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**FREIGHTWISE**

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**FREIGHTWISE**

Management Framework  
for Intelligent Intermodal Transport

# Contact

FREIGHTWISE Management Framework for Intelligent Intermodal Transport is an integrated project within the EU's 6th Framework Programme that aims at bringing together three different sectors:

- Transport Management: shippers, forwarders, operators and agents;
- Traffic and Infrastructure Management: Rail, Road, Sea, Inland waterways;
- Administration: Customs, Border Crossing, Hazardous Cargo, Safety and Security

Project name: FREIGHTWISE - Management Framework for Intelligent Intermodal Transport

Time Scale: 01 October 2006 - 30 April 2010

Consortium: 55 participants in 14 countries with involvement in 9 business cases

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# Case Central South

# Content

## Case Central South

### Objective

The objective is to explore the possibilities of achieving integrated information management systems. Case Central South is separated into two sub-case related feasibility studies:

1. Sub-case 1: Integrated information management system for an intermodal railroad corridor

Germany – Central Italy

2. Sub-case 2: Development of advanced logistics information exchange in a rail transport service connecting Paris – Piacenza – Gliwice

### Rationale

Both the feasibility studies analyse the economical, technical and organisational environment concerning investments in developing intermodal management systems. While sub-case 1 aims to quantify the benefits of the ICT application scenario versus a technology free, pure road transport service, sub-case 2 analyses the feasibility to develop advanced information systems for an existing train service. The analysis work of this case will be supported by findings and problem disclosure of the ongoing 6th FP project BRAVO (Brenner Rail Freight Action strategy aimed at achieving a

sustainable increase of intermodal transport volume by enhancing quality, efficiency and system technology) which deals inter alia with a Corridor Management System (CMS) and a Customer Information System (CIS).



Overall Objective.....	3
The Cases.....	4
Case North West.....	5
Case North East.....	6
Case Central.....	7
Case Central Benelux.....	8
Case Elbe.....	9
Case South East.....	10
Case South West.....	11
Case Central South.....	12



# Case South West

## Case South West

### Objective

The objective is to explore the preconditions for improving intermodal transport solutions of steel products from ARCELOR-MITTAL, one of the largest steel manufacturers of the world.

### Rationale

ARCELOR-MITTAL in cooperation with Port of Gijón, CTIC Foundation and the other Case partners, will use the FREIGHTWISE FRAMEWORK to develop its understanding of intermodal management systems for steel intermodal chains, contributing with its requirements and assessing the feasibility of concrete test cases.

The inputs will be the FREIGHTWISE FRAMEWORK, here used with the clear target of improving the information flow mainly in the container transportation used for moving and delivering world-wide finished steel products. This case is based on the merger of ARCELOR and MITTAL, and will have two sub-cases:

### H1: Atlantic steel markets:

Steel products transported from Spain to France, UK, Benelux and Sweden through Atlantic, North sea and Baltic sea.



### H2: Mediterranean steel markets:

Steel product transported from Spain to France, Italy, and Greece through the Mediterranean sea.





# Case South East

## Case South East

### Objective

The objective is to support rail-based solutions for import/export between Germany and Greece via the Balkan states, by improving the intermodal management systems across modes, borders, public administrations and private companies in new and old member states.

### Rationale

Greece is serving as a gateway between EU and the countries of the Eastern Mediterranean and beyond. In this context, it is important to promote solutions, which can absorb the increased freight transport demand without generating more traffic on the road networks. Proodos is a major multimodal freight transport integrator and organises complete trains with general cargo or containers from central Europe for all Balkan countries, ending up in Greece and Turkey. Proodos has already developed its ICT environment at a modal level and is interested in upgrading its operational capacity by enhancing the interoperability and interconnectivity.

In the FREIGHTWISE context, Proodos will function in close co-operation with OSE and other South Eastern Rail networks. In particular, OSE

is in the process of increasing its information, communication and management capacity to improve its transport services in cooperation with its clients and partners including other rail networks. The success of a modal shift project is very much dependent on reliability and pricing, which in turn depend on the exploitation of the available return cargo flows. A challenge is to achieve integrated management of the entire transport chain with an application in the handling of empty wagons and transit containers.



# Overall Objective

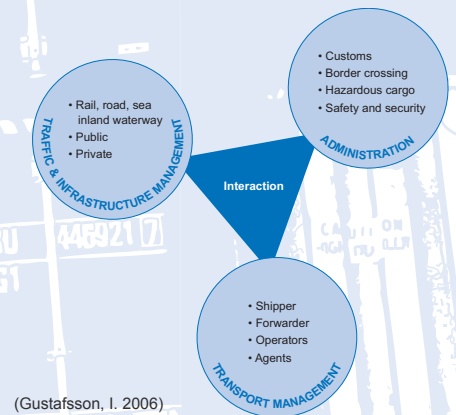
## Overall Objective

The overall objective of FREIGHTWISE is to support the modal shift of cargo flows from road to intermodal transport using road in combination with short sea shipping, inland waterways and rail, as well as to make transport more efficient. It will achieve this objective by means of improved management and facilitation of information access and exchange between large and small, public and private stakeholders across all business sectors and transport modes.

The aim is to produce results building on industrial experiences and demands for cost effective multi modal transport management and developing them further. The results will also be used to support the Commission in developing policies and strategies aiming at improved interoperability along the intermodal transport chain.

Under the heading of the FREIGHTWISE FRAMEWORK the project intends to provide generic system architecture for intermodal, multimodal and comodal transport management based on previous European and national efforts. The FWF will provide support in the use of management tools and demonstrate some new developments intended to facilitate market

transparency and a management framework supporting the organisation of logistics supply chains.



The FREIGHTWISE FRAMEWORK (FWF) will be developed based on previous R&D together with input from a number of real life business cases. The FWF includes concepts and models for planning and managing intermodal transport chains and a key point is to achieve transparency. For instance, the booking of intermodal services will be made much easier when applying the framework. A number of tests and demonstrations of parts of the framework will be performed in the business cases.

# The Cases

## The Cases

The individual cases in which the FWF will be iteratively developed and tested form the real world demonstrations of how harmonisation of data, architectures and messaging can promote sustainable distribution.

# Case Elbe

## Case Elbe

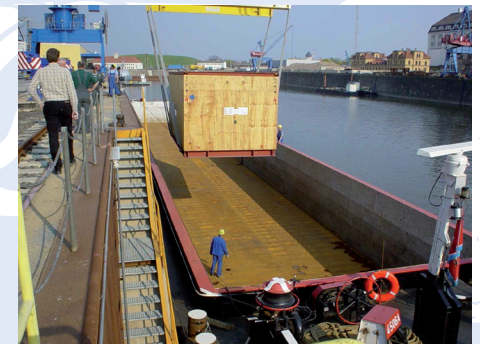
### Objective

The Elbe case seeks to improve the shipment of heavy cargo. Siemens in Dresden produces transformers which are transported on the Elbe to the export terminal in Hamburg for further transport overseas. The inland waterway transport company, Deutsche Binnenreederei, together with the inland port operator, Sächsische Binnenhäfen and the export terminal operator, Wallmann & Co, want to provide added value to the shipper by developing a transport chain management service from production site to export terminal.

### Rationale

The case concerns the shipment of heavy and/or cumbersome cargo, i.e. parts for constructing chemical and other major industrial plants. Every unit weighs 80 tons and is transported by "Binnenschiff" to the export terminal in Hamburg (Wallmann & Co), where the terminal stores the different parts till the complete set is ready to be loaded on a vessel. The present operation is burdened by a number of problems affecting the export processes, which is due to the lack of cooperation between the different carriers and forwarders and lack of information. The transport

chain management system to be developed for handling the cargo from the manufacturing plant to the export terminal will support the overseas forwarder and facilitate the work in the terminal by providing: complete and accurate information on the individual shipment, documentation in the required formats, tracking and tracing capabilities.



# Case Central Benelux

## Case Central Benelux

### Objective

The objective is twofold: 1) demonstrating improved efficiency through the use of electronic message exchange between the parties in the Port of Rotterdam and 2) demonstrating how to make better use of traffic information for strategic, tactical and/or operational planning in road transport operations.

### Rationale

Transport in the congested Benelux area requires good planning and efficient tools. This case centres on the community system Port Infolink in the port of Rotterdam and a major road transport operator Jan de Rijk.

The system Port Infolink will be developed to include a transport order service which will enhance the present services. The case will involve a number of companies (shipping lines, forwarders/ shippers, on-carriage operators) in developing a working demo by which standard transport orders for on-carriage transport can be sent and received electronically between the different players in the logistics chain in an easy way (e.g. via internet, which is also available for less automated companies).

The result will support shipping lines and forwarders/

shippers in communicating electronically with all their inland logistic service providers in an easy and standardised way. This will improve the performance of the inland logistics chain (speed and utilisation) and especially of the barge and rail modalities. Once the on-carriage operators receive the transport orders, they can re-use the information for other logistic and administrative purposes. As a result, companies do not have to retype the information and fewer mistakes will be made.

Jan de Rijk intends to optimize the transport planning process by integrating various types of information from various sources (traffic demand, weather, events, road works, etc.) to allow for improved forecasts for delays and average speeds at specific road sections at specific days and time intervals.



# Case North West

## Case North West

### Objective

The objective is to develop management solutions for combinations of road, rail and maritime transport from Scandinavia to United Kingdom (UK) and the European Continent. The many transport modes involved, the long distances involving operators in several countries and the high demands for transport quality require good management tools and good access to information. The aim is to create solutions that help to provide robust transport services and are able to meet the requirements of production sites and customers in Norway, Sweden, Finland and UK.

### Rationale

The forest and steel industry in Scandinavia has long distances to the markets in central Europe requiring highly competitive inter-modal solutions involving road, rail and maritime transport. Case A1 aims at improving Norske Skog service from Skogn, Norway to the UK via Clydeport's terminal at Greenock, Glasgow. In Case A2, SCA in North Sweden intends to develop the management of its rail transported paper products, nationally and internationally in cooperation with the Swedish National Rail Administration. Port of Gothenburg

looks to improve its service to local forwarders and truckers as part of its strategy to develop a better port community system. The improvements start by Modelling operations based on a detailed analysis of the physical and information flows.





# Case North East

## Case North East

### Objective

The objective is to develop and test a cross-border transport network information system including both cross-border sea links (Finland – Estonia) and land transport links (Finland – Russia and Estonia – Russia) and terminal points where the goods are shifted from one transport mode to another, from land transport (lorry, train) to sea transport and vice versa or from lorry to train. The aim is to reduce waiting times at border crossings and for pick up or delivery of cargo units in the ports.

### Rationale

Waiting times for lorries at border crossings and at port entrances, environmental disturbances and transport costs could be reduced if better information was available. The North-East case will pilot an information system for a cross-border transport network, providing information on arriving and waiting traffic at terminals and border crossings, and support in managing traffic at the corresponding parking areas. The route considered includes cross-border sea links (Finland – Estonia), and land transport links (Finland – Russia and Estonia – Russia) and terminal transfer points. The intended service

will be an interactive information system that makes use of advanced data collection, storage and management and distribution technologies to support data exchange between professional drivers and the various parties involved in their operational environment.



# Case Central

## Case Central

### Objective

The objective is to let a wider range of logistics service providers, especially in the SME range offer intermodal freight management services. An internet based portal could provide new user categories of shippers, freight forwarders, freight integrators (TCM) with such services, without requiring them to become a subcontractor or customer in an already established business network.

### Rationale

The advantage of such a portal could be especially significant for transport on routes (partly) using very congested networks and terminals, as in the case of links from Benelux to the Baltic area. The concept builds on a centrally established technological platform with a supporting business framework. Regional or local transport integrators, established by participating regions or groups of companies (e.g. located in freight villages), will integrate traffic information and support transport operators to publish their services electronically and promote the local business development activities through the platform.

