

# **EMCC** case studies

# Transport and logistics sector: Samskip, the Netherlands

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Samskip is an international company, which offers transport and logistics services by land, sea and air. Samskip has shown an impressive growth rate over the past 15 years and after a tough turnaround in 1993 the company has expanded to become one of Europe's largest container transport companies – partly through strategic acquisitions in 2003.

The company headquarters are situated in Rotterdam, since the Port of Rotterdam still constitutes one of Europe's most attractive locations for large transport and logistics companies like Samskip. However, congestion in the area of the city is a growing issue which might make it less compelling for the company to locate there in the future.

Along with other container transport and logistics companies, Samskip is facing a number of serious challenges in the year ahead such as dealing with traffic congestion on the road, a railway system which has not yet been harmonised and a shortage of labour. Samskip employs modern information and communications technologies (ICT) and optimises its planning systems to make transport even more efficient.

# Introduction

Samskip derives form the Icelandic Federation on Co-operatives, Samband, which founded the shipping company Samband Line in 1943. Samskip was founded in Iceland in 1990 and has grown through strategic acquisitions, now with offices worldwide.

In 1993, the company needed a major reorganisation – the number of ships was reduced from 10 to four, sailing routes were overhauled, staff numbers were reduced by 35%, non-profitable assets were sold and a new management structure and new management tools were installed. Implementing these changes proved to be a major turnaround for the company and since then the company has experienced steady growth.

In 2005, Samskip acquired the Dutch multimodal transport company Geest North Sea Line, the British short sea operator Seawheel and reefer (refrigerated container) centres from the Dutch company Kloosterboer. Previously, Samskip had acquired the Dutch transport company Van Dieren Maritime and a 40% share in the Norwegian carrier Silver Sea. In 2007, acquisitions continued, with the company acquiring parts of the door-to-door business of the merged company Delphis/TeamLines in June, as well as the global reefer logistics group of companies Icepak in November (see <a href="http://www.samskip.com/news/nr/368">http://www.samskip.com/news/nr/368</a>).

Today, all of Samskip operations are united under the brand Samskip and it is now one of the largest container transport companies in Europe. Samskip offers multimodal container logistics and has extensive container services to and from Iceland and the Faroe Islands, along with refrigerated cargo logistics and international forwarding.

Samskip employs about 1,400 people in more than 20 countries worldwide (see Table 1 for more information on the company). The company's headquarters are located in Rotterdam in west of the Netherlands.

Table 1: General statistics and information on Samskip

Number of employees	1,400
Worldwide operations	20 countries
Office locations	62 offices in Iceland, Continental Western Europe, United Kingdom/Ireland, Scandinavia, Baltic states, Eastern Europe, Asia and North America
Core businesses	Multimodal container logistics; Iceland and Faroe Islands services; Worldwide reefer logistics
Partners	Coolboxx, Silver Sea, Kloosterboer, VanDieren Maritime and Jónar Transport
Turnover	€500 million in 2005. In 2006, Samskip expected a turnover of €700 million.

Sources: http://www.samskip.com/media/logo//Comp\_prof\_Mar\_07.pdf and http://www.samskip.com/services/

# Company development

#### **Multimodal container logistics**

As a result of recent acquisitions, Samskip is now also a large European company in the area of multimodal container logistics. Hence, the company a diverse range of routing options using road, rail, sea and inland waterways (barge) (Figure 1), and aims to provide the best combination of transport modes. Current routes include:

- sea frequent services between Continental Europe and the United Kingdom (UK), Spain, Portugal, Scandinavia, Poland, the Baltic states and Russia;
- barge Europe's connected inland waterways make it possible for Samskip to provide services connecting the Netherlands, Belgium, Germany and the main European hinterland;
- rail daily rail shuttles transport goods to Germany, Sweden, Russia, Italy, Spain and other European countries;
- road Samskip's road haulage operations are among the most extensive in Europe. Road transportation is carried out by automated planning systems and the use of track and trace technologies.

Samskip is finding a new market in short sea shipping, replacing the former favourite when it comes to transporting goods – trucks. One of the reasons for this change of modalities is traffic congestion. In an interview with the *Financial Times* newspaper, Samskip's Chief Commercial Officer (CCO), Jacques Kleinkramer, stated: 'We will find ourselves more and more forced to use multimodal – road, rail and barge – because of congestion' (*Financial Times*, 2007).

Figure 1: Samskip's routemap

Source: http://www.samskip.com

According to Samskip's Chief Operations Officer (COO), Paul Swaak, there is room for more efficient exploitation of the existing transportation systems and their organisation (Interview with Paul Swaak, 2007). Most of the companies in transport and logistics are now transporting containers and trucks which are not completely full. Depending on how remote an area is and the size of the company organising the transportation, containers and trucks have on average 20%–45% unused space. Large companies can more easily plan the organisation between different containers simply because they transport more containers. In general, if companies could find a better way of arranging transportation, they could save energy.

As this is a significantly competitive area of the industry, it is difficult to reach a mutual system whereby companies could cooperate on the use of empty space in containers. Mr Swaak estimates that 15% of all trucks could be taken off the roads if freight was organised more efficiently (Interview with Paul Swaak, 2007). Hence, better organisation of logistics chains is not just a business but also a potential environmental benefit (Vrenken et al, 2005).

Improved organisation of empty containers would also help to alleviate the current congestion problems in the Port of Rotterdam. The shortage of warehouses and terminals has forced Europe Container Terminals' (ECT) Delta Terminal at the Port of Rotterdam to refuse the acceptance of empty containers (Logistics Today, 2007). According to Logistics Today, 7% of the containers arriving in the Port of Rotterdam terminals in 2005 were empty (*ibid*).

#### Iceland and Faroe Islands services

Transport to and from Iceland and the Faroe Islands has also become a part of Samskip's business. It includes the use of four vessels: Arnarfell, Helgafell, Akrafell and Hvassafell. The ships connect the islands with the European mainland, Scandinavia and the UK. However, Samskip's operations on the islands also include logistics management and smaller ferry operations.

#### Worldwide reefer logistics and international forwarding

Samskip is a large reefer logistics company offering ocean freight, air freight and truck freight transport, as well as cold storage and documentation. As a reefer company, Samskip organises cold chain logistics which involves the movement of perishable goods from the supplier's location to the consumer (for company figures on reefer centres and vessels, see Table 2).

Table 2: General facts about Samskip

Total capacity at the company's five reefer centres	90,000 tons
Total fleet of 45ft palletwide containers, including temperature-controlled and curtain-sided units	9,500 containers
Total number of vessels: Samskip	23
Total number of vessels: Silver Sea	11

Sources: http://www.samskip.com/media/news\_new//SamskipFrettabref\_04-07LR.pdf;

http://www.samskip.com/services/reefer\_logistics/reefer\_centres/;

http://www.samskip.com/Samskip/equipmentandfacilities/vessels

The typical reefer products transported by Samskip are meat, seafood, vegetables and fruits. Hence, the reefer cargo has to be transported in temperature-controlled reefer vessels and containers. By the use of these specially designed vessels and containers, reefer cargo can be transported all over the world (Figure 2).

Figure 2: Containerised reefer transport network



Source: http://www.samskip.com

#### Organisational change and restructuring

Samskip has experienced steady growth over the last few years. In 2005, the company acquired the Dutch multimodal transport company Geest North Sea Line, the UK short Sea operator Seawheel and reefer centres from the Dutch company Kloosterboer.

# Localisation strategy

The ownership of Samskip is Icelandic but the company's headquarters are located in Rotterdam. The reason for this decision is the fact that Rotterdam is the largest port in Europe and is situated in the heart of Europe close to the most important European trading routes. Moreover, since most of Samskip's employees were already working in Rotterdam and 90% of the company's operations were carried out from the Port of Rotterdam, the decision to locate the company's headquarters in Rotterdam was more than compelling.

# Reefer centres

Sampskip's reefer centres are located in Rotterdam, Ijmuiden in the northwest of the Netherlands, Aalesund in Norway, Reykjavik in Iceland and Kollafjordur on the Faroe Islands as these areas are the main suppliers of sea products. Figure 3 presents the conventional reefer transport network of the company



Figure 3: Conventional reefer transport network

Source: http://www.samskip.com

The UK could be another obvious choice of location for Samskip because 65% of the company's business deals with the UK. However, the prospect of moving to the UK is not particularly convincing as the company would not have access to a short sea port in the UK that would be similar in size to that of the Port of Rotterdam (Interview with Paul Swaak, 2007).

However, increasing congestion is a vital issue for ports located close to cities, as is the case for the port of Rotterdam (Port World, 2006). Samskip is trying to move terminals to locations outside of cities because it is simply too difficult to distribute freight from big cities (Interview with Paul Swaak, 2007).

# Labour pool

In terms of labour, it is clear that Rotterdam offers a large pool of labour skilled for the shipping trade and logistics. According to Mr Swaak: 'We have Erasmus, the Technical University, the Master of Science (MSc) education programmes focusing on transport and logistics – a very lively maritime transport and logistics scene as all of our competitors are also here. There is no other place in the Netherlands to be in terms of that. We have not considered moving our office within the Netherlands.'

# Intermodality and infrastructure

Intermodality in terms of modes of transport is important to Samskip for various reasons. First, increasing congestion on roads and in cities makes it more necessary to shift modes of transport between road and rail and from road to sea (Port World, 2006). Secondly, environmental concerns are becoming more prominent and Samskip would like to perform well in this regard. Overall, Samskip aims to have 40%–45% of its freight transported by rail. According to Mr Swaak, the objective is achievable if the railway markets are liberalised and harmonised (Interview with Paul Swaak, 2007). Moreover, compelling economic incentives also exist to encourage the company to shift transport modes from road to rail; for example, rising energy prices are currently making road transport more expensive. At present, Samskip offers a comprehensive rail service to customers, transporting cargo throughout Denmark, Germany, Hungary, Italy, Spain, Sweden and the UK.

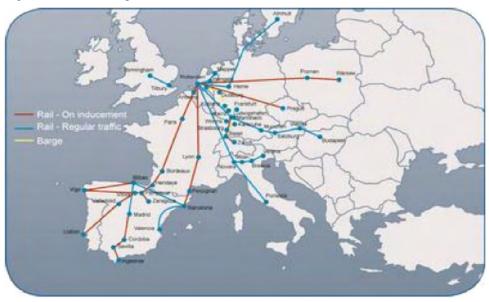


Figure 4: Rail and barge service network

Source: http://www.vnsi.nl/Download/VNSI/TFE%20SAMSKIP.pdf

#### **Competitive position**

For large international transport and logistics companies like Samskip, the liberalisation of trade and increasing growth of the world economy is always paramount. Cases of economic recession or stagnation, such as recent events in France and Germany, are instantly felt in large transport companies. With Sampskip's recent merger of four companies into one coherent group, the competitive position of the company has been strengthened.

#### Offshoring and outsourcing

Outsourcing is highly important for an international transport company like Samskip. At first, certain business activities were moved to eastern European countries, while Asian countries are now on the list of places for outsourcing various activities. However, the only thing affected by outsourcing is the distance travelled by trailers.

# **External relations**

Samskip engages in various kinds of external relations. Mr Swaak mentions some of them in an interview for this case study:

'We cooperate with DFDS Seaways on the Norway route and have a vessel sharing agreement with Delphis to the Iberian peninsula. We are working on establishing more cooperative links with other companies. We use our own networks and try to hook onto others.'

Other types of external relations include committee work, membership of various associations such as the European Intermodal Association (EIA), the European Petrochemical Association (EPCA) and others, as well as presentations at conferences and seminars about the company and the development of the shipping and logistics sector in Europe (European Intermodal Association website; World Cargo News, 2007).

# **Experience and innovation**

Innovation and handling of know-how within Samskip mostly take place as defined by internal processes. For instance, the company has an internal think-tank. Samskip has introduced an innovation incubator programme, through which selected staff will learn about creative thinking and how to develop this into more positive results (Interview with Paul Swaak, 2007).

The company also engages in various activities with universities and schools; at present, a project is underway to develop an intranet site for this work.

#### Profile of the workforce

# Workforce composition and skills level

The workforce of the shipping and logistics sector is predominantly white and male. According to Mr Swaak, this is not surprising. He commented:

'The shipping and logistics sector is not very predictable in terms of workloads, and it is mostly not possible to have a working day from 08.00 to 16.00. The sector is traditionally a very male-dominated environment and until recently it has not been very open to women because of working hours and the nature of the work. However, lately, this has changed and Samskip has started to recruit young women as part of a management development programme.'

However, Mr Swaak emphasises that large cross-country variations exist. For instance, Samskip finds it easier to recruit high-level female workers in the Scandinavian countries where governments offer day care facilities to mothers and a more open mentality exists among people towards women pursuing a career.

Samskip has two types of employees: low-skilled employees and high-skilled employees. The company's Human Resources (HR) Director, Johan van Zeelt, emphasised: 'The high-skilled employees we are looking for have to be able to "jump the curve" – i.e. they have to have a winner mentality and be ready for change. The low-skilled workers have to be good craftspeople.' Moreover, he highlighted: 'The soft skills are much more important today than the certificate and the diploma. It is easy to teach people how to redeposit a box from A to B, but it is difficult to find people with drive, ambition, a winning mentality, service mentality and the ability to connect with people.' Hence, a qualitative change of competence needs is taking place.

This change often seems significant and threatening for people who come from small companies where the traditional focus has been on 'how to sail a vessel from one place to another'. Today, each member of the workforce has to be more adept at assessing customers needs (Interview with Johan van Zeelt, 2007).

#### **Future workforce developments**

#### Recruitment strategies

In terms of recruitment, Samskip firstly endeavours to create an image of the company as a good place to work, for instance in terms of offering an attractive career path. Secondly, the company recruits new workers by offering attractive wages (Interview with Johan van Zeelt, 2007).

It is easier to recruit labour in Rotterdam due to the availability of a larger pool of labour specialised in shipping and logistics. However, the drawback to this is that all of Samskip's competitors are also operating from Rotterdam, which

results in competition for skilled workers. Samskip does not liaise with other companies as regards training and education (*ibid*).

Samskip also follows some internal recruitment strategies. For instance, the company has a traineeship programme as well as a programme for actively hiring people straight from university. Trainees are hired under a three-year programme. During this programme, the young employees have the opportunity to try working in the company's different departments and they get to travel all over the world. Another way of recruiting workers is to participate in conferences with masters students where the company can network with potential new recruits.

#### Organisational change and future profile of employees

The main challenge for Samskip at present and over the next couple of years is the organisational and adaptive changes needed in order to accommodate the changes related to the recent acquisitions of three other companies. By merging four companies into one under the name Samskip, the result is the operation of a brand new company. In light of this, Mr van Zeelt has been hired to carry out this particular task during the coming years.

The workers of the merged companies have different skills profiles and this poses an organisational challenge for the Samskip's HR department. For instance, Samskip acquired the smaller company Geest North Sea Line which was looking for different competences among its workforce than Samskip was. Mr van Zeelt highlights that when some employees recognise that their skills profile no longer matches that of the overall company, they begin to feel insecure in their role. To date, the merger process is still so new that workers have not yet been sent on training courses. The merge required an active strategy from the HR department in order to integrate the diverse workforce.

After the merger and its related processes are fully finalised, the overall competence profile of the company will have to change again. According to Mr Swaak, 'the people we are recruiting at the moment have to be very ambitious, with a high profile, highly educated and driven by success – we are a combination of four companies and now it is about profitability, but we will always strive to have a proper mix of competence profiles.'

The future profile of the employees will be characterised by a high level of knowledge and the ability to build up togetherness both in terms of internal relations and in terms of external relations with customers. About 60%–80% of the employees have to have such a profile (Interview with Paul Swaak, 2007).

#### Profiling employees in hiring process

Every potential employee gets a profile by the use of an advanced computer system which measures a worker's profile both in terms of professional skills and social skills. Samskip has been and still is in a period of change, which requires ambitious people who can deal with change. In this regard, Mr Swaak emphasises: 'When the big organisational change has been carried out, we would like to have a more diverse combination of profiles, because we cannot have a company where everyone is only thinking about change management.'

# New organisation of work

#### **Rate Confirmation Note systems**

Samskip works with a Rate Confirmation Note (RCN) system which gives the company the opportunity to make precise invoices on the basis of kilometres driven for each haulier. This is a reversal of the way invoicing is normally carried out, whereby Samskip pays the invoice received from the haulier. Current experiences with the system show that Samskip can save money using such a system. 'The RCN system is becoming more reliable every day. We send the haulier a weekly overview of what he has done for us, the rate we have agreed, his RCN number, and then we pay him,' explains Mr Swaak.

With the introduction of the RCN system, many of the company's internal procedures have changed. The responsibility for payments of hauliers has been transferred from a central department directly to the employees themselves who are organising the transportation. This arrangement allows for a closer connection between the ordering and the costs, and thereby an increasing cost-awareness among employees in the company.

# **Future challenges**

The immediate challenge for Samskip is to stay competitive through efficient operations. Important factors in this regard include the efficient use of vessels, turnaround time in ports and well-organised land transport.

# Harmonisation and liberalisation of railways

Harmonisation and liberalisation of railways are important issues for Samskip because 30% of the freight administered by the company is transported by rail and barge. The possibility of harmonising regulations across borders is particularly significant for the company as it has in the past experienced some serious obstacles in its attempt to increase transport by rail. A new trend has emerged for larger companies to put reliability before speed, which means that rail transport is more favourable because traffic congestion can be avoided. However, the diverse regulations between countries require a lot of planning to make transport by rail feasible.

# Regulation of labour

The regulation of labour is a key issue for a company like Samskip. New regulations in this field in the EU or other Member States demand a lot of management for the company. One problem in particular that emerges in this regard is the diversity of regulations. In relation to rail transport, the rules and regulations remain significantly different between EU Member States. Mr Swaak explains: 'If you are taking a train from the Netherlands to Italy, you have to deal with four different systems of regulations and standards.'

# Oil prices

Oil prices have an enormous impact on Samskip and the rest of the transport and logistics sector. The cost of oil bunkers has increased by up to 60%, which is incredibly costly for Samskip and other companies in the sector since vessels still run on heavy fuels. In light of this, Mr Swaak highlights: 'We are working on new vessels in an EU project to run on other energies but while we wait it is an enormous cost.'

#### **Expansion of the company**

As economies of scale are expanding for the company, Samskip needs to invest in bigger vessels, bigger terminals and bigger operations. This represents a major challenge for the company over the next 10 years. Mr Swaak states: 'We will have to design new vessels which we already do in cooperation with owners and shipyards.' Hence, the offshore production of ships is a crucial factor for Samskip to meet the increasing demands.

#### **Environmental footprint**

Sustainable transport modes are essential for Samskip both now and increasingly will be in the future. Once again, Mr Swaak emphasises that the company aims to 'try to work with environmental footprints and to manage emissions of carbon dioxide  $(CO_2)$  and mono-nitrogen oxides  $(NO_x)$ '. However, as most of the vessels, trucks and rails are not owned but only operated by Samskip, Mr Swaak highlights that the company 'can only indirectly affect the modes of transport'. Nevertheless, Samskip does 'try to force our suppliers and subcontractors to be more environmental friendly,' according to Mr Swaak.

#### Efficient planning systems

At present, there is scope for more efficient use of transportation. Most of the companies in the transport, shipping and logistics sector are now transporting containers and trucks which are not full to capacity (Logistics Today, 2007). Depending on the remoteness of the final destination for the container or truck and the size of the company organising the delivery, containers and trucks have about 20%–45% empty space. In terms of efficient use of space, large companies have an advantage as they have the capacity to move goods around between many different modes of transport and vehicles.

The logistics sector is a relatively competitive area, which makes it more difficult for to agree on a shared system where all companies could cooperate on the efficient use of space on containers and vessels. Mr Swaak estimates that 15% of all trucks could be removed from the roads if the freight was more efficiently organised. Most understandably, the first step is to encourage good internal organisation of the use of space, but large potential efficiency gains can also be built up if companies could cooperate on this issue.

# Shortage of labour

A shortage of labour is an emerging issue for Samskip, particularly in relation to truck drivers. A greater number of truck drivers are available for work in eastern European countries and in Russia. As a result, these workers are being increasingly employed by companies like Samskip due to the shortage of western European workers. However, the employment of truck drivers from eastern European countries presents a serious challenge for companies in terms of regulations and safety. In this regard, Mr Swaak explains: 'Most of the truck drivers from countries like Poland, Romania and Russia do not have the most basic knowledge of driving regulations and languages in the countries they drive in.' In other words, it seems that the drivers have the basic skills to drive a truck but serious problems can arise when it comes to knowledge of foreign languages and communicating about the freight they are carrying onboard the vehicle. For instance, Samskip cannot get eastern European drivers into chemical plants, because the majority of the drivers do not speak English or German. Hence, the drivers are prohibited from entering the plants for safety reasons.

According to Samskip, it is becoming increasingly difficult to recruit workers with the best skills and a high commitment to the work.

New transport technologies are not particularly important for Samskip at the moment. Most of the technological innovations relate to incremental improvements of existing technologies, thus providing, for example, for safer trucks and more efficient use of fuel. Speaking of technological developments, Mr Swaak commented: 'I cannot see any large-scale technological innovations like self-driven trucks coming up, and I still have not seen anything that can compete with truck and rail.' However, this does not mean that no important improvements of existing technologies are taking place.

# Textbox 1: Radio-frequency identification technologies

In 2006, Samskip examined the opportunities for using radio-frequency identification (RFID) technologies within the company. However, Samskip found that the current stage of technological development of RFID is not as advanced and cost-effective as the company would like. For instance, the RFID tags have to be improved in quality and life span, as it would be too big a task to change the tags in all of the transport terminals for short intervals of time.

Source: Interview with COO of Samskip, Paul Swaak, 2007

Intelligent infrastructure is important in the sense that it can be a tool for developing better control of traffic for instance by regulating congestion. This can be done by supplying information to trucks about congested areas at a given point in time. For instance, if 3,000 trucks are approaching Frankfurt around the same time, it can be very useful for logistics companies and truck drivers to know of areas to avoid due to traffic congestion and to thus plan another route into the city (Interview with Paul Swaak, 2007).

#### Track and trace

Track and trace is becoming increasingly vital for Samskip; at present, the company is running various pilot projects on the use of different track and trace systems. Mr Swaak explains:

'We would like to use track and trace on the hauliers transporting the freight that we are operating. However, most of the hauliers are small companies which do not have the necessary capital to invest in track and trace systems and therefore Samskip has made a deal with some suppliers of track and trace systems who give a discount because of the size of the order.'

Samskip is also running a pilot project in the UK through which mobile phones are used for track and trace purposes – a type of extended personal digital assistant (PDA). On mainland Europe, Samskip also decided to carry out some experiments of track and trace with Nokia phones. According to Mr Swaak,

'the important challenge for Samskip in the coming year is the connection of the many new ICT systems – for instance the track and trace systems. Today, the systems are still young and we will work actively with the development of all of the systems and their interconnectedness during the next year.'

#### Textbox 2: Electronic data interchange system

Samskip is currently operating 115 terminals which require sophisticated monitoring and planning systems. In achieve this, Samskip is applying the so-called electronic data interchange (EDI) system. In 2008, Samskip will have to automate all of its monitoring systems and the challenge in this regard is to connect the terminals and their networks. Hence, the challenge is not the application of new technology but the practical job of connecting all of the existing system into one big well-functioning system.

Source: Interview with COO of Samskip, Paul Swaak, 2007

#### Cooling technologies

One paramount technological change of the future can be mentioned which carries the potential for immense changes in the way Samskip carries out its business. However, it is not a transport technology but rather a cooling technology.

In his interview for this case study, Mr Swaak highlighted:

'We import fish from Iceland, ship them to China or Korea and can them, and then bring them back to Europe and sell them. You will also see new technologies in the food and vegetable business. We are aware of a technology which enables us to ripen a tomato when it is almost ripe. We can transport these almost ripe vegetables and fruits in containers with a controlled atmosphere. Delivery to the required market can take place within one or two days. Then the fruit will taste better when it is sold.'

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# Sources

Dunelm, Photo gallery: Samskip, 2007, available at: http://www.dunelmpr.co.uk/Samskip-Photogallery-NEW.html

Irish Maritime Development Office, *Shipping review: Ireland – Netherlands – Comments*, Dublin, August 2005, available at: http://www.imdo.ie/pdf/IMDOShippingReview.pdf

Logistics Today, *Empty containers causing congestion*, Logistics Today, 26 February 2007, available at: http://www.logisticstoday.com/displayStory.asp?sNO=8515

Port World, *Rotterdam faces congestion by 2010*, Port World, 2006, available at: http://www.portworld.com/news/2006/11/66246

Steen, M., 'Samskip: Having no truck with trailers', Financial Times, 5 December 2007.

Vrenken, H., Macharis, C. and Wolters, P., *Intermodal transport in Europe*, Brussels, European Intermodal Association, 2005, available at: http://www.eia-ngo.com/file/INDEX%20Intermodal%20Handbook.pdf

World Cargo News, *Samskip leads EC shortsea project*, World Cargo News, February 2007, available at: http://www.worldcargonews.com/htm/n20070325.365107.htm

#### **Websites**

Samskip: http://www.samskip.com/

European Intermodal Association: http://www.eia-ngo.com/

# **Interviews**

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