KNOWME

DELIVERABLE 1.3

REPORT ON THE PILOT APPLICATION "BUILDING THE NEXT GENERATION"

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1 EXECUTIVE SUMMARY

The European Union is heavily dependent on a competitive and innovative maritime industry. For this industry, to stay competitive and develop, the future supply of young talented people for work in the industry is a key factor. This deliverable describes and explains research results on how to design and operate a marketing communication process as a strategy for improving the image of the shipping industry in order to increase its attractiveness as a labour market and career opportunity for young people.

In order to develop a marketing communication process, fundamental empirical and conceptual knowledge about the image concept is needed. This knowledge was created through a major and unique scientific survey of more than 2000 pupils in upper secondary schools in Sweden, Norway, and Greece (the SNG survey, reported in Know-Me, 2013, Appendix 1). The survey was designed and led by Gothenburg University, Sweden and carried out by Gothenburg University; Molde University College, Norway; and The University of the Aegean, Greece. Based on the survey, the concept of image is defined conceptually and empirically using scientific methods as a fundamental platform for the development of communication strategies. Image is identified as a multidimensional concept and its dimensions are measured in terms of strength and importance for pupils' choice of career path. The study also analyses the importance of different variables for pupils' stated intensions to work as a seafarer, such as influences from parents, friends, sports and leisure activities, place of living, and choice of educational program. Some differences between countries and between men and women are analysed.

Based on scientific knowledge about the image concept, the Know-Me project has developed several strategies, here called tools, for marketing communication of shipping as a career opportunity for young people. This tool box includes an information brochure about shipping as a career path; an e-portal, "Go-Maritime", which describes jobs and career paths in shipping; two complete sets of teaching materials for strategic lecturing to pupils and students; and a blueprint for designing a national organization termed NIMCO (national image communicator) for communicating a positive image of shipping as a career opportunity to young people. The NIMCO blueprint includes descriptions of organisational structure, knowledge platforms based on the SNG survey, communication systems, operational principles, and a recipe for forming NIMCOs including the synergistic effects of European collaboration among NIMCOs. The deliverable concludes with a summary of suggested actions to be taken, including the NIMCO strategy.

2 INTRODUCTION

The European shipping industry is competing with other industries to attract qualified young people who are planning their future career. If the shipping industry fails to attract enough qualified young people, the future competitiveness of the industry may be at risk. Therefore effective career marketing is very important to the industry. The aim of career marketing is to increase the attractiveness of a maritime career to potential employees.

In the "Description of Work (DoW) for the Know-Me project, "Deliverable 1.3 (D1.3) is entitled "Building the next generation". The DoW, states that "This deliverable will present the results of a range of actions that investigates how young people can be addressed and made interested in pursuing a maritime career". Stated differently, the aim of these results is image improvement, which is a fundamental and important step in career marketing. This leads to the following formulation of purpose for the present deliverable:

> The purpose of this deliverable, "D1.3 Building the next generation", is to present research made within the Know-Me project that aim at improving the image that young people hold of shipping as a labour market and career opportunity.

The methodological approach chosen for fulfilling this purpose is to develop and present strategies for designing effective communication processes for improving the image of shipping as a labour market and career opportunity in the eyes of young people.

As a concept, strategy in this report coincides with general perceptions of strategy found in the academic literature on strategy management of firms and other organisations (such as in Barney, 2002, chapter 1,"What is a strategy"). In this literature the mission, objectives, strategies and policies are core concepts. An organisation's mission is its fundamental purposes, objectives are measurable performance targets that organisations aspire to reach, strategies are the means trough which organisations accomplish their mission, and policies are actions that organisations take to implement their strategies. In this deliverable the focal organisation, here also called "actor", is a very general concept. An actor is taken here to be any person, organisation, company, country, or region using marketing communication that aim at improving the image that young people hold of shipping as a labour market and career opportunity.

In terms of strategy concepts, the focus of this report is on strategies for designing effective communication processes for the mission of improving the image that young people hold of shipping as a labour market and career opportunity. "Objectives" are very specific to individual actors that are implementing strategies. Given a mission, the choice of objectives will depend on the ambition level of the actor, the resources available for the actor, and the context in which the actor is active. Since there are many different actors, objectives are only presented in this deliverable as possible general dimensions for performance measurement without reference to specific actors.

In developing the strategies, fundamental conceptual and empirical knowledge of the relevant image concept is very important for strategy development and implementation. This knowledge is provided in chapter 3, "The role of image and attitudes", and in chapter 5, "A knowledge platform for message strategy development". Given this knowledge, the strategist is assumed to be better prepared to choose and develop strategies from a wider set of means called "marketing communication tools" (chapter 6). Given the knowledge and the tools, analysts and decision makers are assumed to be able to develop strategies and to take individual action covering the multitude of different situations that may appear in practice. This "bottom-up" philosophy does not exclude "top-down" initiatives based on this report. The same knowledge and tools will give guidance.

Being part of a research project (Know-Me), deliverable D1.3 is assumed to provide general knowledge for as many actors as possible who are directly or indirectly engaged in promoting the image of shipping as a labour market and career opportunity for young people. Whereas the mission and the strategies presented in this deliverable are generally relevant, objectives and policies can be formulated in a variety of ways depending on the internal structure of the organisation and the specific context in which the organisation is active. They will depend on the region, the market, specific conditions and problems of the organisation, and the ambitions of its management. Therefore, they are presented as possible generalised examples for organisations that are below the country level.

As specified in the DoW, this deliverable "D1.3: Building the Next Generation" is supposed to build on and be coordinated with the following other deliverables: "D1.1: Best practice of maritime stakeholders to social responsibility and sustainable development", "D1.2: Strategy for using the media as a means for improving the image of the industry", and "D1.4: Information brochure about the shipping industry and job opportunities".

The target audience for this deliverable is broad. It consists of individuals that have one thing in common. They are in their professional role directly or indirectly supposed to be engaged in the task of making young people interested in pursuing a maritime career, either as decision makers, analysts or communicators. Speaking differently – they are engaged in improving the image of shipping as a career opportunity for young people. Young people's choice of career within an industry is very dependent on the image they hold of that industry compared with that of other industries. Members of this target audience are found in the commercial shipping sector in the organisations of shipowners, ship operators, and shipowners' associations. These all have a profound interest in promoting the sector and their organisations as a career opportunity for young people for increasing the supply of competent labour in the future. The same interest exists within the educational sector, where schools, universities and educational administrations gain from promoting maritime educational courses and programmes based on the image of shipping.

The target audience is supposed to have some reading experience from texts and writing styles used in general academic education corresponding to, say, first year academic courses in Bachelor or similar programmes or from similar courses given by industry. The text in the report is kept at the same level as in basic textbooks found in such courses in subjects like marketing management, human resource management, general management, business economics, maritime economics, logistics and similar subjects. Short explanations are given to technical terms. More complicated text is placed in appendices. The text is not for everyone. It is intended for readers who in their

professional work can influence the image that young people hold of shipping as a career opportunity – directly or indirectly.

3 THE ROLE OF IMAGE AND ATTITUDE

Following representative theoretical publications on image, such as Kotler and Keller (2006), we define image as the set of beliefs, ideas, and impressions a person holds regarding an object. The object in the present case is shipping as a labour market and career opportunity. This leads us to the following definition of the image of shipping used in this deliverable:

> The set of beliefs, ideas, and impressions a person holds regarding shipping as a labour market and career opportunity

According to Kotler and Keller (2006): "The first basic step in developing effective communication of an "object" is to assess the current image of the relevant target group, since a target group's attitudes and actions towards an object are highly conditioned by that object's image". Given the fundamental role that the image concept has for developing effective marketing communication, a great deal of effort has been spent in WP1 to identify, define, and measure young people's image of shipping as a platform for further research and development. The lack of knowledge found in the shipping literature regarding the image of shipping is both conceptual and empirical.

Image is the result of perception, the process by which an individual selects, organises, and interprets information inputs to create a meaningful picture of the world. Perception has been studied in experimental psychology for a long time. According to Shiffman (1982), perception involves receiving or seeking stimulation from the external environment by listening, looking, touching, smelling, tasting, and being opposed to forces of gravity and acceleration, e.g. by being pushed and pulled. This means that activities other than looking and listening can contribute to the creation and development of an image. The physical movements of a ship in stormy weather – leading to seasickness – provides only one example of activities referred to by Shiffman (1982) which could contribute to an individual's image of shipping.

In order to develop the image of shipping to a measurable construct, we start from the assumption that image is a multidimensional concept (cf. Hampton *et al*., 1987; Newman, 1957; Herzog, 1963; Dichter, 1985; Spector, 1961; Stell and Fisk, 1986). Appendix 3 contains selected references from a comprehensive literature study of image and related concepts. The managerial relevance of the image construct is based on the common notion of links between image and behaviour.

Attitude is a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object (Fishbein and Ajzen, 1975). It could be described using terms such as feelings, emotions, and likes/dislikes. Attitude has a directional quality. It connotes a preference regarding the outcomes involving the object, evaluations of the object, or positive/neutral/negative feelings for the object. Attitudes are latent, affective variables assumed to produce consistency in behaviour, either verbally or physically. If pupils show a positive attitude towards shipping as an industry or a labour market, this can be assumed to increase the probability that they will consider the maritime industry for their future career.

There are several classic micro models of target persons' specific responses to marketing communication. In the present case, the ultimate response is of course choosing a career in shipping, but this decision is the end result of a long process of decision making. The most relevant theoretical micro model for this study is the "Hierarchy-of-effects" model (Lavige and Steiner, 1961). If this model is applied to the present case, a pupil may be in one of six states of readiness regarding a decision on choice of career: Awareness, knowledge, liking, preference, conviction, and action. The first two are true cognitive states, the following three are affective states, which collectively can be translated into attitude and intention respectively, and the last one, action, is a behavioural state. Image is based on awareness and knowledge. It may have some minor conceptual overlap with the first affective stage, liking, but this overlap should be seen as an interesting consequence of image and not as a part of image as such. Pupils' attitudes and actions towards a career in shipping are highly conditioned by the image of shipping as defined above and by their attitudes towards shipping as a labour market (See Kotler and Keller, 2006 or Fishbein and Ajzen, 1975)

Assuming that the image a person develops of an object comes earlier in time than the development of an attitude towards the same object, it makes sense to see a causal relationship between image and attitude; that is, attitude is perceived as being a function of image, but also, of course, of other variables as well. This view is expressed by the conceptual research model in Figure 1. Figure 1 explains the fundamental role of image in the Know-Me project as an instrument for influencing the attractiveness of shipping as a labour market for young people. Examples of "Other variables" in Figure 1 are influence from the person's focal reference group, environment, or intervening situational variable

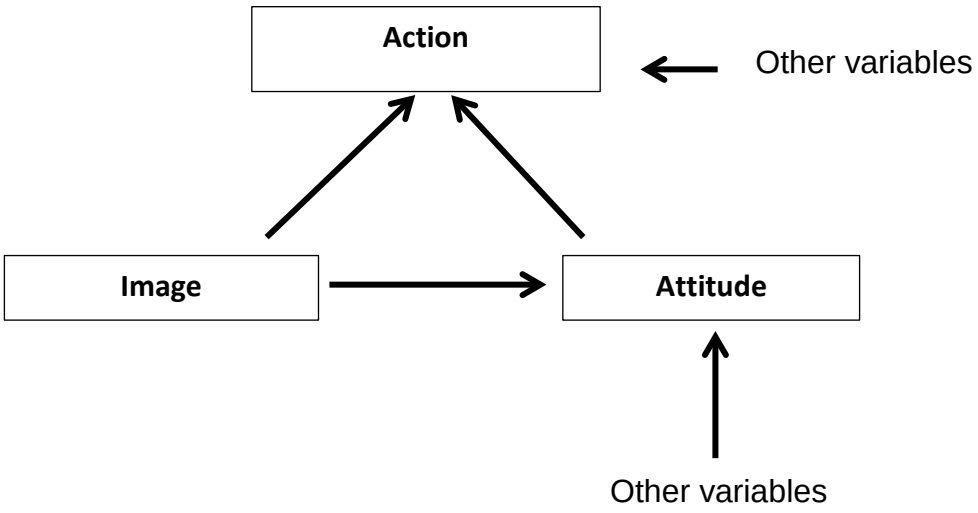

Figure 1. Conceptual research model.

4 MODEL OF THE COMMUNICATION PROCESS

Marketing communication is an important instrument for career marketing. Therefore the theory of marketing communication has been used as the main theoretical framework for organising the research within WP1 and for presenting the results. The present deliverable presents research on key elements related to effective communication of shipping as a career opportunity and labour market for young people. The presentation is based on a model of the marketing communication process. The structure of the process follows a rather traditional model of the communication process (See Kotler and Keller, 2006). Figure 2 shows the elements of the communication process where a message flows from "Sender" to "Receiver". It can be seen as both a normative and descriptive model. The model in Figure 2 is based on ideas from marketing communication theory and marketing channel theory. It is used in this paper for structuring the analysis and presenting the results.

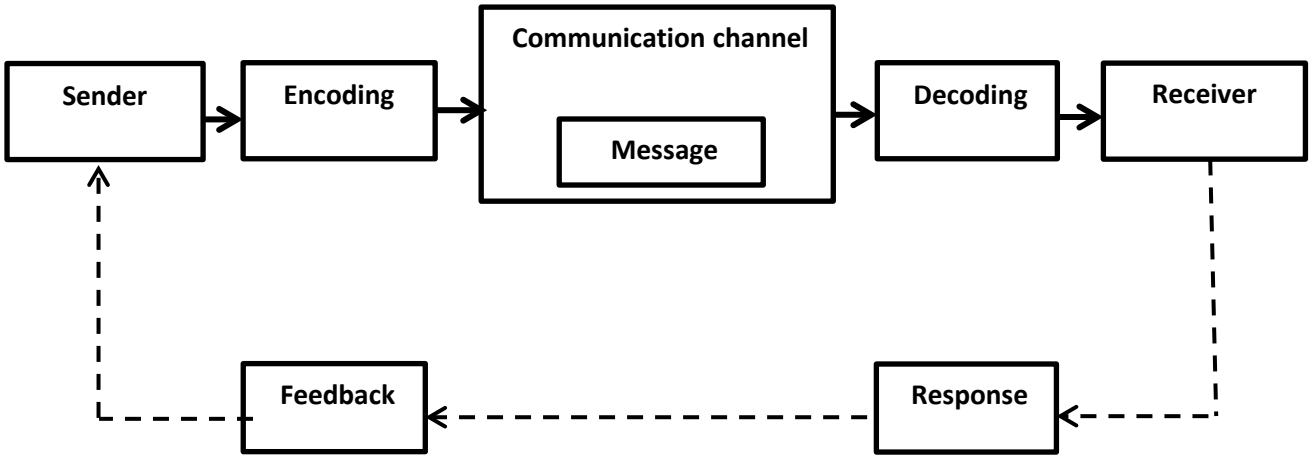

Figure 2. Model of the communication process.

For the purpose of this deliverable, the most important elements of the model in Figure 2 are "Sender", "Communication channel", "Message", and "Receiver".

The sender is the originator of the message in the communication process. The sender is taken here to be any actor (person, organisation, company, country, or region) using marketing communication with the purpose of improving the receivers' image of, and attitude to, shipping as an attractive industry for work and career. In the Know-Me project, the sender is seen as a generic concept.

Receivers (= end receivers) are young people represented in this study by pupils of upper secondary schools. They are the final destination for the sender's message. They represent a focal group for the research activities in the Know-Me project.

A communication channel may be either personal or non-personal (for more information on media and channels, see McDaniel et. al, 2011). Personal channels involve two or more persons communicating directly face-to-face, person-to-audience, over the telephone, or through e-mail. Non-personal channels are communications directed to more than one person and refer to:

- Print media (newspapers, magazines, brochures, books, reports),
- Broadcast media (radio and television)
- Network media(telephone, cable,, satellite, wireless)
- Electronic media (audiotape, videotape, videodisk, CD-ROM, Web page)
- Display media (billboards, signs, posters)
- Events and experiences: Sports, arts, entertainment, museums, cause events
- Public relations and publicity
- Internet and alternative media (social media in particular)

Social media are websites and mobile apps allowing interaction between senders and receivers in social networks and the sharing of messages between the sender and the receiver. Social media may include internet forums, and social community platforms (from service suppliers such as Facebook, Google +, Twitter, and LinkedIn). These allow blogging and micro blogging. Cell phones constitute the newest alternative and are particularly useful for reaching young people. Messages in social media may consist of almost any combination of text messages, pictures, and podcasts (audio or video shows).

A communication channel may contain communication intermediaries participating in the message flow. These function as interim "receivers/senders", furthering the message downstream in the channel towards the final receivers. An intermediary has an upstream sender as a source and is the source for a downstream receiver. The intermediaries may be members in the channel as a result of planned design, or they may just appear there as a result of an uncontrolled spread of information in word-of-mouth communication. Unplanned appearance of intermediaries is not necessarily bad, but could represent a risk under unhappy circumstances. There are recent disastrous examples of the uncontrolled spread of information when young people communicate in modern social media without supervision from parents. The increasing interest of women in jobs within sectors that traditionally have been dominated by men, such as the military or shipping, deserves attention when the concept

of communication control is under consideration. Designing channels with carefully selected communication intermediaries, such as opinion leaders, may increase the efficiency and effectiveness of the communication process. However, it is important that the risk of uncontrolled disturbance of the message is considered early in the planning process. The intermediaries can be considered to have functions similar to intermediaries in a marketing channel. The use of intermediaries may decrease the cost per contact with the final receivers and also increase the impact of each contact, if intermediaries are perceived by the receivers to be trustworthy.

The remaining elements of the model are not of the same importance for the present report. They will, therefore, only be explained briefly. Among these, “Encoding” refers to the conversion of the sender’s ideas and thoughts into a message in the form of words or signs. “Decoding” refers to the receiver’s interpretation of the language and symbols of the message. Without going into any deeper analysis of the concepts, it is important to stress here that the sender’s frame of reference as expressed in the message should not deviate too much from that of the receiver’s. If this is the case, the receiver may misunderstand or disregard the message or part of it. As an example, senders in the shipping industry cannot expect pupils of general upper secondary schools (as receivers of messages) to have more than a rather incomplete knowledge about the working conditions of seafarers and the laws and agreements regulating this labour market. If such knowledge on the part of the receiver is actually necessary, these aspects have to be communicated to the receivers in as simple a way as possible as part of the message. In so doing, it is important to use general and simple terminology and to avoid specialist maritime terminology.

“Response” and “Feedback” refer both to the impact of the communication as such and, if relevant, to follow-up activities aimed at the improvement of the process. Follow- up of response may be based on measurement of the image concepts developed in this project such as image structure, image ratings and image importance. These are presented in chapter 5. The kind of variables used in advertising research for measuring impact may also be relevant in specific cases.

Although of limited importance here, it should also be noted that the communication process may be influenced by “noise” (omitted in Figure 2) which may distort or slow down the transmission of information.

Designing communication processes for career marketing of shipping as a career opportunity and labour market requires support from two strategies, one for designing the message, the message strategy, and one for designing the communication channel, the channel strategy. In this context, data on pupils’ image, attitude, behaviour, and background characteristics are fundamental for the design of message strategies. The SNG survey (See introduction to chapter 4) was made with the aim of establishing a knowledge platform as support for communication process design.

5 “BUILDING THE NEXT GENERATION”: A KNOWLEDGE PLATFORM FOR MESSAGE STRATEGY DEVELOPMENT

The present chapter describes some results of research carried out within WP1 of the Know-Me project with the aim of contributing to the marketing of the maritime profession to young people, who for the purposes of this research have been defined as upper secondary school pupils. Conceptual and empirical knowledge about pupils’ image of and attitude to the seafaring profession, together with background variables, is a vital ingredient in the development of effective message strategies for career marketing. Therefore, this chapter develops a knowledge platform for message strategy development.

A message strategy involves three decisions: decisions on content (what to say), decisions on source (who should say it), and decisions on execution (how to say it). The present chapter uses inputs from the SNG survey for developing communication contents, source, and execution. The SNG survey is a questionnaire study providing data from a probability sample of more than 2000 pupils in upper secondary schools in Sweden, Norway, and Greece. Its design is described in Appendix 1 of this deliverable. The SNG survey defines two target populations for each country, the main target population and the comparative target population. The main target population consists of pupils who have chosen non-maritime study programmes. These are the overwhelming majority of pupils. When we refer to these in the following text, we will for ease of reference use terms like “general schools”, “general programmes”, “general education”. For the comparative target population, pupils following maritime study programmes, we use the terms “maritime schools”, “maritime programmes”, and

“maritime education”. However, it should be mentioned that the category of “general programmes” includes theoretical programmes preparing pupils for university studies as well as vocational programmes.

The knowledge platform developed in the present chapter is based on data from the main target population since these pupils represent a potential labour pool for the maritime industry. The task is how to promote the industry to them using image-improving measures. The pupils in the comparative target population can be assumed to have chosen a maritime career already by their choice of a maritime study programme. Image improvement in their case will not have the same priority. This population is used for comparison.

5.1 Input from the SNG survey for content design

5.1.1 The multidimensional image concept

The objective of this deliverable is to develop strategies for improving the image of shipping as a labour market and career path for young people. The analysis starts from the assumption that such an image exists as an active mental picture in the minds of young individuals or that such a mental picture will develop if an individual is exposed to verbal or other stimuli related jobs and careers in shipping. That this is likely to happen can be considered as almost self-evident, since the target group is in the second half of their last school year - a period of life where they are thinking of and planning their future working life. Therefore, they can be supposed to have developed some kind of frame of reference for approaching and evaluating careers. This has been thoroughly studied in the SNG survey.

It is important that a message fits into the receiver’s frame of reference in order for the message to be processed by the receiver in an effective way. It is therefore necessary for the sender, who designs the message, to be aware of the structure and content of the image that young people hold of shipping as a labour market and possible career opportunity. Since very little research has been identified that seriously contributes to the conceptual and empirical development of the image area of concern, considerable effort has been devoted in WP1 to this research task.

The SNG Survey analyses data from more than 2000 upper secondary school pupils in general schools in Sweden, Norway, and Greece. A description of the methodology of the SNG Survey including its representativeness in a European context can be found in Appendix 1 of the present deliverable. The questionnaire is shown in Appendix 4. The methodology is described in more detail together with empirical results in Know-Me (2013, Appendix 1).

The analysis of the SNG Survey identifies and extracts nine image dimensions from the empirical data. The dimensions are latent variables that have been extracted by means of factor analysis from a large set of items. The methodology is carefully described in Know-Me (2013, Appendix 1). Expressed in terms of nominal constitutive definitions, the image of shipping as a labour market and possible career path for young people is found to be a multidimensional concept spanned or structured by nine dimensions. The image concept is shown in Table 1. The column to the left in the table, “Image Dimension”, contains characteristic names or descriptions given to the latent variables, the factors, by the researchers based on correlation patterns in the data. This means, to take an example, that we have not presented any questions in the questionnaire, which explicitly mention the words “corporate social responsibility (CSR)”. CSR is a latent variable that have been identified based on correlations between a factor and manifest scales used in the questionnaire.

Table 1. Image model. Definition of the image of shipping as a labour market and possible career path. Results for pupils in general schools.

Image Dimension	Definition of image dimension
1 Reward	Monetary compensation, job satisfaction, career advancement, and other physical, mental or social benefits associated with working in the shipping industry
2 Significance of industry	Perceived significance of shipping for world trade, for trade and jobs of the individual's country, and for international social relations
3 Ships as a place of work and living	Integrated impression of working and living at the same restricted place on a ship involving working conditions, daily tasks, social life, leisure time, communicating with people ashore, and organizing family life.
4 Environment	Climate impact and environmental damage from shipping perceived in the light of the shipping industry's environmental behaviour and responsibility
5 CSR	Corporate social responsibility for all employees, for equal opportunities for men and women, and for creating positive employer-employee relations
6 Family	Easiness/difficulty of organizing family life being a seafarer.
7 Career shift	Easiness/difficulty of shifting career from shipping to careers ashore (Career lock in).
8 Risk	Ships sinking due to accidents, injuries through workplace accidents on board, and social risks associated with being locked in on board far from family and friends
9 Employer-employee relation	Perceived level of disputes between employers and employees.

The sets of dimensions identified for Sweden, Norway and Greece are not completely identical. Table 2 shows identified image dimensions separately for Sweden, Norway, and Greece. As can be seen, seven dimensions have been identified for each country. There is a remarkable similarity between the patterns of image dimensions of the three countries. This indicates that studies of other European countries would give similar results. Young people from different countries seem to be remarkably similar. The small differences between Sweden, Norway, and Greece may be explained by:

- Differences in structure, organisation, and operation of the shipping industries of the countries;
- Differences in knowledge and value systems of the respondents;
- Recent relevant events in the countries (e.g. events that may influence the perception of risk).

The absence in Table 2 of a specific dimension for a country does not necessarily mean that the aspects of the dimension are not reflected in the data of the country. The respondents may associate the aspects in question with other dimensions in a weak way. The "family" dimension and the "career shift" dimension seem to be examples of this. In the Norwegian case the family aspect seems to be associated with dimension 3, "Ships as a place of work and living". In the Greek case, the "career shift" dimension" seems to be associated with dimension 9 "Employer-employee relation".

Table 2. Image dimensions for Sweden (S), Norway (N), and Greece (G). Results for pupils in general schools ("X" denotes presence of a dimension).

Dimension	S	N	G
1. Reward	X	X	X
2. Significance of Industry	X	X	X
3. Ships as a place of work and living	X	X	X
4. Environment	X	X	X
5. CSR of shipping industry	X	X	X
6. Family	X		
7. Career shift	X	X	
8. Risk		X	X
9. Employer-employee relation			X

Table 3 shows the identified image dimensions for males and females in Sweden, Norway and Greece.

Table 3. Image dimensions. Comparisons between males (M) and females (F) for pupils in general schools in Sweden, Norway, and Greece ("X" denotes presence of a dimension).

Dimension	Sweden		Norway		Greece	
	M	F	M	F	M	F
1. Reward	X	X	X	X	X	X
2. Significance of Industry	X	X	X	X		X
3. Ships as a place of work and living	X	X	X	X	X	X
4. Environment	X		X	X		X
5. CSR of shipping industry	X	X	X		X	X
6. Family		X		X	X	
7. Career shift	X	X	X		X	X
8. Risk		X	X	X	X	X
9. Employer-employee relation	X				X	
10. Reward II				X		

There does not seem to be any dramatic differences in Table 3 between males and females image with perhaps two exceptions. Males seem to be more aware of the potential impact from the employer-employee relation. This may be due to differences in interest and knowledge of conditions in labour markets between genders in the age groups studied. The second exception concerns dimension 10, "Reward II", which should be seen as a special kind of reward deserving a separate explanation. Some analysis of the survey data reveals that a minor part of the reward (dimension 1) is seafarers' opportunities of experiencing interesting places and countries, together with career advancement. This aspect does only appear separately for female Norwegian respondents. This may reflect some of the more "romantic" perceptions of a career at sea, like the ones reported on in the survey of Norwegian sailors (Mack, 2007). Careers onboard cruise-liners may also be more present in the minds of Norwegian pupils due to a traditional strong presence of Norwegian officers on-board such vessels.

Several comments could be given to the identified nine dimensions in Table 1. Reward is not a question of only monetary compensation. Job satisfaction and career advancement are other factors considered as reward for working in the shipping industry. The environment is another dimension in young peoples' image of the industry, and so is corporate social responsibility (CSR). There seems to be an increasing awareness of sustainable development in the young generation, manifested here by "environment" and "CSR". This is in line with observations from some other industries.

5.1.2 The role and use of the multidimensional image concept

The image dimensions defined in Table 1 can be expected to reflect young peoples' frame of reference when shipping as a labour market and possible career path is brought to the fore. The

dimensions either exist in the mind of the individual, or they are possible to be created in a communication process related to shipping because they also reflect aspects of work and career in a more general sense.

The development of messages aimed at improving the image of shipping should start with a choice of which image dimensions to focus on, since they are rather different and independent. The nine dimensions defined in Table 1 give a vantage point for further development. If a certain dimension is chosen, the next step is to express it in suitable terms in the message.

This set of dimensions is also useful for other strategic activities aiming at increasing the attraction of shipping as a labour market and career possibility using other means than marketing communication. The nine dimensions make up a common platform for integrated strategic management that are relevant also for aspects of ship design, general human resource management, and corporate policy.

One problem for a decision maker planning to carry out image improving activities may be to choose image dimensions to focus on. In all such decision problems the decision maker has to consider the objective for the specific activity and the specific conditions surrounding the strategic problem and the decision maker's organisation. Besides that, if the aim is cost-efficient image improvement, such decisions could gain from two inputs from the SNG survey:

- Knowing how the various image dimensions are rated by the intended target group. The conclusion here could be to try to improve low-rated dimensions.
- Knowing how important the various image dimensions are for young people's choice of career. Here the conclusion could be to focus on dimensions that are important determinants for the choice of career.

Knowledge of image ratings and image importance measures could also be used for developing effect measures for choice between communication programmes in decision problems. Predicting what image dimensions would be affected by a certain communication programme could lead to ideas about effect measures of improvement potential of the type $\Sigma(7-R_j)\times W_j$, where the summation extends over all affected image dimensions. Here R_j is assumed to represent the target group's average rating of dimension j on a 7-degree rating scale and W_j its importance. Other measures could be defined for similar purposes. However, the development of such ideas is an implementation aspect which is beyond the intended scope of the present deliverable.

Image ratings and image importance measures as inputs from the SNG survey will be described in section 4.1.3 and 4.1.4 respectively.

5.1.3 Image ratings

The survey data from the study of upper secondary school pupils in Sweden, Norway, and Greece allows calculating how pupils rate the various image dimensions. The method used for calculating the image ratings is described in deliverable D1.2 (Appendix 1, chapter 6). Table 4 below shows how the respondents in the SNG survey have rated the image dimensions on a 7-degree rating scale. Since the rating "4" on the scale can be interpreted as a point of indifference (a quasi zero point), the image of shipping in the sense dealt with in this report can hardly be perceived as negative, since ratings > 4 are on the positive side, which is the case for the mean ratings in Table 4 and for all individual ratings except four. If the objective in an image improving activity is to improve dimensions having low ratings, such activities should focus on "family", "employer- employee-relations", and perhaps "Risk". Another candidate is "Ships as a place of work and living", since this candidate seems to be important for young peoples' choice. The latter will be analysed in section 4.1.4. Applying alternative logics for taking image ratings as a base for choice of dimensions to focus on may lead to other choices.

Table 4. Ratings along image dimensions by pupils in general schools in Sweden, Norway, and Greece (7-degree rating scale ranging from 1 to 7, 7= maximum)

Dimension	Sweden	Norway	Greece
1. Reward	4,5	5,3	5,7
2. Significance of industry	4,7	5,3	5,5
3. Ships as a place of work and living	3,9	4,2	4,3
4. Environment	4,1	4,5	4,2
5. CSR of shipping industry	4,2	4,5	4,1
6. Family	3,6		
7. Career shift	4,0	4,3	
8. Risk		4,3	3,6
9. Employer-employee relation			3,3
Mean rating	4,1	4,6	4,4

Table 5 shows image ratings for both males and females in Sweden, Norway, and Greece.

Table 5. Ratings along image dimensions for males (M) and females (F) in general schools in Sweden, Norway, and Greece (7-degree rating scale from 1 to 7, 7= maximum).

Dimension	Sweden		Norway		Greece	
	M	F	M	F	M	F
1. Reward	4,4	4,1	5,2		5,6	5,7
2. Significance of Industry	4,9	4,8	5,3	5,3		5,4
3. Ships as a place of work and living	3,9	3,7	4,2	4,8	4,2	4,4
4. Environment	4,2	4,8	4,5	4,6		4,1
5. CSR of shipping industry	4,3	4,1	4,4	4,3	4,3	4,1
6. Family				3,7	4,6	
7. Career shift	4,0	4,4	4,4		3,9	3,3
8. Risk			4,6	4,3	3,8	3,5
9. Employer-employee relation	4,0	3,9			3,7	
10. Reward II				5,4		
Mean rating	4,2	4,3	4,7	4,6	4,3	4,4

5.1.4 The importance of image dimensions for pupils' choice of career path

The SNG survey has also estimated the importance of various image dimensions for pupils' choice of career path. This should be an important input for decision makers' choice of dimensions to include in image improving strategic activities, since a natural conclusion, ceteris paribus, would be to devote effort to improve the dimensions that are most important for pupils' choice of shipping as a future career opportunity.

The method is explained in the description of the SNG survey (See deliverable D1.2, Appendix 1, chapter 7.1.1). The method estimates beta coefficients in multivariate linear regression on standardized variables with the identified image dimensions as independent variables and (1) pupils' stated intentions to work as seafarers and (2) their opinion of shipping as an attractive industry to work in (attitude measure) as dependent variables. The beta coefficients express the relative importance of the variables of which they are coefficients – the importance of the image dimensions.

The concept of "intention" is often used as a "proxy" for behaviour in studies where real behaviour cannot be measured. Both (1) and (2) above are indicators of behaviour, however (2) is not associated with any personal mental commitment on the part of the respondents. It is used for reflecting the pupils' general attitudes to work in the shipping industry without involving the respondents and is thus a less demanding variable to ask respondents about in a questionnaire. The estimates of coefficients of image dimensions' relative importance for pupils' stated intentions to work as a seafarer are shown in Table 6. The figures within brackets are p values of the estimated coefficients (p is the lowest significance level at which a hypothesis that the coefficient is equal to zero can be rejected). Low p-values are desirable such as 5% or lower.The coefficients can only be meaningfully compared vertically per column (within countries). Only estimates that are statistically

different from zero at the 6 % level or lower are shown (p≤6%). Cells denoted with ZZZZ represent estimates that do not meet the required statistical level of significance (6% or lower). They are omitted here in order to prevent wrong conclusions due to statistical uncertainty. Complete interpretation of them would require a much deeper statistical analysis than would be appropriate for this deliverable.

Table 6 shows that two image dimensions are much more important in relative terms than the rest for pupils' stated intentions to work in the shipping industry: "Reward" and "Ships as a place of work and living". The same is the case for pupils' general opinion about shipping – the attitude measure (Table 7). For both dimensions, the beta coefficients are positive and significantly different from zero at all practical levels for all three countries. The importance of these two dimensions deserves to be remembered when it comes to marketing communication. However, when it comes to the "significance of industry", this dimension does only show significant impact on career intentions for Greek pupils. It can also be seen that "significance of industry" means more for forming general opinion (attitude) than it means for pupils' stated intentions to work in the shipping industry.

Table 6. Relative importance of identified image dimensions for pupils' stated career intentions. Estimates of beta coefficients for general schools (Main target populations) in Sweden, Norway, and Greece (p levels within brackets).

Dimension	Importance for career intentions		
	Sweden	Norway	Greece
1. Reward	0,295 (0,00)	0,208 (0,00)	0,207 (0,00)
2. Significance of Industry	ZZZZ (0,10)	ZZZZ (0,30)	0,122 (0,00)
3. Ships as a place of work and living	0,212 (0,00)	0,439 (0,00)	0,266 (0,00)
4. Environment	0,084 (0,06)	0,089 (0,01)	0,095 (0,01)
5. CSR of shipping industry	ZZZZ (0,98)	0,175 (0,00)	0,157 (0,00)
6. Family	0,131 (0,00)		
7. Career shift	ZZZZ (0,07)	ZZZZ (0,08)	
8. Risk		0,174 (0,00)	0,089 (0,02)
9. Employer-employee relation			0,209 (0,00)

The "CSR of shipping industry" is an important determinant for Norwegian and Greek pupils' career intentions, while this determinant is without importance for Swedish pupils. On the other hand, "Family" appears as an important determinant for Swedish pupils, but not so for Norwegian and Greek pupils.

Turning to the results displayed in Table 7, the "CSR of shipping industry" is the second most important determinant for Swedish pupils' opinion of shipping as an attractive industry to work in, while the same determinant ranks fourth for Norway and fifth for Greece.

Table 7. Relative importance of identified image dimensions for pupils' general opinion about shipping as an attractive industry to work in. Estimated beta coefficients for general schools (Main target populations) in Sweden, Norway, and Greece. (p levels within brackets).

Dimension	Importance for general opinion of shipping as an attractive industry to work in		
	Sweden	Norway	Greece
1. Reward	0,376 (0,00)	0,372 (0,00)	0,240 (0,00)
2. Significance of Industry	ZZZZ (0,60)	0,187 (0,00)	0,356 (0,00)
3. Ships as a place of work and living	0,165 (0,00)	0,402 (0,00)	0,316 (0,00)
4. Environment	ZZZZ (0,18)	0,090 (0,01)	ZZZZ (0,20)
5. CSR of shipping industry	0,298 (0,00)	0,182 (0,00)	0,111 (0,00)
6. Family	0,133 (0,00)		
7. Career shift	ZZZZ (0,97)	0,147 (0,00)	
8. Risk		ZZZZ (0,29)	ZZZZ (0,18)
9. Employer-employee relation			0,157 (0,00)

5.2 Input from the SNG survey for choice of source

The source is where the message originates. The source concept is seen from the perspective of the receiver. In a direct communication channel, the sender is the source for the final receiver. However, as said before, there may be communication intermediaries in a channel; actually they are present in most channels. Every such intermediary will be a source for the next member in the message flow. An important factor for a source's effectiveness is its credibility, which is known to be associated with the expertise, trustworthiness, attractiveness and in some cases dynamism and power of the source as seen by the receiver. Some effort has been made in the SNG survey to identify sources that seem to be important for upper secondary school pupils' image, attitudes and intentions related to shipping as a labour market and possible career opportunity and to target such sources. These sources are interesting candidates for inclusion in the communication as intermediaries when developing a communication strategy.

5.2.1 Family and friends

Suggestions from family and friends

"Proposals" from family and friends were measured by two items on seven degree rating scales (Likert scales) in the questionnaire used in the SNG survey: "My family has proposed that I should work in the shipping industry" and "I have friends who have proposed that I should work in the shipping industry".

The relationship between proposal and intention can be measured by the correlation between them. Bivariate correlations between pupils' stated career intentions and proposals from family are 0,58; 0,65; and 0,41 for Sweden, Norway, and Greece respectively and between pupils' stated career intentions and proposals from friends 0,53; 0,68; and 0,37, keeping the same order of countries.

Another approach is to compare the importance of proposals from family and friends with the importance of the image dimensions for pupils' stated intentions to work as a seafarer. Table 8 shows the relative importance of proposals from family and friends on pupils' stated career intentions compared with image dimensions. Some beta coefficients are omitted from the table (cells with "ZZZZ"). The reason is the same as explained in section 4.1.4. In the case of Sweden, it can be seen that direct proposals from family and friends seem to be more important than dimension 1 and 3. In the Norwegian case, proposals from friends stand out as the strongest variable, whereas for Greek pupils, proposals from family seem to be the most important. It is interesting to observe that in Norway, friends are a more dominating source of influence than in Sweden and Greece.

Table 8. Relative importance of identified image dimensions, and proposals from family and friends for pupils' stated career intentions. Estimates of beta coefficients for general schools in Sweden, Norway, and Greece. (p levels within brackets).

Dimension	Importance for career intentions		
	Sweden	Norway	Greece
1. Reward	0,172 (0,00)	0,097 (0,00)	0,166 (0,00)
2. Significance of Industry	ZZZZ (0,58)	ZZZZ(0,97)	ZZZZ (0,07)
3. Ships as a place of work and living	0,090 (0,02)	0,238 (0,00)	0,195 (0,00)
4. Environment	0,069 (0,06)	ZZZZ (0,15)	0,066 (0,06)
5. CSR of shipping industry	ZZZZ(0,23)	0,110 (0,00)	0,105 (0,00)
6. Family	ZZZZ (0,37)		
7. Career shift	ZZZZ(0,04)	ZZZZ (0,58)	
8. Risk		0,113 (0,00)	ZZZZ (0,17)
9. Employer-employee relation			0,209 (0,00)
Proposals from family	0,349 (0,00)	0,236 (0,00)	0,223 (0,00)
Proposals from friends	0,254 (0,00)	0,413 (0,00)	0,157 (0,00)

Bivariate correlations between pupils' attitude to "shipping as an attractive industry to work in" and proposals from family are 0,26; 0,33; 0,30 for Sweden, Norway, and Greece respectively and between

"shipping as an attractive industry to work in" and proposals from friends 0,29; 0,39; and 0,32 keeping the same order of countries.

Table 9 shows the relative importance of proposals from family and friends for pupils' attitude to "shipping as an attractive industry to work in" compared with the image dimensions. The impact from family is insignificant in both Sweden and Norway (not shown, but low). It is stronger in Greece. The impact from friends is relatively strong in Sweden and Norway, but not so in Greece. This gives support for a hypothesis that attitudes in this context are developed differently in Greece as compared with Sweden and Norway. In all countries, the image dimensions are more important than family and friends for the attitude to shipping as an attractive industry to work in.

Table 9. Relative importance of identified image dimensions, and proposals from family and friends for pupils' opinion of shipping as an attractive industry to work in. Estimates of beta coefficients for general schools in Sweden, Norway, and Greece (p levels within brackets).

Dimension	Importance for general opinion of shipping as an attractive industry to work in		
	Sweden	Norway	Greece
1. Reward	0,343 (0,00)	0,339 (0,00)	0,217 (0,00)
2. Significance of Industry	ZZZZ (0,47)	0,174 (0,00)	0,323 (0,00)
3. Ships as a place of work and living	0,143 (0,00)	0,341 (0,00)	0,275 (0,00)
4. Environment	ZZZZ (0,15)	0,076 (0,02)	ZZZZ (0,42)
5. CSR of shipping industry	0,291 (0,00)	0,163 (0,00)	0,081 (0,02)
6. Family	0,114 (0,01)		
7. Career shift	ZZZZ(0,96)	0,136 (0,00)	
8. Risk		ZZZZ (0,57)	ZZZZ (0,04)
9. Employer-employee relation			0,131 (0,00)
Proposals from family	ZZZZ (0,41)	ZZZZ (0,56)	0,130 (0,00)
Proposals from friends	0,213 (0,00)	0,165 (0,00)	0,090 (0,03)

Conclusions regarding proposals from family and friends

The main conclusion is that personal influence from family and friends is an important determinant of pupils' intentions to choose a career as a seafarer. When it comes to general attitude to "shipping as an attractive industry to work in", the impact is relatively strong from friends in Sweden and Norway, but not so in Greece. The impact from family on pupils' attitude is weak in all three countries.

The overall conclusion is that family and friends of upper secondary school pupils are important potential communication intermediaries for communication channel development. Both of them can be expected to possess some of the criteria of credibility – such as trustworthiness, attractiveness, dynamism and power – which are cited in the literature as defining suitable sources in communication channels.

Occupation of parents and friends

It can be seen from Table 10 that the importance of parents' and friends' occupations for pupils' stated career intentions is rather low compared with the most dominant image dimensions. On the average, there does not seem to be any strong or obvious indication that young people intend to follow the same career paths as their parents. The same can be said about general attitude to "shipping as an attractive industry to work in" (See TP 1.2.1, Table 14). If pupils have a positive attitude to shipping as an attractive industry to work in, this attitude does not seem to be inspired from the work experience in the shipping industry of their parents and friends – at least not in terms of relative importance compared with several of the image dimensions. This confirms the story told by Figure 1, that image influences intention directly and indirectly via attitude.

Table 10. Relative importance of identified image dimensions, and work experience of parents and friends for pupils' stated career intentions. Estimates of beta coefficients for general schools in Sweden, Norway, and Greece. (p levels within brackets).

Dimension	Importance for career intentions		
	Sweden	Norway	Greece
1. Reward	0,271 (0,00)	0,184 (0,00)	0,191 (0,00)
2. Significance of Industry	ZZZZ(0,04)	ZZZZ (0,57)	0,097 (0,01)
3. Ships as a place of work and living	0,218 (0,00)	0,422 (0,00)	0,255 (0,00)
4. Environment	0,080 (0,07)	0,085 (0,02)	0,088 (0,02)
5. CSR of shipping industry	ZZZZ (0,98)	0,181 (0,00)	0,153 (0,00)
6. Family	0,125 (0,00)		
7. Career shift	ZZZZ (0,05)	ZZZZ (0,12)	
8. Risk		0,174 (0,00)	0,084 (0,02)
9. Employer-employee relation			0,188 (0,00)
Parents have worked in shipping industry	0,083 0,06)	0,083 (0,03)	0,131 (0,00)
Friends have worked in shipping industry	0,125 (0,01)	ZZZZ (0,23)	0,112 (0,00)

The statement given above that "On the average, there does not seem to be any strong or obvious indication that young people tend to follow the same career paths as their parents" does not mean that that a positive relationship does not exist – only that it is not strong. This was confirmed in a separate analysis (see D1.2, Appendix 1, Tables 24-29), where the means of the following variables were calculated and compared between pupils with parents who had been working in the shipping industry and pupils with parents who had not:

- Pupils' intention to work as a seafarer
- Pupils' attitude to shipping as an attractive industry to work in
- Pupils' overall attitude to the shipping industry
- Pupils' average ratings of the image dimensions

Uniformly for all three countries, the means of these four variables yield higher values for pupils whose parents have been working in the shipping industry. A similar comparison was made for pupils with friends who have been working in the shipping industry compared with pupils who did not have such friends. In this analysis the means of the four variables also showed uniformly higher values for pupils whose friends had been working in the shipping industry than for pupils who did not have such friends

.

Conclusions regarding occupation of parents and friends

The relative importance of parents' and friends' work experience from the shipping industry for pupils stated intentions to work as a seafarer is moderately high compared with that of the image dimensions. However, pupils having parents and friends with work experience from the shipping industry show higher values on the four indicators "pupils' intention to work as a seafarer", "pupils' attitude to shipping as an attractive industry to work in", "pupils' overall attitude to the shipping industry", and "pupils' average ratings on the image dimensions" than pupils who don't have such parents and friends. These categories of parents and friends can be expected to be promising intermediaries and sources for their children in communication channels, since besides fulfilling the general credibility criteria of family and friends (trustworthiness, attractiveness, dynamism and power) they are experts in relevant subjects due to their personal experience from the shipping industry.

Friends as reference group

It is well known in the literature that influence from an individual's reference group is important for the attitudes and behaviour of the individual. This seems to be the case for young people in particular (which is well known among the parents of teenagers). Table 11 shows the importance of "the industry's reputation among respondents' friends" for the respondents' "attitude to shipping as an attractive industry to work in". This illustrates very clearly the importance of young peoples' reference group – their friends.

Table 11. Importance of identified image dimensions, proposals from friends, and industry's reputation among friends for pupils' opinion of shipping as an attractive industry to work in. Estimates of beta coefficients for general schools in Sweden, Norway, and Greece (p levels within brackets).

Dimension	Importance for general opinion of shipping as an attractive industry to work in		
	Sweden	Norway	Greece
1. Reward	0,300 (0,00)	0,282 (0,00)	0,181 (0,00)
2. Significance of Industry	ZZZZ (0,90)	0,124 (0,00)	0,290 (0,00)
3. Ships as a place of work and living	0,121 (0,00)	0,304 (0,00)	0,258 (0,00)
4. Environment	ZZZZ (0,26)	ZZZZ (0,18)	ZZZZ (0,59)
5. CSR of shipping industry	0,253 (0,00)	0,138 (0,00)	0,071 (0,04)
6. Family	0,110 (0,01)		
7. Career shift	ZZZZ (0,98)	0,112 (0,00)	
8. Risk		ZZZZ (0,84)	ZZZZ (0,06)
9. Employer-employee relation			0,127 (0,00)
Proposals from friends	0,138 (0,00)	0,149 (0,00)	0,108 (0,00)
Industry's reputation among friends	0,179 (0,00)	0,205 (0,00)	0,173 (0,00)

More conclusions can be inferred from bivariate correlations between attitude variables (Table 12). A positive correlation coefficient p, ($0 \leq p \leq 1$), measures the degree to which two variables express the same thing. Two variables contain the same information if $p = 1$. The correlation matrix reveals that a pupil's own attitudes correlate significantly with the perception they have of their friends' attitude to the shipping industry – stronger for the overall general attitude to the industry as such than the attitude to "shipping as an attractive industry to work in". Attitudes to shipping seem to be shared in pupils' reference groups.

Table 12. Correlation matrix for general schools: Correlations (in the cells) between attitude variables for Sweden (S), Norway (N), and Greece (G).

Variable	The shipping industry has a good reputation among my friends	Shipping seems to be an attractive industry to work in	All in all, my opinion about the shipping industry is positive
The shipping industry has a good reputation among my friends		0,37 (S) 0,47 (N) 0,42 (G)	0,43 (S) 0,57 (N) 0,47 (G)
Shipping seems to be an attractive industry to work in	0,37 (S) 0,47 (N) 0,42 (G)		0,41 (S) 0,56 (N) 0,54 (G)
All in all, my opinion about the shipping industry is positive	0,43 (S) 0,57 (N) 0,47 (G)	0,41 (S) 0,56 (N) 0,54 (G)	

Conclusions regarding friends as reference group

Attitudes to shipping seem to be shared among members of pupils' reference groups as shown in section 8.3.1.5. This result from the SNG survey, together with the results illustrated in Table 8 that pupils tend to react to proposals and advice from friends, underlines the importance of identifying reference group members as targets for image improving strategies. The interpersonal exchange of information in a reference group will diffuse the information to other group members in a self-sustaining process.

5.2.2 Targeting

One problem in designing communication processes is to reach the various members in the channel that are planned to participate in the message flow – targeting. The term "reach" does not necessarily mean that names, addresses, phone numbers, geographical coordinates or the like must be known, only that predetermined segments of people can be reached by messages from the sender. This can be done using mass media without knowing the addresses of the individuals in the segment. If the characteristics of the segment are known, there is a variety of non-personal communication channels such as print media that can be used efficiently. It is a question of knowing how well channels match segments in terms of exposure. There will always be a certain waste using mass-media for reaching a given target group, since some foreign elements not belonging to the target group will receive the message and some members of the target group will be lost as receivers. Reaching upper secondary school pupils can always be done, since schools can provide access to the pupils. There are also other more expensive sources that can supply address information as a commercial service etc.

The SNG survey has been able to deliver some results on targeting described in the following.

School programmes

The SNG survey asked the respondents about which school programme they attended using the following nine categories: (1) Natural science; (2) Business administration, economics, trade; (3) Social science; (4) Technology, industry, construction and similar; (5) Health care, child and recreation; (6) Arts, media, communication; (7) Hotel, restaurant, food; (8) Shipping and maritime activities; (9) Other.

The means of intentions, attitudes, and image ratings were calculated for each category (See D1.2, Appendix 1, Tables 19 and 20). These means can be used as indicators of how promising pupils from different school programmes are as candidates for either choosing a career as a seafarer or as intermediaries in communication channels. The data are interesting both for choosing schools and school programmes for image promotion and for designing messages in terms of content and form in order that the messages match the individual characteristics of schools and programmes.

Maritime sport and leisure activities

It can be hypothesized that pupils' participation in maritime sport or leisure activities express an interest or social affiliation that makes such pupils more likely candidates for either choosing a career as a seafarer or being suitable as intermediaries in maritime market communication channels. The SNG survey asked the question: "What experience do you have of boating as a sport or leisure activity?". The results show uniformly that increasing experience of boating is associated with increasing values on intentions, attitudes and image ratings for all three countries (See D1.2, Appendix 1, Tables 21-23). Such pupils can be identified via their membership in clubs for boating and maritime sports or via parents' ownership of boats, or parents' membership in yacht clubs and marinas. Social clusters related to maritime sports, maritime culture, or commercial maritime activities are all of interest as potential target groups for image improving communication, since they can function as intermediaries in communication channels, either via direct contact (they have lists of members) or by using the media they control (membership journals, newsletters etc.).

Parents having work experience from the shipping industry

It was mentioned in this section that the means of the four variables "Pupils' intention to work as a seafarer", "Pupils' attitude to shipping as an attractive industry to work in", "Pupils' overall attitude to the shipping industry", and "Pupils' average ratings of the image dimensions" were uniformly larger for pupils whose parents have been working in the shipping industry than for pupils whose parents had not. Such parents may be interesting as targets, either because their children are considered to be good prospects for a career in shipping or because the parents are regarded as potential intermediaries in a communication process. They are easy to target since companies, industry organisations, or labour unions may have directories of members or because these organisations have internal media for reaching their members.

Place of living

There does not seem to be any significant relationships between pupils' place of living and their image, intention and attitude related to shipping as a career opportunity. As mentioned in the introduction to the present chapter, these findings are based on analysis of the main target population, pupils from general schools (=non maritime study programmes). Even if pupils from general schools live close to the sea and have a positive general image of shipping as such, the image they hold of shipping as a career opportunity may not be strong enough for them to have a shipping career as a preferred choice. This is a somewhat unexpected result of the SNG survey, but it

underlines that these variables are, on the average, more influenced by social and other factors than by pupils' place of living. This result should not be perceived as discouraging by the industry – on the contrary. From the perspective of the maritime industry, this lack of geographical pattern signals that the maritime industry has a much wider geographical base than the coastal areas for their future supply of competent people. This observation also should have some implications for market communication strategies.

5.3 Image dimensions and their interpretations: comparative target populations

A fundamental difference between pupils in general schools and pupils in maritime schools is that the latter have already chosen an industry and a career path for their future professional life which they can be assumed to follow with a high probability. Therefore they can be assumed to be much more knowledgeable about shipping in general and the life as a seafarer in particular. This knowledge may be acquired both before and during their education. A logical hypothesis based on this assumption would be that their image of shipping would be spanned by more dimensions and based on deeper knowledge than the image held by pupils in general schools.

This can also be seen in the data. Eight dimensions were extracted for each country by exploratory factor analysis of pupils in maritime schools in Sweden, Norway, and Greece (versus seven dimensions for general schools). Table 13 shows the interpretations of the dimensions and the names given to them, and Table 14 shows how dimensions were distributed among countries.

Table 13. Image dimensions and their interpretations. Results for pupils in maritime schools in Sweden, Norway (N), and Greece (G).

Dimension	Interpretation of dimension
1. Reward	-Salary(S,N,G) -Opportunity for experiencing interesting places and countries(N,G) -Opportunity for career advancement(G) -Interesting industry(G) -Easiness/difficulty of shifting career from shipping to careers ashore(S) -Easiness/difficulty of organizing family life(S)
2. Significance of Industry	-For world trade(S,N,G) -For my country's trade(S,N,G) -For jobs in my country(N,) -Career advancement(S) -Environmental responsibility of industry(G)
3. Ships as a place of work and living	-Working conditions on board(S,N,G) -Degree of equal opportunities for men and women(N) -Leisure time on board ships(S,G) -Easiness of frequent communication with friends and family ashore(S) -Organising family life() -Daily tasks on board(N) -Social relations on board ships(S) -Career advancement(N) -Environmental responsibility of industry(G) -Interesting industry(N)
4. Environment	-Climate impact from freight transport by ship compared with train (S,N,G) -Damage to the environment from long distance freight transport by ship compared with train(S,N,G) -Environmental responsibility of industry(S) -Cost per ton of long distance freight transport by ship compared with train(S,N,G) -Easiness/difficulty of shifting career from shipping to careers ashore(G)
5. CSR of shipping industry	-Degree of social responsibility for all employees(N,G) -Degree of equal opportunities for men and women(S,G) -Degree of disputes between employers and employees(N)

	-Environmental behaviour of industry(S,N) -Interesting industry(S) -Working condition on board(S) -Easiness of frequent communication with family and friends ashore(G) -Significance for jobs in my country(G)
6. Family	-Social relations on board(G)
7. Career shift	-Easiness/difficulty of shifting career from shipping to careers ashore (N)
8. Risk	-Injuries through workplace accidents on board(S,N,G) -Ships sinking due to accidents(S,N)
9. Employer-employee relation	-Disputes between employers and employees(G,S) -Degree of social responsibility for all employees(S,G) -Daily tasks on board(G)
10. Personal satisfaction from working as a seafarer	-Opportunity for experiencing interesting places and countries(S) -Significance of shipping for jobs in my country(S)
11. Social conditions on board	-Easiness/difficulty of organising family life(N) -Degree of social responsibility for all employees(N) -Social relations on board ships(N) -Leisure time on board ships(N)

Compared with the image dimensions extracted from pupils in general schools, two more dimensions appear. One is "Personal satisfaction from working as a seafarer", which seems quite logical remembering that these pupils have already expressed a career preference for shipping by their choice of education. The other is "Social conditions on board", the appearance of which may be explained by their knowledge about the daily life of seafarers learned from education, social networks or their place of living.

Table 14 shows the extracted image dimensions for maritime school pupils separately for Sweden, Norway, and Greece. As can be seen, eight dimensions have been identified for each country. There is a remarkable similarity between the patterns of image dimensions of the three countries. The differences may be explained by differences between countries in terms of shipping industries, economies, labour markets, cultures, traditions, recent events etc. The absence of a dimension for a country does not mean that aspects of this dimension is lacking in the data. They may be included in other dimensions, which may be logical given all the facts of the country and its shipping industry.

Table 14. Image dimensions extracted from pupils in maritime schools in Sweden, Norway and Greece ("X" denotes presence of a dimension).

Dimension	Sweden	Norway	Greece
1. Reward	X	X	X
2. Significance of Industry	X	X	X
3. Ships as a place of work and living	X	X	X
4. Environment	X	X	X
5. CSR of shipping industry	X	X	X
6. Family			X
7. Career shift		X	
8. Risk	X	X	X
9. Employer-employee relation	X		X
10. Personal satisfaction from working as a seafarer	X		
11. Social conditions on board		X	

The fact that the "family" dimension does not appear for Scandinavian respondents from maritime schools may be a bit surprising, as the poor possibilities for an ordinary family life has been identified as a key challenge in recruitment campaigns conducted by the Scandinavian ship owners and their associations. There are several potential explanations of this somewhat surprising result. One could be that this problem actually is smaller for Scandinavian sailors in general because a very significant proportion of these are employed in regular local and short distance regional operations such as ferries and feeder services (Sweden) and ferries and offshore activities (Norway). Normally, these seafarers will have more frequent contact with their home environment than the ones employed in

short and deep sea traffic. The availability of good internet-based communications offered by Scandinavian ship owners could be another explanation. Finally, women seem to be more aware of family aspects than men, and the sample proportion of women in maritime schools in Sweden and Norway is smaller than 10%, but about 50% in Greece.

5.4 Stakeholders on CSR in the shipping industry

Deliverable D1.1, "Best practices of maritime stakeholders related to CSR and sustainable development", investigates how stakeholders rate the importance of different aspects of the current CSR strategies of the shipping industry. The contents of the strategies were grouped in three components: (1) "Environment and energy factors", (2) "Human resource management", and (3) "Stakeholder community involvement". A sample of 15 stakeholders representing European conditions were asked to rate the importance of items representing these three components of CSR on five degree Likert scales. The sample was composed as follows (number of stakeholders within brackets): European bodies (2), seafarers unions (1), port authorities (1), port agents (1), classification societies (1), NGOs (2), regional authorities (1), maritime press (1), suppliers (3), maritime administrations (2). For the CSR components, 10, 12, and 10 items were selected for representing "environmental and energy content", "human resource management", and "stakeholder community involvement" respectively. The importance of the items was rated as follows on the five degree scale by the stakeholders in the sample (median ratings per item within brackets):

1. **Environmental and energy content of CSR strategy:** Disposal of garbage in ports (5), Cleansing of oil (5), Use of separators (4), Sewage systems onboard the ships (5), Ballast and grey water treatment system (5), On board recycling system (4), Cooperation with environmental NGO (3), Participation in awareness campaigns (3), Creation of proactive environmental funds (4), Use of renewable energy forms (3).

2. **Human resource management content of CSR strategy:** Diversity Management (3), Gender equality (3), Professional and personal development (4), Health and safety of personnel (5), Welfare of personnel (4), Working conditions (5), Training (5), Communication and participation of personnel to decision making process (3), Communication opportunities with family (3), Provision of welfare services and entertainment material on-board (3), Cultural awareness training (3), Crew and family assistance unit (3).

3. **Community involvement content of CSR strategy:** Consultations with local governments/administrations (4), Employee volunteering schemes (3), Sponsoring of voluntary organisations (3), Local recruitment and use of local suppliers (3.5), Sourcing from local businesses (3), Hiring and training employees from local community (3), Investing in local banks (3), Office location (3), Participation in local policy debates (3), Financial support to communities projects (4).

Using the average median rating (AMR) per component as a criterion, it is apparent that the environmental and energy content of CSR strategy (AMR=4.2) is perceived to be more important than the human resource management content (AMR=3.75) and the community involvement content (AMR=3.25). Other descriptions in deliverable D1.1 support this conclusion.

This rank order between the three CSR components does not reflect the priorities of upper secondary school pupils expressed by the importance of the various image dimensions for their stated intentions to choose a maritime career. In the eyes of the pupils, dimensions related to "the human resource management of CSR strategy" are more important than environmental aspects. This is clearly demonstrated in Table 6 and other tables, where "reward", "ships as a place of work and living", and "employer-employee relation" are considered to be much more important image dimensions than "environment" for pupils' stated intentions to choose a maritime career.

Looking at the items chosen to represent "the human resource management content of CSR strategy", items such as "gender equality", **"**communication and participation of personnel to decision making process", **"**communication opportunities with family", "provision of welfare services and entertainment material on-board", and "crew and family assistance" are all rated low. These are items that young people find important as ingredients in an attractive CSR that could convince them to choose a maritime career.

A CSR strategy may have several purposes. The CSR strategy of the shipping industry as perceived and expressed by the stakeholders in deliverable D1.1 seems to be aimed at fulfilling necessary legally determined national or international environmental requirements and labour market agreements rather than to make shipping a preferred career for young people. It is myopic and reactive rather than proactive. The strategy does not have a profile that makes shipping interesting as a career choice. These aspects have been considered when developing the marketing communication tools of chapter 6 in this deliverable.

6 "BUILDING THE NEXT GENERATION": MARKETING COMMUNICATION TOOLS

This chapter describes some marketing communication tools that have been developed in the Know-Me project. These tools have been designed and evaluated as outputs of research and they should all be possible to implement practically by "problem owners".

6.1 On the timing of marketing communication to pupils

Most school systems in Europe consist of 9 years primary school and 3 years secondary school. A critical decision on future career will have to be made just before pupils leave upper secondary school which normally will be at an age of 18 to 20. The options after secondary school, as far as maritime careers are concerned, are either academic maritime education as nautical or technical officer or to take a job as a rating directly after upper secondary school, possibly after some very short additional education. Most countries also offer specialised maritime study programmes at the secondary school level. These specialised maritime programmes are of course qualifying for further academic education as a nautical or technical officer and for jobs as ratings, but they also give the student basic qualification for some other academic programmes or subjects. For access to other programmes or subjects at the academic level, additional complementary education may be necessary.

6.1.1 Aspects of timing: Pupils following non maritime study programmes

Most pupils in upper secondary schools following non maritime study programmes (the overwhelming majority of pupils) can be assumed to make an important decision about their future career in the second half of their last year in school or when they leave school. This decision defines one point in time when the individual's image of shipping as career option must be at an optimal level to have maximum impact on a maritime career as a pupil's preferred alternative. Since image development and improvement takes time, image improvement cannot start a very short time before the individual has to make a choice in order for maritime career marketing to be effective. One aspect of this is the choice of educational programme or optional courses that pupils have to make when entering upper secondary school or a short period thereafter. Their actual choices can reduce the degrees of freedom they have later for choosing a maritime career, since not all study programmes or courses are equally suitable for maritime careers or will give easy access to them. The latter is a fact they should be aware of when thy have to make their choices.

A reasonable conclusion from this discussion is that image communication could start early and reach its maximum impact during the second half of pupils' last year in secondary school.

Suggestion for action: Image communication to start with low intensity early and before pupils' choice of specialized educational programmes and to reach a maximum during the second half of pupils' last year in secondary school.

6.1.2 Aspects of timing: Pupils following maritime study programmes

Pupils following maritime study programmes at the upper secondary school level have already expressed a strong interest in choosing a maritime career. For these pupils, image improvement will not have the same impact and could be a waste of resources unless the objective is to further

strengthen their interest in pursuing a maritime career. However, if the objective of image improving activities is to increase applications to maritime study programmes at the secondary school level, such activities must be implemented with sufficient lead time before pupils have to make their final choice. This means during their last year in primary school at the latest. A reasonable conclusion from this discussion is the same as the one drawn for pupils following non maritime study programmes: Image communication could start early and attend its maximum impact just before the decision about further study has to be made.

Suggestion for action: Actors promoting maritime study programmes to pupils in coastal areas to start market communication early and before pupils decide on specialized programmes at the upper secondary school level.

6.1.3 Conclusions about timing of marketing communication to pupils

An early start of information to pupils (and perhaps children) about shipping and seafaring would be in line with the first step, creating awareness, in the “Hierarchy-of-effects” model mentioned earlier. An early start would make pupils more receptive to career marketing communication later during their time in school. The means for achieving this could be books, podcasts, and similar tools for stimulation of children’s interest and curiosity regarding the maritime sector. In the best of worlds, organised image communication could very well start as soon as children can receive and interpret information, if the information is properly adapted to their level, say when they start primary school or even earlier. However, this has not been studied in the Know-Me project. A natural measure to undertake by maritime stakeholders would be to sponsor artistic production of literature for children with the aim of combining adventure and objective information in the same literature (paper or IT based). This could provide a natural entrance into the first step of the ”Hierarchy-of-effects” model – awareness of seafaring and shipping.

Suggestion for action: Financially powerful actors (shipowners, ports, stakeholders, and the EU Commission) to sponsor artistic production of tales for young children in the form of books or similar based on electronic media with the aim mediating an exciting and informative picture of shipping and the maritime environment.

6.2 On direct strategic lecturing to pupils

Communication channels can be categorised according to whether they are personal or non-personal and whether they are direct or indirect. In the latter case the information flows are transmitted via intermediaries before they arrive at the final audience. When tried in the empirical parts of the Know-Me project, it was found that direct personal communication with upper secondary pupils in class or at school was extremely difficult to organise. The reasons behind this are not difficult to understand:

- Schools are working under time constraints with their main task, to teach pupils the required curricula, in particular during their last year in school. There is very little time for other activities.
- Schools may be hesitant to open their classrooms for foreign “lecturers” due to fear of political propaganda or vested commercial interests.
- In some countries written permissions must be given by the pupils’ parents if other than school personnel communicate in an organised way with pupils in school.
- Schools would have to give permission to other industries as well as for career marketing. The maritime industry is not the only industry wanting to attract young talented people.

These problems have also been experienced when conducting research within the Know-Me project. Plans on using direct personal communication to pupils in schools for career marketing of the maritime sector in an implementation phase will be very difficult to realise considering these barriers. In addition it is a very inefficient strategy in terms of costs per contact. The conclusion of this discussion and experience is that direct personal communication to pupils in non-maritime educational programmes in upper secondary schools is not a viable strategy. The hypothesis put forward in the “Description of Work (DoW)” for the Know-Me project that strategic lecturing in class for upper secondary school pupils would be a possible communication channel had to be rejected. For maritime study programmes it would be easier, but their pupils are already preparing themselves for a maritime career, so in terms of career marketing it would be a waste of resources.

Suggestion for action: Actors to use strategic lecturing only in cases where there is a positive personal relation between actor and school.

6.3 Tools for indirect strategic lecturing

Due to the difficulties of using direct personal communication to pupils in school, an alternative strategy has been followed. This strategy is based on the idea of having communication intermediaries to carry out the job. Table 1 specifies relevant image dimensions of young peoples' image of shipping as a career opportunity and labour market and Table 6 the importance of these dimensions for pupils' career intentions. Pupils' decisions will depend, among other things, on what they know and what they feel about these dimensions. Complete lecturing materials have been developed within the Know-Me project on two subjects, "Environmentally responsible cargo shipping in a sustainable society" (TP 1.3.2 and TP 1.3.3) and "Present and future careers in the shipping industry" (TP 1.3.4). The material of each subject consists of a scientific source document describing scientifically based knowledge about the subject together with a set of Power Point presentations for a lecture. Armed with this material, any lecturer can design one or several lectures which will fit a certain audience in a certain context. The material has been received well when evaluated by teachers. The communication strategy is to make this material known and available for reading and downloading via the Internet for potential lecturers and career advisers. The strategic intention is to create "self-going" indirect personal communication channels. One important marketing means for this will be the "Go Maritime Portal", but it may be spread to other websites as well.

Suggestion for action: The EU commission to make the material for indirect strategic lecturing (TP 1.3.2, TP1.3.3 and TP1.3.4) available for lecturers and teachers through appropriate websites such as the "Go Maritime Portal"

6.4 Information Brochure

An information brochure, "Careers in the Maritime Industry" (See Deliverable D1.4) has been developed within the Know-Me project. It describes the shipping industry and job opportunities. It focuses on several image dimensions such as "Reward", "Significance of industry", "Ships as a place of work and living", and "Career shift". It is as such a direct non-personal communication channel, but may also serve as an indirect personal channel when spread for instance to career advisers or lecturers. It combines informational and transformational aspects of message design (See Appendix 2 to this deliverable for an explanation of the concepts of informational and transformational approaches respectively), and it has got positive evaluations from experts.

Suggestion for action: The EU commission to make "Careers in the Maritime Industry" available to actors in printed form or for downloading via the web.

6.5 Know-Me e-portal

The Know-Me information e-portal www.Go-Maritime.net developed within WP5 is an important instrument for career marketing communication. The message it presents is organised under the following headings: "The European Maritime Industry", "Working and Living at Sea", "Working Ashore", "My Maritime Career", and "Interactive". It provides the kind information associated with most of the image dimensions of young peoples' image of shipping as a career and labour market (described in Table 1). The e-portal uses both the informational approach and the transformational approach for message execution (See Appendix 2 to this deliverable). Part of the message coincides in principle with that of the information brochure referred to earlier, but in a more lively form using podcasts. The interactive component is based on Twitter and You Tube.

The portal can become an important communication channel for the future life of the Know-Me project. It has, for example, potential to communicate other messages developed within the Know-Me project such as scientific source documents and strategic lectures to educators, career advisers and

other users, and it can be used as a "warehouse" for information supposed to be transmitted on request to linked destinations.

Suggestion for action: The EU commission to integrate the information e-portal "Go-Maritime net" in the commissions system of websites.

6.6 National Image Communicator (NIMCO)

This chapter presents a toolbox for coordinated action at the national level. It is proposed in this deliverable that systematic and consistent use of the toolbox for developing marketing communication processes could be a viable strategy for improving the image of shipping as a labour market and career opportunity for young people. The toolbox contains a blueprint for independent organisations with communication channel separation (NIMCOs) and four image communication platforms, the image definition platform IDP, the image promotion platform IPP, the message execution platform (MEP), and the communication channel platform (CCP). In terms of the model of Figure 2, continuous evaluation of the response and updating of the platforms will give feedback for improving the communication process over time.

6.6.1 Organisational strategy

In this report, it is assumed that the main aim of image improving activities is to increase the attraction of shipping as a labour market and career opportunity for young people. Increased attraction will facilitate recruitment campaigns for companies in the maritime sector, and also improve shipping companies' marketing of transport services and their supply of capital and other resources.

However, image improvement is not recruitment. It has a longer lead time. It is resource demanding considering the size of the target population and the need of specialised competence. It cannot be assumed to be carried out by individual actors in the market unless such actors are very dominant, since positive outcomes of the activities may be lost to competitors not having contributed to creating the outcomes. These leakages give rise to a "free rider problem". This means that image improving strategies based on marketing communication lend themselves to being planned and implemented in coordination between actors having the same interest, either at a national level or at a supranational level such as the EU, or geographical subsets of the EU having common conditions and objectives. Therefore, the strategy proposed here is to form independent organisations with national coverage in cooperation between the stakeholders involved, either financed by government or by agreed upon shares from the stakeholders. The term national image communicator (NIMCO) will be used in this deliverable for such an organisation in order to facilitate writing.

Collaboration between actors will improve cost efficiency, improve effectiveness, and eliminate or at least reduce the leakage problem. Such national and supranational collaboration will not raise barriers for local communication activities, such as improving labour supply to local ferry services or ports – on the contrary. The main target group, young people – as represented in this study by upper secondary school pupils in Sweden, Norway and Greece – seem to be very similar in relevant characteristics across European countries, as shown in this comparative study. Considering the main target group, young people, there are no indications that communication strategies cannot be carried out, in most cases at EU scale, at least not in a generic sense. NIMCOs, therefore, could gain from having access to a support organisation at the EU level.

NIMCOs must be organised as independent organisations in relation to the stakeholders. Each NIMCO must have a clear identity of its own. Each NIMCO must have separate communication channels in both directions so that image promotion can be separated completely from other flows of information from commercial stakeholders having other purposes and interests. A recent example of this requirement is the web portal of a ship owners' association which in one section of the front page presents internal news where the CEO informs the members about the organisation's strategic activities with the headline "thousands of jobs are at risk if……. (or if not…)" - as an attempt to influence politicians and the government. At another part of the same front page there was external news with pictures of the sunken Italian cruise ship "Costa Concordia" and of a ferry catastrophe in the Philippine Islands. Image promotion directing a pupil to this web portal for more information about

maritime conditions and the job market may give the pupil an unnecessarily negative impression of "risk" in shipping, one of the image dimensions identified in this study (See table 1).

6.6.2 Message strategy

Message content

Table 1 is a model of pupils' image of shipping as a labour market and career opportunity. It is a positive and descriptive model, referred to here as an image definition platform (IDP) when characterised using model terminology. It is a key concept and platform for this study and represents fundamental conceptual and empirical research which has many managerial uses. It is used in this deliverable, among other things, as a framework for developing a new conceptual platform for the development and grouping of arguments in terms of elements for image promotion. This new image promotion platform (IPP) is shown in Table 15. The IPP is a normative and causal type of model aimed at providing an inventory of message elements from which appropriate selections can be used for creating promotional arguments for message design. The IPP gives the communicator access to a set of promotional elements for each image dimension. It is a tool that should help communicators to increase awareness and knowledge in the target group, and specifically help pupils to answer questions like: presence (do I know about it?), relevance (does it offer me something?), performance (can it deliver?), bonding (is it the best alternative?).

The message elements shown in Table 15 should be seen as examples, used here to facilitate the understanding of the role of the IPP. In applications, the arguments will also have to reflect the specific conditions of the country, the organisation, and the target group. As previously stated, message elements must be expressed verbally and conceptually, so that they can be understood by the end receivers, or be able to be translated into their language.

Table 15. Image promotion platform (IPP) of shipping as a labour market and a possible career opportunity

Image Dimension	Message elements
1 Reward	• Wage levels in shipping for different positions, vessels, and traffic areas. • Tax issues • Job descriptions in terms of flexibility, movability, dynamism, and social interaction • Opportunities for career advancement and continued education • Opportunities for experiencing interesting places and countries.
2 Significance of industry	• Descriptions of the importance of shipping for • Trade, globally, regionally, and nationally • Jobs from a national and EU perspective • Cultural and social relations internationally (historical perspectives)
3 Ships as a place of work and living	• Working conditions on board, daily tasks performed at sea and in port, • The social life on board in small groups, • Activities on board during leisure hours at sea, • Leisure hour activities in port, • How to communicate with family and friends ashore
4 Environ-	• Facts about climate impact from shipping compared with the impact from other

ment	modes of transport. • Environmental damage caused by shipping compared with other modes of transport. • Energy efficiency of shipping
5 CSR	• National and international laws, conventions and agreements. • Corporate practices and initiatives • Role of unions
6 Family	• Corporate practices related to holidays, monetary compensation during holidays, and free travel between ship and home, • Possibilities of communicating with family ashore, • Extent and policy regarding couples working on the same vessel, • Present organisational trends and initiatives regarding family issues
7 Career shift	• Possible and common careers ashore after careers at sea. • Corporate supported education for careers ashore • State organised education facilitating shift of career
8 Risk	• Statistics and descriptions on ship wrecks and their consequences in comparison with similar in other transport modes or industries. • Rescue systems and organisations • Statistics on workplace accidents on board in comparison with workplace accidents in chosen industries. • Health care and health insurance at sea • Preventive measures and initiatives by companies and government
9 Employer-employee relation	• The role and activities of unions regarding settlement of disputes between employers and employees • Company policies for managing human relationships on board ships • Preventive measures from governments, unions and companies • Description of company and union practices and agreements

Image creation and image improvement requires control of the communication process so that it will deliver the same basic content independent of how it is executed and by whom. Otherwise, the communicated information may be distorted or get lost in the modern media landscape and in the interpersonal information diffusion processes that the messages may lead to.

Message execution

The term execution refers to how the message is being expressed. The execution strategy constitutes guidelines for how communicators can translate message content into specific communication, starting from the image promotion platform (Table 15). Table 16, the message execution platform (MEP), gives some generalised recommendations on what kind of expression can be used for different image dimensions and what aspects of the information content for each dimension fits the informational and transformational execution strategy. However, it should be said that message execution involves creativity, and it will also depend on the specific characteristics of the sender, the target group, and the problem situation.

Table 16. Message Execution Platform (MEP)

Image dimension	**Message execution**		**Recommended message expression**
	Informational	Transformational	
1 Reward	Based on facts and figures compared with other job alternatives or industry average	For aspects of career advancement and experience abroad	Mainly texts
2 Signifi-cance of industry	Particularly regarding trade and jobs	For international cultural and social relations	Mainly texts
3 Ships as a	Working conditions	Social life onboard	Texts, pictures, and podcasts

place of work and living	on board. How to communicate with family and friends	and leisure activities in port	
4 Environment	Descriptions and figures compared with other modes of transport	Change of climate impact and environmental damage from modal shifts to shipping	Texts, pictures, and podcasts
5 CSR	Descriptions of Institutional facts and actors' practices	Impact from CSR on work atmosphere and perceived labour security	Mainly texts
6 Family	Facts on time spent at sea and at home. Possibilities for communicating with family ashore	Experience from two different family lifestyles	Texts and pictures
7 Career shift	Facts and figures on career shifts from sea to land. Educational offers from state and companies	Examples and experience of career shifts	Texts, pictures, and podcasts
8 Risk	Facts and figures comparing shipping with other industries	Personal, national and international gains from shipping in the light of its risks	Texts and pictures
9 Employer-employee relation	Descriptions of agreements and practices in the labour market	Harmonious relations – a win-win situation	Mainly texts

6.6.3 Channel strategy

The end receivers, the pupils, can be identified and reached in several ways for direct promotion. They may be identified by knowing their age, school, study program etc. In the simplest case, direct promotion can be executed by referring target groups to NIMCO Web sites (portals) using an attention-stimulating personal post card or letter. All that is needed is a text like: "Do you want to know more about careers in shipping? Please see www.xxx.yy!"

The same direct message can be sent using e-mailing, if e-mail addresses are known, or by using traditional mass media advertising in printed media, display media or in connection with events and experiences. Parents can also be addressed at the same time by sending the same message to households. Websites can use all the expression alternatives of the message execution platform (MEP). The advantage of using websites as a communication channel is the complete control it gives over delivered content and execution based on IPPs and MEPs. The costs of this type of communication channel can be kept at moderate levels. The importance of family and friends in general for pupils' attitudes and intentions was shown in the SNG survey (see Section 5.2.1). Targeting pupils directly means that pupils' friends will simultaneously be involved as class mates etc. The pupils will become intermediaries for each other and personal face-to-face communication will develop. Targeting pupils' parents may expand the approach further.

This approach can be combined with simultaneous prioritized communication with schools' career advisers, providing them with more detailed information and material, as well as with access to personal contacts at the NIMCOs, particularly if the approach is dynamically planned to take place in predetermined periods. Pupils' career interest is a key variable for dynamic planning. Periods with strong interest may be at the beginning of the upper secondary school, or when pupils make important choices of courses etc. However, the most obvious period to choose is the same as in the SNG survey – at the beginning or middle of the second half of the pupils' last year in school.

According to findings in the SNG survey, certain segmentation variables can be used for identifying segments showing higher values on indicator variables, such as pupils having parents who have work

experience from shipping, parents who are owners of boats for sport or leisure activity, or pupils who attend specific educational programs. These pupils and their parents may be suitable for grouping into premium segments - “maritime ambassadors” – and organising social forum or social communities for these segments using internet platforms such as Facebook, Google+, Twitter, and Linkedin. These allow blogging and micro blogging. Communication can be carried out on computer or cellular phones. Blogs from selected seafarers about their daily work in different positions on board and from different geographical traffic areas around the world can be quite impressive drivers of interest for young people. Examples could be a female crew member blogging from an icebreaker in arctic waters or a captain taking his container vessel through the Panama Canal. The list could be made longer.

Table 15 shows realistic combinations of communication channels and receivers. In practical cases the best choice will be influenced by the size and character of content, the message expression, the media presence of receivers, and institutional factors. In continuous operation, systematic updating and evaluation of experiences will improve channel selection

Table 17. Communication channel platform (CCP) for different receivers (X = realistic combination)

Communication channels	End receivers	Intermediaries			
	Pupils	Pupils' parents	Pupils' friends	Pupils' club mates	Pupils' career advisers
Print media	X	X			X
Broadcast media					
Network media					
Electronic media	X	X	X	X	X
Events and experiences	X	X	X	X	
Social forum	X	X	X	X	
Social communities	X	X	X	X	
Cell phones	X		X	X	X

6.6.4 Suggestion for action

The NIMCO strategy requires further research. The EU commission or similar EU actors, if any, are recommended to finance a pre- study of the NIMCO proposal regarding if and how this strategy can be implemented. This study should not only deal with organizational aspects, but also with the important scientific core, the image concept and the role of the different platforms based on the image concept, the image promotion platform, the message execution platform, and the communication channel platform and how these platforms can interact in national and European context. This study could further investigate how national communicators could be designed, if regions within Europe could form coordinated building blocks under the umbrella of a central European unit or there should be a direct link between a Central European service unit and the national communicators and the role of such a unit. The end result of the proposed pre-study should be a realistic and detailed “blueprint” for implementation.

6.7 Conclusions and policy implications

6.7.1 Conclusions

One of the main aims of the KnowMe project is to increase the attractiveness of shipping as a career path for young people. This deliverable describes the results of a range of actions that investigates how young people can be addressed and made interested in pursuing a maritime career”. In theoretical terms, this can be characterised as “career marketing”. A fundamental assumption behind career marketing is that improving and utilising the image of shipping will increase its attractiveness as a career path for young people. This is also in line with general marketing theory in which image is a key concept. Therefore a unique survey on image and related variables has been carried out among upper secondary school pupils in Sweden, Norway, and Greece. The conclusions from this

study are that it is possible to develop a scientifically based and practically implementable image concept that is both definable in qualitative terms and measurable in quantitative dimensions. The results of this survey have been developed into knowledge platforms that, together with other research results, provide tools that can help strategists, analysts and decision makers to improve the attractiveness of shipping as a career opportunity. These platforms and some other outputs of research within KnowMe make up a set of marketing communication tools for career marketing. The tools have been described in this deliverable. Some of these can be implemented individually by different actors. However, one specific tool, the NIMCO strategy, presupposes coordinated actions between actors at the national level and preferably also at the supra-national level, for instance at the EU level. Therefore collaboration between policy makers is a key to efficient and effective image improvement and career marketing at various levels.

6.7.2 Summary of suggested actions to be taken

Below follows a summary of actions to be taken by actors. The sections in which these actions are first presented and the analyses on which they are based are given within brackets.

1. The EU commission to initiate and finance a pre-study for investigating if and how the NIMCO strategy can be implemented (Section 6.6.4)

2. Actors carrying out Image communication to upper secondary school pupils to start with low intensity early and before pupils' choice of specialized educational programmes and to reach a maximum during the second half of pupils' last year in secondary school (Section 6.1.1)

3. Actors promoting maritime study programmes to pupils in coastal areas to start market communication early and before pupils decide on specialized programmes at the upper secondary school level. (Section 6.1.2)

4. The EU commission to recommend financially powerful actors (shipowners, ports, stakeholders, and the EU Commission itself) to sponsor artistic production of tales for young children in the form of books or similar based on electronic media with the aim mediating an exciting and informative picture of shipping and the maritime environment.(Section 6.1.3)

5. Actors to plan "strategic lecturing" in schools for promoting shipping as a career opportunity to selectively choose schools where there is a positive personal relation between actors/lecturers and schools in order not to waste resources.(Section 6.2)

6. The EU commission to make the material for indirect strategic lecturing (TP 1.3.2, TP1.3.3 and TP1.3.4) available for lecturers and teachers through appropriate websites such as the "Go Maritime Portal" (Section 6.3)

7. The EU commission to make the information brochure "Careers in the Maritime Industry" available to actors in printed form or for downloading via the web.(Section 6.4)

8. The EU commission to integrate the information e-portal "Go-Maritime net" in the commissions system of websites.(Section 6.5)

9. The EU commission to initiate and finance a study of the impact of the shipping industry's CSR strategies on the profile of the shipping career as seen by the stakeholders, the young generation and the industry itself – similarities and differences (Section 5.4).

7 APPENDICES

Appendix 1. Methodology of the SNG Survey

We have followed an inductive approach when developing the image of shipping as a measurable construct. This approach involves designing a questionnaire with psychometric scales, collecting the data, and analysing the data using multivariate statistical methods. These steps in the survey, taken together, made it possible to simultaneously develop and define the image construct operationally and nominally, and to measure it quantitatively in various ways.

Questionnaire design

The image construct is defined by its dimensions. They have been identified by analysing the quantitative outcomes of the survey. This task involves revealing the number of dimensions and describing their meaning. Based on a literature review on various aspects of shipping and the researchers' own personal contacts with the maritime sector, a set of items were developed. They were considered to have sufficient potential to cover the universe of the most relevant general and career oriented aspects of shipping and at the same time to be understood by potential respondents. The items represent the respondents' general opinions about the shipping industry, their beliefs about being a seafarer on board a cargo ship, their beliefs about cargo ships as a workplace, their opinions about transport by ship, and their thoughts and intentions about their future working lives. The items were designed as seven degree semantic differential scales for mainly cognitive aspects and seven degree Likert-like scales for mainly affective aspects. The questionnaire is shown in Appendix 4. Despite the term "Questionnaire", which is often used in surveys, most of the "questions" are not questions in a literal sense. They are statements (items) to which the respondents are asked to respond. By analysing their responses conclusions can be drawn about latent mental variables. This type of "stimulus-organism-response model"(S-O-R model) is a common generic model for designing items for psychometric measurement in surveys.

A Swedish version of the questionnaire was developed by the University of Gothenburg and tested in various ways in a class room session at the University of Gothenburg on a group of 26 university students just having finished upper secondary school. In this test the students first filled out the questionnaires. After that their interpretations of the items as well as the formulation of the items were discussed. This test only led to a few minor modifications of the questionnaire. It was then translated into English and discussed between partners and thereafter translated from English to Norwegian by Molde University College and to Greek by the University of the Aegean.

Target populations

Two target populations were defined for each country, the main target population and the comparative target population. The main target population is defined as all upper secondary school pupils who are not following a marine programme and who are in their last school year and, if possible, in the second half of their last school year.

All three countries offer maritime programmes at the upper secondary school level, either in separate maritime schools or in schools offering maritime programmes in parallel with other programmes. Pupils in their last school year attending maritime programmes constitute the "Comparative target population" of that country.
When we in the following refer to the pupils/schools associated with the main target population we will use terms like "general schools", "general programmes", "general educations" and for the comparative target population "maritime schools", "maritime programmes", and "maritime education".

We thus have one main population and one comparative population from each country.

Sampling

The study is designed for analysing relationships between variables using multivariate statistical methods. These methods require "epsem" samples (equal probabilities for sample elements) of pupils, otherwise things may become extremely complicated (e.g. see Kish, 1965). Sample designs aiming at estimating population parameters of single variables, may gain in precision from using complicated selection and estimation schemes such as probability proportional to size, stratification, regression estimates etc. However, this is not our main aim, and epsem selection will give reliable results also for parameter estimation with reasonable sample sizes.

The sample selection was carried out using cluster sampling measuring all pupils in selected clusters. This design based on simple random sampling of clusters results in epsem sampling. The definition of clusters was different in the three countries depending on school system, availability of possible selection frames etc. In Sweden and Norway classes were chosen as clusters and in Greece schools. In Sweden and Norway simple random samples of classes were selected from complete lists of classes from these countries' national agencies for education. In Greece a simple random sample of schools was selected from a list of schools from the Ministry of Education.

The final result of the sampling process is one epsem sample per country and target population. These six epsem samples can be handled as independent samples having different selection probabilities.

Collecting the data

The same research plan for data collection was followed in Sweden, Norway and Greece. The schools were contacted via the headmaster/headmistress of the school who appointed a contact person for each selected class, normally the main teacher of the class or similar. Guidelines were given to the contact persons. The questionnaires were distributed to the pupils during a class activity, filled out under surveillance of the contact person, and collected at the end of the session. This design of the measurement process was chosen firstly in order to improve the measurement properties by minimizing group influences and other distorting activities when filling out the questionnaires and secondly to improve the response rate. The design also assures that the respondents belong to the target populations defined for the study.
No cultural or language problems were discovered during the data collection. This is also what may be expected when using the types of psychometric scales we have used. The responses were finally coded into Excel files by each university.

The following numbers of valid questionnaires were collected: In Sweden 641 (407 males, 234 females), in Norway 773 (445 males, 328 females), and in Greece 684 (371 males, 313 females).

On nonresponse

There are two causes for nonresponse in the survey. One is refusal by schools or classes to participate and another is pupils' absence from school on the day when the survey took place. In Sweden 59 % of the selected classes participated, in Norway the response rate in terms of classes was 56 %. In Greece, where schools were selected in the first step, all selected schools participated. There are no reasons to expect any association between the two mentioned causes for nonresponse and the survey variables. In a technical sense these non-respondents can be considered as eliminated from the survey at random. This means that pupils that responded in the survey can be regarded as epsem samples without nonresponse in the statistical analysis.

Multivariate statistical analysis

Two main multivariate methods were used in the statistical analysis of the data: exploratory factor analysis (e.g. see Hair *et al.,* 1995) and a special type of multiple linear regression.
Factor analysis was first used to identify the image dimensions as factors and to explain the meaning of the dimensions by means of factor loadings (correlations between factors and variables). Factors were first extracted using principal components and then rotated using the varimax method for factor rotation. By means of known items loading significantly on factors it was possible to interpret and name the factors.

Factor scores of the varimax rotated factors were used in a second analysis to estimate the relative importance of the image dimensions for explaining the respondents' stated intentions to work as a seafarer and their attitudes to shipping. This was done by estimating beta coefficients using factor scores as independent variables in a linear regression analysis with measures of career intentions and attitudes as dependent variables. The advantage of this method is that the image dimensions represented by factor scores are orthogonal, given the factor extraction methods we used. This minimizes the multicollinearity problem of multiple regression (e.g. see Aigner, 1971, p.73; Hair *et al.*, 1995, p.400; or Gujarati and Porter, 2009, p.157).

For certain analyses describing image characteristics quantitatively, summated scales (cf. Hair *et al.,* 1995) were used to represent the dimensions. This is the case where specific interpretability is important or if group sizes are too small for reliable factor analysis to be carried out.

On representativeness

The research approach using Sweden, Norway, and Greece (the SNG survey) as a multiple case study based on deep, surveys in each country is considered to be the optimal approach for getting good European representativeness in key variables within the available budget and at the same time carrying out high quality measurements.

The aim of any survey should be to minimize total error. A common mistake in surveys is to spend too much budget on sampling, the error of which can be calculated, and to spend too little on attempts to reduce expected measurement error, an error type which is difficult to measure. A well-known model (Kish 1965, ch.13.2) relates total error (T) to sampling error (S) and measurement error (M) according to the formula

$$T^2 = M^2 + S^2$$

From this formula it can be seen that driving S to zero (when the sample size is equal to the population size) will not make T equal to zero. The effect of such an approach may be an impact in the opposite direction since too little resources will remain for controlling M. With a given budget M and S will not be independent. In this study, M depends on the questionnaire design and the data collection (see sections "Questionnaire design" and "Data collection" above), two activities that have been carried out in a way that can be expected to minimize measurement error.

The most important key variables are (1) the image structure in terms of image dimensions and (2) the importance of the image dimensions. When European representativeness is discussed, the focus should be on these two key variables. Representativeness in other variables is of minor concern when studying the image of shipping.

Europe can be perceived here as a population consisting of sub-populations (countries). It is not known at the outset whether countries are different in terms of key variables. Therefore the analyses need deep investigation per country with large samples of pupils per country. There is a high fixed cost per country of carrying out high quality measurements. Splitting a sample on all European countries would be too costly – if even possible to organize. In order to maximize measurement quality, given the budget, it is necessary to investigate a few countries only. The choice of Sweden, Norway and Greece capitalizes on the availability of project partners in these countries. This keeps the fixed country cost low and makes the study possible to carry out at all. The approach reduces fixed total costs and improves measurement quality. These countries taken together are considered

here to represent rather different image driving contexts in Europe. The difference is rather obvious when Greece is compared with the Scandinavian countries, but also Sweden and Norway are very different in terms of the maritime sector's structure and significance as a revenue generating industry for the economy and as a labour market. If similar results are arrived at from three so different countries, it is rather likely, based on methods of analogy, that results in terms of image structure and image importance would not be significantly different in other comparable European countries. These are the principles that have been used in the SNG survey for creating results that are representative of European conditions.

Research collaboration

The research plan, including the research design, the questionnaire and the sampling plan, was developed by Gothenburg University (GU). GU, Molde University College (Molde), and the University of the AEGEAN (AEGEAN), following the research plan, collected the questionnaire data in their respective countries and coded the data into Excel files. GU made the statistical analyses.

Appendix 2. Execution: Informational and transformational approaches

The term execution refers to how the message is being expressed. Execution strategies are how communicators translate their messages into specific communication. Two approaches described in the literature are useful in context of image communication, the informational approach and the transformational approach.

The informational approach would elaborate directly on the informational contents of the image dimensions and their concrete characteristics and express them in clear terms without paraphrasing or changing them too much. The aim is to pass on information showing that a maritime career may be in the target person's best interest and promises to fulfil the person's career expectations. The approach may describe how a maritime job can be the solution to a problem, compare maritime jobs with other job alternatives in terms of benefits, or use testimonials about the maritime profession from celebrated persons who are perceived to fit into the maritime context. The first two states in the "Hierarchy-of-effect model" referred to in chapter 1, awareness and knowledge, are in focus here. A "categorical imperative" here must be not to overestimate the target person's knowledge about shipping. The informational approach assumes that the receiver is able to process the communication in a rational and logical way.

An example of the informational approach involving comparison with other occupational alternatives is a Greek campaign, run by the Ministry of Mercantile Marine in cooperation with the Shipowners' Union and the Hellenic Chamber of Shipping, aiming at attracting the interest of young people, mainly students at high schools, for applying to the Marine Academies. The campaign included visits to secondary schools, TV and radio spots, leaflets, and other events. To make known the salary prospects of a career as a ship officer, one motto of the campaign was: "You have met the generation of 700[1] euros. It is time to meet the generation of more than 3.000 euro as ship officer" (See TP 1.2.5, section 4.1.4)

A transformational approach would elaborate on aspects other than those expressed in the definition of the image dimensions. It could be to describe what kind of person would (or would not) be interested in a career in shipping, what experiences such a career might give a person, or what admiration it might create in a person's social environment. The transformational approach often attempts to awaken emotions that could motivate a specific behaviour.

An example of the transformational approach is the Norwegian "Ikke for alle"-campaign, a joint initiative by the "Maritimt Forum" of Norway, which is a collaborative initiative between ports, private shipping companies, shipowners' associations and governmental bodies. The name of the campaign means "not for everyone", and the main point is to market careers at sea for those who are interested and able to do specific jobs. A major element in the campaign has been to establish an arena where young professionals, who are already working in the shipping business, are used for communicating with other young people in the process of choosing their educational direction (See TP 1.2.3, section 4.3).

[1] At the time, the minimum salary in Greece was 700 euro. Today is 588 for the employees of age over 25 years and 20% less for those beyond the age of 25.

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Appendix 4. Questionnaire

KNOWME

UNIVERSITY OF THE AEGEAN

UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

Molde University College
Specialized University in Logistics

Questionnaire about shipping

This questionnaire is part of a research project, "KNOWME", supported by the EU. In this project we want to find out how young people in some European countries perceive shipping, and what opinions they have about the shipping industry. The results of the project will be used as one of the inputs for EU's maritime policy in the future. The project is carried out in collaboration between universities in Sweden, Norway, UK, Germany and the Greece.

We would greatly appreciate if you could fill out and return the questionnaire. Your answers will be treated confidentially. If you have any questions, please contact:

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Arne Jensen *tel. 031-786 1484* *e-mail: arne.jensen@handels.gu.se*

Explanations:
Shipping: Commercial use of ships for transport
Shipping Industry: Companies and people operating or owning ships in commercial use for transport
Seafarer: Man or woman employed onboard a ship regardless of position

My general opinion about the shipping industry

Answer questions 1 to 9 by placing a check mark in one of the boxes between the words to the left and right of each 7-degree rating scale. The more you strongly agree with the statement given in a question, the further to the right you should place your mark, and the more you strongly disagree, the further to the left you should place your mark. Place your mark in the box in the middle (the "0" box) if you have no opinion at all about a certain question

1. In general, long distance freight transport causes less damage to the environment if done by ship than by train

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

2. The shipping industry is behaving in an environmentally responsible way

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

3. The shipping industry takes social responsibility for all employees

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

4. The shipping industry offers equal opportunities for men and women

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

5. Shipping appears to be an interesting industry

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

6. Disputes between employers and employees are uncommon in the shipping industry

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

7. Shipping seems to be an attractive industry to work in

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

8. The shipping industry has a good reputation among my friends

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

9. All in all, my opinion about the shipping industry is positive

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

My beliefs about being a seafarer on board a cargo ship

Answer questions 10 to 26 by placing a check mark in one of the boxes between the words to the left and right of each 7-degree rating scale. The stronger your belief is described by the word to the left, the further to the left you should place your mark, and the stronger your belief is described by the word to the right, the further to the right you should place your mark. Place your mark in the box in the middle (the "0" box) if you have no opinion at all about a certain question.

10. The opportunity for experiencing interesting places and countries as a seafarer is:

Small ☐ ☐ ☐ ☐ ☐ ☐ ☐ Big
-3 -2 -1 0 +1 +2 +3

11. The opportunity for career advancement as a seafarer is:

Small ☐ ☐ ☐ ☐ ☐ ☐ ☐ Big
-3 -2 -1 0 +1 +2 +3

12. **Organising family life as a seafarer appears to be:**

Difficult ☐ ☐ ☐ ☐ ☐ ☐ ☐ Easy
-3 -2 -1 0 −1 +2 +3

13. **Shifting career from being a seafarer to careers ashore is:**

Difficult ☐ ☐ ☐ ☐ ☐ ☐ ☐ Easy
-3 -2 -1 0 −1 +2 +3

14. **The wage level for seafarers is:**

Low ☐ ☐ ☐ ☐ ☐ ☐ ☐ High
-3 -2 -1 0 +1 +2 +3

My beliefs about cargo ships as a workplace

15. **The daily tasks on board ships are:**

Boring ☐ ☐ ☐ ☐ ☐ ☐ ☐ Stimulating
-3 -2 -1 0 +1 +2 +3

16. **Working conditions on board ships are:**

Bad ☐ ☐ ☐ ☐ ☐ ☐ ☐ Good
-3 -2 -1 0 +1 −2 +3

17. **Social relations on board ships are:**

Bad ☐ ☐ ☐ ☐ ☐ ☐ ☐ Good
-3 -2 -1 0 −1 +2 +3

18. **Leisure time on board ships is:**

Boring ☐ ☐ ☐ ☐ ☐ ☐ ☐ Stimulating
-3 -2 -1 0 +1 +2 +3

19. **The risk of injuries through workplace accidents on board ships is:**

High ☐ ☐ ☐ ☐ ☐ ☐ ☐ Low (which is positive)
-3 -2 -1 0 −1 +2 +3

20. **On board ships, frequent communication with friends and family ashore is:**

Difficult ☐ ☐ ☐ ☐ ☐ ☐ ☐ Easy
-3 -2 -1 0 −1 +2 +3

My opinion about transport by ship

21. **Compared with transport by train, the cost per ton of long distance freight transport by ship is:**

High ☐ ☐ ☐ ☐ ☐ ☐ ☐ Low
-3 -2 -1 0 +1 +2 +3

22. **Compared with using train, the climate impact from long distance freight transport by ship is:**

Great ☐ ☐ ☐ ☐ ☐ ☐ ☐ Small
-3 -2 -1 0 +1 +2 +3

23. **Compared with other modes (truck, aviation, train), the significance of shipping for world trade is:**

Small ☐ ☐ ☐ ☐ ☐ ☐ ☐ Great
-3 -2 -1 0 +1 +2 +3

24. **Compared with other modes (truck, aviation, train), the significance of shipping for Sweden's foreign trade is:**

Small ☐ ☐ ☐ ☐ ☐ ☐ ☐ Great
-3 -2 -1 0 +1 +2 +3

25. **Compared with other modes (truck, aviation, train), the significance of shipping for jobs in Sweden is:**

Small ☐ ☐ ☐ ☐ ☐ ☐ ☐ Great
-3 -2 -1 0 +1 +2 +3

26. **The risk that ships sink due to accidents at sea is:**

High ☐ ☐ ☐ ☐ ☐ ☐ ☐ Low (which is positive)
-3 -2 -1 0 +1 +2 +3

About my future working life

Answer questions 27 to 31 by placing a check mark in one of the boxes between the words to the left and right of each 7-degree rating scale. The more you strongly agree with the statement about your future working life given in a question, the further to the right you should place your mark, and the more you strongly disagree, the further to the left you should place your mark.

27. **I could imagine working as a seafarer for a period some time in the beginning of my working life**

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

28. **I intend to go in for a career as a seafarer**

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

29. **It is not impossible that I will work occasionally as a seafarer for short periods as a complement to another main occupation**

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

30. **My family has proposed that I should work in the shipping industry**

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

31. **I have friends who have proposed that I should work in the shipping industry**

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree
-3 -2 -1 0 +1 +2 +3

2(3)

About my background

32. Gender: Male ☐ Female ☐

33. Age:_____ Years

34. Have any of your parents been working (please mark your answer with an *x* in <u>one</u> box on each row below):

In the shipping industry:	☐ No	☐ Yes, less than two years	☐ Yes, two years or more
In the port industry:	☐ No	☐ Yes, less than two years	☐ Yes, two years or more
On a fishing vessel:	☐ No	☐ Yes, less than two years	☐ Yes, two years or more
In a fishing port:	☐ No	☐ Yes, less than two years	☐ Yes, two years or more
In another transport or logistics industry: (other than those mentioned above)	☐ No	☐ Yes, less than two years	☐ Yes, two years or more

35. Do you have brothers, sisters or grandparents that have been working (please mark your answer with an *x* in <u>one</u> box on each row below):

In the shipping industry:	☐ No	☐ Yes, less than two years	☐ Yes, two years or more	☐ Don't know
In the port industry:	☐ No	☐ Yes, less than two years	☐ Yes, two years or more	☐ Don't know
On a fishing vessel:	☐ No	☐ Yes, less than two years	☐ Yes, two years or more	☐ Don't know
In a fishing port:	☐ No	☐ Yes, less than two years	☐ Yes, two years or more	☐ Don't know
In another transport or logistics industry (other than those mentioned above)	☐ No	☐ Yes, less than two years	☐ Yes, two years or more	☐ Don't know

36. Do you have friends that have been working (please mark your answer with an x in <u>one</u> box on each row below):

In the shipping industry:	☐ No	☐ Yes, less than 3 months	☐ Yes, 3 months or more	☐ Don't know
In the port industry:	☐ No	☐ Yes, less than 3 months	☐ Yes, 3 months or more	☐ Don't know
On a fishing vessel:	☐ No	☐ Yes, less than 3 months	☐ Yes, 3 months or more	☐ Don't know
In a fishing port:	☐ No	☐ Yes, less than 3 months	☐ Yes, 3 months or more	☐ Don't know
In another transport or logistics industry: (other than those mentioned above)	☐ No	☐ Yes, less than 3 months	☐ Yes, 3 months or more	☐ Don't know

37. Have you lived in a coastal area before the age of 12?

☐ Yes, less than two years ☐ Yes, two years or more

If yes, where did you live in a coastal area:

- ☐ City/town with shipping
- ☐ Coastal area without shipping
- ☐ On an island
- ☐ Other, namely:_____

38. Have you lived in a coastal area when aged 12 or older?

☐ Yes, less than two years ☐ Yes, two years or more

If yes, where did you live in a coastal area:

- ☐ City/town with shipping
- ☐ Coastal area without shipping
- ☐ On an island
- ☐ Other, namely:,

39. What experience do you have of boating as a sport or leisure activity?

- ☐ Very great experience
- ☐ Rather great experience
- ☐ Rather small experience
- ☐ No experience

40. To what extent have you been thinking about your choice of profession?

- ☐ To a very great extent
- ☐ To a rather great extent
- ☐ To a neither great nor small extent
- ☐ To a rather small extent
- ☐ To a very small extent

41. What secondary school programme are you attending?

Name of programme:_____

In what study area would you place your programme (Please answer by putting an *x* in <u>one</u> of the boxes) :

- ☐ Natural science
- ☐ Business administration, economics and trade
- ☐ Social science
- ☐ Technology, industry, construction and similar
- ☐ Health care, child and recreation
- ☐ Arts, media, communication
- ☐ Hotel, restaurant, food
- ☐ Shipping and maritime activities
- ☐ Other:_____

Thanks for filling out the questionnaire!

3(3)