



THE MAPPING OF CAREER PATHS IN THE MARITIME INDUSTRIES

**A project by Southampton Solent University for the
European Community Shipowners' Associations
(ECSA)
and the
European Transport Workers Federation
(ETF)
with the support of the
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ABSTRACT

The objective of the study is to provide, through the construction of a series of career maps across a range of Member States, an overview and/or global estimates of the following:

- Possible and actual career paths of seafarers;
- Demand for seafarers at sea and in relevant shore-based maritime sectors, where information is available;
- Barriers to the mobility of qualified seafarers between the sectors.

The methodology for the project had the following main elements:

- A review of existing literature and studies relevant to career mapping;
- A series of interviews with key personnel from various maritime sectors in selected Member States. The following 10 Member States were selected for the study: Denmark, Germany, Greece, Italy, Latvia, the Netherlands, Poland, Spain, Sweden, and the United Kingdom.
- The data from the interviews was analysed to create an individual report and a career map for each of the selected Member States.

In the course of the study, it became apparent that there are a number of similarities between maritime industries in the various Member States and a number of differences. The general findings of the study can therefore be described under these two broad headings.

The similarities that are common to all the Member States are as follows:

- The personal qualities of successful seafarers in relation to both the nature of seafaring and to shore side employment;
- The reasons for choosing to go to sea initially;
- The reasons for staying at sea;
- The reasons for coming ashore;
- The general processes which seafarers undergo in order to progress their careers ashore;
- The barriers to coming ashore;
- The mobility between sectors.

There are also a number of factors that are markedly different in each Member State. These factors are a function of the cultures of the individual country. The following common factors, which have an influence on seafaring careers and maritime industries, have been identified during the analysis for this study:

- The geography and location of the country;
- The strength of the family culture;
- The maritime education and training system.

A comparison between these maritime dimensions and known dimensions of culture reveals some interesting relationships:

- The relationship between the presence and strength of clustering between maritime sectors and the *power distance* dimension;
- The relationship between the presence and strength of family connections and the *individual versus collective* dimension;
- The relationship between individual mobility and the *uncertainty avoidance* dimension.

The individual country reports describe the main characteristics of the maritime sectors in each selected Member State. The career path maps that have been constructed for each country demonstrate that there is a wide range of possible career opportunities for seafarers ashore. The maps also demonstrate that the take-up of opportunities vary from one State to another. All the maps give an indication as to how the maritime clustering works in each Member State and some show the extent to which the cluster has been formalised. The maps also demonstrate the flows of manpower throughout the maritime industry and thus provide indications of the demand for seafarers.

1. INTRODUCTION

1.1 Background and Objectives of the Project

The Communication from the Commission to the Council and the European Parliament in 2001 on the training and recruitment of seafarers¹ produced several significant conclusions and recommendations. Of particular relevance to this project were the recommendations to re-launch the image of the shipping industry and to support research into the present and potential job content and career paths of active and former seafarers, at sea and on shore.

The more recent Council conclusions in 2003², having regard to the 2001 Communication, considered that further action should focus on the following three objectives:

- The improvement of the image of the seafaring profession, aiming at attracting young people to work at sea;
- The assessment of existing human resources and seafarers' qualifications;
- The improvement of maritime education and training.

The Council encourages social partners to contribute to such efforts to attract young people to the seafaring profession and invites shipowners, in particular, to promote the idea of a career with perspectives of mobility, promotions and future employment on land.

The aim of this study, therefore, is to contribute to these initiatives by mapping the multiple career opportunities that exist for European seafarers both at sea and ashore. Career maps may be used by a variety of maritime organisations in Member States for a number of purposes:

- To provide a co-ordinated and coherent set of information for potential entrants to the shipping industry about future opportunities within a wider maritime cluster. Such an integrated network will allow a more holistic approach to the marketing and promotion of career opportunities in the maritime industries.
- To aid the analysis of the entry requirements, training, qualifications and experience required for career progression between different maritime sectors and ultimately to streamline and facilitate relevant career paths between sectors.
- To make a contribution to the development of fundamental tools for the analysis of the maritime labour markets in the European Union.

¹ Communication from the Commission to the Council and the European Parliament on the training and recruitment of seafarers. COM(2001)188 final. 6.4.2001.

² Promotion of Sea Transport and the Seafaring Profession – Council Conclusions. 9686/03 (Presse 146)

The objective of the study is to provide, through the construction of a series of career maps across a range of Member States, an overview and/or global estimates of the following:

- Possible and actual career paths of seafarers;
- Demand for seafarers manpower requirements at sea and in relevant shore-based maritime industries, where information is available;
- Barriers to the mobility of qualified seafarers between the sectors.

1.2 Methodology

1.2.1 Method and Process

The methodology for the project had the following elements:

1. A review of existing literature and studies relevant to career mapping.
2. The design of an interview schedule to elicit the information required, in order to achieve the goals of the project.
3. A series of interviews with key personnel in selected Member States. These individuals represented both public and private maritime sectors, including representatives from a variety of maritime organisations and other stakeholders, such as ship owning organisations and associations, trade unions, and similar persons in relation to the relevant shore-based industries employing maritime expertise. The interviews were conducted primarily in person, although some interviews were conducted by telephone.

The following 10 Member States were selected for the study:

Denmark, Germany, Greece, Italy, Latvia, the Netherlands, Poland, Spain, Sweden, and the United Kingdom.

The selected Member States represent a range of both northern and southern States and old and new Member States. All the Member States selected have significant numbers of seafarers³. They also represent different maritime cultures, regimes and clusters.

4. Initial pilot studies were undertaken in Denmark and Greece. The process was reviewed and then extended to the other 8 Member States. The extent of the information obtained from each country is a function of what was available, what could be assembled within the resources of the project, and the willingness of individuals to participate. In this latter respect, all those who did participate were extremely co-operative and encouraging in their support for the aims of the project. In only one country did it appear that individuals were reticent to be interviewed or contribute to the project.

³ BIMCO/ISF Manpower Update 2000

One country is an exception to the general method and process described above. The UK data has been obtained almost exclusively from the recent study by Gardner et al.⁴ The reason for this exception is due to the direct relevance of this comprehensive study, which had covered shore-based employment of seafarers within the UK only two years ago.

5. The data from the interviews was analysed to create an individual report and a career map for each of the selected Member States. The individual career maps are attached to each individual country report and, where possible, adopt the same employment categories used in the 2001 study on the economic impact of maritime industries in Europe.⁵
6. Each country report was written to the same format including the following seven sections:
 - Socio-economic and Cultural Background
 - Maritime Education and Training Systems
 - Employment Data
 - Specific Characteristics of the Member State
 - Significant Sectoral Descriptors
 - Table of Sectoral Representatives
 - Career Map
7. Each country report and map was circulated to the interviewees for comment and amended as necessary. The draft report including all the country reports was also circulated to delegates of both ECSA and ETF, before producing this final report.

1.2.2 Timescale of the project

The project commenced on 01 July 2004 and was officially completed on 30 June 2005. Internal project meetings were held at regular intervals during this period and an interim progress presentations was made to the ECSA/ETF Sectoral Dialogue Working Group on Training and Recruitment in December 2004. A presentation to this group and representatives of the European Commission was held on 30 June 2005 to launch the main findings of the study. The final report was submitted to the European Commission at the end of September 2005.

⁴ Gardner, B. M., Marlow, P. B., Naim, M.M., Nair, R.V. and Pettit, S.J. *“The UK economy’s requirements for people with experience of working at sea 2003”* Report to the DfT Contract No; PPAD 9/70/15

⁵ Economic Impact of Maritime Industries in Europe. Policy Research Corporation N.V. 2001.

1.2.3 Project management and team

ECSCA was responsible financially to the Commission for carrying out the project, with Mr Alfons Guinier (ECSCA Secretary General) taking on the formal role in that context. Mr Tim Marking (ECSCA Deputy Secretary General) and Mr Eduardo Chagas (ETF, Political Secretary for Maritime Transport Section) were also jointly involved in the overall management of the project.

The Project Director was Professor Michael Barnett, Head of the Technology Research Centre, Southampton Institute, UK who had day-to-day responsibility for the management of the project. The research team comprised Sonia Karassavidou (ECSCA), Catherine Szyszko (ETF), David Gatfield and Claire Pekcan (Southampton Institute), Bent Overgaard, Consultant and Allan Graveson (NUMAST, UK).

The project could not have been completed without the generous assistance given by the participants in each country. They are listed in a Table with each country report and their support is gratefully acknowledged.

1.3 Deliverables

1. Interim progress presentation to the ECSCA/ETF Sectoral Dialogue Working Group on Training and Recruitment.
2. A presentation to launch the findings of the study (held on 30 June 2005).
3. Website links, including ECSCA, ETF and MIF sites, to promote the study findings.
4. A final report containing the completed career maps for each selected Member State and other findings.

2. GENERAL FINDINGS OF THE PROJECT

2.1 Introduction

The findings contained in this chapter are the result of either the analysis of the general views and opinions expressed by the interviewees from all the selected Member States or from the research findings of previous studies, as referenced.

In the course of this analysis, it became apparent that there are a number of similarities between the maritime industries in the various Member States and a number of differences. The general findings of the study are therefore described under these two broad headings: similarities and differences.

The similarities relate to the general nature of seafaring as an occupation and matters relating to an individual's choice of career and the general processes that have to be undergone to effect a change in career. Seafaring, unlike most other occupations, requires individuals to leave home and spend considerable periods of time, working and socialising, in a confined vessel isolated, for the most part, from normal society. Seafaring, like occupations such as mining, is considered one of the more dangerous careers. It has a language of its own, and "knowledge" that can only be gained through the "rites of passage". Consequently, seafaring is a way of life that knows no national boundaries and is reflected in the "brotherhood" of seafarers wherever they may come from. It is this brotherhood that partially explains why seafarers are often welcomed in shore positions where they will be in contact with either other ex-seafarers or serving seafarers. The general processes, which seafarers undergo in coming ashore, are also essentially the same in all the Member States that were covered in this study.

However, there are also a number of factors that are markedly different in each Member State. These differences are a function of the cultures of the individual country. The following factors, which have an influence on the way in which maritime affairs are conducted in each Member State, have been identified during the study:

- The geography and location of the country;
- The strength of the family culture;
- The maritime education and training system.

Before describing both similarities and differences in more detail, a table is presented which summarises some of the key comparative indicators for each Member State. The year to which the data applies does vary but is generally between 2003-05. The following data was generally available:

- Number of ships on own register
- Total number of vessels controlled
- Number of ratings at sea
- Number of officers at sea
- Total number of seafarers
- Total number of people employed in maritime sectors
- Contribution of sector to national economy

Table 1: Comparative data for each Member State

	Number of vessels registered	Total number of vessels controlled	Number of Officers (Deck and Engineers)	Number of Ratings	Total estimated number of seafarers	Estimated number of personnel in maritime cluster	Estimated turnover of maritime cluster Billions Euros
DENMARK	509		5500	4000	9500	81,000	13.4
GERMANY	508	2575	4,428			>200,000	30.0
GREECE	1575	3697	14,000	5,000	18,747		
ITALY	1031	1575			18,000		
LATVIA	21	84	7,500	10,000	17,500	500	
NETHERLANDS	768		3,858	1002	4,860	135,600	21.4
POLAND	12	112	19,000	26,000	45,000		
SPAIN	0	>210	15,000	10,000	25,000		
SWEDEN	571		5,300	6,700?	12,000	200,000	
UK	754	805	13,032	9,621	22,653	250,000	54.0

The table illustrates that most Member States control vessels in addition to their own flag fleets and man them with varying levels of their nationals as officers and ratings. The exceptions to this are Poland and Latvia where there are many more officers and ratings than national flag vessels thus confirming their employment on other foreign flag vessels. The number of shore-based personnel in the maritime industries appears to be at least 10 times the number of serving seafarers and the turnover figure gives some indication of the important contribution these industries make to the European economy.

2.2 Similarities

The similarities that are common to all the Member States, and probably all maritime nations, are as follows:

1. The personal qualities of successful seafarers in relation to both the nature of seafaring and to shore side employment;
2. The reasons for choosing to go to sea initially;
3. The reasons for staying at sea;
4. The reasons for coming ashore;
5. The general processes and problems which seafarers undergo in order to progress their careers ashore.

2.2.1 Personal qualities of successful seafarers

Seafarers are especially valued by shore employers for a number of reasons:

1. Their knowledge of ships, shipping, systems and maritime processes. They are also able to converse with clients and other seafarers using the technical jargon and language of the sea. Generally, ex-seafarers are more comfortable discussing marine issues in the company of other ex-seafarers than with non-seafarers.
2. Their maritime credibility. This is related to the above but comes with experience at sea, which is why this factor is often sought by shore employers in maritime related businesses.
3. Their ability as independent, self-reliant and resourceful workers. Seafarers are generally good at handling uncertain situations as they develop, and are regarded as responsible employees who are committed to getting the job done.
4. Leadership potential. Officers are also regarded as potentially good and pragmatic leaders who are good at making decisions and creative at solving problems.

These are qualities and values that the seafarer adopts at an early stage in their seafaring careers, making them present even in young junior officers. Former officers often present very similar CV's in terms of qualifications and general sea experience when seeking shore employment. They will, therefore, often be selected by employers on the basis of their personal attitude, and their "fit" with the recruiting organisation.

Seafarers are perceived to have some disadvantages, however, and these may be summarised as:

1. An officers' education may be too preoccupied with narrow operational technical questions for some management positions ashore. There is a view among some prospective shore-based employers that maritime education should focus more on general management issues, including commercial and business management. This lack of general management education was mentioned by interviewees as especially noticeable in officers who lacked an extended basic education.
3. Prospective shore employers may consider that these characteristics are especially true of senior officers, who may be seen as being fixed in their ways, and aversive to change and the authority of others.

2.2.2 Reasons for going to sea

An individual's choice of career may be influenced by a number of factors to which any young person may be exposed, but the following appear to be the most significant:

1. The location of home or place of upbringing. In most Member States, there are traditional areas that have been, and often continue to be, significant areas from which seafarers may be recruited. Of course, these are usually coastal regions or, as a good example, the Greek islands. Each country has its own areas and these are described in the individual country reports.
2. Family influence. It has been a repeated research finding that the majority of recruits have a seafaring family member: usually a parent, grandparent or an uncle, and this is often their source of information regarding careers at sea. For example, Fricke (1974)⁶ found that 55 percent of UK cadets questioned had a father who had been to sea, and Zhao (1998)⁷ found that 66 percent of the female cadets she surveyed had a father in the Merchant Navy. In a more recent survey of UK cadets⁸, it was found that 41 percent of those who responded had received information about the sea from a family member at sea. However, as the statistics for the UK suggest, this influence may diminish as fewer and fewer people go to sea.
3. Good career prospects. This is actually a combination of factors but often features as the most important single factor in an individual's career choice⁹. This will include salary expectations in relation to similar levels in the individual country, status of the profession, and the opportunity for early responsibility and promotion.
4. A long-term interest in the sea.

⁶ Fricke P. H., (1974) "*The Social Structure of Crews.*" Cardiff: Department of Maritime Studies, University of Wales

⁷ Zhao M. (1998) "*Women Seafarers in the EC: a preliminary report based on German and UK case studies.*" Cardiff: Seafarers' International Research Centre

⁸ Pekcan, C., Barnett, M and Gatfield, D (2003) "*A National Survey of Cadets*" Warsash Maritime Centre

⁹ Pekcan, C., Barnett, M and Gatfield, D (2003) *ibid*

5. Travel. This factor is probably less influential in the modern age of jet travel and “back-packing” but is still mentioned in the list of the top five reasons for going to sea.

Seafaring has also tended to attract young people of a practical nature, who have been less interested in pursuing formal educational qualifications. The special mix of discipline, tolerance, professional rewards, and the socialising forces of the tight-knit team aboard, has often had a positive appeal and effect on this category of young people. But, as crews have become smaller, and long term company loyalties rarer, these positive aspects have diminished, and there is a view now that the ships’ crews of today do not possess the additional necessary resources and time to integrate young people who are not already equipped personally to fit in immediately.

2.2.3 Reasons for staying at sea

Those individuals who stay in the seafaring profession are perceived to be the more practical minded, often with a long held ambition to become a Master or Chief Engineer. They are people who appreciate the job and the seafaring lifestyle, and the rewards that this brings. There are also those who find fulfilment of their personal ambitions outside their working life and find seafaring conducive to the pursuit of these other activities. Perhaps they are very active in other areas, for example, managing small private businesses while ashore. In contrast, there are also the more academically inclined, who may from the outset, regard the officers’ vocation as merely a step on the ladder to a maritime career ashore and who will often plan for additional education.

Another factor that may determine the length of time spent at sea by an individual is “fast track” promotion, which in some companies has become the rule rather than the exception. Within a few years, an officer’s salary may be at a level that is difficult to match in a normal shore job. Often this high salary will be followed by financial commitments, sometimes referred to as the “mortgage trap”, which may be difficult to meet with a “normal” salary.

Fast promotion has now reached a level where some interviewees considered it a problem. This may be the case where it could result in an entire group of officers possessing only a limited amount and diversity of experience among them. The problem is accentuated by the fact that no differentiation is made between sea time earned on small and large vessels, making it possible for officers with experience from only small vessels to obtain senior officer positions on large vessels, with no prior experience in such vessels. In earlier times, the shipping companies themselves would have largely prevented this, but now they may not have the possibility of choice in the present situation. A possible solution put forward by interviewees would be a requirement for more sea time during the basic education period.

This rate of progression between the ranks thus differs considerably from one company to the next and over time. Prospects are relative to the commercial achievements and consequent expansion or reduction of individual companies. This is again partly related to the general cyclical nature of the industry, and together they form a pattern of considerable fluctuation in the demand for seafarers. The natural consequence is that some shipping companies, during rapid fleet expansion, offer fast lanes of promotion, whereas others, during stagnation or reduction, may possess a staff of relatively young officers at senior level, offering very little prospect of promotion for junior officers, a situation sometimes referred to as “dead men’s shoes”.

Bearing this in mind, generally Deck Officers may expect to be two years as a Second Officer, two years as a First Officer and six years as a Chief Officer before command. Engineer Officers benefit from a shorter ladder, and from a higher flow of people, as Engineers generally have more opportunities to leave the seagoing career than do Deck Officers, and they also tend to leave at an earlier stage. Having said that, there was a general impression among interviewees in some countries that the trend regarding Deck Officers is changing now towards the pattern of the Engineer Officers.

Finally another trend that may have an impact on an individual’s decision to stay at sea is the changing relationship between the individual seafarer and his employer. With many seafarers now employed by crewing agencies, they will often move between different vessels and companies, and will not develop an allegiance to a particular operator or shipping company. This introduces the notion that officers, who enjoy permanent contracts with shipping companies, may be more committed to their employers and, therefore, have a higher retention rate at sea. This trend affects the employer too who, when seeking the most eligible candidate for any position, will seek someone who is experienced but not too old. The result is that it is more difficult for older officers above the age of 45 to find employment. Furthermore, the record of references is nowadays maintained and carried by the seafarer, not by the employer. Hence, this record will require corroborating evidence, if the latest history is not totally transparent. As one interviewee put it: “Otherwise the shipowner may think that the seafarer is trying to cover some less complimentary chapters of his seafaring record”.

Where data is available, it tends to confirm the general view of interviewees that those who are still at sea ten years after graduation, are likely to stay for the rest of their working lives.

2.2.4 Reasons for coming ashore

Individuals will make career decisions based on a number of factors, which they experience during the course of their seagoing life. In the case of ratings, many regard the life as a seafarer as a passing phase of life anyway, but many have also been forced to leave the profession because of lack of employment opportunities.

Among the most common factors are pressure from the family and a commitment to pursue an opportunity that suddenly presents itself.

2.2.4.1 Pressure from the family

This major incentive to leave the sea stems from the requirements of the modern family, where it is expected that both parties will pursue a career, making the efforts of both necessary in relation to the child caring demands made by the young family. This economic development during the last forty years has resulted in a growing pressure on young seafarers with families to find a shore job. This reason for coming ashore will generally occur when an officer is in his twenties or early thirties when many couples are building families.

2.2.4.2 Coincidental opportunity

The shift towards a shore side career is often the result of an opportunity that has suddenly presented itself, by what can be described as “fortuitous coincidence”. This may be the case when the shipping company requests the officer to take employment in the shore side of the organisation, or when a job in the local port administration, or with a small local ferry operator, suddenly presents itself without anticipation.

2.2.4.3 Other reasons

Other reasons mentioned by interviewees focus on difficult social conditions on board, caused by small crews, cultural differences between nationalities, stress and high workloads, all of which results in loneliness and the need for a more conventional social life. In addition, the lack of a company culture, which helps to create a bond between the officers and the shipping company and a feeling of belonging, is reported to be a problem that diminishes job satisfaction. This is believed by some to be the result of modern shipping practices, which appear to be more concerned with short-term return on investment than with long-term commitments and good human resource management.

Other reasons mentioned in the interviews for leaving the sea include: poor ship board management, a lack of career planning and the prospect of no promotion and ambitions towards professional and personal development through work. Another reason, which is difficult to quantify, is a lack of enthusiasm, or apathy, in the face of the demanding requirements of the job, in terms of long hours, stress and loneliness. Another contributing factor, which appears to be of real concern to seafarers themselves, is the perception of diminishing legal security and the criminalisation of seafarers. This is based on the observation that senior officers in all parts of the world are subject to indefinite incarceration for reasons that the officers often feel they have little control over.

Finally, another factor, prompting seafarers to leave the sea, is the effort made by some shore employers to attract seafarers from the merchant marine to satisfy a high demand for skilled seafarers in their sector of the maritime industry. A good example of this is provided by the Danish Naval Defence, which has a serious recruitment problem and has tried to attract more seafarers by streamlining their systems of admission, training and education. They hope to recruit perhaps 20-30 officers annually by offering an on-going managerial education to Master's level, early managerial responsibility, an attractive job content and ship board service pattern with a variety of further job opportunities.

2.2.5 The way ashore

Former seafarers who have come ashore because the right opportunity presented itself suddenly will often tend to stay, and perhaps make career progression, with the same employer or in the same line of work. In contrast, seafarers who seek to come ashore following a more conscious planned decision, will often follow a more complicated route, by preparing and putting themselves in a position, in which they can respond to recurring opportunities. The pattern differs somewhat between engine and deck officers.

2.2.5.1 Deck Officers

Deck officers who have decided to seek employment ashore will often have to manoeuvre into an intermediate position in order to land their desired job. This is particularly the case in relation to traditional job areas like pilotage, ports administration and stevedoring, where it is customary for candidates to present themselves and their intention, and be in a position to apply and fill a vacancy, should the need arise. In a similar way deck officers need to be in position in order to monitor the employment market, reflect on job advertisements and be available for interviews.

This is very difficult as a deep-sea sailor, and in order to achieve this positioning the officer will often accept less attractive intermediate jobs ashore, in ferries or in other domestic trades, as a steppingstone towards their desired job. This is a process that may take time, and often the officer will seek to improve his or her employability, and fulfil some of their ambitions for personal development by additional education and training.

In terms of career progression ashore, indications are that the employment of Deck Officers in the traditional employment areas of ports, ships agency, ships brokerage and

freight forwarding businesses, has decreased. An explanation may be that these businesses have become more integrated into the wider logistics industry and are now less directly related to seafaring.

Deck officers will very often stay in the maritime industry as pilots, with the water police, as VTS officers¹⁰, as lockmasters, as superintendents with shipping and ship management companies, as inspectors and surveyors, in various functions with the ports, with the maritime administration and education or in a range of functions in the general logistics industry, not least in relation to internal waterways where appropriate to the individual country.

Former deck officers are valued as leaders and will often find employment in middle management in generalist functions within administration, general management, sales, HR, education, classification or as self employed.

2.2.5.2 Engineer Officers

Engineer officers will often aim for shore employment within a very well defined group of jobs at large plants where their operational skills and experience are in demand. This focus, a relatively steady demand and the tradition to employ engineers directly from sea, enables Engineer Officers to await the right opportunity from their regular jobs without having to first manoeuvre into position.

Engineer Officers will therefore not necessarily feel the same need for additional education and shore-recognised qualifications as the Deck Officers. Their progression from sea to shore follows a much firmer tradition and pattern, and additional training is more likely to follow employment, be in-house and specific for the job.

Engineer Officers have a wider choice, and are quite sought after wherever large comprised plants are being operated and maintained. This is the case in relation to large plants in the manufacturing and processing industries and the traditional areas of employment within public utility industries, power and nuclear plants as well as many jobs as technical supervisor for large buildings or compounds with a range of technical infrastructure like hospitals, hotels and conference centres.

Inside the maritime industry, Engine Officers are in demand as inspectors and surveyors with shipping, management, classification and insurance companies, or in operational functions with shipping and management companies, shipyards, and engine manufacturers, with maritime service and repair and in various functions as superintendents.

¹⁰ VTS, Vessel Traffic System, reporting, monitoring and to some extent managing maritime traffic by radar, radio and AIS, Automatic Identification System.

In summary, the general impression is that a significant majority of Engineer Officers will stay within the maritime sector, but in addition to this, opportunities are to be found as operations and maintenance manager functions at larger plants in industry, in hotels, hospitals, etc. and with public utilities.

2.2.6 Career Progression on Shore

The general impression is that former officers make attractive employees in shore-based professions and will progress well. They will often start at middle management level and generally progress towards the top of middle management, but only a few go much further and only very few to the absolute top of senior management. The lack of general management and business qualifications mentioned above is believed to be one explanation for this inability to reach the pinnacles of management.

It is difficult to evaluate this situation in terms of whether more ex-seafarers ought to reach higher levels on the career ladder, and if so, why they are not successful. It would appear that the obstacle of lacking qualifications could play a role. Another plausible explanation is that seafarers, at sea and later on shore, are employed as managers of technical and operational functions, whereas senior management today is dominated almost entirely by people with a commercial and financial background.

2.2.7 The Scope for Returning to Sea

This is a specific issue that is often raised in relation to discussion about future shortages, and in relation to the possible design of a more appealing job and a more flexible career path.

Firstly, it should be noted that the numbers involved are quite small. However, the issue seems to have two categories of personnel, those who will wish to return within 3-5 years of leaving the sea, and those who stay ashore longer.

It appears that some seafarers find it difficult to adapt and get a solid foothold ashore, and return to sea within a few years. One explanation for this is that the shore job sometimes does not live up to expectations, and that the requirements on management ashore, i.e., to be available at all times, leave the seafarer missing the long periods of time-off in the seafaring profession. This is mentioned particularly in relation to former senior officers, who will return to sea encouraged by their families, who find that the seafaring life offered better conditions and more “quality time” for the family as a whole. It is also noted that seafarers ashore miss the sensation of being “on the move” and the changing pattern of their voyages. This is the “flipside” of their valued ability to think on their feet, improvise and solve problems as they occur.

If the seafarer, however, has been ashore for more than five years, it seems that their desire to return to sea is motivated by some unfortunate occurrence more than by a genuine wish. The occurrences that are most frequently mentioned are divorce and unemployment. At the same time, changes are happening at sea at a rate that makes ship operators doubtful that a seafarer who has been ashore for more than 5-7 years can adapt successfully again to the modern way of life afloat. The result is an almost unanimous opinion of the interviewees that indicates that despite the lack of officers and a certain interest on the side of former officers to return, this will hardly be possible for officers who have been away for more than five years or who are above the age of 50.

Finally seafarers who, perhaps through a rotation system, have tried working on shore, tend to appreciate the qualities of seafaring. What is appreciated is primarily the influence over one's own work and the long vacations. As one interviewee remarked: "Those who have had a look behind the curtain are astonished to learn how attractive seafaring is in comparison".

2.2.8 Barriers to Mobility

All individuals face their own challenges when contemplating a change of employment and seafarers are not exempt from these problems. However, there are a number of general issues for seafarers coming ashore or moving between sectors that may be summarised as follows:

- Learned helplessness. Life at sea may make some seafarers unhappy but they lack the personal drive and commitment to do anything about it. They possess "learned helplessness" and will often become embittered. The tragedy of this is that such behaviour, especially among senior officers, can have a dramatic effect on young recruits on their first voyages.
- Progression from rating to officer. Some countries have established processes for progression and encourage ratings to become officers. In other countries, the difference in rating and officer status is quite marked and there are few who make the transition.
- Lack of appropriate qualifications. In some countries, the lack of qualifications that may be equated easily with shore qualifications may be an issue. The lack of general management qualification for officers seeking shore management positions has already been mentioned.
- Lack of opportunity. One of the problems of being at sea is that individuals are away from the recruitment and interview circuit. It is more difficult for them to respond to advertisements by deadlines, organise interview dates. They have to rely on family and friends more to bring opportunities to their attention.

2.3 Differences

2.3.1 Introduction

Whereas there are a number of factors that are common to all Member States and create the same issues or experiences for individuals, there are also a number of common factors that are markedly different in each Member State. These factors are a function of the cultures of the individual country. The following cultural factors, which have an influence on seafaring careers and maritime clusters, have been identified during the analysis for this study:

- the geography and location of the country;
- the strength of the family culture;
- the maritime education and training system.

2.3.1.1 Geography and location.

Clearly the natural geography of a country and its location with respect to maritime trade routes are significant factors in determining the maritime tradition of a country, and by implication, the importance of maritime industries to the national economy.

The Member States selected for this study vary from an island nation like the UK to a large country like Germany with a comparatively short coast in relation to the size of the country. Location on the European map is a related factor, for example, the Netherlands calls itself the “Gateway to Europe” on the basis of its position in relation to mainland Europe. Because of the nature of this study, all the countries have a strong maritime tradition.

Such factors are likely to influence the importance that national Governments place on the maritime industries. This in turn may determine the macro-economic climate in which individuals will make career decisions. It may also be an indication of the strength of the maritime cluster. In some countries like the Netherlands, Germany and Denmark the maritime cluster is formalised and well organised, less so in countries like the UK, and maritime clusters are not so explicit in Spain, Italy or Greece.

It is also noticeable that within Member States, there are strong regional sources for seafarers. Not surprisingly, these are the coastal regions of countries with large landmasses, like Germany and Spain. This is not so noticeable in a country like the UK, where nobody lives more than 70 miles from the sea.

2.3.1.2 Strength of the family culture

The interviews with key personnel in each country revealed that the influence of family and the use of extended family connections were quite different in the Member States. Greece probably represents the best example of where family connections are used to help gain employment. Such use of family connections, although present, is much less evident in a country like the UK.

Such differences may make barriers to mobility less of a problem in countries where family connections can ease the way ashore or the movement between sectors.

2.3.1.3 The Maritime Education and Training System (MET).

Previous studies, such as the Thematic Network on Maritime Education (METNET)¹¹, co-ordinated by the World Maritime University, have highlighted the differences in the MET systems of European maritime nations. Although EU countries conform to the STCW95 requirements, the way in which this is achieved is markedly different in the Member States. Broadly speaking, there is a difference between the “vocational” approach, represented by the Netherlands, and the more “academic” approach favoured by countries such as Poland. In the former, more emphasis is placed on the practical work-based aspects of qualifications, in the belief that seafaring is not really an academic subject and that very successful officers may be produced without high levels of university education. The latter view provides individuals with a university style education, in a belief that in order to be a successful officer it is required to have an academic theoretical underpinning and powers of critical analysis. Countries like the UK are in a transitional phase, where a vocational system is now being tempered with the introduction of degree programmes.

The debate about the value of a university education for seafaring officers has continued in several countries for decades. In the UK, as an example, the ship owning community has traditionally been a little suspicious of academically qualified officers for fear of losing them early to better shore-based jobs. However, now that most parents wish their children to receive a university education, this has led to a review of this stance and degree options allied to vocational training are now being introduced. The main purpose of the UK’s degree programmes is to appeal to a wider range of potential entrants with higher-level qualifications. It also brings the UK shipping industry more into line with developments in the UK higher education system.

The dangers of a degree system that offers graduates a minimum of sea time is exemplified by Spain where there is some concern that graduates can enter marine related positions of responsibility with little practical experience. However, it does have the benefit of making qualifications easier to equate to shore qualifications, thus making the transition ashore easier for individuals.

2.3.2 The Dimensions of Culture

The best-known model of national culture stems from the work of the Dutch social scientist, Geert Hofstede¹², who did some seminal work in the 1960’s on national culture as a result of a survey of IBM workers in different countries. Over a number of years and in a series of books and papers, he has developed a model of culture based on four dimensions: individualism versus collectivism; power distance; uncertainty

¹¹ World Maritime University (2003) Final Technical Report: Thematic Network On Maritime Education, Training And Mobility Of Seafarers (METNET) Contract N°: 1999 – TN 10983

¹² Hofstede, G. (1991) Cultures and organisations: Software of the Mind. London: McGraw-Hill.

avoidance and masculinity versus femininity. Different countries can be plotted along each of these dimensions.

A comparison between these dimensions and the dimensions of maritime culture which have been identified above reveals some interesting relationships:

- 1 The relationship between the presence and strength of clustering between maritime sectors and Hofstede's power distance dimension;
- 2 The relationship between the presence and strength of family connections and Hofstede's individual versus collective dimension;
- 3 The relationship between individual mobility and Hofstede's uncertainty avoidance dimension.

2.3.2.1 Maritime Clusters and Power Distance

Hofstede's Power Distance dimension is all about hierarchies. High power distance cultures are ones in which there are many ranks and status is important; seniors are obeyed and respected and there is a large "distance" between the common man and the nation's rulers. Low power distance cultures are exemplified by flatter hierarchies; there is more equality between individuals and less distance between "the man in the street" and the power of the nation's leaders.

In a maritime context, this becomes apparent in the differences between those countries where parts of the maritime sector are quite independent and separate from each other, with their own hierarchies and systems and those where the boundaries are far less rigid. A good example of a high power distance culture in this respect is Greece where the hierarchical systems for the Coastguard, Hellenic Navy and administration appointments are quite separate from the shipping industry itself. Italy and Spain share this trait to a lesser extent. In comparison, in the Scandinavian countries, the UK and Netherlands, the boundaries are less rigid and many of these shore-based appointments will come from ex-seafarers. This may in part explain why clustering of shore-based maritime activity is more or less formalised in the various Member States.

2.3.2.2 Family Connection and Individualism

Hofstede's dimension of individualism versus collectivism refers to the extent to which an individual in society considers himself an integral part of a larger social group or feels independent and autonomous. Oriental cultures are good examples of highly collectivist cultures, in which individuals will relinquish personal rights for the greater good and harmony of the society at large. Classic individualistic cultures are the USA and UK in which the individual's rights are paramount. In these cultures, the "self-made man" is admired whereas in collectivist cultures, such behaviour might be considered arrogant.

In the context of the maritime industry, analysis of the interviews suggests that in certain countries, family connections, especially extended family, are much more important than others. This means that in the more collectivist Member States, it is normal for individuals to use their families to help them gain employment ashore or to

move from one position to another. In the more individualistic countries, this chain of contacts is much weaker.

2.3.2.3 Individual Mobility and Uncertainty Avoidance

The uncertainty avoidance dimension is the extent to which an individual feels comfortable with, or will tolerate uncertainty. High uncertainty avoidance cultures are characterised by structure and procedures, and individuals will be more likely to wish to follow rules and protocols. In low uncertainty cultures, individuals will be more prone to rule breaking, but will also be more flexible with an ability to think creatively in situations of uncertainty.

In the maritime context, it may be that this cultural dimension is responsible for the extent to which individuals are prepared to leave their social environment and work for foreign owners or live in foreign countries. For example, it is noted in the individual country reports that Italian seafarers will not usually seek to work overseas. Although Greece certainly exports its maritime expertise, it is often by setting up a community overseas, such as the Greek ship owning community in the city of London. On the other hand, individuals from countries like the UK and the Netherlands are more likely to be prepared to “emigrate” to find job opportunities in other places. In this context, there would appear to be a link between the two dimensions of mobility and family connections. Clearly in countries that are both collectivist and high on uncertainty avoidance, this feature will be reinforced.

The figures on the following pages illustrate the position of each Member State for the relationships described. Unfortunately, because information on Poland and Latvia was not available, these two countries have had to be omitted. The diagrams show that there are clear cultural differences between the group of southern countries and the northern States. This “group” difference is strongest in the relationship between power distance and maritime clusters, for example, but less so for the other relationships.

Figure 1. Maritime Clusters and Power Distance.

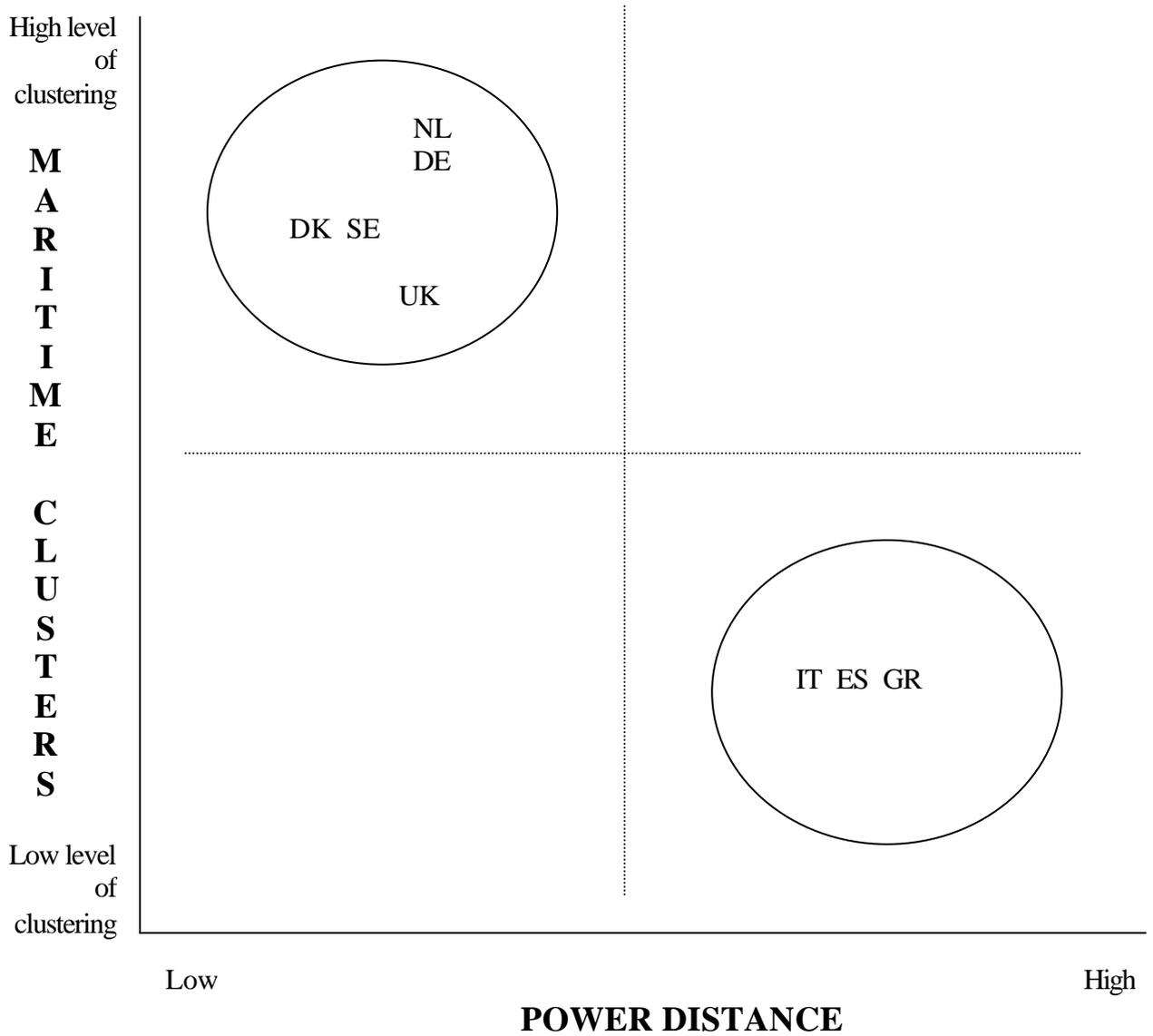


Figure 2. Family Connection and Individualism.

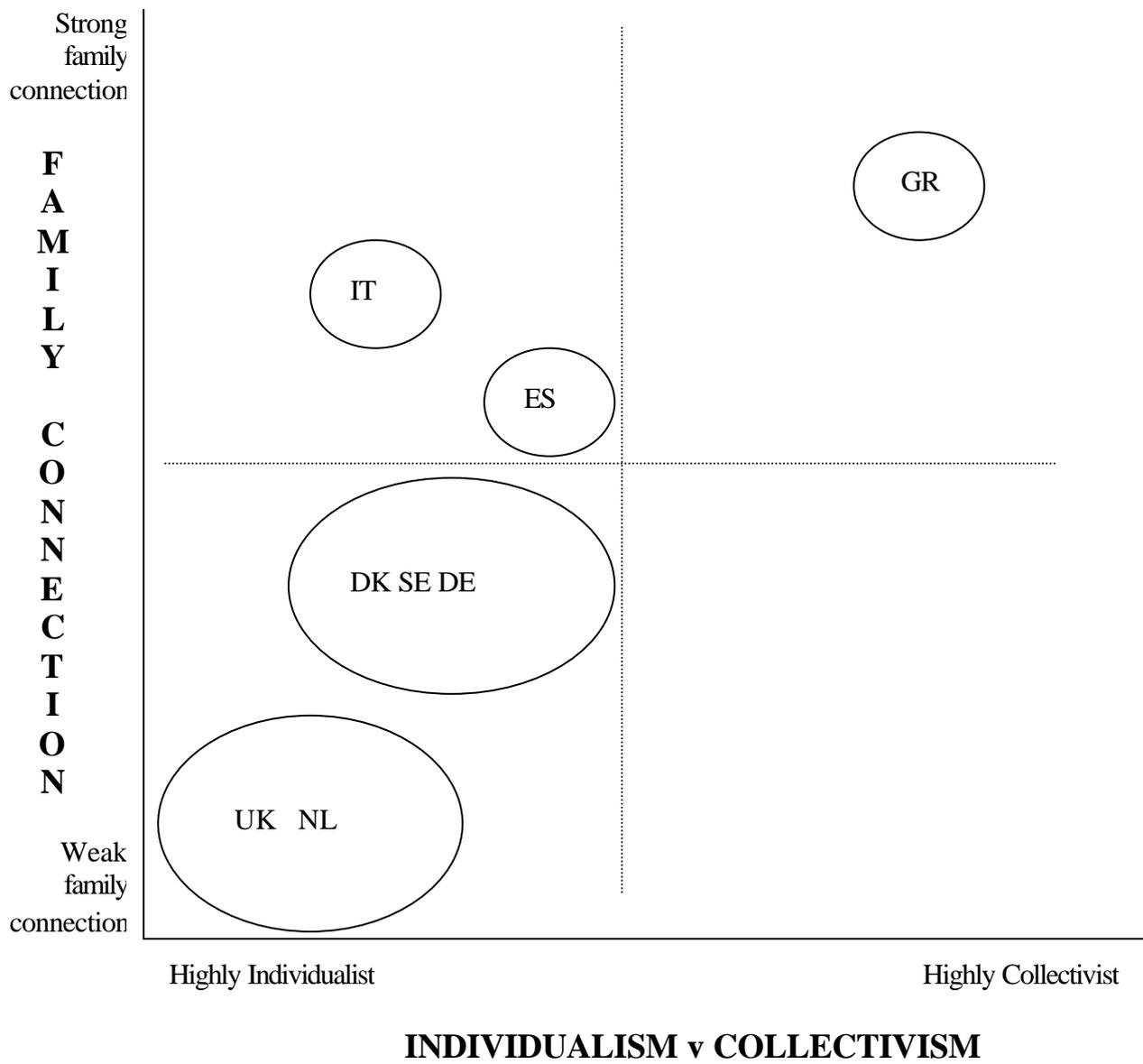
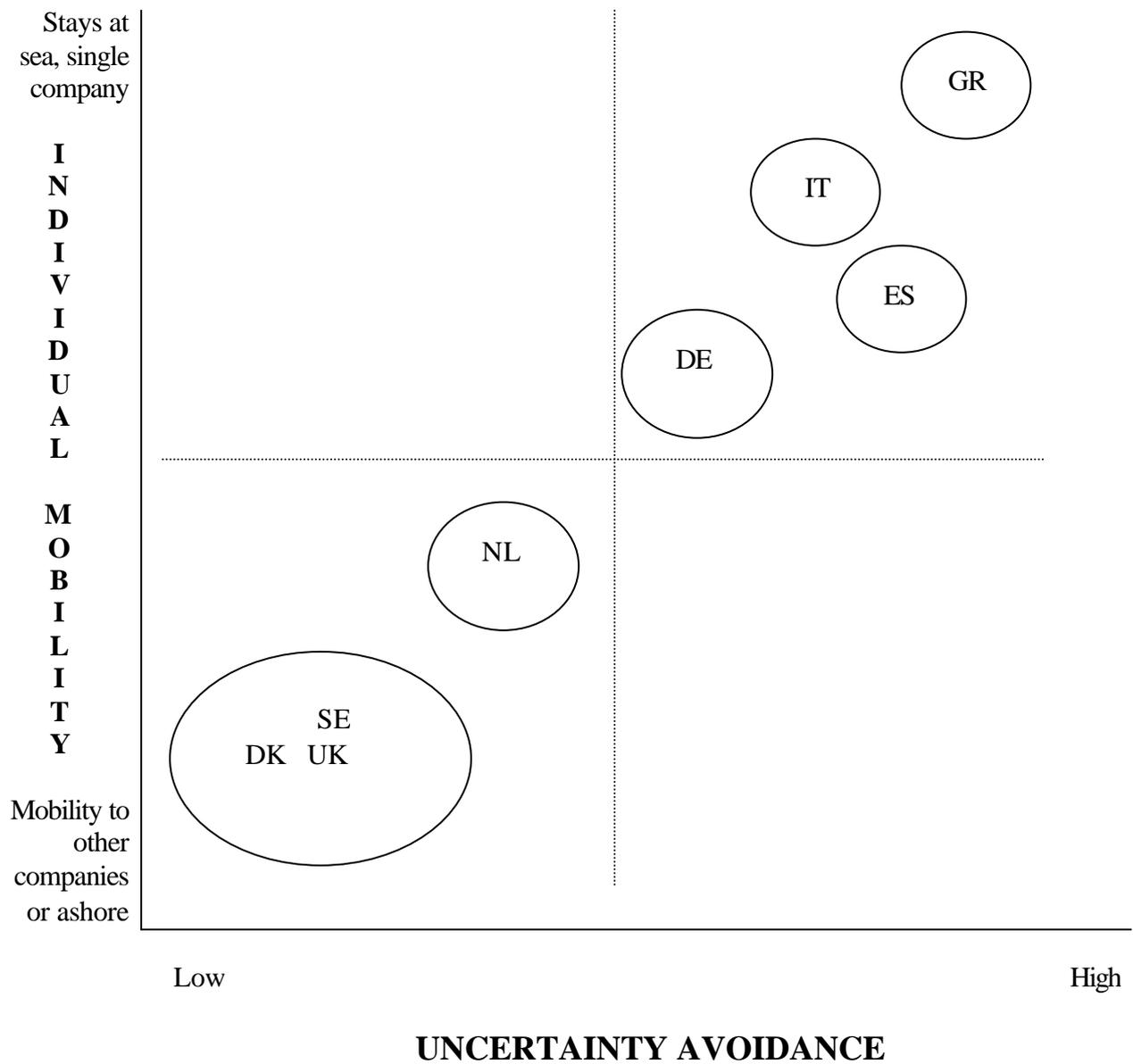
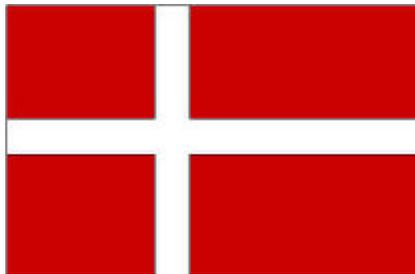


Figure 3. Individual Mobility and Uncertainty Avoidance.



Denmark



3.1 COUNTRY REPORT FOR DENMARK

3.1.1 Socio-economic and Cultural Background

Traditionally, a significant portion of Danish seafarers was recruited from specific geographic and social backgrounds. Officers came from the traditional seafaring communities, with ship owning and seafaring traditions ranging back centuries. This kind of background was regarded as a benefit in selection of suitable candidates, and it was in these communities formal maritime education was first established, and here the navigational colleges remain to this day.

This was also relevant in relation to the engine officers, who were often youngsters from the same background. But as entry requirements to the engineers colleges was that of the formally skilled worker, it became attractive to offer this education throughout the country, which resulted in three navigational colleges and eight engineers colleges.

As modern shipping developed after WWII, ratings often came from traditional working class backgrounds in the larger cities. As one union official with this background expressed it, “at that time, every red blooded boy in the neighbourhood went to sea”. This is significant today by the fact, that perhaps half the members of the unskilled workers union over a certain age have spent time at sea.

However both these trends have changed during the last 10 – 20 years. The traditional maritime community have diminished considerably as a steady source of recruitment, and the notion of a traditional working class is irrelevant in the modern welfare society. Denmark is a traditional maritime nation with a well-established maritime cluster ranging from shipbuilding and equipment manufacture to education, shipping, offshore and management. The cluster is labelled “Det Blå Danmark”, “Blue Denmark”.

Approximately 500 ships are registered under Danish flag, with a total deadweight tonnage of 9 million tonnes. Shipping has grown to become Denmark's second most important export earner, with an aggregate turnover of more than 120 billion DKK (16.1 billion euro) in 2004. The revenue derives mainly from international cross-trade operations between foreign ports; only 5% of the tonnage is employed in national and neighbouring countries' waters, 75% of the activities do not even include calls at European ports. The main areas of operation consist of full door-to-door container services, Ro/Ro and passenger operations, specialized product carrier services, salvage and offshore supply services, as well as traditional bulk, tanker trade, general cargo and reefer activities.

In addition to the tonnage under national flag, Danish shipowners operate an equivalent tonnage chartered from foreign flag. It is estimated that together with their overseas affiliates, Danish owners operate a fleet of 50 million tonnes deadweight. Danish shipowners are also engaged in other maritime-related activities, such as shipbuilding, offshore drilling and production, storage, trucking, rail transport, inland distribution logistics and the buying and selling of vessels.

Danish owners employ more than 20,000 nationals and some 3,000 foreigners in the shipping industry alone. The inclusion of associated and maritime-related activities brings the estimated figure up to a total of some 80,000 employees. Danish owners are, like many of their competitors, experiencing problems recruiting a sufficiently large number of seafarers. As a shipping nation, Denmark has a long-standing maritime tradition, and the Danish government generally supports the maintenance of a positive framework for the industry.

In 2003 the Danish Maritime Authority commissioned a study to clarify the structural dynamics of the Danish maritime cluster ¹³, the main conclusions of which are briefly reflected below.

The Danish maritime cluster is broadly defined as the industries that exploit the sea for commercial purposes, and the industries that substantially supply and purchase the goods and services of the maritime industries. The core maritime industries making up the cluster include the maritime transport, maritime services, shipbuilding, maritime equipment manufacturing, and offshore oil and gas extraction industries. To varying degrees, the cluster links trade with most manufacturing and service industries, and thus has a significant impact on the overall economy.

Accordingly, the cluster directly employed more than 81,000 people. Its total output value topped 120 billion DKK in 1998, directly contributing about 45 billion DKK in value added. In terms of value added the maritime services industry was the greatest contributor within the cluster and, together with maritime transport, contributed more than half the value added in 1998. The cluster is also seen to be highly international on both the input and the output side.

The study revealed significant trade of intermediate goods and services between sectors within the cluster, especially in the maritime transport industry, the maritime services industry, shipbuilding and the maritime equipment industry. The offshore oil and gas extraction industry was seen to lie mainly downstream to the maritime transport industry. However, patterns of intermediate trade differed widely for each of the core maritime industries. It is noteworthy to mention in this respect, that the study revealed that knowledge-intensive business services are most important for the maritime transport, maritime services and offshore oil and gas extraction industries, and less so in shipbuilding and in the production and development of maritime equipment.

13 Navigating Blue Denmark- The Structural Dynamics and Evolution of The Danish Maritime Cluster, November 2003, by Dr. Henrik Sornn-Friese, ISBN: 87-7454-243-5. The publication can be downloaded at: www.sofartsstyrelsen.dk/graphics/Synkron-Library/Sofartsstyrelsen/Publikationer/2003/Vaekststrategi/Navigating_Blue_Denmark.doc

3.1.2 Maritime Education and Training System

Ratings start their maritime education after a minimum of 9 years primary and secondary school, by doing a 6-month basic course followed by 6 months sea time and 6 months finishing school. Qualification to become a “Ships Assistant” is reached after 12 more months at sea. Compared to the “Ships Assistant”, the education for a “Ships Mechanic” is designed to offer better skills, and is equivalent to similar formal educations of skilled workers in Denmark. “Ships Mechanics” enter after a minimum of 9 years primary and secondary school, and follow a training regime that comprises 20 weeks basic maritime training; 20 weeks in a technical college; 6 months sea time; 10 weeks in a technical college; 17 months sea time; 10 weeks in a maritime college and another 10 weeks in a technical college.

The Officers’ education system has just been revised. Entry level is 12 years of schooling, or from various vocational backgrounds combined with additional requirements in math, science and language. Officers’ education is divided into a junior and a senior section. The junior section offers junior officers a dual-purpose licence after 4 years and 3 months. The senior section adds respectively 6 months for deck officers, 12 months for engine officers and 18 months for full dual capabilities. Like the ratings’ education, it is a “sandwich” based system, mixing college and sea time.

This very recent revision has cut the length of the education from 7½-8 years including also a requirement for junior officers’ sea time of 1½ years, before commencing the senior section. Furthermore, the officers’ education system has been classified at BA level. A Master’s level education in transport and maritime management, focusing on innovation, business development, supply chain management, international economy and human resources management, is to be introduced early in 2006.

Progression from Rating to Officer used to be the only way to become an officer, but as officer apprentice programmes were introduced in the 1960’s, the importance of this source diminished. Even so, 20-30 years ago, it is estimated that perhaps 20% of the traditional ratings became officers. Gradually the numbers of ratings progressing to officer has declined, as the theoretical level of the officers’ education rose, and the number of ratings was reduced along with the rest of the crew, as ship operation and maintenance was rationalised during the same period. Since the introduction of the dual officers education, which requires 12 rather than 9 years previous schooling, the number of ratings progressing to officers is non-existent.

3.1.3 Employment Data

In 2002 the Danish Maritime Authority commissioned a statistical based education and career path analysis regarding Danish seafarers, covering the previous 20-30 years¹⁴. The analysis was carried out to show that people with a maritime education were active not only at sea but also on shore, and that a part of the shore employment was within the

¹⁴ Forløbsanalyse for danske søfarende – rekruttering, uddannelse og beskæftigelse, Søfartsstyrelsen 2002.

Path Analysis regarding Danish Seafarers – Recruitment, education and employment, Danish Maritime Authority 2002.

maritime sector, thus contributing capabilities not only at sea but also within the shore based Danish maritime sector. The main findings of this study were as follows:

From 1987 to 2000, 1,416 “Ships Assistants” became qualified, 72.7% of these having, at some stage, been employed at sea. In comparison to the declining retention trend of officers during the 1980’s, the retention rate of these ratings in the maritime sector is more uniform. The average retention rate is 40%, and an estimated 17% of ratings remain at sea for their entire working life. 14.5% of “Ships Assistants” in the period 1987 to 2000, moved to other sectors by obtaining an additional qualification. There was a wide spread of vocations, but the dominant choice, by 10% of the ratings, was in favour of an officers education. 6.3% followed a Master Mariners education, thus accounting for 6% of the total number of Master Mariners educated during the period. By 2000, an estimated total of 772 rating were employed in the wider maritime sector.

Many ratings will leave the seafaring profession, as part of the normal progression of life and because of poor prospects regarding future employment. In fact, many jobs in smaller ships are OS¹⁵ rather than AB jobs, and often students will prefer to stay at OS level, by not finishing their education as “Ships Assistant”, thus retaining their employment, but acting as a blockage to newcomers.

From 1981 to 2000, 4,820 Engineer Officers became qualified, 53.1% of these have at some stage been employed at sea, 25% were still at sea after 10 years and an average of 18% have stayed at sea for their entire working life. The total number of Engineer Officers employed at sea has varied between 2,250 in 1992 and 1,600 in 2000. After implementation of the second Danish register in 1988, employment grew from 1,650 to a peak of 2,250 in 2000, after which the number has declined. This is the result of a declining number of vessels in the Danish registers, replacement by foreign Engineer Officers and rationalisation efforts with new technology and smaller crews.

14% of engineers of a registered total of 13,289 have obtained an additional qualification. The main vocations are: civil engineering: 14.7%; navy officers: 6.8%; teachers: 6.2%; law and economy 5.7%; qualified plumber: 4.9%; certified electrician 4%¹⁶.

83.5% of the registered engineers have been employed inside nine main sectors. The top four are the manufacturing industry with 27% in 2000; followed by shipping (at sea and with the shipping companies ashore) at 17.8%; then the utility industries with 12%, followed by public administration and trade. In total, 43.2% of the registered engineers are employed in the wider maritime cluster.

From 1980 to 2000, 1,495 Deck Officers became qualified, 89.5% of these have at some stage been employed at sea, 55% were still at sea after 10 years and an average of 41.5% have stayed at sea for their entire working life. The total number of officers employed at sea has varied between 2,700 in 1992 and 2,200 in 2000. After implementation of the second Danish register in 1988, employment grew from 2,300 to a peak of 2,700 in 1991, after which the number has declined. This is the result of a declining number of vessels in the Danish registers, replacement by foreign officers and rationalisation efforts with new technology and smaller crews.

¹⁵ OS, Ordinary seaman. AB, Ablebodied seaman.

¹⁶ Forløbsanalyse for danske søfarende – rekruttering, uddannelse og beskæftigelse, Søfartsstyrelsen 2002.

21% of Deck Officers of a registered total of 6,554 have obtained an additional qualification. The main vocations are: civil engineering: 13.2%; teachers: 9.3%; law and economy 8.1%; navy officers: 7.2%; police officer: 4.8%¹⁷.

87.6% have been employed inside eight main sectors: Shipping (at sea and with the shipping companies at shore) is by far the largest with 52.9%; followed by cargo operations and ports at 10% and public administration with 9.9%. In total, 83.7% of the registered Deck Officers are employed in the wider maritime cluster.

3.1.4 Specific Characteristics of the Member State

- Denmark is a traditional maritime nation with a well-established maritime cluster ranging from shipbuilding and equipment manufacture to education, shipping, offshore and management. The cluster is labelled “Det Blå Danmark”, “Blue Denmark”.
- Seafarers contribute significantly to shore-based maritime sectors. Officers often take additional qualifications to come ashore and may enter non-maritime sectors.
- The majority of Deck Officers will stay within the maritime cluster when they go ashore. Besides ferries and other domestic officers’ jobs at sea like fishery inspection and pilotage, the traditional jobs are within ports and cargo handling, logistics, insurance, surveying, agencies, maritime equipment and product sales representatives, maritime education and administration, in the offshore industry and with the shipping companies in a range of functions. One large liner and terminal operator employs hundreds of deck officers around the world.
- In Denmark there is no branch of engineering dedicated to plant operation and maintenance, leaving this area to marine engineers. The same capabilities are the basis for their traditional areas of employment within public utility industries, and many jobs as technical supervisor for large buildings or compounds with a range of technical infrastructure like hospitals, hotels and conference centres. In the maritime sector Engineer Officers are employed by the shipping companies, in the offshore sector, with insurance companies, classification societies, by the shipyards and by the equipment and engine manufactures. Public health and safety authorities, employ approximately 150 engineers, and looking for more.

¹⁷ Forløbsanalyse for danske søfarende – rekruttering, uddannelse og beskæftigelse, Søfartsstyrelsen 2002.

3.1.5 Significant Shore-based Sectoral Descriptors

Utility Industries, Heat and Power

This is a traditional area of shore employment for Engineer Officers. The jobs in this sector often have some similarities with the engineers' shipboard jobs, by involving watch going duties and operations monitoring, but there are also other options.

The preferred candidate has the full engineer's education and a few years at sea, but may also come from other areas, like the windmill industry. Some understanding of economic and business, as well as English and German language capabilities are valued. Additional training will mainly be specific to the job. The general impression is that the engineers comprise a well-qualified and pleasant group.

Today the sector offers a more flat organisation with limited scope of vertical progression. The normal starting position is as operations engineer, above which is the operations manager, the general manager and the CEO. The engineer may become operations manager and in some instances general manager. Other opportunities for development and progression are to become workshop manager or project manager in a special support department.

An estimated 500 marine engineers are employed in this sector. Retention is high but there is a certain predominance of people in their fifties who will retire during the coming decade resulting in a slightly growing demand. At present there is no lack of qualified candidates.

Ports

The ports employ mariners, but predominantly Deck Officers. Level of qualification is of less relevance compared with actual maritime experience, which is seen as beneficial to understanding customer needs. People with several years of experience and perhaps some business, HR and economy training, are preferred.

Career progression is possible from a starting position as port assistant to the Port Captain and/or General Manager. Often progression will be facilitated by additional education and abilities to function in the municipal political environment, which is often the highest level of port management.

The sector currently employs about 400 former Deck Officers, many of whom are in their fifties. However, rationalisation and an ongoing reform of municipal structure are expected to offset some of the recruitment demand in the coming years. There is no lack of qualified applicants at present.

Equipment Manufacturing and Sales

This sector covers both marine equipment, as well as non-marine equipment. Both Deck and Engineer Officers are employed in functions related to sales and customer relations, for example, the development of manuals, operational support and technical service. This is different to product development and design, which is dominated by Chartered Engineers. The most appropriate candidate is someone who was a trained skilled worker before becoming an experienced Engineer Officer and finally a Chartered Engineer.

In addition to the vocational capabilities, candidates are required to possess skills relevant to customer relations like: assertiveness and decision-making. Candidates have to possess good social abilities and cultural awareness. It is anticipated that a growing shortage of suitable Engineer Officers will be available for employment within this sector as a result of the recent fall in recruitment onto the Engineer Officer education programmes.

The Offshore Industry

The offshore industry mainly employs Deck Officers as barge engineers, dealing with navigational and safety issues, and Engineer Officers as rig engineers, responsible for the entire technical operation and maintenance of the rig. The barge engineer will require valid maritime certificates. Fewer seafarers seek the third core vocation of the industry, as drillers.

Additional training will to some extent be needed in order for the barge engineers to retain valid STCW certificates and the same is generally relevant in relation to a range of training required by the authorities.

Career progression is limited on the barge, as the top position as Offshore Installation Manager (OIM), will require direct drilling experience. However some, especially barge engineers, have become drillers and later OIM. Progression towards shore jobs in the technical, HR and other support and management functions is more common. Progression will often be associated with additional training in HR and general management.

Naval Defence

In addition to its own internally educated officers, the Naval Defence has traditionally been able to attract merchant naval Engineer and Deck Officers as part of the general enlisting procedure of the armed forces. They would typically be drafted for 18 months of service and education to lieutenant's level. However, this source of recruitment, which to some extent would encourage retention, is to be discontinued as from January 2005, resulting in a need to revise recruitment strategies. The recruitment need for merchant naval officers is even greater now as the regular recruitment into the Naval Defence is declining.

Traditionally some seafarers, once enrolled, appreciated the variety of job and education opportunities offered by the Naval Defence, and sought permanent employment. Now, the Naval Defence needs to be able to attract and retain as many as 20 to 30 officers annually.

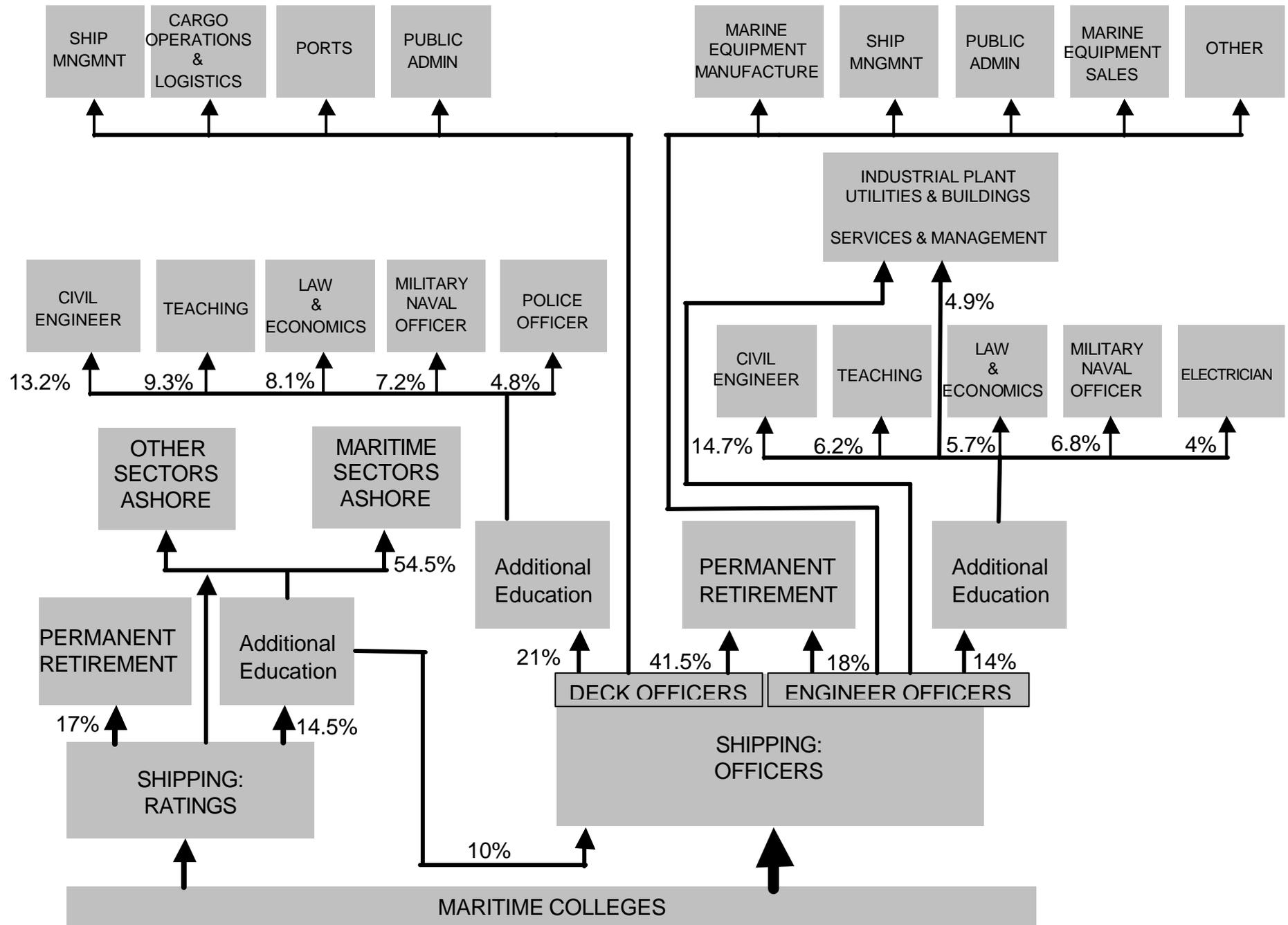
Whereas seafarers used to follow the normal education schedule for internally educated officers, one of the new approaches may well be to offer a more tailored education, offering merit for the candidate's previous education, cutting the time needed from 18 months to 10 months. Promotion and progression will follow a pattern of continuous education and training, structured in two levels at Bachelor and Masters' level. The education and general experience acquired in the armed forces are generally highly regarded, and some officers will move on to managerial careers in civilian society.

Serious problems of recruitment to Naval Defence are anticipated in the future.

3.1.6 Table of Sectoral Representatives Interviewed

Sector:	Organisation:	Representative:
Maritime Education	Danish Maritime Administration	Hemming Hindborg
The Shipping Industry	Danish Shipowners Association	Michael Wengel-Nielsen
The Shipping Industry	Søfartens Ledere, Officers Union	Per Gravgaard,
The Shipping Industry	Maskinmestrenes Forening, Officers Union	Henrik Amdi Madsen
The Shipping Industry	Metal Søfart, Ratings Union	Niels Jørgen Hilstrøm
The Shipping Industry	SID, Ratings Union	Henrik Berlau
Shipbuilders and equipment manufacturers	Danske Maritime	Hans J. Henriksen,
Engine manufacturer	MAN B&W	Per Parkhøj
Business Science	CBS	Dr. Henrik Sornn-Friese,
Naval defence	SOK	Jan Stripp,
Heat and electricity supply	Elsam Kraft A/S	Kurt Petersen,
The Shipping Industry	DFDS	Bertil Hohlmann,
The Shipping Industry	A. P. Moller-Maersk	H. Chr. Orloff Petersen.
Ports	Nykøbing, Falster Havn	Viggo Staberg,
National Health and Safety Authority	Arbejdstilsynet	Kirsten Monrad Jensen Haveise Mortensen
Offshore industri	Maersk Contractors	Peter Brask
Recruitment Consultant	PMC	Bent Bilde Jensen

3.2 CAREER PATH MAP FOR DENMARK



Germany



4.1 COUNTRY REPORT FOR GERMANY

4.1.1 Socio-economic and Cultural Background

The employment and career opportunities in Germany for people with a maritime education are influenced by the geographic and economic characteristics of the country.

The significant geographic factor is that Germany has a relatively short coast to the North and Baltic Seas, compared to the size of the country. The result is that the maritime industry is situated in the north, and that the appreciation of seafarer capabilities is significantly higher here than in the south. An illustrative story regarding this situation refers to an engine officer who applied for a job at a factory in the south, and was turned down with the explanation, that the factory had no steam engines requiring oiling.

Existing statistics regarding recruited “Ships Mechanics” trainees indicate that more than two-thirds originate from the five coastal states and administrative units in the north. Adding the four adjacent northern states, 85-90 % of the trainees originate from nine of the 17 states. No statistics exist regarding officer students, but a somewhat similar pattern may be expected, even if students at this level may be anticipated to be more mobile.

The most significant economic and political factors derive from the unification of the former East and West Germany, after the fall of the Iron Curtain in 1989. This development has had two major consequences:

- During the late 80s and early 90s, the West German maritime industry was suffering from a significant shortage of skilled officers. This situation was alleviated by the supply of a very substantial contribution of skilled officers from the former East Germany. This situation resulted in the absence of a long-term plan in relation to recruitment and training; the result of which is a factor today.
- The maritime sector in the unified Germany is centred in the west, around and to the west of Hamburg. However, the area around the town of Leer in the far west represents the second largest shipping cluster. As many of the officers reside in the east, and are not particularly mobile, the recruitment problems of the shore-based side of the maritime sector is increased.

As in other traditional seafaring countries, the proximity to the coast and the focus of the maritime cluster, as well as family tradition has and still play a role in relation to recruitment of seafarers from the north. However, interviewees note a significant interest in recruitment from the continental regions of the country.

A very important element in relation to the German maritime cluster and maritime employment is the formation of the 'Maritimes Buendnis fuer Ausbildung und Beschaeftigung in der Seeschiffahrt' in 2000. This is a national maritime forum, joining the forces of industry, labour unions, federal government and coastal states, in a common effort to strengthen the sector. The alliance was based on the realisation of common interests: The government wanted to maintain the employment and buoyant economic activity, in an otherwise weakening economy with growing unemployment; the industry realised the growing gap between supply and demand for skilled seafarers, and wanted to generate a favourable political environment; and the labour unions wanted to retain and expand national employment.

An agreement committing all four parties was reached. The Government created improved framework conditions through better use of the EU State Aid Guidelines¹⁸. This included state subsidies for maritime education and training. The unions allowed for more flexibility in relation to the otherwise strict German requirements regarding the number of national or EU residents employed on every vessel, in return for improved efforts in national recruitment and training on behalf of the shipping companies. In return for the improved conditions and flexibility, the industry has promised to increase the numbers of German flagged vessels by at least 100, from about 300 to 400 vessels engaged in international trade, before the end of 2005. At the same time, all parties have managed to improve the general image and presentation of the industry in the media, which is now reporting increased demand for seafarers and favourable salary and employment conditions.

Supply of manpower has indeed become a bottleneck in relation to the development of the sector in Germany, and the shortage of supply relative to demand is expected to increase during the foreseeable future. The Central Employment Office reports a 60 % growth in the number of jobs offered, and a decline in the number of applicants. Paradoxically more than 1,000 German officers serving under foreign flag are reluctant to return, for tax reasons. Germany still has not fully utilised the State Aid Guidelines to completely alleviate the income tax for seafarers.

The government has introduced the tonnage tax¹⁹, and consequently new buildings and registrations under the German flag are increasing, and recruitment has increased tremendously during the last two to three years, resulting in some schools working at 150 % of capacity, and in some 540 of a recruitment goal of 600 being reached in 2004, representing a growth of 35 % compared to 2003. However, this together with other factors, and the neglect of recruitment for many years, has resulted in a significant demand, especially for skilled officers, which coincides with a very limited supply.

¹⁸ The state aide guidelines are a Commission interpretation of the general EU state aide regulation in relating to the shipping industry. In short the guidelines allow certain tax alleviations and favourable framework conditions, but not direct subsidies.

¹⁹ Tonnage tax refers to a system of taxation of shipowners which substitutes a normal taxation of profit with a fixed taxation based on tonnage, allowing shipowners to plan investments in relation to marked requirements rather than tax management considerations. The system is in line with EU State Aide Guidelines.

In order to reverse these trends, efforts are directed towards the general image of the industry and seafarers, and a general increase in knowledge and appreciation from society. To address this issue owners are rethinking the entire social framework surrounding the vocation. One company does not provide video access in the individual cabins, and are designing living, social and working areas to facilitate social coherence by e.g. common office areas and glass walls. Consideration is also given to limiting the number of different nationalities or cultures represented in a crew, and in order to provide continuity, by rehiring the same third country seafarers. Finally issues of job-design, like the growing burden of paperwork, is also receiving attention from the shipowners.

Focused in the northern federal states, Germany constitutes a traditional maritime nation, with a large and diverse maritime cluster, including shipping companies, the bulk of European shipbuilding, leading ship finance institutes, engine and equipment manufacturers and some of the largest ports in Europe. Combined turnover of the cluster is expected to grow by another 15 % to a total of more than 30 billion Euros in 2005.

The status of Germany as a major industrial and trading nation gives a unique maritime profile and labour market, not least in relation to the ports and waterways facilitating this trade. As an example, the Port of Hamburg alone generates some 140,000 jobs, and Germany needs close to 1,000 pilots.

German shipping controls major assets outside Germany in the form of vessels under foreign flag. This however, is slowly changing following a united effort by industry, government and the unions to revitalise the sector under the German flag. With 390 shipping companies, German shipping is divided into three categories totalling 2,575 vessels of 40.9 million GT, as at 1st January 2005:

1. German registered and flagged vessels: 508 vessels and 7.6 million GT.
2. German owned and foreign flagged vessels: 1,592 vessels and 23.5 million GT.
3. Foreign registered and flagged vessels: 475 vessels of 9.8 million GT.

The German registered vessels in categories one and two amount to 2,100 vessels of 31.1 million GT, which are 648 vessels more than in January 2000. As both categories are covered by the German tonnage tax system introduced in 2000, this significant growth is interpreted as evidence of the success of the system. However, the growth has primarily happened in the category of German owned, but foreign flagged vessels, which is causing some grievance in the sector.

About two thirds of German shipping, more than 1,000 vessels of the current German owned fleet, are container vessels with a total capacity of 2.3 million TEU²⁰. This is set to prevail with a significant 409 new buildings of some 1.5 million TEU on order. Of these 72 vessels are of the +6,000 TEU post panamax²¹ size.

During 2004, 160 new buildings representing investments of 4.8 billion Euros were brought into service by German shipowners. By January 2005, some 570 vessels of 17.6 million GT and a value of 19 billion Euros were on order, compared to 370 vessels the previous year.

In the year 2004, the receipts of the seagoing and coastal shipping in Germany came to €12 billion compared with €10 billion in 2003.

The 2004 production of German shipbuilding in terms of ocean going vessels amounted to 61 vessels at 1.0 million GT and a value of 2.78 billion Euros. At the end of 2004, orders of 147 vessels worth some 7 billion Euros were on the books. This figure includes repair and conversions, vessels for inland waterways, yachts etc. The 2004 turnover of all activities in 120 German shipbuilding companies amounted to some 4.5 billion Euros, and an average of 23,300 persons were employed.

In the broader scope, some 400 companies with about 70,000 employees and a turnover of 8.3 billion Euros are active as suppliers of engines and equipment to the shipbuilding industry.

In addition to the shipping, shipbuilding and equipment supply sectors the German maritime cluster includes ports with about 23,000 direct employees, inland shipping employing some 8,000, the fishing industry with 8,000 employees, shipping banks, ship financing, classification societies, education and public administration. Overall, the German maritime cluster directly employs more than 200,000 people.

4.1.2 Maritime Education and Training System

Ratings in Germany are dual purpose “Ships Mechanics”, following a three-year Government supervised vocational training. The education is an apprenticeship divided into time on board a vessel of the contracted shipping company, and time at vocational school. Time at vocational school is combined into three units, each lasting about 3 months.

There are three vocational Seamen’s schools remaining in Germany located in Lübeck, Schleswig-Holstein; Elsfleth, Lower Saxony and Rostock, Mecklenburg-Western Pomerania. Basic safety and vocational training is taught and practised in these schools. After graduation, students have both full AB and Motorman licenses, watchkeeping licenses for deck and engine departments as well as basic safety, survival craft and rescue boat certificates.

²⁰ TEU, Twenty Foot Equivalent Unit sea-container.

²¹ Post panamax is the category of vessels characterised by a size, which makes them too large to pass through the Panama Canal.

The vocational training of “Ships Mechanics” is open to young people with no prior academic qualification. The statistical distribution of school degrees shows that 54 % of the apprentices have a middle degree, after 10 years of basic schooling, 20 % have the lowest 9 years school degree, and 26 % have Abitur or Fachhochschulreife, equivalent to A-levels in the British system.

Information on jobs in German shipping is always aimed at the officers’ level. And most of the apprentices for “Ships Mechanic” use this training as an entry to officers’ training, and are encouraged to do so. According to statistics from 2003, only a minority of around 13 % of the apprentices aim to continue as ratings, 43 % want to obtain a nautical license (deck), 29 % a technical license (engineer), and 8 % aim for dual purpose license, which requires Abitur or Fachhochschulreife as entry level.

The recruitment effort in Germany has been increased considerably in recent years. According to statistics from the seafarers’ union *ver.di* the amount of “Ships Mechanic” apprentices grew from 166 in 2003 to 234 in 2004.

The education of officers is provided in a somewhat complicated yet flexible system, designed to “open the door wide”, as one interviewee put it. Germany offers a chance for an officer’s license, regardless of the type of school degree at entry.

Unlimited deck and engineering licenses can be obtained either at the Fachschule or at Fachhochschule, which is a university of applied science.

The Fachschule education last two years, awarding the students with a Watch Officer’s License on successful completion. Students may enter after completion of vocational college education as either a “Ships Mechanic”, or a “Ship Operation Assistant” (Schiffsbetriebstechnischer Assistent).

The Fachhochschule allows only students with Abitur or Fachhochschulreife. It takes three years of college study in addition to sea time of respectively 12 or 18 months for Deck and Engineer Officers. This curriculum leads to the same certification as the Fachschule, but also to the academic degree of Diploma, which is highly valued in Germany, and plays an important role in future career prospects. It has been decided that the academic degrees from the Fachhochschule will be changed from “Diploma” to “Bachelor”, and that a Master’s level education be created at the Fachhochschule for Deck Officers. Engineer Officers can already obtain a higher degree, which is open to them for example in mechanical engineering.

The “Ship Operation Assistant” education is open for graduates with a middle degree, from 10 years of basic school. The training is similar to the general part of the “Ship Mechanic” education, but students are not apprentices with a shipping company, and sea time is obtained through internships with varying companies. The education takes two years at college and internships onboard, followed by sea time of either 12 months for deck, or 18 months for Engineer Officers. Students may then join the Fachschule for two years to obtain the Watch Officer’s certificate.

In addition to the basic paths for young school graduates, there are shortcuts to the Engineer Officer's license for certified workers from the mechanical or electrical engineering professions. After 12 months of sea time they may join the normal system at Fachschule or Fachhochschule.

Finally, the German system offers an avenue for a dual-purpose officer's education, which was originally required by a small handful of shipping companies, but at present only by one. This path is based on the "Ships Mechanic" and requires four years at Fachhochschule.

The lack of general management and business qualifications, and perhaps even more, the strong German emphasis on formal qualifications, which in relation to senior management means a requirement for academic Masters or PhD levels, are believed to be the explanation for the lack of ex seafarers in senior management positions ashore.

In 2004 a total of 543 people were recruited into maritime education and training system:

- 234 had apprenticeship contracts as "Ship Mechanic",
- 43 started as "Officer's Assistant",
- 28 as "Ship Operation Assistant",
- 137 joined the 4 year Deck Officers education at Fachhochschule,
- 5 joined the 4 year Engine Officers education at Fachhochschule,
- The remaining 96 used the shortcuts for skilled workers and Naval Defence officers.

Of the 543 individuals, 220 or 40 % entered with the highest basic school degree of Abitur or Fachhochschulreife, and only 5 % had the lowest 9 years basic school.

Situated in the coastal states of Germany, there are four Fachhochschule and four Fachschulen offering Nautical Studies and three Fachhochschule and three Fachschulen offering Marine Engineering. In 2004, 164 Deck Officers and 98 Engineer Officers graduated.

Those who stay at sea longer or throughout their working life, tend to be officers with a background as "Ships Mechanics" and from the 'Fachschule', as opposed to the Fachhochschule. But it is also noted that the valued Fachhochschule diploma, means better job opportunities ashore.

There is a concern regarding the current capacity of the educational system. Some schools are already operating at more than 100% load. Those are the Fachhochschulen for Nautical Studies. The Fachschulen and the Fachhochschulen for Marine Engineering could sustain more students. There are concerns regarding the availability of on board training positions. Many modern ships simply do not have the cabins available for cadets. Against this background, it seems paradoxical that a school in Hamburg was recently closed. Regarding onboard training positions, it is hoped that training ships²² might provide a solution.

4.1.3 Employment Data

An estimated 10,000 EU residents and 30,000 non residents are employed on board vessels owned and managed by German shipping companies, and a further 19,000 people are employed within the shore based management of the shipping and management companies.

According to data from the German social insurance system, 11,275 seafarers were employed on German vessels as of October 2004:

- 4,428 German Masters and German and EU officers.
- 701 officers from non-EU countries
- 3,414 German and EU ratings
- 2,732 ratings from non-EU countries.

An estimate of the employment in marine related shore based activities, primarily of former seagoing officers:

- 850 pilots.
- 100 VTS²³ officers.
- 300 with the Water Police.
- 500 with maritime fairways in the waterway administration, including lockmasters.
- 1,000 in the private surveying and monitoring industry with classification, insurance and inspection/vetting providers.
- 1,500 at operational, administrative and managerial functions in shipping and ship management companies.

²² A training ship in this context is a normal vessel fitted with cabins and other facilities to hold perhaps 6 – 12 cadets and perhaps a designated training officer.

²³ VTS, Vessel Traffic System, reporting, monitoring and to some extent managing maritime traffic by radar, radio and AIS, Automatic Identification System.

- 2,000 with ports.
- 1,000 within shipyards
- 1,000 with marine equipment suppliers

4.1.4 Specific Characteristics of the Member State

- The formation of the ‘Maritimes Buendnis fuer Ausbildung und Beschaeftigung in der Seeschiffahrt’ in 2000. This is a national maritime forum, joining the forces of industry, labour unions, federal government and coastal states, in a common effort to strengthen the sector.
- Supply of manpower has become a bottleneck in relation to the development of the maritime sector in Germany, and the shortage of supply of officers relative to demand is expected to increase during the foreseeable future
- In light of the strong demand for skilled officers from the shore side of the maritime industry, retention at sea is a significant issue with German shipowners, as well as down stream employers, who prefer officers with long maritime experience.
- One estimate indicates that the average span of seafaring activity for a Deck Officer is only five years. If Germany follows the normal pattern, Engineer Officers will probably leave even earlier. This is noted as a decline compared to estimated averages of a decade ago of 7 to 8 years.
- There is a significant demographic issue in that 63 % of seafaring officers are above the age of 45²⁴. This is evident not only among seafaring officers, but also with former officers now working as pilots, inspectors, surveyors, cargo planners, etc. The result is a large demand for qualified seafarers, illustrated by the requirement for 20 – 30 superintendents, which is put to the central maritime employment office each month. In addition, considerable efforts to recruit young Swedish officers are being made and there are as many as four jobs for superintendents or similar positions in German companies featured in the weekly maritime newspaper of neighbouring Denmark.
- Fachschul or Fachhochschul education are controlled by the different ‘Laender’ or States of the Federation. This makes it difficult to obtain comparable and consolidated information regarding student numbers or content of curricula. There is a concern regarding the current capacity of the maritime education and training system. Some schools are already operating at more than 100% load.

²⁴ 2003 statistics provided by the seafarers’ union *ver di*.

- The “Ships Mechanic” is regarded as a very important avenue for the supply for officers. Young people who set out to become “Ships Mechanics” are clearly informed that employment prospects as such are very limited, and that they are expected to later pursue an officer’s licence. Noting the lack of consolidated figures, it is estimated that perhaps as many as 80 % ratings will eventually become officers accounting for more than half of the graduating officers. This avenue of officer supply is especially relevant in relation to Engineer Officers, for whom there is an even greater demand than for Deck Officers. Only about 30% of officer students are aiming to become Engineers and two thirds of those originate from “Ships Mechanics”.

4.1.5 Significant Shore-based Sectoral Descriptors

Utility Industries, Heat, Power and Waste Management

This is a traditional area of shore employment for Engineer Officers. The jobs in this sector often have some similarities with the Engineers’ shipboard jobs, by involving watch keeping duties and operations monitoring. However, the percentage of former Engineer Officers in this sector has decreased considerably during the last 10 – 20 years. The explanation is that in recent years, the number of available seafarers has declined.

The preferred candidate has experience from a few years at sea, but may also come from other areas. Mobility is low, but people will change between different plants, and to some extent to and from similar jobs in the refineries or with other industrial plants. Some understanding of economics and business is valued. Additional training will mainly be specific to the job. The general impression is that seafarers comprise a well-qualified group.

Today the sector offers a more flat organisation with limited scope of vertical progression. The normal starting position is as operations engineer, above which is the operations manager, the general manager and the CEO. The engineer may become operations manager and in some instances general manager. Other opportunities for development and progression are to become workshop or project manager in a special support function.

As many other attractive positions are offered to experienced Engineer Officers, the utility industries have found it increasingly difficult to recruit from this source. As a result, the Fachhochschule has introduced new educational programmes related to the operation and maintenance of large plants. Consequently, the demand for ships’ engineers is declining, and the scope of career paths for Engineer Officers is narrowing.

General Public and Maritime Administration and the Private Inspection and Surveying Industries

Beside the Maritime Administration, this line of work is undertaken primarily by the classification societies, but also by and on behalf of insurance companies, shipping companies, cargo forwarders and receivers and others.

It is a diverse, attractive and growing industry. New regulatory requirements like the ISM and ISPS Codes²⁵ as well as increased legal liability and attention to public image have created a range of new job opportunities in this industry of control, verification and implementation.

Ideal candidates are relatively young but experienced officers, with good social and communicative skills. More specifically, good customer service skills are required. The career will always involve substantial job specific and ongoing training. The starting position is at the frontline, working with clients, but after some years, the career may on one hand progress towards ad-hoc, project and specialist functions, or on the other hand towards general management at various levels. At this stage additional training and education will be more specialised and individual.

As mentioned, this is a growing industry, which is attracting many experienced seagoing officers. Even though it is attractive in terms of salary as well as personal development and career opportunities, the shortness of supply is evident, and the industry is looking towards naval architects or non marine engineers, which may eventually close this area of employment for German seagoing officers.

Ship Building, Equipment Manufacturing and Sales

This sector covers both marine equipment, as well as non-marine equipment. Both Deck and Engineer Officers are employed in functions related to sales and customer relations, for example, the development of manuals, operational support and technical service. This is different to product development and design, which is dominated by Chartered Engineers. The most appropriate candidate is someone who was a trained skilled worker before becoming an experienced Engineer Officer and finally a Chartered Engineer.

In addition to the vocational capabilities, candidates are required to possess skills relevant to customer relations like: assertiveness and decision-making. Candidates have to possess good social abilities and cultural awareness.

²⁵ UN International Maritime Organisation, international requirements for procedures, quality assurance etc, regarding maritime safety and security.

Although this is an attractive career path for seafarers wishing to come ashore, a shortage in the numbers of seafarers applying for these positions is being experienced within the sector. This has led the industries within this sector to find alternative sources for the positions that have traditionally been filled by former seagoing officers. For example, MAN B&W is situated in Augsburg in the south of Germany, and they are seeking to recruit Engineer Officers for their marine service department as well as for installation, implementation and service of large shore based power plants. They have found it very difficult to recruit locally, and when they advertise in the northern states, they have only limited success, as candidates are unwilling to relocate. To fill the gap they have had to train local non-marine engineers, or have transferred experienced engineers from other internal departments.

Shipping Companies

Many former seafarers will permanently go ashore following a transfer of employment from a vessel of a shipping company to the shore side administration and management of the company. Here they will mainly fill positions within the technical and operational management departments of the fleet. These positions may also include responsibilities for vessel maintenance, cargo handling, shore-based installations like port terminals, personnel, safety, and security. This is as opposed to the commercial side of the company, into which the officers will only very rarely find their way.

Officers will most often be recruited directly from the fleet, often in relation to a system of rotating secondments. Many different types of jobs are offered, and an equivalent diversity of qualifications is required. In general terms, there are career paths in general operations, project and specialist functions, and one aiming at general management. Some people may cross between these career paths as they progress within the company.

Ideal candidates are often relatively young but experienced officers with good professional, social and communicative skills. The career will always involve substantial job specific and ongoing training. At the management level, substantial additional training and education will often be an integral part of the process.

The increase in job opportunities here is similar to that of the inspection and surveying community, where the ever growing regulatory requirements, like the ISM and ISPS Codes²⁶, have created a range of new job opportunities. New job opportunities are also arising out of the general increase in the technical and operational complexity of modern shipping.

²⁶ UN International Maritime Organisation, international requirements for procedures, quality assurance etc, regarding maritime safety and security.

Pilotage

Large busy ports, long approaches and the North Sea and Kiel Canal, require a very large number of pilots. The Kiel Canal alone currently employs some 270 pilots for the 40,000 annual passages, and the Approaches to Hamburg via the River Elbe some 254, not including harbour pilots. In all, there are about 830 German pilots, and there would be more if all of the vacant positions were filled.

Pilotage is a very traditional career choice for Deck Officers. It is one of the few career options where a salary comparable to that of a senior officer at sea, is obtainable soon after leaving the seafaring profession, which makes this a very attractive career.

Entry requirements are relatively high, as a Master's licence, three years sailing time with a full Master's licence and at least two years of additional sea time is required. These requirements are usually met about 7 - 10 years after graduation and eligible candidates are usually in their thirties. Candidates must pass physical and psychological tests before enrolment in an eight-month programme of practical and theoretical training.

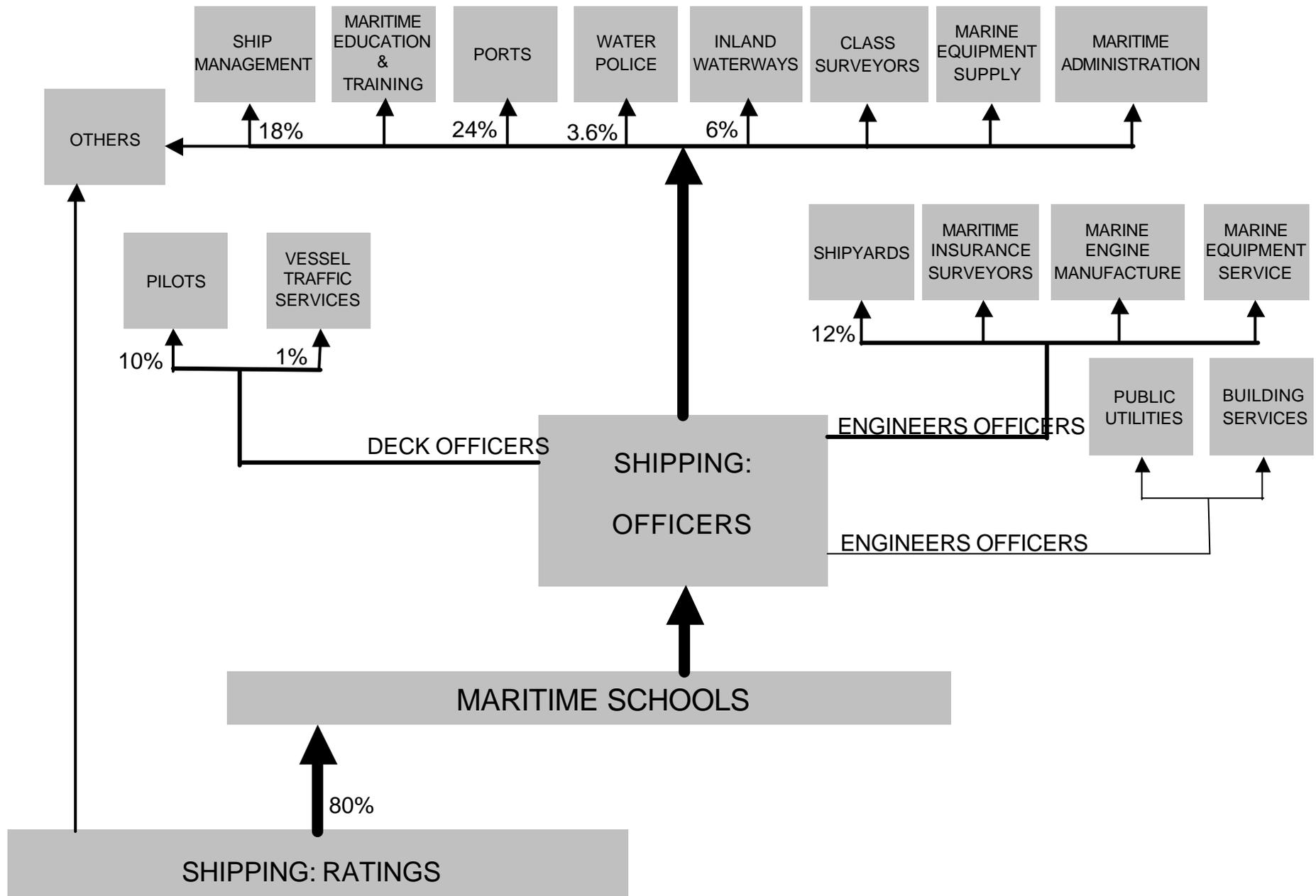
In a recent attempt to fill 20 vacant pilot positions at the Kiel Canal, only two were filled. The lack of eligible applicants for these attractive jobs illustrates the lack of skilled officers in general, and the lack of experienced officers in particular. As mentioned, the average officer will stay at sea for just five years after graduation, which is not enough to become pilot. In the recent past, pilot's positions would be filled with experienced officers in their thirties, directly from the merchant navy. Now however, due to the lack of eligible candidates from seagoing Deck Officers, other sources are being investigated. Candidates from the Water Police or from public administration are accepted, as well as active merchant navy officers above the age of 45. Regarding the latter, the prospect of earlier retirement from the merchant marine makes a change in career less attractive for these officers.

As merchant navy cadet recruitment figures have only increased during the last couple of years, it will be a long time before the benefit is felt. With the high average age of existing pilots, and much overtime work, alternative solutions are urgently being sought. Attempts to recruit officers from the eastern states and from Poland have failed, as officers are reluctant to relocate. The notion is that if one has to work away from home, it might as well be in the Middle or Far East, where salary and tax conditions are significantly more favourable. As a result, the idea of training and educating pilots from scratch, with no prior maritime experience is being considered, with the prospect of seagoing officers losing this traditional and attractive career path.

4.1.6 Table of Sectoral Representatives Interviewed

Sector:	Organisation:	Representative:
The Shipping Industry	VDR, German Shipowners' Association	Bernd Titel
The Shipping Industry	Hapag LLOYD	Klaus Heinig
Equipment Manufacturing	MAN B&W	Lauritz Frisch
Ship Builders and Equipment Manufacturing	German Shipbuilding and Ocean Industries Association	Gerhard Carlsson
The Shipping Industry	VERDI, Seafarers Union	Dieter Benze,
Federal Maritime Administration	Bundesministerium für Verkehr, Bau- und Wohnungswesen	Juergen Goepel
Federal Maritime Administration	Bundesamt für Seeschifffahrt und Hydrographie	Artur Roth
Government Administration	Government. Employment Office	Uwe Schweitzer
Pilotage	BSHL, Pilots Association	Gerald Immens
The Shipping Industry	VDR, German Shipowners' Association	Alexandra Pohl

4.2 CAREER PATH MAP FOR GERMANY



Greece



5.1 COUNTRY REPORT FOR GREECE

5.1.1 Socio-economic and Cultural Background

The Greek merchant fleet is the largest in the European Union comprising of approximately 40% of the total European tonnage. The Greek owned merchant fleet, flying national and other flags, is the largest in the world, comprising of approximately 15.5% of the worlds total tonnage.

It is believed that 10% of the Greek population of 11 million are connected in some way to shipping interests.

Table 2. Greek Owned Merchant Fleet.

	Number of Ships	GT (in million tons)
GREEK FLAG	1,575	32.39
GREEK OWNED (excl. Greek Flag)	2,392	66.63
GREEK OWNED (Total)	3,967	99.02

The traditional source of seafarers within Greece has been from the islands. Seafaring opportunities were available for individuals, even for those with a limited education, to obtain a good income in an economy that was largely agricultural with little industry. In the early 1960's, there was an enlargement of the industrial economy and associated service industries that have led to young people preferring to enter these shore based sectors in preference to going to sea. In addition, the older generation of seafarers have increasingly encouraged their children to enter higher education in order to qualify for professional posts such as medical doctors and lawyers. A further influence has been the development of tourism in the islands, which provides a useful employment opportunity for young people and also those retiring from seafaring.

The current situation is that, despite the negative image of seafaring, employment prospects are improving, with better financial rewards and conditions of service for seafarers. For the relatively small number of people who wish to go to sea as a vocation, the future career prospects are good.

It should be noted that employment opportunities in Greece are heavily influenced by a strong family orientated culture where jobs can be obtained through extended family contacts.

The Greek shipping community wants to employ Greek officers, particularly in senior positions, but as in other parts of Europe there are shortages due to low levels of recruitment of young people. Most Greek shipowners are recruiting to fill senior positions at sea and not for future shore-based employment other than in their own offices, consequently early wastage is not seen as a particular problem.

5.1.2 Maritime Education and Training System

There are nine Merchant Marine Academies (MMAs) in Greece for Deck Officers. These are located in Aspropyrgos, Michaniona, Preveza, Hydra, Kimi, Syros, Cefalonia, Chania, and Oinousses. There are also four Merchant Marine Academies for Engineer Officers located in Aspropyrgos, Chania, Chios and Michaniona. All of these academies are under the supervision of the Greek Ministry of Mercantile Marine.

There are 1218 cadet places within the Deck Officer MMAs and 696 cadet places in the Engineer Officer MMAs. During the academic year 2002/2003 there were 1141 deck cadets and 690 engineer cadets studying within the Greek MMAs. Including the cadets undergoing training at sea on Greek vessels, the total number of cadets in the training system during 2002/2003 was 3745.

No fees are charged to the cadets for their tuition or accommodation and subsistence. Funding for cadet training is provided from three sources, the Greek government, mandatory contributions from the owners of vessels flying the Greek flag according to size and number of vessels registered, and from the European Union.

Cadets, who must be High School graduates, have to pass an entrance examination in order to gain entry into the Merchant Marine Academies. The cadets start their studies with one semester at the MMA, followed by their first semester of onboard training. They then have two more semesters at the MMA followed by their second semester of onboard training. Their studies conclude with three more semesters at the MMA. The full course lasts almost four years, after which successful cadets are awarded their third class Deck or Engineer Officer certificate of competency.

After 24 months of seagoing service, and successfully completing the mandatory STCW courses, third class officers are awarded their second-class certificates of competency. Following a further 36 months of seagoing service and successful completion of the mandatory STCW management level short courses they are awarded their first class certificate of competency, Master or Chief Engineer.

There are two government funded Centres of Post-Training, one at Aspropyrgos and one at Rendis, which run STCW professional short courses for continuing professional development of Greek seafaring officers.

In addition, there are five private maritime training institutions that run a variety of maritime training courses that are approved by various maritime administrations, but not by Greece. It is understood that the Greek Maritime Authority is looking to approve the courses at the private maritime academies at some point in the future.

Maritime training institutions do receive support from the Greek ship owning community on a tonnage basis. Those officers destined for the service in the Greek Coastguard attend their own dedicated academy.

There are no schools in Greece offering education for ratings.

5.1.3 Employment Data

In 2002 the total number of Greek seafarers recorded by the Greek Ministry of Statistics was 18,747. Estimates given by our interviewees suggested that of these approximately 14,000 were officers and 5,000 were ratings. Of the officers 8,000 were deck officers and 6,000 were engineer officers. Of the 5,000 ratings, 4,000 were deck ratings and 1,000 were engine room ratings. The annual rate of attrition to shore based employment before retirement is believed to be about 10%.

In addition to the above, it is believed that there are approximately 2,000 officers working on domestic trade vessels, as well as 1,000 cooks and 4,000 stewards.

5.1.4. Specific Characteristics of the Member State

- Many seafarers stay at sea and retire directly from seafaring employment, returning home often to set up opportunities in local businesses such as tourism.
- In order to ensure a ready supply of Greek senior officers, Greek shipowners provide good opportunities for the promotion of Greek maritime academy graduates. Greek shipowners tend to recruit junior officers from the maritime academies straight to third engineer and second officer level. These junior officers are taken on by Greek shipowners and then promoted to Second Engineer and Chief Officer within the company in as short a time as the STCW requirements allow.
- The most popular shore-based sector for ex merchant marine officers still in maritime employment is technical and operations management within shipping companies. It is believed that this represents 10% of the total number of seafarers leaving seafaring.
- Individuals do enter other professional maritime shore-based sectors such as maritime training, classification societies, marine equipment suppliers and law, but the numbers are extremely low and probably less than 5% of the total number of seafarers leaving seafaring. However, many seafarers will retire early from seafaring to take up non-maritime related employment, such as in tourism, taxi driving, and other individual businesses.
- Yachting provides good career prospects for officers with appropriate seafaring qualifications, but it seems to operate as a separate parallel career path. Yachting also provides good employment opportunities for merchant marine ratings.

- Any view of career paths for seafarers in Greece has to take into account the Government administered Seamen's Pension Fund. This is a generous national pension scheme that allows seafarers to retire from seagoing service at about age fifty with 45% of their final salary. This acts as an incentive for seafarers to retire early. Retired seafarers can get their seaman's card back by accepting a reduced pension. This process allows them to get further seagoing employment. Approximately 30% of retiring seafarers take STCW revalidation courses.
- National Service is mandatory in Greece and it is currently a requirement to serve twelve months. This period forms a natural decision point in the career paths of seafarers and usually occurs after the initial seagoing phase of a newly qualified seafarer.
- Entrants to the national maritime administration in Greece follow a totally separate career path from seafarers with its own system of academies. A very small number of merchant seafaring officers are selected for posts in the Hellenic Coastguard.
- Port authorities are part of the Greek Civil Service system and as such have their own separate career structure. Other sectors, which also have separate career structures, are fishing and dredging.

5.1.5. Significant Shore-based Sectoral Descriptors

Shipping Management

Greek shipowners tend to recruit junior officers from the maritime academies straight to third engineer and second officer level. These junior officers are taken on by Greek shipowners and fast tracked to Second Engineer and Chief Officer. This means that the Greek shipowners have a ready supply of Greek senior officers.

The management of shipping companies offer career progression for their superior seagoing senior officers in technical and operational superintendency ashore, but they do not generally transfer to the commercial management of the company.

Maritime Education and Training

The maritime education and training sector in Greece employs in the order of 100 ex-seafarers as lecturers, made up of both deck and engineer disciplines.

The entry requirement for lecturers is generally a Masters Certificate or Chief Engineers licence, but training for trainers is given after selection.

Maritime Training establishments employ both deck and engineer officers. Seafarers are employed because of their experience and specialist technical knowledge.

The retention rate within the maritime training sector is high, with lecturers often working part time in semi-retirement.

Yachting

Yachting in Greece is made up of two distinct categories, the private sector and the professional sector. The professional sector includes chartered boats that can accommodate 50 or more passengers and crew. Good employment opportunities lie in the professional sector.

Currently there are approximately 7,000 seafarers employed in the yachting sector. Of these 1,000 are officers and 6,000 are ratings. Of the ratings only 1,000 are Greek.

Yacht crews are both from local Greek sources and from abroad. Greek parents want their children to become officers, so it is more difficult to recruit local ratings. Consequently most of the ratings on professional yachts come from abroad, with 70% of them being hotel staff and the remaining 30% deck staff.

The entry requirements for a deck rating are an AB certificate, plus relevant STCW certificates. However, an important criterion at interview is the presentability of the candidate and their fluency in the English language.

Officers onboard yachts come from the maritime academies. Captain's licences come in three grades A, B, and C :

Licence A – greater than 500 g.r.t.

Licence B – up to 500 tonnes

Licence C – up to 150 tonnes

In order to gain a licence, 50% of the candidates' qualifying sea service needs to be on passenger vessels.

Younger people are increasingly attracted to yachting. Career path routes are similar to those for conventional shipping. Although there are lower salaries in yachting than there are in commercial shipping, the attraction of yachting is a lifestyle choice.

The future trend in the sector is that it will be desirable to attract young people directly, in the belief that it will be easier to mould them to the sector's requirements.

Ship Agents

Ships Agents are usually voluntary members of the Ship Agent Union of Greece and the International Ship Agent Association. There are approximately 200 ship agencies in the Ship Agent Union of Greece.

There is a lot of competition between ship agents that leads to lower agency rates. Due to these low agency rates, the ships agency sector is a low paid profession and therefore cannot attract highly qualified people. For example, a Chief Officer at sea earns in the order of ?4,000 – 5,000 per month and a ship's agent earns in the order of ?600 – 700 per month.

Entry requirements are for basic literacy and numeracy. In the accounts department they may possibly look for a first degree. Ship agents occasionally employ ex Chief Officers or Cargo Officers.

Seafarers are employed because of their knowledge and experience of operational cargo matters and their knowledge of shipboard paperwork such as Bills of Lading. As a boarding agent, an ex-seafarer knows seafarers, and can empathise with their problems.

The ship agency is usually part of a shipping company. When working for a ship agency that is part of a shipping company, the ship's agents may be ex-seafarers seconded from the fleet.

Career progression is usually by personal contact, not by virtue of qualifications or experience. Therefore progression is limited.

The employment profile in the sector will change in the future as ship agencies become more fully integrated into the overall logistics business. However, the requirement for knowledge of cargo operations will stay the same.

Shipbrokers

The Hellenic Shipbrokers Association (HSA) has 285 individual members. Membership is on a voluntary basis. The HSA was established in the 1970's. From the 1970's, shipbrokers were mostly deck officers with a good command of the English language. They mostly had a maritime university education. Within Greece the number of shipbrokers who are ex-seafarers is 60 out of a total of 285 shipbrokers. Of the 60 who are ex-seafarers, these are mostly the older shipbrokers that came ashore in the 1970's.

The entry requirements were intelligence, a good standard of English, and preferably a Masters degree. Also a seafaring background of at least one year at any rank was preferred.

Seafarers are employed as shipbrokers because of their knowledge and experience of shipping operations, shipboard technical matters and shipboard paperwork. It is hard to get seafarers to come into the sector because of the pay differential between working ashore and working onboard ships.

The barriers to seafarers being employed as shipbrokers are:

- their lack of English language skills – specifically shipping terminology.
- their level of academic qualifications is not high enough, although this can be overcome by on the job training and experience.

Ship broking does not require the level of experience that a Master or Chief Officer might have, but is more suited to entry by a Second or Third Mate, who has come ashore and gained a higher degree. With this level of entry qualification and experience, a trainee can expect to undertake two years ship brokerage training before starting to fix vessels.

After the age of 45, when some seafarers start to think about coming ashore, they are considered too old to start training as a shipbroker, and too slow to do business. Shipbrokers are considered as needing to be active, progressive and willing to undertake continuing professional development.

Ex-seafarers who do enter the ship broking profession are seen to have a good career path. There is a high retention rate in ship broking within Greece, with most brokers leaving only to retire completely.

The employment profile of seafarers in the ship broking sector is seen to be changing in Greece because there will be less seafarers in the future. It is considered that basic ship operations knowledge can be obtained at university and then the ship broking knowledge can be gained through on-the-job training. In the future it is envisaged that shipbrokers will not come from a seafaring background.

From December 2004 the Hellenic Shipbrokers Association is introducing examinations that will lead to the issuance of a Greek Ship Broking Certificate. The Hellenic Shipbrokers Association will issue this certificate.

Maritime Law

It is a legal requirement for all attorneys at law to be members of a Bar Association, which is in turn a member of the Hellenic Bar Association.

Out of the 1800 members of the Piraeus Bar Association, only 4 are ex-seafarers.

The entry requirements to be an attorney at law are an LLM or a first degree in law, combined with a previous training period in a legal firm and the passing of Bar Association examinations.

The Protection and Indemnity Clubs like to use attorneys who are ex-seafarers.

It is believed that in the future the employment profile of the maritime law sector will have no ex-seafarers.

Classification Societies

In Greece there are approximately 200 technical staff in class societies, of which about 20 (or 10%) are ex-seafarers. In a typical classification society branch office in Greece one would expect to find about 25 technical staff plus administrative staff. The majority of the technical staff are naval architects or marine engineers that are technical university graduates. Technical university graduates are desirable employees as they are more flexible and more available than ex-seafarers.

Typically only two ex-seafarers would be employed, one ex-master who undertakes ISM and ISPS audits, and one ex-Chief Engineer who is a field surveyor.

The entry requirement for the ISM and ISPS auditor would normally be a Masters licence with command experience. The entry requirement for the field surveyor would be a Chief Engineer's licence with experience as Chief Engineer. Both positions would preferably have had experience as a superintendent in a shipping company.

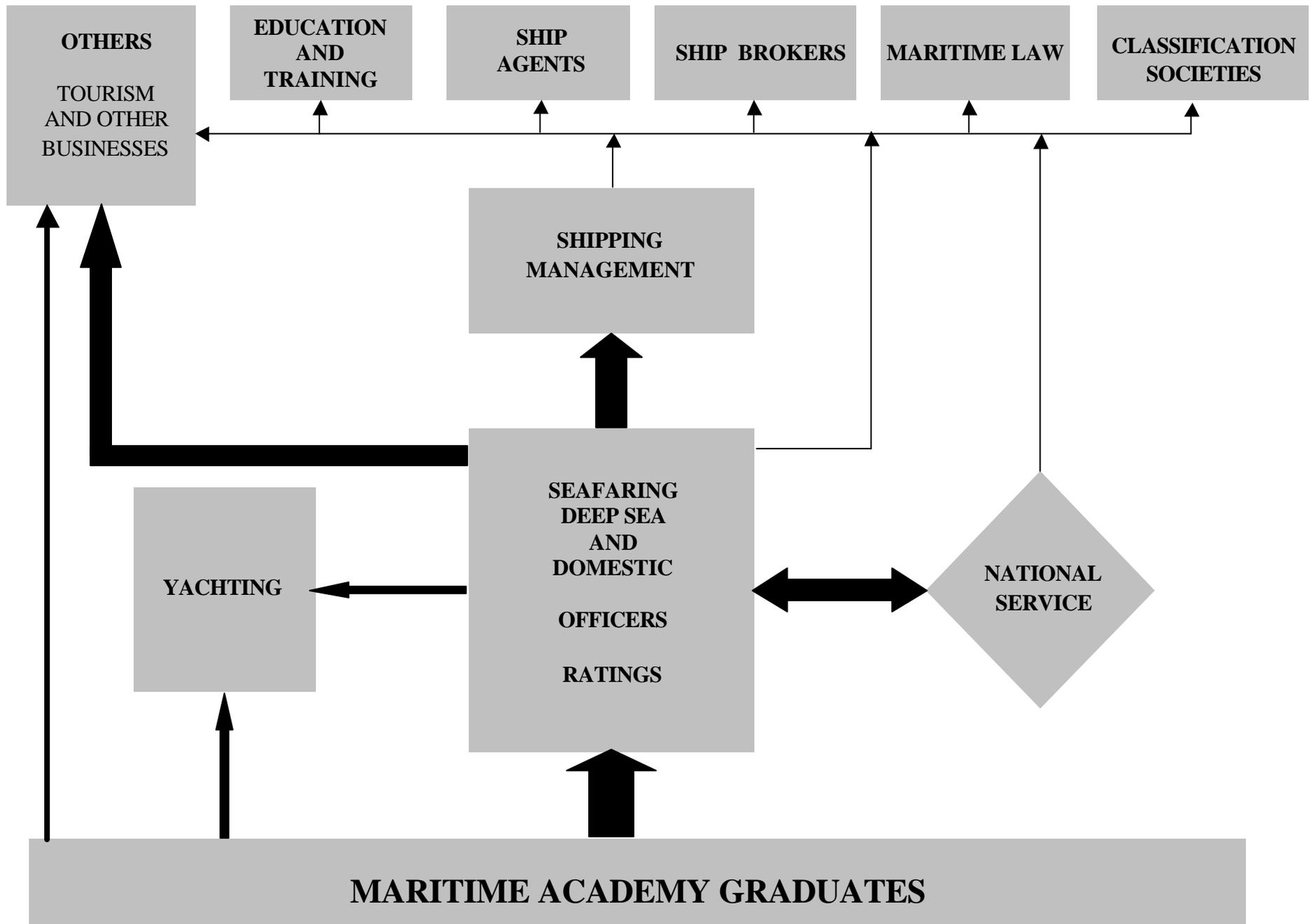
Seafarers are employed as they have the right level of knowledge and experience. In addition, they have specialised experience and ship knowledge that can be transferred to other staff. Seafarers are selected because of their personal qualities to ensure they will 'fit in' to the office culture.

The retention rate in the classification society sector is very good, with only a small percentage leaving. If they do leave they generally go into shipping company management.

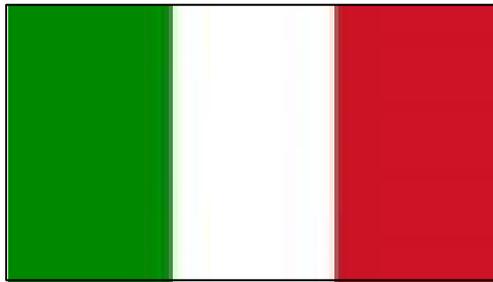
5.1.6 Table of Sectoral Representatives Interviewed

Sector	Organisation	Representative
Shipping Company	Golden Union Shipping Co. S.A.	George Gabriel
Shipowners Association	Union of Greek Shipowners	George Koltsidopoulos
Maritime Training	Quality Maritime Services S.A.	Pangiotis Divriotis
Professional Yacht Owners Association	Hellenic Professional Yacht Owners Association	Dimitris Vassilakis
Seamen's Federation	Panhellenic Seamen's Federation	Nikolaos Koratzanis
Ship Agents	Golden Union Ships Agents Ltd.	Nick Paraskevopoulos
Shipbrokers	Hellenic Shipbrokers Association	Nick Pentheroudakis
Maritime Law	Hellenic Bar Association	Nicholas Goyios
Ship Repairers	Naftosol S.A.	Thanassis Pirinis
Professional Institutions	SNAME	Spiros Malliaroudakis
Classification Societies	Det Norske Veritas	Nikolaos Boussounis

5.2 CAREER PATH MAP FOR GREECE



Italy



6.1 COUNTRY REPORT FOR ITALY

6.1.1 Socio-economic and Cultural Background

Seafaring is generally viewed in Italian society as a very demanding job and a declining sector. Seafaring is not a core activity in Italy.

Traditionally, up until the early 1980's, a lot of seafarers used to come from Genoa and Trieste, but with the improvement in the economy in the north of Italy, this is no longer the case. The majority of seafarers, around 75% or more, now come from the regions around Sicily, Naples, Sorrento and Molfetta, where the economy is still somewhat depressed.

Family ties are very strong in Italy, so jobs that require people to be parted from their families are not favoured.

Italians are not by their nature inclined to seek employment in other countries, they prefer to stay in Italy. It was generally thought that the number of Italian ex patriot workers in the maritime industry was very small.

There is a preference for young people to look to the passenger ship market if they want to go to sea, rather than other trades. The retention rate of seafarers is also better in the cruise ship market.

Between 1980 and 1995 the Italian shipping companies did not recruit any cadets. Therefore, when cadets join Italian owned and managed vessels now, they may find that the only other Italians on the vessel are the Master and the Chief Engineer, all other officers being foreign nationals. This is another reason for the poor retention rate of Italian cadets and junior officers.

Poor employment opportunities ashore have recently led to an increase in the number of applicants to Nautical Schools. However, seafaring is not seen as a rewarding profession, with the differential between shore based employment salaries and seafarers salaries being only in the order of 1 to 1.5.

The retention rate of Italian seafarers is not good. The Italian economy is growing and the number of seafarers is dropping. The pay differential between shore based workers and seafarers has reduced significantly in recent years, and this is seen as the main reason for the poor retention rate. However, an Italian cadet can currently earn in the order of €1700 per month gross, compared to €800 per month as an average for someone of the same age working ashore.

It was thought that in Italy, the seafarers who stay at sea until their thirties before coming ashore, so gaining ten years of seafaring experience, can earn up to 100% more than the people who went straight into shore based employment from Nautical School.

It was felt that, in particular, experienced ships engineering officers had no trouble in getting positions ashore in the marine equipment service, electrical generation services, utilities engineering services and refrigeration sectors.

Italy has two ship registers, one being the Italian Registry and the other, the Italian International Registry. The International Registry was set up to give certain tax benefits to Italian registered vessels.

The Italian Registry has 1,031 vessels registered over 100 gross registered tonnes.

The Italian International Registry has 544 vessels registered over 100 gross registered tonnes. The introduction of the Italian International Registry has been seen to give a boost to the Italian shipping industry, with additional vessels coming onto the new registry, not just those that are transferring across from the original Italian Registry. The Italian International Registry has recently been extended to also include ferries with voyages over 100 nautical miles and chartered yachts. In order for a vessel to be admitted into the Italian International Registry, agreement has to be reached with the Italian Seafarers Union.

There are approximately 200 shipping companies in Italy.

6.1.2 Maritime Education and Training System

In Italy, at the age of fourteen, young persons have to decide which discipline of high school they wish to attend. One of the options available to them is a Nautical School. These schools offer a general education, but specialise in the maritime disciplines of navigation, marine engineering and naval construction. There are currently thirty-six Nautical Schools in Italy, of which five offer naval construction as an option. Students attend the state funded Nautical Schools up to the age of nineteen. Approximately 1,100 students in total graduate from the Italian Nautical Schools each year.

Only 20% of those students graduating from the Nautical Schools take up seafaring officer cadet positions. Of the rest about 50% go on to university, many starting maritime related degree programmes. However, the retention rate at universities in Italy is not good, with about half of university entrants failing to complete their course of study. The remaining 30% of those students graduating from Nautical School go directly into employment, many of these entering the maritime sectors of port and terminal operations, shipbuilding, ship repair and the pleasure craft industry.

Most students who do choose to go to sea also express a wish to come ashore after a few years, but they are not clear as to what they want to do when they come ashore.

One criticism of the Nautical School system is that during the time students are attending the Nautical School they only visit vessels briefly, they do not sail on a vessel for any period of time. When they graduate from the Nautical School and become a cadet sailing on a vessel, many of them get a shock and do not like life at sea, so leave after only a short time. A new initiative at the Nautical School in Genoa is attempting to resolve this problem. They have launched a pilot project of a period of two months onboard a vessel during the third and fourth year of school. These months of sea service will count towards the period of service required to obtain their first certificate of competency, the “Patentino”.

The Nautical Schools are currently looking at developing professional yachting option within their curricula.

There are no specialist schools for training merchant navy ratings in Italy.

There are currently about ten private training centres in Italy that offer the STCW mandatory training courses. After gaining employment with a shipping company, junior officers have to fund their own training at these training centres to obtain their mandatory STCW course certificates, State funding of these courses having ceased in 2001. Italian shipping companies do not currently pay for this training either. This may change as some non-Italian shipping companies have recently started to offer to pay for the mandatory STCW training course required by their Italian junior officers. It was generally regarded that Italian shipping companies did not invest in Maritime Education and Training.

The Italian government has introduced a tonnage tax and a financially beneficial international register. From July 2005, the Italian government has introduced a requirement for one cadet to be berthed on each vessel entering the tonnage tax regime. Alternatively, the shipowner has to contribute to a maritime education and training fund.

There are currently no dedicated maritime education and training institutions in Italy that offer courses to prepare junior officers for their first certificate of competency, the "Patentino". Prior to taking written and oral examinations administered by the Italian Coastguard, candidates currently undertake their own preparations. There are some shipowners training programmes for cadets that offer eight months post Nautical School diploma training. This training is in two phases, four months of shore based training to take STCW mandatory courses and four months sea time. However, the funding for these training programmes has been coming from a complicated grant system that is partly financed from the European Union, partly from local government and partly from the Italian Shipowners Association. The EU component of this funding is set to cease in 2006. These grants for post diploma training are said to be very difficult to obtain.

Due to the EU component of the post diploma training-funding scheme coming to an end during 2006, it has been proposed to start up a new Italian Shipping Academy during 2005. This academy will initially offer one hundred places to the top performing students of the Nautical Schools. This intake will comprise of both deck and engineer officer cadets. The cadets at the new academy will undertake a two-year programme of study, which will include one year's sea service, and all of the mandatory STCW training courses. The cadets will earn credits towards a degree, but will not obtain sufficient credits at the academy to gain a degree.

The movement to bring about the new Italian Shipping Academy has been driven by a Genoan consortium of shipowners, seafarers unions, ship agents, shipbrokers and the Genoa Port Authority. The Italian Coastguard is controlling this consortium. The new academy would require at least 100 cadets per year to make it viable. The intention is to set up one academy in the north of Italy first, in Genoa, and then if demand for places is high, to set up a second academy in the south of Italy.

Junior officers have to serve eighteen months sea time, and obtain the required mandatory STCW training certificates, before they can put themselves forward to the Coastguard to take their 2nd class certificate of competency, the “Patentino”. After being awarded their “Patentino”, officers currently have to serve another 48 months sea time, 12 months of which have to be beyond the Straits of Gibraltar, before they are eligible to take their 1st class certificate of competency, the “Patenti”. The Italian Coastguard is currently considering reducing this length of sea service to 18 months in order to come into line with other European countries.

After officers have obtained their “Patentino”, they do not attend any further maritime education and training institution prior to taking their “Patenti”.

The examination process for both the “Patentino” and the “Patenti” comprises of a written and oral examination set by the Italian Coastguard. A panel of three persons, one Coastguard officer, one Italian Navy officer and one Nautical School lecturer, administers the oral examination.

There is no degree level training programme for seafarers in Italy. It was generally thought that not many Italian ex seafarers obtain degree level qualifications.

Early in 2005, a new training institute was established in Italy to train ex seafarers and nautical school graduates for employment within the professional yachting industry.

6.1.3 Employment Data

During 2004 there were 352 Italian cadet officers at sea, 184 of these being navigating cadets and the remaining 168 being engineer cadets. Only about 50% of these go on to become junior officers, and it was felt that within five years nearly all of these would have left seafaring. The retention rate right through the ranks to the level of Master and Chief Engineer is not good.

Shipowners stated that once seafarers had left the sea, it was rare to see any returning to seafaring.

In Italy approximately 130 junior officers per year are awarded their 2nd class certificate of competency, the “Patentino”.

It was generally thought that about 50% of the cadets leave seafaring after one to two years. Of these it was felt that 25% go directly into other maritime sectors such as ship agency, freight forwarding, terminal operations and cargo logistics, whilst another 25% go to university.

There are currently approximately 27,000 Italian seafarers holding valid certificates of competency. It is not known how many of these are currently employed as seafarers, but of those sailing it is believed that about two thirds will be sailing on Italian flagged vessels and the remainder on foreign flagged vessels. A further 7,000 seafarers are believed to be employed in the coastal and fishing trades, including tugs.

It was generally felt that since Government funding for the STCW mandatory training courses ceased in 2001 there has been less interest in seafaring as a career.

In the port of Genoa there are currently in the order of 10,300 employees working directly in maritime activities, of which 1200 are stevedores. The stevedores work mostly in family orientated businesses.

In Italy, for every eight months and twelve days of sea service, a seafarer is credited for one years worth of contributions to the Italian state pension scheme. Therefore the period onboard is calculated as 1.4 times the contributions of a person ashore. This is a special allowance for seafarers. When a person has 40 years worth of pension contributions, they can claim a state pension from the age of 65. A reduced state pension can be claimed at age 60 if 35 years worth of pension contributions have been made.

For Italian seafarers serving on vessels of either Italian registry, their employer has to pay two thirds of their state pension contribution, and the seafarer has to pay the remaining one third.

Italian Engineering Officers and Radio Officers are allowed to retire at 55 if they have reached the minimum level of state pension contributions. Navigating Officers have to work until they are 65 before they can retire and claim the state pension. Some Engineering Officers take the early retirement offered, and then return to work at sea for about four months per year in order to supplement their pension. This has caused a shortage of Italian Chief Engineers. With the introduction of the Italian International Registry in 1998, Italian shipping companies are making the terms and conditions for Chief and Second Engineers more beneficial to try to retain them. This is being done in order to try and develop a career path for Italian Chief Engineers into shipping technical management.

Some Italian shipping companies also own cargo terminals, and these companies are using the financial benefits from the Italian International Registry to try and improve the terms and conditions for Chief Officers in order to retain them. This allows these companies to develop a career path for their Chief Officers into terminal operations management.

There are very few Italian ratings and those that there are tend to be only on home trade vessels. The average age of these ratings is estimated to be between 40 and 45, with no new ratings starting at sea.

Vessels registered on the Italian International Registry have to employ at least six Italian nationals. All crew onboard vessels registered on the main Italian Registry are required to be EU nationals. If vessel managers cannot meet these manning requirements they can apply for a special dispensation from the Italian maritime authority. Many Italian registered vessels have such dispensations, as their managers cannot recruit the required numbers of Italian or EU seafarers.

On Italian flagged vessels the Master has to be an Italian national.

6.1.4 Specific Characteristics of the Member State

- The number of Italian ex patriot workers in maritime industry sectors is thought to be very small.
- Between 1980 and 1995 Italian shipping companies took on no officer cadets. This has led to a shortage of experienced Italian seafarers in the age range of 29 to 44 years. This is now having a serious affect on recruitment for the Italian shore based maritime sectors. It is also adversely affecting the retention of the officer cadets who started in the industry after 1995.
- During their initial period of maritime training at Nautical School, those who wish to go to sea as officer cadets, do not sail on a vessel until after they have graduated and been employed by a shipping company.
- There are no specialist schools for training merchant navy ratings in Italy, and the number of Italian ratings is very small, and decreasing, with no new ratings being taken on.
- The retention rate of Italian seafarers is not good.
- Due to the advantageous pension arrangements in place for Italian Engineering Officers, there is a shortage of Italian Chief Engineers.

6.1.5 Significant Shore-based Sectoral Descriptors

Shipping Management

Third party ship management is not a large sector in Italy, there being only ten small third party ship management companies in Italy. Italian ship management companies tend to be located in Geneva, Monaco and Lugano for tax purposes. The ship management companies in Italy are more in the business of crew management than technical management. There is less of a requirement for experienced ex seafarers in crew management than in technical management, so there are only a few ex seafarers employed within the ship management companies in Italy.

Maritime Education and Training

There is a requirement in the Italian Nautical Schools for all teachers to have a degree. It is only the specialist technical teaching staff that have a seafaring background, and of these about 50% come from a military naval background and the other 50% from a merchant naval background. There are only about four technical teaching staff in each Nautical School, of which only two would be ex merchant navy seafarers. Therefore, throughout all of thirty-five Nautical Schools in Italy there are probably only seventy ex merchant navy seafarers.

It was felt that the number of ex merchant navy seafarers teaching in Nautical Schools was declining because of the requirement to have a degree in order to teach.

Yachting

The tax regime for registering yachts in Italy is currently very beneficial. It is therefore expected that the professional yachting industry in Italy will grow rapidly over the next few years.

For some time a career pathway has existed for retired Italian senior seafaring officers to take up positions as Masters and Chief Engineers on super-yachts.

Currently there are no special certificates of competency for yachts over 24 metres in length. The certification of seafarers on these yachts is currently treated the same as for all other merchant vessels.

With the setting up of a professional yachting training institute during 2005, it is expected that an increasing number of Italian seafarers will be attracted into professional yachting as a career path.

Coastguard (Maritime Administration)

The Italian Coastguard has 1269 officers, of which approximately 40% are ex merchant navy deck officers. If an Italian seafaring deck officer has their first class certificate of competency, the “Patenti”, they can apply to join the Coastguard. If their application is successful they have to undertake three months training at the Military Academy, after which they can qualify as a Lieutenant in the Italian Coastguard. Most of the ex merchant service deck officers applying to the Italian Coastguard are serving 2nd Mates and Chief Officers.

No ex merchant service engineering officers enter the Italian Coastguard. The Italian Classification Society RINA provides any engineering input required by the Italian Coastguard Port State Control activities.

Ship Agency

There are approximately 500 ship agency companies in Italy, with 130 of these being located in Genoa. It was estimated that 90% of these companies would employ one or more ex seafarers.

About 75% of seafarers entering ship agency companies are young officers who have between two and six years of seafaring experience. The remainder have sailed as senior officers. The only requirement for ex seafarers to enter into ship agency companies is that they have a number of years of seafaring experience; they do not require a degree.

Maritime Law

There are approximately 200 lawyers in Italy who are conversant with maritime law. However, none of these lawyers was known to be an ex-seafarer. In Italy, maritime law is not seen as a career pathway for seafarers.

Classification Societies

In the organisation of the Registro Italiano Navale (RINA) 60% of their surveyors are graduates who do not have any seafaring experience, and the remaining 40% of their surveyors are ex seafarers who are not graduates.

RINA stated that they require ex seafarers for both field surveyor and plan approval positions.

RINA is finding it difficult to recruit Italian ex seafarers, as fewer are available in the employment market.

Shipbuilding

The Fincantieri group dominates the shipbuilding industry in Italy with its eight shipyards handling around 80% of the Italian shipbuilding market. In general the Italian shipbuilding industry does not employ many ex seafarers, instead preferring to employ specialist graduates directly from university.

Ship Repairing

There is not so much ship repair work carried out in Italy as the nearby ship repair yards in Croatia, Montenegro and Turkey tend to be more competitive.

Marine Equipment Service

The marine equipment service sector in Italy is a career path for ex marine engineering officers, but the numbers of ex seafarers employed are small.

Pilotage and Vessel Traffic Services

There are 248 pilots employed in Italy and all of these are ex seafaring Deck Officers. Private companies that provide pilotage services to the Italian port authorities employ the pilots.

In Italy, all of the vessel traffic services (VTS) operators come from the military navy. Genoa is the only port in Italy to have a dedicated vessel traffic service.

Port Authorities

There are 26 Port Authorities in Italy.

Although the port authorities would like to hire ex merchant navy seafarers, because of their experience, they are unable to do so because the number of people employed in this sector has been falling, and this has meant that they have been able to retain their existing employees, of which only the tug crews are ex deep-sea seafarers.

During 1992 – 1993 the port terminals in Italy were privatised, so the port authorities no longer directly employ people to work in these areas.

Any new personnel being directly employed by the port authorities would now be expected to have a degree level qualification.

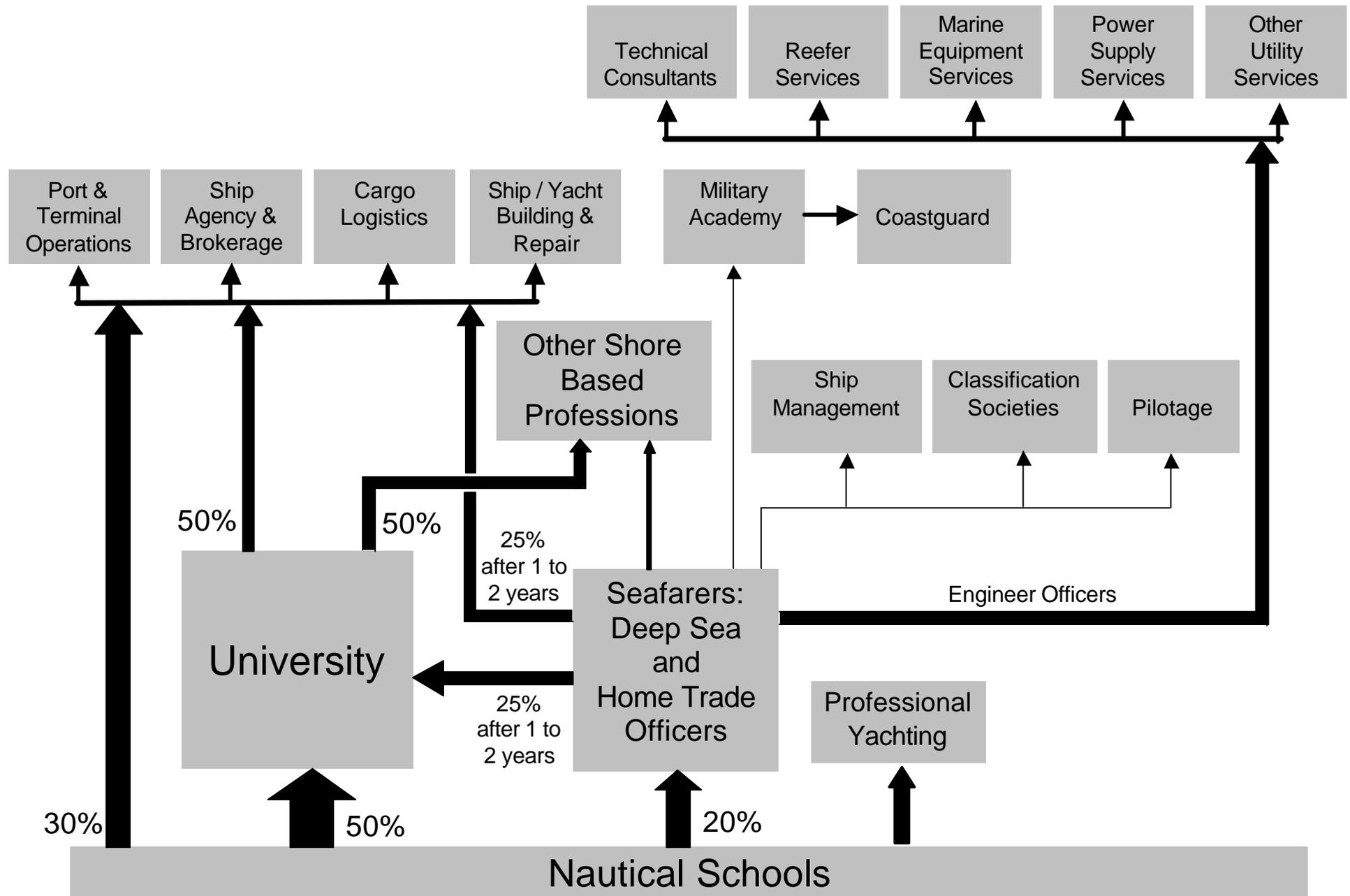
The port authority in Genoa employed eight ship inspectors, none of who were ex seafarers. Although the port authority saw these positions as requiring the skills and experience of ex seafarers, because of the requirement for the inspectors to have a degree level qualification, there were no ex seafarers coming forward to take up these positions.

Port authorities would like to see more seafarers obtain degree level qualifications so that they could enter into employment in this sector.

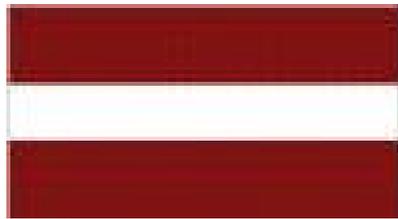
6.1.6 Table of Sectoral Representatives Interviewed

Sector	Organisation	Representative
Seamen's Federation	International Transport Federation	Capt. Piero Luigi Re
Seaman's Union	Fit Settore Marittimi	Capt. Remo de Fiore
Chamber of Commerce	Centro Ligure per la Produttività Presso la Camera di Commercio di Genova	Dr Giampaolo Rossi
Shipping Company	Ignazio Messina & C.	Capt. Stefano Canestri
Shipowners Association	Confitarma	Dott. Claudio Barbieri
Maritime Training	Istituto Tecnico Statale Nautico "S.Giorgio" Genova e Camogli	Wladimiro R. Iozzi
Port Authority	Autorità Portuale di Genova	Giovanni G. Novi
Ship Agency	Mediterranean and Overseas Shipping Agency	Dr Tommaso Pallavicino
Ship Management	Norbulk Enterprise Ship Management	Gian Enzo Duci
Maritime Law	Studio Cavallari	Avv. Egisto Cavallari
Coastguard	Guardia Costiera	Dott. Marco Brusco Capt. Sergio Villa
Classification Societies	Registro Italiano Navale	Giovanni Poerio
Pilotage	Federazione Italiana Piloti dei Porti	Giovanni Lettich Oreste Bozzo
Professional Yachting	UCINA	Mr Cavallari
Seafarers Welfare	Apostle Ship of the Sea	Father Giacomo Martino

6.2 CAREER PATH MAP FOR ITALY



Latvia



7.1 COUNTRY REPORT FOR LATVIA

7.1.1 Socio-economic and Cultural Background

The legacy of the break-up of the Soviet Union plays a significant role in understanding the maritime industry of Latvia today. Seafaring during the Soviet era was predominantly a profession for ethnic Russians, Belarusians and Ukrainians. These were the nationalities of the traditional seafaring families. Maritime education was offered in the Russian language in St. Petersburg, and for various reasons Latvians would often find it difficult to obtain the necessary permissions to go abroad as seafarers.

One of the consequences of this is that even today, approximately 70 % of Latvian seafarers are ethnic Russians, Belarusians and Ukrainians. They are, even if born in Latvia, labelled “non nationals”, and are not automatically issued Latvian passports. An estimated 50% of all Latvian seafarers fall under this category, and have not yet obtained citizenship. The issues of a lack of citizenship, and ethnic language difficulties, have consequences in relation to career prospects at sea, and even more ashore. The nationality issue has historic and political implications beyond the scope of this report, but the main practical concerns are related to the problems of international travel for some Latvian seafarers and their language skills.

Shipowners, operators and crewing agencies prefer seafarers that have Latvian passports, rather than the visa carried by the “non nationals”, as this makes international travel much easier. The main requirement for a “non national” to obtain Latvian nationality is to pass a test in Latvian language and history. The test is said to be not particularly difficult, many have already passed, and the union and manning agencies are strongly recommending others to do so. Despite this, there are some of the “non nationals” who will not, or cannot, obtain Latvian nationality, and these may suffer the consequence of lower employability.

During and after the break-up of the Soviet Union, Soviet vessels were more or less divided between the new emerging sovereign states according to the geographical disposition of the shipping companies head offices. The Republic of Latvia took over the entire merchant fleet previously under the control of state-owned USSR companies located in the territory of Latvia. An exception was the SOVCOMFLOT vessels, which were taken over by MORFLOT of Russia. Originally this resulted in 107 vessels, which were mainly reefers, oil, chemical and gas tankers, and some Ro/Ro vessels. A large proportion of the fishing factory and fishing fleet reefer vessels of the USSR were taken over by Latvia in the same way.

The result is that Latvian seafarers still specialise in the skilled, and sought after, labour market of specialist vessels such as reefers and notably gas, chemical and oil tankers. It has been noted that Norwegian shipowners have chosen to train and employ Latvian seafarers specifically for positions on chemical tankers.

Today these seafarers, who are recognised for their high level of education and experience, are employed in the European and world fleet. This has resulted in the growth of a flourishing manning and crewing management sector in the maritime

industry of Latvia. A large number of manning and crewing agencies are now facilitating the employment of seafarers from Latvia and neighbouring countries.

The Latvian maritime cluster may be characterised as a fragment of the maritime industry of the former Soviet Union. The result is that there are two major commercial ports, Riga and Ventspils, and five shipyards with some dry docks and good size floating docks. These shipyards mainly undertake the repair of merchant vessels. There are also some facilities for the construction of small vessels and fishing vessels.

Following the fall of the Soviet Empire, the sovereign state of Latvia found itself without a legal and financial system to facilitate the ship owning industry of a market economy. In order to take out mortgages on their vessels and finance their businesses, Latvian shipowners had to transfer vessels to foreign open registers. Even though these shortcomings of the Latvian system have been rectified, a major portion of the Latvian owned fleet remains registered under foreign flags. This situation is said to be due to the maritime regulatory framework that has been established in Latvia. Despite this framework offering of a tonnage tax system, it is perceived to be too bureaucratic. Also, because the old age and poor condition of many vessels, it is not feasible to re-register vessels back under the Latvian flag; the vessels tending to stay registered with what are regarded as more lenient open registers.

There are now only a small number of vessels under the Latvian flag. The major part of the Latvian maritime industry is a large number of seafarers, who used to man a considerable portion of the Soviet fleet.

Recent data related to the Latvian registered merchant fleet shows some significant changes in its composition:

Table 3. Latvian Registered Merchant Fleet.

Year	Number of Vessels	Average Age (years)	Total Gross Tonnage
2001	46	19.1	44,737
2004	15	32.1	60,193
2005	21	33	201,743

It is estimated that the Latvian owned, but foreign flagged fleet, may have four times the number of vessels that are in the Latvian registered fleet. Even so, there is an obvious imbalance when comparing the total number of Latvian controlled vessels with the 17,500 Latvian seafarers.

7.1.2 Maritime Education and Training System

Maritime education and training is offered at three levels: a secondary level vocational school, a college education offering the lower operational levels of certificates and an academy at university level, offering the higher level certificates.

Latvian ratings are educated in a system offered by four private vocational schools. Traditionally deck and engine ratings have been educated separately, but following inspiration from Germany and Denmark, a new dual purpose “Ship Mechanic” education is about to be introduced. Entry into the system requires nine years of basic primary schooling, and will bring students up to secondary level. The full education will be of three to four years duration of which the maritime component is one to two years.

Officers are recruited with A-levels after 12 years of basic education. The officer’s education is at university level and both Deck and Engineer officers follow a similar programme. After an admissions test, the education commences with three years at university, followed by 12 months sea time at junior officers level, and two years back at university. The last two years may be attended part time.

In addition to the full time students, the Latvian system allows students with a maritime background to undertake part time education or distance learning. This pathway is particularly attractive to ratings and maritime college graduates.

In 2004, 312 Deck and 250 Engineer officers graduated.

The Latvian education system is quite flexible and allows seafarers to supplement their qualifications, and an estimated 10% of the officers will at some stage undertake additional education. The impression is that additional education to Masters degree level is undertaken by individuals who want to leave the maritime industry entirely. Law is mentioned as a popular subject for supplementary education, but also economics and business administration. The MBA degree seems to be particularly popular.

Currently, the entry requirements for maritime education programmes can be set to a very high standard, because seafaring is a very attractive career in terms of employment, salary and social status. The potential therefore exists to increase the Latvian maritime education capacity and throughput. In the maritime industry there are some who express the need this, but there may be a lack of strategic guidance to achieve this goal.

7.1.3 Employment Data

According to data from the Latvian Seafarers Register and Major Crewing Agencies there are some 24,000 registered seafarers:

- In the merchant fleet approximately 20,000 seafarers are registered, 17,500 with valid certificates. Of these 10,000 are ratings and 7,500 are officers.
- There are approximately 2,000 seafarers in the fishing fleet.
- Approximately 2,000 seafarers are employed in port service vessels and inland and coastal waters vessels.

- Approximately 1,100 officers and 1,500 ratings are reported to be employed on European Economic Area flagged vessels.
- It is estimated that 500 former seagoing officers are employed ashore in the Latvian maritime sector, with crewing agencies, ship agents, freight forwarders, shipping managers, classification societies, surveyors, ports, cargo handlers, and in education.

Information on the employment of Latvian seafarers was included in a report from the U.S. Department of Transportation entitled; “Foreign-flag Crewing Practices”, a review of the nationalities and size of the crews of non-U.S.-flag cargo vessels calling at the United States during 2000. This report states that:

“In contrast with other Eastern European seafarers, the Latvian seafarers in this study sailed predominantly on chemical (50%) and other types (26%) of tanker vessels. Latvian crews were also reported on a number of reefer vessels (17%) during 2000. Latvian seafarers sailed on vessels under a variety of flags with Liberia (42%) the only flag with a large number of crew entries. There were no Latvian flag vessels calling the U.S. study ports in 2000.”

Unemployment is virtually unknown among officers, but is widespread among ratings. As a result, it is generally agreed that there are too many Latvian ratings, and the aim is to reverse the present division of 60 – 40 % between ratings and officers. In view of the excellent employment opportunities, ratings, as well as people from the naval defence and fishing industry, are offered programmes to become merchant marine officers.

Ratings of all categories, including catering staff, are offered officer’s education in a part time educational programme, which allows them to continue their working life as seafarers. The programme is popular with young ratings, and is believed to contribute more than 50 % of the officers graduating in recent years. However, this system is the cause of some concern regarding the quality of the officers, due to the part time nature of the programme.

Latvian officers that are specialised in chemical, gas and oil tankers, are seen to be highly attractive in the labour market and consequently can receive rapid promotion. Traditionally an officer would stay for three to four years at each rank. Today, well qualified officers with a good command of the English language, can expect to be promoted almost as soon as they gain the required certificate of competency, reaching senior officer level after only six to eight years.

Former seafarers have played a very important role in establishing the maritime cluster of the new sovereign state. During the transitional period in the years following independence, many officers went ashore to establish their own business as entrepreneurs of the new market economy. They would start small companies in the emerging new maritime sector, as agents, brokers, forwarders, as well as in crewing, operation, associations and administration. After a few years, when the market began to stabilise, many seafarers returned to sea because of the level of salary they could earn. However, those who remained ashore still form the core of the Latvian maritime

industry today. It is noticeable that throughout the industry, in business as well as administration, former Masters are found in the senior positions.

In the emerging private economy, opportunities for seafarers exist as ship agents, ship brokers, freight forwarders, crewing agents, classification society surveyors, and maritime administrators. Seafarers can also gain employment in ports, general logistics, insurance, banking, ship management, shipping companies and the inspection and surveying industry. A minority will leave the maritime sector to join other industries such as construction, manufacturing and utility services.

Another attractive career pathway is to take up traditional superintendent employment with foreign shipping and ship management companies. One interviewee was aware of some 10 Engine Officers, in the 35 – 45 years age group, who had become technical superintendents with companies in Norway, Cyprus and the U.K.

7.1.4 Specific Characteristics of the Member State

- There is a significant specialisation by Latvian seafarers in the skilled and sought after labour market of specialist vessels such as reefers, and notably gas, chemical and oil tankers.
- Approximately 70 % of Latvian seafarers are ethnic Russians, Belarusians and Ukrainians. They are, even if born in Latvia, labelled “non nationals”, and are not automatically issued Latvian passports. An estimated 50% of all Latvian seafarers fall under this category, and have not yet obtained citizenship. The issues of a lack of citizenship, and ethnic language difficulties, have consequences in relation to career prospects at sea, and even more ashore. There are concerns related to the problems of international travel for some Latvian seafarers and their language skills.
- The requirement for Latvian language skills in order for seafarers to get shore-based employment is paramount. Many of the ethnic Latvian resident seafarers do not have these language skills.
- The career paths and employment of Latvian seafarers is strongly influenced by the relatively high salaries earned by seafarers serving on foreign flagged vessels. The prevailing situation is that a junior officer may earn as much as 7 – 10 times the salary of someone in a comparable position ashore.
- The relatively high salaries of Latvian seafarers on foreign flagged vessels leads to a high retention rate of seafarers at sea. This in turn makes the recruitment of seafarers as teachers at the maritime colleges, in the maritime administration, as well as for other positions ashore, both within and outside the maritime cluster, extremely difficult. As a consequence, seafarers may lose many career pathways, as the wage gap is closed by the general economic development, and other sources of labour are found.
- Many international maritime service providers, such as classification societies and insurance companies, will have a Baltic representation in the Latvian

capital of Riga, rather than in each of the three relatively small Baltic States. This has opened up more opportunities for seafarers to work ashore.

- It was felt that the strategic vision for the maritime industry in Latvia was not as good as it could be. The maritime cluster is at present primarily geared towards the supply of seafarers, and is not as broad and well balanced as in other European countries. This situation has led to Latvian seafarers enjoying fewer career path opportunities than their colleagues from other EU member states.
- The retention rate of seafarers is very high compared to most other EU member states. One interviewee estimates that 80 % of the officers will still be at sea 10 years after graduation.
- Latvian officers enjoy a relatively high social status and salary level, and would expect, and are expected to, enter a shore-based career at a relatively high level in middle management. A factor that can play an important role in attracting seafarers away from the sea is the very real prospect of reaching senior management within a few years.
- The crewing industry is still benefiting from the heritage of the Soviet maritime cluster, in the form of a huge surplus of skilled and experienced seafarers.
- There have been good levels of recruitment of new officers during the last decade, and the demographic of officers seems to be well balanced between the age groups.

7.1.5 Significant Shore-based Sectoral Descriptors

The Crewing Industry

The Crewing Industry is perhaps the most significant part of the maritime sector in Latvia. There are presently 53 companies in operation of which 10 are relatively large. All key positions in the management and administration of these companies are filled with former seafarers of all disciplines, providing jobs for some 150-200 former officers.

This industry expanded greatly following the independence of Latvia. It has evolved from a situation with small independent service providers, to the present situation where a number of companies are agencies of large foreign shipping companies from among others major Norwegian tank ship operators. The agencies have also now formed subsidiaries and partnerships in neighbouring countries.

Attractive candidates to the industry are experienced officers of all categories, with good language skills and the ability to understand and meet the needs of the shipowner as well as the seafarer. The sector offers attractive conditions and is able to recruit well-qualified and competent executives to meet their demand.

The Ship Agents and Freight Forwarding Industry

The Ship Agents and Freight Forwarders Industry consists of some 40 – 45 primarily small companies with less than 10 employees, employing in total about 100-150 former seafarers. Approximately one third of the agents are larger companies, which combine the agency functions with freight forwarding and / or other activities like crewing.

When the industry emerged after Latvian independence in the beginning of the 1990's, it consisted almost entirely of former seafarers, notably Deck Officers. During its subsequent development, due to the difficulty in recruiting active officers, the employee profile has changed. The former officers and original entrepreneurs are now at the senior management level, while new employees to middle management tend to be business and logistics graduates, who are bound to move towards senior management during years to come.

Appropriate candidates for this industry are experienced Deck Officers, with good language skills. In terms of salary, this industry is perhaps slightly less attractive than the crewing industry, and is to a growing extent less dependant on recruiting former seagoing officers.

The Shipping and Ship Management Companies

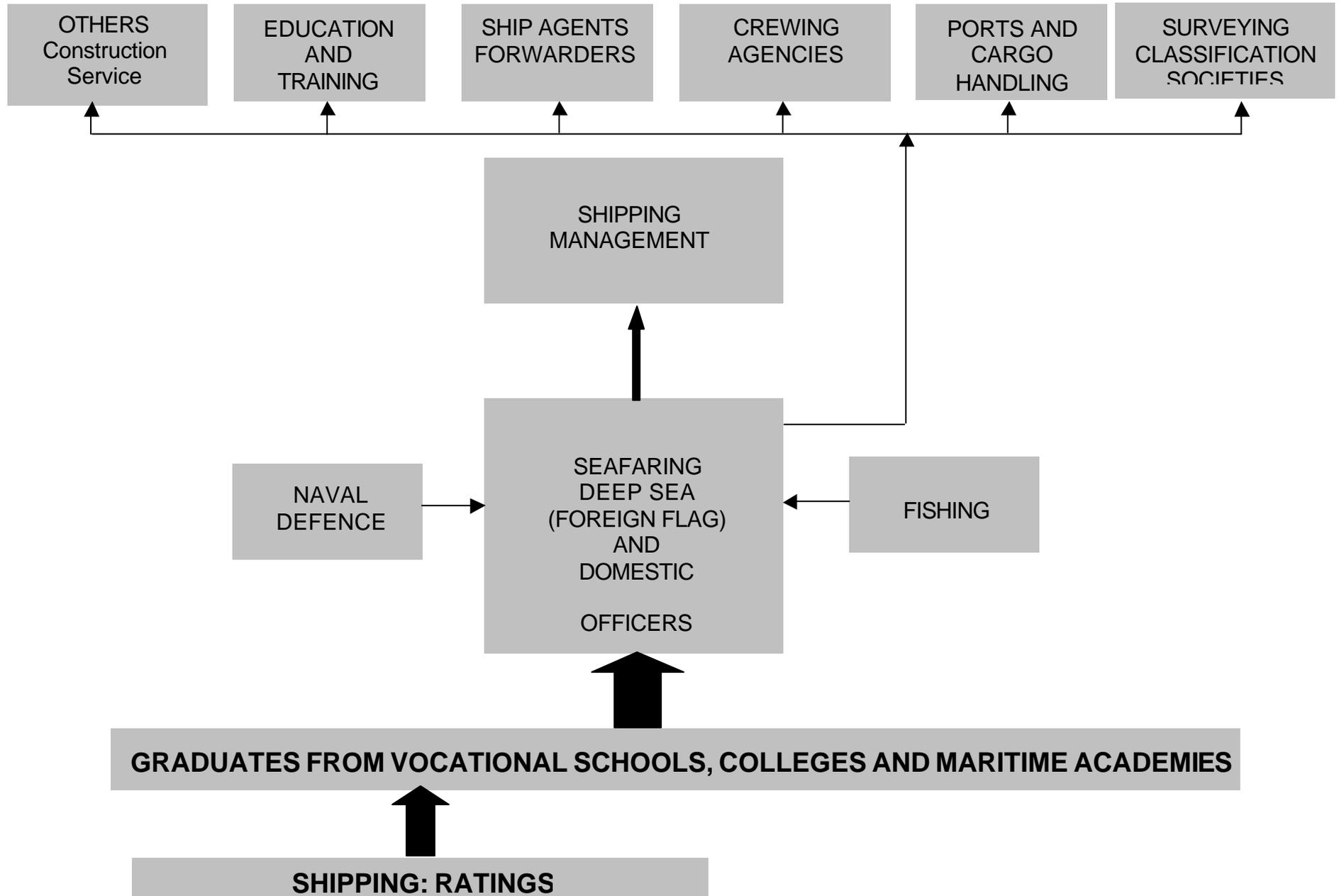
There are some shipping companies in Latvia, all of which are under private ownership. The major shipping company is the Latvian Shipping Company controlling 40 merchant vessels of over one million dwt, but only seven vessels of this company are registered under the Latvian flag.

A new trend of ship-management businesses has emerged and there are now a number of Latvian ship-management companies. This business has good prospects under the new shipping law that gives the opportunity to foreign shipowners to register their vessels under the Latvian flag and to benefit from a favourable taxation regime. Due to this increase in shipping and ship-management companies, this may provide new prospects for experienced Latvian seafarers to come ashore.

7.1.6 Table of Sectoral Representatives Interviewed

Maritime Administration	Maritime Department	Aigars Krastins
The Shipping Industry	Latvian Shipowners Association	Gunars Steinerts
The Shipping Industry	Latvian Seafarers Union	Igors Pavlovs
Maritime Education	Latvian Maritime Academy	Gregory Gladkovs
Crewing Industry	LATBGI, Ass. of Crewing Agencies	Alexej Churkin
Maritime Education	Latvian Maritime Academy	Janis Brunavs
Maritime Administration	Seafarers Register	Jazeps Spridzans
Agents and Brokers Industry	National Agents and Shipbrokers Ass.	Raimonds Toms
Maritime Administration	Maritime Administration	Ansis Zeltins

7.2 CAREER PATH MAP FOR LATVIA



Netherlands



8.1 COUNTRY REPORT FOR NETHERLANDS

8.1.1 Socio-economic and Cultural Background²⁷

The Netherlands is one of the world's major international trading countries. The international focus and outward orientation of the Dutch stems from centuries of maritime tradition.

Although small in area, the Netherlands occupies a strategic geographical location for which it has earned the name: "Gateway to Europe". The Netherlands has turned its favorable location for transshipments, accessibility, transportation, trading culture and service industry into a major maritime cluster.

The Dutch maritime cluster comprises 11 sectors and about 11,800 companies, offering nearly 200,000 jobs, directly and indirectly. The cluster includes the Dutch shipping industry, major ports including Rotterdam, which is Europe's largest and the world's third largest port, the world's largest dredging fleet, the largest European inland barge fleet, shipbuilding including yachts, offshore, fisheries, the water sports industry, shipping finance, legal advisors and insurers, maritime education and research, a modern Royal Navy and the marine equipment suppliers and service industries. The total turnover of the cluster has increased from 17.8 billion Euros in 1997 to 21.4 billion Euros in 2002. The value of the cluster's exports amounted to 12.6 billion Euros in 2002, which represented about 2.9% of the Netherlands total Gross National Product.

In order to create a platform for all these maritime interests to meet, the Government has actively supported the cluster through the development of the Dutch Maritime Network (Stichting Nederland Maritiem Land). This employers' organization, operating as a network, aims at the further promotion and reinforcement of the Dutch maritime cluster. With a Board made up of prominent persons from the maritime world, this organization is actively involved in communication, long term policy development, image building, maritime education and a host of different maritime projects. In many ways, this organization has grown out of the successes of the new Dutch shipping policy, which was introduced in 1996.

Shipping by nature is an international activity and ship owners can locate themselves anywhere. The Dutch Government realized this and that the value of shipping is not only in ships and jobs at sea, but also in the supporting infrastructure on land. The Dutch shipping policy therefore is designed to enable ship owners to trade their vessels from the Netherlands on competitive and profitable terms.

One important item of this package of measures is the option to the ship owner of determining annual fiscal profits on the basis of the tonnage of his ship, irrespective of the flag under which the ship sails – the "tonnage tax". The Dutch flag offers additional benefits, since it allows companies to apply flexible manning regulations and to make use of additional fiscal measures, which reduce the cost of employing crewmembers domiciled in the Netherlands by around 30%.²⁸

²⁷ This section has used material from several fact sheets provided by the KVNR website at www.kvnr.nl

²⁸ www.kvnr.nl Fact sheet 1: Shipping policy, October 2002

Flexible manning regulations were made possible by the introduction in 1996 of the Manning Act, which incorporates international STCW 1995 requirements. The certification requirements for Dutch ships have been simplified. Within the framework of STCW95, the Netherlands has signed agreements with a number of labour supply countries. Officers in the possession of Certificates of Competency from these countries can be issued a Dutch endorsement of recognition, after which they can be employed on Dutch ships. Ratings are not subject to signed agreements between the Netherlands and their country of origin; therefore Dutch vessels may employ ratings from all nationalities.

There are no legal demands concerning the nationality of crewmembers, with the exception of the Master, who must possess Dutch nationality or the nationality of any of the other EU Member States, Norway, Iceland or Switzerland. Or he must possess the nationality of a country that has a recognition agreement with the Netherlands to sail on Dutch vessels. This latter category may be employed as a Master by a Dutch shipowner, if a permit for doing so is issued to the shipowner by a panel, composed by the Dutch shipowners association and the Dutch seafarers Federation. Since 2003, a dispensation has been allowed which also permits Masters from the countries that have recognition agreements with the Netherlands to sail on Dutch vessels. In 2003, about 30 non EU Masters were working on vessels in the Dutch fleet.²⁹

The number of ships registered in the Netherlands increased from 557 in 1995, year on year, to a peak of 810 vessels in 2003. As of January 2005, the figures showed a decrease in 52 vessels, giving a total of 768, representing 5.1 million gross tonnes.

In summary, due to its geographical position, the Netherlands is a maritime nation with a long tradition. The importance of the maritime cluster to the Dutch economy is recognised by Government, which has given support to the shipping industry and to the creation of the Dutch Maritime Network. Consequently, the Netherlands has a sophisticated maritime infrastructure, including the provision of statistics on its maritime labour markets, with all elements working together for the national good. This “togetherness” in the face of the potentially invasive North Sea, described by one interviewee as the “Polder” model, is evident. Although this might be expected in a relatively small country, nevertheless, it is an important factor in the continuing success of the Netherlands as a maritime nation of influence in Europe.

8.1.2. Maritime Training and Education System

Two features have characterised the Dutch maritime education system: the vocational nature of the system and the bivalent certification for Deck and Engineer Officers.

Most students enter the maritime education system after a compulsory primary education of eight years and a secondary education, which ranges from four years prior to entry into the intermediate vocational education system (at age 16) or five years before entry into the higher vocational system (at age 17).

²⁹ Royal Association of Netherlands Shipowners Annual Report 2003, p 44

Maritime education for officers thus consists of two main routes: the intermediate vocational route (MBO) for four years and the higher vocational route (HBO), which is for three years. It is possible for students to move from MBO to HBO. After a further year's study, and successful completion of the HBO, a graduate receives a BSc. Both systems will lead to the student's first Certificate of Competency as a Watch keeping Maritime Officer. After two to four years as a Watch keeping Maritime Officer and a short ship management course, officers may be awarded their Certificate of Competency as Master/Chief Engineer for vessels of unrestricted Gross Tonnes or kW power. Qualifications for other officers, such as dredger officers and personnel on ships less than 3000 gross tonnes/3000 kW (SWK), generally follow the MBO model.

The bivalent system of officer certification was introduced in the 1980's, but with the increasing number of mono-discipline foreign officers serving on Dutch vessels, this has created the situation where more specialist education is now needed for Dutch officers. Consequently, the MBO system is undergoing revision to allow the re-introduction of mono-disciplinary 'courses'. With regard to HBO, the four institutions in the Netherlands that offer nautical education are in consultation to consider more specialisation and a change in direction towards more competence oriented education. This process is predicted to occur by 1 January 2006³⁰.

Table 1 shows the numbers of new entrants into the various streams for the years 1996-2003. Table 2 shows the number of graduates from the streams for the same years. Of course, not all graduates will necessarily go to sea, but it is estimated that 75% of them will.³¹

Table 4 – Number of entrants

	1997	1998	1999	2000	2001	2002	2003	2004
SWK	142	136	121	80	96	See MBO	See MBO	See MBO
MBO	251	285	295	257	232	416	448	414
HBO	261	227	255	199	174	183	200	235
TOTAL	654	648	671	536	502	599	648	649

Table 5 – Number of graduates

	1997	1998	1999	2000	2001	2002	2003	2004
SWK	96	112	97	See MBO	See MBO	See MBO	See MBO	See MBO
MBO	180	194	187	284	317	308	366	308
HBO	216	209	207	221	152	155	146	114
TOTAL	492	515	491	505	469	463	512	422

³⁰ Royal Association of Netherlands Shipowners Annual Report 2003, p 45

³¹ Veenstra, A (2005) "The Duration of the seafaring career: an analysis of Dutch pension fund data 1954-2001." Erasmus University, Rotterdam

These figures confirm the findings of a report that states that the number of students in the Netherlands has been quite stable overall during the last few years, although there is a slight decreasing trend in the total numbers of entrants and graduates. This is also the case in other occupations so it may simply be the result of a general decrease in young people in the Netherlands.³² A noticeable increase, however, is in the number of graduates with a limited certificate for vessels less than 3000 gross tonnes/3000 kW.

In 2004, nautical education in the Netherlands in 2004 was provided by a number of colleges. MBO and SWK (Skipper for near-coastal voyages) level courses were offered by the Noorderpoort College “Abel Tasman”, the Maritieme Academie “Den Helder”, the Maritieme Academie “Harlingen”, Afdeling Zeevaartopleidingen in Zwolle, the Maritiem Instituut in Ijmuiden and the Deltion College. Courses at HBO, MBO and SWK levels were offered at the Scheepvaart en Transport College (“STC”) in Rotterdam, and the Maritiem Instituut ‘De Ruijter’ in Vlissingen. HBO level only courses were offered by the Maritieme Academie Amsterdam, and the Maritiem Instituut “Willem Barentsz” in Terschelling.

There are no training institutes for ratings other than ratings for inland shipping.

8.1.3. Employment Data

Data is available for 2002³³ on the number of companies in each sector of the Dutch Maritime cluster and the number of employees in each sector. These figures are shown in Table 3 below.

Table 6. The Sectors represented within the Dutch Maritime Network

<u>Sector</u>	<u>Number of companies</u>	<u>Total number of employees</u>
Shipping	400	19850
Shipbuilding	90	10270
Offshore	340	19080
Inland Shipping	3500	11600
Dredging	290	5170
Ports	620	26750
Royal Navy	1	16110
Fishing	795	5650
Maritime services	700	9560
Water Sports (Leisure)	4000	13230
Marine Equipment suppliers	750	13190
TOTALS	11496	135600

³² Waals, Frans (2002) “A Forecast Model and Benchmarking of the Supply and Demand of Maritime Officers”, Erasmus University, Rotterdam.

³³ Van der Aa, Jansen, & Stuijvenberg (2004) “Monitor Maritieme Arbeidsmarkt 2003”.Nederland Maritiem Land Series. Delft University Press.

The 135600 employees represents about 1.8% of the total Dutch workforce. The majority of the maritime sectors expect to remain stable in the future. Only Inland Shipping, Water Sports and Marine Equipment Suppliers expect an increase in employment. Offshore and the Royal Navy both expect a decrease in employment.

The number of seafarers employed on Dutch flag vessels has decreased from 7650 in 1996 to 4858 in 2004. During the same period, however, the increase in foreign seafarers has increased from 6100 in 1996 to 12906 recorded in 2004. These figures do not include 466 on-board trainees in 2004³⁴. No data was available but it appears that very few Dutch seafarers work on foreign vessels.

The number of ships is now slowly falling but, due to the age factor, many Dutch senior officers will reach retirement age soon and with the number of graduates remaining stable, the shortage of Dutch officers is expected to increase. One solution would, of course, be to recruit more Dutch officers, but another alternative would be that the number of foreign officers employed, in order to satisfy this demand, might be expected to increase.

The evidence³⁵ suggests that the Dutch labour market in shipping is dominated by a large proportion of young officers. This large proportion is caused by the fact that few Dutch officers remain at sea until normal retirement age. Most start working ashore after spending a relatively short time at sea – a recent study suggests that this time has decreased from 7-8 years in the 1950's to only 5 years in the 1980's.³⁶

The Dutch pension fund began in 1954. Since 1975, a seafarer's pension is built up from age 22 to 60. At 57.5, seafarers can opt for an early pension. During this period, the pension can continue to build. Between 60 and 65, seafarers are eligible for a "bridging" pension. The normal retirement age is 65, from which age seafarers may draw a standard retirement pension.³⁷

8.1.4. Specific Characteristics of the Member State

- The geographical position of the Netherlands in Europe ensures that it has a strong interest in all aspects of maritime affairs, but particularly in inland shipping and dredging.
- The Dutch Maritime Network. The concept of economic clustering of related industries, although also present in both Germany and Denmark, is probably more advanced and remarkable in the Netherlands than any other EU Member State. This may be related to the strong sense of national culture felt by the Dutch. The Dutch too have a relatively sophisticated system for measuring their labour markets.

³⁴ Informative letter to the Dutch Parliament on December 12, 2004.

³⁵ Waals, Frans (2002) "A Forecast Model and Benchmarking of the Supply and Demand of Maritime Officers", Erasmus University Rotterdam.

³⁵ Veenstra, A (2005) "The Duration of the seafaring career: an analysis of Dutch pension fund data 1954-2001." Erasmus

University, Rotterdam

³⁷ Veenstra, A (2005) *ibid*

- Due to shipping policy changes in 1996, including the adoption of a tonnage tax, the Dutch fleet has increased significantly in the period 1996-2004.
- Although the number of Dutch graduates has remained stable, the supply of Dutch officers has decreased. This has led to an increased demand for foreign officers, mainly from Eastern Europe and the Philippines. The Netherlands has equivalency recognition arrangements with several labour supply countries. There are 1002 Dutch ratings. All other ratings are foreign nationals.
- Dutch officers are generally young, and they come ashore after only 5 years at sea. A significant number of senior officers that stayed at sea will retire in the coming years.

8.1.5. Significant Shore-based Sectoral Descriptors

The Dutch Maritime Network

The Dutch Maritime Network comprises a cluster of 11 components, including shipping, which constitutes a significant proportion of the maritime sector in the Netherlands. The eleven sectors represented by the cluster are: shipping; ports; maritime services; ship-building; marine equipment suppliers; yachting; fishing; dredging; offshore; the Dutch Royal Navy and inland shipping.

The purpose of the Network is to provide for the members a platform for discussion and actions, and the promotion of the maritime cluster. It is a collection of employers so the labour market is seen from their perspective.

Labour studies are conducted regularly – the 2002 survey was the most recent³⁸. Data on labour mobility is gathered from employers by questionnaire. The level of analysis is at the cluster level not at the individual sector level. Consequently, most information available focuses on the inputs and outputs of the whole cluster, not the mobility within it. Most probably, a new comprehensive survey will be conducted in 2006. At present, a limited study/survey (for shipping and dredging) was conducted for the year 2004.

The influx of new personnel into the whole cluster is relatively low (for example 3% in Ports and 5% in Shipping and Offshore) compared with a national average of 14%. This is explained partly by the generally low turnover rates (3% for Shipping and Ports) compared with the national average of 11%.

One out of every six new employees in the cluster is a school leaver or graduate. In 2002, only in Dredging and Ports was this significantly lower. In most sectors, the bulk of new employees come from other sectors, often from within another maritime sector. This is especially true of the Shipbuilding, Dredging, Ports, Maritime Services and Marine Equipment Supply sectors. Some sectors do have considerable mobility

³⁸ Van der Aa, Jansen, & Stuijvenberg (2004) "Monitor Maritieme Arbeidsmarkt 2003". Nederland Maritiem Land Series. Delft University Press.

within companies in the same sector – this is true of Fishing and to some extent to Shipping and Inland Shipping.

The majority of employees who leave their job also leave their sector. This level of mobility is between 65 – 75%. However, it also appears that these employees and their maritime expertise are, for a considerable part, retained within the maritime cluster.

The attached career map shows the more significant lines of mobility between the sectors of the Network.

Most of the shore-based maritime opportunities for ex-seafarers thus lie within one or other of the sectors in the Maritime Network. However, there are some other significant maritime-related sectors that are not part of the Network. These sectors are described below. In addition, some sectors, such as surveying, which is part of the Maritime Services sector, also provide good examples of opportunities for suitably qualified seafarers ashore, and are described here.

Surveying (part of the Maritime Services sector)

It is estimated that there are about 650 Dutch surveyors, working not only in the Netherlands, but as far reaching as from Iceland to Morocco. A company such as AMEYDE employs 23 surveyors, of whom 22 are ex-seafarers. 90% of their work is for damage and loss prevention liability cases, for example, for P&I clubs. Of this sample, 85% are former Deck Officers and 15% former Engineer Officers.

The ideal candidates for surveying possess the following qualifications:

- 1 Experience (especially dry-docking) and credibility. Their really desirable qualities are their knowledge of ships and their credibility as expert witnesses. Consequently, ideal candidates are likely to be in the 30-40 age range.
- 2 A Master's or Chief Engineers certificate is optimal, but lower certificates are acceptable.
- 3 An investigative nature and the ability to write reports are highly regarded.

The retention rate is generally good. Most staff turnover is due to retirement or moving to different companies within the maritime services sector. Some engineers do move out of the maritime sector completely, taking up opportunities in power plants ashore. However, there are current shortages for qualified surveyors.

Maritime Education and Training

There are an estimated 400 ex-seafarers in the Maritime Education and Training system in the Netherlands. They come from a range of marine sectors, including shipping, dredging, ports and the offshore industry.

Retention is high and there are about 10-20 vacancies available nationally per year.

Pilotage

Since privatization in 1988, registered pilots have been organized on both a professional and business level, under the general organization known as Nederlands Loodswezen. There are currently 500 registered pilots and 400 supporting staff.³⁹

All registered pilots together form the public body for the profession: Nederlandse Loodscorporatie - NLC (the Dutch Pilots' Corporation). Its main tasks are to ensure and to further the quality and continuity of the services rendered by registered pilots. As well as the national NLC, there are four regional pilots' corporations: the Northern Region, Amsterdam, Rotterdam and the River Scheldt. A supporting company, Nederlands Loodswezen B.V. deals with the collection of pilotage charges and provides general support to the pilots. Its tasks are, for example, planning, administration, personnel, transport and IT. Its shareholders are the registered pilots.

The Maritime Pilots Institute Netherlands [MPIN] is a subsidiary of "Nederlands Loodswezen B.V." that provides education and training for their pilots.

98% of the pilots are ex-commercial seafarers, although in an interesting trend to offset expected shortages of recruits, about 2% of the current workforce is ex Royal Dutch Navy. Normal entry requirements are a Master's certificate, although a Mate's certificate is acceptable if the individual has also received the HVO education. No experience of command is necessary.

The training given to new pilots is extensive. There is an initial one year training phase, including a national course with examinations to pass. This is followed by local training and the understudy of experienced pilots for 7-9 months before going solo.

As might be expected, the retention rate is very high: it is a well paid, interesting and satisfying job. Leaving employment before normal retirement is usually the result of sickness. Retirement is compulsory at age 55.

The move from a wholly Government service to a combination of a public organisation and a private company seems to have been successful. No future shortages of recruits are anticipated, but like its counterpart in the UK, the future organisation of the pilotage service appears to be the subject of debate.

Maritime Law

It is estimated that there are about 12,000 lawyers in the Netherlands, i.e. those called to the Dutch Bar. Of these about 100 are lawyers who deal with maritime or "wet" cases. It is estimated that there is likely to be only 15 of these who will be ex-seafarers. The lack of seafarers going into the law is probably due, as in other countries, to the requirement to study Law to graduate level.

³⁹ Extracts from the Dutch pilots website: www.loodswezen.nl

Classification Societies

It is estimated that there are about 100 ex-seafarers working as surveyors for Classification Societies in the Netherlands. This includes both “wet” surveyors and “dry” surveyors, who concentrate on audits ashore.

In addition to Deck and Engineer Officers, Classification Societies also employ naval architects. The ideal ex-seafarer candidate will hold both the vocational certification plus a BSc degree. They will have seagoing experience and need both sector knowledge and the right personal attitude.

They will receive extensive internal training and development, and may specialise in different ship types, for example, LNG or cruise ships. Alternatively, they may specialise in a type of survey, for example, underwater surveying. There are management opportunities and also opportunities to cross over to other sections, for example, ISM certification, R&D and consultancy and more recently, security and ISPS issues.

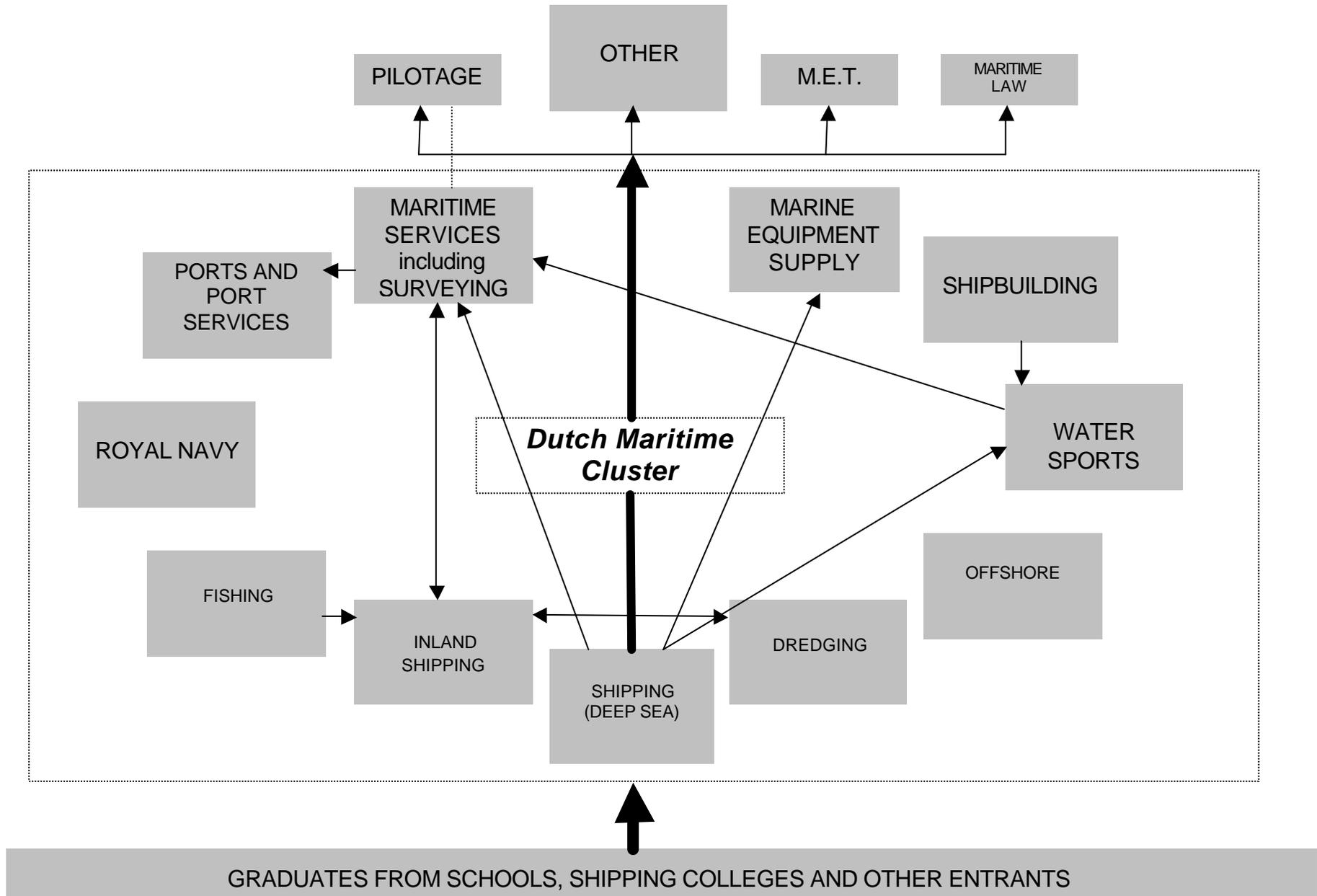
The exit destinations for most surveyors are to other companies or to the marine equipment supply sector.

Because the Classification Societies have access to international sources for recruitment, there seems to be little concern over current or predicted shortages of Dutch ex-seafaring officers.

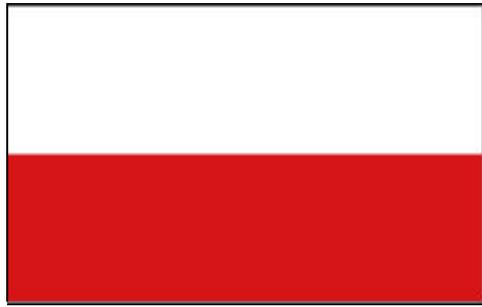
8.1.6. Table of Sectoral Representatives Interviewed

Sector	Organisation	Representative
Maritime Administration	Ministry of Transport, Public Works and Water Management	Drs Henk Merkus Mr Rob de Bruijn Ing R E Donkersloot
Maritime Networks	Nederland Maritiem Land	Drs Ir Henk Janssens
Shipowners Association	Royal Association of Netherlands' Shipowners (KVNR)	Guido Hollaar
Maritime Education and Training	Erasmus University Shipping and Transport College	Franz Waals Ton Van Essen
Seamen's Federations	Federatie van Werknemers in de Zeevaart	Marcel van den Broek
Pilotage Associations	Loodswezen	Willie Bennik
Labour Consultants	ECORYS	Ruud van der Aa
National Port Services	Nationale Havenraad	Drs A M J Langeveld
Maritime Law	Nautadutilh	Willemijn Arends Mark Mouthaan
Ship Surveyors	Van Ameyde	Aant Elzinga
Classification Societies	Det Norske Veritas	Henk Akse

8.2 CAREER PATH MAP FOR NETHERLANDS



Poland



9.1 COUNTRY REPORT FOR POLAND

9.1.1 Socio-economic and Cultural Background

Based on its history and geography, Poland is clearly characterised as a maritime nation. It is located on the Baltic Sea, and is crossed by two of largest rivers that flow into this sea, the Oder and the Vistula. The main maritime cluster is situated on the coast in the Gdynia-Gdansk area, but maritime activities are also found in Szczecin, Olsztyn, Poznan, Warszawa, Katowice, Krakow and Kolobrzeg and Swinoujscie and many other smaller coastal towns.

During the communist era seafaring was considered a very attractive vocation. Furthermore, even before the collapse of the communist system, Polish seafarers were allowed to work on western ships, and seafaring was one of only a few opportunities for foreign travel, enabling the earning of foreign currency and the opportunity to purchase and import foreign goods. Polish seafarers were entitled to an additional salary paid in US dollars when they were working onboard vessels flying the Polish flag. This additional salary varied with rank and trading pattern, but could be quite substantial. Family traditions have always played a role in the Gdynia-Gdansk, Szczecin and other coastal areas, but the attractiveness of seafaring was such, that people from the entire country were attracted.

Poland has a diverse maritime cluster ranging from shipping, shipbuilding, equipment manufacturing and ports to the service, finance, fishery and the leisure industries.

By December 2004 the merchant fleet of Polish ownership and co-ownership under various flags counted 112 vessels of 1.6 million GT. Only 12 vessels are under the Polish flag.

The present socio-economic situation remains to a large extent the result of the situation following the fall of the Soviet Empire and the introduction of a market economy. Poland found itself without the legal and financial systems required to facilitate the ship owning industry. In order to take out mortgages on their vessels and finance their businesses, Polish shipowners had to transfer vessels to foreign open registers. From almost 300 Polish owned vessels in the late 1980's, the number soon dropped towards the present level.

Poland has six shipyards, and in 2004 they built 25 vessels, which is 11 more than in 2003. Shipbuilding and ship repair ranks amongst the five largest Polish exports. Linked to this industry is a large sector of equipment manufacturers.

Currently in Poland there is a great surplus of qualified seafarers, and this has become a major issue in relation to seafarer employment and career paths. Whilst shipbuilding and equipment manufacturing represent major shore based activities of the maritime sector, labour supply has become the major "sea borne" activity of the sector, as indicated by the presence of 50 – 60 crewing agencies.

In the present situation the main problem, as perceived by the interviewees, is a lack of direct interest by the Polish Government in the maritime sector. The future of shipbuilding and equipment manufacturing is considered uncertain. The situation is

more positive within the ports sector, where the general economic growth in the country is leading to increased investment and increased turnover.

9.1.2 Maritime Education and Training System

In Poland maritime education follows three pathways:

- By secondary vocational schools and apprenticeship, mainly aimed at the shipbuilding and repair industry.
- By way of private maritime schools offering a fast track Diploma Course to students entering after 12 years of basic schooling. This is a 36-month educational programme at Management Level based on IMO Model courses and approved by the Polish Administration. The education includes 12 to 14 months at sea. Graduates will obtain a license as officer of the watch, and will earn higher licenses based on sea time served.
- By a five to six year college/university level education for students entering after 12 years of basic schooling. This education includes sea-time on training vessels and in the Navy.

During their education, ratings will receive a standard 12-year basic schooling, making them qualified for the officers' education where their prior learning is taken into account for entry. Although no accurate data was made available for this study relating to the progression of ratings, one estimate is that 20 – 30 % of the ratings will become officers. It is considered quite normal that officers have a background as ratings.

The general notion is that officers' progression is quite fast, especially in the lower ranks, while individual appraisal systems play a more important role as the higher ranks are approached. Senior officer's level may be reached after six to eight years.

9.1.3 Employment Data

Estimates indicate that of approximately 45,000 Polish seafarers, an estimated 26,000 are ratings and 19,000 officers. 40,000 are employed on foreign flag, and 5,000 on EU flagged vessels.

Information on the employment of Polish seafarers was included in a report from the U.S. Department of Transportation entitled; "Foreign-flag Crewing Practices", a review of the nationalities and size of the crews of non-U.S.-flag cargo vessels calling at the United States during 2000. This report states that:

“Like Ukrainian seafarers, Polish crews are found in large numbers on dry cargo vessels (over 85 percent) under various flags. Where they differ is in the use of Polish seafarers by owners of RO/RO vessels. Approximately 16 percent of Polish entries were on RO/RO vessels where Polish officers are the 3rd most common nationality and unlicensed crewmembers are the 2nd most common. Additionally, Poland has a national flag presence in the U.S. foreign trade crewed by Polish seafarers. Overall, Polish flag vessels represented about 10 percent of Polish seafarer employment in the U.S.-foreign trade in 2000.”

The Polish seafarers monthly wage, for example for an AB, when working onboard for a foreign employer amounts to approximately USD 1500, which is approximately twice the average salary in Poland. However, when taking into account that the seafarer can only earn this level of salary for six to seven months of the year, and there are deductions for national social insurance, the seafarers’ net monthly salary is lower than the average salary in Poland.

9.1.4 Specific Characteristics of the Member State

- Poland has historically had a level of unemployment, which creates considerable competition in the labour market, based on qualification and employability. This has resulted in a highly skilled workforce with ambition for education and lifelong learning.
- The abundance and mobility of skilled manpower are apparent not only in the supply of seafarers to foreign shipping but also in other maritime sectors. One interviewee pointed out that from a graduating class of some 30 naval architects only a small handful would find employment in Poland, the rest would go abroad. This availability of skill is mentioned as one reason a company like DNV has its largest presence outside Norway in Poland.
- Even though there is very little domestic demand for seafarers, due to the decline in recent years of the number of Polish owned vessels, the number of officers educated and qualifying has remained constant.
- The crewing or labour supplying industry are still benefiting from the heritage of the communist era, in the form of a huge surplus of skilled and experienced seafarers. There has also been good supply of new officers; therefore the population of seagoing officers is reasonably divided among the age groups.
- Due to the large number of seafarers relative to the career opportunities ashore in the maritime sector, Polish seafarers have fewer opportunities to gain maritime related shore based employment. This leads to a higher retention rate of officers at sea. Estimates suggest that as many as 80 – 90% of officers are still at sea after ten years.

- Regarding seafarers' career paths ashore, Polish ex seafarers are not normally employed in the maritime administration. Civil servants usually fill these posts.
- Transfer of manpower from the fishing industry to the merchant navy has been limited in Poland. Former fishermen have apparently found employment in the fishing fleets of other countries.
- In addition to the traditional jobs as pilots, educators and administrators, the emerging private economy, offered new opportunities in ship agency, ship brokerage, freight forwarding, manning agencies, and shipping operations. Seafarers are also attracted to the ports, general logistics, insurance and finance, ship management, shipping companies and the inspection and surveying industry. Another popular career path is to become independent entrepreneurs by investing the accumulated capital in small hotels or vacation cottages along the coast.
- Many officers are attracted to leave Poland with their families, to take employment as superintendents with operators and shipping companies in Europe and elsewhere.
- In the shore based maritime sectors, Engineer Officers are in demand as inspectors and surveyors with classification and insurance companies, or in technical functions within ship management companies, shipyards, and equipment manufacturers, with maritime service and repair and in various functions as superintendents. Outside the maritime cluster, opportunities are to be found as operations and maintenance manager functions at larger plants in industry, at hotels, hospitals etc. and in public utility.

9.1.5 Significant Shore-based Sectoral Descriptors

The Crewing Industry

In relation to shore employment of seafarers the crewing industry is one of the most significant maritime sectors in Poland. There are approximately 50 - 60 companies in operation. Former seafaring officers, of all disciplines, fill many key positions in the management and administration of these companies. The sector provides in the order of 200 jobs for former officers.

The industry has evolved from a situation with small independent service providers, to the present situation where a number of companies are agencies of large foreign shipping companies. These agencies have also formed subsidiaries and partnerships in the neighbouring countries.

The most suitable candidates for this sector are experienced officers of all disciplines, with good language skills and the ability to understand and meet the needs of both shipowners and seafarers. This crewing industry offers attractive conditions of employment and is able to recruit high calibre seafarers to meet their demand.

General Public and Maritime Administration and the Private Inspection and Surveying Industries

Beside the Maritime Administration this line of work is undertaken primarily by the classification societies, but also by, and on behalf of, insurance companies, shipping companies, cargo forwarders and receivers and others. It is difficult to estimate the number of former seafarers employed in this sector, but as an indication, DNV, which accounts for perhaps 50 % of the maritime classification market in Poland, employs 20 – 25 former seafarers out of a total of 135.

It is a diverse and growing industry. New regulatory requirements like the ISM and ISPS Codes⁴⁰, increased legal liability, and the attention to public image, have all led to the creation a range of new job opportunities in this industry for their control, verification and implementation.

Ideal candidates are relatively young but experienced officers with good social and communicative skills. More specifically, the abilities to appreciate the position of the client, and to deliver a prompt quality service, are highly valued.

The career will always involve substantial job specific and ongoing training. The starting position is at the frontline, working with clients, but after some years, the career may on one hand progress towards ad-hoc, project and specialist functions, or on the other hand towards general management at various levels. At this stage additional training and education will be more specialised and individual. Due to the availability of suitably qualified staff, Det Norske Veritas has placed a particularly large research department in Poland.

Ship Building, Equipment Manufacturing, Service and Sales

This sector covers both marine equipment, as well as non-marine equipment. Both Deck and Engineer Officers are employed in functions related to sales and customer relations, for example, the development of manuals, operational support and technical service.

In addition to the vocational capabilities, candidates are required to possess skills relevant to customer relations like: assertiveness and decision-making. Candidates have to possess good social abilities and cultural awareness.

⁴⁰ UN International Maritime Organisation, international requirements for procedures, quality assurance etc, regarding maritime safety and security.

Three career paths are available: as head of department, and further towards senior management; as a specialist, often associated with the term “senior” in the title, and without direct managerial responsibility; or as a project manager. Promotion is rewarded in a competitive environment involving other vocations, and often related to additional education and training in business and management.

Utility Industries, Heat, Power and Waste Management

This is a traditional area of shore-based employment for Engineer Officers. The jobs in this sector often have some similarities with the Engineers’ shipboard jobs, by involving watch keeping duties and operations monitoring.

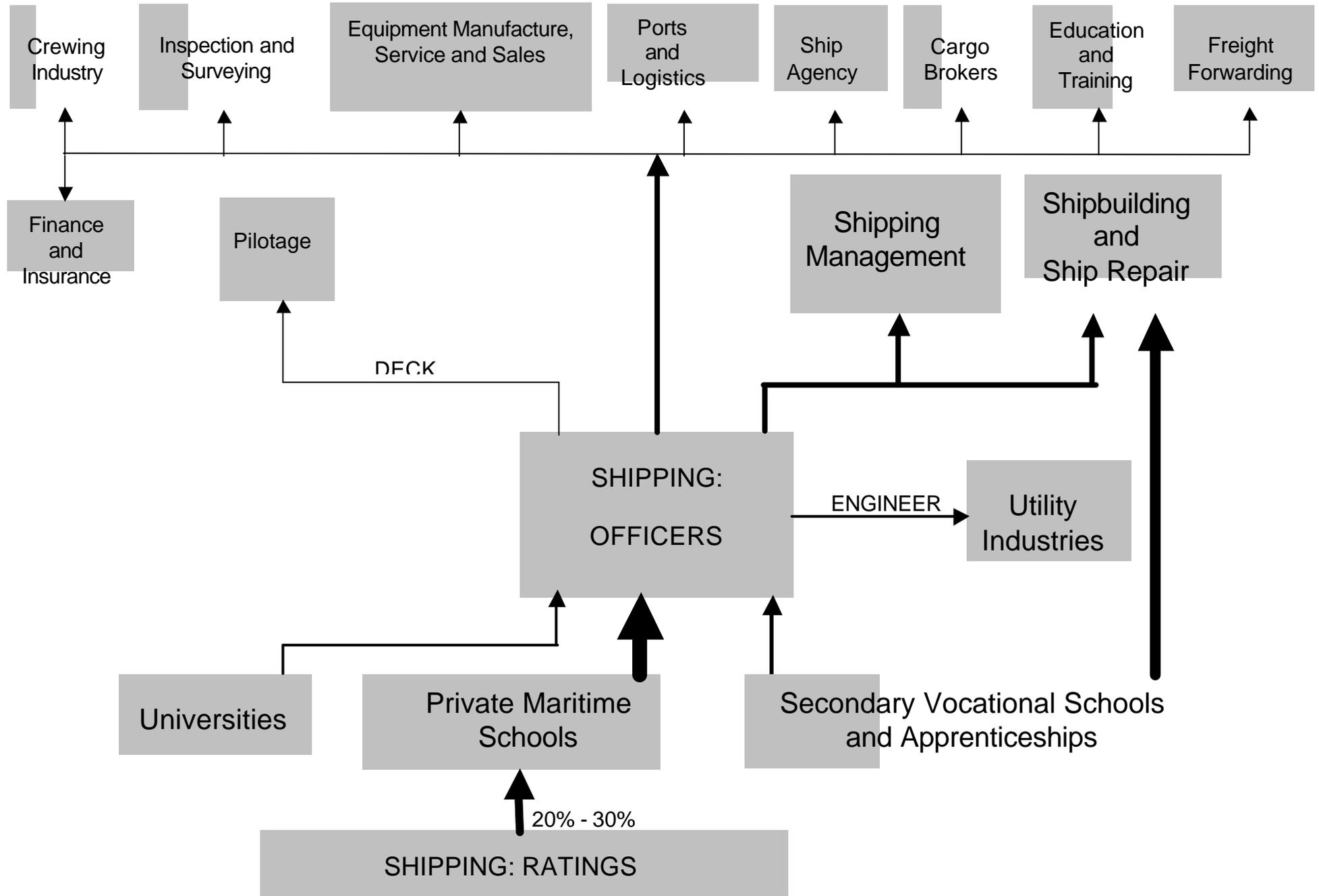
The preferred candidate has experience from a few years at sea, but may also come from other areas. Language abilities and some understanding of economics and business are valued. Additional training will mainly be specific to the job.

The normal starting position is as Operations Engineer, above which is the Operations Manager and the General Manager. Other opportunities for development and progression are to become workshop or project manager in a special support function.

9.1.6 Table of Sectoral Representatives Interviewed

Maritime Education	Gdynia Maritime University	Henryk Sniegocki
The Shipping Industry	Association of Shipowners and Maritime Entrepreneurs of Poland	Slawomir Balazy
The Shipping Industry	Polish Seafarers' Union	Henryk Piatkowski Anna Pokusa
Classification and Surveillance Industry	DNV, Poland	John Jyng
Crewing Industry	Ass. of Crewing Agencies, I.E.S. Co Ltd.	Tomek Trzaskowski Tomaz Kuc
Maritime Cluster Research	Polish Chamber of Maritime Commerce	Witold Waclawik-Narbutt

9.2 CAREER PATH MAP FOR POLAND



Spain



10.1 COUNTRY REPORT FOR SPAIN

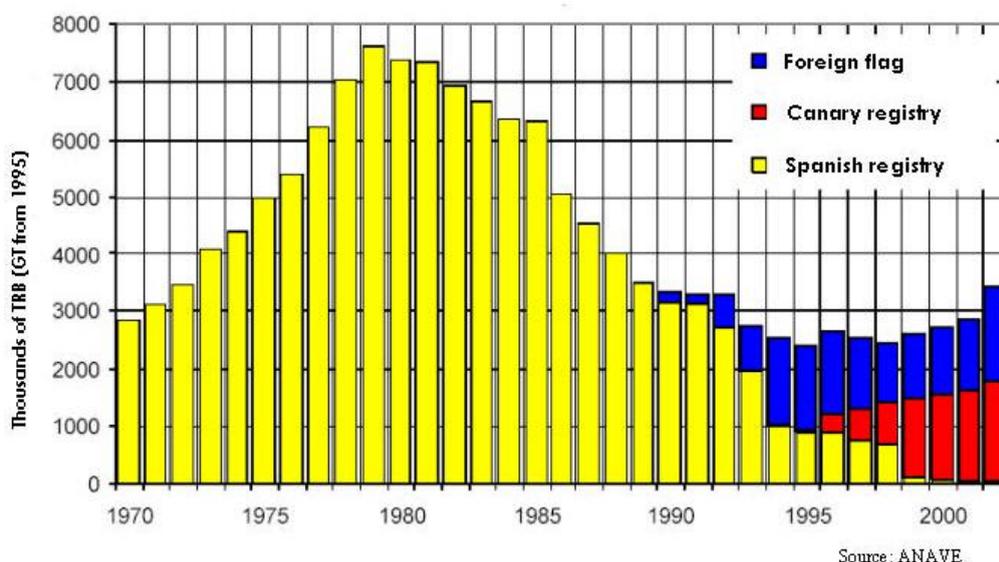
10.1.1 Socio-economic and Cultural Background

The importance of the maritime industry for the Spanish economy keeps growing year by year. The gross tonnage transported by Spanish maritime commerce, increased again by 256 million tonnes (2.7%), reaching a new historic maximum in 2003. 79,8% of the gross tonnage represents imports and 20.2% exports.

The gross tonnage of vessels under Spanish ownership was approximately 4 million tonnes in 1990, dropping to a minimum of 2,300 million tonnes in 1997 and growing again to a total of 300 ships with 4,176,997 tonnes in 2005⁴¹. However, of particular interest is the change in registration practice during those years.

In 1990, the main Spanish registry accounted for nearly 100% of the tonnage owned by Spanish interests. Only a very small amount was foreign flag. Foreign flag tonnage increased during the 1990's and now represents about 1.8 million tonnes (45%). An even more noticeable trend is the increase in the second register (Canary Islands) at the expense of the main register. The Canary registry began in 1993 and has expanded rapidly so that in 2004, the main register had disappeared and the second register accounted for the remaining 55% of tonnage (approximately 2.2 million tonnes) (see Figure 4).

Figure 4. Fleet controlled by Spanish shipping companies.



⁴¹ Panorama de la actividad naviera durante 2004. 2005. ANAVE - B.I.A. N° 436.

Table 7. Fleet registered in the Spanish “pavilion” (Pabellon).

Ship type	01/01/2004			01/01/2005		
	Ships	GT	TPM	Ships	GT	TPM
Oil tankers	16	569.825	1.061.662	17	492.709	913.777
Bulk carriers	0	0	0	0	0	0
General cargo vessels	18	46.604	64.015	17	42.155	57.540
Container ships	29	243.837	288.990	27	234.970	287.180
Roll-on/roll-off	40	407.687	219.323	38	410.910	211.707
Reefers	9	24.842	23.008	9	24.842	23.008
Gas tankers	6	292.645	237.984	9	662.126	518.217
Passenger ships and ferries	63	417.602	91.121	56	375.989	78.847
Other vessels	29	174.947	259.468	27	152.044	227.323
TOTAL	210	2.177.989	2.245.571	200	2.395.745	2.317.599

Table 7 illustrates the type, number and trade of vessels registered in what is termed the “Spanish pavilion” (Pabellon). “Pabellon” means exactly the same as “Bandera” or Flag. This term is used to include ships registered both in the traditional register and the special Canary Islands Register and therefore describes those vessels where the technical and commercial management of the ships is based in Spain. The term “Flota total controlada” is used when reference is made to the fleet that is managed from Spain, but is operated under foreign flags. It is important to clarify this point since, these days, there are ships that have no relation with Spanish companies, ships owned by Spanish companies with foreign registry, and Spanish companies that belong to foreign shipping companies. Clearly, these different kinds of ownership makes this kind of estimation very complicated⁴².

As with other traditional European maritime nations, Spain has strong regional sources for seafarers. In recent years, however, several of our interviewees felt that the rigours of seagoing, in comparison with the relative comforts of shore life, has meant that there has been a reduction in interest in seafaring amongst the young. There are good opportunities for those with a vocation for seagoing, and many young people can enter the university system and join the shore-based maritime professions with minimum seagoing required. Consequently, there are no artificial barriers to those who wish to seek shore-based maritime employment. A potential shortage of seafaring experience has led to concerns among those shore-based professions where seagoing experience is considered essential, for example, pilotage. However, as with the relationship between UK and India, it may be that a new source of Spanish speaking seafarers may become available in the future from Latin America, which will fill any increased demand for officers.

⁴² Clarification provided through correspondence with ANAVE. El Registro especial de Canarias. Ventajas y situación hoy. Manuel Carlier de Lavalle. Director General – Asociación de Navieros Españoles (ANAVE). Profesor Titular de Explotación del Buque – Universidad Politécnica de Madrid.

10.1.2 Maritime Education and Training System

In Spain there are two academic systems to prepare future Merchant fleet officers. It is important to note that neither of them depends on the “Ministerio de Fomento”, which is responsible for STCW certification. The academic system is the responsibility of the education authorities of the respective regional and autonomous communities.

The first system is the University system. Within this system there are two routes:

1. A five year degree programme at one of the seven maritime universities, based in Cadiz, Barcelona, Corunna, Gijon, Santander, Bilbao or Tenerife. This programme includes three years shore-based study, followed by six months sea time experience as a cadet, followed by a further two years academic study including a final year project. To take this route, a student must have completed the “Bachillerato” (2 years after Secondary Education) and an access test (equivalent to UK “A” levels). The minimum age for entry is 18. The student graduates with a university degree (“Licenciatura”). To proceed to a Second Mate’s certificate, a candidate now needs to complete one year’s sea time (and an oral examination). To obtain a First Mate’s certificate requires a further year’s sea time. Finally, to proceed to a Master’s certificate, another year’s sea time is required with the successful completion of a project.
2. Alternatively, after the three years initial study and six months at sea, a student may receive a diploma (“Diplomatura”) and then proceed to a Second Mate’s certificate by completing one year sea time (and an oral examination). To obtain a First Mate’s certificate requires a further year’s sea time. However, to proceed any further to a Master’s certificate, the candidate must now complete the final two years academic study and another year’s sea time is required with the successful completion of a further exam.

The second system comprises the professional schools or technical colleges (Sistema de la formación profesional). It provides a pre-university education. The completion of these studies is accredited by a title that is more restrictive than the university system already mentioned. There are also two routes through the technical college system:

1. The “formación profesional grado superior” (the “High Professional Grade”). A student is required to finish secondary education, and then a further two years. Entry age is 18 years old.
2. The “formación profesional de grado medio” (the “Medium Professional Grade”). A student is required to finish secondary education. The entry age is 16 years old.

The first route of the university system is popular with many students who graduate from the degree programme but do not then go to sea. They may enter a number of professions but some do go directly into shore-based maritime employment, for example, in the maritime administration.

The system is broadly similar for both deck and engineer officers. The degrees are awarded by the Ministry of Education and Science, but the Certificates of Competence are issued by the Maritime Administration (Dirección General de la Marina Mercante del Ministerio de Fomento).

Ratings have their own college(s) in order to obtain their AB and other relevant certificates. Promotion to officer level is rare and most ratings generally remain at sea until they retire.

The qualification system for fishermen is quite separate and is administered autonomously on a regional basis. The qualifications are equivalent to a technical college education. Although it is theoretically possible (5%) for fishermen (in particular, engineers) to transfer to domestic commercial shipping as certificated junior officers with a limitation on tonnage and/or power, this is seldom done in practice.

The education system is funded by the Government and consequently, in general, Spanish shipping companies will recruit cadets at the completion of the five-year academic period. Manning agents will also recruit Spanish seafarers at this point.

10.1.3 Employment Data

Approximate figures for the total number of Spanish seafarers have been given as 25,000. Of these, 10,000 are ratings and 15,000 officers. Official data from the Ministerio de Fomento give the following details for student graduates and STCW certificates:

1. Number of students

Table 8 below refers to the number of students recruited each year through the University system. (Note that the number of graduates in the first years is low because there was a change in the Degree plan)

Table 8. Number of entrants into Spanish MET

Year	(Diploma Deck) "Diplomado sección Puente"	(Higher degree Deck) "Licenciados sección Puente"	(Diploma Engine) "Diplomado. sección Máquinas"	(High degree Engine) Licenciados sección Máquinas	(Diploma Radio) Diplomado sección Radioelectrónica.	Totals
1994/1995	66	-	73	-	77	216
1998/1999	257	5	195	3	59	519
2002/2003	288	51	159	24	34	556

Table 9 below refers to the number of students recruited each year at the Technical or Professional colleges. (It is important to note that the numbers the first years are low because they were new courses which started in 1997).

Table 9. Number of graduates from Spanish MET.

Year	formación profesional grado medio (medium) sección puente (Deck)	formación profesional grado medio sección (Medium) máquinas (Engine)	formación profesional grado superior (High) sección puente (Deck)	formación profesional grado superior (High) sección máquinas (Engine)	Totals
1998/1999	9	6	41	22	78
2002/2003	166	243	232	174	815

The number of students recruited in Naval Universities was 1164 in 1981 and in 2003 only 421. During 2002 the number of graduated was 33% compared to 1981.

2. Numbers of current STCW certificates:

The numbers of graduates (with the papers required by STCW Convention) are as follows:

- Number of Higher degree Deck (“de titulados superiores de Puente): 5076.
- Number of Higher Degree Engineers (“de titulados superiores de máquinas”): 2653.
- Number of Higher degree Radio (“de titulados superiores de radioelectrónica”): 558.
- Number of Diploma deck (“de titulados medios de Puente”): 4599.
- Number of Diploma Engineers (“de titulados medios de máquinas”): 3236.
- Number of deck and engine ratings: 10039.

The major domestic employer of seafarers is Trasmediterranea that employs 300 officers on permanent contracts.

10.1.4 Specific Characteristics of the Member State

- Many seafarers stay at sea and retire directly from seafaring employment.
- The most popular shore based sectors for ex merchant marine officers still in maritime employment are: the maritime administration; technical and operations management within shipping companies; shipping agents; pilotage and other port services, and SASEMAR.

- The Spanish dual route system for academic and professional qualification means that graduates can pursue good careers ashore in maritime related professions with a minimum amount of sea time. This has the benefit of ensuring that some necessary maritime posts, for example, in the Administration are not dependent on ex-seafarers. However, the disadvantage is that posts that do require sea experience are harder to fill and/or are filled with personnel with little practical experience at sea.
- Individuals do enter other sectors such as education and training, classification societies, and maritime law, but the numbers are low.
- Any view of career paths for seafarers in Spain has to take into account the pension arrangements. There is a generous national pension scheme which takes account of the trades in which a seafarer has sailed, for example, service on tankers can effectively reduce the retirement age by 0.4 for every year served. Under the scheme, seafarers could retire from seagoing service on full pension at about 55 with 25 years employment history at sea.

10.1.5 Significant Shore-based Sectoral Descriptors

SASEMAR

SASEMAR is a Government funded agency, but its personnel are not employed on Civil Service contracts. It was formed in 1993 and currently about 90% of its employees are ex-seafarers. SASEMAR performs three main functions:

- 1 Maritime Search and Rescue
- 2 Salvage and pollution clean-up services
- 3 VTS services in Spanish ports and coast.

The company operates a number of salvage tugs. 400 people are employed by REMASA in salvage operations. 250 people are employed in VTS services, working a three shift system over 24 hours.

The company offers good working terms and conditions and retention is high. It is a secure job and is better paid than regular seagoing employment, so there is no shortage of applicants for the posts available. The average age of the ex-seafaring employees, who are mainly senior officers, is 45-60 so the company does anticipate a human resource shortage in a few years time. It is accepted that the company may have to accept less seagoing experience in the personnel who are recruited in the future.

Maritime Administration

Employment in the Spanish Maritime Administration is an attractive option for those graduates from University who are seeking a shore-based occupation in the marine field with a minimum of seagoing commitment. The Spanish Maritime Administration currently employs 201 merchant marine officers, 2 of them are women. These posts include the three departments of Deck, Engine and Radio. In addition, there are 61 naval architects, 4 of whom are women.

Shipping Management

The major shipping companies employing Spanish officers do look to select ex-seafarers to come ashore into shore-based management positions. However, the proportion of seafarers who stay at sea till retirement has been given as 80%. Ex-seafarers, particularly engineers, are sought for technical superintendent positions.

Maritime Education and Training

In addition to the seven universities already mentioned, there are 12 technical colleges in Spain. Together they employ about 500 people, with 200 of these being Maritime Education and Training lecturers in the universities. There are good opportunities for ex-seafarers in this sector. After passing an examination, the lecturer can become an Associate Professor, which is a Government post. Retention is also high in this sector.

Pilotage

Pilotage is a shore-based maritime sector that uses ex-Masters exclusively. There are currently 225 pilots operating in Spanish ports. The entry requirements are a Master's certificate of competence and two years in command within the last ten years. Entrants have to take two exams: a general examination of regulations and a local examination. These examinations are administered by the Pilot's Association (Federacion de Practicos de Puerto de Espana) but the licenses are issued by the maritime administration. Apprentice pilots must also complete three months training alongside an existing pilot. To maintain registration, a pilot must be a member of the Association.

The annual requirement for pilots in Spain is about 10-20 that accounts for natural wastage. Pilots can retire at 55 with full pension but may continue until the age of 70, subject to satisfactory medical examination.

Pilot Exemption Certificates (PECs) are allowed and issued by the administration. The requirements include two months of experience in port entries for ferry Masters and eight months for regular visits by cargo vessels.

Retention is 100% because it is considered to be a prestigious occupation and the pinnacle of a navigator's career. The posts are highly paid and there is no current shortage of applicants. However, a shortage of sufficiently experienced candidates is anticipated in 5-8 years time. A solution to this problem may be difficult as there is considerable resistance to reducing the existing qualifications.

Ship's Agents

Ex seafarers are employed by ships agents in a number of Spanish ports but no data on numbers was available for this study.

Classification Societies

There are probably about 150 technical staff working in Classification Societies in Spain. Of these, about 25-30% are likely to be ex-seafarers, and the vast majority will be ex-engineers. There are very few deck officers and these will be involved in ISM audit work.

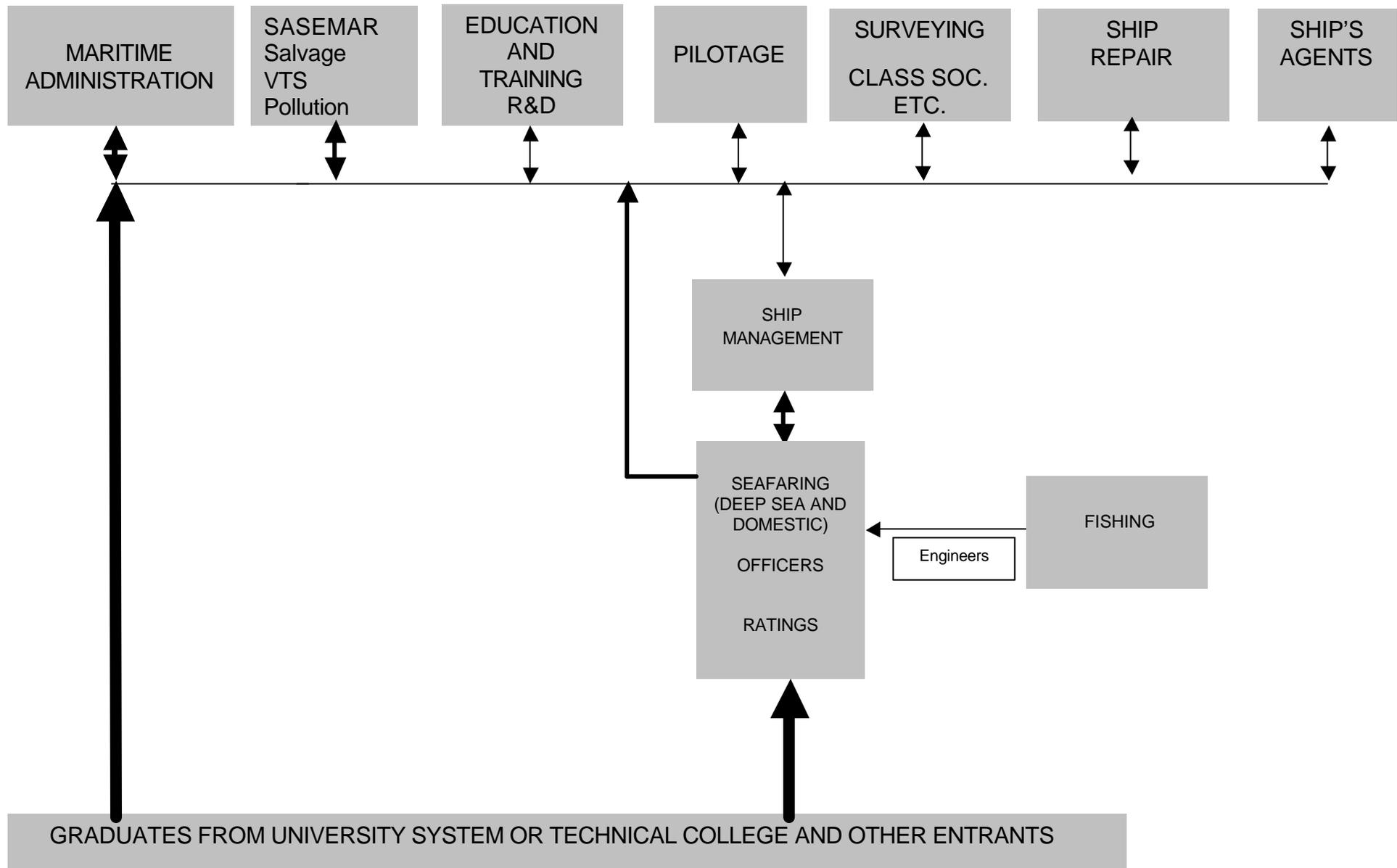
Ex-seafarers are seen as being desirable employees because of their knowledge of how ships work. Ex chief engineers, who have recent sea experience, are particularly preferred because of their qualifications and experience. Retention is high.

Although annual recruitment requirements are low, there has been difficulty recently in recruiting suitably experienced ex-seagoing staff. However, in the long term, although not desirable, this may not present significant problems because suitably qualified naval architects, particularly those who have specialised in machinery options, can fulfil most requirements.

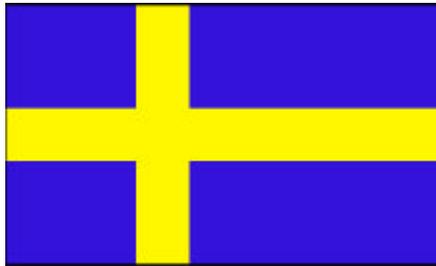
10.1.6 Table of Sectoral Representatives Interviewed

Sector	Organisation	Representative
Maritime Administration	Ministerio de Fomento	Julian Abril Garcia F. Javier Villanueva Santaulari
Shipping Companies	Trasmediterranea	Alvaro Nunez Luis Bueno Garcia
	Teekay Marine Services	Jose Villasante
Shipowners Association	Asociacion de Navieros Espanoles (ANAVE)	Manuel Carlier de Lavalle Elena Seco Jesus Barbadillo
Maritime Education and Training	Universitat Politecnica de Catalunya	Prof. Dr. German de Melo Rodriguez
Seamen's Federations	Transportes, Comunicaciones y Mar (TCM)	Jose Manuel perez Vega Artime
	Federacion de Comunicacion y Transporte (CCOO)	Jose Perez Dominguez Jon Azkue Manterola
Pilotage Associations	Federacion de Practicos de Puerto de Espana	Alfonso Munoz Fernandez Enrique Yturriaga Cantos
Salvage, Port services	EPE Sociedad de Salvamento y Seguridad Maritima (SASEMAR)	Carlos Donnay Garrido
Classification Societies	Lloyd's Register EMEA	Jesus Gordo

10.2 CAREER PATH MAP FOR SPAIN



Sweden



11.1 COUNTRY REPORT FOR SWEDEN

11.1.1 Socio-economic and Cultural Background

The maritime industry in Sweden, in terms of employment and commercial activity, was originally limited to two regions, one on the southwest coast, centred around Gothenburg with its Chalmers Maritime Academy, and one to the northeast on the inshore sea around Stockholm. Sweden used to have five officers' academies with the majority in these regions, seafaring was a family tradition and shipping companies were family businesses.

The element of small family companies is still present in the industry, but the importance of family tradition in relation to seafaring has diminished considerably. This development started with the introduction of the officer's cadet training in the 1960's. Before this, going to sea was not always socially acceptable in the middle class and the possibility for ratings to become officers was merely a pathway for social climbing open to the working class.

The officer cadet title, introduced in the 1960's, encouraged recruitment from outside of the traditional sources, and this was further enhanced by the introduction of the present officers' education in the late 1980's. The recruitment success is also accredited to the increased entry level to 12 years basic education and the elimination of sea time requirements prior to commencing the education; which provides sea time as an integrated part of the education. The success is evident by the fact that the maritime academies have four to five applicants for each place.

This reform did not only result in young people from all over the country and from more diverse social backgrounds to apply, but applications were also received from people who already had shore based employment. The result was an intellectual boost to the industry, which was helpful in changing the ways of this traditionally conservative industry, assisting in the modernisation and improvements in efficiency.

However, those who stay in a seafaring profession longest, or throughout their working life, tend to be characterised as those who originate from traditional seafaring families and reside in the traditional maritime communities. These are communities who understand the seafaring lifestyle, comprised of families that cope well with the conditions that accompany this type of lifestyle. Those who stay in the profession are seen to be the more practical minded with a rating background, and the ambition of becoming Master or Chief Engineer.

Sweden is an old maritime nation with a large maritime cluster. The Swedish Shipowners Association defines the Swedish shipping industry as all shipping, irrespective of flag, controlled and/or operated from Sweden, including: ships under the Swedish flag, ships under foreign flags owned by Swedish companies and ships under foreign flags on long-term charters to Swedish operators.

According to statistics from the Institute of Shipping Analysis in Gothenburg, Swedish shipping consisted of 571 ships with a total deadweight of 10.8 million tonnes by December 2003. The corresponding numbers for December 2002 were 567 ships and 10.33 million tonnes deadweight.

29 new vessels with a total deadweight of 1.1 million tonnes were delivered to Swedish shipowners during 2003. The most important shipping sectors are:

- In tanker shipping, Swedish companies operate crude carriers, products and chemical carriers and special tankers.
- The ferry industry is a large and important sector, with about 35 million passengers per year on international routes and on the route between mainland Sweden and Gotland.
- Industrial shipping as transport of forestry products and cars worldwide are two Swedish specialities.
- A large number of ships in the Swedish merchant fleet are RoRo vessels in short sea services and bulk carriers, operating mainly in European waters. There are also Swedish liner services on the North Atlantic and between Scandinavia, Western Europe and the Mediterranean.
- Reefer shipping mainly involves about 70 vessels operated from Sweden.

This structure, with a focus on the bulk spot market, industrial/contract shipping and ferries has emerged as the result of a transition that has taken place during the last 30 – 40 years. Before this transition, Swedish shipping was dominated by traditional worldwide liner shipping.

Swedish shipping may be characterised as the result of not having fully utilised the options in the EU state aid guidelines for shipping⁴³. The result is that Swedish shipping mainly consists of smaller vessels in domestic and regional trade, and a segment of larger ferries in regional and North European trade, while the majority of the once significant deep sea fleet has flagged out.

However, the trend for flagging out has now been reversed. There are several reasons for this, one of them being the new net salary model, and the option to employ mixed crews by means of the TAP⁴⁴ agreements, allowing employment of non-residents under local conditions. TAP applies only to cargo ships engaged in international traffic. The industry hopes that this trend will be sustained by the introduction of an attractive tonnage tax option.

⁴³ The state aid guidelines are a Commission interpretation of the general EU state aid regulation in relation to the shipping industry. In short the guidelines allow certain tax alleviations and favourable framework conditions, but not direct subsidies.

⁴⁴ TAP, Tillfälligt anställd personal, which may be translated to; temporary employed personnel. TAP's are only allowed on cargo vessels, have to be residents of non EEA countries with a maritime education and training system approved by the Swedish Maritime Administration, and employment conditions covered by collective agreements approved by Swedish unions, TAP's are not allowed as master or chief engineer and may only fill 50 % of the other positions on cargo vessels when seen across the fleet of a company.

A total of 12,000 seafarers are employed on Swedish flagged vessels, of these 760 are TAP employees. The age structure of the active ship's officers is a concern; since a large number of officers are due to retire in the next few years. Consequently, it is recognised as being extremely important that the shipping companies hire the new graduates. Of 2,700 Deck Officers, 35% are above the age of 50. Of 1,600 Engineer Officers, 40% are above the age of 50. In the order of 900 Deck Officers and 650 Engineer Officers are expected to retire during the next decade. Therefore, in order to accommodate the expected fleet growth, there will be an annual demand for around 300 new graduate officers.

The shore-based shipping industry will also require an increase of well-educated personnel in the future. The whole shipping cluster is expected to expand and there will be jobs for more people with a good education in business, finance, naval architecture, maritime law and information technology.

The Swedish maritime cluster is focused on the Gothenburg and Stockholm areas. Approximately 13-14,000 persons are employed as seafarers, and within the administration and commercial management of shipping companies. An estimated additional 65,000 are employed in closely linked industries and public administration. A further 120,000 are employed in organisations with some attachment to the maritime industry, resulting in a total of some 200,000 people employed in the cluster.

The Swedish maritime sector is uniquely affected by the geography of the country, characterised by a long coastline and hundreds of small islands. These features offer employment and careers to a large number of seafarers on small passenger vessels, including some 340 vessels owned by members of the Small Passenger Vessels Association, SWEREF,⁴⁵ employing some 1,000 Deck Officers⁴⁶ and 1,300 ratings. Other coastal careers are pilots and professionals required to monitor and maintain the 6,300 nautical miles of fairways, which carry the 95 % of Swedish foreign trade that is transported by sea.

11.1.2 Maritime Education and Training System

The engine and deck ratings education programmes are offered at 10 High Schools throughout Sweden. The two education programmes follow the same pattern. Entering from a minimum of nine years primary and secondary school, the education programme consists of three years at a Maritime High School, including eight months sea time, half of which is on a training vessel. This is equivalent to the 18 months of sea time required for the ratings to graduate at AB⁴⁷/motorman level.

⁴⁵ The Association, SWEREF, is estimated to cover approximately 80 % of the vessels in this part of the industry.

⁴⁶ These officers will predominantly hold class VI – IIX certificates.

⁴⁷ AB, Able Seaman has reached the highest merit of ratings as opposed to the OS, ordinary seamen, who are still undergoing training.

The officers' education programmes are only offered at two colleges, one in Gothenburg and one in Kalmar. Each college accepts approximately 50 students of each discipline and 50 students for lower class VI certificates. The education programmes lead to the award of either a B.Sc. in Nautical Science or a B.Sc. in Marine Engineering. Both programmes basically follow the same pattern.

There are two alternative admission criteria for officer education programmes. The first is as a qualified AB or motorman. The second is with a minimum of nine years primary and secondary school, but with significantly more subjects required than the entry requirement for the ratings Maritime High School. The curriculum is the same, whichever admission route is taken. The education programme lasts three years if entering as a qualified AB or motorman, or four years for the other admission route, due to the inclusion of 12 months sea time

Young people who initially choose the ratings, rather than the officers', education programme, are often school weary and prefer the ratings education as it offers more sea time, less schooling and a more immediate opportunity to earn an income. However, it is expected that upon reaching the age of 25 – 30 years they will apply to enter the officers' education programme, where they benefit from some accreditation for prior learning, and are favoured for admission before others.

Two Masters Degree programmes have recently been introduced at the maritime college in Gothenburg. These programmes are mainly directed towards Deck and Engineer Officers. The programmes are of 1½ years duration in either, logistics and maritime business, or in ships engineering. So far, 30 students have been enrolled, however, it is still too early to draw any conclusions regarding the impact of these programmes on career progression. Even more recently a huge effort of developing diverse postgraduate educations has been initiated in Kalmar. The effort is expected to represent an investment of some 150 million euro.

11.1.3 Employment Data

According to figures provided by the Swedish Shipowners' Association for October 2002, their members employed the following personnel on Swedish flagged vessels⁴⁸:

- 563 Masters and 938 Deck Officers on Swedish conditions and 133 on TAP conditions.
- 401 Chief Engineers and 412 Engineer Officers on Swedish conditions and 89 on TAP conditions.
- 1864 ratings including cooks and mess men, on Swedish conditions and 410 on TAP conditions.
- 2685 hotel personnel on ferries and passenger vessels.

⁴⁸ The Swedish Shipowners' Association represents 90 – 95 % of the tonnage in this category.

Estimates of the employment of Swedish officers on non-Swedish flagged vessels owned by members of the Swedish Shipowners' Association are:

- 74 Masters, 95 Deck Officers, 74 Chief Engineers and 80 Engineer Officers.

Other employment data:

- The company Star Cruises is managed by a Swedish management company and employs an estimated 280 Swedish Deck and Engineer Officers.
- The Swedish Maritime Administration employs some 235 pilots and 320 officers and ratings on pilot boats, icebreakers and other vessels operated by the Authority.
- An estimated 1000 Deck and Engineer officers are employed in Swedish controlled vessels under foreign flag.
- Small costal ferries and passenger vessels below 500 GT employ approximately 1,000 Deck Officers, primarily holding class 6-8 certificates, and 1,300 ratings, during the summer season and perhaps 800 officers and ratings during the rest of the year.
- Many merchant marine officers will at some stage join the naval defence but only a few will stay there permanently as more than reservists.

A study into the behaviour of merchant marine officers in the 1990's by Janhunen and Schröder⁴⁹, on behalf of the Swedish Shipowners' Association, focused on the 795 students registered in their last year of education at the two academies during the five year period between 1994 and 1998; 503 persons or 63 % as deck officers and 292 persons or 37 % as engine officers. This study presented the following information:

- Promotion was faster in the engine room than on the bridge. Whilst only 16% of Deck Officers covered by the study who had obtained a full Masters certificate held a position requiring that license, the equivalent figure for Engineer Officers was 52 %.
- Retention amongst those with a rating background was higher than those who entered directly onto the officers' education programme, without first being a rating. The data showed that 10 out of 25 graduates who entered directly into the officers' education programme had left the sea, while the figure for graduates with a rating background was only 5 out of 27.

⁴⁹ 90-TALETS SJÖBEFÄL, En rapport om Sveriges nya sjöbefäl, Skola, examen, behörighet, arbete, åsikter, by Jarkko Janhunen and Tony Schröder , Sveriges Redareförening, Göteborg 1999.

Janhunen and Schröder also provide a valuable source of information relating to seafarer employment and careers in an earlier study⁵⁰. This study attempts to map the career paths of Deck Officers graduating from the Gothenburg Chalmers Academy at five-year intervals, from the years 1965-70-75-80-85-90 and 95. The study is based on questionnaires sent to 228 identified graduates, of which 141 (67 %) answered. This study presented the following information:

- 80 out of the 141 Deck Officers, or 57%, were still in a seagoing career.
- Out of the 54 Deck Officers now working ashore, 26 left the sea within the first six years after graduation.
- Including those who had been employed ashore but had returned to sea, 72 or 52% of 138 Deck Officers, had at some stage left the sea.
- Of 78 Deck Officers remaining at sea, 23 or 29.5% had plans of leaving; including 17 or 41.5% of 41 of the youngest graduates from 1990 and 1995.
- 28 out of the 54 Deck Officers who left the seagoing profession did so to take up jobs that they had not applied, but that had been offered to them.
- 52 or 37.4% of 139 Deck Officers have obtained additional formal education as: officers with the naval defence (13), in finance (12), maritime business (4), Engineer Officers (4), law (3).
- Of 97 Deck Officers without additional education, 30 expressed the intention to undertake it later.
- 64 of 72 or 89 % of Deck Officers in shore-based employment are active within the maritime cluster. 18 are involved in shipping companies, 10 are with the maritime administration, 9 with ports, 9 in cargo handling, 6 in insurance, 5 in the inspection industry, 4 as shipping brokers, 4 as freight forwarders, and 3 in ship management.
- 32 or 58% of 55 Deck Officers in shore-based employment indicated some interest in, or were not totally opposed to, the notion of returning to sea.

It was noted by the authors of this report that the sample size was relatively small, including only one fifth of the graduates, and that only the Chalmers Academy was covered, leaving out evidence of possible geographic differences. It should also be noted that this data was collected in 1997.

⁵⁰ Sjökapitainers yrke och karriär - The Profession and Career of Master Mariners, Graduation study by Jarkko Janhunen and Tony Schröder under guidance by Per A. Sjöberger, Chalmers tekniska högskola, May 1998.

A majority of Deck Officers will stay within the maritime cluster when they go ashore. Besides ferries and other domestic officers' jobs at sea like fishery inspection and pilotage, the jobs are within logistics, insurance, surveying, agencies, maritime equipment and product sales representatives, maritime education and administration and with the shipping, manning and management companies in a range of functions. Recent year's introduction of demanding requirements like the ISM and ISPS Codes⁵¹ has created a range of new job opportunities, mainly for Deck Officers.

In the maritime sector, Engineer Officers are employed by shipping companies, insurance companies, classification societies and by the equipment and engine manufacturers. Some become self-employed offering consultancy or repair services both within and outside the maritime sector.

There is a general optimistic feeling regarding the future of the Swedish maritime industry, and this is also the case in relation to the recruitment, supply and employment of Swedish seafarers. There are some differences of opinion between employers and employees, but a strong shared will to address and solve problems.

There is no unemployment at present, but a lack of qualified Engineer Officers, which to some extent is accredited to the lack of junior officer positions, which in turn is seen as the result of the TAP system. There is also general concern that too few junior officers are recruited and educated, taking into account the large number of Swedish officers that are getting close to retirement.

With currently only 70 Deck Officers graduating each year, and an annual requirement of approximately 25 experienced officers for pilotage alone, the problem of a lack of qualified officers is very possible.

The sector of small coastal passenger vessels also anticipates a manpower shortage in the future. In the Swedish system there is 2,500 valid certificates of class VI to IIX, of these 1,000 are active in this sector. The problem is that of the 2,500 certificate holders, 1,300 are above the age of 50 and only 450 are below the age of 37. This may lead to the increased recruitment of deep-sea officers into the coastal passenger sector. The solution proposed by the industry is to introduce a specific education programme for this sector, which would only require integrated sea time in these types of vessels.

The requirement for sea time on international trade, in order to obtain the higher certificates of competency, has also reported to be a problem in relation to larger vessels. The imbalance towards domestic and local trade's results in a lack of jobs in the deep-sea fleet, which forces young officers towards foreign flag, in order to obtain the sea time required to obtain their higher certificates of competency. Recently, German owners, in need for EU seafarers for their own shipping revitalisation efforts, have been very active in the Swedish officers market.

⁵¹ UN International Maritime Organisation, international requirements for procedures, quality assurance etc, regarding maritime safety and security.

11.1.4 Specific Characteristics of the Member State

- Officer cadet recruitment is very successful, as evidenced by the fact that the maritime academies have four to five applicants for each place offered.
- Former ratings still supply a significant 20 % of the students at the officers' academies. The ratings position is not seen as lifelong vocation, but very much as a step towards either becoming an officer or leaving the seafaring profession.
- It is generally agreed that promotion within the officer ranks is faster today than it used be a few years ago. The upturn in Swedish shipping following the introduction of the TAP system, and the prospect of a tonnage tax system, together with an aging senior officer profile, is expected to create opportunities for fast promotion in the coming years.
- The Swedish maritime industry perceives a seagoing career as one phase of a more diverse career. The trend is that fewer officers stay at sea for their entire career, and more leave earlier. The indications are that 40 – 50% of Deck Officers will have left the sea within the first 10 years after graduation, and that 50 – 60% of the Engineer Officers will have left the sea within 7 – 8 years after graduation. It is also thought that close to half of the Engineer Officers never go to sea after graduation, but proceed directly to a shore job.
- Retention amongst those officers with a rating background is higher than those who entered directly onto the officers' education programme, without first being a rating.
- For Deck Officers, the career path away from deep-sea sailing, and towards shore-based employment, is facilitated by the availability of positions in the very large sector of small coastal passenger vessels, as well as other domestic, or semi domestic, passenger or cargo services.

11.1.5 Significant Shore-based Sectoral Descriptors

Utility Industries, Heat, Power and Waste Management

This is a traditional area of shore employment for Engineer Officers and motormen. The jobs in this sector often have some similarities with the Engineers' shipboard jobs, by involving watch keeping duties and operations monitoring, but there may also be other duties. However, the percentage of former Engineer Officers in this area has decreased considerably during the last 10 – 20 years. It is thought that as many as perhaps one third used to be former seafarers, where today only a few are found. The explanation given is that in recent years there are ever fewer seafarers available for recruitment.

The preferred candidate has experience from a few years at sea, but may also come from other occupations. Mobility is low, but people will change between different plants, and to some extent, to and from similar jobs in the refineries or with other industrial plants. Some understanding of economics and business is valued. Additional training will mainly be specific to the job. The general impression is that ex-seafarers comprise a well qualified group.

The sector offers a flatter organisation today with limited scope for vertical progression. The normal starting position is as operations engineer, above which is the operations manager, the general manager and the CEO. The engineer may become operations manager and in some instances general manager. Other opportunities for development and progression are to become a workshop or project manager in a special support function.

No shortage of manpower is felt at present, but it is anticipated in the future. The failure of the initiative to educate civilian engineers in operations is regretted and has resulted in ongoing considerations about establishing a "Land Engineers" education at the maritime officers' college.

General Public and Maritime Administration and the Private Inspection and Surveying Industries

Interviewees mention the Swedish Maritime Administration as the largest single employer of Deck Officers besides the shipping companies. Even though this is partly due to the high number of pilots, the inspection and surveying industries form a major field of employment for Deck and Engineer Officers alike. In addition to the Maritime Administration, this type of work is undertaken primarily by the classification societies, but also by, and on behalf of insurance companies, shipping companies, cargo forwarders and receivers and others.

This is a diverse, attractive and growing industry. New regulatory requirements like the ISM and ISPS Codes⁵², as well as increased legal liability and an attention to public image, have created a range of new job opportunities in this industry of control, verification and implementation.

⁵² UN International Maritime Organisation, international requirements for procedures, quality assurance etc, regarding maritime safety and security.

Ideal candidates are relatively young but experienced officers with good social and communicative skills. More specifically, good customer service awareness is highly valued.

This career will always involve substantial job specific and ongoing training. The starting position is working directly with clients, but after some years, the career may progress either towards ad-hoc, project and specialist functions, or towards general management at various levels. At this stage, additional training and education will be more specialised and tailored to individual requirements.

This is a growing industry that is already attracting a high number of experienced officers, but it is attractive in terms of salary as well as personal development and career opportunities, and there is no indication of a supply shortage. On the contrary, applicants, who may have waited for years for the right opportunity, will approach employers.

Shipping Companies

Many former seafarers will permanently settle ashore following a transfer of employment, from a vessel of a shipping company to the shore side administration and management of the company. Here they will mainly fill positions with the technical operation and maintenance of the fleet in all its aspects, including cargo handling and shore side installations like port terminals, personnel, safety, security etc. This is as opposed to the commercial side of the company, to which the officers will only very rarely find their way.

Officers will most often be recruited directly from the fleet, often through a system of rotation. Many different types of jobs are offered, and an equivalent diversity of qualifications is required. In general terms, there are two career paths: one in general operation, or project and specialist functions, and one aiming at general management, although the two may be combined.

Ideal candidates are often relatively young but experienced officers with good professional, social and communicative skills. The career will always involve substantial job specific and ongoing training. At the management level, substantial additional training and education will often be an integral part of the process.

Developments in this sector reflect that of the Inspection and Surveying community. Ever growing regulatory requirements like the ISM and ISPS Codes⁵³ have created a range of new job opportunities

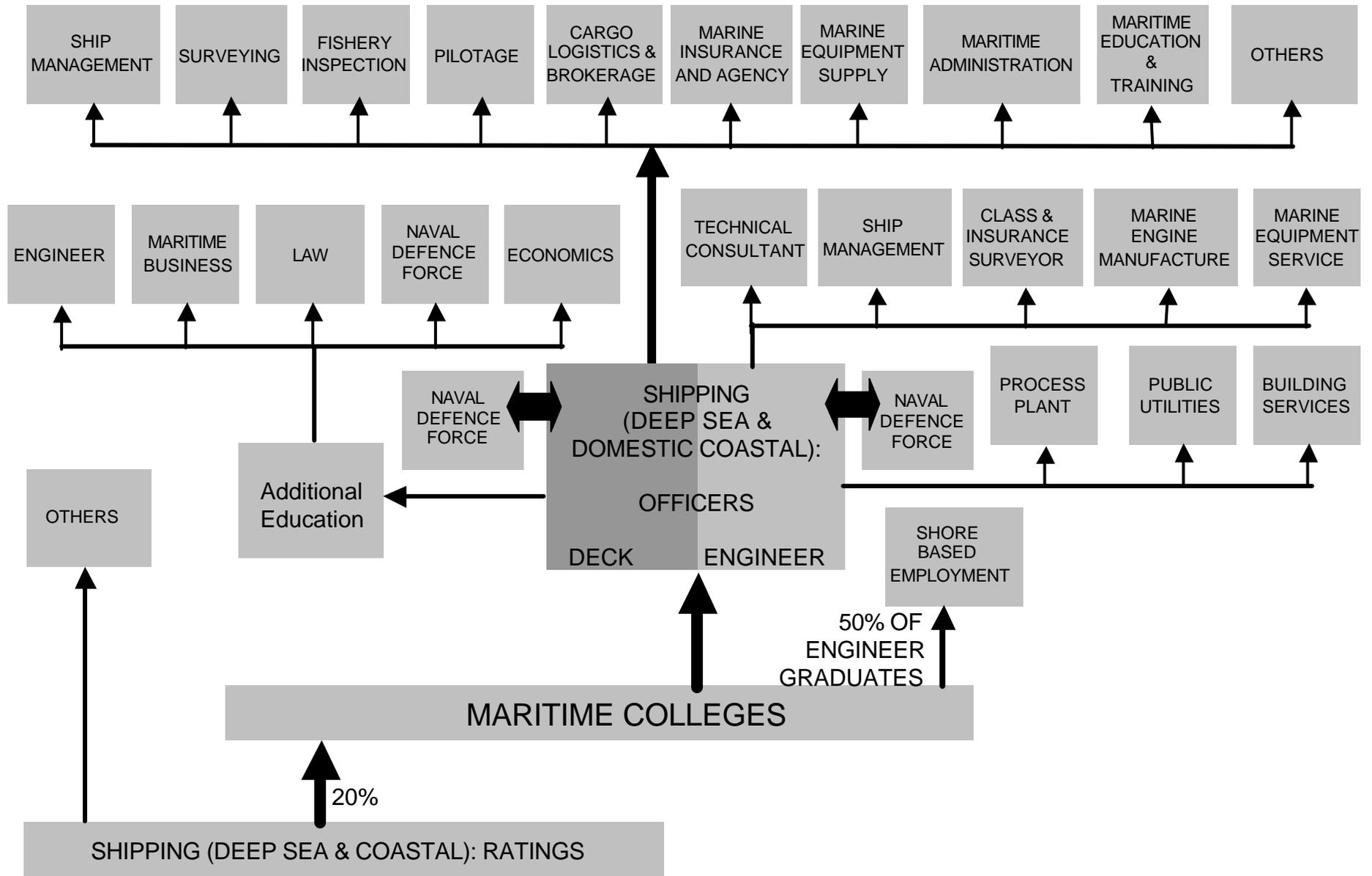
This is also an attractive career path in terms of salary as well as personal development and career opportunities. As the shipping companies have the pick of the crop of their own employees, there is no indication of shortages. The requirement for shore side personnel does imply a loss of seafaring staff, where the shortage may be more problematic.

⁵³ UN International Maritime Organisation, international requirements for procedures, quality assurance etc, regarding maritime safety and security.

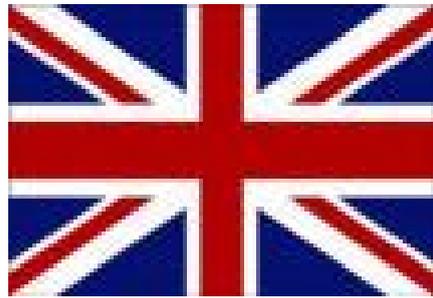
11.1.6 Table of Sectoral Representatives Interviewed

Sector:	Organisation:	Representative:
The Shipping Industry	Swedish Shipowners' Association	Per A. Sjöberger
The Shipping Industry	Swedish Shipowners' Association	Jan Ifwarsson
Maritime Education	Kalmar Maritime Academy	Rolf Zeeberg,
The Shipping Industry	Sveriges Fartygsbefäl-förening, Officers Union	Christer Lindvall
The Shipping Industry	Sjöbefälsförbundet, Officers Union	Christer Themné,
Maritime Administration	Sjöfartsverket	Olle Wadmark,
Maritime Education	Gothenburg Maritime Academy	Lars-Eric Carlsson
Maritime Administration	Sjöfartsverket	Jan Peter Elf
Port Management	Port of Gothenburg	Peter Svanberg
Shipping Agents and Forwarders	Sveriges Skeppsmäklareförening	Berit Blomqvist
The Shipping Industry	SWEREF	Leena Tegevi
The Shipping Industry	Walleniusrederierna	Goran Lindström,
The Shipping Industry	Silja Line	Ulf Samuelson

11.2 CAREER PATH MAP FOR SWEDEN



United Kingdom



12.1 COUNTRY REPORT FOR UNITED KINGDOM

12.1.1 Socio-economic and Cultural Background⁵⁴

The UK's geographical position and the volume of its trade makes UK waters some of the busiest for shipping in the world, with 95% of its trade by weight arriving or leaving at sea. As an island nation, the UK has a strong maritime tradition, both in shipping and in related maritime sectors. Following a decline in its merchant fleets in the last quarter of the 20th century, the shipping industry is now showing signs of re-vitalisation. Fifty million people travel to, from and around the UK by ferry each year. We are technological leaders in offshore oil and gas extraction, and strong in marine manufacturing. The Royal Navy is the second strongest navy in the world and London is the world centre for maritime financial and legal services.⁵⁵

Both shipping and the overall maritime sector play a significant part in the UK economy. In 2003, UK shipping had a total turnover of almost £6.7 billion (9.6 billion Euros), with container shipping followed by the cruise industry being the main contributors. The maritime sector has turnovers larger than both aerospace and agriculture together, with an annual turnover of £37 billion (54 billion Euros). The maritime sector employs 250,000 people in sectors ranging from shipping and shipbuilding to fishing, marine leisure, ports and maritime services.

With the introduction of the tonnage tax, the UK owned fleet has more than doubled in the last five years. In 2004, 668 vessels were owned and operated from the UK. This represented UK-registered vessels, other Red Ensign ships and foreign registered vessels, owned in the UK. These three elements of about 5 million gross tonnes each resulted in a total deadweight tonnage for the UK of 16.5 million tonnes.

The tonnage tax has also been responsible for an increase in the throughput of cadets in recent years. The first cadets trained under the tonnage tax regime are now emerging from the education system, but it will take time to deliver significant increases in officer positions.

In 2003, a national campaign called "Sea Vision" was launched. Sea Vision is a national and local initiative that has brought together over 100 organisations and associations from all aspects of the UK maritime sector. Sea Vision has two objectives: to raise the profile of the maritime sector with the general public and specifically to target awareness among the young. Secondly, the initiative aims to set a blueprint for co-operation across the sector for the future. The campaign is led by the UK Chamber of Shipping, and those involved in the initiative include the manufacturing sector (shipyards and marine equipment producers), ports, marine financial and legal services, the leisure sector (both boat-building and recreational activities), Government, the Royal Navy, commercial fishing, academia, professional institutes and societies.

⁵⁴ "British Shipping" The Chamber of Shipping Annual Review 2004-05

⁵⁵ www.seavisionuk.org

In addition to a National Core Group, Sea Vision uses regional networks and structures to promote the maritime cluster. Existing regional clusters such as Marine South West, Maritime London and Mersey Maritime are part of the regional structure. The campaign uses a variety of material for promotion and supports career events at both national and local levels.

12.1.2 Maritime Education and Training System⁵⁶

The UK state education system consists of a number of stages starting at about age five, and is based on a national curriculum. By age 16, most students will sit examinations for General Certificates of Secondary Education (GCSEs). Compulsory subjects include Maths and English and Science. From age 14, students who wish to take more work-oriented qualifications can study for National Vocational Qualifications, beginning at Level 1 at this age. There are five NVQ levels. Foundation and Intermediate general vocational qualifications (GNVQs) provide a basis for this system but are now being replaced by “vocational” GCSEs. Options after GCSE’s include advanced level qualifications at college (“A” levels) or work related qualifications. Scotland has a different education system and qualifications.

All entrants must be in good health and pass a statutory medical examination before being employed at sea. A good standard of eyesight is also required for prospective deck personnel. Individuals will need to be sponsored by a shipping company or training provider.

For Deck and Engineering ratings, there are two entry routes, the marine traineeship and the marine apprenticeship, depending on entry qualifications.

The marine traineeship develops seafarers for employment in the deck or engine-room department of a ship, in support of the Officer of the Watch. Trainees have employed status, and will be taken on as part of the normal complement of the ship’s crew, receiving training through alternating periods at marine college and on the job training on board ships at sea. Both Deck and Engineering trainees will be trained to support the maintenance and operational functions of the ship, and in the event of contingencies, to participate in emergency teams and take charge of survival craft. For the Marine Traineeship you will need to have at least 3 GCSEs, a Foundation GNVQ, or equivalent.

The Marine Apprenticeship develops seafarers for the role of Officer of the Watch in the deck or engineering department of the ship, and involves considerable responsibility in monitoring and controlling operations during watch (shift) duties. Apprentices have employed status, and like trainees will be taken on as part of the normal complement of the ship's crew, receiving training through alternating periods at marine college and on the job on board ships at sea. For the Marine Apprenticeship entry route, applicants will need to have at least 4 GCSEs in English, Mathematics, Physics or a Combined Science, or intermediate GNVQ or equivalent.

⁵⁶ www.mntb.org.uk

Deck apprentices will be trained to manage a small team of people to control work in support of the ship in a broad range of operations, depending on the function of the ship. This may include loading and discharging cargo, direction and care of passengers, dredging and survey operations, supply and emergency support to offshore installations etc. Deck apprentices will develop their competence to take charge of the navigation of the vessel. Engine-room apprentices will be trained to manage a small team of people to monitor and control the engine-room machinery and services in support of the ship's operations at sea and in port, including maintaining machinery and equipment. They will develop their competence to take the role of duty engineer in a periodically unmanned engine-room. Both Deck and Engineer apprentices will learn how to control or guide other people in response to contingencies or emergencies, and the protection of persons and the environment.

For Officer Cadet Training, successful applicants can enter with at least 4 good GCSEs in English, Mathematics, Physics or a Combined Science; or with “A” levels (or Scottish equivalents), or with an Intermediate GNVQ or equivalent. The training programme is designed for those who are seeking to become an officer and progress through the ranks as junior officer, senior officer, chief mate or second engineer to master or chief engineer officer. The training typically lasts 3 years and follows the pattern of alternating periods at sea and at marine colleges ashore. The planned programme of experience at sea is undertaken under the direction of qualified ships officers.

Sponsored degree courses are also available for those who want a degree-based education and who have an interest in a seafaring or shipping industry career. Degree options include Merchant Ship Operations, Nautical Science or Nautical Studies linked to seafarer training for the deck department, and in Marine Engineering degrees for the engineer department. A number of shipping companies offer sponsorship for these degree courses. Training lasts approximately four years, of which three are spent at university/college. The other year will enable the development of seafaring skills, to complete the sea-service needed for the initial professional Certificate of Competency, and to provide shipboard experience. It can be undertaken at various stages throughout the programme, depending on the sponsoring company and University/college, and will either be as a sandwich-based model or as the final year. Entry is in accordance with the admission requirements of the University/college concerned and typically will include mathematics and/or physics at “A” Level.

A graduate entry for both Deck and Engineer Officers is possible and is designed for graduates with a science based background who wish to progress to the highest levels of professional certification (i.e. Master and Chief Engineer) in the shortest period of time. Candidates will need to have a science-based or related degree.

A new framework of a two-year Foundation Degree is being introduced nationally in the UK, as part of a three year training scheme leading to an Officer of the Watch Certificate of Competency. Partnership and collaboration between employers and providers of higher education, the planned integration of work-based skills and academic learning and the relevance of skills and their application in a work-based environment are all central to the concept of the Foundation Degree. These and other key characteristics align very closely with the planned and progressive nature of cadet

training in the Merchant Navy. So far as the Merchant Navy is concerned, it is envisaged that:

1. training schemes incorporating a Foundation Degree will become the mainstream entry for those who are recruited and trained as officer cadets (i.e., those individuals who are committed to going to sea from the outset but who may progress in different directions at a later stage of their careers);
2. an under-graduate entry route based on the more traditional form of three-year Honours degrees will continue to be offered to any individuals who are attracted to a career in the maritime sector but who are not committed from the outset to employment at sea;
3. alternative training programmes will continue to be available for those sections of the industry where degree-level programmes are not appropriate and to provide an entry route for potential officers and ratings who have the right attributes, motivation and ambition to succeed but not the academic standard appropriate for Foundation Degree entry.

The revised framework will be phased in over the next two to three years, with a target for the first Foundation Degrees to be available as from September 2006. It is expected that the existing schemes will continue for some time after that. This will provide the basis for the 'alternative' route, ensure continuity of supply during the transitional period and provide a fallback position should there be any difficulties in recruiting for the Foundation Degree.

12.1.3 Employment Data

Since 1997, an annual analysis of UK Seafarers has been published. The data given in this section is from the latest analysis available for 2004⁵⁷. The tables include data from 1997 to allow for trends to be observed.

Table 10. Summary of employment data for estimated number of UK seafarers 1997 - 2004

	1997	1998	1999	2000	2001	2002	2003	2004
Officers								
TOTAL	17026	16128	15419	15970	13300	14655	16477	15514
Active at sea	14302	13548	12952	13415	11172	12310	13841	13032
Deck	6722	6368	6087	6439	5340	6143	6921	6777
Engine	7580	7180	6865	6976	5832	6167	6920	6255
Dual purpose								22
Ratings								
TOTAL	10860	10795	8925	10331	6395	8897	10554	9621
Deck			2617	2450	1924	2983	3265	3479
Engine			884	835	710	911	1164	989
General purpose		346	520	57	699	612	462	
Trainees								
In training			779	981	1020	1012	1053	1124
Officer cadets			779	981	1020	1012	1002	1033
Ratings							51	48

Notes:

1. The difference between total officers and “active at sea” is based on an assumption that 16% of certificated officers work ashore. This is taken as a mid-range assumption between 9% and 21% from previous studies.
2. The figures for officers also assume a retirement age of 62. Such assumptions affect the figures but it is believed that this gives the most realistic set.

⁵⁷ Glen, D., “United Kingdom Seafarers Analysis 2004” A Report for the Department of Transport. The Centre of International Transport management, London Metropolitan University, 2005.

Table 11. Total Employment in the UK Maritime Sectors

	Maritime Sector	Estimated Number of Personnel Employed
1	Classification Societies	2896
2	Consultants/surveyors	9150
3	Port Services	3526
4	Terminal Operators	7228
5	Towage/Salvage/Dredging	4727
6	Ports	8909
7	Marine Lawyers	2344
8	Marine Insurance and P&I	3375
9	Ship Finance	834
10	Ship Brokers and Charterers	2511
11	Ship Agents	8482
12	Marine Equipment and Information Technology	39266
13	Marine Engineering	7321
14	Shipowners and Offshore	19649
15	Ship and Crew Management	2488
16	Maritime Schools	1962
17	Miscellaneous	7182
	TOTAL	131850

Source: Adapted from Gardner, B. M., Marlow, P. B., Naim, M.M., Nair, R.V. and Pettit, S.J. “*The UK economy’s requirements for people with experience of working at sea 2003*” Report to the DfT Contract No; PPAD 9/70/15

The table above shows that the central estimate for total employment in the maritime industry is 131,850 employees. The confidence interval attached to the central estimate indicates there is a 95 per cent probability that the actual number in the sector lies somewhere between a lower limit of 120,433 and an upper limit of 143,267 employees. Gardner’s 2003 study also estimated that 15,700 jobs were identified that employers would prefer to fill with ex-seafarers. 8,800 jobs were identified where employers consider it to be essential to employ former ships’ officers.

12.1.4 Specific Characteristics of the Member State

- Tradition of ex-seafarers working in shore-based sectors, particularly in the City of London;
- Recent development of regional maritime “clusters” and the “Sea Vision” campaign;
- New Foundation degree system planned to combine both academic and vocational requirements;
- Popular destinations for ex-seafarers include technical management, consultancy and surveying.

12.1.5 Significant Shore-based Sectoral Descriptors

This entire Section is taken from Appendix 4 of Report to the UK Department of Transport by Gardner et al and is a description of the sectors categorised in the Table above.

Classification Societies

Classification societies in the UK employ a range of qualified personnel including naval architects. Lloyd's Register has been a major employer of ex-seafarers but both Det Norske Veritas and American bureau of Shipping employ ex-UK seafarers. Classification societies often employ ex-engineer officers as surveyors and, in the past, will most likely have had seagoing experience as a Chief Engineer and hold an Extra Chief Engineer's certificate. Consequently, they will have attained Chartered Engineer status.

Lloyd's Register⁵⁸ has a graduate training programme for graduates with an honours degree in marine or mechanical engineering, naval architecture or electrical and control engineering. Degree courses undertaken in the United Kingdom must be accredited by the UK Engineering Council, to satisfy stage 1 of their requirements for achieving chartered engineer status. Degree courses undertaken in other countries must be recognised by an equivalent national professional body in the locations concerned.

Successful applicants to the programme will normally undertake a training period of two years depending on their experience. This will consist of training in various London office departments, practical survey training in Lloyd's Register field offices, attending technical and vocational courses, shipyard experience and time at sea.

Consultants and Surveyors

Companies or individuals in this category are involved in a wide range of maritime related work. They may be engaged in surveying activities such as marine surveys, statutory surveys, condition surveys, and cargo surveys or in providing technical advice to the legal profession or in arbitration cases. Some firms specialise in economic related maritime consultancy work. They will often undertake work on behalf of third parties such as insurance companies, P and I clubs, average adjusters and vessel charterers. Some surveying firms also provide technical advice to insurance companies, legal firms, banks and other companies operating within the maritime related sector.

Cargo surveyors generally work for third parties. They are often engaged to provide advice to marine cargo insurance underwriters in matters relating to liability claims and loss assessment. They undertake loss and damage surveys in the event of cargo sustaining damage during transport and may also provide advice on loss prevention measures prior to the dispatch of cargo. They may also be required to act as expert witnesses.

⁵⁸ www.lr.org

Marine Surveyors are usually former Merchant Navy deck officers with an unlimited Masters or Chief Engineers certificate. Over 90 per cent of the present members of the Institute of Marine Surveyors hold this qualification. Some ship surveying firms also conduct draught surveys, bunker surveys and marine engineer repair surveys. For the latter two types of work they generally employ former Merchant Navy Engineers, usually with an unlimited Chief Engineers certificate but sometimes with an unlimited Second Engineers certificate.

Most firms in this business category are small, often ten or fewer employees, including clerical staff. Professional staff are largely ex-seafarers, usually former deck officers with an unlimited Masters or Chief Engineers certificate.

Port Services

Businesses in this category are companies supplying stevedoring and cargo handling services and companies providing pilotage services that have not been included under ports. Very few ex-seafarers are employed by stevedoring or cargo handling companies. Where they are, however, they tend to be ex-Deck Officers holding an unlimited Masters or Chief Engineers certificate. Such people are employed either as cargo superintendents or in general management. Businesses providing pilotage services, on the other hand, are major employers of ex-seafarers. Former deck officers are employed as pilots and are usually required to hold an unlimited Masters or Chief Engineers certificate. Former ratings are employed as launch or pilot cutter crews.

Ex-seafarers are employed by pollution control companies as oil pollution vessel crews and in a wide range of other jobs. Former deck ratings are employed as boat handlers; former deck and engineer officers with Officer of the Watch (formerly Class 3 or 4 certificates) as oil spill technicians and unlimited Masters or Chief Engineers certificate holders as marine and engineer superintendents and as technical, sales and commercial managers. Some former seafarers are directors of such companies.

Ports and Terminal operators

The port industry remains a major employer of ex-seafarers, particularly former Merchant Navy Deck Officers and ratings. Former Deck Officers employed as Harbour Masters and pilots are generally required to hold an unlimited Masters or Chief Engineers certificate.

Towage, Salvage and Dredging

Towage companies with tugs working in river estuaries employ former seafarers as officers and ratings on their tugs and some as shore-based personnel. The requirement for shore-based personnel is, however, limited. Salvage companies employ former seafarers as marine and engineer superintendents, safety officers and salvage masters. Such employees are generally required to hold an unlimited Masters or Chief Engineers certificate, although some may hold an unlimited Chief Officers or Second Engineers certificate.

Dredgers can either be employed in capital or maintenance dredging within a port area or in aggregate dredging offshore. Essentially, dredging companies, like towage and salvage companies, are specialised shipping companies. Their requirements for shore-based personnel with seafaring experience are, consequently, similar. Former seafarers, therefore, are employed as marine and engineering superintendents and in other technical capacities. Some are also employed as dredging superintendents where they have gained the necessary experience on leaving deep sea employment.

Ex-naval personnel are employed as hydrographic surveyors by some companies. Where former seafarers are employed, they will usually hold the appropriate qualification for the level of the job. Marine and engineering superintendents will, therefore, normally have an unlimited Masters or Chief Engineers certificate.

Maritime Law

Companies within this category provide legal advice and services covering a wide range of maritime activities. Small legal firms tend to buy-in their non-legal technical expertise from consultants, but larger firms, with fifty or more employees, may employ former seafarers to provide such expertise in-house. Former seafarers working for them may be employed on casualty investigation work or, if appropriately qualified, as legal executives or lawyers.

Marine lawyers, who are also ex-seafarers, are usually former deck officers an unlimited Masters certificate. In addition to their professional legal qualifications, they often hold a maritime related degree. Some former seafarers are partners in legal firms carrying out maritime work.

Marine Insurance, Protection and Indemnity Clubs and Loss Adjusters,

The marine insurance market in the UK is composed of various insurance companies and Lloyd's of London. Former seafarers are seldom employed as marine insurance underwriters. Where their technical knowledge is required, it is usually bought in. Some companies, however, employ former seafarers in their marine claims department as specialists. Where a business itself specialises in marine claims work, they provide the technical expertise to evaluate claims. In such businesses ex-seafarers are employed as consulting surveyors, energy surveyors, average adjusters and claims executives. For these types of job an unlimited Masters or Chief Engineers certificate is usually required, and the nature of the job will determine whether a former Deck or Engineer Officer is employed.

P and I clubs are formed by shipowners to secure cover for risks which are beyond the scope of normal marine insurance risks. Such clubs are, therefore, a specialised sector of the marine insurance market, i.e., mutual indemnity. Former seafarers may be employed by such clubs as surveyors in their condition survey department or as claims executives. They may also, occasionally, be employed as underwriters. Clubs usually look for either people with a seafaring or legal background to work as claims executives. For survey work, the clubs require former Deck or Engineer Officers with an unlimited Masters or

Chief Engineers certificate. For claims handling and loss prevention work they generally prefer former Deck Officers with this qualification.

Loss Adjusters may employ former seafarers as loss adjusters or as marine surveyors. For the former type of employment either ex-Deck or ex-Engineer Officers may be required and for the latter type ex-Deck Officers. Such people are usually required to have an unlimited Masters or Chief Engineers certificate.

Ship Finance

Clearing banks and other institutions within this category, which provide shipping companies with loan capital and other forms of finance, do not generally see that there is any advantage to be gained from employing seafarers because of the technical expertise they possess, unless they also have other qualifications and skills which are more relevant to their specific line of business.

Where technical expertise is required it is bought in from consulting or surveying firms. Such companies, however, do recruit shore-based shipping company personnel with financial management experience and, therefore, may occasionally recruit former seafarers who have gained such experience with a shipping company.

Ship and Cargo Broking and Ship Chartering

Broking firms provide services to international commodity traders and to tramp vessel owners. Chartering firms are generally involved in chartering in vessels to provide shipping services within the bulk sector. Some former seafarers are employed as chartering or sale and purchase brokers, but seafaring experience is not generally considered to be a prerequisite for such jobs. Seafaring experience is considered useful, however, in sale and purchase matters, particularly when the handover from one owner to another takes place.

Many larger ship broking firms which have other shipping interests besides broking employ former seafarers. They are often not employed, though, in a broking capacity, but as terminal managers, husbandry managers and operations managers or in agency work. For such jobs they are required to have appropriate seafaring qualifications. Good interpersonal skills are seen as being an essential requirement for a broker. Former seafarers may not always possess such skills.

Most Chartering companies are small, employing less than ten personnel; some are subsidiaries of larger foreign companies. Former seafarers are usually employed in a technical capacity as operations managers or supervisors or to provide support to the chartering function by carrying out tasks such as technical audits. They may also be employed as marine or engineer superintendents, but this is not likely. Such jobs usually require an unlimited Masters or Chief Engineers certificate.

Ship Agents

Companies in this category provide shipping companies with liaison services for their ships while in port. They liaise on the ships behalf with bunkering, stevedoring and other contracting companies and provide other services, such as accounting, where necessary. They will, for example, arrange for the berthing and un-berthing of ships and for tugs and fire fighting services if required.

Most firms within this category are small, few employ more than thirty people. While some employ former seafarers, the consensus of opinion appears to be that the positions they fill could be easily filled by non-seafarers. For run of the mill agency work, the technical expertise which seafarers possess is seldom required.

Marine Equipment Suppliers and Information Technology

Companies in this category provide a wide range of job opportunities for former engineering officers in particular, although the numbers employed by individual firms are generally small. Firms that manufacture more sophisticated equipment are more likely to employ ex-seafarers as salesmen or for providing technical advice in the use of equipment. This provides job opportunities for former Deck Officers as well as Engineer Officers.

Many former seafarers employed in this business category hold an unlimited Masters or Chief Engineer's certificate, although some jobs may not require this level of qualification.

Marine Engineering

Employment opportunities for ex-seafarers in marine engineering are mainly for former Engineer Officers. They may be employed as system and control engineers or as electrical and engineer designers. Former Royal Naval officers are preferred for many of these jobs. Ex-Merchant Navy personnel are also employed as superintendents and helmsmen.

Shipping and Offshore Companies

Shipping companies employ former merchant seafarers usually in fleet management jobs. Such employees generally hold an unlimited Masters or Chief Engineers certificate and depending on the nature of the post could be either former Engineer or Deck Officers. Offshore companies are also engaged in water based maritime operations. Their requirement for shore-based personnel with seafaring experience is, therefore, similar to that of shipping companies. Ex-seafarers are, consequently, employed in similar capacities and are required to have the appropriate level of qualification for the job. Among the jobs that they fill in such companies are those in marine safety management. They are also employed in other technical management capacities, including quality control and as marine and engineer superintendents as well as in chartering operations and in technical training.

Ships' Crew Management

Ship Management companies are capable of providing shipowners with a complete range of management services for their vessels. They may takeover the whole operation of managing a fleet of ships for an owner or only some of the functions. They, therefore, employ former seafarers in the same capacities as shipping companies, which own and manage their own ships. Consequently, former seafarers are primarily employed as marine and engineer superintendents and as ship operations managers. Such employees are usually required to hold an unlimited Masters or Chief Engineers certificate.

Crew Management firms provide an employment agency service for shipping companies and other firms in the maritime related sector seeking to recruit seafarers. They are also sometimes involved in activities relating to the training of cadets as well as their recruitment. Former seafarers employed in this type of personnel work are usually either ex-Deck or ex-Engineer Officers with at least an Officer of the Watch certificate. Many hold an unlimited Masters or Chief Engineers certificate.

Education and Training

Four mainstream nautical colleges: Blackpool and Fylde College, South Tyneside College, Glasgow College of Nautical Studies and Warsash Maritime Centre are the main providers of professional maritime education and training in the UK. Other establishments provide different types of specialised training for maritime activities or higher education services. The four main colleges are employers of ex-seafarers, mainly former officers. Most hold at least an unlimited Masters or Chief Engineers certificate.

Miscellaneous

This category includes non-profit and charitable organisations, Seamen's missions, publishing, representative organisations and public sector agencies.

Non-profit and charitable organisations are concerned mainly with the welfare and education of both seafarers and ex-seafarers and with the maintenance of the national maritime heritage. Depending on their function, they may see it as a requirement or an advantage to employ ex-seafarers but often this is not the case.

Publishing companies in this category include the specialised maritime press and publishers of trade journals and books. The more specialised technical journals and the maritime press tend to see it as an advantage to employ at least one ex-seafarer but the business related publications generally do not.

This category also includes organisations like the RNLI, Trinity House and the Maritime and Coastguard Agency (MCA). These organizations are large employers of former seafarers, particularly ex-petty officers and ratings. This category also includes the maritime unions. Former officers, where employed, often hold an unlimited Masters or Chief Engineers certificate. MCA inspectors have responsibility for operating UK Flag State control as well as the Port state control system in the UK which ensures, among other things, that specific international regulations relating to vessel safety are

complied with by vessels visiting UK ports. The Marine Accident investigation Branch (MAIB) has responsibility for investigating accidents to shipping within UK territorial waters, regardless of whether such accidents involve UK registered ships or whether such vessels are merchant, fishing or pleasure craft. The MAIB is also responsible for investigating accidents involving UK vessels in foreign waters. In the past, former seafarers working for this agency in a professional capacity were required to hold an Extra Master's certificate or Extra Chief Engineer's certificate or a Class 1 certificate and a relevant degree qualification.

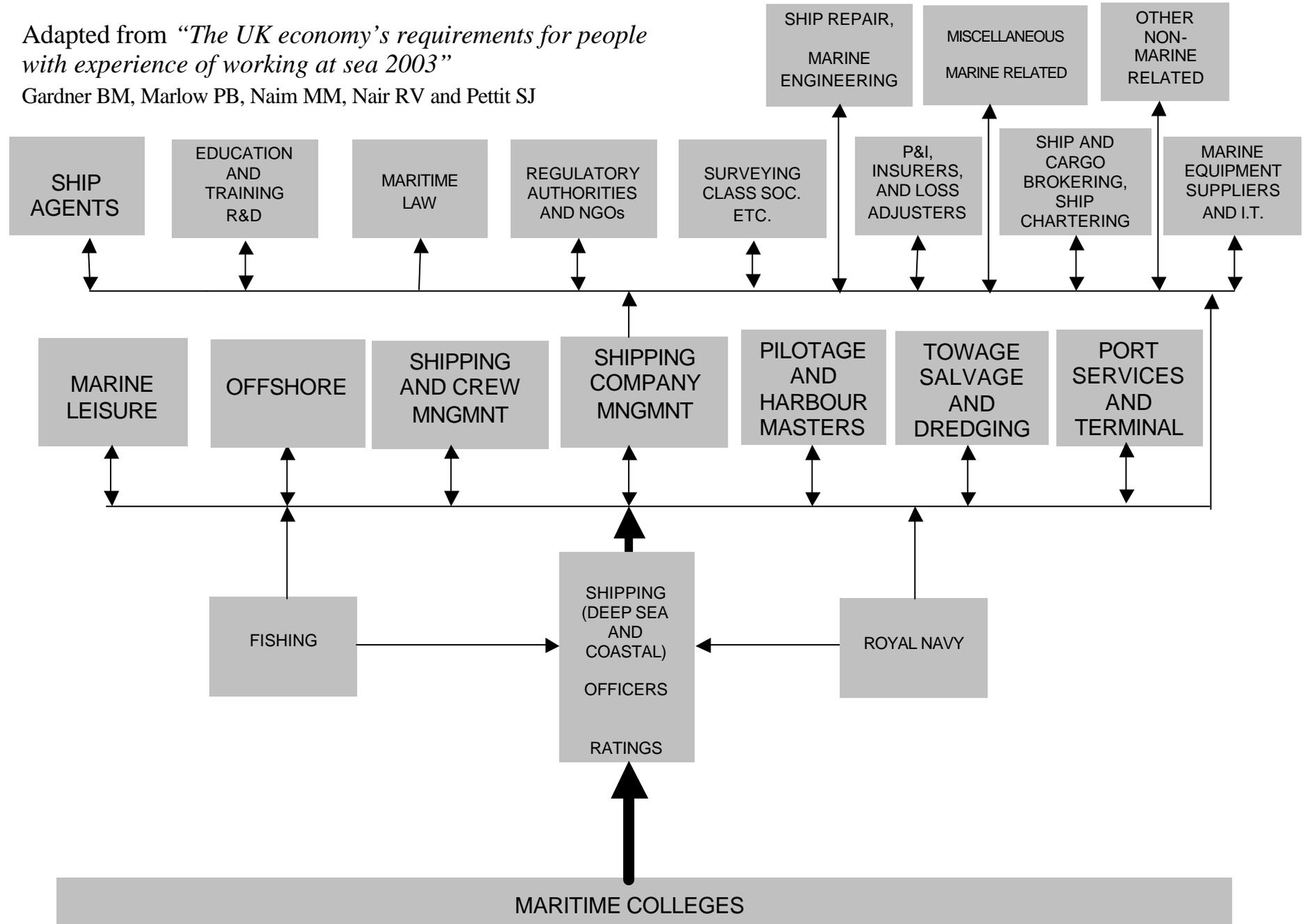
12.1.6 Table of Sectoral Representatives Interviewed

Because of the way in which the UK report was constructed, using existing data and texts, interviews with key personnel were not conducted. However, Mr Tim Springett of the UK Chamber of Shipping has reviewed this report, and his comments have been incorporated into the report.

12.2 CAREER PATH MAP FOR UNITED KINGDOM

Adapted from “*The UK economy’s requirements for people with experience of working at sea 2003*”

Gardner BM, Marlow PB, Naim MM, Nair RV and Pettit SJ



13. CONCLUSIONS

The original objective of this study was to provide an overview of the following aspects of maritime employment for ten selected states:

- Possible and actual career paths of seafarers.
- Seafarer manpower requirements at sea and in relevant shore-based maritime industries, where information is available.
- Barriers to the mobility of qualified seafarers between the sectors.

13.1 Possible and actual career paths of seafarers.

The career path maps that have been constructed for each country demonstrate that there are a wide range of possible career opportunities for seafarers ashore. The categories of work are similar across the member states, but the actual career paths taken are a function of the culture of the member state. For example, ex seafaring Engineer Officers enter the power utilities industries in some states, but not in others.

The career path maps also demonstrate that the take-up of opportunities varies from one state to another. The maps therefore range from a simple structure, such as Greece, to much more complex structures such as Denmark. For example, in Greece, this reflects the fact that most seafarers stay at sea until retirement, whereas in Denmark, most officers do not.

All the maps give an indication as to how the maritime clustering works in the member states and some show the extent to which the cluster has been formalised. The most prominent example of a formalised clustering is the map of the Netherlands.

Although the study was not intended to provide supply and demand figures for seafarers, the maps do give an indication of the flows of manpower throughout the maritime industry in each member state. In some cases actual percentage values for these flows were available.

13.2 Seafarer manpower requirements at sea and in relevant shore-based maritime industries, where information is available.

The seafarer manpower requirements are very much a function of the socio-economic climate and social culture within each member state. Each country report details the situation with respect to their maritime sectors. Each country report also describes the maritime education and training system. As mentioned elsewhere, the differences between these systems are quite significant. This can lead to differing requirements for entry into various shore-based sectors.

In Italy, for example, it is difficult for ex seafarers to work within a Port Authority, as their system requires these employees to have a degree, which few ex seafarers will have. In addition, few seafarers will enter the Maritime Administration in Spain because there is a plentiful supply of maritime graduates who satisfy the entry requirements.

There are some shore-based sectors that are common across all member states as being difficult for seafarers to enter due to the qualification level required. Maritime Law is a good example of a sector in all member states where ex seafarers would need to undertake considerable extra education and training before entry.

There are some sectors that are common across all member states, where maritime skills are considered essential, pilotage being a good example of this. However, most shore-based sectors where ex seafarers are seen as desirable, will look to alternative manpower sources to satisfy their requirements if ex seafarers are not available.

Most of our interviewees, although regretting the likely future shortage of seafarers, did not report any particular concerns about meeting their future manning requirements.

13.3 Barriers to the mobility of qualified seafarers between the sectors.

The following common barriers to mobility were identified during the course of the study:

- Learned helplessness. Life at sea may make some seafarers unhappy but they lack the personal drive and commitment to do anything about it.
- Lack of opportunity. One of the problems of being at sea is that individuals are away from the recruitment and interview circuit. It is more difficult for them to respond to advertisements by deadlines, organise interview dates. They have to rely on family and friends more to bring opportunities to their attention.
- Lack of appropriate management qualifications. The lack of general management qualification for officers seeking shore management positions is an issue.

The following member state specific barriers to mobility were identified during the course of the study:

- Progression from rating to officer. Some countries have established processes for progression and encourage ratings to become officers. In other countries, the difference in rating and officer status is quite marked and there are few who make the transition.
- Lack of equivalent qualifications. In some countries, the lack of qualifications that may be equated easily with shore qualifications is an issue.

In addition to a greater understanding of the issues described above, it was found during the analysis that there were certain interesting similarities and differences between the individual Member States that may have an impact on career opportunities. These are summarised below:

The similarities that are common to all the Member States relate to the nature of seafaring as an occupation, the reasons for employment change, and the processes which seafarers undergo, as a consequence of their occupation.

These factors are as follows:

- The personal qualities of successful seafarers in relation to both the nature of seafaring and to shore side employment;
- The reasons for choosing to go to sea initially;
- The reasons for staying at sea;
- The reasons for coming ashore;
- The general processes and problems which seafarers undergo in order to progress their careers ashore.

There are also a number of common factors that are markedly different in each Member State. These factors are a function of the cultures of the individual country. The following common factors, which have an influence on seafaring careers and maritime industries, have been identified during the analysis for this study:

- The geography and location of the country;
- The strength of the family culture;
- The maritime education and training system.

A comparison between these maritime dimensions and known dimensions of culture reveals some interesting relationships:

- The relationship between the presence and strength of clustering between maritime sectors and the *power distance* dimension;
- The relationship between the presence and strength of family connections and the *individual versus collective* dimension;
- The relationship between individual mobility and the *Uncertainty Avoidance* dimension.

These factors and relationships affect the way a maritime industry, or a cluster of different sectors, develops in individual countries. Although there may be common solutions to some of the issues of modern European shipping, for example, in the way career opportunities may be promulgated to young people, or in the harmonisation of MET systems, this study concludes that because of the individual socio-economic situation and culture of each Member State, the development of strategies to improve seafaring and shore-based maritime careers has to be done within these parameters for each State.

It is hoped that this study has made a contribution to the understanding of those parameters and that individual Member States will be able to learn from each other where it is appropriate, but also to resolve the issues that affect them within their own distinctive maritime and national culture.