market. Based on previous research, as elaborated in chapter 2.1, we define entry strategy into a new market as follow:

*A firm's configuration of resources internally and its connection of external resources through cooperation to overcome barriers when entering a new market.*

The resources and capabilities of a firm decide to which degree a company is able to compete. If those that are needed are not already in place, they must be acquired through other methods. Everything from the physical resources of a company, to the intangible knowledge their employees possess is an example of this, and how these are used is critical for future competitiveness. Relations to customers, suppliers and competitors may yield competitive advantages. Internal development can occur through resource base configuration and entrepreneurship, which enables the firm to be dynamic and exploit opportunities as they present themselves.

Becoming the chosen supplier in the OSV-market represents many difficulties. High entry barriers will hinder the emergence of new competitors in a market. Competitive advantages to overcome these can often be found internally in the form of resources, both physical and organizational. The OSV-industry is capital intensive, due to the high costs of vessels, but the intangible resources such as knowledge, innovativeness and experience, may prove just as important as the physical resources. The entrants must map these resources to get a better knowledge of which strategic capabilities is necessary, and how to build a competitive advantage based on these.

Even though there are few incumbents in the High North thus far, the area will prove interesting to several of the market leaders from other areas. The competition status must be assessed, especially with regards to the barriers for new entrants. In addition to the competitive barriers, there are regulatory and technological ones. An example is the strict demands related to both practices and equipment, which must be met in order to operate in Arctic waters. Hereunder, the new polar code, which will increase the demands as to “ship design, construction and equipment; operational and training concerns; search and rescue; and, equally important, the protection of the unique environment and eco-systems of the polar regions” (IMO, 2014)

The entry barriers described above are tied to the following factors: competition, technological demand and regulatory barriers. It is necessary to go in depth on how these affect the company’s choices of entry strategy with relation to the resource base, entrepreneurial orientation and modification of the business model.

The competitive forces dictate the power relation between the customers, suppliers and competitors in the market. The new entrant must adjust their entry strategy to mitigate the barriers created by the most influential actors in the market.

This leads us to the first research question:

*R1: What is the relation between the competitive forces and the choice of entry strategy for small to medium sized shipping companies in the High North ERRV-market?*

The high technology market in the High North may present obstacles for new entrants that are not yet invested in such technologies. The new entrant might have to considerably expand its resource base by new and unfamiliar methods, albeit, the newcomer might prove to be better than any other accessing and utilizing these. If the smaller firms are able to use their size as a competitive advantage instead of disadvantage, they may prove to be more dynamic and have a higher chance of adapting to technological development.

This leads us to the second research question:

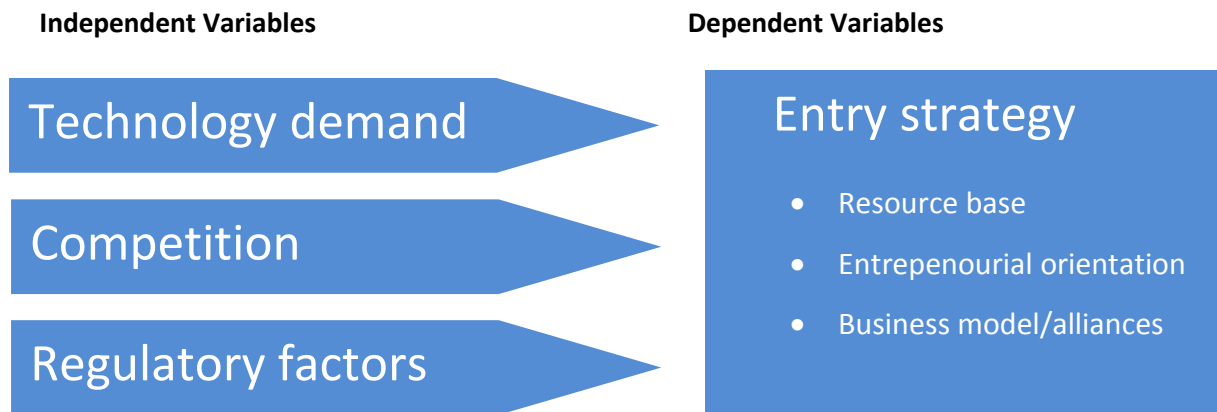
*R2: What is the relation between technology demands and the choice of entry strategy for small to medium sized shipping companies in the High North ERRV-market?*

On the Norwegian Continental Shelf (NCS) there is a comprehensive mandatory framework from government institutions like the Norwegian Petroleum Safety Agency and the Maritime Directorate that one has to encounter as a ship owner. Shipping companies have to invest a lot of resources to meet these demands, and the requirements influence the way the companies operate. The regulations are under development in the High North, and may also provide uncertainty for the concerned OSV companies.

This leads us to the third research question:

*R3: What is the relation between regulatory demands and the choice of entry strategy for small to medium sized shipping companies in the High North ERRV-market?*

The following figure visualizes the correlation between our independent and dependent variables:



*Figure 1: The relation between independent and dependent variables*

With this in mind, we seek to find answers to how a company can establish themselves as a central player in the high tech offshore service vessel market, with a focus on the response and rescue segment. There is no single answer to these questions, as different companies will find themselves in different situations, with their unique set of resources and capabilities. Nonetheless we hope to simplify the process by utilizing a framework of theories and concepts, and adapting them to the given industry.

### **1.3 Scope and limitations**

Due to time and resource constraints, we found it necessary to make certain limitations to our scope of research. Firstly, we limited our focus to the emergency response and rescue sector. The offshore service industry is vast, but we found this specific segment to be especially interesting to us, given the additional importance of emergency response and rescue in more fragile environments. Further, we chose not to investigate the customer side closer. Even though this is an important aspect of the industry, the processes of tender and contract negotiations is to a large extent confidential, and we understood early that we would not get access to the valuable information required.

More time would allow us to dig deeper into specific parts of each company and variable, but given the constraints our main goal has been to create the “big picture”, and rather allow subsequent research to elaborate more specific areas of our findings. Additionally, information about several parts of the companies’ operations and structure proved to be hard to come by. Fortunately, we were able to extract valuable information from the interviews, but we fear that specific nuances may have been excluded or missed by the researchers.

Our focus has been on internal resources of each company, in addition to the frequency of relations and knowledge sharing in the industry. More macroeconomic and financial analysis could also contribute with valuable information for potential new entrants.

## 2. Theory

In this chapter we present the theoretical platform of our study. To sufficiently cover the research questions we have built the discussion upon a variety of previous research, while attempting to show the relation between them when choosing the entry strategy.

First we will look into the entry strategy, which constitute ways of mitigating barriers in the new market. Hereunder, we include the resource-based theory, entrepreneurial orientation and business model reconfiguration. A viable entry strategy will be determined by the characteristics of the market and environment. We therefore apply the commonly used framework of Porter's five forces to assess the competitive climate in the new market. As for the regulatory factors we will identify and assess the relevant regulations and requirements. Both these aspects rely on technological demands, thus we will investigate the features and characteristics of a high technology market.

### 2.1 Entry Strategies

*Without a robust entry strategy there is no real commitment to serving markets on a permanent basis (Pehrsson, 2002, p.143).*

Entering a new market requires a comprehensive plan which sets forth the objectives, resources and policies to achieve sustainable growth in the markets (Albaum and Duerr, 2008). Accordingly, one should carry out an analysis of the market environment and competitive conditions (Pehrsson, 2002)

The term "entry strategy" has been used in a variety of ways to describe the methods for entering a new market. In particular, the term has been used to focus on methods or approaches for entering challenging markets, e.g. other countries, where significant changes in resource base and organizational adaptations have to be made. The least complex, and perhaps most spot on definition is found at Wikipedia, which explain that "A market entry strategy is the planned method of delivering goods or services to a new target market and distributing them there" (Wikipedia, n.d.). A more analytical approach to the phenomena is presented by Hitt et al. (1999, p.45) who claim that "entry into a new market is culmination of a process in which new resources and capabilities are accessed and integrated into the firm".



Hitt et al. (1999) explain that the resources can be acquired through three different methods: internal development, acquisition, or alliances. In our case, where we focus on smaller companies with limited resources who want to enter a new market, it will be natural to assume that such companies could seek cooperation with other firms which have complementary resources. Thus, we will use a definition that includes the aspect of cooperation.

Based on Hitt et al. (1999) we define entry strategy as:

*A firm's configuration of resources internally and its connection of external resources through cooperation to overcome barriers in entering a new target market.*

Hitt et al. (1999) emphasize the resource-based theory (RBT) as a tool to analyze the resources and capabilities that constitutes a firm's competitive advantage. RBT suggest categorizing the resources as physical, financial or organizational. When entering a new market, one has to identify the necessary resources and capabilities. Using the RBT will ease the process of revealing any shortcomings (Barney, 1991). The perceived barriers for entering a new market will then vary amongst companies, depending on their resource-base (Pehrsson, 2002).

As for the capability to identify useful resources which no one else sees value in, and further to act upon these, we have included entrepreneurial resources to our assessment. Alvarez and Busenitz (2001) link entrepreneurship and RBT, by arguing that both rely on the need for heterogeneous resources to achieve competitive advantages. Dynamic capabilities, in which entrepreneurship constitutes, could prove to be decisive in a new, relatively unexplored, high technology market. While basic entrepreneurship concerns which business to enter, Lumpkin and Dess (1996) argues that the entrepreneurial orientation may describe the processes and methods firms use to enter the new market in a clearer way.

As part of the entry strategy we emphasize the business model (BM) as the degree of movement of parts of organization into the new market area, and further how a BM can be constructed and optimized. The necessity of movement may depend on how capable the company is to use their competitive advantage in the new market (Johnson et al., 2011). If the competitive advantage is not directly applicable in the new market, the entrant might have to

cooperate with a local actor to enforce their competitiveness, benefitting from local knowledge and experience. This could be to increase their ability to distribute their product in a new market, or to manufacture locally (Johnson et al., 2011). By locating the competitive advantages through RBT, we can also assess the applicability in the new market, and further argue for needs to modify the BM. Potentially, the new business model must be fitted into the organization, and thus we will further argue how to adjust the new BM into the organization.

### **2.1.1 Resource configuration as part of entry strategy**

Panayides and Gray (1999, p.111) argues that maritime organizations “can no longer attain competitiveness solely on the three generic strategies,” hereby referring to Porter’s principles of absolute cost advantage, differentiation and concentration. In their assessment of relational competitive advantages in professional ship management, they argue that the resource-based theory is considered more suitable than the neo-classical theory of perfect competition when evaluating strategic capabilities in the shipping industry (Panayides and Gray, 1999).

The resource-based theory, also known as resource advantage theory, is a popular strategic concept derived from the belief that “the competitive advantage and superior performance of an organization is explained by the distinctiveness of its capabilities” (Johnson et al., 2011 p.83). The idea behind the perspective is to look at firms in terms of resources rather than in terms of their products (Wernerfelt, 1984).

Barney (1991) define a firm’s resources as: “[...] all assets, capabilities, organizational processes, firm attributes, information, knowledge etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness” (Barney, 1991 p.101). These resources are usually divided into three main categories: physical resources, financial resources, and human or organizational resources. Resources in themselves are, however, not valuable unless the firm possesses the competence to derive their maximum potential. Hence, Johnson et al. (2011) presents the following model:

<b>Resources</b>		<b>Competences</b>
Machines, buildings, raw materials, products, patents, data bases, computer systems	<b>Physical</b>	Ways of achieving utilization of plant, efficiency, productivity, flexibility, marketing
Balance sheet, cash flow, suppliers of funds	<b>Financial</b>	Ability to raise funds and manage cash flows, debtors, creditors etc.
Managers, employees, partners, suppliers, customers	<b>Human</b>	How people gain and use experience, skills, knowledge, build relationships, motivate others and innovate

*Figure 2: Components of strategic capabilities. Source: (Johnson et al., 2011, p.85)*

The physical variables in the model may be slightly altered to better represent the OSV industry, while still reflecting the main idea:

<b>Resources</b>		<b>Competences</b>
Vessels, buildings, products, patents, operation systems	<b>Physical</b>	Ways of achieving utilization of vessels, efficiency, productivity, flexibility, marketing

*Figure 3: The physical resources of a shipping company*

The interplay between the necessary resources and competences are what creates valuable competitive advantages.

In an imagined industry where all companies control the same resources, any strategic choice can be duplicated by the others. There would, in other words, be impossible to gain a competitive advantage in this kind of market. Hence, there are two underlying key concepts of the resource-based view: organizations are not identical, but are rather heterogeneous, and; organizations have difficulties obtaining or copying the capabilities of another (Johnson et al., 2011).

Resources may not always have a strategic value, however. Some could hinder innovation. Some could have no effect, while some could be of great strategic importance. The VRIO analysis enables a firm to evaluate the strategic value of their resources. VRIO may be used to map the resources which provide a competitive advantage. The four key criteria are: Value,

rarity, inimitability and organized to capture value. If a resource fulfills all criteria, the firm holds a sustained competitive advantage (Kozlenkova et al., 2013).

In a dynamic market the ability to adapt and apply the resources under different contexts is important. Kozlenkova et al. (2013) argues that VRIO-resources are not easily exchangeable from one market to another, or over company borders. They may, however, be acquired across market or company borders through cooperation, alliances and by adapting existing resources to new markets. This ability could derive from a VRIO-resource.

The goal for any firm should be to acquire a competitive advantage. Barney (1991) defines this as “[...] Implementing a value creating strategy not simultaneously being implemented by any current or potential competitor.” For this advantage to become sustained, it is necessary that “other firms are unable to duplicate the benefits of this strategy”(Barney, 1991 p.102).

For companies that have yet to gain an advantage, acquiring the necessary resources may present a difficulty: “(...) firms cannot expect to “purchase” sustained competitive advantages on open markets, such advantages must be found in the [VRIO] resources already controlled by a firm” (Barney, 1991 p.117).

Barney (1991) also argues that the previous ways in which a company has acquired its resources may have an impact on strategic capability, meaning that a company with a history of innovation is more likely to acquire valuable resources in the future too. Those who have gained it through luck may therefore be unable to recreate it at later stages.

Similarly to entry barriers in the traditional view of Porters five forces, a firm can acquire a resource position barrier. This is the case when the resource position of a firm makes it more difficult for the incumbents and new entrants to catch up (Wernerfelt, 1984). To reach this position, it is not enough with attractive resources. Wernerfelt explains that the firm needs to find “those resources which can sustain a resource position barrier, but in which no one currently has one, and where they have a good chance of being among the few who succeed in building one” (Wernerfelt, 1984 p.175). In addition to this, the resources must be combinable with the firm’s existing ones, to create positive synergy effects.

Recognizing the core competence, based on the resources and capabilities of a firm, can ease the process of gaining a competitive advantage. Pehrsson (2002) cites three tests designed by Prahalad and Hamel (1993) for defining the core competence of a firm:

- Core competence provides potential access to a wide variety of markets
- It should make a significant contribution to the perceived customer benefits of the end product
- A core competence is the kind of factor that is difficult for competitors to imitate

According to the core competence, a firm can position itself in a favorable market position or enter a market where it is appreciated. The core competence's applicability in the new market could be decisive as to the necessity to acquire new resources. This causality will be further elaborated in the chapter 2.1.3 in the context of business model reconfiguration.

The ability to develop successful relationships is considered an intangible resource, which has proven to be especially important in the shipping industry (Panayides and Gray, 1999). While alliances will be assessed and elaborated in chapter 2.1.3, we will in this chapter approach the more general view of relations, as a capability of the firm. The necessity of recognizing potential relationships, and further how to stimulate and exploit them, will be discussed accordingly.

### **The capability to explore and facilitate beneficial relationships**

Even though the physical and financial resource requirements may create an entry barrier in the shipping industry, the intangible resources could also be an important competitive advantage. In relation to this, Panayides and Gray (1999, p.111) argues that: "In the shipping industry in particular, companies may also have access to intangible resources within the organization that they can effectively harness and utilize in order to achieve competitive advantage". Hereunder, the authors highlight the importance of the firm's ability to engage and develop better relationships with their clients, and thereby increasing the competitiveness of the firm. (Panayides and Gray, 1999)

Jenssen (2003) supports the latter authors' view, by arguing that customer relations is the most important relation for the Norwegian shipping companies' competitiveness. The author also argues that despite being world class when it comes to cooperation, there is still unfulfilled potential. Ship owners have to seize these possibilities and focus on the long term through strong and professional leadership. On the contrary, Norwegian ship owners are often accused of being short-sighted and capitalistic in their behavior (Jenssen, 2003).

Panayides and Gray (1999) argue that many ship management companies do not utilize their potential because of a too narrow focus on cooperation. To give specific costumers the best

product, the supplier has to reveal the possibilities regarding new technologies and specifications available at that time, in order to provide the best possible solution to the buyer. This optimization will build trust and commitment between the suppliers and buyers for lower transaction costs and more loyal customers (Panayides and Gray, 1999).

Gustafsson et al. (2005) argue that there are two drivers for loyalty, affective commitment and calculative commitment. While affective commitment is created by social interaction, mutuality and trust, calculative commitment is tied to switching costs. Affective commitment could be seen as the warmer, emotional aspect, while the calculative commitment is the colder and more rational. They further explain that “loyalty is often interpreted as actual retention, which is a cornerstone of customer relationship management (CRM)” (Gustafsson et al., 2005, p.210). The third element the author introduces is customer satisfaction.

Which one of these three constructs one should pursue is dependent on which one is most important for the customer. If the customer is mostly concerned about customer satisfaction, one should pursue lower prices or better quality on products. If the customer see affective commitment as more important one should focus on engaging social interaction and building relationships. At last, if calculative commitment is important, one should focus on enforcing switching barriers. Despite the seemingly distinct separation, it is important to mention that the three constructs can depend on and affect each other. Customer satisfaction can be seen as a more overall evaluation (Gustafsson et al., 2005).

When exploring new relations and potential partners, companies tend to seek in their already established social network. This might narrow the number of potential partners, create a common way of thinking and thus also affect the design of the relations structure. Being a “path creator” rather than a path dependent actor is important in the relational context (Gulati, 1998). Gulati (1998) encourages companies to look into their historical path, to recognize how they ended in today’s social context, and based on this shape their own strategy.

Social networks can provide crucial information and abilities to utilize the financial and human capital. A social network constitutes social capital. Obviously, increased social capital could contribute to competitive advantages. Panayides and Gray (1999, p.117) introduce three variables that determine the “stability and long-term nature of business relationships”: Trust and commitment, willingness to cooperate and adapt to the client’s needs, and idiosyncratic investments in the relationship. It is important to also keep in mind that cooperation described

above has its limitations as to laws and legislations, which might forbid certain types of tacit cooperation (Barney, 2010).

In the following chapter we will introduce entrepreneurship as a tool to acquire heterogeneous resources. We will also explain different ways to entering a new market through entrepreneurial orientation.

### **2.1.2 Entrepreneurial orientation as part of entry strategy**

In a study done by Woldesenbet et al. (2011, p.508), they argue that “Small firms have great potential to compete as suppliers to large production organizations, provided that they have developed the entrepreneurial and dynamic capabilities that enable a sustained offering of value-added products and services.”

Entrepreneurial opportunities emerge when someone sees value in resources where nobody else does, and acts upon these (Alvarez and Busenitz, 2001). To successfully exploit the opportunity, and extract the entrepreneurial rent, a firm must have the ability to acquire the needed resources, and the organizational ability to generate a heterogeneous output. Thus, entrepreneurial capabilities can be defined as “cognition, discovery, pursuing market opportunities, and coordinating knowledge that leads to heterogeneous outputs” (Alvarez and Busenitz, 2001, p.757). The ability to think differently separate entrepreneurs from large organizations in the way that they are more forward-looking, and can therefore more quickly make sense of complex situations, which again leads to innovation and possible competitive advantages.

Entrepreneurship shares certain characteristics with the RBT, as both rely on the same condition: the need for heterogeneous resources to achieve competitive advantages (Alvarez and Busenitz, 2001). The mentioned paper therefore suggests the addition of two more concepts to the previously mentioned RBT model: 1) Entrepreneurial recognition (recognition of opportunities and opportunity seeking behavior as a resource), and 2) The process of combining and organizing resources as a resource.

A high-level human capital is critical for entrepreneurial businesses success and their ability to identify opportunities to differentiate themselves and provide high-value, knowledge-intensive products and services (Woldesenbet et al., 2011). The owner’s capabilities plays a critical part in the success of small firms, and as a result of this, Woldesenbet et al. (2011,

p.508) list these criteria: “Small firms ability to operate in new product markets is a function of the managerial resources available, the owner’s strategic capability to identify and develop opportunities, and the firm’s ability to develop greater resource in order to exploit market opportunities.”

For small firms that do not possess these abilities, the focus should be on improving the development of the competence and skills needed. “Entrepreneurial capability enables the identification of opportunities in a new market, but the dynamic capability sustains the ability in strategically positioning itself within the new marketplace” (Woldesenbet et al., 2011, p.508).

With the development of strategic management theory, the focus in the literature has shifted from “what kind of business to enter” as the basic entrepreneurial question, to a more holistic view of the entrepreneurial process, describing *how* to enter the business (Lumpkin and Dess, 1996). The authors use five dimensions to describe this process, which they call the entrepreneurial orientation (EO) of a firm. Included here are autonomy, innovativeness, risk taking, proactiveness, and competitive aggressiveness (Lumpkin and Dess, 1996).

The factors mentioned above are part of a new entry, but they may not all be present in every case. The extent to which each of them is useful is dependent on the external factors of the market, like the industry environment. Internal factors such as organization structure may also have an influence. In other words, the importance of each factor is dependent on the circumstances of which the firm is subject to.

Lumpkin and Dess (1996) describes autonomy as the ability of an individual or a team to implement ideas without being restricted by the organizational frames, and cites that a high degree of entrepreneurship in smaller firms has been correlated with autonomous leaders. That is, leaders which were highly aware of development in the markets their business is subjected to, and relevant technological advancements. Innovativeness in the context of entrepreneurial orientation reflects a firm’s habit to create new solutions in the form of products, services or technological processes (Lumpkin and Dess, 1996).

Risk taking is commonly viewed as an integral part of entrepreneurship. In an organizational view, Lumpkin and Dess (1996) argues that it is related to large commitment of resources in the interest of receiving high returns, by exploiting new opportunities in the market.

Proactiveness can be defined as acting in anticipation of new opportunities, and could therefore be said to be crucial for entrepreneurial orientation, as it values a forward oriented



view. It may be compared to initiative, which has been highlighted as an important factor in entrepreneurial thinking, in order to capture value in new markets.

Lumpkin and Dess (1996) further define competitive aggressiveness as a firm's ability to directly challenge its competitors to achieve entry and outperform them. As young firms may find themselves in weaker position than the incumbents, they must take steps to become legitimate in relation to suppliers, customers and competitors.

Even though all the above mentioned dimensions are important for understanding the entrepreneurial process, they may occur in different combinations, varying from firm to firm. In other words, entrepreneurial ability is not be limited to those firms with high level of all the EO dimensions, but also those that combine some of them well. Furthermore, the authors argue that entrepreneurial orientation may be particularly important for new entrants which struggle to fully utilize their resource base. An EO is not necessarily strongly associated with organizational performance unless it is combined with the proper strategy and environmental conditions, and should therefore be put into a larger framework, the author concludes. (Lumpkin and Dess, 1996)

We have now explained theories related to resource identification and application. The next chapter will elaborate ways to adapt new resources into the organization, through reconfiguration of the business model. Also included hereunder will be the potential movement of the organization towards the new market, through alliances.

### **2.1.3 Business models as part of entry strategy**

As mentioned initially, we will focus on business model as to which degree the new market will require a change in the business model and to which extent the company should physically move into the new market. We will also briefly introduce some important considerations as to managing emerging business models.

The business model (BM) of a company is argued to be considered independently to other strategic concepts and theories. It grasps the essence of how a company creates value. In recent literature it has been discussed in the context of paths and how the businesses are able to develop new ways to earn profit over time (Brunninge and Wrambsby, 2013).

The shipping industry is characterized by standardized products and intense price competition, which have translated into an industry dominated by a focus on cost-cutting and efficiency (Borch and Batalden, 2013). This “may mean less emphasis on experimentation, innovation, and alternative business configurations for meeting challenges or opportunities in complex, volatile environments,” according to Borch and Batalden (2013 p. 6). The complex, volatile environments mentioned here is with regards to the High Arctic. In these areas, the business model must be realigned to allow for innovation, in addition to the regular cost-efficiency efforts, even though this balance is difficult to achieve. The survival of a company in highly volatile environments is directly threatened by the focus on “business as usual”, and one should consider re-configuration of the business model to adapt to a new market. This could include a revision of the entire value chain, to develop the firm’s internal and external innovative resources (Borch and Batalden, 2013).

Similar to the reasoning of Borch and Batalden (2013), Pehrsson (2002) argue that the successfulness in a new market is based on how the firm’s resources and capabilities can be applied there. A high relatedness between the business and the core competence will make the process of entering a new market less dependent of organizational change. Johnson et al. (2011) support this theory, by arguing that the breadth of the company’s advantages decide which changes are necessary for the organization with regards to cooperation and value chain modification, and accordingly changes in the business model. In this respect, changes might be necessary in a new market where the competitive advantages are not directly applicable. Based on the allegations of Borch and Bataldsen (2013), who argue that the new market requires reconfiguration of the business model, we will introduce ways to adapt the business model to meet the new demands.

### **Business model innovation**

According to Massa and Tucci (2013, p.2) the role of BM in innovation is twofold:

- 1. The BM represents an important vehicle for innovation.*
- 2. BM may also be a source of innovation in and out of itself*

According to Giesen et al. (2007) findings, the firm’s performance can be increased through developing new business models. They also discovered that older companies will have greater benefit from external collaboration and partnerships to innovate the enterprise model,

compared to younger ones. The authors describe enterprise model innovation as changes in the networks with employees, suppliers, customers and others, including configuration of the resource base.

As for creating or integrating a new business model, Massa and Tucci (2013) introduces an aspect related to how one can cope with more than one BM within a company. For example if a company which mainly is targeting a premium market, introduces a branch for the low cost market. This might affect their existing businesses negatively, by “(...) *cannibalizing existing sales and customer bases, destroying or undermining the existing distributor network, compromising the quality of services offered to customers, or simply defocusing the organization by trying to do everything.*” (Massa and Tucci, 2013, p.27) According to the authors researchers have traditionally divided such businesses into two distinct business models, but Massa and Tucci (2013) refer to Markides and Charitou (2004) who present a framework to evaluate the degree of conflict between the BMs and how different the markets are to be perceived strategically. Based on this the BMs can be separated or integrated, or start a process of aligning or divorcing (Massa and Tucci, 2013).

## **Alliances**

As mentioned in the entry strategy chapter, alliances might be a viable tool to close the resource gap. This enables firms to cooperate and share experiences and competence across company borders, for example by gaining knowledge of the local environment through an alliance with a local actor.

“A strategic alliance exists whenever two or more independent organizations cooperate in the development, manufacture, or sale of products or services” (Barney, 2010, p.363).

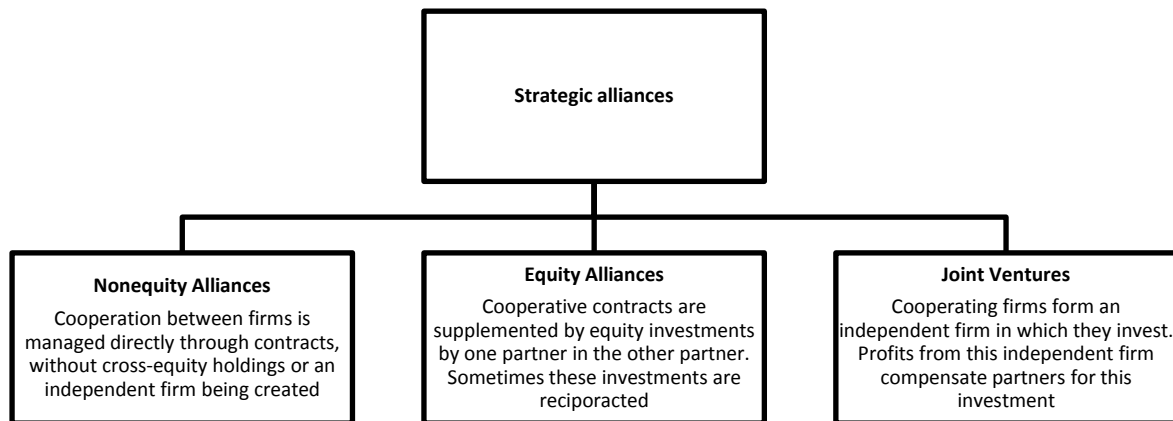


Figure 4: Strategic alliances. (Barney, 2010, p.364)

The main driver for the alliances described above is to create synergy effects, which means that two or more companies together can generate a premium above what they would have achieved individually (Barney, 2010).

The authors further explain that alliances can be motivated in regard of:

- *Exploiting economies of scale*
- *Learning from competitors*
- *Managing risk and sharing costs*
- *Facilitating tacit collusion*
- *Low-cost entry into new markets*
- *Low-cost entry into new industries and new industry segments*
- *Low-cost exit from industries and industry segment*

Barney (2010) points out three potential pitfalls of entering an alliance. The first one is adverse selection, which means that one of the partners entering the alliance has misrepresented their ability to fulfill their obligations in a sufficient manner. Second, the moral hazard, that a company in an alliance does not do their best to utilize their abilities and skills. At last, what the authors call “holdup”, which means that one of the partners would benefit more from a specific investment related to the alliance than the other(s).

## **Benefits of a dynamic business model**

All companies are affected by external and internal change. Brunninge and Wramsby (2013) emphasized the importance of preventing a locked in path, which could either make the company blind to new opportunities, or force it to perform a costly “unlocking”. The popular saying “never change a winning team” do not apply in this context. The authors further argue that a dynamic business model under constant consideration would benefit a company, not only in the terms of enabling change, but also by encouraging exploration of new threats and opportunities. To be able to shift quickly can also trigger first movers advantages, which consequently also make the model harder to copy. New organizations is considered to be more dynamic regarding creating new business models, and is therefore more likely than incumbent companies to enjoy first mover advantages (Brunninge and Wramsby, 2013). On the opposite side, new organizations may meet other issues regarding “*considerable technological uncertainty, lack of legitimacy, lack of resources and, in general, liability of newness, which do influence the design and validation of new BMs*”(Massa and Tucci, 2013, p. 9)

The following two chapters will address characteristics and how to approach high technology demands, and further introduce tools to assess the competitive forces in the market. As for the regulatory demands, we will elaborate the most relevant laws and regulations which ship owner companies encounter in the High North in chapter 4.4.

## **2.2 Factors that influence entry strategy**

Previous market entry theories have been based on the evolutionary view (Chang, 1996), the externally oriented industrial organizational view (Porter, 1981) or the internally oriented resource-based view (Barney, 1991). Pehrsson (2002) argues that these are too circumstantial by themselves, and has proposed to combine the internal and external factors in a more balanced manner (Pehrsson, 2002).

Traditional entry strategy literature presents barriers to entry as the major external factor. The author argue that these barriers may be perceived differently from firm to firm, implying that the potential business opportunities will be assessed differently depending on the viewer, and is as a whole dependent on strategic competence of the firm in question. Since the barriers must be determined on a basis of limited facts, the process of implementing the entry strategy

may lead to a change in this perception over time. The perceptions of entry barriers, and the knowledge gained throughout this process are dependent on the need for internal strategy competence in order to gain an established market position (Pehrsson, 2002).

Barriers to entry imply disadvantages that apply not to incumbents, but those trying to enter a new market. Incumbents can therefore enjoy higher profitability, the higher the entry barriers are. These factors will be elaborated and assessed in the following chapter. Although it generally exist some objective facts, the perception of these barriers will be highly subjective based on the available information, according to Pehrsson (2002).

### 2.2.1 Competition as influence factor

Porter’s five forces is an often applied framework used to define the structure and competitive forces of an industry. It is therefore useful for potential new entrants, as a tool to explore the opportunities and pitfalls of the industry. First of all to map the barriers to entry, but other factors are equally important to paint the big picture. The sources of market power should to a high degree dictate the strategy of new entrants. Porter specifies that “The point of industry analysis is not to declare the industry attractive or unattractive but to understand the underpinnings of competition and the root causes of profitability” (Porter, 2008, p.29).

#### The Five Forces That Shape Industry Competition



Figure 5: Porter’s Five Forces. (Porter, 2008)

## **Threat of new entrants**

All existing industries will have a different set of entry barriers. The extent of these will to a large degree influence the threat of new entrants, and shape the potential entry strategy of a new entrant. Porter (2008) argue that the height of these barriers decide the possibility of newcomers to a market:

- Supply-side economies of scale
- Demand-side benefits of scale
- Customer switching costs
- Capital requirements
- Incumbency advantages independent of size
- Unequal access to distribution channels
- Restrictive government policies

Shortly put, there are several factors that may hinder new entrants. If price is the deciding element, those with high volumes and low cost per unit will have a significant advantage. The buyers may also be more lenient to trust the established companies for products and services that are crucial to their operations. If entry requires large initial investments, which may be considered a sunk cost for the incumbents, the barriers will be equally increased. The incumbents may also possess established brand names, technology and operation systems that the entrants must compete against. Furthermore, if the new entrant cannot access the necessary distribution channels, they will have no possible means of selling their product. Governmental regulations may be of either help or present additional challenges. (Porter, 2008)

*The challenge is to find ways to surmount the entry barriers without nullifying, through heavy investment, the profitability of participating in the industry. (Porter, 2008, p.29)*

The barriers mentioned are, however, always subject to change. Both outside- and inside factors may influence and raise or lower the barriers. This includes everything from strategic decisions by leading competitors to new legislations passed by the government (Porter, 2008).

## **The power of suppliers**

The suppliers are an important factor when considering the profitability of an industry. They decide the costs, and hence the profitability to some extent. If the supplier group is more

concentrated than the industry and not heavily dependent on it, they will enjoy a high degree of power, and be able to push prices. If the switching costs are high, or the suppliers offer differentiated products, the customers will also be forced to adhere to the rules set by the suppliers, as they have no viable options. The same can be said if the customers lack substitutes to the product the supplier offers. If the suppliers are heavily dependent on one group of customers, however, they will want to protect their interest by offering reasonable pricing and taking part in support activities, e.g. R&D (Porter, 2008).

### **The power of buyers**

With high buyer power the market is subject to price competition and tight margins. The buyer power is high if they possess significant negotiating power, and if they are price sensitive. To avoid or negate this, the suppliers can seek to differentiate themselves. With standardized products the buyers can play the suppliers against each other, but if a company is able to provide products that are specialized for certain conditions, the tables may turn. The power of buyers is high if there are few of them. The suppliers will then be too dependent on the customer to be able to exercise any bargaining power. Furthermore, if the switching costs are low, the customer may change suppliers at any given time (Porter, 2008).

If the product represents a significant part of the customers' budget, they are more likely to be price sensitive. Likewise, if the customers have a low profit margin, they will seek to lower the purchasing costs wherever possible. The degree to which the suppliers' product influence the quality of the buyers' end product will also have an influence on their willingness to pay a high price (Porter, 2008).

### **The threat of substitutes**

If there is another product that may replace the one the firm is producing, the threat of substitutes is high, and profitability in the industry will diminish. The threat of substitutes is generally considered low if the substitute cannot compete in function, attributes and performance (Porter, 2008).

### **Rivalry among existing competitors**

The amount of rivalry among existing competitors gives the new entry information about how to compete. Rivalry takes many forms, for example: price discounting, new product



introductions, advertising and service improvements. High rivalry limits the profitability, and the degree depends on intensity and on what basis they compete (Porter, 2008).

*The dimensions on which competition takes place, and whether rivals converge to compete on the same dimensions, also have a major influence on profitability. Rivalry and price competition is especially destructive to profitability. (Porter, 2008, p.32)*

When the customer group has high leverage, due to reasons mentioned earlier, price competition is more likely to take place.

Porter argues that competition is not necessarily a detriment to profitability. As long as the rivalry is focused on features and services instead of price, it can improve the customer value, thereby supporting higher prices. Furthermore, the attributes on which they compete must be different. If not, the result will be zero-sum competition instead of an increased average profitability (Porter, 2008).

When entering the market it will be necessary to assess all the above mentioned criteria, and finding the position where the competition is weakest. A part of this will also be to exploit potential industry changes. This includes spotting and claiming new positions that emerges with the changes, that smaller more agile competitors may be more suited to pursue. To fully exploit these opportunities, the entrant must tailor the value chain to cope with the competitive forces in this segment (Porter, 2008).

### **2.2.2 High technology demand as influence factor**

An important aspect considering high technology is that the market shifts rapidly and unpredictably. This requires the strategic behavior to also be dynamic, thus at all-time maintain a good overview over the market conditions and your competitors. A firm has to respond to the shifts in consumer preferences and competitors strategies, and also anticipate what the customers would demand in the future. This requires resources and competence to always be on level, or one step ahead of the competitors. This being said, one should be careful not to become paralyzed by the analysis (Boutellier and Heinzen, 2014).

Boutellier and Heinzen (2014) divide the total market demand into segments, which further requires distinct strategies when considering how to approach it. The authors also refer to prospectors, defenders, analyzers and reactors. Prospectors seek new markets and

opportunities and are the first ones out. They do this based on an “outside-in” approach, locating the potential or current needs in a market and adapt the organization to fit the external situation. Opposite, by an “inside-out” approach the prospector look into the organization and this way find the best fit regarding market. The defenders try to defend its market by sealing off a share of the market and provide products to a stable mass of customers. The analyzer typically follows the prospector into the new market segments with similar products and at the same time strives to capture a stable share of the market. The reactor simply reacts to what others do.

In the article of Fosfuri et al. (2013), the authors provide theoretical evidence that in a high tech market, it is harder to retain an early mover advantage than in a market with a slow and smooth innovation. Fosfuri et al. (2013) also argue that in a high tech market, the technology is easy to copy, and the followers are often better off than the first movers. Fosfuri et al. (2013) sites Mitchell (1991, p.85), saying that the incumbents “are likely to possess strong sets of assets required for the commercialization of goods in a new technical subfield”

Relatively big companies are better prepared to commercialize products in an early industry due to their capacity and ability to grow business rapidly. This is often a necessity for success in an emerging industry. These beneficial prerequisites include complementary assets, general purpose assets and other resources that can be applied in the new market area (Fosfuri et al., 2013).

In high technology industries the actors have to strive for new technologies to avoid falling behind. One of the key factors for differentiation in these markets is knowledge, thus competitiveness requires high investments research and development to gain knowledge and deploy it. Since new technologies often are visible for other actors, they might be hard to restrict from the competitors. Severe investments in technology therefore constitute a big risk, because the value of it would diminish or even vanish if copied (Boutellier and Heinzen, 2014). Thus, being a follower might be a viable solution compared to leading the line. The authors also underpins that in mature technologies, the investments are considerably higher in high technology manufacturing units to achieve differentiation.

### 2.2.3 Regulatory influence factors

The introduction of the Polar code will encompass new regulations towards pollution, safety and technology demands related to Arctic operations (IMO, 2014). Brown and Dean (1995) argue that some firms may develop strategic benefits with the inclusion of environmental regulations to an industry, especially if these are complex. These arguments are based on the fact that regulations will affect some firms to a more severe degree than others, based on their situation in the market, their size, and their ability to manage new technology advancements. Further, the authors present earlier research which suggests that “environmental regulations may have unequal impacts in the sense that they may place a heavier burden on new firms” (Brown and Dean, 1995, p.289). New regulations will often increase the capital requirements for efficient entry, hence increasing the barriers to entry. Incumbents may therefore be able to use these regulations to their advantage. (Brown and Dean, 1995)

The complexity of meeting the regulation demands will increase with the number of different institutions which put forward the demands, and to which degree they overlap. Empirical studies have shown that “regulations may affect smaller organizations that lack the specialized resources needed to handle regulatory compliances more severely than large organizations” (Brown and Dean, 1995, p.291).

The more a firm deals with regulatory agencies, 1) the more the firm learns about how to relate and effectively handle them, 2) the more the firm learns about what technologies to use for maximizing efficiency, and 3) the more the firm learns about how to modify organizational processes to handle the necessary tasks (Brown and Dean, 1995).

Incumbents will, in other words, have an advantage based on learning from experience. New firms may mitigate this barrier by taking advantage of external consultants or hiring employees with regulatory and legal experience. In some cases there will also be programs offered by regulatory agencies or trade associations, which the entrants can benefit from (Brown and Dean, 1995).

New regulations may, however, also have positive effects on new entrants. Brown and Dean (1995) argue that these three factors could give the entrants a competitive advantage:

1. Regulations may exclude small firms from enforcement, if the lawmakers wish to make the industry more attractive to new entrants. This method may be called “size tiering.”
2. Fitting new technologies on existing products could lead to ineffectiveness. New entrants have the opportunity to avoid this by choosing the technology in the equipment at the same as they enter the market, instead of refitting existing equipment.
3. New regulations may increase the demand for new solutions to efficiently meet the regulatory demands, which entrepreneurial firms can develop and sell to the remainder of the market.

Brown and Dean (1995) do, however, conclude that complex regulations will in most cases favor the incumbents more than new entrants. The authors’ reasoning behind this is that incumbents may be in a position to influence the law makers to adjust regulations in their favor, by promoting regulations that play to their strength, or increases the requirements put on new entrants.

The incumbents also have the ability to influence new regulations by creating new, efficiency increasing technologies, which influences the law makers to create legislations that demands that all companies lives up to this standard. “When this happens, the innovative company acquires a protected market, hedged in by environmental standards that it can meet, but its competitors cannot” (Brown and Dean, 1995, p.300).

The national legislations and the customer demands, as to certificates and other requirements, will be further assessed in the frame of reference chapter, 4.4.

### 3. Research Method

This chapter covers the practical techniques we have applied in our study, the assumptions for these techniques and the underlying philosophical standpoints. We saw the necessity to study literature related to research methods in an early phase, to enable a consistent approach throughout the whole thesis.

#### 3.1 Ontology and epistemology – The world as we see it

Even before we started writing, or even thinking about the thesis, our perception of the world would determine how to assess the given phenomena. This relates to ontology and epistemology.

Ontology is by Easterby-Smith et al. (2012, p.2) defined as “*Philosophical assumptions about the nature of reality*”. Basically we divide the ontology into four distinct branches, with realism in the left hand side and nominalism in the other. The two sides part on the question whether a single truth exist, which can be revealed through finding facts, or if there is no truth, and facts are determined through the interplay between individuals. The latter relates to the right hand side and nominalism. If we would have to place ourselves somewhere along the line, we would place ourselves somewhere in the middle, with a tendency towards the nominalism side. Thus, we relate ourselves most to the so called “relativism” branch.

Easterby-Smith et al. (2012, p.19) explain this branch as a belief that “*There are many truths*” and “*Facts depend on the viewpoint of the observer*”. In other words, truths can be found, but what we see as truths can later be adapted or even disproved, either by our own experience regarding the phenomena, or by being persuaded by other sources.

As for epistemology, Easterby-Smith et al. (2012, p.18) define it as “*A general set of assumptions about ways of inquiring into the nature of the world*”. Similar to ontology, it can seem “far-fetched” when trying to objectively place ourselves according to how we think, and how we think that we think. One generally divide epistemology into positivism and social constructionism. Easterby-Smith et al. (2012, p.22-23) explains that “*The key idea of positivism is that the social world exists externally, and that its properties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition*” and further elaborate that in social constructionism “(...)“*reality*” is determined by people rather than by objective and external factors.” According to this, people interfering with each other make the reality, and the interference

creates what we assume to be real. Thus, the external factors cannot be observed detached from the people interfering with it. In most cases researchers ascribe some way or another to both positions. But our perception combined with the art of the theme we are assessing, regarding business management and the interplay of humans in a complex environment, makes it evident to tie us to the social constructionism paradigm.

There are both benefits and disadvantages of the social constructionism paradigm, and the associated qualitative methods. Benefits are described by Easterby-Smith et al. (2012, p.28) as *“strengths in their ability to look at change processes over time, to understand people’s meanings, to adjust to new issues and ideas as they emerge, and to contribute to the evolution of new theories. They also provide a way of gathering data, which is seen as natural rather than artificial”*. On the opposite, the author further explains the disadvantages as problems regarding a high amount of data which have to be interpreted, and the role of the researcher which would have to contribute with his/her subjectivity to translate the findings into a result. This subjectivity might also be seen as a disadvantage in itself, where interested parties might doubt the researcher’s findings and integrity (Easterby-Smith et al., 2012).

## **3.2 Research Design**

*“Research design is about organizing research activity, including the collection of data, in ways that are most likely to achieve the research aims.”* (Easterby-Smith et al., 2012, p.37)

In the autumn 2013 we started developing ideas for a thesis. Based on the location of the university and the competence within the area, we chose to focus on petroleum related activities in the High North. Offshore shipping was a red thread, and after consolidation with our academic advisor, we agreed on entry strategies to the standby vessel market in the Barents Sea, since there was little research on this exact theme, but applicable theory available.

### **3.2.1 A qualitative method – Case study**

We wanted to see how a company could enter the new market, by assessing potential newcomers and already established actors. Since we found it hard to draw a concrete line between the context and the phenomena, we found it necessary to go in depth to recognize

and understand the explicit factors. The qualitative approach of a case study appeared to be the most viable solution. A case study is typically used when a *how* or *why* question is asked, describing a contemporary event, where the researcher have little or no control (Yin, 2009). We wanted to see how a company could enter a new market, by assessing potential newcomers and already established actors. Since our research questions focus on “what” questions, the study should be categorized as an exploratory case study. This type of study is meant to explore a new area of research, to set the baseline for further research (Yin, 2009)

In the article “Five Misunderstandings About Case-Study Research” Flyvbjerg (2006) argue that the case study enables the researcher to observe a phenomena and its context, to get a more nuanced view of the situation and events. This is necessary since there is not developed any context-independent theory in social science. The closeness to the phenomena and people studied also facilitate a fast learning process and enable us to gain and provide context-dependent knowledge (Flyvbjerg, 2006). This would enable us as researchers to develop an expertise in the field we research, which we consider valuable for two reasons; we are still in education and want to have a steep learning curve; we are especially interested in the field of study. We believe that this motivation provide a good baseline for fruitful research.

### **3.2.2 Generalization in Case Studies**

Flyvbjerg (2006) challenges the critics towards case studies and generalization. The author refers several research disciplines which have gained a break through based on case studies. The famous example of “black swan” and “all swans are white” is being used as an example of how intense observation of one particular case can change what is assumed to be true. The challenge is to find the right case to observe and to approach it in the best manner, to increase the possibility to do meaningful discoveries (Flyvbjerg, 2006). In our study we had an excessive preface of gaining knowledge through primary and secondary data to have the prerequisites to do so

Still, many researchers argue that case studies give limited possibilities for generalization (Easterby-Smith et al., 2012). We found it beneficial to add several cases to strengthen our findings. The generalization we strived for was to strengthen established theory, so called analytical generalization. This differs from statistic generalization which generalizes by studying a sufficient frequency of a population (Yin, 2009). On the opposite, as explained in the paragraph above, to disprove established theory would in this regard also provide us with

a finding. By adding several cases we tried to achieve triangulation from established theory and several companies engaged in the same business sector and industry experts to increase the robustness of the thesis. By looking at all the most relevant competitors in the market we were assessing, the risk of getting a biased view from just one company and their perceptions and meanings, was reduced (Yin, 2009). This was actually something we found important throughout our study, because of the different answers we acquired, which let us further investigate the motives and reasons for these differences.

### 3.2.3 Sampling

We found it appropriate to use a non-probability sampling design (Easterby-Smith et al., 2012). The cases were chosen based on the market of operations. We analyzed the fleets of ship owner companies who were dedicated in the standby/rescue segment, and further discussed with our supervisor which companies to assess. Based on this initial research we decided upon four cases, all ship owner companies with interests in the northern standby rescue market. Our choices got confirmed when our first interviewee from Esvagt mentioned the exact same companies as their main contenders regarding contracts in northern Norway. Flyvbjerg (2006) reasons how selecting some cases can be beneficial to describe why problems occur and consequences, instead of random sampling which often leads to how often they occur on a more superficial level. In our study, trying to find truths in a specific market based on assessing the most invested participators combined with various relevant research, we would fall under the type of selection which is called critical cases (Flyvbjerg, 2006). The author describe the purpose of this type of sampling “to achieve information that permits logical deductions of the type: if this is (not) valid for this case, then it applies to all (no) cases” (Flyvbjerg, 2006, p.230).

Our academic advisor also suggested that we should contact persons responsible for chartering and operating activities. Thus, our sampling procedure could be seen as a hybrid of purposive sampling and snowball sampling, since we had an opinion on which cases and employees to include, but the choice of individuals were affected by others (Easterby-Smith et al., 2012). All the case interviewees stressed the role of the ship designer as important when applying to a tender. This led us to an interview with a ship designer. Vard Design was chosen because they have designed several vessels for operations in the High North. After contacting



Vard Group per phone and introduced our intentions, we got further directed to the vice president of Vard Design.

We preferred to do the interviews face to face, but because of capacity constraints from us and interviewee's side and the geographical spread, we had to perform some of the interviews by phone. The interviews with Atlantic Offshore, Chriship and Vard Design were done by phone, while Simon Møkster Shipping and Esvagt were approached in person. We visited Simon Møkster Shipping in Stavanger, which gave us valuable insight in a ship owner company. While being there we also took the opportunity to interview as many as possible.

The following figure shows the companies and interviewees.

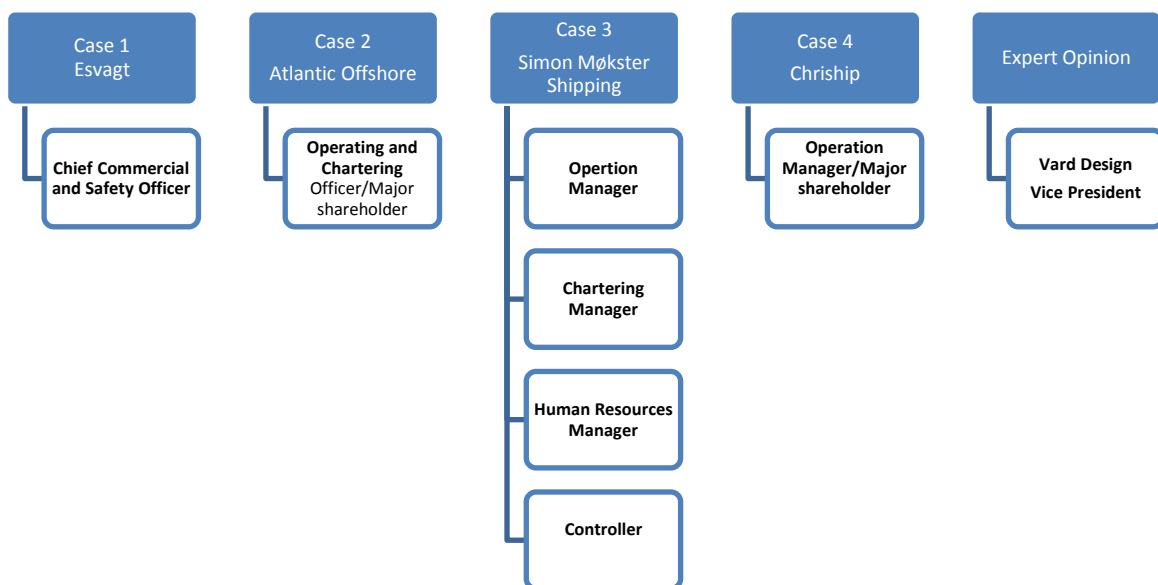


Figure 6: The companies and interview objects

In addition to these interviews we attended several conferences and had fruitful chats with experts on maritime operations and shipping.

Seminars and lectures we attended associated with our thesis:

- Arctic Dialogue 2014
- Guest lecture held at the University in Nordland by HR-manager Paul Eirik Davies from Troms Offshore about HR policy

- Bodøseminaret 2014, “*An important meeting place for stakeholders in the Norwegian petroleum industry*”(Norsk Petroleumsforening, 2014)

### 3.2.4 Data gathering

Our source of primary data was then in depth interviews and secondary data which was acquired through relevant articles of previous research, web pages, annual reports and other public information. We also conducted some informal talks with industry experts, to get a better overview of the procedures and causalities in the industry. In addition, we had the possibility to contact individuals we had performed interviews with if we needed any extra information. This could be related to financial numbers, deeper understanding of certain issues and so on.

#### 3.2.4.1 The interviews

Since we wanted to confirm or disconfirm established theory in a specific context, the questions were based on previous research, in addition to inputs we had acquired through discussions with our academic advisor.

When preparing an interview it is important to consider to which extent you should structure the interview (Easterby-Smith et al., 2012). We chose to use a detailed semi-structured interview guide. This was mainly to make sure we would cover everything we wanted answered, however, we had a loose approach to the guide, where we throughout the interviews considered the necessity to explicitly ask the written question. This gave us the flexibility to further investigate any phenomena that was brought to the surface throughout the interview.

We also slightly changed the interview guides based on the interviewee. This was mainly to dig deeper into specific events of interest in the company the interviewee was representing, thus the main topics were covered and incidents we saw of special importance was investigated more in depth. When interviewing specialists in certain areas, such as a controller, we dug more into things related to his profession, letting the interviewee loosely speak about what he thought was most relevant regarding our subject.

The researcher is always to some extent prejudiced. To not affect the interviewee we tried to ask wide questions, avoiding yes or no questions and putting words into the other's mouth.

Regarding the opposite side of the table, the interviewee might have some ulterior motives for answering one way or another. Even though we extensively explained the confidentiality in the initial correspondence, and further reminded the interviewee that nothing would be published without consent, we had reason to believe that some answers could be altered in what they thought would be in their favor. This is something we had to bear in mind throughout the whole thesis. However, we were impressed by their willingness to talk about seemingly delicate matters.

The findings in our interviews were arranged by companies and in the respectively categories we had chosen for the interview. The structure differs some from the theory chapter and analysis. We found it more reasonable to structure the interviews slightly different than consistently following our theory structure, for a more informal conversation with our interviewees, avoiding advanced theoretical sayings. As for organizing the collected material, we chose to divide our empirical findings into categories based on the interview guide. This differs some from the categories in the theory and analysis chapter, because we found the material too complex to be easily organized without the added explanation we provide in the analysis.

### **3.2.5 Data Analysis**

A friend of mine in the police once said that ten minutes of action often result in ten pages of writing. This is also applicable for interviews. Fortunately, we were provided with an external professional transcriber to do the work for us. Nevertheless, a great amount of time was invested in reading and interpreting. Usually we received the interviews in written format in less than a week after we conducted it. This let us have the actual interview fresh in mind while interpreting and analyzing.

We performed a content analysis, which is recognized as “a relatively deductive method of analysis where codes (or constructs) are almost all predetermined and where they are systematically searched for within the data collected”(Easterby-Smith et al., 2012, p.340) Thus, in the analysis we triangulate data from interviews with theory and other secondary data to find or dispute coherence with established theory. We first assessed the dependent variables, then the independent ones, before we discussed how the dependent ones were affected by the independent. Identifying key factors as to entry strategy in the analysis part enables us to draw a conclusion based on our findings.

### 3.2.6 Wrap up

There are generally two ways to sum up an master thesis, one could summarize and “close” or leave it open. Researchers argue that in dense case studies it might be disadvantageous to sum up different mutual exclusive concepts, because it disputes the initial purpose of the research to grasp a complex nature and the context. As a solution one can tell the story in its diversity and by this letting the reader interpret the conclusion. As for our research we found different contradicting stories and findings, such as the matter of price contra quality when contracting ships to operate in the High North. In this case we would not necessarily state a correct ratio, but rather chose to describe the differences and leave the end open. Thus, the nature of our case study cannot be summarized in a brief few-point solution, but rather the story in itself can be seen as a result (Flyvbjerg, 2006).

### 3.3 Validity and Reliability

Validity and reliability refers to the quality of your research. Easterby-Smith et al. (2012, p.71) encourage asking the following questions to reveal the degree of validity and reliability in constructionist designs:

*Validity: Have a sufficient number of perspectives been included?*

*Reliability: Will similar observations be reached by other observers?*

As argued above, we chose to add several cases and interviewees to get several perspectives. The difference in characteristics of the firms also gave us the benefit of seeing the market from different angles. In addition we added an expert interview to get the suppliers perception as well. Ideally we would add the customer side, but because of confidentiality in the tendering process, and capacity constraints, we chose not to.

To ensure correct interpreting of the result, the findings chapters were respectively sent to each company, so they could correct any misunderstandings. This process enabled us to correct some of the subjectivity we carried into the writing process.

### 3.4 Ethical considerations

We hold a firm stance according to ethics in our master thesis. The companies we are assessing hire altogether over a thousand employees, with a turnover of several billion NOK.

This stresses the importance of staying objective, and not influencing their businesses by publicizing confidential information or showing the companies in an unfair positive or negative light.

Easterby-Smith et al. (2012) list these key principles in research ethics:

1. Ensuring that **no harm** comes to participants.
2. Respecting the **dignity** of research participants.
3. Ensuring a fully **informed consent** of research participants.
4. Protecting the **privacy** of research subjects.
5. Ensuring the **confidentiality** of research data.
6. Protecting the **anonymity** of individuals or organizations.
7. **Avoid deception** about the nature or aims of the research.
8. Declaration of affiliations, funding sources and **conflict of interest**.
9. **Honesty and transparency** in communicating about research.
10. Avoidance of any **misleading** or false reporting of research findings.

The standard procedure we applied when approaching a potential interviewee was to send a mail where we elaborated the theme of the thesis and our intentions. We also made it clear that we would record and transcribe the interviews, and later send it back to the interviewees respectively. We also ensured the participants that nothing would be published without consent. Thus, all our empirical findings were approved by the concerned company.

## 4. Frame of Reference

In this part we will give a short overview of the history of the industry to create a picture of previous development on the Norwegian Continental Shelf. Further, we will assess and clarify the wide set of laws and regulations which govern the offshore service vessel industry operating here.

### 4.1 An overview of the maritime sector

The Norwegian offshore fleet is the second largest in the world, and the most advanced (Menon, 2012). The fleet serves a demanding industry across the oceans with experienced personnel and advanced technological features. The ships participate in every phase of the offshore petroleum development which includes exploration, development, production and disassembling of offshore plants and infrastructure. During the last decade the industry has become more internationalized, and the Norwegian ship owners now compete worldwide. Today, the Norwegian shipping companies receives over half of the operational income from foreign markets. To exemplify the importance of the Norwegian fleet abroad, every fourth vessel operating in Brazil is controlled by Norwegian ship owners. Norwegian shipping companies also provides its services in other parts of South America, Africa and Asia (Menon, 2012).

The shipping companies serve a key role for the maritime industry in Norway, and cooperate closely with sub suppliers, ship builders and oil and gas companies. This has created a dynamic and innovative environment in the business sphere, and one of the most competitive maritime regions in the world. Especially in the north-western part of Norway, where the “maritime cluster” is located, the vertical cooperation and strong horizontal competition have stimulated a competitive industry. In addition, knowledge hubs and academia have contributed with research and knowledge diffusion for common competitiveness (Hervik et al., 2012). The cluster phenomenon is given a lot of thoughts in recent literature, and apparently for a good reason.

The offshore shipping companies in Norway today control about 600 vessels, where approximately 60% sails under a Norwegian flag. About 90% of the contracted new builds on Norwegian shipyards derive from domestic shipping companies. The sector employed about 6500 sailors with a turnover of NOK 30 billion in 2011, compared with respectively 7223

sailors and NOK 18 billion in 2004. From 2011 to 2013 the value creation in the sector has further increased with 33 percent. The high growth is expected to continue and the appreciated spillovers likewise (Menon, 2012, Erik W. Jakobsen et al., 2014).

## 4.2 A young industry founded on traditions

The Norwegian coastline ranks from the second to eight longest (depending on how it is measured) (CIA, 2014). Obviously, this has motivated Norwegians through generations to seek opportunities offshore. The first offshore vessels were literally built on the foundation of fisheries, by modifying existing fishing vessels. The first generation of specialized offshore vessels was built based on the experience, technology and knowledge of building and operating other types of vessels. A good example of the usefulness of these prerequisites, is the first specialized vessel built in Norway, “Rig Pilot”, which still serves its duties in China today (Menon, 2012). The shipyard and the company that first operated the vessel were situated in the geographical core of what we today call the “maritime cluster”. The same region which was, and is still heavily invested in fisheries (Hervik et al., 2012). Forty years later, Norway possesses the most advanced and valuable offshore fleet in the world (Menon, 2012).

When approaching new possibilities further north, the same process of developing existing experience and knowledge in other industries are applied to tackle the new challenges in a harsher climate. Troms Offshore, with the head office located in the Arctic city of Tromsø, address their key specialty as Arctic operations. They refer to their operating experience in the north from other maritime operations, when they proclaim their competitive advantages in the High North (Troms Offshore, 2014).

## 4.3 Offshore service vessels and ERRVs

According to Menon’s project, “*A knowledge based maritime industry*” the offshore shipping companies was defined as the following:

*Owners and operators of supply vessels, anchor handling tug supply vessels, construction vessels, seismic- and other offshore related specialized ships, as well as subsea contractors* (Menon, 2012, p.4)

In this thesis we will focus on vessels with ERRV capabilities. Albeit, the multi-purpose nature of the vessels which will be operating in the remote locations of the High North makes us look into a wide specter of vessels.

ERRVs are vessels able to perform rescue operations. They typically carry two or more fast rescue crafts (FRC), which is deployed in the sea from the ERRV to rescue people from installations and the open sea. When the weather conditions do not allow the FRC to operate, the ERRVs are equipped with special equipment to rescue personnel straight onboard. When survivors are rescued aboard, they are accommodated in suitable rooms and taken care of by personnel trained to perform medical aid. If necessary, people gets lifted off deck and transported ashore by helicopters (ERRV Association, 2014).

In addition to core rescue operations, ERRVs also provide other support functions to the offshore installations. This could be “warning off” unauthorized ships approaching installments, inter-field cargo transport, towage assistance and pollution control. The ERRV’s should also be capable of controlling the initial process in a major offshore accident, until the onshore support center is ready to coordinate (ERRV Association, 2014).

As mentioned in the introduction of the thesis, ERRVs on the NCS often provide additional offshore support services. Put another way, OSVs might have emergency response and rescue as additional properties. The abilities and capacity of an ERRV is approved through regulations. These regulations vary across country borders and geographical areas. These regulatory demands will be elaborated in the following chapter.

#### **4.4 Laws, regulations and certificates**

In this chapter we will introduce the most important institutional framework which ship owners encounter on the Norwegian Continental Shelf (NCS). We will also introduce relevant certifications and codes that the customers demand to be in place to become a supplier.

For members of International Maritime Organization (IMO), such as Norway, the flag state is responsible for supervision and regulations in accordance with conventions determined by IMO (Norsk Olje og Gass, 2002). The flag state is not limited to the framework set by IMO, and is free to determine additional demands. The Norwegian authority is regarding this only restricted by EEA interference (Ministry of Trade, 2005). In addition to this there is the



framework of the United Nations Convention on the Law of the Sea (UNCLOS) which determine the ruling state’s responsibilities and rights in their ocean space (UN, 1994).

The following model illustrates the framework a ship owner company has to comply with to operate at the NCS.

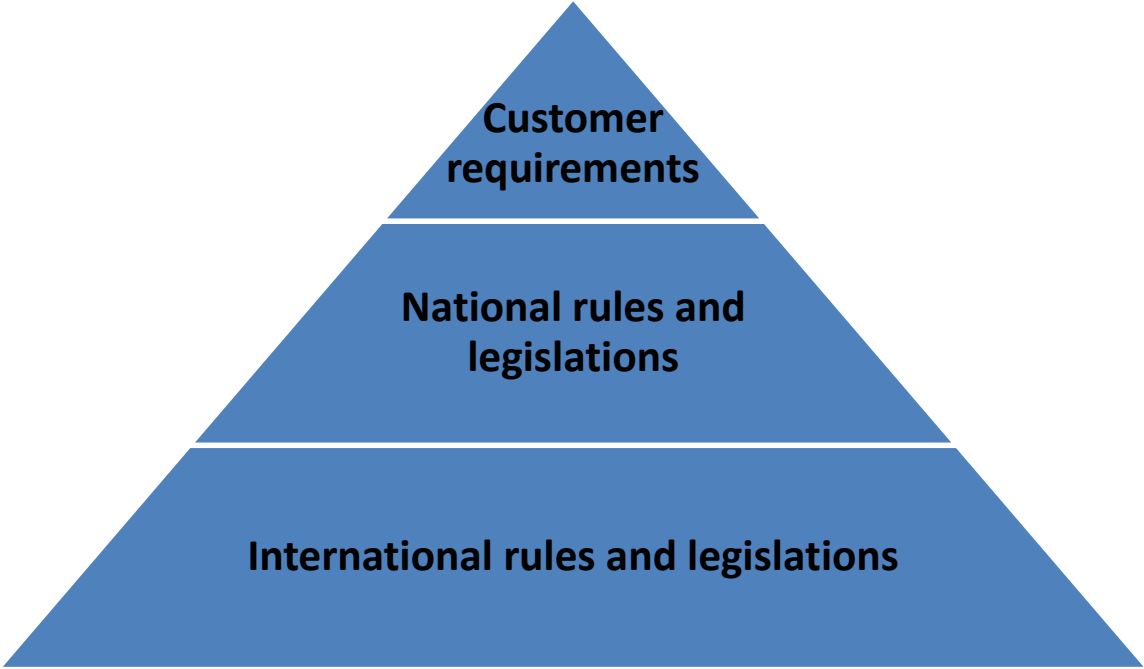


Figure 7: Regulatory framework

**International legislations at the NCS**

Normally IMO is seen as the baseline for maritime operations on the NCS (Borch et al., 2012). IMO was created to align and coordinate laws and regulations at sea for the world’s fleet, and today 164 states are members. The organization typically responds to severe accidents by introducing codes, policies and resolutions. In the recent years more focus has been drawn to comprehend risk management and cost effectiveness internationally. The IMO has implemented the International Safety Management (ISM) code , the Safety of Life at Sea (SOLAS) convention and the Standards of Training, Certification and Watchkeeping (STCW) convention (Ministry of Trade, 2005).

In practice companies often comply to the legislations set by the IMO by hiring companies with authority delegated from the flag state to perform inspections and certificates on the government’s behalf. This works as an insurance for the government and customers that the ship owner companies are acting according to the law. The charterer, typically an oil company, often requires that the vessel is classed by a recognized classification company, i.e.

member of the International Association of Classification Societies (Ministry of Trade, 2005). An example of such a company is Det Norske Veritas (DNV), which is authorized to conduct certificates on behalf of 80 national governments (DNV, 2014).

Generally the conventions and ISM code addresses minimum requirements for constructions and equipment, in addition to management of ships to improve safety, security and environmental standards for vessels at sea and in harbor. This encompasses a wide variety of requirements from hull design to communication procedures between top level management and sailors. All the ships that are subject to the regulations are regularly or on demand reviewed to ensure that they comply with the rules, and are issued required certificates for international traffic. Training and exercises is often a prerequisite for personnel and assets to be approved (Ministry of Trade, 2005). More details about the ISM code (IMO, 2010) and SOLAS (IMO, 1974) can be found at IMO's homepage.

The Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) was the first IMO convention which included "the human element". This convention includes detailed requirements regarding personnel working in the shipping industry, such as issuance of certificates based on competence, minimum age, experience and health. 98,51% of the worldwide tonnage have ratified this convention, and it sets the standard for education and employment. Requirements depend on the work task and addresses such as medical treatment, crisis management, navigation abilities and so on (Ministry of Trade, 2005)

There are few mandatory regulations concerning operations in Arctic waters. IMO has introduced "Guidelines for ships operating in arctic ice-covered waters", but these are not mandatory (Borch et al., 2012). Requirements and procedures are about to become more formally determined as IMO is now working with the "Polar Code", which is to set the framework for operations in the Arctic seas.

*IMO is developing a draft mandatory International Code of safety for ships operating in polar waters (Polar Code), to cover the full range of design, construction, equipment, operational, training, search and rescue and environmental protection matters relevant to ships operating in the inhospitable waters surrounding the two poles. (IMO, 2014)*

The new mandatory code comes in the wake of the optimism of oil and gas resources in the polar waters, and the new possibilities according to sea routes in the Arctic. The polar waters

are considered more vulnerable to pollution and emissions, and the remote location in harsh climate requires specialized measures to ensure safety and environmental protection

The following figure gives an illustration of the international framework one has to comply with when operating in polar regions:

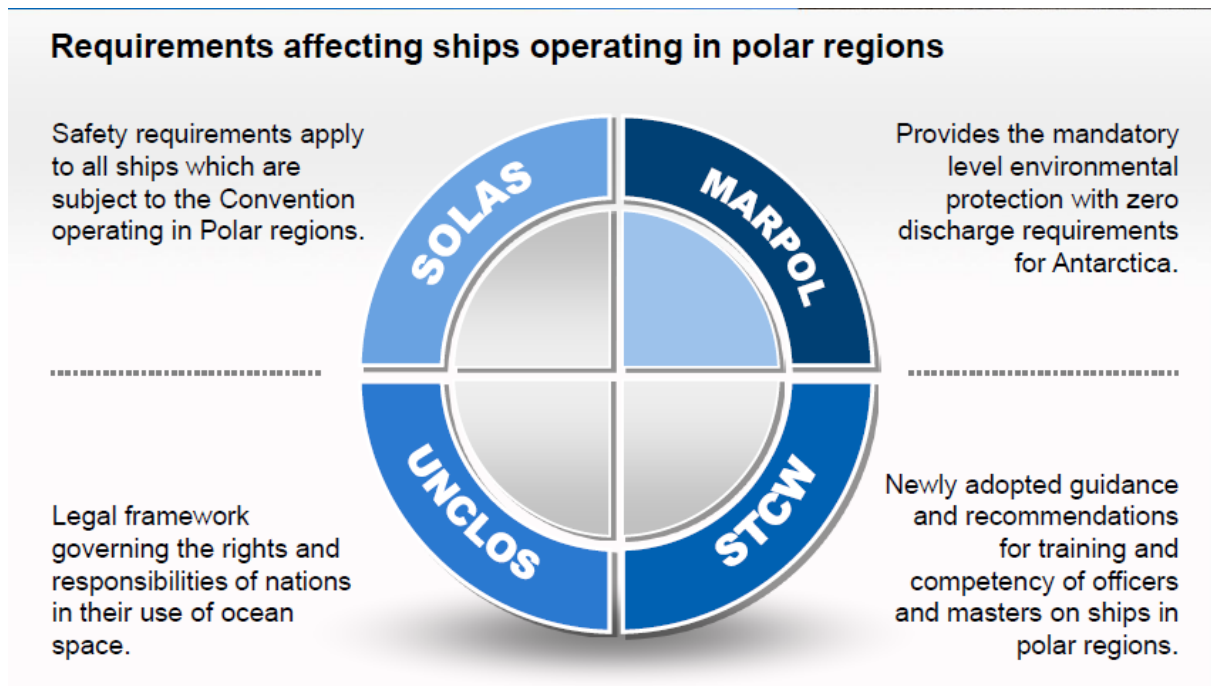


Figure 8: Requirements in polar regions (Deggim, 2011)

### National legislations at the NCS

The Norwegian Petroleum Directorate (NPD) provides a legal framework which concerns petroleum related operations for OSVs, for example emergency preparedness. Operations that are not considered petroleum related, are subject to the Norwegian Maritime Authority (NMA). This could be anchor handling services, supply and so on (Norsk Olje og Gass, 2002).

Emergency response and rescue vessels operating at the NCS are subject to NMA's regulation for maritime security and safety. This regulation includes specific abilities concerning construction, equipment and personnel (Norsk Olje og Gass, 2002). This legislation encompasses requirements in accordance with the climate the vessel is to operate in, such as icing and hazardous weather conditions. Necessary documentation has to be provided to NMA for approval (Lovdata, 1991).

*NMA issues certificates for standby vessels. The attachments to the certificates specifies the standby services the vessel is controlled for, the standby equipment the shipping company have onboard, operational limitations and capacity for the vessel and equipment” (Lovdata, 1991, §7, certification 1)*

In addition to this, there are several requirements according to quality enhancement, maintenance and verification of requirements and deviations for ship management companies. The charterer is allowed to perform inspections of the vessel to ensure its capabilities and is entitled to documentation of the chartered vessels abilities and capacity which is relevant for its imposed duties (Norsk Olje og Gass, 2002). Oil Companies at the NCS usually conduct vessel inspections with a checklist where the inspector(s) tick satisfying conditions, or comment any deviations.

### **Special requirements from Oil Companies**

Oil companies have their own demands and preferences according to the organization they are dealing with and the vessels they are chartering. This is both to ensure that national and international laws are followed in addition to their own additional requirements. The lack of a fixed framework for operations in Arctic waters encourage oil companies to develop their own procedures and guidelines to enhance safe operations based on experience gained in cooperation with ship owners and other relevant actors (Borch et al., 2012).

For example, Statoil have written what they call the “Captain’s Manual” which “outlines the interaction between the oil company’s logistics center, the supply base, the vessel and the oil installation” (Borch et al., 2012, p.3). Borch et al. (2012) further introduces at page three the Management of Change routines developed by the oil companies in the North Sea, “whereby the shipping company is obliged to perform thorough risk assessment and consequence analyses when entering a new field of operation”.

According to Såtendal (2013) on slide eighteen, the following criteria have to be met before submitting a bid to Statoil:

- *The ship owner is ISM certified*
- *Registered in Achilles*
- *Statoil has completed HSE verification in accordance with Norsok S-006*

- *Quality system based on ISO 9001*
- *Certified to ISO 14001 environmental management system*

Since Statoil is the biggest player on the NCS, and one of two potential customers in the Norwegian Barents Sea, we would elaborate briefly some of the points above.

## **ISO – International Organization of Standardization**

International accreditation according to quality and environmental management of a third party have become of increasing importance. ISO initially set the standard for specific products, but have in addition developed a more general certification system applicable to all industries. In the shipping industry ISO 9001 and ISO 14001 have become an important way to show the company's dedication to quality enhancement and environmental protection. ISO-certificates are issued by an authorized classification company approved by ISO (DNV, 2011, DNV, 2012).

### **Achilles**

Achilles acts as a third party organization and consists of members from many industries and sectors. On their homepage Achilles describes what they do as:

*“Achilles creates and manages a global network of collaborative industry communities, allowing trading partners to share high quality, structured, real-time data.” (Achilles, 2013)*

Achilles collects information from enlisted suppliers and further explains at their homepage that their tasks are “supplier sourcing, pre-qualifying, evaluating, auditing and monitoring”(Achilles, 2013). Suppliers are assessed according to finance, environment, CSR, legislations, products, services, health and safety. The purpose for the organization is to reduce risk for buyers, increase effectiveness in the selection process, to expand markets for sellers and to increase the overall performance of the members.

In addition to the rules and guidelines of seafaring mentioned above, different oil companies emphasize numerous additional requirements to be fulfilled when chartering a vessel. Some are absolute, other depend on the vessels purpose and the geographical area of operation (Såtendal, 2013).

## 5. Empirical Findings: The Companies

Here we will give a short presentation of the companies we included in our survey, in addition to presenting our findings from the interviews with the respective cases. The order is listed in a declining factor, decided by the size of the companies (based on the number of employees).

### C1 - ESVAGT

#### Introduction

Esvagt was founded in 1981 as a provider of safety and support vessels to the oil and gas industry. The Danish company located in Esbjerg entered the industry with the belief that they could perform the necessary tasks better than the customized British fishing vessels that were currently operating. Esvagt's first two vessels, *Esvagt Alpha* and *Esvagt Bravo* were hired by Maersk, which was the beginning of a long partnership and the history of Esvagt.

Today, *Esvagt Bravo* is still on duty, but the fleet has been expanded to contain a total of 37 vessels. The experience gained over the 33 years since 1981 has been an integral part in establishing Esvagt as one of the market leaders in their segment, with a focus on being recognized as an attractive, reliable and responsible partner.

*“Our fleet comprises modern offshore support vessels with high quality specifications designed for operations in harsh weather conditions. We do not only want to be level with the best - we want to be the best on the market.” (Esvagt, 2014)*

Esvagt have extensive experience from Arctic operations with two vessels supporting drilling operations West of Greenland in 2010 and 2011, and a recent shift towards the Barents Sea. Today they have three vessels operating here, one of which is their marquee vessel *Esvagt Aurora*, offering its services to the Goliat field on a long-term contract for ENI Norway.

The total crew as of today consists of 800 at sea and 50 onshore. The large workforce combined with their rescue, oil recovery, firefighting, towing, supply, anchor handling and multi field services, makes Esvagt one of the market leaders in their segment, and the only one from Denmark.

## **Physical resources**

The OSV-market is highly competitive with several medium to large companies. The demands are different from region to region, and dependent on cycles in oil prices and exploration intensity. Because of this, there are several different viable strategies, according to the CCO. Esvagt divide their fleet into three different categories to be able to offer solutions for more or less the entirety of the Norwegian, British, Dutch and Danish market, in the different market cycles. Group 1 is the customized, larger multipurpose vessels built on tenders, while group 2 and 3 consists of smaller, cheaper to operate vessels, often built on speculation.

The service vessels in the market are often built to serve multiple roles. According to Esvagt, this may not be the optimal solution “Some companies prefer to include the emergency preparedness capability in the supply vessels, but that is an expensive solution as we see it. It increases the cost with about 100.000kr per day, and the crew will have emergency preparedness as a secondary task. This may not be optimal in areas with extreme weather conditions, and the training may suffer.” Esvagt’s strategy intends to focus on being the best at “getting people quickly out of the sea”, rather than being as multidimensional as some of the other companies. This does not mean that Esvagt has no multipurpose vessels, as these are often required by the customers to reduce the number of vessels needed in an operation. It is rather a testament to their training and focus on emergency preparedness as first priority.

Some flexibility is needed because of the different regulations in different countries. Esvagt build their vessels to either be only certified for the Danish sector (the group 3 vessels), or for the Norwegian, British, Dutch and Danish sector (group 1 and 2). Even though it is cheaper to build the vessels for one particular sector, Esvagt puts an emphasis on flexibility in the fleet to keep their crew employed at all times.

## **Financial resources**

In the early phase of Esvagt’s history, the company exchanged four vessels from Em. Z. Svitzer with 50% ownership as compensation, to increase their physical resource base from four to eight vessels. This was done to avoid competing against each other for the same market share. Em. Z. Svitzer later acquired an additional 25% in Esvagt in 1998, which in 2012 was sold to the A.P. Møller – Maersk consortium. Thereby, Esvagt’s financial buying power is strong, hence the process of building new vessels are not restricted to tenders, but also on speculation. Operations in the Arctic does, however, take its toll. According to the

Chief Commercial & Safety Officer (hereby referred to as CCO), “making a modification on a vessel outside Hammerfest are 6,2 times more expensive than it would be in Denmark.” This is somewhat influenced by the distance between their supply base in Esbjerg, Denmark, to their Arctic activities outside Hammerfest in Northern Norway.

Recent financial reports show that the company is in a solid financial state and that the turnover and profits were at an all-time high in 2013 (Maersk, 2014). As stated in Maersk’s annual report from 2012, the emergency response and rescue segment was the only one that was not negatively affected by oversupply (Maersk, 2013).

### **Organizational resources**

30 years of experience in emergency preparedness, combined with continuous internal training is one of the most important competitive advantages of Esvagt, according to the CCO. “Our customers tell us that we are more focused on our core competence than those that combine emergency preparedness with supply, anchor handling etc. You can see that our people are focused on working with emergency response, and doing a good job.”

The competence and knowledge their workforce possesses is built over a long period of time, with help of a structural framework set in place by the management. The CCO emphasizes that it is important to listen to the workers at the vessel to acquire knowledge and create learning processes from the bottom to the top. To achieve this, the management works in close relation with the offshore crew and regularly visits the crew at sea to get an insight in daily operations. “When the crew exchange vessels arrives in port (...) the crew members meet with staff from the HSEQ department and senior management to discuss safety and security. Much development and innovation have occurred in these meetings”

The CCO argues that the competence gap might be the most difficult barrier to overcome for newer actors: “We always educate our own captains. When we hire a captain from another company, the candidate will start in a lower position, and work his/hers way upwards. If the person is a good captain, he/she will rise in ranks quickly. It is a system put in place to give insight to the functions of the lower ranks.” This is first and foremost because of the medical responsibility that comes with the role of captaining an emergency preparedness vessel, and the difficulties related to navigating close to oil platforms. The CCO explains that handling MOB-boats in harsh weather, routines regarding emergency preparedness vessels and



maneuvering close to oil platforms is not necessarily something you know when coming from the outside.

When starting up, Esvagt hired the workforce from their region, who knew the company well. Now that they are operating on a larger scale, and have become more known, there are more applicants from other areas. The CCO explains: “Especially on land, we notice a larger demand. We are a company with success, and people want a part of it.” They do, however, still stick to mostly Danish employees. Differences in taxation regulations in other countries are some of the reason, but the CCO also emphasizes their dependency on the workforce as a main reason for their hiring policy, presumably related to trouble-free communication.

### **Cooperation and alliances**

The OSV-industry is highly dependent on the oil companies, and the CCO states that a close relationship with the oil companies is “alpha and omega”. Esvagt seek to develop and get better based on the feedback they receive from this interplay, as a ship owner that doesn’t listen to the customer will not get any work, according to the CCO.

As to the majority shareholder Maersk, the CCO state that “We are a member of the Maersk family, but we get nothing for granted. We compete at the same grounds as our contenders.” He further explains that “In the start, when we built Esvagt Alpha and Esvagt Bravo, Maersk actually said that they could not promise anything, but Esvagt could build the vessels, and Maersk would look into it.” After the completion, the vessels were chartered, and this was the start of a 30 year long cooperation. Today Maersk charter eight vessels from Esvagt.

The CCO further emphasize the brokers role in the network by saying that “the broker strives to create value for the ship owner companies by comprehensive insight in the market and assisting in development of offers by daily dialogue with customers.” He elaborates that not all contracts are signed through brokers, but by direct contact between their company and the oil company. Most of the contracts in Norway are, however, achieved through brokers.

Esvagt share and gain knowledge through diagonal chains, in forums where questions related to rescue, northern areas and winterization are discussed. Being part of the cluster at Esbjerg includes geographical closeness to suppliers and workforce. Before initiating their first operations in the Arctic regions outside Hammerfest, Esvagt gained valuable knowledge through cooperation with the Royal Danish Navy and their experience from Greenland.

Competing against the Norwegian companies is not always easy, however. Even though Esbjerg could be considered a maritime cluster, the CCO expresses that the offshore cluster in Møre, with seven of the world's largest offshore shipping companies, is a tough competitor: "One must get early out of bed (to compete), but our advantage may be that we only focus on emergency preparedness [...] that's our right of life." As there are no other companies within the same segment in Denmark, Esvagt cannot draw the same benefits from regional cooperation as the cluster in Møre for example.

Establishment outside the regional clusters could potentially be a challenge for other new entrants too, but Esvagt proves that this can be overcome by focusing on core competence, in addition to knowledge sharing where possible, and adding financial strength through alliances.

### **Innovation**

Like in most industries, innovation is an important driver also for ship owners, especially so on Norwegian sector, according to the CCO. He explains that while the competition on British sector is usually based on price, quality is valued higher in Norway. This does, naturally, not equate to costs being negligible, but there is more room for innovation as long as the prices are still kept competitive. The CCO explains "The oil companies request new and better ways of operating, especially with regards to rescue and fuel consumption." In this regard, benchmarking is important to always be level with the competition, and to keep an eye open if someone gets a good idea, according to the CCO.

Cooperation is also an important part of the innovation process, as good partners ease the innovation process in a technological perspective, according to the CCO. The quality of the product delivered on a tender is highly dependent on the innovation process in the collaboration with the sub-suppliers, shipyards and their design department.

As far as internal innovation goes, the CCO emphasizes the importance of getting the knowledge from the people using the equipment to those that are making it. Esvagt achieves this by producing their own MOB-boats (smaller, fast going rescue boats deployed from the larger vessels). "The crew that is using these daily can then express what is working, what is not working, and what can be done better," the CCO explains. This way, innovation becomes part of the daily routine, and the operational activities can be continuously improved.

Accordingly, he argue that "the fact that we do crew change on sea by MOB-boat, every 28th

day, both requires and provides comprehensive training, which could be seen as one of the most advantageous features of Esvagt.”

Including everyone in the innovation process is important for Esvagt to achieve their main goal, which the CCO expresses like this: “The need for safety and the ability to supply new concepts are important, but also the development of new areas, like the cold north. We are good at rescuing people, and the colder it gets, the more important this is.” Operating in the Arctic is not a goal in itself to Esvagt, but rather operating wherever their competence is most needed and where quality is valued above price.

### **Experiences and challenges from the Arctic**

Esvagt was the first company to receive a contract for their ERRV *Esvagt Aurora* for operations at the Goliat field, developed by ENI. Esvagt gave this reason for them coming out on top: “I think the quality and our experience was the deciding factor, especially in relation to rescue and oil recovery, but of course the price played a role.” They believe the focus on quality is factored by the fear that if something were to go wrong, future operations in the Arctic would be at risk. “It is one for all, and all for one”.

Esvagt emphasizes the need for better logistics systems in the Arctic as the main challenge related to their operations in the area. Especially the delivery of spare parts has presented difficulties for the company that has its supply base in Denmark, without any offices in close proximity to the Arctic. Currently, the required parts must be flown in from Denmark, which represent a high cost premium compared to other operations. Albeit, he notifies that “we have actually accomplished sending a critical part from our local airport Billund at 15.00, which entered Hammerfest before midnight. This could absolutely not have been done any faster.”

The harsh climate also presents some difficulties naturally, but according to the CCO they have met few specific problems thus far. The biggest challenges are how to operate in the darkness, and how to deal with ice, in addition to the mentioned logistics. He further argues that Esvagt has comprehensive experience with darkness. “Esvagt have launched 25 000 MOB-boats the recent three years, whereby 3000 in the dark.”

### **Competition and entry barriers**

The resource base is an important part of a firm’s competitiveness. The CCO emphasizes that acquiring the necessary competence might be the biggest barrier to new entrants, in addition to the funds required for building a new ship, and last but not least, getting the contract. Of

course, the acquisition of a contract will again be dependent on the sum of resources that make the company interesting as a supplier to the customer.

## C2 - Simon Møkster Shipping AS

### **Introduction**

The shipping company was founded in 1968 by the captain Simon Møkster. In the starting era the company was mostly invested in small cargo vessels, which were frequently traded. In the 1980s Simon Møkster started to convert vessels into support vessels to the oil and gas industry, soon to be a leading actor in the North Sea. Thirty years later, in 2011, the last two converted support vessels were sold. The early investments and extensive experience in the offshore support industry built the foundation for today's company, consisting of a modern fleet with Q/HSE as key priorities. Anne Jorunn Møkster, the CEO of the company, emphasize their long term perspective, striving for a sustainable fleet and long term contracts (Environmental and Annual Report 2012)

*The company has continued focus on the North Sea as well as on new opportunities in the northern regions. This has proven to be a sensible strategy and one that we will continue to pursue in the coming years. (Environmental and Annual Report 2012, 2013, p.6)*

Simon Møkster withholds the strategy to focus on the Norwegian market, inter alia by strengthening their presence in the Barents sea, standing out from many other shipping companies who are seeking opportunities in new emerging markets such as Brazil (Førde, 2012b)

By the end of 2012 the company had 665 employees, with 32 at the head office and the majority sailing under a Norwegian flag, in addition to those sailing under Faroese, Norwegian International Shipping Register and Isle of Man flags. They have seen a growth from NOK 26,5 million in profit after tax in 2011 to 69,9 in 2012. The company state that they have a positive outlook at the future, with increasing activity on the NCS (Environmental and Annual Report 2012).

## **Physical resources**

*In many cases the company have been in the forefront of adopting new technology and new solutions BEFORE they have become the industry standard (Environmental and Annual Report 2012, p. 18)*

The fleet has an average age of 10 years, with many innovative vessels in their portfolio. Simon Møkster Shipping was amongst others, the first Norwegian ship owner company to achieve the DnV Clean classification, complying with the environmental requirements set by DnV. In the wake of this they have also invested in LNG powered vessels and further improve their environmental profile through new technologies to reduce emissions (Environmental and Annual Report 2012).

*As at 01.02.2012 the company had operational responsibility of 23 vessels. No fewer than 17 of these vessels have the class notation clean/clean design, and nine of them have SCR cleaning systems in place to reduce NOx emissions (Environmental and Annual Report 2012, p. 18)*

The company estimated the fleet coverage in 2013 to be 74%. The fleet (in 2012) consists of:

- 11 PSVs
- 4 AHTS
- 3 field support vessels
- 3 support vessels
- 2 ROV subsea vessels
- 2 roll on-roll off vessels

In addition to the already established presence at the Goliat field with Stril Polar and Stril Challenger, Simon Møkster Shipping was recently awarded a contract with ENI Norway at the same field with their new Vard PSV-06 LNG vessel to be delivered in 2015. The vessel is a supply vessel with comprehensive emergency rescue and response capabilities such as FiFi I and II, oil rec, NMA (240 persons), winterization and towing. The vessel is built at Vard Aukra. Another new build, Stril Luna, is to operate in the High North for Statoil, also with standby capabilities in addition to supply. (Simon Møkster Shipping, 2014)

The fleet is put together by four different segments, and has a visible relation with their strategy of reaching northwards, with extensive oil recovery and winterization systems. Even though many may see the fleet composition as too wide, Simon Møkster Shipping appreciate

the opportunities it grants. The subsea segment has been very successful so far, according to the Operation Manager (hereby referred to as OM), where Stril Explorer has been in high demand despite being smaller than most of its counterparts in the market. A slightly larger sister vessel is soon to be delivered. Like most offshore shipping companies, the PSVs are the core of Simon Møkster Shipping. The OM emphasizes that these are not “only” PSVs, but also possess comprehensive emergency preparedness capabilities like oil recovery and NOFO-class. This adds to the flexibility of the vessels. The third segment is anchor handlers, which is currently not the main priority, but there have been talks of new investments to come in the future. The fourth segment is the ERRVs. The OM characterizes three of their vessels, Merkur, Herkules and Poseidon as the most advanced in this segment on the Norwegian sector, all of which are on long-term contracts with Statoil.

There are also some older vessels left, which fall under the traditional standby classification, but according to the OM, Møkster Shipping is unable and unwilling to compete against Esvagt in this market: “We used to be a clear cut standby-company for a long time, but we lost against Esvagt, and rather chose to develop our fleet towards other markets in the North Sea, and more advanced ERRVs.” The focus is rather on new builds, where they have four vessels coming the next years. Three of these have standby and rescue capabilities, in addition to the necessary winterization class to operate in the High Arctic. The vessels are on long term contracts with Statoil and ENI, where one will assist Esvagt Aurora at the Goliat field.

The OSV-industry, like all shipping industries, is characterized by conjectures. Investments are risky, and sometimes you have luck, and sometimes not. The financial controller states that: “The subsea market is interesting, and we have belief in the PSV-market. We will also continue to invest in ERRVs, but on contracts.”

Simon Møkster Shipping builds their vessels both on contracts and speculation. There are, however, differences dependent on which kind of vessel it is. While the supply, anchor handlers and subsea vessels can be built on speculation, the entry barriers in the ERRV market are higher, and require long-term contracts.

### **Financial resources**

The financial controller of Simon Møkster Shipping could report a solid financial performance the recent years. Their EBITDA margin has been satisfactory with a total of 43% for the fleet in 2013. He stated that the best companies lie somewhere between 52-57% and the poorest closer to 30%, which ranks Møkster at the upper half. The turnover has had an

increase from 2011 to 2012, with a slight decrease in 2013, ending at 864 million NOK. The controller explains the decrease as a result of lower revenues than expected in 2013, mostly because of lower rates and utilization in the spot market.

As for financing new projects, the controller states that in general it is no problem. Despite this, financing have become tougher after the financial crisis of 2008. The banks and financial institutions have become less eager in giving out loans, which could potentially affect companies without a strong reputation. Usually the loans given now are represented by a lower funding ratio and higher margins. He further points out that the financial well-being is more important than the size of the company, when acquiring loans. Banks prefer to have insight in the company's cash flows, which could be harder to manage in a bigger company.

The controller further elaborates that when entering the standby-market in the High North, long term contracts with the customer is absolutely necessary, due to the specific requirements to vessel design. The contract length is very important for the financing of the vessel, as a long-term contract with a solid company will make this process a lot easier. As an example, when building an anchor handler for the spot market, you may get 65% funding. On a contract, however, one may achieve 70-80% funding. As for Simon Møkster Shipping, who want to finance as little as possible with equity, the latter is preferable.

What seems to be a challenge in these regards is how to value the vessel by the end of a contract, as the terminal value of the vessel is decisive. Bearing in mind that the contracts might last for 10-15 years, and the specification of these vessels, it is hard to predict the demand for them when the contract expires. Even though the projects with the major oil companies will offer easier solutions with regards to financing, they may often prove to not be the most profitable ones. The controller explains that the high competition for the contracts pushes the margins down.

The controller further recognizes the CEO as a strong motivator for meeting with different brokers and financial institutions, to keep up with the market, and to know which products and tools that may be used. He further exemplifies this with a meeting they had the day before, with a Dutch bank that is new to the market, where they benefitted from mutual learning. He further elaborates that the demands from external institutions, as to reporting and information exchange, works as a driver to keep learning, through courses and meetings. He also states that the relations they create with the financial institutions are very important, to

create a good relationship and mutual understanding, both regarding business to business and on an individual level.

Throughout the interview the controller also introduced us to different methods of financing. In the recent years there has been more focus on finding new ways to finance, which some of the competitors have used. This could for example be to issue bonds. To summarize the financial precautions in the High North, the controller states that: “We don’t expect anything new when operating in northern areas, as the segment is nothing new, but we might have to explain to the banks what our goal is when entering this segment.”

### **Organizational resources**

Møkster prefers to train and develop new officers through their own systems, in a similar fashion to what Esvagt does. According to the OM, there is a focus on the training of apprentices and cadets internally, to emphasize learning by doing. “It is seldom that we hire captains from the outside”. There is also an emphasis on the optimal combination of the crew, and that a captain from one type of vessel has to show that he can handle another type of vessel before he can captain it.

Visitation is an important part of the knowledge sharing process, and the management of Simon Møkster Shipping has a goal of visiting the vessels and crews as often as possible. The OM explains that they are in an advantageous position here, as most of their vessels are in their “backyard” along the Norwegian coast. Despite that much of the communication is done by e-mail or phone, the face-to-face interaction is very important for the leadership, he says. New for this year is that all employees should attend at least one external course during the year to promote learning, so it is visible that Simon Møkster Shipping is increasing its focus on this aspect of the organization.

### **Cooperation and alliances**

Simon Møkster Shipping’s alliances seem to be mostly in vertical lines, highlighting the importance of a tight relation with both customers and ship designers. Apart from this, the most important partners are the banks and similar sources of funding, according to the financial controller: “The market swings, so it is important to have a good partner. The Norwegian banks are very competent and oriented. They have high demands, which we learn from.”



Møkster and Torghatten are involved in a joint venture in the vessel Stril Mermaid. As Møkster is not listed on the stock exchange, this is used as an alternative method to acquire funds. The criterion for cooperation is that Møkster is in charge of the operation of the vessel, which is important to the company, and has been a barrier for cooperation with competitors. “We could have owned a vessel together with Eidesvik or Solstad, but who should operate it then? Everybody wants the operation. So that is the hindrance for this kind of joint ventures.”

The diagonal links to academia are restricted to securing the next generation of sailors, but it seems to be little focus on R&D in cooperation with external sources, except the ship designers.

### **Innovation**

Simon Møkster Shipping was one of the first with gas powered vessels (Stril Pioner), and similarly early with diesel-electric engines. Most of the innovational work is done in cooperation with the ship designers, but it is up to the shipping company to take the final step. Møkster is for example the first to utilize a new ship bridge developed by Rolls Royce on one of their new builds, and even though Møkster is not the designer, they could be considered innovative because of their willingness to invest in it. The Operation Manager says “We like to be innovative, and I think we’re good at it.” Copying others solutions is, however, also very common in the industry. This is somewhat customer driven, according to the HR manager: “The customers may have a solution in place, which is working, and then they tell us how they want it done.”

Adding additional equipment to the vessels may not always repay initially, as the contracts are based on exactly what the customer needs, and does not pay more for extra equipment. The controller justifies the investment with this argument: “The vessels may live longer, and are more attractable at a certain age, but that cannot be said with certainty yet.” In addition, much of the innovation is related to energy solutions that protects the environment and often reduces operational costs.

Involving the crew in the innovation process is important to Simon Møkster Shipping, and the HR manager says that this is subject to constant improvement. The goal is to engage the crew in managerial work as much as possible, in addition to the regular offshore work. This is done by bringing them to the shipyards and getting the input of the people that will work with the new equipment daily. There are also regular workshops with the customers and NOFO to improve the emergency preparedness capabilities of the company.

## **Experiences and challenges from the Arctic**

With regards to the challenges like longer distances, darkness, temperature etc., the Operation Manager does not consider their operations at Goliat to be heavily affected. The cost of making the vessels winterized is, however, substantial, and requires much of the equipment to be indoors. Everything must be heated, and the steel must be improved, even though the OM argues that sea-ice is not an immediate challenge where they are currently operating.

They do, however, have plans to send four vessels to the Barents Sea, outside Murmansk, Russia. Here, the demands to necessary equipment carried by the vessels will be increased. In addition, communication signals may not work optimally; likewise will the DP (dynamic positioning) systems be challenged.

There are no special training programs in place for the crew that is going to work in the Barents Sea, but the OM admits that they have thought about it. ENI has issued a wish for the company to have course their employees on how to deal with the darkness, and other psychological aspects. Instead, Møkster seeks to hire their crew for these operations from the area, partly because it is cheaper, but also because of their experience with the environmental conditions. To ease this process, they have also established a regional office in Hammerfest as a basis for their commitment in the north. Despite the demands from ENI, the OM does not have the impression that this is as important to them as they may give an impression of. They did after all choose a Danish company as their supplier.

Considering that most of the OSV-companies have vessels with de-ice, the Chartering Manager does not see any significant competitive advantages by being a pioneer in the High Arctic. Møkster Shipping has yet to experience extreme conditions during their sporadic operations. In general, it is hard to say how important of a criteria experience is for the oil companies, given that few ship owners have any substantial experience from the High Arctic. He does, however, argue that every operator will stress factors like competence, quality and experience, but “everyone” has the same experience and ability to handle these projects.

The Chartering Manager (hereby referred to as CM) assesses the most important factors for succeeding in the north to be the willingness and financial capital to invest. He argues that the ones with the lowest margins and a good design have the biggest advantage. The shipyards have the competence and architecture, all you need is the money, but then there is some coincidence related to which ones are available, and which design the oil companies prefer.

“The Barents Sea will become the new North Sea. That is what we are hoping for, at least. It will, however, be expensive. The distances are longer, and the equipment requirements higher,” the CM finishes.

### **Competition and entry barriers**

Simon Møkster Shipping clearly states that: “The strategy of Simon Møkster Shipping is north. We don’t want to go to Brazil or Australia. We’re going north,” as a testament to their willingness to make the necessary investments. The Chartering Manager stressed the necessity for newer vessels to operate for the two operators that are currently in the Barents Sea, Statoil and ENI. In general, new vessels built on tenders are the only ones that will be able to fulfill the requirements set here.

He also specified that if one of the “big ones”, for example Solstad, would be interested, they would most likely be the ones to receive the contract. “They have the power, technology, and the money. It is only a question about their willingness [to enter these areas] and their willingness to compete”. Their potential lack of experience with rescue operations and the Arctic environment would present a significant challenge, according to the interview object. “The big companies in the OSV-industry generally possess a wide range of competence and experience. The last piece of the puzzle can be bought,” he argues.

The variety of the OSV-industry does, however, serve as some kind of buffer for competition in the specific rescue segment. Most of the big ship owners, like Solstad and Farstad, has rather chosen to pursue goals in Brazil, Australia etc. The competition, according to the CM, is mostly influenced by the ones that are already the market leaders in this segment, like Esvagt, Atlantic Offshore, Møkster Shipping, and to some extent Havila, which currently has one vessel in this segment.

Since standby is a niche market, somewhat confined to the Norwegian Continental Shelf, the CM explains that one of the entry barriers is that the vessels have limited alternative use. The advanced vessels that require significant investments may generally not be used or sold internationally, so the new entrants are confined to a small market with tough competition. Furthermore, all the necessary regulations like ISO, IMO, ISPS and quality assurance will prove complicated and difficult for new entrants. Then there is the added framework for emergency preparedness, which is a rigid affair. It is also very expensive to equip or rebuild existing vessels, giving them emergency preparedness capabilities. The profitability of the

market is dependent on each contract, according to the CM. It is dependent on the technical solution the ship owner can offer, and what the customer is willing to pay for it.

The relation between price and quality can be an intricate business. The customer will state their demands for specifications in the tender, which the bidders must live up to. Apart from this, the success is dependent on choice of shipyard, design, financial aid, how cheap the vessel can be operated, and what the margin requirements are. The vessel and the steel is the same for every ship owner, so it is the operation cost and margin requirements that put the competitors apart, according to the CM. In addition, the deciding factor is often how well received the design is by the customers.

Danish Esvagt has several advantages over their Norwegian counterparts, due to the difference in regulations between their home countries. One of these is the ability to perform crew changes offshore, according to the CM. This grants Esvagt the opportunity to have training exercises at a regular basis, and gain valuable experience in all weather conditions.

The CM describes Møkster's biggest competitive advantage as the following: "We have short decision-making paths. We don't have to work around a complicated hierarchy. We have close proximity to the industry, both suppliers and the customers like Statoil, ENI, BP and Esso. Our employees have a rich experience, and I also think the customers see us as trustworthy."

## **C3 - Atlantic Offshore**

### **Introduction**

Atlantic Offshore, formerly known as Sartor Offshore AS, was established in 2008. The main office is located in Bergen, with a branch office in Aberdeen, Scotland. The young company was founded by the acquisition of vessels and organizational assets from Norwegian Sartor Shipping AS and Irish Mainport Ltd, hereby gaining the necessary experience and assets required to become an instant challenger in the OSV-market, with the goal of becoming a preferred supplier of multirole rescue vessels and platform supply vessels to the international oil and gas industry (Atlantic Offshore, 2013)

With 400 crew members and 24 vessels operating off Ireland, the Mediterranean, the Southern Atlantic and in the North Sea, Atlantic Offshore has quickly established itself as the largest supplier of ERRVs from Norway. They emphasize the following motto:

*We strive to exceed the expectations of our customers by providing a service focused on safety, reliability and being environmentally conscious. Through our commitment to operational know-how, innovation and marine safety, Atlantic Offshore Rescue Ltd aims to be a market leader in offshore vessel operations.* (Atlantic Offshore, 2013, p.6)

### **Physical resources**

Atlantic Offshore's fleet consists mainly of PSVs and emergency preparedness vessels. (ERRV) They are currently the process of renewing their ERRV fleet, where the older vessels are being replaced or fitted to the new regulations, with a goal of possessing an entire fleet of highly advanced vessels. The development of new designs has been in close cooperation with a major Norwegian designer, for the delivery of several new ERRVs to both Norwegian and the UK sector. These are mostly meant to operate on long-term contracts for customers that they have worked with in the past. The CEO has previously emphasized through their website that "a modern fleet provides a competitive advantage. Operators place considerable emphasis on new vessels with the highest certifications in safety and environment." (Atlantic Offshore, 2012) Additionally, the company has a backlog of amounted to 5 billion NOK including options, which enables them to stay active in the spot market (Atlantic Offshore, 2014).

### **Financial resources**

Similarly to Simon Møkster Shipping, Atlantic Offshore emphasizes the financial foundation of building "brick by brick". Traditional financing with bank loans have been the most common tool, but the last years they have entered the obligation market with great success, according to the Operation and Chartering Officer (hereby referred to as OCO). They have also initiated other means of financing, both by using equity and various finance arrangements. The OCO states that "the reputation and *renomé* the company possesses makes it easier to acquire funds." He further explains that it was more difficult as a smaller company, but with increased attention surrounding the activities of the company, it reaches a position where it gets easier to acquire capital through a partner or bank loans.

### **Organizational resources**

Atlantic Offshore has an active role in the development of competence within their whole crew. One of the ways to achieve this is through the “Atlantic Academy”, which is a place to perform training in the internal control systems. The OCO emphasizes that the knowledge development of all the different control systems are especially important. There is also need for a lot of training specifically for rescue equipment and operations. Atlantic Offshore has a separate rescue branch, to develop a special knowledge among the crew with regards to emergency preparedness. The OCO explains that “it’s expensive and demanding, but it’s a part of what we do, and the training is a central part of it”.

Similar to the other companies, the management visits the vessels as often as possible, to enable mutual learning. The crews are put together with help of a matrix based on their skills, to ensure learning between people, and the optimal crew for each operation. Daily reporting is common to keep a close communication between different vessels and the management.

With regards to recruiting, Atlantic Offshore has had some difficulties onshore in previous years, but this has gotten better. Now that hiring in the oil industry is at a decline, Atlantic has seen an increase in the amount of received applications. It was a problem getting Norwegians offshore earlier, the OCO states, but now there is access to a lot of competent Englishmen, Swedes and Faeroes. “So access to labor is no problem at all,” he concludes.

### **Cooperation and alliances**

The OCO is clear in Atlantic’s stance with regards to alliances: “We don’t cooperate with competitors, based on principles.” They do, however, keep close ties with the E&P companies, ship designers and governmental institutions. Cooperation with the customer is important and regular meetings create a mutual dialog. Showcasing flexibility is important to create goodwill, which the customers know to appreciate: “Our extreme flexibility wins us contracts,” the OCO states. Meetings with the E&P companies and different governmental institutions have also helped in the development of solutions for Arctic environments, according to the OCO.

### **Innovation**

Atlantic Offshore has shown that innovation in ship design and new technological solutions together with the ship designers can be beneficial. The OCO says that: “The oil companies often give us contracts based on our solutions.” Even though the technology may be copied by competitors, he argues that the total package is what matters, including quality of the vessel, organization and flexibility.

The internal innovation work is equally emphasized, with inclusion of the crew in the day to day innovation work, through continuous dialog. It is also common to include the captains in the development projects, to get the view of the people that work with the equipment on a day-to-day basis. Ultimately, the driver for innovation is to get new contracts, according to the OCO.

The special expertise and design that enables them to adapt to the service they are providing, is Atlantic Offshore greatest strength according to the OCO. The service they have provided Statoil has created ripple effects, which creates demand for similar solutions across the North Sea.

### **Experience and challenges from the Arctic**

Atlantic Offshore employs a large crew, several who are from Northern Norway, and that are re-schooled fishers from this area. Because of this, the OCO does not see competence and experience as a problem with relation to operations in the Arctic. With regards to climate challenges, they see de-ice as the only vessel requirement, which they are in dialog with designers about. They are, however, also preparing for operations further north: “We are in a lot of forums with oil companies, where we discuss solutions and prepare for when operations will start in ice-covered waters.” They are also in dialog with a major oil company about a large scale operation outside Greenland, where the ice related challenges are significantly greater than in the Barents Sea.

### **Competition and entry barriers**

The OCO of Atlantic Offshore describes the competition intensity on Norwegian sector as relatively low, especially compared to the UK sector: “There are only a couple of competitors on Norwegian sector, with 2-3 that can challenge in the Barents Sea.” Some of the reasoning behind this is down to regulations, and how multipurpose vessels can deliver standby-functions for whole areas on Norwegian sector. In the UK, every installation requires its own vessel. With regards to barriers to entry, capital and knowledge are emphasized, but this is in general terms for the standby and rescue segment. The OCO does not expect particular differences with relation to operations in the Barents Sea.

Another potential barrier is the existing relations. These can be important for new contracts, as the oil companies often contacts the ship owners directly, or through brokers. This means that trusted suppliers will get offers that new entrants might not be able to compete for at all. Atlantic Offshore’s most recent long term contracts have been drafted directly with Statoil

and Total, without the interference of ship brokers. In general, the power balance is in significant favor of the oil companies.

The question about price or quality seems to be a quite controversial one, with different answers from every person we've asked. The representative from Atlantic Offshore states: "Of course the price is important, but we have experienced getting the contract even when we didn't offer the lowest price, but the highest quality."

## **C4 - Chriship**

### **Introduction**

Chriship is the smallest potential contender which we are assessing in this case study. The company's roots trail back to 1858, when their first cargo vessel was acquired. In the following century the company has been involved in ship owning, broking and agency. In 1972, the joint stock company Chriship AS was established. The company entered the offshore market in 2007, by acquiring a shipping company in Stavanger, which until then had been managed by Simon Møkster Shipping. Most of the investors in the original company stayed on board, while Chriship bought a 51% share. During a year Chriship achieved the necessary certification to provide its services in the offshore market, such as ISO and Achilles, and immediately became a contender in the ERRV market.

### **Physical resources**

The tonnage consists of three older ERRVs and on the homepage Chriship states that:

*The company has the last 30 years mainly operated and owned older tonnage, and has by this accumulated special competence in the technical challenges this represents. (Chriship, n.d.)*

Chriship is interested to expand their fleet, and are looking for new opportunities in several offshore segments, included high technological ERRVs for the High North.

### **Financial resources**

As for accounting figures Chriship-Gruppen AS, Chriship AS and Chriship Offshore AS can refer to a good operating income, except for a realized loss in 2012. Altogether the companies have an equity ratio of twenty percent, a decrease from thirty five percent in 2011. The



financial losses could be tracked down to their subsidiary Sea Supply Holding AS and Sea Supply AS, which constitutes a downward trend in operational income since 2009, with the company operating their offshore vessels, Sea Supply AS, presenting a negative result of -13 million NOK after tax in 2012, compared to a positive result of 27,5 million in 2009 (Proff, 2014c, Proff, 2014b, Proff, 2014a, Proff, 2014d).

The COO of Chriship states that they do not see any problem in financing a vessel if they should succeed winning a tender, and receiving a long term contract. The COO do not believe that their capital costs are higher than for a bigger company, thus not lowering their ability to compete on prices in this regard, albeit, it might be more difficult for a small company to receive the funding in the first place. Further on he explains that they stay updated in ways of financing, such as bonds, leasing and potential investors, although bank financing seems like the most likely option for Chriship per now.

### **Organizational resources**

The COO explained that ISO and Achilles came in 2007, after the acquisition of Sea Supply. “You can say that the transition to ISO and Achilles was rather small, because we had a comprehensive system within ISM, not just the minimum system, which made it relatively easy.” Further, when it comes to costs of implementing the certifications, he said that it depends on to which extent you use external consultancies to implement them. He elaborated that the management and owner’s experience in managing vessels and also the relevant formal education and competence within the organization has given a good foundation of implementing ISO and Achilles in-house. Then he explained that ISO 14001 was implemented in 2011 and “It was a rather straightforward matter. It is not a very complicated case, it means that you have to measure and monitor in addition to have a conscious approach to environmental concerns.” Much of it was already included in MARPOL, and he explained that they already had an even more comprehensive environmental system than MARPOL requires. He argued that their stance towards environmental concerns was influenced by two factors, the customer’s preferences and the management and owner’s personal pro-environment attitude. Thus, this has been a common mindset for many years before entering into the oil service sector.

The COO further mentioned flagging out, and stated that the taxation system in Norway is not optimal, and that nowadays it is favorable to flag out, either to another Nordic country with

tax refund scheme for sailors or to another “tax heaven”: “It is not possible to compete on these grounds when our wages are twice as high as contenders” and “We see the tendency that the ability to compete on the Norwegian sector with Norwegian flag is shrinking.” He elaborates that “We have amongst other Danish and Faroese flags. The Danish flag have advantages as to taxation, and a strong contender on the NCS.” He says that the Norwegian model, which is a hybrid regulation and bears the Norwegian hallmark of compromise with only partial tax refund for sailors, unfortunately does not work as it should. “And you can say, if we should build a vessel, which is still the plan, it would exclude the Norwegian register. We basically cannot win a contract with only Norwegian wages.” The COO told us that they prefer Norwegian sailors working onboard, but Norwegian tariffs often prove too expensive to win tenders in the market. Thus, he imagines that future acquisitions will sail under a foreign flag. “We have had Gibraltar as the preferred flag earlier in bulk transport, which have worked fine. It is not much work involved in having a foreign flag either.”

The COO sees the political uncertainty as a problem. He states that the government has to facilitate people working at sea to gain experience and competence, not only conduct research to systematize knowledge. He further elaborates that they are dependent on offshore crew to come ashore and share their knowledge with the management to further improve operations. This does not only apply to Chriship, but for Norway as a leading maritime nation: “I am very concerned about the future (of the country) in these regards”.

The COO explains that they now have three people in the management that have worked at sea. In addition to this he refers to competent people in the board of directors, with experience from the Norwegian coast guard and other ship owning companies, as well as sailing officers. He also emphasize that he and his family have throughout generations been partaking in the shipping industry, nationally and internationally, and the practical experience you gain through being a part of the maritime environment locally is valuable to really know how to approach challenges in the North.

As for nationality of the crew, the interviewee says that most of the officers onboard are Norwegian. He also introduces a Russian officer, which speaks fluently Norwegian and has a formal education in Russian law, as a valuable asset if they are to enter the Russian market. Despite this, he argues that Chriship currently sees the political risk as too high as for entering the Russian market. “Chriship’s experience in Russia is extensive, in the 80’s and 90’s we traded lumber there, which circumstantially went well.” Nevertheless, he states that the

political risk is currently too high for Chriship with exposure directly to Russian charterers, and that their focus in the Barents Sea will be within Norwegian borders, with the possible exception of international oil majors as charterers.

### **Cooperation and alliances**

The COO states that the ship brokers are their most important partner. In addition he mentions the suppliers and developers (such as designers, system developers etc.). He further explains that the network with other ship owner companies are a seldom occurrence so far, but might be more significant through R&D projects in the future.

As for alliances and cooperation with contenders, he refers to other companies' previous failures, and has a problem seeing how this could work. The main problem here, he explains, is deciding how ship management companies can share management of vessels. He further elaborates that this could work if one of the companies does not have an operational division, where one company invests and another operates. "When it comes to cooperation through development of knowledge and competence it is another case. That we could do." Despite this, he explains that there are certain limits as to how much one could cooperate and share with its contenders. "The experience is that when several contenders meet with the good intentions of sharing knowledge and experience, they always aim at getting more from the table than they are bringing." Customer relations are very important, but the COO explains that the rules and procedures in the tendering process hamper some of the opportunities in this regard.

### **Innovation**

As for participation in seminars, courses and conferences to acquire knowledge, the COO argues that they have some capacity constraints, especially regarding time. This is one of the limitations of being a smaller company. Despite this, they do their best to be updated and amongst others participate in research projects besides developing their own managerial competence and procedures. The interviewee mention amongst other a project they had with northern research institutions, developing and testing drones in response and rescue missions, that they hope to commercialize in the present future.

### **Experience and challenges from the Arctic**

When it comes to challenges in the High North, the COO states that they do not see any problem mitigating them based on their experience and knowledge. Albeit, he states that it is always possibilities for improvements. He further refers to the darkness and polar lows as the

main challenges, despite that the weather in general is more appealing in the Barents Sea than in the North Sea. He further explains “When it comes to competence to operate up north, in my point of view, I honestly believe that our captains and crew have an advantage compared to many others because they have been operating here before on different kind of vessels, such as bulk carriers and trawlers. “So, in my perception we are well equipped to compete for contracts in the North.”

### **Competition and entry barriers**

The COO states that their entry to the OSV-market was tied to a decision to divest in the bulk-market, and a series of coincidences and decisions led them to the initial choice of entering the offshore market. He further elaborates that when the choice fell; they were dedicated and worked hard to establish themselves amongst incumbents. “I would say we have succeeded, first and foremost as a viable contender to the incumbents, with good results in the initial phase, but with challenging market conditions the last few years. Focus on safe management and high standards have however not been influenced or compromised by the market conditions”. He especially emphasize that their customer relation have given them good prerequisites to compete further north as well. “When being able to achieve this (position), we should also have better prerequisites (than our contenders) up here (in Northern Norway)”. By better prerequisites he points at the competence especially amongst the crew, where several of them have experience from fisheries in cold climate and sea ice. This includes the officers, and also the collective competencies of the management and the board of directors. He further explains that DNV is working with new and revised requirements to operate in the High North, and that he find this interesting, because it might give their competence a practical foothold.

When we asked the COO if he felt that being established close to the new market was a competitive advantage he said that “I feel that it should, but at the same time that it is not”. He referred to the first Goliat contract, where several companies established in Northern Norway replied to the tender, but none of them succeeded in getting the contract. Chrishop was, however, not competing for this contract.

As for competition and competitors the COO argues that several of the potential contenders are not specialized in the ERRV-market, but still have vessels with standby capabilities as a part of the area emergency responsiveness in Norway. In this regard he explains that the area emergency responsiveness in Norway might have its drawbacks.

When it comes to the size of the company and competitiveness he states that in general, “money means power in this world”. Despite this, he believes that through dedicated ownership they ensure high focus on operation and safety within the company. He refers to the company’s track record of no serious accidents to personnel since 1973, when the company was incorporated. He also argues that the company culture with their focus on safety started long before the introduction of the STWC-convention, and that the statistics shows that this so far has succeeded well.

Lastly, the COO highlights the value of being established north of the polar circle. He explains that to really understand how to live and function in a certain context requires a deeper understanding, which cannot be granted through micromanaging based on explicit knowledge. In addition to the traction Chriship is gaining in the offshore sector, the COO points out that their extensive experience in ship management is one of their most important competencies.

## **C5 – Vard design**

In addition to the four cases, we also had an interview with an external expert on ship design, from the Vard Group. Vard is a major global shipbuilder, and has extensive experience from designing and manufacturing vessels for the offshore industry.

The Vice President of the design department (hereby referred to as VP) explains that a close relationship with both the ship owners and the E&P companies is an important part of the design and vessel development process. The process in itself is dependent on the demands from the customer, but the ERRVs that are usually built on tenders require an individual concept developed to satisfy the specific demands, instead of building on previous “templates”. The responsibility of the ship designer is to put together the package, often in close cooperation with the ship owner. In some cases, it is common to work together with several ship owners towards one tender. Even though one might see this as a conflict of interest, the ship designer has clear guidelines to avoid this. If a ship owner offers their own suggestions to solutions, the ship designer refrain from sharing this with the others, the Vice President emphasizes.

### **Arctic requirements**

The VP explains that the distances in the Barents Sea are often longer than in the North Sea, so the focus on transit and fuel efficiency is higher. The vessel should be narrower and lighter in the water. In addition, the vessels have to be winterized, and there is an increased focus on environmental protection. Most of the vessels are built with some kind of ice-class, but the focus is mostly on winterization and keeping the vessels free of ice. Meeting the NOFO-requirements and having the oil recovery equipment indoors is especially important.

The further north the industry moves, the higher demands will be required. The VP argues that the oil companies' demand for multi-purpose vessels that can do "everything", including ice-management, rig support, oil recovery etc. may not be optimal. "We have requested a more holistic view from the oil companies when there are several operators in the same area. With better coordination it should be possible to have more optimized vessels."

### **Price or quality as the deciding factor?**

It is common for the oil companies to include several minimum requirements in the tenders. As long as these are fulfilled, the VP argues that price is the deciding factor. He does, however, point out that there are examples of designs that do not satisfy the requirements, but are chosen nonetheless. "Ultimately, the price is alpha and omega for the oil companies," he concludes.

Foreign shipyards' has the ability to produce at a lower price due to country specific differences. As Vard cannot compete on this basis, they rather focus on delivery precision and quality. The VP argues that because of this, it may be financially sensible to choose them as supplier, as the costs of delay from a foreign shipyard may outweigh the additional premium of a Norwegian product.

### **Innovation and cooperation**

The cost of the design progress is solely on the ship designers according to the VP. If the ship owner does not win the tender issued from the oil company, the ship designer will not get paid. The degree to which the ship owners take part in the design process varies from company to company, where some show great commitment and involvement, while others awaits the proposed concept. "I think we are most successful and satisfied when we work together", the VP states, and highlights Solstad, Troms Offshore, Simon Møkster Shipping, Dof and Farstad as regular partners, among several others.

Vard also participate in research and development projects, but these are something they initiate by themselves, without a specific customer in mind. The aim of these projects is to develop tools and know-how that can be utilized in new designs. This also facilitates more revolutionary and “out-of-the-box” development, according to the VP. He describes the industry as rather conservative, and speculates that the oil companies seldom invest in unproven concepts.

## 6.1 Analyses of entry strategies

In the previous parts we have presented our theoretical framework, our methodical approach, given a short overview of the industry, and presented our findings. In this part, we will try to connect these parts together while analyzing the connections. In the end, we hope to map how the early entrants have chosen to react to the new conditions of the High North, and how potential later entrants may draw on these experiences to find the optimal entry strategy.

We will first look at the dependent variables as to entry strategy, before comparing them to the independent variables in relation to entry in the High North.

For simplicity sake, we will in the following part refer to our informants in each company as C1 (ESVAGT), C2 (Møkster), C3 (Atlantic Offshore), C4 (Chrishop), and C5 (VARD).

### 6.1.1 Resource configuration as part of the entry strategy

The distinctiveness of the resources and capabilities of a firm is the cause of competitive advantages, according to the RBT. Through our interviews we found several distinctions between the companies' resources, and what each of them value as the most important. The companies that do not possess the necessary resources that are required to enter the market must seek ways to acquire them, especially the ones that result in competitive advantages. Learning from the history of the experienced incumbents may help in this regard.

The resource base may be assessed in three parts: physical, financial and organizational. We will continue the use of this framework here, to compare the cases in the most comprehensible way, and thereby locating the most important resources:

#### **Physical resources and utilization**

The physical resources of the companies are to large extent influenced and decided by the overlying strategic decisions of the management. Our cases distinguished themselves from each other by a different focus on each segment of the OSV-industry, with an intersection in the ERRV-segment. Clarifying the divide between the vessel-composition is challenging, due to the multipurpose role that seems to be an increasing trend in the industry. Even though Esvagt clearly states that rescue and response is their core business, they have vessels that may fill the roles of platform supply vessels as well. Based on their answers towards main



strategic focus, however, it is still possible to group the companies in a somewhat clarifying overview:

Company	Esvagt	Møkster	Atlantic Offshore	Chrishop
Segments	ERRV	PSV, ERRV, AHTS, Subsea	PSV, ERRV	ERRV

Figure 9: The fleet compositions

The composition of the fleet and the range of operations will have an influence on both strategic choices and to what extent these may be carried out. Esvagt argue that they may possess a competitive advantage over their competitors in the ERRV-segment, due to the fact that they have a narrower focus, and therefore their capabilities are more specialized for this segment. Møkster, on the other hand, have chosen a more diversified approach than their competitors in the ERRV-segment, moving away from the traditional ERRV to the more multi-functional “high-tech” ones. With a substantial investment in four different segments, they have chosen not to focus on one specific core segment, and argue that this gives them the chance to compete on a broader specter.

Both Møkster and Atlantic Offshore mentioned that they are moving out of the low-cost market, and rather focusing on new builds and vast improvements of their fleet. Atlantic Offshore is currently in the middle of a renewal process, where extensive investments have been made to create the largest ERRV fleet on Norwegian sector. This seems to be largely due to the fact that they are not able to compete with Esvagt with regards to price.

Equal for all the companies, however, is that none of them view their physical resources as an important competitive advantage. Even though the vessels are financially their most valuable assets, these do seemingly not put a great emphasis on this as a competitive advantage in itself. Despite being richly equipped with state of the art technology and equipment, the vessels can easily be imitated by competitors. As long as a company can afford it, the designs are freely available from the ship designers.

Johnson et al. argue that to derive the maximum potential from the resources, competence is needed. This is reflected in the answers of the companies, who all value their competence as one of their most valuable assets and competitive advantage. Our revised model from the theory chapter can be used to illustrate this connection:

<b>Resources</b>		<b>Competences</b>
Vessels, buildings, products, patents, operation systems	<b>Physical</b>	Ways of achieving utilization of vessels, efficiency, productivity, flexibility, marketing

The product the shipping companies deliver to the customers could be considered equally a service as a product, given the comprehensive tasks and responsibilities that are included. To sufficiently carry out the operations, Atlantic Offshore argues that their flexibility in this regard is one of their competitive advantages. The vessel in itself can be duplicated, but the total package is created by each individual company in collaboration with the customer. This includes being efficient and thereby driving down costs. In this regard, we observed that all the companies have a strict focus on their quality systems, which are put in place to ensure the productivity and quality across the whole value chain.

The extent to which a vessel can be utilized is a product of the demands from the customer, in addition to the design of the vessel. Our interview object from Vard argues that the trend towards multipurpose vessels may lead to the case of “multi-useless” vessels, where the designs end up too comprehensive with regards to efficiency. The companies reflected this opinion to some degree, but argued that they are simply dictated by the demands from the oil companies.

The physical resources are not competitive advantages in themselves, but to what degree they can be utilized might be. New entrants must find ways to acquire the expensive physical resources, but they will by all means not provide competitive advantages by themselves. To what degree they can be utilized might be, and they must find advantages in their ability to be flexible and efficient. Regardless, the financial means must be present.

### **Financial resources**

<b>Resources</b>		<b>Competences</b>
Balance sheet, cash flow, suppliers of funds	<b>Financial</b>	Ability to raise funds and manage cash flows, debtors, creditors etc.

The companies distinguish themselves greatly with regards to financial resources and solutions. While Møkster Shipping and Chriship are family owned businesses, Esvagt and Atlantic Offshore are owned by external investors. This may have influence the company’s ability to raise funds, which is an integral part of extending the resource base. An example of price of the vessels that the customer demands for emergency preparedness operations in the High North, is Esvagt Aurora with a price tag of 350 million NOK, which constitutes the need of good funding options (Førde, 2012a).

For small entrants, the physical and financial resource gap that must be filled is quite significant, but with the way the market works, the acquisition of a big scale contract may help to overcome several of their short comings. The promise of fixed income from a long-term contract with a major oil and gas company strongly reduces the equity requirements from financial institutions, according to our findings. In other words, acquiring a contract will greatly ease the process of financing.

Two of the companies indicated an increased focus on “creative financing” (C2, C3). After the financial crisis of 2008, the banks and financial institutions have become less willing to give out loans than previously. This has increased the importance of evaluating alternative methods for funding, which may require a new outlook on the “building stone by stone” philosophy that many of the older companies have lived by.

The greatest challenge related to financing will be to prove that the company is well-operated, which again often will be dependent on experience, reputation and relations.

**Organizational resources**

<b>Resources</b>		<b>Competences</b>
Managers, employees, partners, suppliers, customers	<b>Human</b>	How people gain and use experience, skills, knowledge, build relationships, motivate others and innovate

Given the importance and value the companies put in their employees, the organizational resources may be the most important capability to assess. Knowledge, experience and skills all seem to be key assets to sustained competitive advantage in the industry, and both our

findings and theory indicate that the ability to build relationships may be an integral part of acquiring future contracts.

Due to the differences in the physical resource base, it is also natural to assume that there are differences in the organizational resources of the companies. Even though this is harder to identify, the companies did imply that they were better than their competitors at certain areas. The divide in strategic scope could indicate that companies like Esvagt and Chriship has their core competence directly related to emergency preparedness, specified by the companies themselves, while the more diversified companies must widen their focus and skill set to fit a broader prospect. To what degree this differentiates their capabilities is, however, difficult to assess. Despite their differences, Esvagt and Møkster have both been awarded contracts by ENI in the High North, which may indicate that the different strategies are not deciding as a competitive factor.

Panayides and Gray (1999) argue the importance of intangible resources in the shipping industry, specifically towards relations. The vertical and diagonal links were all valued by those we interviewed, although to a different degree. While all the companies emphasize the relation to customers as absolutely necessary, some emphasized this to a higher degree, especially pointing out the work they put in to market themselves towards their clients. Esvagt proved to be especially good at providing the best solutions for the buyer, and revealing the possibilities of their new technologies. This was verified both by theirs, and their competitors' answers in the interviews. The ability to market their product, and show how their solutions are best suited for the operations, could prove to be the deciding factor in a tender process.

The connections to suppliers, competitors, and other institutions varied between the cases. Our interview with Vard leads us to believe that maintaining close relationships with the suppliers can result in competitive advantages through superior design and solutions for the customer. Further, R&D cooperation with external institutions could improve innovation and learning in the organization, something Chriship and Atlantic emphasized as valuable to them.

According to Gulati (1998), companies tend to seek in their already established social network when looking for potential business partners. This presents an obstacle for new entrants, which will often have a very hard time creating fruitful relationships in a mature market. We observed that the E&P companies tend to invite companies they already trust and have established a relationship with to their tender processes. In other words, if the supplier is not already on the "inside", they may lose out on the chance to present their solution at all.

Chrishop has mitigated this by creating a reputation through operations in what might be called less “high-profile” operations, where competence may be regarded as more important than technologic advancement. This includes low-cost operations on the NCS, and comprehensive operations on UK sector.

In addition to external processes, the internal development is an important part of a firm’s capabilities. The training and development of the employees are important. For this reason, all the companies have regular training schedules, meetings, seminars and close cooperation between the top management and the crews to enhance learning.

The ability to train and develop their own captains from scratch, which Esvagt and Møkster does, could be considered a barrier to new entrants. Smaller and newer companies may not have the luxury of being able to hire captains with the intention of letting them rise through the ranks, instead of entering directly into a captain role. Because of this, they could experience difficulties with achieving the same level of quality that these companies enjoy. The required competence will be difficult to obtain by other means than internal development, as all the companies reported low turnover in employees, and the ones they lost were mostly to the oil and gas rigs, not to competitors.

Even though the companies obviously value their competence themselves, it is difficult to say to what degree it can be considered a competitive advantage. Despite some disagreement, the general consensus was that the oil and gas companies tend to award contracts based first and foremost on price, with competence and quality only as second criterion. Another challenge is whether or not the competence is unique, as three of the companies stated it as its main competitive advantage. Given that the companies are equally good in this area, a statistic that is tough to measure, it should not necessarily be considered to be a competitive advantage over their competitors.

From this viewpoint it seems that the competence is more of a prerequisite to entry, rather than a competitive advantage in itself. Competence is, however, a wide description, and could include expense-reducing abilities such as little downtime in operations, less accidents, more efficient solutions etc. In this case, it could contribute to lowering the costs, which again constitute a competitive advantage. It could also prove to be more valuable in Arctic conditions, where the customers seems to value safety and smooth operations to a higher degree, in fear of losing out on future development in the area. Considering the environmental

focus in the media and the fragile climate in the Arctic, a mistake could prove catastrophic. From this viewpoint, reliability could be considered a highly valuable asset.

Danish Esvagt has gained a competitive advantage much on the basis of their country of origin. Their competitors seem to think this way at least. The Danish regulations offer a lower tax base for employees than what their Norwegian counterparts is subject to, which in turn has reduced costs across the line. Furthermore, the unions in Denmark are weaker, so the crew has fewer rights when it comes to operative procedures. An example of this is that Norwegian sailors can require making the crew change onshore, while Danish sailors may not. This has created the possibility for Esvagt to dominate the low-cost standby market, which they in turn have used as a mean to enter the high-tech and more cost intensive emergency preparedness market, with experience and relations gained through years of operations. Several of their Norwegian counterparts expressed a somewhat critical view to the Norwegian system, and hereunder argued that the future of sailors from Norway may be at risk, if the regulations are not revised. It is, of course, too easy to put Esvagt’s success solely down to laws and regulations. The company has had a continuous focus on developing their core competence, to be the most efficient at rescuing people, which they have used in building a solid reputation and business.

The previously mentioned ability to perform the crew changes offshore also grants them the opportunity to perform more exercises, and therefore become even better at their core competence. The CCO argue that “the fact that we do crew change on sea by MOB-boat, every 28th day, both requires and provides comprehensive training, which could be seen as one of the most advantageous features of Esvagt.”

**Summary of resource base**

In the matrix bellow we have summarize what we recognize as the most important features of each company regarding the resource base.

Company/resource	Esvagt	Møkster	Atlantic	Chrishop
Physical	Specialized ERRV-fleet. Self-developed rescue equipment.	Environmentally friendly vessels. Close to customers and suppliers.	Largest ERRV-fleet in Norway	Low-cost, older vessels. Close to the market.
Financial	Strong owner in Maersk.	Family owned. Limited access to capital	Exposed to the obligation market and foreign	Family owned. Limited access to capital

			capital	
Organizational	Core competence in ERR*. Extraordinary customer oriented. Diagonal chains. Under Danish legislation, gives training advantages.	Diversified. Emphasize cooperation with ship designer.	Flexibility. Emphasize cooperation with ship designer. Diagonal chains	Specialized in operating older ERRVs. Involved in research by diagonal chains.
Perceived most valued features towards Barents Sea according to company.	Specialized in efficient rescue	Rich experience. Short decision-making paths. Head office close to customers.	Cooperation with designers and customers through projects. Emphasise their flexibility.	Tacit knowledge. History of dedication to HSEQ.

Figure 10: The resource base summarized

### 6.1.2 Entrepreneurial orientation as part of the entry strategy

In this chapter we will assess the entrepreneurial capacity and orientation of our case firms. According to Alvarez and Busenitz (2001), entrepreneurial opportunities emerge when someone sees value in resources where nobody else does, and acts upon these. Woldesenbet (2011) argue that small firms may compete as suppliers to large production organizations provided that they have developed the entrepreneurial and dynamic capabilities that enable a sustained offering of value-added products and services. The author especially values the managerial resources available to the firm, and the owner's ability to recognize opportunities.

A high-level human capital is critical for entrepreneurial businesses success and their ability to identify opportunities to differentiate themselves and provide high-value, knowledge-intensive products and services (Woldesenbet, 2011). The owner's capabilities play a critical part in the success of small firms. Thus, new and smaller entrants to the new market should recognize the importance of entrepreneurial abilities, and take advantages of the dynamism a smaller company might possess.

An example of this dynamic capability is the transition Chriship made from bulk vessels to the offshore market, when they recognized an opportunity. This is the biggest transition we have observed among the companies we are assessing, at least relatively speaking. Even

though their success can be disputed, the COO argues that they have earned money and also proved to be a contender to the incumbents in the ERRV market.

In the following we will assess the firms and their entrepreneurial orientation, both in general and the tendency towards the Barents Sea. The entrepreneurial orientation of a firm decides to what degree it is entrepreneurial, and how it is able to benefit from new opportunities in the industry. Lumpkin (1996) argues that autonomy, innovativeness, risk taking, proactiveness, and competitive aggressiveness are central dimensions of the entrepreneurial orientation.

Most of Esvagt's new vessels are winterized, which could be seen as proactiveness as to the new market. Despite this, they emphasize their general capability of rescuing people as their main competitive advantage, regardless of location. Esvagt stand out as to product innovation, as they produce their own MOB-vessels. In addition to dialogue with customers and suppliers, they benefit from comprehensive training because of the crew exchange routines are incorporated into the company by regular meetings when the crew reaches ashore. From assessing the fleet, it seems like Esvagt tend to emphasize rescue related innovation more than for example environmental aspects. As for risk taking, they are exposed to the spot market with their smaller ERRV vessels, but with a relatively large fleet, investing in familiar sectors would not be considered especially risky. The fact that they have outcompeted Møkster in the low-cost ERRV market, admitted by Møkster's operational manager, indicate competitive aggressiveness in the North Sea.

Møkster's CEO Ann Jorunn Møkster was recognized as an autonomous leader by several of the employees we interviewed, across disciplines. The controller explained that the CEO was a driver for exploring and developing potential relations. In the interview the operations manager emphasized short decision-paths illustrated by open doors at their offices at all times. As to risk taking, Møkster is moving away from the ERRV spot market, to the contract-based high technology ERRVs. Thus, one could consider them risk averse in this segment, but with two new PSVs built without contract, and still exposure to the spot market in other segments, they are still subjected to risk. Møkster's innovation is strongly connected to their proactiveness, through their environmental friendly fleet. The proactiveness is emphasized in their annual report by stating "In many cases the company have been in the forefront of adopting new technology and new solutions *before* they have become the industry standard" (Environmental and Annual Report 2012, p. 18). The extraordinary proactiveness is proved by being the first company to introduce a vessel with DNV's "Clean design", which have



become the industry standard of new vessels today. The competitive aggressiveness is harder to assess, but they have a firm stance towards the northern markets.

Møkster clearly state a strategy of aiming northwards instead of the emerging markets in the South. This is coherent with their strategy to go from traditional ERRVs to more advanced multi-purpose vessels. They have built gas-driven vessels for the new market and established an office there, which could be considered proactive behavior. In addition, most of the new builds have winterization classes. The strategy and dedication as to going northwards, combined with new builds indicate competitive aggressiveness in the new market.

Atlantic argues in their interview that they regard innovation a high priority in their organization. They allegedly cooperate with ship designers and oil companies to provide favorable solutions, and emphasized the relationship to ship designers to a higher degree than the others. Atlantic explained in the interview that they were planning an extensive modernizing of their ERRV fleet to improve competitiveness. Despite most of the new builds meant to phase out the old vessels, the size of the investment arguably both show tendency to risk taking and competitive aggressiveness. Atlantic Offshore has also built an extensive fleet in a short amount of time, which underpins the latter.

Chrishop has the smallest onshore office, with the fewest potential decision makers. Despite their limited resources, they participate in innovational projects with government institutions and also put a great emphasis on their managerial system innovation. As to risk taking, relatively severe investment was done recently (2007) when they entered the ERRV market. An investment in a modern vessel for the high north would constitute a significant investment, which would probably double the accumulated worth of assets in the firm.

Participating in the development of drones, for example, could be an indicator of their dedication to participate in proactive activities. This must be put into the context of a firm with limited resources, which choose to emphasize such efforts.

In general, as to risk taking and the orientation northwards, all the companies express that the only option as to building high technology ERRVs/Multi-purpose vessels for the new market are based on long term contract. Accordingly, investments that constitute risk in this matter would be physical movement toward the market or investments in R&D.

According to this assessment, we can interpret that all the companies that have stated interest in the High North are entrepreneurial, but with slight differences in their orientation.

### 6.1.3 Business model as part of the entry strategy

The perception of “business as usual” amongst shipping companies regarding operations in the Norwegian Barents Sea framed by Borch and Bataldsen (2013) seems to be relatively accurate. Three of our four cases have emphasized that there are few issues regarding operating in such areas, thus neither expressed the necessity for significant changes in their routines to do operations there. Esvagt refer to their experience there during the last couple of years, where there have been few specific problems. Albeit, this do not mean that Esvagt do not acknowledge the necessity of competence and knowledge. The interviewee expresses rather explicitly the necessity for excellent performance as an ambassador in a new volatile area. In the same regards, interviewees from Møkster and Atlantic in general do not see any significant issues concerning operations in the Norwegian Barents Sea. Commonly they see their knowledge and competence more or less directly applicable in the new market. But, all three of them participates some way or another in knowledge development of Arctic operations. By this it could be argued that the three companies see their competitive advantage directly applicable in the new market, with no need to engage in alliances with actors in the new market to fill potential gaps.

Chrishop, which is located north of the polar circle, address more directly the environmental and climatic concerns of operating in the North, and further argue that their tacit knowledge should be considered valuable in regards of operations in the north. Møkster have established an office in Hammerfest, which could be seen as a modification in the BM, with a fully owned subsidiary. Their motivation for this the interviewees argue to be improving cost efficiency through lower transportation costs for crew and to acquire people with experience from the environment. We also vaguely interpreted that it could be for marketing purposes as well, in order to show their dedication to the new market. Møkster have also shown capability to initiate alliances through a joint venture with Torghatten in the vessel Stril Mermaid. Thus, Møkster is the only company that has done visible changes in their business model, and thereby their value chain. The fact that Esvagt and Møkster have achieved contracts in the area might be seen as a proof that their ability to compete in the North, based on their experience further south, is satisfying.

Esvagt, Møkster and Atlantic all acknowledge the lack of infrastructure to some extent. Esvagt for example argue that the cost of acquiring and deploying spare parts, are significantly higher in the new market. The latter argue that more exploration and production

activity in the area would stimulate industries and infrastructure to make the process easier and cheaper.

The new entrant's core competence and the applicability of it in the new market would as argued above and in theory (Johnson et al. 2011) be decisive as to the degree of modification and development of the BM. Put another way, the perception of the market strategically will determine how to cope with the new market with regards to the business model. Chriship, with its fleet of three older vessels, competing mainly on the UK sector, would arguably have to do some changes in the business model when entering the market. Markides and Chaitou (2004) argue that the companies have to decide whether to separate or integrate the BM, or start a process of aligning or divorcing. Møkster, who stated that they are moving away from the low-cost ERRV market to the more advanced multi-purpose market, are thereby showing a tendency to divorcing their BM and further focusing on one of them, which would be the high technology contract-based market.

The same reasoning might be applicable for Chriship or other potential entrants which are in similar segments other places, but want to approach the new high technology market. They must then assess their BM, with a special focus on the pitfalls argued by Massa and Tucci (2013), which are dangers of "cannibalizing existing sales and customer bases, destroying or undermining the existing distributor network, compromising the quality of services offered to customers, or simply defocusing the organization by trying to do everything".

Brunning and Wrambsby (2013) argue that new organizations are considered to be more dynamic regarding creating new business models. Accordingly, Chriship is the company who has been through the biggest transitions (of our cases) regarding business model configuration through their shift from bulk vessels to offshore vessels. This way one can argue that despite the relatively higher necessity to change the BM, they are more capable of doing so.

The willingness to initiate alliances provided different answers across company boarders. Møkster is the most engaged company through their alliance with Torghatten, and their fully owned subsidiary located close to the new market in Hammerfest. Atlantic has explicitly stated that horizontal alliances and cooperation is out of the question. The others tend to dwell more on the opportunity, and proclaim that their specious stance roots in; their efforts to keep competitive advantages inside the company; questions regarding the practical feasibility; or refer to a history of unsuccessful cases. Both Chriship and Møkster express that an alliance would be most viable for them if someone fund the vessel, and they could manage and

operate. As for both, this would mean low-cost entry into the new market (Barney, 2010). This seems evident as a mean to access capital, not being exposed to the stock or obligation market, as a way to access capital.

## 6.2 Analyses of factors influencing entry strategy

We will now look closer at to what effect the independent variables will vary in the High North, and further explore the relation to the dependent variables. Competitive, technological and regulatory factors will be assessed one by one, and then compared against resource configuration, entrepreneurial orientation and business models respectively.

### 6.2.1 Competitive factors and entry strategy

In this sub-chapter, we will assess the power balance of the market, evaluate the barriers, and consider how to negate them. The viewpoint is from the perspective of shipping companies that wish to compete for the contracts in the High North, many of which already have experience in other markets, first and foremost the North Sea. Much of the power balance will, however, share similarities to the industry as a whole.

#### 6.2.1.1 Differences in competitive factors between the North Sea and the High North

The differences and similarities we have observed between the North Sea and the High North can be presented in the following way:

	North Sea	High North
Barriers to entry	<ul style="list-style-type: none"> <li>• Low</li> <li>• Not as demanding as to knowledge, experience and equipment.</li> <li>• Low switching costs because of shorter contracts and spot market.</li> <li>• Relatively high capital requirements, but lower than Arctic.</li> </ul>	<ul style="list-style-type: none"> <li>• High</li> <li>• “High-profile” operations. Tenders required.</li> <li>• High switching costs because of long contracts (10-15 years)</li> <li>• High capital requirements, but easier as to financing</li> </ul>
The power of suppliers	<ul style="list-style-type: none"> <li>• Low</li> <li>• Low switching costs, many potential suppliers</li> </ul>	<ul style="list-style-type: none"> <li>• Low</li> <li>• Low switching costs, many potential suppliers.</li> <li>• Increased dependency on good design and technology solutions</li> </ul>
The power of	<ul style="list-style-type: none"> <li>• Medium/High</li> </ul>	<ul style="list-style-type: none"> <li>• High</li> </ul>

buyers	<ul style="list-style-type: none"> <li>• Few customers</li> <li>• All types of purchases. Both contract and spot.</li> </ul>	<ul style="list-style-type: none"> <li>• Two buyers (thus far). Both exceptional demanding.</li> <li>• Big purchases, long term.</li> </ul>
The threat of subsidies	<ul style="list-style-type: none"> <li>• Low</li> </ul>	<ul style="list-style-type: none"> <li>• Low</li> </ul>
Rivalry among existing competitors	<ul style="list-style-type: none"> <li>• High</li> <li>• Many companies of equal size</li> <li>• Increased growth may lessen the intensity</li> <li>• Vessels can be used across a large market</li> </ul>	<ul style="list-style-type: none"> <li>• High</li> <li>• Many of the same contenders</li> <li>• Increased growth may lessen the intensity</li> <li>• Higher exit barriers, as vessels must be optimized for the specific market</li> </ul>

*Figure 11: Differences in competitive forces*

The competition for contracts is already intense in the High North, and is expected to remain so in the future. Considering the similarities to the markets further south, the current market leaders are likely to extend their position to the Barents Sea, if they see it beneficial to invest here (C3). For ERRV suppliers, our interview objects expect the situation to become similar to the situation at the NCS as a whole, with 4-5 companies competing in the segment. The oil companies want to maintain a healthy competition, according to our interviews, presumably to keep the prices down and encourage new and better solutions.

### **Barriers to entry**

The offshore service vessel industry is an industry with high fixed costs due to the heavy investments that are required for high tech vessels. In a traditional sense, this increases the entry barriers. It should, however, be specified that this is not the case if the expected returns are attractive. As long as there are profits to be made, investors will be willing to invest in a competitive new entrant. The companies we interviewed therefore highly value their relation to investors, and continuously work on improving their financing.

Given that the operations are more demanding, and Statoil and ENI in some ways carry a responsibility for the entire industry as first movers in the Norwegian Barents Sea, the contracts to suppliers are by a high degree awarded on reliability and reputation, according to our informants. This may indicate why Esvagt and Møkster have won the tenders so far, given their long history in the industry. They also argue that the ERRVs that are required in the

Arctic are only viably built on tenders, due to special requirements to specifications. Acquiring a contract is therefore essential for entering the market. For newcomers with a lacking resource base, acquiring these contracts will be difficult without an established network.

When the cost of switching from one supplier to another is high, the probability of breaking into a market reduces dramatically. Seeing as the OSV-fleet is highly mobile and there are no comprehensive infrastructural changes needed, the switching cost in the industry is not especially high. The contracts in the High North are, however, often awarded at a long-term basis. Breaking such a contract is costly, and not likely to be a common occurrence. Therefore, switching from one supplier to another is most likely to happen at the end of such contracts, which is commonly signed for durations of 10 to 15 years. Given the increased use of long-term contracts in the High North, the switching costs will increase accordingly.

The incumbents often possess several advantages that can be difficult to compete with. Included here are, amongst others, size advantages. An established ship owner will naturally have a sophisticated fleet, and a developed knowledge of the market. In addition to this, they should be expected to have acquired important connections in the market, and strong organizational systems.

### **The power of suppliers**

The main suppliers of ship owners are the shipyards and ship designers, most commonly from Norway, Poland or Spain. The Norwegian yards have to compete with the foreign yards where labor costs are substantially lower. The switching costs between suppliers are low, which is reflected in the shipping companies' tendency to order new builds from different shipyards, depending on their needs at the time. Because of the relatively high costs in Norway, the shipyards are to a high degree dependent on Norwegian customers and their preference for quality over price. This puts them at a disadvantage, which is reflected in their tendency to invest in innovation and R&D, which is often uncompensated by the customers if their solution is not chosen (C5). The choice between Norwegian, Polish or Spanish shipyards seems to be decided on the evaluation of quality, low price or reliability. The Norwegian shipyards are the most expensive and reliable, the Polish are cheapest but somewhat unreliable, while the Spanish shipyards are somewhere in between.

With an increased need for multipurpose vessels, efficient design that allows the ship owners to fully utilize their vessels may become more important. The power of suppliers is, however, not likely to increase, as there are still several suppliers that may offer these solutions.

### **The power of buyers**

The buyers, oil and gas companies in this case, enjoy significant negotiation leverage in the OSV industry. At the NCS there are a few large, powerful consumers that employ most of the OSV fleet. In the High North, ENI and Statoil are the only ones that are close to opening for permanent production. In addition to this, they generally make big purchases (long-term contracts), that represent a significant part of the supplier's portfolio. In reality this means that one shipping owner often delivers all their services to a small selection of buyers.

Fleet coverage is an important performance indicator for OSV-companies, because of the high fixed cost related to the vessels which may imply that if they are not operative, the company is losing money. For the companies that build more or less exclusively on tenders, long-term contracts are a necessity for survivability, which gives the customers high bargaining power.

Subsequently, the market will be subject to price competition and tight margins, according to Porter's framework. From our observations, we can in fact confirm that the ship owners are often not so satisfied with the margins, and argue that the customers value the ability to drive down prices. Even though the customers argue that they assess quality as just as important (Statoil, 2013), this might not necessarily be the most important factor when they award the contracts.

Porter (2008) argues that the degree to which the suppliers' product influences the product of the customer decides their willingness to pay a higher price. The quality of the product could in this case refer to the increased logistic difficulties in the High North, which may require a higher quality in the services of the supplier to avoid disruption in production. Our findings does, however, not show signs that the ship owners are positive to an increased focus on quality over price from the customers.

### **The threat of substitutes**

There is to some extent a lack of substitutes in the OSV industry. At the moment, and in the foreseeable future, the only substitute to offshore vessels is subsea constructions. These are, however, not viable in most areas. As most of the petroleum in the Norwegian Barents Sea is located far away from land, platforms are still the preferred solution. The installations of subsea constructions are restricted to some special projects where the discovery is made closer to land, most notably the Snøhvit field outside Hammerfest.

### **Rivalry among existing competitors**

In an industry where there are numerous competitors of roughly equal size there is a high intensity of competition. This is further strengthened by high exit barriers, as the vessels that are required for emergency and rescue operations regulated for the High North are commonly not in high demand other places, where the regulations are different (C2). The multipurpose vessels built for operations here will probably prove inefficient and too costly to use in less demanding environments.

A high industry growth does, however, lessen the intensity. From 2004 to 2011 the investments on the NCS was more than doubled, and is still increasing at a rapid rate (Jakobsen et al., 2014). According to the interviews, the growth is expected to be large in the High North too.

In addition to the factors mentioned in Porter's framework (similar products and high fixed costs), there are some additional factors that influence the likeliness of price competition in the OSV industry. Maybe most important is the expansion pattern of fleets. For most companies, a new ship represents a significant capacity investment. This leads to disruptions in the supply-demand balance, hence causing periods of overcapacity and price cutting (Borch, O.J. 2012. Norsk offshorenæring i nord - næringsorganisering og krav til fartøyutvikling. Rapport, Handelshøgskolen i Bodø). Therefore, one could definitely argue that correct timing, often based on luck, is necessary for entrants.

#### **6.2.1.2 The relation between competitive factors and entry strategy**

In the analysis above, we recognized the entry barriers as the significant difference. With ENI and Statoil as the major players in the High North thus far, the OSV-companies has to relate to two of the most demanding customers on the NCS. Statoil has a strict philosophy to put



safety ahead of profits, while ENI have shown interest of proving that they are better than their counterpart. The first movers in the Norwegian Barents Sea will to some degree be seen as ambassadors for the whole industry, which means that there is a minimal margin of error. This makes the objectives of the chartered vessels “high profile”, putting a greater emphasis on flawless operations, hence increasing the demand for trusted suppliers with a good reputation.

Another aspect related to the high entry barriers are the high investments in vessels specialized for a certain area. These vessels might not be efficient and useful in other areas, making it hard for the ship owner companies to assess the value of the vessels after the contract ends. The switching costs are high, based on the fact that the contracts are argued to be between 10-15 years. Therefore it is reason to believe, that it would constitute severe costs to shift from one supplier to another.

We will now assess how our dependent variables, respectively resource base, entrepreneurship and business model, will be affected by these competitive forces.

#### **a) Competitive factors and resource configuration**

##### **Absolute requirements:**

- Experience and knowledge which accumulated creates competence.
- Financial means to acquire new vessels

##### **Additional requirements:**

- Ability to communicate capabilities to the customer
- Stimulate relations vertical to be included in development of new solutions and tender processes. One should also consider horizontal relations.

There are some absolute necessities as to competing for the tenders in the High North. A new entrant must have a record to show to. Experience and knowledge accumulated creates competence. Competence is mentioned as the most important criteria for new entrants by all the companies we interviewed. Gaining this competence could present difficulties and be time consuming. The way Chriship have chosen to compete in less technology intensive market, to build this record, seems like a viable solution. By gradually gaining contracts and reputation amongst the major oil companies, one will not only gain experience, but also the relations and

acknowledgment amongst the demanding actors. The market is highly competitive, especially in the UK (C4), which might constitute low margins, thus the competence development might be costly.

We have also observed that some of the actors are better at communicating their competitive advantages to the customer. As argued by interviewees from Atlantic and Esvagt, the relation to customer is critical as to competition. Opening marketing channels, investing money and time in relationships and showing flexibility could contribute to stimulate such relations (Panayides and Gray, 1999). Atlantic argues amongst others that the ability to be flexible as to customer demands is one of their most valuable competitive advantages. Thus, a newcomer should focus on such efforts to be recognized by the oil companies as an adaptive supplier.

Additionally, since the switching costs are already high, one could argue that the affective commitment and customer satisfaction is the most important variables to stimulate regarding the loyalty of customers (Gustafsson et al., 2005).

Financing a vessel is also an absolute necessity. A new entrant might lack the financial strength that bigger and more endowed companies enjoy. Therefore it is important to have organizational features that are able to explore and exploit possibilities as to finances. A newcomer should focus on stimulating relations, thereby recognizing which financing methods are most reasonable, and who can provide them. The high competition intensity makes all margins relevant, thus, lower margins as to financing will increase the competitiveness of the firm. Another important aspect as to financing is the fact that the long-term contracts with solid counterparts reduce the requirements of loan givers.

#### **b) Competitive factors and entrepreneurial orientation**

- Easy to access product technology
- Unique solutions

As argued by Woldesenbet et al. (2011), smaller organizations may compete against established firm by being flexible and maneuver quickly in new markets. The described “high profile” missions in the North require high technology assets. Since the technology to a high extent is developed further back in the value chain, and the concepts are available for everyone after commercialization (C5), the high technology demand is not necessarily hard to mitigate for smaller new entrants. The ability to recognize and initiate new solutions quickly could, however, bend in favor of smaller organizations. Thus, by being entrepreneurial, with short decision paths and small quanta to move in a certain direction, one could arguably

utilize new products faster, thereby offering value-added products and services. In addition, entrepreneurs and entrepreneurial oriented companies will have the ability to see value in resources where others do not, which could mean to add value to the product through unique solutions. Chriship have, for example, participated in a project developing drones for emergency response missions, and could thus be able to implement such ideas into the total package, thereby adding value to the end user.

### **c) Competitive factors and business models**

- Alliances to expand capabilities
- Deciding how to approach several BMs, and watch out for pitfalls.

To fulfill the resource gap a new entrant can develop an alliance with a more endowed company, and thereby become viable contenders in the Barents Sea. As to competence the new entrant can cooperate with an incumbent, or another potential new entrant, and thereby create synergy effects. As argued by most of our assessed companies, however, there are some practical issues regarding this. They all manage vessels, and thereby ask the question, who is to operate? Recognizing the problem does not mean that there is not a viable solution, however. This could typically be a situation where some one sees value where no one else does, referring to entrepreneurship.

Regarding the paragraph above, the companies who expressed managerial problems as to horizontal alliances (C2, C4), saw a viable solution where one company invested in the vessel, and they operated. This is not unusual on the NCS and could be a way to mitigate the entry barriers as to finances.

As argued in 6.1.3, Møkster show both ability and willingness to adapt the BM towards a new market. Moving out of the highly competitive ERRV market to focus on more advanced ERRVs on long term contract also indicate a business model more suitable to the High North demand. This being said, they are also the most diversified company, which constitutes efforts to manage several sectors and BMs simultaneously.

On the assumption that the new entrant is established in another geographical region and/or segment, it would require changes in the business model towards the new market. The new entrant's competitive advantages and the applicability of it in the new market would, as argued in chapter 6.1.3 and in theory, be decisive as to degree of modification or

development of the BM (Johnson et al., 2011). Put another way, the perception of the market strategically would determine how to cope with the new market with regards to the business model. Chriship, with its fleet of three older vessels, competing mainly on the UK sector, would have to do some changes in the business model when entering the market. A thoroughly assessment of their old and potential new business model must be done, to avoid the pitfalls elaborated in chapter 6.1.3.

As to the ability to develop and optimize the business model, Brunning and Wrambsby (2013) argue that new organizations are considered to be more dynamic regarding creating new business models. This way one can argue that despite the relatively higher necessity to change the BM, such companies are more capable of doing so.

To be competitive in a new area depends on their competitive advantages there, and to which degree they can be applied in the new market. Thus, as for mitigating the high entry barriers, the company has to review possibilities as to alliances. In addition the new entrant should consider the necessity to implement a new business model to increase competitiveness, and how to incorporate it with the old BM.

## **6.2.2 Technology demands and entry strategy**

When entering a new market, where the technology demands are substantial, the risk/reward ratio may be higher than usual. Boutellier and Heinzen (2014) argue that such markets shift rapidly and unpredictably. New regulations that will decide the future expansion of petroleum activity in the Arctic, and the technology demands towards shipping companies will increase the unpredictability for new entrants. Thus, companies must maintain a good overview over the market conditions and competitors. Accordingly, all of our cases have expressed that benchmarking and comparison with contenders is a normal procedure. In addition we observed that they had a lot of knowledge of their contenders.

All of the companies also express that much of the new technologies is developed earlier in the value chain, thus the ship designer was seen as an important resource as to gaining knowledge of which technologies and solutions that are available at the given time.

### **6.2.2.1 Differences in technology demand between the North Sea and the High North**

The interviewed companies listed these as the most challenging technological aspects related to operations in the High North:

- Communication
- Navigation systems (DP)
- Logistics
- Optimal design with regards to ice and darkness
- More equipment must be carried onboard, and often inside
- Experience and competence to utilize equipment and mitigate climatic factors
- Increased environmental awareness – one mistake could be detrimental to the industry

Fosfuri and Suarez (2013) argue that it is harder to retain an early mover advantage in a high tech market. This could prove beneficial for new entrants entering the market after the first movers. As the technology and ship design is to a large extent available commercially after a vessel is built, it proves that the prerequisites as to design remain the same for new and old entrants. Despite this, the smaller companies that are eager to enter a new market might lack some prerequisites that big companies might have, such as complementary assets, general purpose assets and other resources that can be applied in the new market area (Fosfuri and Suarez, 2013). Thus, Fosfuri and Suarez argue that the companies with these assets have better prerequisites to innovate and commercialize new products. Their theory is to some extent confirmed by examples from the Norwegian offshore market, where product innovation of vessels are often driven by the biggest and most endowed ship owner companies, such as Eidesvik which is the largest provider of LNG-fueled PSVs, and the first ship owner company worldwide with an offshore supply vessel powered by a true fuel cell hybrid system (Eidesvik, 2014a, Eidesvik, 2014b).

Boutellier and Heinzen (2014) argue that “A firm has to respond to the shifts in consumer preferences and competitors strategies, and also anticipate what the customers will demand in the future”. The oil and gas companies are highly demanding, and this is reflected in many of the shipping companies’ willingness to build highly advanced vessels. It can, however, be challenging to find the correct balance between the investments in new technology and keeping the costs low. Because of the incoherency between quality and price as decision criteria, the ship owners risk to lose out on contracts if they move too far in any direction.

The easiness to imitate also bends in favor for the smaller new entrants. Boutellier and Heinzen (2014) argue that investments in innovation in such market constitute a big risk. Regarding this subject, the cost in vessel design will somehow be distributed amongst the actors. That is, given that other designers follow the same procedures as Vard, which bear

their innovational costs by themselves according to the Vice President. If the tender is not won, Vard will not receive any pay from the ship owner company. Thereby, the development of concept has to be indirectly covered by the next customer, or basically the one who receives the contract.

It must be said, however, that the general consensus is that the new technology demands have thus far not presented much problems for the companies we interviewed. Several of them have already gained some experience with operations in the High Arctic, although the divide between the southern Barents Sea and further north is an important distinction. The Goliat field is located 50 kilometers outside Hammerfest, which the companies do not necessarily reckon as an especially challenging environment with regards to new technologies, compared to their daily operations in the North Sea. However, the farther north the industry moves, the more challenges will be met.

#### **6.2.2.2 The relation between technology demands and entry strategy**

Generally, the companies did not emphasize the technological challenges in the new market. The consensus was that moving further north would mainly raise the bar as to sea ice and communication trouble. The winterization is the typically addressed feature of Barents Sea, which involves moving all equipment on the vessel indoors. These solutions are to a high extent developed by the ship designer, but both our case interviews and the ship designer interview argued that the concept development benefitted from an active customer, in this regard the ship owner company. The high technology ERRV also needs competent staff to handle the added equipment in a correct and efficient manner.

#### **a) Technology demands and resource configuration**

- Overview to see which solutions work
- Develop efficient solutions with suppliers
- Get local experience

As argued extensively earlier in the thesis, the access to technology is not considered a problem. Therefore, it is seemingly rather the ability to explore and recognize the best solutions in the market. As argued in the introduction, stimulating the relationship with the supplier will also be valuable in this regard. Even though some of our interviews argued that people working further south would be perfectly capable of doing the same work further north, as to expertise, it seems evident that people with experience from the north would be

beneficial to acquire. Being familiarized to the psychological aspect of cold and darkness, and possessing the tacit knowledge of how to mitigate any problems could prove valuable.

#### **b) Technology demands and entrepreneurial orientation**

- Proactiveness
- Recognize shifts and act, this is probably your advantage.
- Optimize a follower strategy: let the incumbents do the hard work.
- Developing products

As argued, the entrepreneurs' greatest advantage is easy maneuverability in an unpredictable market. A new entrant should take advantage of this to be in the forefront as to implementing new ideas, and adapting to customers' demands. Proactiveness could be decisive as to reducing the exit costs, for example by building vessels and solutions that will be in demand in the future. A viable strategy for small companies that lack general resources could then be to let the bigger and more endowed companies stand for the "revolutionary" technological development, while the smaller company focuses more on how to utilize the existing equipment to the best degree, or a more incremental technology development.

#### **c) Technology demands and business models**

- Alliances to mitigate the lack of general assets.
- Optimize the BM to a certain market.

The lack of general assets cannot always be mitigated by providing something different. Alliances may be necessary to obtain the general assets, and thereby being proactive. One should also consider how to implement the BM when moving into the high technology market, and how to optimize it to avoid redundancy. The new technology demands constitute a necessity for development of new operating routines and land based support as to service and crewing, which amongst others Esvagt emphasized. The BM should allow such adaption to find place, and the advancement of the BM should be thoroughly incorporated in the existing business (Borch et al., 2012).

### **6.2.3 Regulatory factors and entry strategy**

New technological demands increase the need for good design solutions. In this regard, the suppliers, and the shipping company's relation with the suppliers, will become even more important as a competitive advantage. Vard explains that the multipurpose functions of the vessels are troublesome to optimize.

With demanding requirements from both the customers and the institutions, the complexity of regulatory demands will require additional resources towards understanding and handling the transition. Brown and Dean (1995) argue that this could provide benefits for the incumbents. Companies with long experience in the industry at the NCS will similarly have experience in dealing with the regulatory agencies. Theory suggest that they will therefore be better able to effectively handle the regulations, know how to maximize the use of new technologies, and better know how to modify their organizational processes to handle the necessary tasks (Brown and Dean, 1995). For new entrants to deal with this they must either hire consultants or have employees with experience in the matter.

There may also be some advantages for new entrants, however. With new regulations, the existing vessels must often be refitted to meet the new requirements, towards both pollution and safety measures. This could lead to inefficiencies, and therefore benefit new entrants with vessels that are designed with the newest technology in mind. Additionally, the new technology demands can present opportunities for entrepreneurial companies that develop and market their solutions towards customers and competitors.

The incumbents' potential ability to influence new regulations will, however, enable them to bend these in their favor. New fuel efficiency technologies, rescue methods, or oil recovery equipment is likely to influence the institutions to demand it from all actors, giving the inventor a first mover advantage, and a protection against competitors that are not able to meet the new demands.

#### **6.2.3.1 Differences in regulatory factors between the North Sea and the High North**

The regulatory and customer demands are high across the NCS, but new legislations like the Polar code will increase the degree to which environmental and safety challenges in the High North must be met. Brown and Dean (1995) argue that this may influence the strategic decisions of both incumbents and new entrants. By increasing the requirements to equipment and competence, the entry barriers will increase accordingly.

Since many of the regulations in the Polar code are focused towards the local specific challenges in the Arctic, local companies may not see this as a barrier. The CCO of Chriship argue that the local knowledge developed through years of transportation, fishing, or similar operations here, may mean that stricter regulations will give their competence a practical foothold, and may therefore prove to be a competitive advantage instead of disadvantage.



### **6.2.3.2 The relation between regulatory factors and entry strategy**

- Necessity to follow the regulations on the NCS in general
- Extra guidelines and demands from customers such as certificates

The chartering manager in Møkster emphasized the comprehensive regulations and certificates which must be handled when entering the new market. The regulatory framework is to a high extent applicable at the whole NCS, with slight modifications. Despite this, the oil companies working here have high demands as to certification and compliance to them, as elaborated in the frame of reference chapter 4.4 (Såtendal, 2013). In addition to this, the new polar code is about to be implemented, which will cause changes to how the companies operate there.

#### **a) Regulatory factors and resource configuration**

- Tie people with knowledge of the regulations into the organization
- Organizational features to handle the complexity

Brown and Dean (1995) argue that there are several ways to mitigate the complex regulations. One of them is to hire people with knowledge of regulations. The CCO of Chriship argued that his education combined with his knowledge of ship management, made the process of adapting to new certificates and legislations easier. They also made the processes themselves, which gives them an extensive insight in what they are really doing. Other entrants must hire external consultants, if the knowledge cannot be found inside the company. Routines and systems must be optimized to handle the complexity of many different regulations to follow.

#### **b) Regulatory factors and entrepreneurial orientation**

- Predict shifts and adapt fast.
- Be proactive

The ability to predict what is coming next also applies according to regulations. Chriship is an example of someone who benefited from their internal standards before implementing the ISO framework, which meant that they only needed slight changes to become up to standard. The same could be said for our other cases, but could prove challenging for new entrants.

Entrepreneurs could benefit from new regulatory demands. They may take part in shaping them by inventing new solutions which, for example, increases oil recovery efficiency. By

proving that the efficiency can be increased, the law makers and customers will demand similar solutions from the other suppliers in the market. If they are not able to comply, the entrepreneur will effectively create a resource barrier (Wernerfelt, 1984).

### **c) Regulatory factors and business models**

- Handle capacity constraints, narrow focus on area.
- Alliances to ease the process of achieving legitimacy

As mentioned with regards to the high technological demand, a new entrant might consider moving out of other areas because of capacity constraints. Related to regulations, it can be costly to adapt to several different regulations at the same time, especially with few organizational resources. Atlantic and Chriship, both with extensive experience in the UK market, emphasized the complexity of different regulations over country borders. Again, the danger of doing everything at the same time, argued by Massa and Tucci (2013), could affect the regulation compliance and overall business performance.

The new company can also become a regulatory expert, which other actors see as valuable. Chriship, for example, emphasized that new regulations in the High North could give their tacit knowledge foothold, thus be in their favor as to competition. This could make them a viable business partner to handle new regulations. The other way around, the entering company might ally with a company which shows extraordinary capabilities of handling regulations.

## **6.3 Summary**

The competitive forces is to a large extent similar in the markets further south and the High North. Somewhat higher entry barriers may mean that new entrants will have a tougher time entering directly in this market, and must first build a reputation in other, more accessible markets. Close relations to suppliers and customers can aid in creating good solutions, and is a prerequisite to be invited to the tender processes. If this prerequisite is already met, the greatest challenges will be with regards to technology and regulatory demands. These factors may be mitigated through reconfiguration of the resource base, emphasizing the entrepreneurial orientation of the firm and potential alliances.

According to our findings, through primary and secondary data, we have set up a highly simplified matrix that illustrates how the independent variables affect the dependent ones. Thus, we also present possibilities and constraints as to mitigating the challenges:

	Perceived difference	Resource base configuration	Entrepreneurship and orientation	Business model and alliances
Competitive forces	High entry barriers: “High profile” requires high trustworthiness. Higher power of customers	<b>Absolute requirement:</b> Competence Finances <b>Additional:</b> Ability to communicate capabilities. Stimulate relations horizontally and vertically	Easy to access product technology. Unique solutions	Alliances to expand capabilities. Deciding how to approach a new BM and avoid pitfalls.
Technology demand	Additional technology equipment and solutions. Logistics Competence Increased environmental awareness.	Keep a good overview of what works. Develop efficient solutions with suppliers Get local competence.	Proactiveness. Let the bigger companies do the hard work. Apply and utilize new products	Alliances to mitigate the lack of general assets. Optimize the BM to a certain market.
Regulations	Extra guidelines and regulatory framework present and coming.	Hire people with competence. Organizational features to handle the complexity.	Developing new solutions to create barriers. Predict shifts and act fast.	Alliances for legitimacy. Avoiding a too wide area for operations, to ease regulatory demands.

Figure 12: Summary model

## 7. Conclusion

In this thesis we wanted explore the possibilities for small- to medium size ship owner companies to enter the emergency response and rescue market in the High North. To do so, we found it necessary to identify and measure the entry barriers, and further how they could be mitigated. We therefore assessed four companies, all invested in ERRV vessels, based on their resource-base, entrepreneurial orientation and business model.

### **The new market**

As oil and gas activity increase in the Norwegian Barents Sea, more support vessels are required to support the operations. The climatic features and remoteness make the market distinct to the mature market further south in Norway. This increases the requirements for top of the line emergency preparedness. The perceived distinctiveness are argued differently by our interviewees, but the consensus indicate “business as usual” when approaching the Norwegian Barents Sea. Till now, the vessels have been chartered by the oil companies through tender processes. A tender is issued to several ship owner companies, where all requirements to the vessels are presented. The ship owners then hire a designer, to make a package to present to the charterer. Thereafter the oil company assesses different concepts from different ship owner companies, and chooses the one they find most suitable. The general consensus of the people we have spoken to is that a low price is crucial. Albeit, all the additional requirements to competence have to be met, which in itself is comprehensive. Our interviewees also emphasized that without an existing reputation to show for you risk not even being invited to the tendering process.

### **How to approach the new market**

First and foremost, there are several absolute necessities as for entering the market, most notably the means to finance a customized vessel, and the competence to operate it. Further, the charterer has to recognize your accumulated knowledge and experience. This issue is two-fold; actual competence and perceived competence. The competence has no value if the charterer is not aware of it. Therefore, our interviews emphasized track record as a necessity. One has to prove worthy through other operations to enter the “high profile” operations. Thus,

a company that is eager to enter the ERRV market in the north should arguably have been invested in similar segments before. To compete with the prices of foreign companies like Esvagt, the Norwegian companies argued that flagging out may be crucial to reduce wages, at the cost of attractiveness for local Norwegian workers.

The other aspect includes relations and marketing. Showing dedication and flexibility according to the customers' needs will build stable and long relationships, argued to be the most important relation in the shipping sector. The COO of Esvagt stated this clearly: "The customer is alpha and omega".

The focus on finding new ways of financing have become of higher importance the last years, according to our interviewees. Not only being able to fund the vessel, but also being decisive as to margins when entering a capital intensive market. A new entrant must then be able to find the optimal way of financing, with the best possible terms and conditions. This is, however, made easier by the acquisition of a contract. The length of the contracts and the solid counterparts leads to stable cash flows in the foreseen future, thereby increasing the willingness of financial institution to lend money.

There are, however, some aspects of the market which bends in favor of the smaller new entrants, first and foremost the accessibility to technology. When a concept is developed by the ship designer, regardless of who eventually buys it, the concept gets commercialized. Therefore, the new entrant has access to the newest technology when developing their concept, given that they choose the right suppliers. Both the designer and ship owners we interviewed did, however, argue that the development process is best completed in unity, to ensure the quality of the "total product".

Regarding the entrepreneurial aspect of how to recognize and utilize resources that no one else sees value in, we assessed the entrepreneurial orientation to be high in all our cases, which might seem evident because of the size of the administrations onshore and the nature of the market. Thus, even new companies with a high degree of entrepreneurial orientation may be unable to use this as a competitive advantage against the incumbents.

Another aspect that was recognized as important by our interviewees was the comprehensive regulatory framework one has to fit in to compete for contracts in the High North. This could be a head ache for new entrants, which does not possess the organizational resources that the larger companies have. As for now, the polar code is about to be finished, and the ship owners

must adjust to new regulations once again. The cost as to time and money will depend on the company's foresight and precautions.

### **Willingness**

Taking the step northwards will evidently require changes in the business model. Through our study, we have recognized different approaches as to adapting the business model for the High North. Møkster establishing an office there might be the most dedicated move in this respect. The companies were to some extent open for cooperation with regards to knowledge-sharing, but did not see any viable solutions for sharing the management of the vessels. New entrants may still benefit from exploring this possibility closer, but they are dependent on new solutions to make this work. Alliances where one company invests and another operates the vessel seemed a more likely scenario.

As we argued earlier in the conclusion, the track record is important. This would evidently mean that the new entrant have been active in another area before, within the same or similar segment. Approaching the new market would then mean to develop a new business model. There are many difficulties regarding this, which may be especially challenging in small organizations. The danger of doing everything at the same time might damage the overall business, thus one have to manage the business models well. One should start the process of aligning, divorcing, integrating or separating, according to the degree of difference of the features in the new market.

As explained by the chartering manager in Møkster Shipping, the willingness to enter the market is decisive as to succeeding. A substantial portion of the physical, financial and organizational resources of the company must be committed to overcome the entry barriers. A good foothold in the High North in an early phase might prove profitable in the future, with possibility of gaining an experience-advantage over competitors. Thus, a dedication towards the new market and a strategy that is well balanced between price and quality might result in future contracts, and the necessary know-how when the market moves even further into ice-covered waters.

## **8. Further Research**

This being an exploratory research we have mapped several crucial aspects as to entry strategy towards the ERRV market in the Norwegian Barents Sea. Because of capacity constraints, both related to time and insight, we consider it interesting to dig deeper into several of our topics and findings.

### **Alliances**

Alliances with competitors seem like an intricate phenomenon in the industry. Moving further north to more remote locations has proven to be challenging as to logistics and infrastructure. A study of the history of alliances in the sector and also to which extent such alliances could contribute to increased efficiency, both regarding coordination of logistics and R&D, would be of interest.

### **Regulations**

During the writing we got to learn about differences in regulation over country borders, especially regarding the difference in the UK-sector and Norwegian. A comparison-study of the regulatory framework, as to benefits and disadvantages of the current systems, and further how it could be aligned would be interesting.

### **Ship registration**

Several of our interviewees emphasized the necessity to flag out, as a mean to reduce costs and be competitive in the OSV-industry at the Norwegian Continental Shelf and the international market in general. The companies we assessed had both vessels with Norwegian and foreign flag. A comparison study of benefits and disadvantages as to choice of country registration could contribute to valuable findings both in regards of business insight, but also in the bigger picture, as to political and regulatory issues with the current system.

### **Buyer side**

More studies that investigate the tender process and how the E&P companies choose their suppliers would be valuable. Gaining insight into this process could, however, prove to be difficult.

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## 10. Attachments

### Interview guide – ESVAGT:

#### Menneskelig/Sosial kapital

##### Kunnskap og samarbeid

1. Hvordan skapes kunnskap i deres bedrift?
2. Hvordan beholder dere den?
3. Hvilke utfordringer har dere møtt ved å operere i nordområdene/arktiske områder?
4. Hvordan anser dere tilgangen på kvalifisert arbeidskraft?
  - På land?
  - Til sjøs?
5. Oppfatter dere at selskapets størrelse har noe å si med tanke på dette?
6. Hvordan legger dere til rette for læring i deres organisasjon?

##### Eksternt samarbeid:

7. Hva har nettverk og samarbeid å si for dere?
  - Har dette endret seg over tid? For eksempel i ulike faser av selskapets utvikling?
8. Hvordan forekommer dette i deres organisasjon?
9. Hva har relasjon til kunde å si for dere?
10. Hvem er ESVAGT's viktigste samarbeidspartnere?

##### Internt samarbeid

11. Hvordan forekommer informasjonsflyt i deres organisasjon?
  - Fra operasjonell aktivitet til toppledelse og vica versa.
  - Mellom avdelinger/mellom sjø og land.

##### Innovasjon

1. Hvor viktig er innovasjon for dere?
2. Kopierer dere andre aktører i markedet?
3. Hva gjør dere for å legge til rette for innovasjon?
4. Hvordan engasjerer dere offiserer til sjøs i innovasjonsarbeid?
5. Hvilke kunnskaper og erfaringer anser dere som viktigst i deres organisasjon?
6. Hva er de viktigste driverne for innovasjon i deres organisasjon?
7. Hvor forekommer innovasjon i deres organisasjon?
  - Internt?
  - Diagonale lenker? (FoU, allianser etc.)

## **Fysisk kapital**

1. Fortell om deres fartøysportefølje. Hvordan er den sammensatt?
2. Hvordan er fartøysporteføljen knyttet til deres strategi?
3. Kan du beskrive prosessen når dere tilegner dere et nytt fartøy?
  - Kommunikasjon?
  - Ressurskrevende?
4. Hvilken konfigurasjon og spesifisering av fartøy har dere inntrykk av at det er størst etterspørsel etter?
  - Heterogen flåte kontra multirolle.
5. Hvilke tilleggskrav stilles til standbyfartøy i Barentshavet kontra Nordsjøen/Norskehavet?

## **Finansiell kapital**

1. Fortell om deres finansielle situasjon.
2. Hvordan arbeider dere for å oppdrive finansiell kapital?
3. Har størrelse noe å si for muligheten til å oppdrive kapital?
4. Hvordan anser dere muligheten for å oppdrive kapital, og hvordan er premissene?  
Da ønsker vi alle helst å få svar på dette i forhold til:
  - I årene som har vært
  - I dag
  - I fremtiden (Blant annet med tanke på innføring av Basel III-standardene)

## **Konkurransestrategi:**

1. Hvordan vil du beskrive konkurransesituasjonen i ERRV markedet?
  - Fare for nykommere?
  - Hvordan anser dere utsiktene for konkurransesituasjonen?
2. Hvilke barrierer forbinder du med å etablere seg i ERRV-markedet?
3. Hvordan vil du beskrive maktforholdet i forhold til
  - a. Tilbydere (Verft, utstyrsleverandører osv.)
  - b. Kjøpere
4. Hvordan arbeider dere for å tilegne dere kunder?
  - Vedrørende langtidskontrakter?
  - I spot markedet?
  - Hva vil du si var deres nøkkelkriterier for å bli foretrukket leverandør til Goliat
5. Hvilke kriterier har dere inntrykk av at deres potensielle eller eksisterende kunder legger mest vekt på ved valg av leverandør?
  - Pris/Spesifisering?
  - Erfaring, kvalitet, kompetanse?
6. Hva vil du si er deres viktigste konkurransefortrinn?
7. Hvordan ser dere på mulighetene i Barentshavet/arktiske farvann?
  - Hvordan tilnærmes disse områdene av dere?

## **Interview guide – Simon Møkster Shipping**

### **Fysisk kapital**

1. Fortell om deres fartøysportefølje. Hvordan er den sammensatt?
2. Hvordan er fartøysporteføljen knyttet til deres strategi?
3. Kan du beskrive prosessen når dere tilegner dere et nytt fartøy?
  - Kommunikasjon?
  - Ressurskrevende?
4. Hvilken konfigurasjon og spesifikasjon av fartøy har dere inntrykk av at det er størst etterspørsel etter?
  - Heterogen flåte kontra multirolle?
5. Hvilke hovedforskjeller opplever dere av krav og regler ved operasjoner i Barentshavet kontra Nordsjøen/Norskehavet?
  - Teknologi? Forskrifter?
  - Er det hovedsakelig krav fra kunde, eller lovpålagte forskrifter?
  - Hvordan håndterer dere dette?

### **Finansiell kapital**

1. Fortell om deres finansielle situasjon.
2. Hvordan arbeider dere for å oppdrive finansiell kapital?
3. Hvordan anser dere muligheten for å oppdrive kapital, og hvordan er premissene?  
Da ønsker vi alle helst å få svar på dette i forhold til:
  - I årene som har vært
  - I dag
  - I fremtiden

### **Menneskelig/Sosial kapital**

#### **Kunnskap og samarbeid**

1. Hvordan skapes kunnskap i deres bedrift?
2. Hvordan beholder dere den?
3. Hva kreves av kompetanse ved operasjoner i Barentshavet kontra Nordsjøen/Norskehavet?
4. Hvordan anser dere tilgangen på kvalifisert arbeidskraft?
  - På land?
  - Til sjøs?
5. Oppfatter dere at selskapets størrelse og renommé har noe å si med tanke på dette?
6. Hvordan legger dere til rette for læring i deres organisasjon?
7. Hvordan forekommer informasjonsflyt i deres organisasjon?
  - Fra operasjonell aktivitet til toppledelse og vica versa.
  - Mellom avdelinger og fartøy/mellom sjø og land.

#### **Eksternt samarbeid:**

1. Hva har nettverk og samarbeid å si for dere?
  - I forhold til konkurranse? Teknologi?
  - Har dette endret seg over tid? For eksempel i ulike faser av selskapets utvikling?
2. Hvordan forekommer dette i deres organisasjon?
3. Hva har relasjon til kunde å si for dere og hvordan dyrker dere dette forholdet?
4. Hvem er deres viktigste samarbeidspartnere?

### **Innovasjon**

1. Hvor viktig er innovasjon for dere?
2. Kopierer dere andre aktører i markedet?
3. Hva gjør dere for å legge til rette for innovasjon?
4. Hvordan engasjerer dere offiserer til sjøs i innovasjonsarbeid?
5. Hvilke kunnskaper og erfaringer anser dere som viktigst i deres organisasjon?
6. Hva er de viktigste driverne for innovasjon i deres organisasjon?
7. Hvor forekommer innovasjon i deres organisasjon?
  - Internt?
  - Diagonale lenker? (FoU, allianser etc.)

### **Konkurransesituasjon:**

1. Hvordan vil du beskrive konkurransesituasjonen i standby-markedet?
  - Fare for nykommere?
  - Hvordan anser dere utsiktene for konkurransesituasjonen i Nordsjøen kontra Barentshavet?
3. Hvilke barrierer forbinder du med å etablere seg i standby-markedet?
4. Hvordan vil du beskrive maktforholdet i forhold til
  - a. Tilbydere (Verft, utstyrsleverandører osv.)
  - b. Kunder
5. Hvordan arbeider dere for å tilegne dere kunder?
  - Vedrørende langtidskontrakter?
  - I spot markedet?
6. Hvilke kriterier har dere inntrykk av at deres potensielle eller eksisterende kunder legger mest vekt på ved valg av leverandør?
  - Pris/Spesifikasjon?
  - Erfaring, kvalitet, kompetanse?
  - Forskjell Nordsjøen kontra Barentshavet?
7. Hva vil du si er deres konkurransefortrinn?
8. Hvordan ser dere på mulighetene i Barentshavet/arktiske farvann?
  - Hvordan tilnærmes disse områdene av dere?

## **Interview guide – Atlantic Offshore**

### **Fysisk kapital**

6. Hvordan er fartøysporteføljen knyttet til deres strategi?
7. Hvilke hovedforskjeller opplever dere av krav og regler ved operasjoner i Barentshavet kontra Nordsjøen/Norskehavet?
  - Teknologi? Forskrifter?
  - Er det hovedsakelig krav fra kunde, eller lovpålagte forskrifter?
  - Hvordan håndterer dere dette?

### **Finansiell kapital**

4. Fortell om deres finansielle situasjon.
5. Hvordan arbeider dere for å oppdrive finansiell kapital?
6. Hvordan anser dere muligheten for å oppdrive kapital, og hvordan er premissene?  
Da ønsker vi alle helst å få svar på dette i forhold til:
  - I årene som har vært
  - I dag
  - I fremtiden

### **Menneskelig/Sosial kapital**

#### Kunnskap og samarbeid

8. Hvordan skapes kunnskap i deres bedrift?
9. Hvordan beholder dere den?
10. Hva kreves av kompetanse ved operasjoner i Barentshavet kontra Nordsjøen/Norskehavet?
11. Hvordan anser dere tilgangen på kvalifisert arbeidskraft?
  - På land?
  - Til sjøs?
12. Hvordan legger dere til rette for læring i deres organisasjon?
13. Hvordan forekommer informasjonsflyt i deres organisasjon?
  - Fra operasjonell aktivitet til toppledelse og vica versa.
  - Mellom avdelinger og fartøy/mellom sjø og land.

#### **Eksternt samarbeid:**

5. Hva har nettverk og samarbeid å si for dere?
  - I forhold til konkurranse? Teknologi?
  - Har dette endret seg over tid? For eksempel i ulike faser av selskapets utvikling?
6. Hvordan forekommer dette i deres organisasjon?
7. Hva har relasjon til kunde å si for dere og hvordan dyrker dere dette forholdet?
8. Hvem er deres viktigste samarbeidspartnere?
9. Hvilke kriterier legger dere vekt på når dere inngår et samarbeid?



## **Innovasjon**

8. Hvor viktig er innovasjon for dere?
9. Kopierer dere andre aktører i markedet?
10. Hvordan engasjerer dere offiserer til sjøs i innovasjonsarbeid?
11. Hvilke kunnskaper og erfaringer anser dere som viktigst i deres organisasjon?
12. Hva er de viktigste driverne for innovasjon i deres organisasjon?
13. Hvor forekommer innovasjon i deres organisasjon?
  - Internt?
  - Diagonale lenker? (FoU, myndigheter etc.)

## **Konkurransesituasjon:**

2. Hvordan vil du beskrive konkurransesituasjonen i standby/rescue-markedet?
  - Fare for nykommere?
  - Hvordan anser dere utsiktene for konkurransesituasjonen i Nordsjøen kontra Barentshavet?
9. Hvilke barrierer forbinder du med å etablere seg i standby/rescue-markedet?
10. Hvordan vil du beskrive maktforholdet i forhold til
  - a. Tilbydere (Verft, utstyrsleverandører osv.)
  - b. Kunder
11. Hvilke kriterier har dere inntrykk av at deres potensielle eller eksisterende kunder legger mest vekt på ved valg av leverandør?
  - Pris/Spesifikasjon?
  - Erfaring, kvalitet, kompetanse?
  - Forskjell Nordsjøen kontra Barentshavet?
12. Hva vil du si er deres konkurransefortrinn?
13. Hvordan ser dere på mulighetene i Barentshavet/arktiske farvann?
  - Hvordan tilnærmes disse områdene av dere?

## **Interview guide – Chriship**

### **Innledning**

1. Forell om selskapet. Historie, strategi fremover? Har dere intensjoner om å skifte over fra lavkost til differensiert høyteknologisk? Eller har dere et ønske om å operere i begge segmentene?
  - Er det kun stand by/rescue som gjelder for dere, eller er dere åpen for andre segmenter?

### **Fysisk kapital**

8. Fortell om deres fartøysportefølje. Hvordan er den sammensatt?
9. Har dere planer om å tilegne dere nye fartøy?
  - I tilfelle, hvilke fartøy dreier dette seg om?
10. Hvordan er fartøysporteføljen knyttet til deres strategi?
11. Hvilken konfigurasjon og spesifisering av fartøy har dere inntrykk av at det er størst etterspørsel etter?
12. Hvilke hovedforskjeller opplever dere av krav og regler ved operasjoner i Barentshavet kontra Nordsjøen/Norskehavet?
  - Teknologi? Forskrifter?
  - Er det hovedsakelig krav fra kunde, eller lovpålagte forskrifter?
  - Hvordan håndterer dere dette?

### **Finansiell kapital**

7. Fortell om deres finansielle situasjon.
8. Hvordan arbeider dere for å oppdrive finansiell kapital?
  - Tanker rundt kreativ finansiering som å gå ut i obligasjonsmarkedet eller annet?
9. Hvordan anser dere muligheten for å oppdrive kapital, og hvordan er premissene?  
Da ønsker vi alle helst å få svar på dette i forhold til:
  - I årene som har vært
  - I dag
  - I fremtiden

### **Menneskelig/Sosial kapital**

#### **Kunnskap og samarbeid**

14. Hvordan skapes kunnskap i deres bedrift?
15. Hvordan beholder dere den?
16. Hva kreves av kompetanse ved operasjoner i Barentshavet kontra Nordsjøen/Norskehavet?
17. Hvordan anser dere tilgangen på kvalifisert arbeidskraft?
  - På land?
  - Til sjøs?
18. Oppfatter dere at selskapets størrelse og renommé har noe å si med tanke på dette?
19. Hvordan legger dere til rette for læring i deres organisasjon?
20. Hvordan forekommer informasjonsflyt i deres organisasjon?

- Fra operasjonell aktivitet til toppledelse og vica versa.
- Mellom avdelinger og fartøy/mellom sjø og land.

### **Eksternt samarbeid:**

10. Hva har nettverk og samarbeid å si for dere?
  - I forhold til konkurranse? Teknologi?
  - Har dette endret seg over tid? For eksempel i ulike faser av selskapets utvikling?
11. Hvordan forekommer eksternt samarbeid i deres organisasjon?
12. Hvordan ser dere på et eventuelt samarbeid med et annen selskap som opererer i samme industri/segment?
13. Hva har relasjon til kunde å si for dere og hvordan dyrker dere dette forholdet?
14. Hvem er deres viktigste samarbeidspartnere?

### **Innovasjon**

14. Hvor viktig er innovasjon for dere?
15. Kopierer dere andre aktører i markedet?
16. Hva gjør dere for å legge til rette for innovasjon?
17. Hvordan engasjerer dere offiserer til sjøs i innovasjonsarbeid?
18. Hvilke kunnskaper og erfaringer anser dere som viktigst i deres organisasjon?
19. Hva er de viktigste driverne for innovasjon i deres organisasjon?
20. Hvor forekommer innovasjon i deres organisasjon?
  - Internt?
  - Diagonale lenker? (FoU, allianser etc.)

### **Konkurransesituasjon:**

3. Hvordan vil du beskrive konkurransesituasjonen i standby-markedet?
  - Fare for nykommere?
  - Hvordan anser dere utsiktene for konkurransesituasjonen i Nordsjøen kontra Barentshavet?
14. Hvilke barrierer forbinder du med å etablere seg i standby-markedet?
15. Hvordan vil du beskrive maktforholdet i forhold til
  - a. Tilbydere (Verft, utstyrsleverandører osv.)
  - b. Kunder
16. Hvordan arbeider dere for å tilegne dere kunder?
  - Vedrørende langtidskontrakter?
  - I spot markedet?
17. Hvilke kriterier har dere inntrykk av at deres potensielle eller eksisterende kunder legger mest vekt på ved valg av leverandør?
  - Pris/Spesifikasjon?
  - Erfaring, kvalitet, kompetanse?
  - Forskjell Nordsjøen kontra Barentshavet?

18. Hva vil du si er deres konkurransefortrinn?
19. Hvordan ser dere på mulighetene i Barenshavet/arktiske farvann?
  - Hvordan tilnærmes disse områdene av dere?

### **Interview guide – VARD Design**

1. Kan du kort beskrive dine ansvarsområder i Vard Design?
2. Fortell om designerens rolle ved utvikling av fartøy.
3. Opplever dere en forskjell ved utvikling av fartøy for operasjoner i Barentshavet, kontra Nordsjøen?
  - Hva kreves av ekstra kompetanse?
4. Hva opplever dere som de viktigste kriteriene for at deres konsept skal bli valgt av oljeselskapene ved operasjoner i Nordområdene?
  - Pris/kvalitet?
5. Hvilken rolle har rederiene i innovasjonsarbeidet deres?
  - Dekker de noe av innovasjonskostnadene?
6. Hvordan ser dere som skipsdesignere på mulighetene i Nordområdene?