

# NETWORK OF SHORT SEA SHIPPING PROMOTION CENTRES

## NETWORK OF REGIONAL MARITIME COMPETENCE CENTRES - REMARCC

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### 1. INTRODUCTION (BACKGROUND)

This paper will give a brief introduction into the development of the project "Network of Short Sea Shipping Promotion Centres" and its results.

The basic idea of the project was to introduce a network approach for short sea shipping promotion centres, which have a close link with regional development. The main priorities of this project were to strengthen the competitiveness of European short sea shipping and to improve logistics services in port regions by enhancing co-operations and initiating networks between the regions involved in the North Sea region.

During recent years the discussion about short sea shipping and the development "from road to sea" has become very intense. This has been a result of the appearing weakness in the logistics system in Europe, which was in the past mainly focused on road transport. But facing the existing overload of the European road network, the predicted increase in transport volumes and the negative effects on the environment, it has become obvious that logistics concepts have to become economically and ecologically sustainable.

The base of this INTERREG study has been another INTERREG study: "Identifying of regional logistics parameters". The results deriving from this study confirmed from both sides - i.e. from a scientific analysis of the short sea shipping, incl. sea transport flows and from statements of actors from the demand and the supply side in interviews - that marketing in short sea shipping is to be improved and for this purpose co-operation between the providers of maritime transport and logistics is useful and necessary.

Analysis and simulations of transport flows and modal split on corridors relevant for short sea shipping showed that there are cargo potentials in road haulage which are suitable for sea transport. These potentials have been hauled on roads although sea transport would have been quite competitive. A decisive reason why sea transport has a smaller share of modal split is insufficient marketing in short sea shipping.

The Network of Short Sea Shipping Promotion Centres (NWSSSPC) provides a contribution for strengthening the competitiveness of short sea shipping and the maritime transport chain in the North Sea region as a whole.

The fundamental strategic objective of the NWSSSPC is to create a tool, which follows a model character to be applicable in other port regions. Hence, this model character also provides the opportunity to get port areas into the network that has currently not been involved in the project. This open approach with the opportunity to include other ports into the network will avoid distortion of competition between ports.

The network character and its open access perform a permanent development process in order to improve the performance of short sea shipping and interregional co-operation among port regions.

Since positive effects of promotion activities for short sea shipping are not limited to partner ports, there will be positive multiplier effects to all port regions due to improved marketing of short sea shipping as a whole.

### ***Changes within the Course of the Project***

The original approach of the INTERREG IIc short sea shipping network project has been comprised of two objectives. The first objective was to develop regional Promotion Centres for short sea shipping, while the second objective has been the creation of a network among these centres. Once such a network has been created among the North Sea partner regions, it should be enlarged to other maritime areas to integrate Promotion Centres from those regions.

Within the course of the project, some changes in the environment, in which the project has been operating occurred due to

- changes in the partner regions themselves
- an increasing number of Promotion Centres outside the North Sea region with the objective to develop a network.

The changes in the partner regions themselves refer to the development of promotion centres on a national level and are therefore supported by national authorities. In order to avoid any opposite developments on national and regional levels, it was decided that the term 'Promotion Centre' should be applied only on a national level.

Additionally, the increased number of Promotion Centres outside the North Sea region has given reason to development of a network of these national Promotion Centres. Again, to avoid counteracting developments, it was necessary to change the name of the network that was established officially within the project.<sup>1</sup>

However, the influence of these parallel developments on a national and a regional level referred merely to the terms 'Promotion Centres' and 'Network of Promotion Centres' but did not have negative impacts on the purpose to promote short sea shipping on a regional level.

On the contrary, both approaches, i.e. promotion on a national and a regional level provide the chance to co-operate and to gain synergy effects as both levels are dedicated to supplement each other with complementary and not competing activities.

Such a chance to promote short sea shipping efficiently by using both levels will have to be pursued strongly in future activities for the clear benefit of port regions.

## **2. PARTNERS STRENGTHS/WEAKNESSES**

The project consists of altogether six partners covering all countries bordering the North Sea. The main partners are from:

- Bremen, Germany
- Lower Saxony, Germany
- Kristiansand, Norway
- Västra Götaland, Sweden
- Padborg/Aabenraa/Aarhus, Denmark
- North East England, UK

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<sup>1</sup> Within the project the 'Network of REgional MARitime Competence Centres' (REMARCC) was founded.

- Groningen<sup>2</sup>, Holland

In addition to the regional partners, consultants and universities from the partner regions were involved in the work-packages. These partners are:

- Institute of Shipping Economics and Logistics (ISL), Germany
- Bremen Institute of Industrial Technology and Applied Work Science at the University of Bremen (BIBA), Germany
- Institut for Transportstudier, Denmark
- Chalmers University of Technology – Department of Transportation and Logistics, Sweden
- Agder Research Foundation, Norway
- PricewaterhouseCoopers, Germany

Furthermore, partners from

- Lisbon, represented by FRESTI, Portugal
  - Southampton, represented by Southampton Institute, UK
  - Pori, represented by the Centre for Maritime Studies / University of Turku, Finland
- joined the project as associated partners.

The strengths and weaknesses of the port regions can be summarised into these general statements.

<b>Strengths:</b>	<b>Weaknesses:</b>
Geographical position advantage Investment/expansion Co-operation between the port and its players Connection to infrastructure	Lack of area for port expansion Over-capacity of ports Concentration of cargo on few ports Limited use of technology Hinterland infrastructure does not meet port needs.

The opportunities and threats cannot as easily as the strengths and weaknesses be categorised since these naturally are of a more individual nature. But these opportunities and threats could be generalised from the SWOT-analysis of the port regions.

<b>Opportunities:</b>	<b>Threats:</b>
Development of port into a logistics hub Environmental developments EU road congestion, and EU initiative to move goods off the roads.	Competition from other ports, national and international. Competition from other modes of transport.

### 3. TRANSPARENCY AND CO-OPERATION

The existing need to improve the transparency on the 3 levels, inter-regional transparency, intra-regional transparency and market transparency, and the directly related importance for a bigger success of maritime transport in Europe gives one of the reasons and – at the same time – one of the objectives for a ‘network of short sea shipping Promotion Centres’.

Both the establishment of Promotion Centres in the individual port regions and the link of these centres within a network aim at higher transparency by enhancing regional and interregional co-operation and communication within the ports and short sea shipping sector. Due to the strong competition in the

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<sup>2</sup> Groningen was involved as the lead partner of the INTERREG IIc project ‘Transport Study’ in order to guarantee an efficient co-operation between both projects and to avoid double work for the benefit of both projects and the North Sea region as a whole.

logistics sector, since logistics requirements from the demand side, can be met by many actors in the logistics sector, it is essential for European short sea transport

- firstly to have sufficient information on the available logistics services in the maritime sector to offer efficient and competitive logistics chains and
- secondly to make availability of efficient and competitive logistics offers known and transparent to the demand side.

### ***INTRANSIT - Intermodal TRansport ANalyser and SimulaTion***

To increase the transparency of Short Sea Shipping and to have an operational tool for promoting Short Sea Shipping, a concept IT-programme was drawn up.

Within the completed project the structure of a working demo version of INTRANSIT as a tool for the promotion of short sea shipping has been developed. A demo version will be available soon under [www.shortsea.org](http://www.shortsea.org).

#### **The project structure**

The INTRANSIT sub-project was made up of these 5 phases:

- Specification of programme contents
- Pilot study
- Programme adjustment
- Market analysis<sup>3</sup>
- Turn-key concept development

#### **Ad 1. Specification of the programme content**

Originally the concept was conceived as a tool where the attention of the transport buyer could be drawn to alternative routes by entering origin and destination. Transport buyer could then compare this with his/her present modal split and transport corridor.

Another aspect that entered the concept was the idea of an environmental assessment of the modal split for the corridor in question.

The idea of a route-planner did, however, run into data collection problems at an early stage. It would be very difficult and cost intensive to gather all the relevant information needed to present a plausible tool to the transport buyers, and even more so to maintain and keep the data up-to-date.

Suggestions, that the operators entered their own data into the database would require a huge administrative force to maintain the database and to validate the data. And even so, to have a tool that would be respected and used would require a close to 100% commitment from the operators. This was deemed impossible.

A different concept started to emerge, which related to the idea of transparency, and contained the basic ideas of a tool to analyse multimode transport. Instead of having an exact tool, one could be made based on average figures, but with the possibility for the user to adjust these figures according to his or hers more exact knowledge of that specific transport.

This led to the concept of a programme, which would be easy for the user to utilize and implement and give the user a high degree of added value. The programme enables the user to analyse routes and corridors themselves, instead of having fully to rely on a second hand claim about the transport. Further the programme had to be easy to construct and maintain. The programme is build up of modules, which can be updated individually, fully replaced or excluded if necessary. Modules can of cause also be added to the programme if further analysis parameters are required. Maintenance of the programme is limited to the average figures used in the core database of the programme. This will mostly apply to the environmental part of the programme. Other updates will only be required when technology changes to an extent where the average figures need to be recalculated. Administration on the pro-

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<sup>3</sup> This phase was not carried out in the project.

gramme is therefore very limited and the programme could be offered as a free service via the Internet or through distributing the programme on a CD.

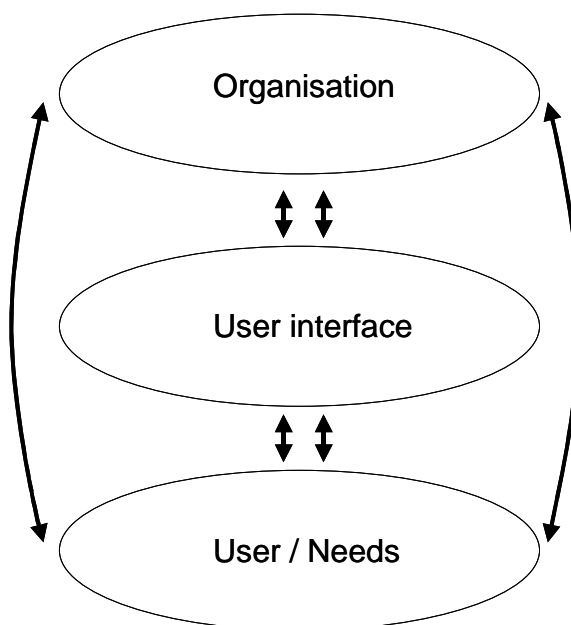
## Ad 2. Pilot study

The pilot study was conducted in the Danish and the international steering groups.

The Danish group was of the opinion that the concept as such was a good idea, but that it was too extensive and too expensive for a small organisation like the Short Sea Promotion Centre Denmark to undertake at the moment, but that the concept was a good indicator of a future development towards a greater dependency between the transport modes and an indicator of how different modes of transport could be thought entered into a transport chain. Further it could be used in this concept state towards transport buyers and all other interested parties to proclaim the aspect of transparency and multimodality.

The international group found the concept very interesting and was willing to extend the concept demo to a full-scale working demo, or even a full-scale programme, on the Internet. This could not be done under the current project, but will be applied for under the forthcoming Interreg IIIB-programme.

Figure 1. Concept foundation



## Ad 3. Programme adjustment

The first version of the programme was a rough demo-programme with only two main functions: 1) to display alternative routes for a certain choice of corridor, and 2) to show environmental data for each leg of a particular route.

As the programme was intended to be like a route-planner with transport suppliers entering their own data, the list of suppliers could also be entered into the programme. The actual suppliers on a certain leg of the route could be identified and easily accessed for the user.

The user could then flick through each leg and get a picture of the pros and cons of each leg in relation to his or her specific transport.

The full-scale structure of the programme can be seen in the figure.

This concept was, however, rejected because of the economic and administrative costs of running and maintaining this database.

This led to a refined demo-version of the IT-concept as described in the following section "Turnkey concept development."

## Ad 5. Turn-key concept development

The concept fulfils the three basic needs for programmability, usability, and maintenance illustrated in the figure 1.

The success criteria of the programme is made up of:

- the users
- the data
- the user friendliness
- organisation and maintenance

### Users:

The users of the tool have been defined as transport buyers. This group is targeted because of their apparent need for transparency in the market. This group also has the final decision power when it comes to the actual design of a multimode transport chain.

The definition could at a later stage be extended to cover all transport related personal.

### The data:

The concept fulfils the main idea of giving the user the relevant information in terms of output. Through the selection process in the programme the user narrows down the field of parameters and is left with the actual information needed and nothing more.

In terms of data input there are two levels. First level is the data that the user enters into the programme. Second level is the input entered by the programme holder, e.g. the basic data for the programme default values.

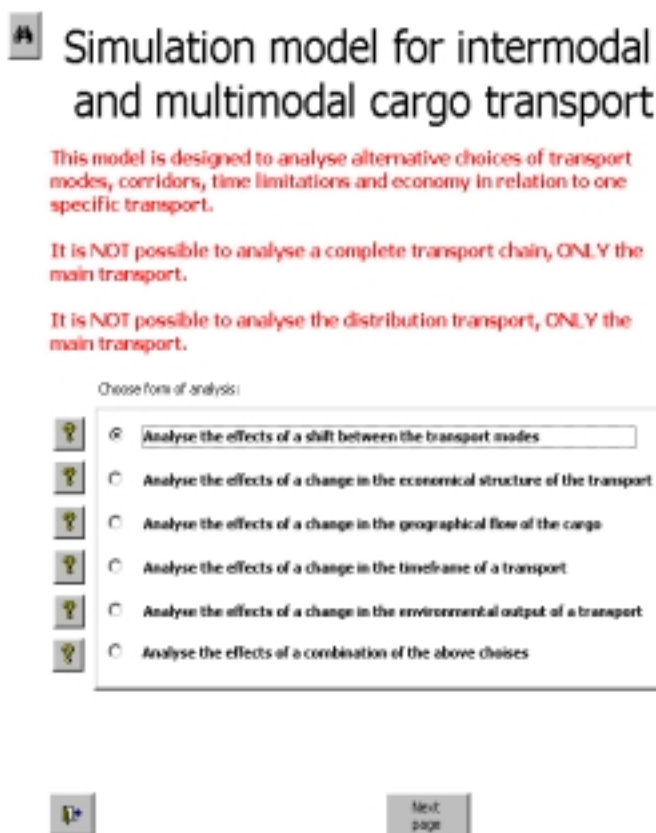
### User friendliness:

The concept is designed to provide as easy access to as relevant information as possible for the users. So data input and data output need to be tailored to the requirements of the users. This means a logical and easy to comprehend graphical layout of the programme. Easy to understand and logically sequenced data input screens. Relevant and value added data output from the programme.

### Organisation and maintenance:

The programme is of a magnitude that makes it easy and cheap for a smaller organisation to implement, operate, and maintain.

Figure 2. The IT-concept



### The IT-concept

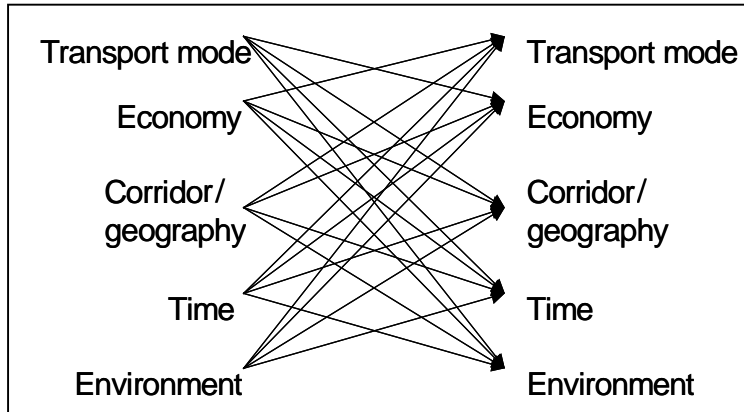
The goal of the IT-concept is to create transparency in sea transportation/multimode transport through simulation of alternative transport patterns. In order to promote Short Sea Shipping it is important to have parameters with which to compare it to other modes of transport. Short Sea shipping has some obvious advantages, but these advantages are often drowned in the overall complexity of a normal transport chain. Also users tend to be very conservative in their choice of transport. So in order to increase transparency and make users aware of the advantages of other transport modes, including short sea shipping, it is necessary to create a tool, which provides the necessary complexity to give usable results to the user, and at the same time be user-friendly enough to provide easy access for all levels of transport professionals.

The programme is not thought of as a route planner or as a 100% exact tool. The programme relies on average figures where the actual figures are not available, or where the actual figures

would have been too extensive to collect and to maintain.

The most important parameters in a transport are mode of transport, corridor/geography, time, and economy in a transport chain. But also the environmental factor plays an increasingly important role. And not only one single of these parameters is of importance; often it is a combination of several factors. So in order to make a simulation of a transport the user will have to make a choice, which parameters are of importance for his or her transport. Figure 3 shows the possible combinations for

**Figure 3. Simulation combinations**



methods of analysis, e.g. transport mode with economy or time with environment.

One question to the method of analysis could be: "What effect will it have on the economy of the existing transport chain if I change one transport mode to another"? Another potential question is: "What transport mode should I choose for the given corridor to become more environmentally friendly"? The programme will give an estimate of these types of questions.

**Programme structure:**

*1) Mode of analysis:*

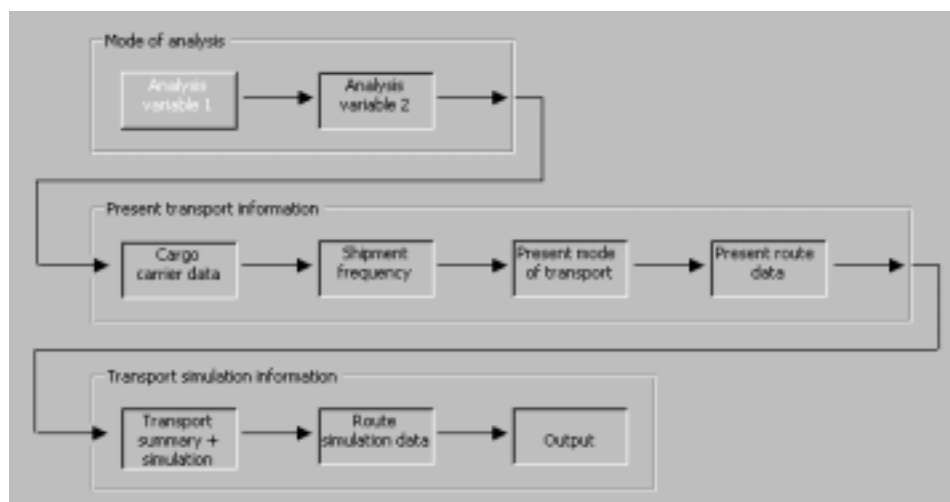
As seen in figure 4 the programme consists of only three levels, mode of analysis, present transport information, and transport simulation information.

First level represents the simulation parameters, where the user defines which analysis is going to be undertaken. This corresponds to the actual question that the user wants answered. The first page introduces a list of possible analysis methods, which also represent the independent variables of the simulation. The next page represents the dependent variable, which together with the first page makes up the analysis method. This method dictates the layout of the following pages in relation to the questions asked and information needed.

Once the analysis method is established, the user moves on to give as detailed information about the current transport as possible. Depending on the method of analysis the user will be asked different questions relating to that individual method.

Different help menus and default values will help to guide the user through the individual pages in the programme, to make the usage of the programme as effortless as possible. The default values can of course be replaced by the actual figures, if available.

**Figure 4. Programme structure**



*2) The present transport information:*

The second level of the programme relates to the information about the present transport, or the transport in relation to

which the user wishes to do simulations.

The actual data input and number of input windows in this section may vary in accordance with the relevance to the actual simulation undertaken.

For illustration the following example is used: Transport mode, as the independent variable, and time, as the dependent variable.

For this specific analysis information about the cargo is of less importance. The cargo carrier is the important component. Here the user can calculate the number of cargo carriers if this is not known. Other relevant information in relation to the cargo is whether the cargo is high or low value and whether it is temperature regulated, dangerous or otherwise in need of special care and attention which affects the timescale of the transport.

The frequency of the shipment is important for obvious reasons. Whether the transport is sensitive to arrival time or not decides the flexibility of the transport chain. Hence, if the cargo needs to be at a certain place at a certain time, which means that regular liner-routes cannot be used, this might increase the overall cost of the transport considerably, or move the departure time significantly forward.

The present mode of transport(s) represents the current transport chain, and in combination with the present route data defines the 0-state in the simulation. Thus the simulation output will relate to this information.

### *3) Transport simulation information*

Like the last two stages of the “present transport information” similar information is needed for the simulation purpose. First the user is presented with a summary of the data input up to this point. Here the user also needs to choose the value of the independent variable. For this example it would have to be the transport mode to see the effects on the timescale of the transport.

The last page contains the data needed in the simulation process to present the user with the estimated time frame for the simulated transport in relation to the original transport. Information on destinations, via points, speed etc. is entered. Lastly the result of the simulation is presented. The scope of the result sheet varies in accordance with the analysis undertaken.

To be able to give the greatest user friendliness the programme sequentially reduces the amount of input from the user according to the user's previous input, which is why the user will not be asked about any financial input if this is not one of the two analysis parameters.

## **4. CONCLUSION AND RESULTS**

The completed INTERREG IIc project ‘Network of Short Sea Shipping Promotion Centres’ has provided a strong contribution to the objectives – as set down in the Operational Programme for the North Sea region – of promoting and improving North Sea links and linkages and promoting of better information and communication networks.

Despite the challenges and changes the project has had to cope with, the envisaged aims to support short sea shipping and to build up a network to promote maritime transport in the North Sea have been achieved.

Referring to short sea shipping as a transport mode as such, some problems relating to short sea shipping are real and others imaginary, some problems are general for the business and some relate to specific areas within the business. Some problems are external relating to overall structural/political challenges; others are internal relating to organisational, managerial and strategic problems.

Thus the problem of short sea shipping cannot be reduced to one or a few tangible statements concerning the problems in the business. Rather it needs to be broken down into the relevant segments and handled in accordance with the type and magnitude of the problem. But no matter what type of problem short sea shipping is faced with, all of them need to be addressed and dealt with.

Step 1 is identification of all relevant problems relating to short sea shipping.

Step 2 is to prioritise the problems into groups as mentioned above.



Step 3 relates to the actual problem solving which will be dealt with below.

Step 4 is to communicate the solutions out to all interested parties.

In relation to Step 3, the most obvious problem to deal with is the imaginary ones. These are very damaging to the industry, because they help keep transport buyers of other transport modes, politicians, and other important parties who feel negatively about short sea shipping, locked in their belief.

The main solution to the imaginary problems, and also a lot of other problems in the industry, is data collection, data analysis and data dissemination. If short sea shipping is better in specific fields than other transport modes, this should be documented and circulated to as many interested parties as possible. This documentation will also reveal actual trouble spots of the industry, which could then be addressed and actions could be taken.

Therefore identification of single problems needs to be addressed to individual areas within short sea shipping, and not be taken into account for the industry as a whole.

In relation to the imaginary problem should be treated as seriously as the real problems. This relates to the overall view of short sea shipping as a homogenous group, where external parties, incl. transport buyers, see short sea shipping in a more or less negative way. Whether the problem is real or not, it still affects the industry as a whole, and adds negatively to the overall performance of the industry.

Problems of a general nature to the business need to be addressed in a different way as opposed to specific problems. Specific problems could relate to Ro/Ro, container, bulk, ports, shippers or any other segment within short sea shipping. General problems transcend several or all areas and relate to the overall performance of the industry. But if short sea shipping cannot document its performance in relation to other industries, its chances of taking the lead in relation to road traffic will be reduced significantly.

Therefore promotion of short sea shipping needs to deal with the specific problems before solving the more general problems. Identify real trouble areas, and develop tool to help solve the problems in these areas. Once the real trouble areas have been dealt with, solving the imaginary problems should be easy, since the industry now has the tools to eliminate any undocumented accusation. The last strategic approach then is to fine-tune the overall image of short sea shipping and help reinforce the position of short sea shipping in general.

If the industry hides away behind closed doors, no comments, do nothing-approaches and a non-transparent market, a greater deal of the industry will surely be run over by more open, outspoken, and active operators creating a more transparent market.

Future promotion activities for enhancing the competitiveness of short sea shipping have to refer to:

- Develop and promote Benchmarking tools, and proclaim the importance of data collection and data analysis to increase efficiency and profit
- Develop and promote Simulation tools, to break down barriers of old-fashioned thinking and promote the benefits of short sea shipping in relation to other modes of transport
- Develop and promote environmental tools and thereby focus on financial benefits and the benefits to the efficiency of the transport
- Increase shippers' awareness of the importance of education of employees and increased IT implementation.
- Increase shippers' awareness of the transport market development, and the need to act.
- Facilitate the creation of network between parties from different modes of transport. An obvious tool for this could be the Internet.
- All of the above also applies to the ports. Ports need to be an integral part of the transport chain.
- Short Sea Shipping problems need to be addressed individually in relation to transport type and NOT as a homogeneous group.
- Split the tasks for promotion fields into target-areas such as Ro/Ro, Container, Bulk, ports etc.