Project N°: TREN-05-FP6TR-S07.43661-513504

TREND

Towards new Rail freight quality and concepts in the European Network
in respect to market Demand

Instrument: CO-ORDINATION ACTION

Thematic Priority: Sustainable Surface Transport

Deliverable B6 – Business Model for international Co-operation

Due date of deliverable: PM XXX
Actual submission date: 31.07.2006
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Organization name of lead contractor for this deliverable: HaCon Ingenieurgesellschaft mbH Hanover, Germany

Revision: final, 31.07.2006

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The TREND Project is funded under the 6th Framework Programme of the European Commission
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1 Introduction

1.1 Background and overall objective

In the past, international rail services were carried out with low performance. Nevertheless, on specific lines (e.g. linking plants of the automotive industry or large intermodal terminals) the quality of service could be increased considerably. However, like in the forwarding industry, in shipping and in the air transport industry, a network of international dimension cannot be employed and efficiently operated only by single parties. Forming of alliances could be a solution, even for smaller market partners with local or regional scope to participate in international freight services.

Against this background TREND workpackage B6 is aiming at the elaboration of Business Models for international co-operation with respect to corridor specific frameworks. The opportunities of creating such Business Models will be examined, taking into account the area of conflict between co-operation and competition as well as experiences gathered from existing initiatives. Finally, the development of such a Business Model has to be validated against platforms of technical rules (like the Technical Specification on Interoperability (TSIs)) and legal issues.

Workpackage B6 is positioned within the TREND project as shown in Figure 1-1. The main influences will be derived from innovative Rail freight services (workpackage B3) and the legal framework as elaborated in workpackage A2.

Figure 1-1: Positioning of workpackage B6 within the framework of TREND
1.2 Summary

This report summarizes the work of TREND workpackage B6, reflecting on the elaboration of Business Models for international co-operation.

To fulfill this task, substantial studies were carried out by the TREND B6 team under the project leadership of HaCon, which can be structured into the following main issues:

- Definition of basics terms and objectives (e.g. different forms of co-operation and Business Models),
- Detailed description of existing agreements and operating models; as a core result of this working step a list of components as possible instruments for Business Models was derived.
- Analysis of the terms of usage (incidence, specific conditions) of these components in order to deduce their suitable applications and furthermore to generate the framework for the creation of Business Models on TREND corridors.
- Development of a Business Model on an example corridor Benelux – Turkey/Greece.
- Verification of this Business Model against European competition law and other legal conditions as well as against the influence of TSI.

Within a detailed description of existing agreements and operating models 30 existing co-operations were analyzed. They cover the whole range from mere agreements to daily practiced transport services, from passenger traffic to freight transport, from rail freight services to road, air and other modes’ transports (see Figure 1-2).

Based on this analysis, 51 co-operation components have been derived. These components can be interpreted as the basic instruments for Business Models. Figure 1-3 provides an overview of these components, assigned to the main “departments”

- Headquarter / Management
- Administration with the components
- Business with the main components
- Resources with the main components

analogue to the theoretical case of a “co-operation company”.

Figure 1-2: Cluster of analyzed co-operations

<table>
<thead>
<tr>
<th>Co-operation Cluster</th>
<th>Co-operation name</th>
<th>Type of involved partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Passenger co-operations (rail)</td>
<td>1 Eurostar</td>
<td>Railway Undertakings (incumbents, new entrants)</td>
</tr>
<tr>
<td></td>
<td>2 Thalys</td>
<td>Railway Undertakings (incumbents)</td>
</tr>
<tr>
<td>II General agreements (rail freight)</td>
<td>3 COTIF</td>
<td>States</td>
</tr>
<tr>
<td></td>
<td>4 Rail Net Europe</td>
<td>Infrastructure Managers</td>
</tr>
<tr>
<td>III Freight co-operations (rail)</td>
<td>5 BoxXpress</td>
<td>Railway Undertakings (new entrants), terminal operator</td>
</tr>
<tr>
<td>Co-operation Cluster</td>
<td>Co-operation name</td>
<td>Type of involved partners</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td></td>
<td>6 Brenner Rail</td>
<td>Railway Undertakings (incumbents)</td>
</tr>
<tr>
<td></td>
<td>Cargo Alliance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 CORTAX</td>
<td>Intermodal Operators</td>
</tr>
<tr>
<td></td>
<td>8 European Bulls Alliance</td>
<td>Railway Undertakings (new entrants)</td>
</tr>
<tr>
<td></td>
<td>9 European Rail Shuttle</td>
<td>Railway undertaking (new entrant), alliances with incumbent and new entrants</td>
</tr>
<tr>
<td></td>
<td>10 Kombiverkehr - ICA</td>
<td>Intermodal Operators</td>
</tr>
<tr>
<td></td>
<td>11 Netzwerk Privatbahnen</td>
<td>Railway Undertakings (new entrants)</td>
</tr>
<tr>
<td></td>
<td>12 Rail Euro Concept</td>
<td>Railway Undertakings (incumbents)</td>
</tr>
<tr>
<td></td>
<td>13 Rail Traction Company/Lokomotion</td>
<td>Railway Undertakings (new entrants)</td>
</tr>
<tr>
<td></td>
<td>14 Railion North-South-route</td>
<td>Railway Undertakings (incumbents, new entrants)</td>
</tr>
<tr>
<td></td>
<td>15 SIBELIT</td>
<td>Railway Undertakings (incumbents)</td>
</tr>
<tr>
<td></td>
<td>16 Systemcargo</td>
<td>Forwarder, Railway Undertaking</td>
</tr>
<tr>
<td></td>
<td>17 UIRR model</td>
<td>intermediate operators, Railway Undertakings (mostly incumbents), road transport companies, freight forwarders, logistic companies</td>
</tr>
<tr>
<td></td>
<td>IV Freight co-operations (non rail)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18 Air Cargo Interlining</td>
<td>national, continental and intercontinental airlines</td>
</tr>
<tr>
<td></td>
<td>19 Antwerp Intermodal Network</td>
<td>Port development company, transport companies, terminal operators</td>
</tr>
<tr>
<td></td>
<td>20 Bonamare-Bonatrans</td>
<td>Five owner masters, leasing ships belonging to five limited partnerships where the owner masters hold shares themselves</td>
</tr>
<tr>
<td></td>
<td>21 Cargo-Line/ABX</td>
<td>mid-size freight forwarders co-operation, transport/logistic service provider</td>
</tr>
<tr>
<td></td>
<td>22 China Cargo Alliance</td>
<td>Medium-sized freight forwarding companies</td>
</tr>
<tr>
<td></td>
<td>23 City Logistics (Example: Bremen)</td>
<td>Freight village development company, freight forwarding companies</td>
</tr>
<tr>
<td></td>
<td>24 CoLog</td>
<td>Medium-sized freight forwarding companies</td>
</tr>
<tr>
<td></td>
<td>25 Deep-freeze food logistics</td>
<td>manufacturers of deep-freeze food, logistics provider specialized in handling and transporting refrigerated food</td>
</tr>
<tr>
<td></td>
<td>26 eWit</td>
<td>transport companies with strong focus on inland waterway transport, companies for consulting/technical support</td>
</tr>
<tr>
<td></td>
<td>27 On road network</td>
<td>Road transport companies, freight forwarding company</td>
</tr>
<tr>
<td></td>
<td>28 Star Alliance</td>
<td>Passenger airlines (carriers) of various sizes</td>
</tr>
<tr>
<td></td>
<td>29 System Alliance</td>
<td>Medium-sized freight forwarding companies</td>
</tr>
<tr>
<td></td>
<td>30 The New World Alliance</td>
<td>Shipping companies with main focus on container shipping</td>
</tr>
</tbody>
</table>
Figure 1-3: Overview of co-operation components

- **Strategic Planning**
- **Logistical Capabilities**
- **Market Research**
- **Access to new Markets**
- **Standard Setting**
- **Moderation of Interests and Conflicts**
- **Finance**
- **Accountancy**
- **Controlling**
- **Allocation of Transaction Resources**

**Business**

- **Sales and Marketing**
- **Customer Services**
- **Operations**
- **Supply Chain Management**
- **IT Systems**
- **Finance**
- **Wages**
- **Personal**
- **Infrastructure**

**Resources**

- **Product Definition, Sales, Advertising**
- **Information Platforms (Online, Paperwork)**
- **Lobbying**
- **After Sales**
- **Licensing and Testing**
- **Quality Agreements**
- **Quality Management**
- **Accountancy**
- **Data Management**
- **Interfaces**
- **Slot Booking and Usage**
- **Terminal Operation**
- **Cross Border Transportation**
- **Time Table Construction**

Introduction
With respect to the development of Business Models it is important to understand, that the usage of the described components is suitable only under dedicated conditions (no "ideal" Business Model). In summary, these conditions cover a (corridor) specific framework with the criteria:

- Business cases,
- Infrastructure,
- Actors/Players,
- Other Prerequisites.

Figure 1-4 shows the spectrum for each of these criteria, divided in several aspects.

### Figure 1-4: Specific framework for Business Models

<table>
<thead>
<tr>
<th>Criteria</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tr>
<td><strong>1. Business Cases</strong></td>
<td></td>
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<tr>
<td>Service affected</td>
<td>new</td>
<td>extended</td>
<td></td>
<td>links between existing ones</td>
<td></td>
</tr>
<tr>
<td>Markets affected</td>
<td>specific market segments</td>
<td></td>
<td></td>
<td>several market segments involved</td>
<td></td>
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<tr>
<td>Competition</td>
<td>intermodal</td>
<td>intramodal</td>
<td></td>
<td>intermodal/intramodal</td>
<td></td>
</tr>
<tr>
<td>Competition in charging schemes</td>
<td>same level</td>
<td>higher than competitors</td>
<td></td>
<td>lower than competitors</td>
<td></td>
</tr>
<tr>
<td>Geographical Coverage</td>
<td>worldwide</td>
<td>Europe</td>
<td>corridor</td>
<td>limited number of countries (1...5)</td>
<td>region</td>
</tr>
</tbody>
</table>

| **2. Infrastructure**            |                    |                    |                    |                    |                    |
| Ownership / Access               | public / free unlimited access | public / regulated access (regulation) | private / external owner | private / owned by one partner | external / owned by several partners |
| Charging system                  | free of charge      | fixed charges      |                    | to be negotiated    |                    |
| Infrastructure Charging          | free of charge      | Marginal costs     | Full infrastructure costs | Full cost (internal + external) |                    |

| **3. Actors / Players**          |                    |                    |                    |                    |                    |
| Number of parties affected       | bilateral          | multilateral       | Alliances          | open network       |                    |
| Leadership                       | Same level         |                    | strong leader      |                    |                    |
| Nature (level of creation of value) | identical - similar (horizontal) | | | complementary (vertical) | |

| **4. Other Prerequisites**       |                    |                    |                    |                    |                    |
| Geographical Coverage (political borders) | national           | international within EU (common framework) | | international |
| Legal / Contractual Framework    | individual         | general framework (sector-specific) | | legal framework (e.g. international law) |
| Intensity of Cooperation         | merging businesses | merging parts of the business / partner largely independent | | Restriction to specific geographical area (full independence beyond this region) |
| Financial Commitment             | equal shares       | unequal shares     | own costs          |                    |
| Risk sharing                     | equal shares       | unequal shares     | own risk           |                    |
By assigning the analyzed 30 co-operations to this framework and overlaying their actually used components, clusters for suitable component applications for new corridor Business Model can be gathered.

Generally this procedure can be adopted on all (TREND) corridors. With respect to the envisaged Integrated Project (IP) the proposed CREAM corridor has been chosen as an example for developing corridor specific Business Models.

The CREAM corridor complies for the most part with TREND corridor C. The main difference lies in the extension to Benelux, to Greece and to Italy, including the option to continue to Asia via Turkey (see Figure 1-5).

**Figure 1-5: Example corridor for a new Business Model**

According to the described procedure suitable components for the example corridor have been chosen and specified. In summary the Business Model for this corridor can be described as follows:

- Potential involved Partners: Regarding the project consortium of CREAM as the “core” co-operation, it consists of 25 partners from 14 European countries, thereof
  - 14 Railway Undertakings (RU),
  - 1 Infrastructure Manager (IM),
  - 4 Intermodal Operators (IO),
  - 1 Technology Provider (TP),
  - 4 Consultant and Research companies (CR),
  - 1 Association (AC).
Main objectives/Strategic background

The CREAM Project has been designed to respond to the increasing demand for rail-based logistic systems, and the implementation of change in the European railway area, which has been initiated by the European legislation. Against the benchmarking business models of logistic service providers CREAM will design and validate advanced customer-driven business models (ABM) for Railway Undertakings and intermodal operators. CREAM will analyze the operational and logistic prerequisites for developing, setting up and demonstrating seamless rail freight and intermodal rail/road and rail/short sea/road services on the Trans-European mega-corridor between the Benelux countries and Turkey, including field validation.

Legal / contractual basis

In order to minimize administrative efforts – especially in the start-up phase – it is not intended to establish a formal company for the demonstration of the ABM.

The partners’ role within the CREAM business model will be defined in the deliverables of the respective workpackage and by additional contracts amongst the partners of the co-operation. Also additional partners, which are not in the CREAM consortium, can become part of the business model (e.g. customers) by additional contracts. One important part of these contracts will be the allocation of train capacity shares. Every partner will be responsible for the risk of capacity utilization of his share.

Market segments

Following the general objective to offer joint services with defined contractual obligations for each partner, the "String-of-pearls" concept has been chosen to be the example transport service on CREAM corridor.

This means that long haul trains covering the complete corridor route with or without intermediate stops are supplemented by other trains to travel on dedicated corridor sections.

Within this concept the trains will consist of container wagons and conventional wagons, without general restrictions regarding commodities, as long as no special and not available facilities are required.

Coverage

The activities within the project lifetime will cover the following areas:

- Research/concept developing,
- Technological development,
- Prototyping/demonstration and
- Training

within the fields of (output of other TREND workpackages)

- Innovative rail-based supply chains including intelligent rail and multi-modal operation models,
- Quality management system,
Efficient corridor capacity management,
Interoperability and border crossing,
Integrated telematic solutions for train control, tracking & tracing of shipments and customer information,
Rail logistics for temperature-controlled cargoes,
New technology for the transport of unaccompanied semi-trailers in intermodal transport.

To ensure the feasibility, the elaborated Business model was checked against the legal framework, mainly consisting of the two aspects

- compatibility with European competition law and
- verification against common legal issues.

The respective analyses have been carried out with the collaboration of juristic experts and lead to the core result, that no severe juristic obstacles against the CREAM Business Model are to be expected.
1.3 Workpackage organization and structure

The work of this study has been executed in the period January 2005-June 2006. Within this timeframe, representatives of the four TREND partners and several experts contributed their specific knowledge to this report (see Figure 1-6).

**Figure 1-6: Companies and representatives involved**

<table>
<thead>
<tr>
<th>No</th>
<th>Company</th>
<th>Country</th>
<th>Representatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HaCon (workpackage leader)</td>
<td>Germany</td>
<td>Marian Gaidzik</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lars Deiterding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Jan Hildebrandt</td>
</tr>
<tr>
<td>2</td>
<td>CER - Community of European Railways</td>
<td>Belgium (int.)</td>
<td>Jaques Dirand</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pierre Reinhardt</td>
</tr>
<tr>
<td>3</td>
<td>IVE – Institut für Verkehrswesen, Eisenbahnbau und -betrieb der Universität Hannover</td>
<td>Germany</td>
<td>Bernd Seidel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Silke Janßen</td>
</tr>
<tr>
<td>4</td>
<td>UIRR – International Union of Combined Road-Rail Transport Companies</td>
<td>Belgium (int.)</td>
<td>Martin Burkhardt</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eric Feyen</td>
</tr>
<tr>
<td>5</td>
<td>EKonsult</td>
<td>Germany</td>
<td>Eckhardt Kuhla</td>
</tr>
<tr>
<td>6</td>
<td>Independent consultant</td>
<td>France</td>
<td>Werner Breitling</td>
</tr>
<tr>
<td>7</td>
<td>Independent lawyer</td>
<td>Germany</td>
<td>Kurt Fuchs</td>
</tr>
</tbody>
</table>

TREND partner

Experts

The content of this study has been broken down into a couple of tasks, which were combined to a structured workflow as shown in Figure 1-7.

**Figure 1-7: Structure and workflow of TREND workpackage B6**

- **Analysis of existent forms of cooperations**
- Components for Business Models
- Suitable application for components
- Business Model for new Corridor
- Check
  - Legal issues
  - Influence TSI
- Results and recommendations

---

Phase I: Analysis of existents cooperations / Business Models

Phase II: Transfer to new Corridor Business Model
In Phase I a detailed analysis of existent forms of co-operation has been performed. Within this working step 30 Business Models of both rail and non rail co-operations were examined, resulting in:

- a list of 51 components as the instruments for composing Business Models,
- the usage of these components within the existing co-operations,
- the elaboration of a general (corridor) specific framework for Business Models,
- the classification of the existing co-operations within this framework.

By overlaying these results, clusters of suitable application for the components can be derived.

In Phase II these component applications have been applied to a new (example) corridor. Reflecting on the specific framework of this new corridor, the respective components could be specified and composed to a Business Model for international co-operation. This model was subsequently checked against legal issues and the technical framework of TSI.

The working steps of this procedure have been discussed and agreed at several meetings (see Figure 1-8).

**Figure 1-8: Meetings of TREND workpackage B6**

<table>
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<tr>
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1.4 **Definition of basics**

With respect to the title of TREND workpackage B6 a couple of basic definitions have to be made in order to generate a common sense of understanding mainly concerning the items

- Business Model (BM) and
- Co-operation.

1.4.1 **Business Models (BM)**

In technical literature there are numerous definitions for a Business Model. Generally a BM is an individual, company specific framework, which simply answers the question: “How does a company earn its money?”

Actually every company has its own Business model. In summary they all contain the following main components:

- **Value proposition:** Definition of the company’s benefit for
  - customers (e.g. new and/or better transport services, cost reduction)
  - partners (e.g. access to new markets and customers, synergy effects).

- **Creation of value:** Pointing out
  - what kind of services will be generated by the company (and how?)
  - on which markets these services will be provided?

- **Revenue model:** Description
  - of the sources (services, customers) for revenues,
  - of the amount of revenues to be expected.

The main reasons for a company to develop a Business Model are

- to analyze the own business in order to detect weak points and to distinguish against competitors,
- to structure and demonstrate new business ideas, including success evaluation.

1.4.2 **Co-operations**

Cooperative business models - within the framework of TREND B6 - have to be coordinated connections of several modes and means of transportation, transport services, transport companies and/or transport technologies. Further on they must be

- target-oriented,
- long term designed,
- committing

and must give planning reliability for all partners and customers.

By fulfilling these criteria, “real” co-operations can be distinguished from casual “ad hoc” collaborations, in which a harmonization of the single parts of the transport chain does not take place.
Cooperative business models can be realized on different levels,
- either structured by function:
  - infrastructural co-operation (e.g. using a common transshipment point),
  - operational co-operation (e.g. producing a transport service jointly),
  - informational co-operation (using common tools of data processing etc),
  - technical co-operation (e.g. developing or using special equipment for a common transport service),
  - organizational co-operation (e.g. founding of a common transport company).
- or structured by creation of value:
  - horizontal co-operation (based on the same level of creation of value)
  - vertical co-operation (based on different levels of creation of value).

In practice, cooperative business models often combine several co-operation levels (e.g. horizontal model with operational, plus informational and/or plus organizational co-operation).

With regard on the envisaged IP, TREND B6 mainly focuses on operational (horizontal and vertical) co-operations. The other forms of co-operation are included as well, as far as they are necessary to describe the entire transport concept and/or include single components, which may be transferable to the recommended corridor specific Business Model.

1.4.3 Co-operations as an appropriate Business Model for TREND

The spectrum for Business Models can be fixed at two extreme position (Figure 1-9):
- The “Integrator”, who provides all services along the entire transport chain from one source, either by own capacities or by taking over other companies.
- the “Fourth party logistic provider”, who disposes of no own capacities and therefore has to purchase all services casually (bilateral contracts with other companies).

Within this framework co-operations or alliances are placed. In a suitable composition of components they can work like a “virtual integrator”.

Figure 1-9: Spectrum for Business Models
2 Synthesis of international treaties, bi-/trilateral agreements and best practices from other trades

2.1 Introduction

2.1.1 Competitiveness of the rail freight industry

International rail Freight ought to be the natural market for the Railway companies, because of the cost structure of the industry, giving a clear advantage to long distances. But international operations are hindered by a number of well known reasons, summarized in the next section.

So there is a first interrogation about the viability of Rail Freight in general, even without the complications inherent to international traffic. European railways operate under exceptional conditions anyway, with a rather high part of international activity. In the rest of the world, rail freight is mainly a domestic business.

- Some countries are not primarily interested in the economic performance of their railway system. This is the case when there is almost no intermodal competition so far, for example when the road network is underdeveloped. Another factor can be the weight of the human factor, when sometimes millions of people depend directly or indirectly from the payroll of big railway administrations. China and India are typically part of this category, and among the biggest employers worldwide. This is also the case of Russia, even if the Russian authorities envisage now that their railways could be more part of the European and even transcontinental systems.

- In some other countries, mainly in North America (USA and Canada), there exists a profitable Rail Freight business, with a high modal share for rail. The American situation represents an example and a hope for almost all the Freight Railway companies elsewhere in the world.

- In many countries, including some European countries, rail freight business is now quite marginalized, with market shares under 5%. As an example, this is the case in countries where single wagonload is non-existent, like in Greece and to some extend in Spain (although the situation is changing rapidly in the latter due to renewed state investment in the rail infrastructure).

- Finally, there is the case of the European countries with a strong tradition in railway activities. There are of course differences to be observed, but the average situation is a stabilizing modal share (after years of decline) and, in many countries, a dwindling profitability. Independently from the overall framework conditions applicable to transport as a whole (which have a structural impact on the competitiveness of rail) the present report will concentrate on how innovative business models can contribute to restore both acceptable financial margins and rail freight growth.
2.1.2 Operational and/or commercial co-operation in international rail freight services

Beside the general problems of the rail freight business explained above, there are distinctive characteristics of international rail freight, as it is run presently.

- Operational priority is generally given to passenger traffic. This problem, which is also felt in national traffics, is sometimes proposed to be solved with the help of a dedicated freight network (like in the United States). A totally new network dedicated to freight, with its huge investment costs, however seems out of reach, in the current geographic and financial set-up in Europe. Some main lines are already, or are going to become, dedicated to freight traffic; but the difficulty of interaction and mainly saturation at nodal points and on some critical sections remains. The alleviation of congestion at nodes and on some sections would render the recourse to priority rules less necessary. Of course, there is also the theoretical possibility to guarantee some operational priorities to rail freight services on existing mixed lines, but this would have to be done to the detriment of services, which today enjoy the highest priority (passenger services).

- Insufficient technical, operational and administrative interoperability and juxtaposition of several national traffic organizations is another problem. The lack of interoperability (with, notably, the need to change locomotives and drivers at borders) has generally rendered the “Operational Co-operation Model” between railways necessary and unavoidable. If the traditional “Commercial Co-operation arrangements” between National Railways is politically less welcome today (as “subcontracting” is getting political preference), the necessity to cooperate at operational level (even when using the “Subcontracting Model” at commercial level) will probably remain necessary for quite some time. Today, even new comers on the international market are sometimes obliged to cooperate with other companies when there is no possibility to run trains through the borders end-to-end.

- Co-operation at commercial level: In the past, this model was used by the railways as a means to simplify administrative and commercial procedures between themselves. In a liberalized environment, this model is look upon with suspicions, because of alleged possible cartel behavior. In fact, there is little justification for totally eliminating this model, as long as the market is open and other models are allowed like “competition end-to-end” and “subcontracting”. The main disadvantage of the “Commercial Co-operation” model, as it exists today, is that liability tends to be diluted between the subsequent carriers and that the customers tend to have no single interlocutor (but, sometimes, as many as carriers).

The market parties feel that operational co-operation is sometimes still necessary while the different forms of commercial co-operation are not, in all cases, adapted to the new requirements of the transportation market.
2.1.3 Creation of an intra modal competitive environment by the European authorities

The great ambition of the European Commission has been, in the last 15 years, to change the previously described situation, mainly by deeply altering the institutional set up.

The idea was and still remains to create an internal European market for the railway sector, with the help of the first two "railway packages" and the accompanying directives and regulations. As explained in Part A of the TREND research project, various tools have progressively been put into place in almost every country of the European Union: Accounting and/or institutional separation of infrastructure management and operations, regulatory bodies, safety authorities, capacity allocation bodies, charging bodies, notified bodies for interoperability.

Facilitating the access to the market was the goal, and many efforts have already been made with the setting up of framework agreements, network statements, clear procedures for train path allocation and capacity of terminals and marshalling yards allocation.

The separation of accounts between infrastructure management and operations is one of the cornerstones of the new system. Although not required by existing legislation, the European Commission strongly encourages countries to realize a full separation between infrastructure and operations. This however leads to some specific difficulties, because of a strong interdependence between operational and infrastructural activities. This will be explained in more detail in the next chapter.

On the other hand, one can say that the field is now ready for new players. The "game" can be played by one single player, or in joining forces with others.

The probability of success will be better if all the parties involved are aware of some a priori limitations due to the present environment, principally that:

- the new institutional set up has not allowed so far to improve fundamentally the consistence, the state and the capacity of the infrastructure.
- Intermodal competition only concerns a minority of market segments (most of them being a matter for one mode of transport only, usually road), and an increase in intramodal competition will not change this fact.

2.1.4 “Integrated” and “non integrated” railways

As seen earlier, one way chosen by the European lawmakers to create a single market was to separate infrastructure management and railway operations from an accounting point of view. A certain number of countries went beyond the strict EU requirements and enforced a full separation between operations and infrastructure.

Institutional separation is however not the only way to allow an increased intra modal competition: the North American example has shown that competition can also be effective among integrated railways under the auspices of a strong regulatory body. However, one decisive reason why the American railways remained integrated (without imposing open access) was the fear that competition would have pulled rail freight
prices down to only covering variable costs, hence depriving the rail system as a whole of its capability to cover its fixed costs (i.e. notably capital investment into the infrastructure). For this reason, the capacity of the system to self-finance itself has been privileged over open access, with the result that some areas are indeed only serviced by one rail operator (or alternatively by trucks and other means of transport).

There was actually no opportunity in Europe to have an open discussion on these matters, the American example just being considered as non-relevant for Europe. It is true that the legal, financial and business backgrounds are not the same in Europe and in the USA, but some basic principles nevertheless remain the same, especially concerning the fundamentals of the railway industry:

- Railways need much higher levels of capital investments than other industries (in the USA, the figures are 3.5 % of revenue on average across industries and 18% in the case of the railway sector). One difference with America is that Europe’s rail is not allowed to decide on infrastructure investments and to raise the needed resources. In theory, it is admitted that it is the State’s role to invest in rail infrastructure, in the same way as in road infrastructure.

In practice, the states have been unable, or unwilling to provide the necessary resources, with the practical result that on average the European railway infrastructure network is in not too good a state, that there are problems of capacity and even some safety issues.

The European railway industry needs to find more resources to maintain and develop the infrastructure; in the USA, this is the task of the Railway Undertakings themselves; but even with a much better productivity, and a favorable fare level (they are the reference on their market for quality and efficiency), they can hardly cover their costs, hence some long term questions for the quality of infrastructure too. The situation is of course worse in Europe, and no solution is at hand for the moment.

- Free access will certainly lead to lower rates for the most powerful shippers (most of which are typically more profitable than the Railway Undertakings themselves). By driving rates down, intra modal competition strips also the railway system of investment capital and prevents it from earning enough to cover its full cost (including the cost of providing equipment and safe service).

- Control by integrated railways of all the elements of rail transportation has, in the case of the American railways, resulted in significant cost savings that have been passed on to rail customers in the form of lower rates (Measured in revenue by ton-kilometer, average rail rates in the USA have fallen 60 percent in inflation adjusted terms since 1980).

It is true also that the present open access policy in Europe (with separated infrastructure management) has brought specific administrative complications (concerning, among others, the priorities for the use of tracks, operating conditions and investment policies) and has consequently increased the “transaction” costs between the operating part and the infrastructure management part. In addition, the complex coordination between track owners and opera-
tors could have safety ramifications, as problems in the United Kingdom have shown in the past.

- In the USA, the deregulation brought in 1981 by the Staggers Act did not change the fundamentally integrated nature of the railway industry. It was nevertheless very successful both for the railways and their customers: From 1980 to 2004, rail traffic volume rose 81 percent and productivity 180 percent; nearly all of these productivity gains have been passed through to rail customers through lower rates. At the same time, rail market share is up and the rail accident rate is by now the lowest ever.

- Once again, it should also be reminded that intra modal competition is not the only or the main competitive force that matters. The reality is that rail faces extensive competition (notably from road) for the vast majority of its business, including when a customer is served only by one railway.

- An obvious result of the “non integrated” approach was the creation of a considerable amount of “new entrants”, and it may be interesting to measure to what extent the increase of the number of players has fostered market growth or not.

The European Commission indeed makes a link between the development of rail freight and early market opening. As an example, in its 2006 report on the Implementation of the First Railway Package, the Commission writes:

“A country-by-country analysis clearly indicates that the Member States which were the first to reform their railways by introducing competition in the rail freight transport sector recorded the biggest increases in volume (tkm) between 1995 and 2004: the UK (70%), Germany (24%), Netherlands (67%), Sweden (8%), and Austria (36%)”.

The Commission supports these observations using figures, which compare the development of rail freight (since 1993) and the market share of new entrants in each Member State.

However, on a closer look, it appears that the Commission’s conclusion that market development is closely linked to market opening is not really supported by the actual data. A thorough analysis has been carried out (see Appendix 2.1) using the data to be found in the Commission’s report: no statistical evidence has been found of a correlation between rail freight growth and market opening. This is because other criteria have also to be taken into account, like low rail infrastructure charging (Netherlands), high road infrastructure charging (Switzerland, Austria), significant government support to the infrastructure (United Kingdom, Spain), good general state of the infrastructure (Sweden, Finland), cancellation of rail infrastructure debt (Germany), etc. Of its own liberalization is not enough to foster market growth. Its effectiveness can only be demonstrated when combined with other essential elements of rail revitalization (like in the United Kingdom, in the Netherlands, in Sweden and, above all, in Switzerland).
2.2 The main players – present situation and strategies

2.2.1 The Infrastructure Managers

Railway infrastructure (track, signaling and telecommunication networks) remains mostly public property. With some exceptions, like in Switzerland, infrastructure management is a monopolistic, state owned activity. The liberalization of the European rail transportation system has not reached, for obvious reasons, the physical network itself. If infrastructure performance is not good enough for structural reasons, as it often happens, this has to be accepted by the Railway Undertakings, because normally no competition exists among Infrastructure Managers (again with some exceptions, like possible alternative routes belonging to separate Infrastructure Managers.)

Many Infrastructure Managers actually complain about the fact that the funding for track maintenance is insufficient. In some countries, this shortage has already had serious consequences, going from speed limitations to neutralizing some parts of the network (e.g. France). It has to be reminded that speed limitations do not only play against direct performance, but at the same time reduce the capacity of the affected lines.

Another question is to know whether some parts of a network are saturated or not. Saturation in the railway business is not an obvious concept: most Infrastructure Managers will explain that their network is, in general, not saturated, meaning that not all paths offered to the Railway Undertakings are effectively used. A closer look at the situation reveals that there are recurrent difficulties at certain nodal points, which usually affect other parts of the network.

The mixing of passenger and freight traffics has also negative consequences for both categories; for the latter, if there is the slightest delay, freight trains may be obliged to be stabled a very long time until a whole battery of passenger trains, going faster, has passed them. The feeling of saturation can be different, according to the type of traffic.

UIC has tried to define exactly the notion of saturation (UIC leaflet n° 406), but this definition was mainly made for administrative reasons.

Interoperability is primarily an infrastructure problem. It is also a top priority for the European Commission, and the new Technical Specifications for Interoperability will be very helpful in a near future for improving a not so good situation. There is also a cost for interoperability and the return of investment should be assessed before a decision is made on investments.

Infrastructure Managers have now, and more than ever, to face the following challenges:

- Improve their networks,
- Establish an effective international co-operation with their colleagues from other countries. (RNE is a further step in that direction),
- Propose attractive, and if possible, harmonized prices for the use of infrastructure to the Railway Undertakings.
2.2.2 The Railway Undertakings

2.2.2.1 The incumbent railways

The dominant railways, usually the former national railways, are, as explained before, in an uneasy situation: their commercial and financial results are stagnating. There are however different categories of incumbent railways, with different kinds of problems to solve and also with different strategies:

- Huge organizations (Railion, SNCF Fret) and smaller companies (Cargas Renfe, CFL);
- With different levels of recovery of the railway sector’s historic debt (in some countries, the historic debt still burdens the whole rail system);
- In countries with very different levels of effective liberalization of the railway sector;
- With either a rather good market share against other modes (SBB, Rail cargo Austria) or much smaller ones (sometimes under 5%);
- Having a good level of integration with logistic partners or not.

It is not surprising then to observe a variety of behaviors among these incumbents railways, depending on the factors listed above. These behaviors are mainly one or more of the following:

- Concentrate on saving costs;
- Accept a relative decline, in order to deliver good quality of service for the remaining traffics;
- Seek a dominant position, because it is expected that only a few players will remain in the market, and that one wants to be one of them;
- Stick to the former co-operative ways (with the necessary adaptations to avoid conflicts with the European and national competition authorities).

2.2.2.2 The new entrants

Not all “new entrants” are actually “new”. Under this name, one finds all the companies which are not the “incumbents”. This is why, among hundreds of non incumbent railways, only a minority is made of really recently created entities. At the same time, not all the new entrants are potential competitors for the incumbent railways, some of them specializing in complementary services. One typology for new entrants could be:

- “Short line” operators. They are often former regional or city railways, carrying passengers and (sometimes) freight. These companies act in most cases as feeder lines for bigger players;
- Former industrial railways (used to operations in the steel and chemical industry, mining etc.). Sometimes these entities decide to leave their mostly private network and to set up a business on “main lines”. The main purpose of theses companies is to reduce the transportation costs for themselves;
- Traction companies;
- New competitors, some of them small, some of them part of important groups (like CONNEX-VEOLIA). The strategy of these new players is often “cherry picking” block train services (single wagon load traffic being too complicated and costly to organize and with little profitability prospects);

- And not to be forgotten, incumbent companies entering markets outside their historic territory, by extending block train services, or by acquisition of investments in existing railways.

Owners of these “new entrants” are local and regional authorities, port authorities, industrial companies, transport operators, former employees of the incumbents, members of logistic groups, professionals from the transportation industry and historic railways themselves.

2.2.2.3 The Authorized Applicants

Authorized Applicants (port authorities, forwarders etc.) are allowed, in certain countries (where national law makes it possible), to access to the infrastructure by buying train paths. Then these Authorized Applicants can organize tenders and subcontract traction to a selected Railway Undertaking.

2.2.3 The emergence of logistic companies and operators in international transport

Organizational and commercial leadership is key to success in the transport industry. It is necessary to understand and fulfill the customer’s expectations, and it brings a better added value to the business. Thus it was not surprising to observe in the recent years that the more dynamic companies, especially in road transportation, developed from simple carriers towards transport organizers, taking charge of the multiple demands of the market at an early stage, and with an improved understanding of the needs of their customers.

The transportation market has now evolved in such a way that customers are used to a wide range of logistic services, beside a good quality of service for transport itself; Just in time delivery is only one aspect of this evolution. More important is that the production processes of the client and the organization of transport by such a logistic company are now very often part of a continuous process. It is as if the overall value of the produced goods was reached only after delivery to the final buyer or user, and that transport was in fact part of the production process (but has nevertheless to be subcontracted to a third party, not belonging to the core business of most industrial companies.)

For all these reasons, some railway companies among the biggest wanted also to present themselves as logistic companies, directly or through subsidiaries.

2.2.3.1 The need for co-operation in the transport sector

For a long time, the transport and logistics market was dominated by mid-size companies, adapted to respond to the requirements of their customers, mostly at national level. International transport services were provided in sequential processes by a se-
ries of service providers on a case-by-case basis, often also on a customer-related ba-

sis (same repeated procedures for one customer).

In an internationalized and liberalized transport market global transport and logistics

providers evolved to better cope with complex international transport requirements. The portfolios of these “global players”, according to their marketing departments, comprise every logistics service shippers might think of. Nevertheless, mid-size ser-

vice providers still have an important role to play, usually developing into all-rounders

also offering specialized or niche services beside a range of standard services.

Smaller players in the transport market are therefore very often related to the follow-

ing attributes, constituting clear benefits to customers in a fast changing and highly

competitive market:

- simple decision procedures,
- short response times,
- flexible transport solutions,
- personalized customer relations,
- high regional competence and market closeness.

But the structure of mid-size companies also encompasses some negative effects,
tending to play a crucial role in today’s transport and logistics markets:

- little geographical coverage,
- market experience largely restricted to country of origin (regulations, financing etc.),
- restricted capabilities to respond to large contracts and complex project re-

quirements,
- high specific effort required for the implementation of modern IT equipment,
- weak position in procurement negotiations (vehicles, equipment, fuel etc.).

In some cases, disadvantages of particular service providers may also result from le-

gal restrictions such as denied licenses to operate on designated routes in the aviation

sector, which are usually agreed on a bilateral basis between countries.

To overcome the weaknesses of individual companies, co-operations have proven to

be a suitable means to improve the position in the market, to capitalize on economies

of scale or to increase efficiency of processes.

2.2.3.2 Adaptation of the Railway Undertakings

As far as international rail services are concerned, most railway companies typically

present both the positive and negative characteristics listed above.

Even without a specific logistic demand beyond transport, international rail freight

presents a range of challenges due to the juxtaposition of several successive carriers:

- different languages,
- lack of operational and administrative interoperability,
- Lack of a common information system.
The question is to know whether a Railway Undertaking is able, and under what conditions, to provide the logistic services expected by modern customers, and even, in a more modest way, to deliver a good quality product in cross-border traffic.

In some cases the answer is "yes"; especially when its main customers, themselves, belong to big traditional industries like the steel industry. These industries used to have their own transport and logistic organization, and sometimes their own (private) railway network. This kind of customer generally has a good understanding of the functioning of railway transport. Actually, it is usually their Transport Department, which plays the role of a logistic company, being the interface between the carrier and, let's say, the steel company.

International traffic is not a too complicated issue in this case, traffic flows being usually concentrated on a small number of well known consignees; The problem is that the importance of these traditional flows has been decreasing for many years, and that even these industries prefer now to concentrate on their core businesses and to subcontract logistics to third parties or subsidiaries.

The rail sector is responding in various ways to the challenges of international transport and international logistics:

- Historic companies carry on cooperating with each other at operational level. However, at commercial level, the company holding the commercial contact with the customer may sometimes claim the full responsibility for the whole international transport chain, using "subcontracting" rather than "traditional co-operation".

- Similarly, new entrant companies adopted operational co-operation between themselves as a means to operate trains internationally (e.g. European Bulls). However, at commercial level, new entrants tend to systematically apply the "sub-contracting" mode among themselves.

- Historic companies are also diversifying their co-operation activities by entering into contract with new entrant companies outside their traditional territories, using the sub-contracting mode (e.g. Railion Deutschland cooperated with BLS in Switzerland). Sometimes, they even chose to integrate operators abroad (whether small or big) into their own organization (e.g. Trenitalia bought a large share in TX Logistics. Railion Deutschland bought majorities in NS Cargo and DSB Cargo).

- These cooperative activities and merger/acquisitions are sometimes used by individual companies as a launching pad for operating trains end to end into foreign territories (e.g. after cooperating with BLS in Switzerland, Railion chose to operate trains on its own between Germany and Switzerland).

In the field of logistics, various strategies are also being applied:

- Some historic railways were already part of a group including logistic companies (e.g. SNCF partly owns a logistic company, Geodis, however the railway operator and the logistic operator are not in a link of subordination between them).
Some other historic railways chose to integrate themselves into a logistic pole. This was the case of DB when acquiring Stinnes.

Some other historic railways (like SBB Cargo) have chosen to simply concentrate on their core business (rail operations).

New entrants have sometimes a more obvious link with logistics being often themselves an emanation of a logistic group or of a shipper (TX Logistics, Rail4Chem).

In the past, in Central and Eastern Europe, marketing and sales matters were sometimes totally separated from the Railway Undertakings, and given to some state owned forwarders.

### 2.2.3.3 The leading professionals

- **Logistic companies** (providing logistic services like storage, final distribution etc.) have strongly developed in the last 20 years. For them, it is very natural to be “road oriented”, because of the intrinsic flexibility of that mode. This represents a huge competitive disadvantage for the railway mode not being any longer the mode of reference.

- **Integrators**, like UPS and DHL. These companies have a global geographic coverage and utilize every transport mode. Their activity is based on distribution around aeronautical hubs. It is typical for them to use shuttle trains between airports or important economic centres. Their quality requirements are very high.

- **Wagon owners**. Some of them do more than renting wagons to their customers: they sometimes play the role of a logistic company, and act as an interface between customers and Railway Undertakings.

- **Forwarders**. Historically, forwarders were mainly customs agents; their activity concentrated on border crossing questions; but as it was very complicated for a railway customer to organize international transportation with successive railways, it became soon natural for him to hand over to the forwarder the whole negotiation, including fares, quantity discounts and so on.
2.3 International rail freight: elementary aspects

The railway business can be split into a certain amount of elementary tasks. The traditional Railway Undertakings perform, sometimes implicitly, all these tasks.

A simplified list of them could be:

- Headquarters responsibilities
  - Strategy and market research. Strategy cannot be shared, and should normally not be made public.
  - Logistics. Some Railway Undertakings deal with logistics, some other are simply carriers. Sometimes the department of logistics is integrated in the Railway Undertaking, sometimes it is a separate company in a transport group. For the final customer, it makes of course a big difference to be obliged to handle logistical matters by himself, or to rely on third parties, like forwarders or the carrier.
  - Administration and finance.
  - Marketing and sales, after sale.

- The interface with Infrastructure
  An ideal solution would be to have the same simplicity of use of the infrastructure in railways as in road transportation. But things are more complicated in the case of railways:
    - because of the interaction between infrastructure and operations, a permanent interface is needed in order to monitor the question of capacity.
    - Infrastructure charges may be another matter of negotiation, prices being not always “fixed”.

- Rolling stock (locomotives and wagons), drivers
  - maintenance,
  - dispatching,
  - drivers.

- Operations
  - planning,
  - day to day operations,
  - terminal operations,
  - border crossing,
  - human resources in operations.

These elementary activities are normally handled by every Railway Undertaking. If two or more RU’s co-operate, they share some of them, and keep the others under their own responsibility. Thus, there are many arrangements possible, going from a rather weak commitment (for example in common communication or lobbying) to a fully integrated Railway Undertaking.
2.4 Possible organizations and examples

In summary 30 existent co-operations have been included in the analysis of possible organizations. These models were clustered and described on the basis of dedicated examples within the following chapters.

Figure 2-1 provides an overview over these 30 analyzed example co-operations with some of their main characteristics. They cover the whole range from mere agreements to daily practiced transport services, from passenger traffic to freight transport, from rail freight services to road, air and other modes' transports.

A detailed description of all example co-operation can be found in Appendix 2. 2, structured in the main aspects:

1. Involved partners
2. Type of partners
3. Owner relationship between the partners
4. Main objectives
5. Legal/contractual basis
6. Geographical coverage
7. Market segments
8. Coverage
9. Strategic background – evaluation
10. Volume of business

Further examples of co-operations were contributed by Trenitalia. Due to missing the deadline of this working report they could not be integrated in the detailed description. Nevertheless they were included in Appendix 2.3.
### Figure 2-1: Analyzed example co-operations

<table>
<thead>
<tr>
<th>Co-operation name</th>
<th>Type of involved partners</th>
<th>Geographical coverage</th>
<th>Main market segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 COTIF</td>
<td>States</td>
<td>42 countries, mainly European, but also in North Africa and in the Middle East</td>
<td>Passengers and freight</td>
</tr>
<tr>
<td>4 Rail Net Europe</td>
<td>Infrastructure Managers</td>
<td>Almost all of Europe</td>
<td>Pre constructed and tailor made paths</td>
</tr>
<tr>
<td>5 BoxXpress</td>
<td>Railway Undertakings (new entrants), terminal operator</td>
<td>Dedicated destinations: German north seaports – Southern German economic centers</td>
<td>Block trains of overseas containers</td>
</tr>
<tr>
<td>6 Brenner Rail Cargo Alliance</td>
<td>Railway Undertakings (incumbents)</td>
<td>Corridor Munich - Verona</td>
<td>Joint production of all services: Block trains, combined transport, &quot;Rollende Landstraße&quot;, wagonload traffic, by maintaining the individual commercial/sales responsibility</td>
</tr>
<tr>
<td>7 CORTAX</td>
<td>Intermodal Operators</td>
<td>Belgian terminals through the Ronet hub to South of France, Italy and Spain</td>
<td>All kind of consignments: mainly swap bodies and containers but also semi-trailers</td>
</tr>
<tr>
<td>8 European Bulls Alliance</td>
<td>Railway Undertakings (new entrants)</td>
<td>All of Europe, but mainly in the countries of the founding companies (Benelux, Germany, Italy, Austria, Czech republic and Slovakia)</td>
<td>Containers, Cereals, chemicals in tank cars, coal, petroleum coke, Cement etc.</td>
</tr>
<tr>
<td>9 European Rail Shuttle</td>
<td>Railway undertaking (new entrant), alliances with incumbent and new entrants</td>
<td>Mainly from and towards Rotterdam, but also from and towards Hamburg and Bremerhaven Destinations are almost every country on the North South route: Belgium, Germany, Switzerland, Italy, Czech Republic, Slovakia, and also Poland, Hungary, Slovenia.</td>
<td>Intermodal block trains for maritime containers</td>
</tr>
<tr>
<td>10 Kombiverkehr - ICA</td>
<td>Intermodal Operators</td>
<td>Germany (based on the national network KombiNetz2000+) – Austria – The Netherlands – Italy – Eastern countries</td>
<td>Merging of seaport hinterland and land transport flows of mainly swap bodies and containers but also semi–trailers</td>
</tr>
<tr>
<td>11 Netzwerk Privatbahnen</td>
<td>Railway Undertakings (new entrants)</td>
<td>Germany and neighbor countries</td>
<td>All types of goods/commodities</td>
</tr>
<tr>
<td>Co-operation name</td>
<td>Type of involved partners</td>
<td>Geographical coverage</td>
<td>Main market segments</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12 Rail Euro Concept</td>
<td>Railway Undertakings (incumbents)</td>
<td>Originally, Woippy-Manheim with only one border crossing (Forbach). In a further stage, enlargement to the hinterlands (Ruhr Region in Germany, Area of Lyon in France). One possible long term option is for the REC to handle part of the German Spanish traffic</td>
<td>All kinds of goods, but only in full trains (single wagon load is not concerned)</td>
</tr>
<tr>
<td>13 Rail Traction Company/Lokomotion</td>
<td>Railway Undertakings (new entrants)</td>
<td>Originally the Brenner route, but actually all the German-Italian traffic via Austria</td>
<td>Combined transport, steel, automotive</td>
</tr>
<tr>
<td>14 Railion North-South-route</td>
<td>Railway Undertakings (incumbents, new entrants)</td>
<td>All countries from Finland, Norway, Sweden and Denmark to Italy and the South east of Europe</td>
<td>Combined and conventional transport, mainly block trains</td>
</tr>
<tr>
<td>15 SIBELIT</td>
<td>Railway Undertakings (incumbents)</td>
<td>SIBELIT is in charge of operations between Muizen and Bale. But improvement of the Antwerp-Milan, and more generally Benelux-Italy route is the final goal</td>
<td>All traffics</td>
</tr>
<tr>
<td>16 Systemcargo</td>
<td>Forwarder, Railway Undertaking</td>
<td>National traffic on dedicated German destinations: Hamburg/Bremen/Osnabrück/Hannover – Frankfurt/Karlsruhe/ Nürnberg/ Regensburg/ Landshut</td>
<td>Primarily time critical system traffic</td>
</tr>
<tr>
<td>17 UIRR model</td>
<td>Intermodal operators, Railway Undertakings (mostly incumbents), road transport companies, freight forwarders, logistic companies</td>
<td>Most continental countries of Europe</td>
<td>Mainly the continental market of loading units coming from the road side.</td>
</tr>
<tr>
<td>18 Air Cargo Interlining</td>
<td>National, continental and intercontinental airlines</td>
<td>Worldwide. Often corridor-oriented</td>
<td>Air cargo, all commodities</td>
</tr>
<tr>
<td>19 Antwerp Intermodal Network</td>
<td>Port development company, transport companies, terminal operators</td>
<td>Services start and end in the port of Antwerp. Services operate in Belgium, the Netherlands and Germany (Rhine only).</td>
<td>Transport of intermodal transport units, mainly container services (intermodal)</td>
</tr>
<tr>
<td>20 Bonamare-Bonatrans</td>
<td>Five owner masters, leasing ships belonging to five limited partnerships where the owner masters hold shares themselves</td>
<td>Europe, all navigable waterways as from class Va</td>
<td>Inland waterway transport Commodity: bulk goods, building materials, containers/swap bodies, hazardous materials, heavy loads, disposal transport</td>
</tr>
<tr>
<td>21 Cargo-Line/ABX</td>
<td>Mid-size freight forwarders co-operation, transport/logistic service provider</td>
<td>Germany</td>
<td>Road transport: National consolidated cargo</td>
</tr>
<tr>
<td>Co-operation name</td>
<td>Type of involved partners</td>
<td>Geographical coverage</td>
<td>Main market segments</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-----------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>22 China Cargo Alliance</td>
<td>Medium-sized freight forwarding companies</td>
<td>China: all major ports and cities closed to the coast. Less than five branches in the Chinese hinterland. Worldwide: south Asian coast range (Indian Ocean), Europe, USA, Australia (South East), South America (west coast)</td>
<td>Mostly maritime transport, all market segments</td>
</tr>
<tr>
<td>23 City Logistics (Example: Bremen)</td>
<td>Freight village development company, freight forwarding companies</td>
<td>City and region of Bremen</td>
<td>Road transport; mainly groupage freight</td>
</tr>
<tr>
<td>24 CoLog</td>
<td>Medium-sized freight forwarding companies</td>
<td>Focus on Franken (Franconia) in Central Germany, activities and partner companies all across Europe</td>
<td>Road transport: automotive, glass and beverage logistics, relocation/removal and furniture transport, export/import air, shipping and rail transport services, general goods for national and international shipping</td>
</tr>
<tr>
<td>25 Deep-freeze food logistics</td>
<td>Manufacturers of deep-freeze food, logistics provider specialized in handling and transporting refrigerated food</td>
<td>Germany, Benelux: three times per week per region, Great Britain, South of Europe, East of Europe: one to two times per week</td>
<td>Road transport: Deep-freeze food products</td>
</tr>
<tr>
<td>26 eWit</td>
<td>Transport companies with strong focus on inland waterway transport, companies for consulting/technical support</td>
<td>The river Danube serves as an example in the application and stands for any inland waterway in Europe.</td>
<td>All market segments except for express services. All modes, focus on inland waterway transport.</td>
</tr>
<tr>
<td>27 On road network</td>
<td>Road transport companies, freight forwarding company</td>
<td>The network serves 19 hubs spread across Sweden</td>
<td>Road transport, focus on general cargo</td>
</tr>
<tr>
<td>28 Star Alliance</td>
<td>Passenger airlines (carriers) of various sizes</td>
<td>842 destinations in 152 countries</td>
<td>Air traffic, focus on passenger traffic</td>
</tr>
<tr>
<td>29 System Alliance</td>
<td>Medium-sized freight forwarding companies</td>
<td>Germany, Europe via the SystemPlus co-operation</td>
<td>Consolidated goods (packaged and palletized).</td>
</tr>
<tr>
<td>30 The New World Alliance</td>
<td>Shipping companies with main focus on container shipping</td>
<td>Major East-West container trade lines: Trans-Pacific, Trans-Atlantic, and Asia-Europe</td>
<td>Maritime transport; Worldwide container shipping</td>
</tr>
</tbody>
</table>
2.4.1 Co-operative models

The spirit of the new organization of the railway market fostered by the European Commission is rather competition than co-operation. However, this does not mean that co-operation will disappear. Technical and operational co-operation will probably still be necessary for quite some time, as a means of overcoming interoperability barriers.

However, it is likely that traditional commercial co-operation will diversify towards other forms of partnerships (notably based on subcontracting, merger acquisitions or other types of co-operation agreements). The various ways of cooperating have been described in general terms in chapter 2.2.3.2.

A few examples of how this is done practically are given below. Some co-operation arrangements may be loose, i.e. involving little commitment and very light structures (e.g. European Bulls). Others are more structured, involving the set up of dedicated organizations (RailEuroConcept, Thalys). Whatever the agreement is, these arrangements always comprise one or more “bricks” of the elementary activities described in chapter 2.3 above.

The relationship can also be a looser one, with some contractual arrangements or simply a charter of good behavior. Some examples of this model can be found in Appendix 2.2.

2.4.1.1 The "European Bulls" model

There is no specific legal structure involved. If there is the need to prepare a common offer to a customer, one of the members of the alliance will take the lead and subcontract with the others, if necessary, or even with parties outside the alliance. Actually, and in the case of European Bulls, only a small amount of new traffics has been realized so far under its flag.

This is because the main goal of European Bulls is lobbying and external communication. Most of its activities so far has been press conferences and press releases, with a good media coverage; this is at the same time useful for each individual member of the alliance: being medium sized or small companies, compared with the incumbents, some extra publicity is always needed.

2.4.1.2 The "Rail Euro Concept"(REC) model

Here we have a legal structure, in fact a limited company. Its size remains very small (about 30 staff), compared to the mother companies, Railion and SNCF. Actually, the stakeholders do not want it to be or to become a Railway Undertaking: each big railway keeps its own business orientation, commercial services and production system.

REC was created with the aim to be a coordinator in the operational processes. The “bricks” devolved to Rail Euro Concept are:

- Studies (Medium term),
- Production planning,
Day to day production follow-up,
Cross border facilitation.

There is a trilateral contract between Railion, fret SNCF and REC, detailing the responsibilities of each party. But despite these written rules, pre-eminence of the 2 stakeholders is structurally overwhelming and unanimity is needed for most decisions

2.4.1.3 The "Thalys" model

Thalys is of course a passenger venture, but the model can be used easily for freight too. The main point of course is that Thalys was, from the beginning, a success story. This must be underlined, because most business cases in the freight area were and remain less promising.

Thalys has also always had, like Eurostar, a very strong image as a product. Its shareholders have accepted to differentiate Thalys completely from “normal” trains (with specific and high profile advertising, yield management of prices, differentiated design for the train sets, specific catering and frequent traveler programs, on board magazine and so on).

The legal structure linking SNCF and SNCB in a Belgian co operative, is not particularly binding in itself. If the joint venture is already able to work in many aspects like a real Railway Undertaking, it is probably because of a very effective (and double) delegation of powers:

- from the shareholders to the board of directors,
- from the board of directors to the managing director.

Thus many responsibilities are already managed by the latter, like the definition of general strategy and commercial policy: pricing, yield management and consistence of service (frequencies, time tables) and also

- Communication, press releases, lobbying, marketing, brand names, advertising, image, customer service; market research, service standards in trains and terminals, common training for the staff, quality measurement;
- Safety framework (drivers, conductors and maintenance), co-ordination of operational services of the two partner companies, co-ordination of maintenance works, operational co ordination in day to day activities;
- Co-ordination of strategic projects.

2.4.2 Competitive models

2.4.2.1 One company with global geographical coverage

This is the model we can observe in road transport, with a fairly homogeneous European infrastructure used by all and trucks delivering an end to end service. This can happen, but very rarely, for railway transport too, for example in the case of a block train crossing a border and destined to the private siding of a big industrial company.
The fact is interoperability has not developed enough to allow this to become usual: Normally, or very often, locomotives and or drivers have to be changed at the border station, due to specific regulations, language problems and further difficulties already described.

This is why, in most cases, a partner with a good knowledge of the particularities of the neighboring country, is needed.

2.4.2.2 One company with subsidiaries

This is the way chosen by Railion some years ago. Subsidiaries were set up in the Benelux and Denmark, and shares taken in Railway undertakings in other countries. In theory partners combine flexibility and geographical coverage in doing so. The insufficient level of interoperability remains of course the same as before.

2.4.2.3 One company with subcontractors

Contractual law will replace shareholder’s influence in this case.

The main contractor can use its subcontractor on a permanent basis, or on an ad hoc basis. One can also imagine a kind of symmetry in subcontracting; it may be that the same company is the main contractor for one traffic and a subcontract for another one.

For the final customer, the situation is clearer, notably as far as liability is concerned, with only one party responsible towards him, even if, exactly like in the past, the service will be performed by 2 or 3 subsequent companies.

This is, for example, the case on the North south route with BLS Cargo and Railion, (despite the fact that Railion has a share of 20 % in BLS Cargo). Railion calls this type of arrangements where subcontracting partnerships are formed with the intention to compete with other players “Competition”.

Finally, subcontracting traction only can be an option (like with RTC and Lokomotion).
2.5 An analysis of non rail co-operations

An analysis of co-operations in transport and logistics sectors other than rail have revealed a range of practices that may stimulate the development of co-operation strategies in the rail freight sector. The competitive forms of organizing transport services already listed at the end of the previous chapter do also exist in other transport and logistics sectors. They shall not be discussed in detail again as the “co-operative” elements are often facing a strong controlling position of a lead partner. The competitive forms of organization are:

- One company with global geographical coverage. One service provider provides full service along the transport chain;
- One company with subsidiaries. The lead partner has full control of the partners;
- One company with subcontractors. Partners are bound by contracts regarding the performance and possible sanctions. Subcontractors may lose a contract in case of bad performance or dissents.

In the following, the co-operative forms of organization are presented and discussed. They were clustered in four categories:

- Customer driven co-operations,
- co-operations of service providers,
- co-operations of service providers with central sales and marketing elements; and
- co-operations with indirect effects on market development.

2.5.1 Customer driven co-operations

The businesses of shippers, being the customers of the transport and logistics industry, highly depend on the quality of transport and logistics services. Furthermore, shippers have a high interest in keeping transport and logistics costs down to improve their competitiveness in the market. Some shippers and their commissioned freight forwarders have therefore initiate co-operation in the operation of their transport and logistics processes. The main objective is the concentration of freight flows and the capitalization on economies of scale. But also further effects may result:

- reaching critical transport volumes for the implementation of new processes and/or technologies;
- increasing capacity utilization by either joining freight flows being complementary in time and/or by route (backloads!).

Three examples may highlight common practice, where customers co-operate to enhance the efficiency of transport and logistics services.

2.5.1.1 Deep-freeze food logistics

Three deep-freeze food manufacturers from the Osnabrück region (Germany), offering all different product ranges, agreed on joint order acceptance, storage, packaging and
distribution (transport). The production volumes being highly complementary in time (ice cream in summer, bakery products in winter) allow to reduce overall storage capacity and lead to high capacity utilization of assets along the overall logistics chain. The transport logistics provider in this case is owned by one of the customers.

Transport logistics of three companies where fully integrated due to the non-competitive position of the partners involved. Further more, economies of scale may be achieved in common procurement processes.

2.5.1.2 **Antwerp Intermodal Network (AIN)**

Port hinterland services of the port of Antwerp highly depend on road services. To increase the share of alternative transport modes to make better use of transport infrastructure and to increase the quality of hinterland services, the port of Antwerp took the initiative to foster inland waterway transport and rail as a means to improve customer satisfaction among port users.

The port of Antwerp therefore acts as a mediator between final transport customers (shippers) and transport service providers and co-ordinates the implementation of new services by inland waterway transport and rail. Operators keep their high degree of independence.

2.5.1.3 **On road Alliance**

In Sweden, the On road Alliance was created on the initiative of a major freight forwarder Kühne + Nagel. Kühne + Nagel, not delivering road transport services in Sweden themselves, was unsatisfied with the services provided by the competing full service providers. The On road Alliance was hence set up, joining a range of regionally operating road transport providers, operating also national long-haul services. The new national network is fed by Kühne + Nagel transport volumes, operates under harmonized quality standards and runs a common IT platform. Regional activities by the partners are not affected. Members are granted full independence.

As in the AIN project, the co-ordinating partner takes over some administrative tasks but does not seem to dominate the group.

2.5.2 **Co-operations of service providers**

Transport and logistics providers freely acting on the market tend to join capacities and know how to improve their market position and to capitalize on economies of scale. Nevertheless, they may wish to maintain a high degree of independence while co-operating in certain parts of the business.

Three examples may highlight common practice in the transport sector, which all have in common that marketing and sales largely remain with the particular partners. Some common central administrative services are usually provided by a service provider being more or less closely linked to at least one of the partners.
2.5.2.1 Interlining in air freight services

Interlining is a means for air freight carriers to extend their network without operating on additional links themselves. Carriers agree to co-operate in a way that they provide transport capacity on their routes to the partner, taking on board freight acquired by the partner. An interline agreement between two carriers covers billing procedures, the handling of claims, arbitration procedures in case of disagreements, and waybills and other documents. Transport rates are agreed separately.

The IATA interline agreement, the annual update being negotiated under the lead of IATA, is the most popular document interlining is based on. Carriers wishing to interline with another carrier have both to access the agreement and need to manifest their will to interline with this particular partner. Clearing house services are also provided by IATA.

Bilateral interline agreements do not involve IATA although the IATA interline agreement is often the basis for the contract agreed among the two partners. Billing is directly handled by the two partners.

2.5.2.2 The New World Alliance (TNWA)

The New World Alliance consists of three major container shipping companies jointly optimizing their networks, for example: ports served, and schedules. Sharing transport capacities on their vessels, this form of co-operation is similar to interlining in air freight services.

Obviously no major common sales and marketing activities are ongoing, no joint body is known which has been set up for support services.

2.5.2.3 CargoLine and ABX Deutschland: Integration of networks

Two less-than-truckload (LTL) networks for consolidated/grouped goods were partly merged after a long awkward economical period of the ABX Deutschland network. CargoLine hence opened its network to ABX LOGISTICS at the beginning of 2006, taking over ABX’ business (transport volumes). Six ABX branches were fully integrated into the CargoLine network, the others were otherwise sold or closed. CargoLine quality standards and product range are implemented.

ABX gave up its own LTL network in Germany but gained a reliable strategic partner in its international network. Both the European CargoLine network and the European and international network of ABX LOGISTICS are not affected by the co-operation at national (German) level.

Compared to completely selling ABX Deutschland, ABX does not have to give up its LTL business in the most important European market. Instead, ABX has got a reliable partner. CargoLine improves its network and largely benefits from increased transport volumes.
2.5.3 Co-operations of service providers with central sales and marketing elements

2.5.3.1 Star Alliance

The Star Alliance is the first close alliance in the passenger air transport sector, founded in 1997. Its main objectives are:

- extending the services offered to the customers by each carrier by interlinking the partner networks and services;
- usage of synergy effects at service and operational level;
- fostering innovation and setting of industry standards;
- capitalizing on economies of scale and alliance bargaining power.

Five years later, the Star Alliance Services GmbH was founded steering the many projects implemented by Star Alliance members. Examples are the optimization of flight schedules, optimizing passenger transfer between Star Alliance flights in terminals and the development of a common information technology platform.

Complex marketing structures have been established including joint ticket offers (by continents, the “Around-the-World Ticket” etc.), linking frequent flyer programs and sales procedures.

2.5.3.2 Bonamare - Bonatrans

The inland waterway shipping market is to a large extent characterized by owner master operated units (owner and master of a vessel being identical) fully bearing the economical risk of their ship and operations. Due to the limited capacities of one single ship (and its owner), no strategic approach to marketing and acquisition of contracts is possible. Many shippers hence practice a hand-to-mouth living or have their ship chartered by forwarders and the like.

Bonamare overcomes this critical situation by establishing a shared risk community which now survived almost 30 years and was able to cope with rising fuel prices and heavy competition with eastern European ship owners so far. The major objectives of Bonamare are therefore:

- bundling capacities for the centralized joint acquisition of bigger and more complex contracts;
- capitalizing on economies of scale (fuel, etc.);
- sharing of economical risk of commercial activities, especially repair.

2.5.3.3 CoLog AG, Bayreuth, Germany

Six partners from the freight forwarding business jointly founded CoLog AG (plc.) in 2005 to provide mainly the regional supply industry with a competent partner in contract logistics. CoLog is intended to provide qualified services in the fields of intralogistics and transport logistics, being a close link between shippers and freight forwarders.
CoLog is a central element of a new strategy, offering services that go far beyond the services provided by each partner so far:

- bundling existing know-how of the partners for the provision of value-added services such as process analysis and consulting and
- provision of one face to the customers (marketing/sales) as regards complex tasks and contracts.

### 2.5.3.4 System Alliance

The System Alliance provides a co-operative transport network for consolidated/grouped freight. The group are seeking chances to compete with internationally operating logistics service providers. The establishing of the System Alliance network is therefore an appropriate means of extending the geographical coverage of each of the partner’s services.

Joint marketing, internet presence and sales activities are central elements of the alliance. All partners seem to keep their independence as regards the provision of services in other than the consolidated cargo sector.

### 2.5.4 Co-operations with indirect effects on market development

The two following examples shall demonstrate co-operations that only indirectly affect the success of businesses in the freight transport sector. The China Cargo Alliance supports professional networking in a quite new and non-transparent market but may have significant short-term effects. eWIT improves the knowledge about inland waterway and intermodal transport and will hence only have a mid- to long-term effect.

#### 2.5.4.1 China Cargo Alliance (CCA)

CCA members from China seek to co-operate with freight forwarding companies from abroad. CCA provides the Chinese forwarding industry with a network of international freight forwarders who not only handle their export shipments, but who allow to develop international business all over the world.

The main objectives of international partners are access to the Chinese market at reduced risk. Chinese partner companies provide a good knowledge of the Chinese market or of at least their port or region. They are able to provide the full range of services in China, extending the facilities of non-Chinese forwarders not having the capacities or not wishing to set-up own offices and networks in China themselves.

CCA enables their members to compete with large multinational forwarders by having a reliable international forwarding network and thereby providing good services at competitive prices.
2.5.4.2 eWIT - Web-based Intermodal and Inland Waterway Transport Training for Europe

The project eWIT pursues three main objectives:

- provision of a consolidated source of information about intermodal inland waterway transport (IWT);
- provision of modern and attractive learning tools in the sector of logistics education and training on intermodal IWT;
- increase of awareness for intermodal IWT in the European logistics sector.

In order to improve the use of multimedia technologies in education on Inland Waterway Transport, eWIT has implemented a new web-based approach to logistics training. Web-based applications have been developed which will provide European trainers and learners with up-to-date training methods and content on intermodal IWT. The tool shall replace current methods and content which is mostly reduced to a few outdated technical and nautical issues. Instead, eWIT provides users of the new platform with information displayed in several formats: text, graphs, audio and video animation.
3 Component analysis and generalization

3.1 Deduction and structuring of co-operation components

From the analysis of existent co-operation models (see chapter 2.4) 51 co-operation components have been derived. These components can be interpreted as the basic instruments for appropriate Business Models.

As shown in chapter 1.4.1, a Business Model is the strategic framework of a company. Under this condition it is suitable to structure the components analogue to the organization of a company with its main “departments”

- **Headquarter / Management** with the components
  - Strategic planning,
  - Logistical capabilities,
  - Market research,
  - Standard setting,
  - Moderation of interests and conflicts.

- **Administration** with the components
  - Billing, accountancy,
  - Financing, Controlling,
  - Allocation of transaction costs.

- **Business** with the main components
  - Marketing and sales,
  - Customer services,
  - Operations,
  - Know-how-management,
  - IT-Systems.

  Most of these components are specified in one or even two further levels.

- **Resources** with the main components
  - Traction / movable assets,
  - Wagons / movable assets,
  - Personnel,
  - Infrastructure.

  Most of these components are specified in one further level.

All components have been assigned to these four main categories. As a result Figure 3-1 shows the maximum case of a “co-operation company”. This is a theoretical case and shall provide a complete and structured overview of all components. A deeper analysis has to show, which composition of components will in summary lead to a suitable corridor specific Business Model.
Figure 3-1: Structured overview of co-operation components (maximum case)
3.2 Description and definition of the co-operation components

Figure 3-4 provides another (listed) overview of the components with a short description in order to get a common sense of understanding what is actually included in the respective components.

However, the analysis of the co-operation models showed, that three of the components (including their interdependences) can be expected to have an outstanding impact to the planned corridor related new and optimized rail freight services and will thus be described more detailed:

- volume bundling,
- interlining and
- yield management.

Volume bundling can be done in two steps (see Figure 3-2):

- “Classical bundling”, i.e. bundling via sales management activities to fill own cargo capacities.
- “Interlining“: This alternative, coming from the cargo airline business, is filling spare capacities a certain short time before departure with cargo from the „competitor“ (and vice versa) in an interaction process. This action should take place actually after the first step, in due recognition of one´s own capacity before departure.

Figure 3-2: Principle of volume bundling and interlining

1. Step „classical bundling“
   Filling of own allotments with „own“ cargo

2. Step “interlining”
   Filling own allotments with “external” cargo
Another instrument to get volume is yield management. It is first of all a tool of pricing (see Figure 3-3). A fundamental precondition is the knowledge of one’s clients behavior concerning their ordering process dependant on their flexibility of order time. An optimal situation for yield management is a container block train. It could be seen as a “virtual” platform with predefined allotments as “booking units”.

**Figure 3-3: Principle of yield management**

- **“Flex-“ Price offer**: This price offer increases as the booking deadline approaches.
- **Normal Price**: The normal price remains constant throughout the booking period.
- **Volume**: The volume increases as the booking deadline approaches.
- **Cost Coverage capacity**: The cost coverage capacity increases as the volume increases.

---

**Preconditions**
- “history” date base (concerning volume / price correlation)
- train = fixed, defined capacity

Both tools above are good examples for setting of business rules:

- for the classical bundling no common business rules are necessary for any sort of co-operation. The train capacities of each operator are contracted for a certain duration. Thus each operator will apply his internal rules to get cost coverage.

- for the interlining process common business rules are definitely necessary. They have to be contracted between the train partners to create a win / win situation on each side.
<table>
<thead>
<tr>
<th>Component level 1</th>
<th>Component level 2</th>
<th>Component level 3</th>
<th>Component level 4</th>
<th>Definition, Remarks</th>
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</thead>
<tbody>
<tr>
<td>Headquarter /</td>
<td>Strategic planning</td>
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<td>Adapting long-termed action schemes</td>
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<td>Management</td>
<td>Logistical capabilities</td>
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<td>Using different logistical capabilities of different partners for one logistic offer</td>
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<td></td>
<td>Market research, access to</td>
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<td>Common market research resulting in volume bundling</td>
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<td>new markets</td>
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<tr>
<td>Standard setting</td>
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<td>E.g. branding of one common product</td>
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<td></td>
<td>Moderation of interests,</td>
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<td>Neutral and competent instance to moderate interests of the partners, balance interests of partners and customers, conciliate in case of conflicts amongst the partners. The relevance of this component increases with rising number of partners/customers.</td>
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<td>conflicts</td>
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<td>Administration</td>
<td>Billing, accountancy</td>
<td></td>
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<td>Agreement on common systems, One leading accountant company</td>
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<td>Financing, controlling</td>
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<td>see above</td>
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<td></td>
<td>Allocation of transaction</td>
<td></td>
<td></td>
<td>Distribution of transaction costs amongst the partners, Search and information costs, Bargaining costs, Policing and enforcement costs.</td>
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<td>costs</td>
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<td>Business</td>
<td>Marketing and sales</td>
<td>Product definition, sales, advertising</td>
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<td>Common agreement in order to be recognized as one product</td>
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<td></td>
<td>Frequent user programs, yield management</td>
<td></td>
<td>see separate description above, see also Star Alliance Program</td>
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<td>Lobbying</td>
<td></td>
<td>Cooperation enforces a better recognition and acceptance. Being done preferably by the &quot;Lead Partner&quot;, e.g. like European Bulls</td>
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<td>&quot;external&quot; co-operation between the &quot;one face&quot; and the customer</td>
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<td>Background coordination</td>
<td>&quot;Internal&quot; co-operation amongst the partners as a necessary prerequisite to create a &quot;one face&quot;</td>
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<td>Information platform</td>
<td>e.g. Hotline, paperwork, ...</td>
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<td>After sales</td>
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<td>see separate description above</td>
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<td>Interlining</td>
<td></td>
<td>see separate description above</td>
<td></td>
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<td></td>
<td>Day to day operation, dispatching</td>
<td>Mutual acceptance of locos, wagons, personnel</td>
<td>Administrative co-operation to avoid time loss and operational effort</td>
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<td>internal responsibility for failure (amongst the partners) and failure regulations between the partners and the customer(s)</td>
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<td>Continuous train supervising</td>
<td>permanent localization and target/actual comparison</td>
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<td>Ad-hoc resources management</td>
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<td>e.g. Liability for damages, delays etc.</td>
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<td>Cooperation is securing a better position for slot negotiating. It is the result of common volume bundling</td>
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<td>Cross border transportation</td>
<td>Customs clearance</td>
<td>&quot;One side&quot; responsibility for customs clearance, online customs clearance</td>
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<td></td>
<td>Train controlling vs. mutual trusting</td>
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<td>Handling of transport documents</td>
<td>common set of documents, common platform for electronic transport data exchange</td>
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<td>Time table construction</td>
<td>coordination of time tables amongst the partners and between the partners and the customers.</td>
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<td>Common web-site</td>
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<td>graphically supported online disposition of resources</td>
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<td>Dispatching (operation)</td>
<td>graphically supported online disposition of rail and road long/short distance traffic and shunting movements</td>
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<td>Slot management</td>
<td>Common tools for slot purchasing, management and selling</td>
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<td>Quality management</td>
<td>Common tools for quality management</td>
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<td>Accountancy</td>
<td>Common tools for accountancy</td>
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<td>Data management</td>
<td>Common tools for continuous standing data management</td>
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<td>Interfaces, data exchange</td>
<td>Common interfaces for data exchange between the co-operation partners and between co-operation/customer</td>
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<td>Booking</td>
<td>Management and viewing of train capacities, electronic booking for customers</td>
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<td>Resources</td>
<td>Traction (for rail) / movable assets (for all other modes)</td>
<td>Ordering / common procurement</td>
<td>Common ordering (with an agreement on one common specification) is securing better pricing</td>
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<td>Allocation / dispatching</td>
<td>Agreement on a relevant back office with common business rules and assessment tools</td>
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<td>Maintenance</td>
<td>On the basis of a common maintenance rules agreement on a common depot strategy</td>
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<td>Traction (for wagons) / movable assets (for all other modes)</td>
<td>Ordering / common procurement</td>
<td>see above &quot;traction&quot;</td>
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<td>Allocation / dispatching</td>
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<td>Maintenance</td>
<td>see above &quot;traction&quot;</td>
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<td>Personel</td>
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<td>Staff training, provision of services</td>
<td>Installing common training centers with a common program</td>
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<td>Staff provision</td>
<td>Using the same pool</td>
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<tr>
<td>Infrastructure</td>
<td>(Low-cost)terminals</td>
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<td>Transshipment points (terminals, hubs, ...) owned by the co-operation or by one of the partners</td>
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<td></td>
<td>Transshipment facilities</td>
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<td>Transshipment facilities owned by the co-operation or by one of the partners</td>
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<td></td>
<td>Loading points (customers)</td>
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<td>Integration of customers’ loading points into the operational concept</td>
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</tbody>
</table>
3.3 Applications of the co-operation components

In a further working step it was analyzed, which components were actually used in the 30 existent co-operation models. This kind of evaluation can be used to identify suitable components for the development of new Business Models with similar framework. This procedure will be executed in chapter 4.

Figure 3-6 provides an overview of the usage of the components in the respective co-operations and furthermore shows their assignment to the components groups. In summary all 51 components and 30 analyzed co-operation models resulted in 500 identified component nominations. This means that the “average” analyzed co-operation model consisted of 16-17 used components; actually the spectrum reached from minimum 1 to maximum 33 used components.

Within a deeper analysis it was examined, what kind of components were used in dedicated kinds of co-operation forms

For this analysis the co-operations were structured into four clusters:

- Cluster I: Passenger co-operations (2 examples analyzed),
- Cluster II: General agreements (rail freight) (2 examples analyzed),
- Cluster III: Freight co-operations (rail) (13 examples analyzed),
- Cluster IV: Freight co-operations (non rail) (13 examples analyzed).

The components were aggregated to level 1 (see also Figure 3-4):

- Headquarter/Management,
- Administration,
- Business,
- Resources.

Figure 3-5 shows the relative frequency of usage of the components in the respective co-operation cluster. This type of presentation takes into account, that the co-operation clusters and the components level have different sizes (numbers of co-operations/components) and that not all components are usable in non rail co-operations.
The main results from this evaluation show:

- a notably high frequency of usage within the passenger co-operations; this applies to all components. However it has to kept in mind, that this sample is rather small; therefore the results remain uncertain.
- that the usage of resources components is smaller than within other component levels;
- that the frequency of component usage within “rail” and “non rail” co-operation is about the same.
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<thead>
<tr>
<th>Component level 1</th>
<th>Component level 2</th>
<th>Component level 3</th>
<th>Component level 4</th>
<th>Passenger co-operations (rail)</th>
<th>General agreements (rail European)</th>
<th>Freight co-operations (rail)</th>
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<tbody>
<tr>
<td>Marketing and sales</td>
<td>Customer services</td>
<td>Business operation</td>
<td>IT systems</td>
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| Figure 3-6: Usage of co-operation components in existing Business Models

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<th>Component level 1</th>
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<th>Component level 3</th>
<th>Component level 4</th>
<th>Passenger co-operations (rail)</th>
<th>General agreements (rail European)</th>
<th>Freight co-operations (rail)</th>
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<td>Marketing and sales</td>
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<td>Component analysis and generalization</td>
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## Usage of co-operation components in existing Business Models (continued)

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**Component analysis and generalization**

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### Usage of co-operation components in existing Business Models (continued)

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4 Conduction of components to a comprehensive Business Model

4.1 Methodical approach

The development of TREND Business Models is subject to two main groups of influences (see also Figure 4-1):

1. General objectives of the TREND approach, such as
   - Seamless transport from customer to customer with respect to infrastructure, operation, information and organization;
   - “One face to the customer”;
   - Competitiveness to mere road transport as a necessary prerequisite for modal shift effects

2. A corridor specific framework, consisting of main criteria as
   - Business cases,
   - Infrastructure¹,
   - Actors, players,
   - Other prerequisites.

Figure 4-1: TREND Business Models – Methodical approach

The usage and composition of components - as the instruments for Business Models – has to be reflected on this framework.

As a conclusion it has to be stated, that there will be no “ideal” Business Model, which fits for all, but “comprehensive” Business Models, whose suitability has to be evaluated within the respective (corridor specific) framework.

¹ It is preconditioned, that all railways are separated into operation and infrastructure departments
4.2 Specific framework for existents co-operations

Following this argumentation the four main aspects of the specific framework have been split up in representative criteria by the workpackage team during a meeting on June 13th 2006 in Hanover.

Furthermore the spectrum for each of these criteria has been defined by (minimum) two to (maximum) five specifications. Figure 4-2 shows the result of this discussion.

Within a next working step all 30 examined co-operations (see chapter 2.4) have been assigned to the specific framework scheme by four expert teams from

- CER: co-operation forms 1-6, 8-16
- HaCon: co-operation forms 16, 23, 29
- IVE: co-operation forms 18-22, 24-30
- UIRR: co-operation forms 7, 10, 17

The result is shown in Figure 4-3. The quantitative evaluation is according to the scheme in Figure 4-2 and covers a spectrum from 1 to 5.

The result of these classifications is the specific profile of the respective co-operation model. These profiles can be used to classify a new Business Model. By identification of similar specific profiles of the existent and the new example, suitable components and their specification can be derived. These working steps will be executed in the following chapter for the development of a Business Model of an example corridor.
Figure 4-2: General spectrum of specific framework for Business Models

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<td>intermodal/intermodal</td>
</tr>
<tr>
<td>Competition in charging schemes</td>
<td>same level</td>
</tr>
<tr>
<td>Geographical Coverage</td>
<td>worldwide</td>
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<td><strong>2. Infrastructure</strong></td>
<td>1</td>
</tr>
<tr>
<td>Ownership / Access</td>
<td>public / free unlimited access</td>
</tr>
<tr>
<td>Charging system</td>
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</tr>
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<td>Infrastructure Changing</td>
<td>fixed charges</td>
</tr>
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<td><strong>3. Actors / Players</strong></td>
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</tr>
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<tr>
<td>Nature (level of creation of value)</td>
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<tr>
<td><strong>4. Other Prerequisites</strong></td>
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<tr>
<td>Geographical Coverage (political borders)</td>
<td>national</td>
</tr>
<tr>
<td>Legal / Contractual Framework</td>
<td>individual</td>
</tr>
<tr>
<td>Intensity of Cooperation</td>
<td>merging businesses</td>
</tr>
<tr>
<td>Financial Commitment</td>
<td>equal shares</td>
</tr>
</tbody>
</table>

Legend:
- 1: National
- 2: Regional
- 3: International within EU (common framework)
- 4: International
- 5: International
- links between existing ones
- several market segments involved
- intermodal
- intermodal/intermodal
- higher than competitors
- lower than competitors
- limited number of countries (1-5) region
- to be negotiated
- fixed charges
- marginal costs
- full infrastructure costs
- full cost (internal + external)
- open network
- strong leader
- complementary (vertical)
## Figure 4-3: Specific framework for the Business Models of existing co-operations

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<th>3 COTX</th>
<th>4 Rail Net Europe</th>
<th>5 Box-Xpress</th>
<th>6 Brenner Rail Cargo Alliance</th>
<th>7 CORTAX</th>
<th>8 European Rail Alliance</th>
<th>9 European Rail Shuttle (ERS)</th>
<th>10 Rumburk-Vorarlberg-ICA</th>
<th>11 Network Privatbahnen</th>
<th>12 Rail Euro Concept</th>
<th>13 Rail Traction Company/Loekshem</th>
<th>14 Railif North South coast</th>
<th>15 SIBELIT</th>
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Quantitative spectrum from 1 to 5 (see figure 4.2)
Specific framework for the Business Models of existing co-operations (continued)

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<td>3. Actors / Players</td>
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</tr>
<tr>
<td>Legal / Contractual framework</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Intensity of Cooperation</td>
<td>6</td>
<td>3-5</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Financial Commitment</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>unknown</td>
<td>N/A</td>
<td>unknown</td>
<td>unknown</td>
<td>unknown</td>
<td>3</td>
<td>1</td>
<td>unknown</td>
<td>unknown</td>
<td>unknown</td>
</tr>
<tr>
<td>Risk sharing</td>
<td>6</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>3</td>
<td>unknown</td>
<td>N/A</td>
<td>unknown</td>
<td>unknown</td>
<td>unknown</td>
<td>1</td>
<td>unknown</td>
<td>unknown</td>
<td>unknown</td>
<td>unknown</td>
</tr>
</tbody>
</table>

General agreements (roll freight) - Passanger cooperations (rail) - Freight cooperations (roll) - Freight cooperations (New rail)
4.3 Development of an exemplary corridor Business Model

The preceding working steps should not only be understood as a state-of-the-art-documentation, but can also be used as a basis of the development of corridor specific Business Models.

A "guideline" for this procedure can be described as follows:

1. Choice of an example corridor;
2. Description of the main characteristics of the Business Model;
3. Definition of the specific framework of the chosen corridor and classification within the general framework scheme according Figure 4-2. The result will be a “corridor profile”.
4. This corridor profile can be compared with the profiles of the existing co-operations (according Figure 4-3), clusters of similar characteristics between the existing and the new co-operation cases can be identified. In a next step analogue conclusions can be drawn between the new corridor and the actually used components of existent co-operations (see chapter 3.3) with similar corridor profiles. Based on these conclusions it can be estimated, which components may be suitable for the Business Model of the new corridor.

4.3.1 Choice of an example Corridor

Generally the described procedure can be used on all (TREND) corridors. With respect to the envisaged Integrated Project (IP) the proposed CREAM corridor has been chosen as an example for developing corridor specific Business Models.

The CREAM corridor complies for the most part with TREND corridor C. The main difference lies in the extension to Benelux, to Greece and to Italy, including the option to continue to Asia via Turkey (see Figure 4-4).

Figure 4-4: CREAM-Corridor
4.3.2 Main characteristics of the example Business Model

Due to an easier comparableness a similar structure has been used as for the description of the existent co-operation models (see chapter 2.4).

4.3.2.1 Involved Partners

The “core” co-operation consists of 25 partners from 13 European countries (see Figure 4-5). The co-operation will be open to additional partners, e.g. to offer short sea ferry services between Turkey and Italy.

Figure 4-5: Co-operation partners on CREAM corridor (consortium)

<table>
<thead>
<tr>
<th>Nº</th>
<th>Organization name</th>
<th>Type</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HaCon Ingenieurgesellschaft mbH</td>
<td>CR</td>
<td>Germany</td>
</tr>
<tr>
<td>2</td>
<td>Bulgarian State Railways</td>
<td>RU</td>
<td>Bulgaria</td>
</tr>
<tr>
<td>3</td>
<td>Romanian National Railway Company for Freight Transportation</td>
<td>RU</td>
<td>Romania</td>
</tr>
<tr>
<td>4</td>
<td>Intercontainer Austria Ges. mbH</td>
<td>IO</td>
<td>Austria</td>
</tr>
<tr>
<td>5</td>
<td>Knorr-Bremse Systeme für Schienenfahrzeuge GmbH</td>
<td>TP</td>
<td>Germany</td>
</tr>
<tr>
<td>6</td>
<td>KombiConsult GmbH</td>
<td>CR</td>
<td>Germany</td>
</tr>
<tr>
<td>7</td>
<td>Kombiverkehr Deutsche Gesellschaft für kombinierten Güterverkehr mbH &amp; Co KG</td>
<td>IO</td>
<td>Germany</td>
</tr>
<tr>
<td>8</td>
<td>Lokomotion Gesellschaft für Schienentraktion mbH</td>
<td>RU</td>
<td>Germany</td>
</tr>
<tr>
<td>9</td>
<td>Hungarian State Railways Corporation</td>
<td>RU</td>
<td>Hungary</td>
</tr>
<tr>
<td>10</td>
<td>National Technical University of Athens</td>
<td>CR</td>
<td>Greece</td>
</tr>
<tr>
<td>11</td>
<td>Hellenic Railways</td>
<td>TU</td>
<td>Greece</td>
</tr>
<tr>
<td>12</td>
<td>Delft University of Technology / OTB Research Institute</td>
<td>CR</td>
<td>Netherlands</td>
</tr>
<tr>
<td>13</td>
<td>Betuweroute Exploitatiemaatschappij (BREM)</td>
<td>IM</td>
<td>Netherlands</td>
</tr>
<tr>
<td>14</td>
<td>Rail Cargo Austria AG</td>
<td>RU</td>
<td>Austria</td>
</tr>
<tr>
<td>15</td>
<td>Railion Deutschland AG</td>
<td>RU</td>
<td>Germany</td>
</tr>
<tr>
<td>16</td>
<td>Railion Nederland N.V.</td>
<td>RU</td>
<td>Netherlands</td>
</tr>
<tr>
<td>17</td>
<td>Rail Traction Company SpA</td>
<td>RU</td>
<td>Italy</td>
</tr>
<tr>
<td>18</td>
<td>Stinnes AG</td>
<td>IO</td>
<td>Germany</td>
</tr>
<tr>
<td>19</td>
<td>Turkish State Railways</td>
<td>RU</td>
<td>Turkey</td>
</tr>
<tr>
<td>20</td>
<td>Transport Route Wagon - Transport Rail Weg</td>
<td>IO</td>
<td>Belgium</td>
</tr>
<tr>
<td>21</td>
<td>Balnak</td>
<td>FW</td>
<td>Turkey</td>
</tr>
<tr>
<td>22</td>
<td>Serbian Railways</td>
<td>RU</td>
<td>Serbia</td>
</tr>
<tr>
<td>23</td>
<td>Slovenian Railways</td>
<td>RU</td>
<td>Slovenia</td>
</tr>
<tr>
<td>24</td>
<td>Union Internationale des Chemins de Fer</td>
<td>RU</td>
<td>France/int.</td>
</tr>
<tr>
<td>25</td>
<td>Macedonian Railways</td>
<td>RU</td>
<td>Macedonia</td>
</tr>
</tbody>
</table>

4.3.2.2 Type of partners

The co-operation partner can be assigned to the following types (see also Figure 4-5):

- Railway Undertakings (RU),
- Infrastructure Managers (IM),
- Intermodal Operators/Freight Integrators/Customer (IO),
- Forwarders (FW),
- Technology Providers (TP),
- Consultants and Research (CR).

and thus cover a large variety regarding spectrum of services and competence, geographical provenience, size of enterprise and new incumbents/entrants.

4.3.2.3 **Main objectives/Strategic background**

The CREAM Project has been designed to respond to the increasing demand for rail-based logistic systems, and the implementation of change in the European railway area, which has been initiated by the European legislation. Against the benchmarking business models of logistic service providers CREAM will design and validate advanced customer-driven business models for Railway Undertakings and intermodal operators. CREAM will analyze the operational and logistic prerequisites for developing, setting up and demonstrating seamless rail freight and intermodal rail/road and rail/short sea/road services on the Trans-European mega-corridor between the Benelux countries and Turkey, including field validation.

4.3.2.4 **Legal / contractual basis**

In order to minimize administrative efforts – especially in the start-up phase – it is not intended to establish a formal company.

The partners’ role will be defined by contracts between the co-operation (consortium) and the European Commission, between the co-operation and customers and amongst the partners of the co-operation. These contractual binding will be the basis of the proposed Business Model. One important part of these contracts will be the allocation of train capacity shares. Every partner will be responsible for the risk of capacity utilization of his share.

The deciding processes within the co-operation are described in chapter 4.3.4.3.

4.3.2.5 **Geographical Coverage**

see chapter 4.3.1

4.3.2.6 **Market segments**

Following the general objective to offer joint services with defined contractual obligations for each partner, the "String-of-pearls" concept has been chosen to be the example transport service on CREAM corridor.

This means that long haul trains covering the complete corridor route with or without intermediate stops are supplemented by other trains to travel on dedicated corridor sections (see Figure 4-6).

Within this concept the trains will consist of container wagons and conventional wagons, without general restrictions regarding commodities, as long as no special and not available facilities are required.
4.3.2.7 Coverage

The activities within the project lifetime will cover the following areas:

- Research/concept developing,
- Technological development,
- Prototyping/demonstration and
- Training

within the fields of

- Innovative rail-based supply chains including intelligent rail and multimodal operation models,
- Quality management system,
- Efficient corridor capacity management,
- Interoperability and border crossing,
- Integrated telematic solutions for train control, tracking & tracing of shipments and customer information,
- Rail logistics for temperature-controlled cargoes,
- New technology for the transport of unaccompanied semi-trailers in intermodal transport.
4.3.2.8 Volume of business
For the first step it projected to generate an additional volume for rail service in the corridor region of 200 Mio tkm.

4.3.3 Specific framework for the example corridor
The specific framework for the CREAM corridor has been elaborated by HaCon and was discussed, harmonized and confirmed with the whole workpackage team. The result is shown in Figure 4-7.

4.3.3.1 Business cases
- Service affected: The example case concentrates on the “String-of-pearls” as rail operating concept on the corridor. In summary this extends the already existing rail transport services on the example corridor.
  ➨ Service affected = “extended”
- Markets affected: The rail operating concept allows for mixed trains consisting of combined transport or conventional wagons. General restrictions to dedicated commodities are not intended as long as no special and not available facilities are required.
  ➨ Markets affected = “several market segments involved”
- Competition: Due to the general objectives the main competitor will be road transport. Beyond it the CREAM transport service will have to compete with other rail transport services on the corridor as well.
  ➨ Competition = “intermodal/intramodal”
- Competition in charging schemes: Keeping in mind that circumstances are different in the respective corridor countries, the general tendency that rail prices are higher than road prices, taken road transport as the main competitor.
  ➨ Competition in charging schemes = “higher than competitors”
- Geographical coverage
  ➨ Geographical coverage = “corridor”
Figure 4-7: Corridor specific framework for a Business Model on CREAM corridor

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Spectrum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Business Cases</strong></td>
<td></td>
</tr>
<tr>
<td>Service affected</td>
<td>new</td>
</tr>
<tr>
<td>Markets affected</td>
<td>specific market segments</td>
</tr>
<tr>
<td>Competition</td>
<td>intermodal</td>
</tr>
<tr>
<td>Competition in charging schemes</td>
<td>same level</td>
</tr>
<tr>
<td>Geographical Coverage</td>
<td>worldwide</td>
</tr>
</tbody>
</table>

| **2. Infrastructure** | | | | |
| Ownership / Access | public / free unlimited access | public / regulated access (regulation) | private / external owner | private / owned by one partner | external / owned by several partners |
| Charging system | free of charge | fixed charges | | | to be negotiated |
| Infrastructure Charging | free of charge | Marginal costs | Full infrastructure costs | Full cost (internal + external) | |

| **3. Actors / Players** | | | | |
| Number of parties affected | bilateral | multilateral | | | |
| Leadership | Same level | | | | |
| Nature (level of creation of value) | identical - similar (horizontal) | | | | |

| **4. Other Prerequisites** | | | | |
| Geographical Coverage (political borders) | national | | international within EU (common framework) | | international |
| Legal / Contractual Framework | individual | general framework (sector-specific) | merging parts of the business / partner largely independent | legal framework (e.g., international law) | |
| Intensity of Cooperation | merging businesses | | | restriction to specific geographical area (full independence beyond this region) | |
| Financial Commitment | equal shares | unequal shares | own costs | own costs | own risk |
| Risk sharing | equal shares | unequal shares | | | |

Conduction of components to a comprehensive Business Model
4.3.3.2 Infrastructure

- Ownership / Access: Along the complete corridor only railway lines owned by the state authorities are used. Therefore and due to European law the access to rail infrastructure is generally possible and restricted only by operational framework (e.g. time tables).
  - Ownership / Access = “public / regulated access”
- Charging system: In all traversed corridor countries defined slot charges have to be paid.
  - Charging system = “fixed charges”
- Infrastructure charging: The charging of infrastructure differs in the corridor countries. In summary it lies somewhere between “Marginal costs” and “Full infrastructure costs”.
  - Infrastructure charging = not defined (between “Marginal costs” and “Full infrastructure costs”)

4.3.3.3 Actors / Players

- Number of parties affected: The actual constellation includes multilateral co-operations with more than two partners as well as alliances, where all partners are involved.
  - Actors / Players = not defined (between “multilateral” and “Alliances”)
- Leadership: Again this criterion cannot be assigned clearly: On one hand all co-operation partners will have the same rights and duties. On the other hand experience proves that in every co-operation some partner will show more activity than others.
  - Leadership = not defined (mixture of “same level” and “strong leader”)
- Nature (level of creation of value): In the first operating phase the new service will concentrate on cooperative rail transport, which is a classic case of horizontal co-operation. This includes the option to expand to a vertical co-operation in a later stage.
  - Nature = “identical – similar (horizontal)”

4.3.3.4 Other prerequisites

- Geographical coverage (national borders): As not all corridor countries are EU members the geographical coverage is mostly within EU, but includes further international components.
  - Geographical coverage = not clearly defined (mixture of “international within EU” and “international”)
- Legal / Contractual framework: The contractual obligations of the partners will be mainly based on international law, which includes the possibility for further individual contracts within this general framework.
  - Legal / Contractual framework = “legal framework (e.g. international law)”
Intensity of co-operation: In order to minimize overhead efforts (costs, deciding processes etc.) especially in the start-up phase it is not recommended to establish a new company or to merge business parts of the partner companies. On the contrary, apart of the cooperative transport service, every involved partner will remain an independent enterprise.

- Intensity of co-operation: = “Restriction to specific geographical area (full independence beyond this region)”

Financial commitment and Risk sharing: The Business Model intends to allocate train capacity shares to the operating partners. Every partner will be commercially responsible for his respective share.

- Financial commitment and Risk sharing: = “Own costs” and “Own risk”

### 4.3.4 Components of the Business Model

Based on this framework and on an analogy to other existent co-operations with a similar profile the following Business Model for the CREAM corridor has been developed by the workpackage leader and was discussed and adjusted with the other partners of the TREND B6 team.

#### 4.3.4.1 Specification of the components

The following tables specify the components of the Business Model, subdivided into the main Business areas (i.e. component level 1) “Headquarter/Management”, “Administration”, “Business” and “Resources”. Under the term “specification” all functions and processes are summarized, which are planned to be included in the Business Model.

#### 4.3.4.1.1 Headquarter / Management

**Figure 4-8: Specification of the Headquarter/Management components**

<table>
<thead>
<tr>
<th>Component level 2</th>
<th>Component level 3</th>
<th>Component level 4</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic planning</td>
<td></td>
<td></td>
<td>No common “Strategic planning department”, strategic issues are covered by steering committee</td>
</tr>
<tr>
<td>Logistical capabilities</td>
<td></td>
<td></td>
<td>Not intended</td>
</tr>
<tr>
<td>Market research, access to new markets</td>
<td></td>
<td></td>
<td>Corridor specific market research for joint services, but no overall market coordination</td>
</tr>
<tr>
<td>Standard setting</td>
<td></td>
<td></td>
<td>Steering committee for agreement on technical, commercial and other rules/standards</td>
</tr>
<tr>
<td>Moderation of interests, conflicts</td>
<td></td>
<td></td>
<td>Independent expert panel, members without own commercial interest, no CREAM partners</td>
</tr>
</tbody>
</table>
4.3.4.1.2 Administration

Figure 4-9: Specification of the Administration components

<table>
<thead>
<tr>
<th>Component level 2</th>
<th>Component level 3</th>
<th>Component level 4</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billing, accountancy</td>
<td></td>
<td></td>
<td>Responsibility of the respective OSS-partner for customer billing and for</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>internal cost/revenue allocation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Common rules for cost and revenue</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>allocation to be agreed in the steering committee according to &quot;Standard</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>setting&quot;.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>See also &quot;Business/Customer services/OSS&quot;</td>
</tr>
<tr>
<td>Financing, controlling</td>
<td></td>
<td></td>
<td>Financing and controlling during project lifetime done by the coordinator,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>afterwards by independent accounting office</td>
</tr>
<tr>
<td>Allocation of transaction</td>
<td></td>
<td></td>
<td>Allocation of transaction costs ana-logue to train capacity shares</td>
</tr>
<tr>
<td>costs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.3.4.1.3 Business

In order to provide high quality rail and road competitive services, it is absolutely necessary to offer an integrated information and communication system, consisting of information (general information, time-tables, tracking/tracing, prices etc.) and interactive functions (booking, hotline, accountancy etc). Such a system is planned for the CREAM Business Model as well. Nevertheless this integrated system has been split up in the following figure to allow a more detailed and description of the specification.

Figure 4-10: Specification of the Business components

<table>
<thead>
<tr>
<th>Comp. level 2</th>
<th>Comp. level 3</th>
<th>Comp. level 4</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing and sales</td>
<td>Product definition, sales, advertising</td>
<td></td>
<td>Common product definition and advertising.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sales by respective OSS partner</td>
</tr>
<tr>
<td></td>
<td>Frequent user programs, yield management</td>
<td></td>
<td>Rules/framework set by &quot;Standard setting&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Establishment of joint working group (project lifetime) or common depart-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ment for execution of rules and definition of negotiation framework</td>
</tr>
<tr>
<td>Lobbying</td>
<td></td>
<td></td>
<td>Common conferences and articles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Joint appearance against political and economical authorities</td>
</tr>
<tr>
<td>Customer services</td>
<td>&quot;OSS&quot;</td>
<td></td>
<td>Usual OSS functions and services</td>
</tr>
<tr>
<td></td>
<td>Customer coordination</td>
<td></td>
<td>Special task force for the corridor with branches at the partners, integrated in the existent OSS network and structures</td>
</tr>
<tr>
<td></td>
<td>Background coordination</td>
<td></td>
<td>See above</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Also coordination with managerial, commercial and operational issues</td>
</tr>
<tr>
<td>Comp. level 2</td>
<td>Comp. level 3</td>
<td>Comp. level 4</td>
<td>Specification</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------</td>
<td>--------------</td>
<td>---------------</td>
</tr>
</tbody>
</table>
| Information platform | Hotline function performed by the respective OSS  
Common brochures and other information paperwork by the coordinator (project lifetime) |
| After sales | Located at the respective OSS, working according common rules, defined by "Standard setting" in coordination with "Quality management" |
| Tracking and tracing | Joint customer information service, e.g. BRAVO-CIS, developed by project partner or external consultant  
Technical framework defined by "Standard setting", operated by one of the partners (one must be responsible) |
| Quality agreements | Framework defined by "Standard setting"  
Standard or individual, customer related agreements, handling by OSS |
| Operations | Volume bundling | Joint services to optimize train capacity utilization with defined contractual obligations per partner.  
"String-of-pearls" operating concept  
Mixed trains consisting of container wagons and conventional wagons  
No general restrictions regarding commodities, as long as no special and not available facilities are required.  
Allocation of train capacity shares. Every partner is responsible for the risk of capacity utilization of his share. |
| Interlining | Interlining amongst the partners to fill up train capacities. Operational management by corridor dispatcher, business rules by Headquarter/ Management |
| Day to day operation, dispatching | Mutual acceptance of locos, wagons, personnel | Setting up working group  
- to define framework for mutual acceptance,  
- to check of compliance with framework,  
- for permission of mutual acceptance |
| Failure management | Coordination between operation and cross border centers |
| Continuous train supervising | Coordination group for  
- definition of technical and operational framework  
- coordination between existent systems  
Informational supervising by OSS  
Operational supervising by corridor dispatcher, authorized to advise national control centers |
<p>| Ad-hoc resources management | Done by corridor dispatcher, authorized to advise national resource managements |</p>
<table>
<thead>
<tr>
<th>Comp. level 2</th>
<th>Comp. level 3</th>
<th>Comp. level 4</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality manage-ment</td>
<td>Slot booking and usage</td>
<td>Setting up working group to define framework and operational guidelines for - preventive measures (e.g. software tests). - detection of responsibilities in case of failures, damages etc. - fulfilling QM guidelines (e.g. ISO 9000) Each partner company nominates one QM responsible person, authorized to take all necessary measures. Nomination of one QM corridor supervisor to coordinate the work of the QM managers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Terminal operation</td>
<td>By corridor dispatcher in coordination with &quot;Market research&quot;, &quot;Marketing&quot; and &quot;OSS&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cross border transportation</td>
<td>Coordination of rail services and terminal operations already in the planning phase. Coordination of operational procedures between corridor dispatcher and the operators of the partner terminals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Customs clearance</td>
<td>Establishment of cross border centers Simplified customs clearance by mutual trusting between border authorities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Train controlling vs. mutual trusting</td>
<td>Generally mutual trusting of trains</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Handling of transport documents</td>
<td>Unique standard transport documents Intention to transfer document data electronically</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Time table construction</td>
<td>Corridor wide coordinated and agreed time table planning process Providing of adequate, through going slots</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Know-how-management</td>
<td>Installation of a common knowledge management system</td>
<td></td>
</tr>
<tr>
<td>IT-Systems</td>
<td>Information platform (Web-site)</td>
<td>Common Web-site - for presentation of offer profile, - as a platform for customer information (tracking/tracing system, pricing, booking), - as an internal discussion and information exchange platform (knowledge management)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disposition (resources)</td>
<td>Agreement about TSI conform Disposition systems, probably development and integration in one corridor wide system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dispatching (operation)</td>
<td>Agreement about TSI conform Dispatching systems, probably development and integration in one corridor wide system</td>
<td></td>
</tr>
</tbody>
</table>
### 4.3.4.1.4 Resources

**Figure 4-11: Specification of the Resources components**

<table>
<thead>
<tr>
<th>Component level 2</th>
<th>Component level 3</th>
<th>Component level 4</th>
<th>Specification</th>
</tr>
</thead>
</table>
| Traction (for rail) / movable assets (for all other modes) | Ordering / common procurement | Joint definition and optimization of technical specifications  
Better prices by purchasing similar locos | |
| Allocation / dispatching                 | Loco pool, fed by the partner railways | | |
| Maintenance                               | Corridor wide harmonized level of maintenance | | |
| Traction (for rail) / movable assets (for all other modes) | Ordering / common procurement | Common wagon ordering/renting by corridor dispatcher | |
| Allocation / dispatching                 | Not intended | | |
| Maintenance                               | Not intended | | |
| Personnel                                | Staff training, provision of services | Joint training for cross border operation | |
| Maintenance                               | Personnel staff provided by the partner railways  
Obligation for the partner railways to provide a defined pool of qualified personnel | | |
| Infrastructure                            | (Low-cost)terminals       | Not intended | |
|                                          | Transshipment facilities  | Not intended | |
|                                          | Loading points (customers) | Not intended | |

**Comp. level 2**  **Comp. level 3**  **Comp. level 4**  **Specification**

- Slot management  
Agreement about TSI conform Slot management systems, probably development and integration in one corridor wide system

- Quality management  
Agreement about TSI conform Quality management systems, probably development and integration in one corridor wide system

- Accountancy  
Agreement about TSI conform Accountancy systems, probably development and integration in one corridor wide system

- Data management  
automatically included due to TSI

- Interfaces, data exchange  
automatically included due to TSI

- Booking  
Agreement about TSI conform Booking systems, probably development and integration in one corridor wide system
### 4.3.4.2 Realization level of the components

Figure 4-12 provides an overview of the components and their usage within the CREAM Business Model, subdivided into

- components to be realized mainly on a communication/coordination level (c),
- components to be realized mainly on an operation level (o) and
- components not intended to be realized (-).

#### Figure 4-12: Component overview of CREAM corridor Business Model

<table>
<thead>
<tr>
<th>Component level 1</th>
<th>Component level 2</th>
<th>Component level 3</th>
<th>Component level 4</th>
<th>Realization level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headquarter / Management</td>
<td>Strategic planning</td>
<td></td>
<td></td>
<td>c</td>
</tr>
<tr>
<td></td>
<td>Logistical capabilities</td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Market research, access to new markets</td>
<td></td>
<td></td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>Standard setting</td>
<td></td>
<td></td>
<td>c</td>
</tr>
<tr>
<td></td>
<td>Moderation of interests, conflicts</td>
<td></td>
<td></td>
<td>c</td>
</tr>
<tr>
<td>Administration</td>
<td>Billing, accountancy</td>
<td></td>
<td></td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>Financing, controlling</td>
<td></td>
<td></td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>Allocation of transaction costs</td>
<td></td>
<td></td>
<td>o</td>
</tr>
<tr>
<td>Business</td>
<td>Marketing and sales</td>
<td>Product definition, sales, advertising</td>
<td></td>
<td>o</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Frequent user programs, yield management</td>
<td></td>
<td>c</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lobbying</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Customer services</td>
<td>&quot;OSS&quot;</td>
<td>Customer coordination</td>
<td></td>
<td>o</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Background coordination</td>
<td></td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>Information platform</td>
<td></td>
<td></td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>After sales</td>
<td></td>
<td></td>
<td>o</td>
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<tr>
<td></td>
<td>Tracking and tracing</td>
<td></td>
<td></td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>Quality agreements</td>
<td></td>
<td></td>
<td>o</td>
</tr>
<tr>
<td>Operations</td>
<td>Volume bundling</td>
<td></td>
<td></td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>Interlining</td>
<td></td>
<td></td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>Day to day operation, dispatching</td>
<td>Mutual acceptance of locos, wagons, personnel</td>
<td></td>
<td>c</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Failure management</td>
<td></td>
<td>o</td>
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<tr>
<td></td>
<td></td>
<td>Continuous train supervising</td>
<td></td>
<td>c, o</td>
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<tr>
<td></td>
<td></td>
<td>Ad-hoc resources management</td>
<td></td>
<td>o</td>
</tr>
<tr>
<td>Component level 1</td>
<td>Component level 2</td>
<td>Component level 3</td>
<td>Component level 4</td>
<td>Realization level</td>
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<td>------------------</td>
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</tr>
<tr>
<td>Quality management</td>
<td>Slot booking and usage</td>
<td>Terminal operation</td>
<td>Cross border transportation</td>
<td>c, o</td>
</tr>
<tr>
<td>Slot booking and usage</td>
<td>Terminal operation</td>
<td>Cross border transportation</td>
<td>Customs clearance</td>
<td>o</td>
</tr>
<tr>
<td>Terminal operation</td>
<td>Cross border transportation</td>
<td>Customs clearance</td>
<td>Train controlling vs. mutual trusting</td>
<td>c</td>
</tr>
<tr>
<td>Cross border transportation</td>
<td>Customs clearance</td>
<td>Train controlling vs. mutual trusting</td>
<td>Handling of transport documents</td>
<td>o</td>
</tr>
<tr>
<td>Time table construction</td>
<td>Customs clearance</td>
<td>Train controlling vs. mutual trusting</td>
<td>Handling of transport documents</td>
<td>o</td>
</tr>
<tr>
<td>Know-how-management</td>
<td>IT-Systems</td>
<td>Information platform (Web-site)</td>
<td>c, o</td>
<td></td>
</tr>
<tr>
<td>IT-Systems</td>
<td>Information platform (Web-site)</td>
<td>Disposition (resources)</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Information platform (Web-site)</td>
<td>Disposition (resources)</td>
<td>Dispatching (operation)</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Disposition (resources)</td>
<td>Dispatching (operation)</td>
<td>Slot management</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Dispatching (operation)</td>
<td>Slot management</td>
<td>Quality management</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Slot management</td>
<td>Quality management</td>
<td>Accountancy</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Quality management</td>
<td>Accountancy</td>
<td>Data management</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Accountancy</td>
<td>Data management</td>
<td>Interfaces, data exchange</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Data management</td>
<td>Interfaces, data exchange</td>
<td>Booking</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Interfaces, data exchange</td>
<td>Booking</td>
<td>Resources</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Resources</td>
<td>Traction (for rail) / movable assets (for all other modes)</td>
<td>Ordering / common procurement</td>
<td>c, o</td>
<td></td>
</tr>
<tr>
<td>Traction (for rail) / movable assets (for all other modes)</td>
<td>Ordering / common procurement</td>
<td>Allocation / dispatching</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Ordering / common procurement</td>
<td>Allocation / dispatching</td>
<td>Maintenance</td>
<td>c</td>
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<td>Allocation / dispatching</td>
<td>Maintenance</td>
<td>Traction (for rail) / movable assets (for all other modes)</td>
<td>c, o</td>
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</tr>
<tr>
<td>Traction (for rail) / movable assets (for all other modes)</td>
<td>Traction (for rail) / movable assets (for all other modes)</td>
<td>Maintenance</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Traction (for rail) / movable assets (for all other modes)</td>
<td>Maintenance</td>
<td>Personnel</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Personnel</td>
<td>Staff training, provision of services</td>
<td>Infrastructure</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Staff training, provision of services</td>
<td>Infrastructure</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Low-cost terminals</td>
<td>Infrastructure</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Transshipment facilities</td>
<td>Infrastructure</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Loading points (customers)</td>
<td>Infrastructure</td>
<td>o</td>
<td></td>
</tr>
</tbody>
</table>
4.3.4.3 **Controlling and deciding structures**

The controlling and deciding processes will be managed by a three-level-composition, consisting of

- the first level with the Steering committee, which will be responsible for the strategic planning as well as for the agreement on commercial/organizational rules and the setting of technical standards. A further core responsibility lies in the coordination of the working groups.

The Steering committee is supported by the Project Coordinator (during the project lifetime), being responsible e.g. for controlling and information issues, and by external experts, who will have an advisory and moderating function within the co-operation and continue the Coordinator´s work after the project lifetime.

- joint working groups, representing the second level of the co-operation organizational structure. In these boards the main coordination and communication work will be done. In detail, joint working groups are intended for
  
  o market research,
  o frequent user programs / yield management,
  o Corridor OSS,
  o technical framework and probably execution of software development,
  o mutual acceptance of locos, wagons and personnel,
  o framework and coordination for train operation/dispatching and terminal operations,
  o guidelines for Quality Management,
  o coordinated time table construction,
  o resources management.

- the operational control, settled on the third level. Here we find institutions like cross border centers, OSS or corridor dispatcher.
5 Verification of the Business Model

5.1 Verification against competition law

The Business Model, elaborated within workpackage B6, is most favorable to the implementation of innovative railway services in trans-European railway corridors. The business model is based on an analysis of business components involved in the management and operation of railway services and on a description of the co-operation framework, identifying the key elements setting out the framework for the business development.

Basing on these and further TREND findings, the above-explained integrated project for setting-up advanced international railway services was developed. The so-called CREAM project, which will be funded by the European Community within the 6th Framework Programme, will set up a strategic alliance of around thirty partners from about a dozen European countries. CREAM is intended to implement fast and reliable intermodal rail services between the ports of Antwerp and Rotterdam as well as industrial areas in Western Germany and Turkey.

The partnership will involve Railway Undertakings, intermodal operators, traction providers, the railway supply industry, port and ferry operators and consultancies. The partnership is intended to develop, implement, and demonstrate new and/or improved solutions for the operation of international intermodal rail services. The service frequency will be up to six train pairs per week on the key leg between Wels (AT) and Istanbul (TY). The results shall pave the way for a new quality in international rail freight.

Given the current structure of the railway market, cross-border co-operations are for an unforeseeable time expected to be required for the proper and reliable operation of international rail services. Depending on the structures of the service and the co-operation, such projects may influence competition on the railway market. TREND has therefore requested a “Legal opinion on alliances in European rail freight services” from a German layer (Rechtsanwalt Kurt Fuchs, Cologne) in late 2005 (see Appendix 5). The following analysis compares the findings of this legal opinion to the planned structure of the CREAM project.

5.1.1 Strategic alliances

Strategic alliances are defined as “co-operations between legally independent companies that exceed a single business transaction or a normal business relationship”. Furthermore, strategic alliances in the rail freight sector are defined as being a “co-operation between at least two legally independent railway companies that exceeds a normal business relation in connection with rail freight services”. The CREAM partnership hence fully complies with this definition of a strategic alliance as the consortium involves at least one Railway Undertaking from each country involved, two intermodal operators, and traction companies.

Given the exemplary character of CREAM, this project encompasses most of the possible objectives presented in the legal opinion:
- access to new markets (Central Europe – Turkey);
- extension of lines served (Western Germany – Austria/Hungary);
- aggregation of rail freight services (consolidation of freight in Wels);
- improvement of rolling stock circulation and utilization (significantly reduced journey times);
- optimization of personnel allocation (significantly reduced journey times).

The objective of gaining access to rolling stock is not important in this respect, as the intermodal operators involved own a sufficient number of intermodal wagons. All objectives mentioned are compatible with European competition law.

### 5.1.2 Structures of strategic alliances

Alliances in which all partners belong to the same level of the value chain are called horizontal alliances (compared to vertical alliances). CREAM may be classified belonging to horizontal alliances as most of the partners involved in the operation of the service are Railway Undertakings. The intermodal operators may be assigned to the level of Railway Undertakings, operating railway services together with the traction companies. Many other partners involved in CREAM participate mainly to the R+D character of the project.

The co-operation agreement (consisting of the “accession” of each partner to the core contract with the European Commission and the “consortium agreement”) between all partners, realizing the project under the leadership of a co-ordinating partner, is the basis for all action to be undertaken. All partners fully retain their independency. CREAM is no incorporated partnership.

### 5.1.3 Antitrust and competition law

European legislation sets out the framework for competition in the open European market. It is intended to rule out (art. 81, par. 1 of the Treaty of the European Community-ECT):

- market players affecting trade between Member States;
- prevention, restriction and distortion of competition.

Strategic alliances do fall under the cartel prohibition rules according to this article, and so does CREAM. But the legal opinion points out that no case of violating competition law under the given circumstance became known so far. The activities of such co-operations do not affect trade among Member States as long as the agreements are not limited to regional services, which can in no way “be offered by competitors from another Member State”. This is always the case if the services are operated in an open standard gauge infrastructure network, providing sufficient opportunities for competitors.

Therefore, the key criterion for the evaluation of legal conformity is the prevention, restriction, and distortion of competition. In the case of CREAM this criterion is not given as the framework may be judged as such:
The participating consortium members do not restrict themselves in their own freedom of action. Given the small scale of the project (one train per day and direction), the consortium partners are by nature and size to operate a significant number of further rail services.

Other companies operating similar railway services will not be derogated. One train per day and direction occupies less than 1% of infrastructure capacity of a double-track railway line. Even if two thirds of the capacity were restricted to passenger services, one single train would not use up more than 3% of the freight capacity (and the intra-modal market share).

It has furthermore to be stated that especially on the South-Eastern railway corridor, rail remains to be a little developed transport mode. Given the overall fast growth of road freight traffic and its negative impacts on society, a stimulation and strengthening of the rail mode is a political European objective. Co-operation among Railway Undertakings is therefore generally welcome.

Exemptions from this general valuation of co-operations are expected in the case were at least two dominant (formerly State) railways co-operate in such a close manner that competitors are as good as excluded from a specific market. CREAM also involves a significant number of former State railways. However, the service covered by the co-operation agreement will not by any chance dominate the market for railway services on the corridor concerned.

5.1.4 Other provisions in competition law

Art. 82 ECT prohibits any abuse of a dominant position by one or more Railway Undertakings. For the time given, only former State railways are rated fulfilling the criteria of a dominant position. As CREAM involves a significant number of dominant Railway Undertakings, the alliance has to be evaluated under various angles:

- The CREAM co-operation agreement does not exclude contracts between either consortium members and third parties, or third parties among each other. This is especially true as the CREAM project is under public EU surveillance during the funding period.

- The restricted scope of the project does not unduly restrict capacity utilization in the corridor used (see above).

The CREAM project is intended to develop a new quality in rail freight services: simplified processes, faster and reliable operations. Therefore the close integration of many partners is required to develop and demonstrate the feasibility of the service. By nature of the intermodal rail service, an intermodal train operator would be primarily responsible for the operation and marketing of the train. The involvement of most of the other partners will be of inferior importance once the service will be regularly established. Therefore, the service and the particular roles of the co-operation partners would require a review given the standard framework for regular services.
5.2 Verification in the light of the legal and administrative conditions and prerequisites taking into consideration the necessity of competition

5.2.1 The CREAM model

The “comprehensive Business Model”, as well as the analysis of its components is described in chapter 4. Not surprisingly, it is more or less the same as the CREAM model, which is more or less a concentrate of the main best practices revealed by the TREND project.

Logistical service providers (LSP), like forwarders or road operators are used to organize and perform door-to-door transport services for shippers out of one hand even if they subcontract components of the services, for example to a trucking company. They are keen to keep the direct relationship with the customer for all purposes such as pricing, ordering, quality monitoring or claims, and do not wish any interference by service partners or subcontractors (“one face to the customer”).

Compared to that business philosophy (one strong leader in the transport chain), today’s business model in international rail services, which in fact is typical for railways all over Europe, is characterized by a co-operative approach both in marketing and operations, and a distribution of responsibilities and contacts. Particularly in case of irregularities this relationship generates a lack of clarity of who is responsible for doing what, and often shifts the burden of integrating the service to the customer.

Against the benchmarking LSP business model the CREAM project will investigate into the design of an appropriate, innovative business model for rail freight and intermodal services on the project corridor, and develop a concept for transforming the current model into a more road-competitive and customer-oriented business relationship.

CREAM is no usual co-operation model between two or three Railway Undertakings, but a much more complex grouping of intermodal companies, logistic service providers, industrialists dealing with rolling stock, infrastructure and signaling equipment, Railway Undertakings, forwarders, academics and consultants. The whole concept is linked to one specific “mega corridor” going from Germany to Turkey.

But of course the actual CREAM corridor is only an example, the same thinking could have applied to the Scandinavia-Spain or the France-Poland corridor.

Due to the complexity and the length of the corridor, and considering also the amount of partners involved, the business model is neither simple nor linear:

- Many market segments are concerned, as no one is normally excluded from the model.
- The model is set up against intramodal as well as intermodal competition.
- CREAM is open to multilateral cooperation (more than two partners), but also to alliances of all partners.
- Normally, all the partners should be at the same level of responsibilities, but in fact some big players could want to become stronger leaders than others. In
the case of the Germany-Turkey corridor, this will happen with the Deutsche Bahn Group, particularly with Railion.

- The geographical coverage is international with countries belonging already to the European Union or not.

5.2.2 The components of the CREAM model

The main question is to know whether a component will be handled commonly or separately by two or more partners, and also to check if all components are relevant or if some of them are not belonging to the scope of the venture.

- "Co-operative" components:
  - Corridor specific marketing research for joint services,
  - Steering committee for definition of technical and commercial rules and standards,
  - Product definition,
  - Advertising,
  - Lobbying,
  - Customer service (corridor task force),
  - After sales (common rules and standards),
  - Tracking and tracing (technical standards level),
  - Operation planning (string of pearls concept),
  - Day to day operations (common dispatcher),
  - Quality management (working group for framework and operational guide lines),
  - Setting up of cross border centers,
  - Common web site for customer information and knowledge management,
  - Agreements about TSI conform systems (dispatching, disposition, slot management quality management and accountancy),
  - Pool of locomotives.

- Partner specific components:
  - Strategic planning,
  - Billing, Accountancy,
  - Sales,
  - Customer services (except corridor task force),
  - After sales (except rules and standards).

- Non relevant components:
  - Logistic capabilities are not considered in the model,
  - infrastructure matters (terminals, transshipment facilities and loading points),
To sum it up:

- Sales and strictly commercial activities are not made in co-operation;
- Most part of the technical components, from product definition to after sales, are shared;
- Specific common entities have to be set up in order to organize all the co-operative interfaces, like for instance:
  - Steering committee for definition of standards,
  - Corridor dispatching office,
  - Cross border centers.

### 5.2.3 The legal rules and regulations in the concerned countries

It has to be checked now, if there are legal barriers, especially as far as the co-operative components are concerned.

TREND workpackage A3 has concentrated on the openness of the market of each of the selected countries; it has however to be understood that the level of openness of the market is not always a precondition to have a successful corridor model, as incumbent partners may in some cases perfectly handle corridor issues.

On the other hand, an open market will facilitate the emergence of many new players, and enhance the probability of successful combinations of these players.

The main results of workpackage A3, as far as corridor development is concerned, especially with the above mentioned co-operative components, are the following:

- **Institutional set-up**
  The institutional set-up (evaluation of commitment of national policies for market opening and fair policy, regulatory body, safety authority, separation of infrastructure, capacity allocation, charging body and notified bodies) can be considered, when complying with the EU directives, as a pre-condition, rather than a factor, for the integration of rail freight markets and operations. Some countries like France, Poland, the Czech republic and Slovenia score poorly in this aspect. It has to be noticed that the countries forming the CREAM corridor have actually a rather good ranking as far as institutional set-up is concerned.

- **Access to the market**
  Licensing and safety certification issues, as well as the structure of track charges do not seem to represent any longer a decisive barrier. The right of access remains sometimes a limiting factor.
  
  The allocation procedure for terminals and marshalling yards represents in some cases a critical issue. A higher level of standardization and co-ordination may be required in the future.
  
  Concerning labour supply, the availability of locomotive drivers is often a problem, especially in the “old” EU Member States.
• User rights
  User rights are strongly related with quality issues. At the present stage, these
  rights are very low for Railway Undertakings vs. Infrastructure Managers, and
  score a little bit better for shippers vs. Railway Undertakings.

• Discriminatory practices and competitive distortions
  These are not linked to administrative and legal barriers, but rather to the insuf-
  ficient strength of existing rules to prevent abuses.

  The fact is, that proven discriminatory practices are actually very rare; some
  potential of discriminatory practices has however been detected in areas like
  access to terminals and electricity, as well as access of rolling stock to the net-
  work and access to ancillary services and service facilities.

  These elements do not represent major elements on which it is worth while to
  focus, according to the interviews the experts had with the concerned parties.

5.2.4 The limitations required by the European Commission

Without entering into too many details, it has also to be checked whether our co-
operative model is complying with the overall European rules governing open competi-
tion. Even the rail sector, despite its difficulties, has to be in line with the concerned
regulations and directives.

We will consider here only the oldest and most general regulation, which is COUNCIL

The regulation states in its article 2:

Subject to the provisions of Articles3 to 6, the following shall be prohibited as
incompatible with the common market, no prior decision to that effect being re-
quired: all agreements between undertakings, decisions by associations of under-
takings and concerted practices liable to affect trade between Member States which
have as their object or effect the prevention, restriction or distortion of competition
within the common market, and in particular those which:

(a) directly or indirectly fix transport rates and conditions or any other trading con-
ditions;

(b) limit or control the supply of transport, markets, technical development or in-
vestment;

(c) share transport markets;

(d) apply dissimilar conditions to equivalent transactions with other trading parties,
thereby placing them at a competitive disadvantage;

(e) make the conclusion of contracts subject to acceptance by the other parties of
additional obligations which, by their nature or according to commercial usage,
have no connection with the provision of transport services.

(a) and (c) are particularly important, as no "commercial" activity can be shared by
the partners.

But a range of technical arrangements is formally allowed in article 3 of the same
regulation:
The prohibition laid down in Article 2 shall not apply to agreements, decisions or concerted practices the object and effect of which is to apply technical improvements or to achieve technical cooperation by means of:

(a) the standardization of equipment, transport supplies, vehicles or fixed installations;

(b) the exchange or pooling, for the purpose of operating transport services, of staff, equipment, vehicles or fixed installations;

(c) the organization and execution of successive, complementary, substitute or combined transport operations, and the fixing and application of inclusive rates and conditions for such operations, including special competitive rates;

(d) the use, for journeys by a single mode of transport, of the routes which are most rational from the operational point of view;

(e) the coordination of transport timetables for connecting routes;

(f) the grouping of single consignments;

(g) the establishment of uniform rules as to the structure of tariffs and their conditions of application, provided such rules do not lay down transport rates and conditions.

The CREAM model seems to be in line with regulation 1017/68, under the condition to limit co-operation to technical agreements, setting up of standards and product definition, but without commonly fixing prices or sharing markets.

5.2.5 Conclusions

The CREAM model is not an open model: players from different backgrounds and skills freely decide to join and to share the risk in a common venture. The number of players may be quite high, for instance over 20 in the actual CREAM project. There is almost no chance for a single “new entrant” to play a role on the same corridor. Actually intramodal competition is not obvious to organize on complex corridors.

There are remaining legal and administrative barriers, as clearly shown in TREND workpackage A3.

But these barriers mainly hinder outsiders trying to enter the market in one or two countries; the business case here is very different, because of the many countries and players involved: There are several players in each countries, each of them having a strong position in its country and in its field of competence (RU, forwarder, traction company, etc.). Knowing perfectly the local situation and the right people, these players will have no trouble to overcome local difficulties if any.

More obstacles are linked with interoperability questions, at technical and administrative levels. These problems cannot be solved in the short term, with the exception of “administrative” interoperability: Sometimes this kind of problem only appears because of different rules among the RU’s and/or IM’s; but then progress can be achieved more easily with co-operation structures like steering committees and the same.
Thus the main problem of this kind of Business Model will be one of organizing co-operation among numerous partners in several countries and not legal barriers.

On the other hand, if the partnership is successful, it will become very hard to have intramodal competition on the same corridor, except in rare cases when the market is big enough for two competitors. The CREAM model is mainly a weapon against intermodal competition.
6 Evaluation of the influence of the Technical Specification for Interoperability ("Telematic Applications for Freight Services") on the realization of operational Business Models

6.1 General

The TSI Telematic Applications for Freight Services (TAF TSI) was drawn up with reference to Directive 2001/16/EC – Interoperability of the trans-European conventional rail system.

The scope of this TSI was defined in view of the fact that the efficient interconnection of the information and communication systems of the different actors, Infrastructure Managers and operators, represents an important element of interoperability. Performance levels and quality of service of the railway system depend directly upon such interconnection.

This applies especially for the freight business where a multitude of actors, Railway Undertakings, Infrastructure Managers, wagon keepers and others, must act in a coordinated manner to be able to satisfy the customer's requirements.

More information on the main content of the TSI (esp. scope, involved entities, implementation) are given in Appendix 6.

6.2 Implementation of the TAF TSI

At present, the freight business is characterized by several different modes of co-operations set up between these actors including incumbent railways and more recent organizations as well as new entrants, mostly on a national or regional basis as well as for specific cross-border links. This means that a multitude of information and communication systems is already in place.

In this context, it has to be highlighted that the TAF TSI is a functional TSI in accordance with Article 2(c) of Directive 2001/16/EC. This means that no technical solutions but only procedures are prescribed. Consequently, existing information and communication systems can be maintained.

As laid out in the Annex, at present a Strategic European Deployment Plan (SEDP) is set up by the European representative bodies from the railway sector (CER, EIM together with UIC) involving relevant experts from RUs and IMs. It is the common understanding of these experts that the SEDP is to be based on a "mapping of the TAF TSI functionality set against the freight business requirements". This means that the implementation of the TAF TSI Requirements should be business oriented to avoid wasting money, therefore only those TAF TSI requirements shall be implemented which are strictly necessary for the interoperability of the network.

This approach does not change the TSI, but better supports the various entities implementing the requirements of the TSI by interpreting the TAF TSI implementation to the real business needs.
This is underlined by the TSI itself which says in Art. 4.2.14.2:

"Networking in this case means the method and philosophy of communication and does not mean the physical network.

Rail interoperability is based on a common Information Exchange Architecture, known and adopted by all participants, thus encouraging and lowering barriers for new entrants, especially customers."

Practically, the only mandatory element is the so-called "Common Interface" which is specified in the TAF TSI as follows (Art. 4.2.14.7):

"The Common Interface is mandatory for each actor in order to join the rail interoperability community.

The Common Interface has to be able to handle:

- message formatting of outgoing messages according to the metadata,
- signing and encryption of outgoing messages,
- addressing of the outgoing messages,
- authenticity verification of the incoming messages,
- decryption of incoming messages,
- conformity checks of incoming messages according to metadata,
- handling the single common access to various databases."

Figure 6-1 shows the co-working between the common parts of the system and the existing systems via the "Common Interfaces".
6.3 Conclusion

The facts that

- the TAF TSI is a functional TSI which does not require the potentially uneconomic replacement of existing systems,
- the implementation of the TAF TSI by the means of the SEDP is defined by the relevant experts representing the experience and expertise needed to follow strictly a business-oriented approach,

allow the conclusion that no constraints are to be expected

- nor for the set-up of adequate freight business models,
- neither for the access of new entrants in the freight business.
7 Evaluation of advantages and disadvantages of implementation with respect to business cases

In the framework of TREND workpackage B3 several business cases of successful international rail freight services have been presented by the stakeholders (Railway Undertakings and rail freight customers). Most of the cases are related to international combined transport of containers, swap bodies and semi-trailers, which was obviously the most dynamic rail market in the eyes of the railways. Further cases are dealing with chemical products in tank wagon, finished cars on double-deck car carrier wagon, and bulk cargo in wagon dedicated to the transport of a particular commodity. In particular railays from central and Eastern Europe argued not to forget agricultural products and fertilizers as a seasonal commodity. Almost no attention was paid to general cargo. Typical production forms responding to the business cases mentioned are block trains customer-to-customer, or terminal-to-terminal in the particular case of combined transport. Only a few, mostly Intermodal operators such as Kombiverkehr, reported on more complex operating systems like group trains or “Gateway Systems” in which bundling of cargoes takes place in intermodal terminals where the loading units are shifted between domestic and international (block) trains.

Figure 7-1: Business Cases

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The business cases are becoming more and more complex since the roles of customers and railways are changing. The changing relates to both the relation among railways and the relation between railways and customers. Furthermore the customers are changing: some try to – at least temporally – become railways, while others are concentrating on their core business. In the light of this Railway Undertakings are experiencing some strategies to maintain or expand their market position in international rail freight services.
In order to reply to the ever increasing trend towards international freight services Railway Undertakings (RU) have a variety of options starting with the traditional model in which the customer (CU) organizes the entire railway transport by contracting different railways (one for each country) in succession (see Figure 7-2, case (3)). A further option that takes account of the opening of the European railway markets in international transport is illustrated in Figure 7-2, case (1). In that case the Railway Undertakings acquires for licenses (personnel and equipment) in the corresponding countries (networks) and produces the whole service for the customer on own account by own assets. In case that the railway which holds the contract with the customer is not able to expand its own license (personnel or equipment) into the requested countries it can subcontract railway services in the corresponding countries and it becomes a “lead Railway Undertaking” with full responsibility to the customer (Figure 7-2, case (2)). If the relationship to the corresponding Railway Undertakings is not only for one service but includes general agreements for the exchange of services we are already stepping towards a co-operation of “alliance” (Figure 7-2, case (4)).

Scientifically, co-operations are grouped by the role of the stakeholders into vertical co-operations, if companies from different levels of the value creation chain are working together in the partnership as “virtual integrator”, whereas a horizontal co-operation is composed of companies of the same level. A co-operation among Railway Undertakings would thus be a horizontal co-operation, or “alliance” (see Figure 7-3).
The “Virtual Integrator” tries to fulfill different roles in the supply chain between pick-up of freight at the consignor until delivery at the consignee. In this case the railways get in conflict with real integrators (all services within one company or group of legally and financially related companies) and classical forwarders, which are also acting as their customers for the pure rail section of the journey.

In the alliance typically processes are widely co-ordinated and unified. The activities can be limited to procurement, production or include marketing and sales. In the latter case the alliance acts as a one-stop-shop to the customer. The predominant motivation to establish a co-operative environment and to enter an alliance is always to realize efficiency gains through rationalization of workflow and economies of scale. Thus the main purpose is to bundle sufficient volumes to run the fix-cost oriented rail business more effective.

Advantages of the proposed alliance model are thus expected in the following business cases (see Figure 7-4).
The Alliance shows clear advantages in long haulage where personnel and equipment of different partners of the alliance can be used for the relevant subsection, and where the partners' employees have country specific knowledge e.g. for customs inspections, organizing the last mile or obtaining return freight. The efforts to set up an alliance are normally not justified for single trains with clearly defined roles, but for multiple trains which are brought into the alliance by different partners. An individual company can become a specialist for single commodities but gets also dependent on that industry, whereas a Railway Undertaking alliance can attract different commodities of different customers and become thus more independent from single industries. Only in exceptional cases it might be useful to create a railway alliance for single commodity e.g. chemical products. The same applies for the quantity of cargoes: Alliances are aiming at bundling unbalanced, irregular 'less-than-train-load' cargoes of the respective partner's regional domain in order to generate sufficient volume to continuously exploit the alliance's resources. Finally the alliance allows to realize economies of scale, which is essential in a fixed-cost business like international rail freight transport. In contrast to this transaction costs for creating and maintaining the alliance against the prevailing competition in other market segments or corridors should be considered.
8 Recommendations of further procedures

The workpackage B6 studies have shown a great variety of Business Models, each of them with different components and suitable applications. For the TREND specific task to elaborate a corridor oriented business model, the special framework of such a geographical restricted example had to be considered. The respective procedures to define and to set-up Business Models in the selected corridor, can easily be transferred to other corridors. So the described working steps can be used as a common template for the investigation of a corridor specific framework.

This applies for the common table of components as well; taking both main inputs (framework and components) in summary, the TREND work can also be used for the definition of Business Models on other corridors. A direct transfer of the selected Business Model from the CREAM corridor to other corridors is not possible, as there is no “Ideal Business Model”.

For the selected corridor an alliance, consisting of several Railway Undertakings on the same level (no “leading” company) plus additional operating partners (Intermodal Operators / Forwarders) has shown the best preconditions in order to provide new and improved rail freight services with higher quality. This model will allow the partners to set up international services, which are competitive to road transport and which will meet the request of the customers.

Besides the pure implementation of new joint services, the closer cooperation of the partners will assist the general optimization of railway operations, which is indispensable to improve the quality and the performance on the corridor.

It is therefore recommended to realize the proposed Business Model on the respective corridor. Due to this purpose, an Integrated Project (IP) will be the suitable basis to adjust and support such an innovative business model, especially in the starting phase.
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Appendix 2.1: Correlation between market shares and market development

NOTE: The following statistical analysis has been made using the data presented in Annex 11 of the European Commission’s 2006 Report on the Implementation of the First Railway Package. The following pages only concentrate on a strict analysis of the data (on a purely technical level). Interpretations and conclusions to be drawn from this technical analysis are presented in Chapter 2.1.4.

In order to analyze the link between Market Share of New Entrants and Traffic Growth, it is useful to plot each country’s data on a map, where the market share of New Entrants is recorded on the “X axis” and the traffic growth is recorded on the “Y axis”.

There is no obvious link between market share of new entrants and overall traffic growth

From a first superficial observation of the map, it is possible to see that there is no obvious link between the two variables. Indeed, the individual country points are not more or less plotted along a clear distinct line. Rather than this, we can observe an apparently indistinct cloud of points within a “tipped-over cone shape”.

Two countries (out of 25) appear to fall outside this cloud: Estonia and Great Britain. Estonia is an odd case, because the traffic growth data provided covers a period (1993 to 2004) which preceded the massive take over of the market by big Russian companies in mid 2004 (leading to a 29% market share of new entrants, in 2005 only!). In addition, the remarkable growth figure in this country is directly linked to a dramatic increase of Russian exports between 1995 and 2000 (i.e. well before massive new entries into the market). The market share of new entrants has therefore been corrected accordingly (from 29% in the Commission’s data to 0%).
The case of Great Britain is more complex. According to most market observers, the market growth in this country is very much linked to an above-average growth rate in Britain (compared to European average) and to the fact that massive financial support from the Government since 2001 has led to substantial improvement of infrastructure management (i.e. free additional capacity on the existing network). In addition, it should be underlined that the market share of new entrants includes “Freightliner”, the historic intermodal part of British Rail and that, during at least a number of years, EWS and Freightliner remained on their respective market niche with little competition between them.

In order to nevertheless try to establish a statistical link between the two variables (market share of New Entrants and traffic growth), it is possible to run a regression analysis of the data. A regression analysis identifies the line which minimizes the distance from all the points to itself. In simpler words, it attempts to summarize the data along a general “trend” line.

Here, the regression analysis has been carried out on all countries (including Estonia and Great Britain). The regression shows that the line summarizing the link between market share of new entrants and growth rate is nearly flat (with only a very slight “downward” orientation), which typifies a lack of correlation between the two variables. If the two were positively correlated (i.e. if traffic growth would grow with market share of new entrants), the dots would indeed be much more grouped around a line going clearly up².

² Note: According to this analysis, an increase of 10% of New Entrants market share would lead to a 1% decrease in overall volume. A similar analysis, excluding the “odd values” (i.e. Estonia and Great Brit-
A cluster analysis of the data confirms that overall market growth or decline is not linked to the level of market share of new entrants. Looking into details, it is possible to single out several clusters of countries.

The majority of countries (14 in total) are countries where the market share of new entrants is medium to nil and where traffic growth has been medium to high (see three top-left clusters in mapping above).

Conversely, two clusters towards the bottom right (4 countries in total) contain countries with relatively higher market shares of new entrants but with only medium to negative traffic growth figures.

On the bottom left, there is a “disparate” cluster of countries with low to zero market share of new entrants coupled with either negative or close-to-zero growth figures. From a strictly analytical point of view, this cluster could in fact be split into two sub-clusters (one for the zero-growth-rate countries and one for the negative growth rate countries).

Outside of this, a cluster of two countries remains with high market shares of New Entrants and high growth rates. Out of these two countries, however, and as seen before, the case of Great Britain verges on “aberration” (from a data analysis point of view).

Note: some data taken from the Q-Inform European Commission’s review of the 1st Railway Package (Annex 11 – figures 11.3 and 11.4). Market share of New Entrants in Eastern countries could not correspond to historical period of market growth data.

A cluster analysis of the Commission’s data confirms that overall market growth or decline is not linked to the level of market share of new entrants.
Appendix 2. 2: Description of the analyzed co-operations

Appendix 2. 2- 1: Eurostar

1. Involved partners:
   - Eurostar UK Ltd,
   - SNCF,
   - SNCB.

2. Type of partners:
   - Eurostar UK Ltd is the British RU in charge of the Cross Channel passenger rail traffic in UK;
   - SNCF and SNCB are the main RU’s respectively in France and in Belgium.

3. Owner relationship between the partners.
   - SNCF and SNCB are independent companies;
   - Eurostar UK Ltd belongs to LCR, the consortium in charge of building the new high speed line in Britain, but is operated by ICRR (Inter Capital and Regional Railways);
   - ICRR shares are with National Express (40%), SNCF (35%), SNCB (15%) and BA (10%).
4. **Main objectives:**
To run the high speed services between Britain and the Continent, especially between London and Paris and London and Brussels. The logic of the business is that of the airline industry (compulsory seat reservation, yield management).

5. **Legal / contractual basis:**
Eurostar UK Ltd, SNCF (via its subsidiary French railways Ltd) and SNCB are partners in Eurostar Group Ltd, a GEIE «Groupement d’intérêt économique Européen» with respective shares of 33%, 62% and 5%.

Eurostar group is only in charge of the commercial policy and some other specific tasks (see below). Commercial, operational and financial relationship among partners are described in confidential contracts.

6. **Geographical coverage**
London-Paris and London-Brussels routes (with periodic additional services e.g. from Britain to the French Alps in winter time).

7. **Market segments**
Mainly leisure and business segments.

8. **Coverage**
The three owners delegate to Eurostar group Ltd the definition of general strategy and commercial policy: pricing, yield management, consistence of service (frequencies, time tables). Final decisions are taken by the board of directors.

Are part of the shared responsibilities:

- Commercial: (i) communication, press releases, lobbying (ii) marketing, brand names, advertising, image, customer service; (iii) market research (iv) service standards in trains and terminals, common training for the staff, quality measurement.
- Operational: (i) safety framework (drivers, conductors and maintenance), (ii) co-ordination of operational services of the 3 partner companies, (iii) co-ordination of maintenance works (iv) operational co-ordination in day to day activities
- Co-ordination of strategic projects (like the change from Waterloo to St Pancras Station in 2007)
9. Strategic background – evaluation
Eurostar is not a Railway Undertaking.

In the beginning, each partner wanted to keep a tight control on the business, and the process of decision taking was painful and inefficient. The big issues like sharing revenues were theoretically dealt with in general (and complicated) agreements, but nothing was foreseen for day to day problems.

Later, and progressively, more and more areas of relative autonomy were given to the common entity, but the base of operations still remains with the Eurostar UK, SNCF and SNCB. (operations, relationship with the IM’s, drivers, maintenance of train sets, terminal services).

Operational results are satisfying, but global financial results are not, because of the amount of fixed fees to be paid annually to Eurotunnel, based on a very high number of passengers (due to optimistic initial traffic previsions).

10. Volume of business
About 7 million passengers/year, with a market share of 65%, compared to the Air traffic.
Appendix 2. 2- 2: Thalys

1. Involved partners:
   - SNCF and SNCB are partners in Thalys International
   - DB and NS are associated to Thalys International on the routes to Germany and Netherlands.

2. Type of partners:
   - SNCF and SNCB are the main RU’s respectively in France and in Belgium.
   - DB and NS are the main RU’s in Germany and Netherlands.

3. Owner relationship between the partners.
SNCF and SNCB are independent companies.

4. Main objectives:
To run the high speed services between Paris and Brussels, with continuation to Cologne and Amsterdam. To be as independent as possible of the operational and commercial rules of the shareholders without being a new Railway Undertaking.

5. Legal / contractual basis:
Thalys International (formerly Westrail International) is a Belgian Co operative company, belonging to SNCF (70%) and SNCB (30%). It handles commercial and operational matters.
The scope of the responsibilities, as well as the financial rules and the decision taking procedures are described in internal and confidential documents.

6. Geographical coverage
The main stations are: Paris, Brussels, Antwerp, Amsterdam, Rotterdam, Liege, Aachen, Cologne.

7. Market segments
Mainly leisure and business segments.

8. Coverage
The 2 owners delegate to Thalys international the definition of general strategy and commercial policy: pricing, yield management, consistence of
service (frequencies, time tables). Final decisions are taken by the board of directors. Are part of the shared responsibilities:

- **Commercial:** (i) communication, press releases, lobbying (ii) marketing, brand names, advertising, image, customer service; (iii) market research (iv) service standards in trains and terminals, common training for the staff, quality measurement;

- **Operational:** (i) safety framework (drivers, conductors and maintenance), (ii) co-ordination of operational services of the 2 partner companies, (iii) co-ordination of maintenance works, (iv) operational co-ordination in day to day activities;

- Co-ordination of strategic projects.

### 9. Strategic background – evaluation

Thalys is not a Railway Undertaking, but from the beginning, the owners admitted a rather high level of autonomy for the joint venture. Thus a strong image of a specific product appeared very soon thanks in particular to:

- efficient and consistent advertising,
- original and good quality catering organization,
- trilingual staff (on board),
- frequent travelers bonuses,
- excellent reliability, with a permanent monitoring of quality, including customer satisfaction measurement.

The use of a specific infrastructure (high speed line) and in practice, a certain priority given over other trains is a big asset.

The construction of new high speed lines in the Benelux and the linking between Thalys and the German high speed network have created a new European perspective, concerning the coverage of Thalys and symmetrically of the German ICE. There are certainly some competition issues at stake in the medium and long term, but for the time being, DB and NS envisage to become partners in Thalys International.

### 10. Volume of business

About 6 million passengers/year.
Appendix 2. 2- 3: COTIF

1. History:
COTIF has its roots in the late 19th century when the first international convention on harmonized rules for international rail goods traffic was signed. The rules have been periodically revised ever since. They were extended to passenger transport in 1924. But while the purpose of the Convention has been to facilitate international through transport by rail, it has always been possible for Member States to include ancillary road and shipping legs of international journeys within the scope of the uniform rules, so providing for a single contract for the whole journey.

At the 1980 revision conference the institutional provisions of the original convention were subject to a fundamental reform which led to the creation of an international intergovernmental organization with legal personality - OTIF - of a modern form and structure. This new Convention concerning international carriage by rail came into force on 1 May 1985. This version of the Convention - 'COTIF 1980' - is that currently in force. There are currently 42 signatory states to COTIF drawn from Europe, North Africa and the Middle East.

COTIF 1980 contains two appendices setting out rules, known as "Uniform Rules", which make provision on the content of:

- contracts for the international carriage of passengers (known as the CIV Uniform Rules).
- contracts for the international carriage of goods (freight) (known as CIM Uniform Rules) with annexes dealing with, amongst other things, the carriage of dangerous goods (known as RID Regulations) and international haulage of private owners' wagons (RIP Regulations).

A substantial work program to revise the Convention took place in the latter half of the 1990's. The Protocol of Vilnius signed on 3 June 1999 presents a new version of the Convention (COTIF 1999) which:

- amends certain aspects of how the organization functions: in particular
  - replacing the 'central office' with a 'General Secretary' as the official body of the organization,
  - increasing the frequency of General Assemblies, and election of the General Secretary,
  - introducing English as a working language, alongside French and German,
  - altering the system of financial contributions to COTIF's costs so as to be closer to the UN system in which GDP plays a significant part - both the last two changes are likely to make it easier for additional countries to join COTIF.
- provides new versions of the CIV Uniform Rules (Appendix A to COTIF 1999) and CIM Uniform Rules (Appendix B to COTIF 1999);
Significant changes are: increased scope to bring in all contracts for international carriage, increases to the default (i.e. unless the parties otherwise agree higher) maximum compensation limits for loss of luggage, goods etc; new provision for default maximum compensation for delay to passengers; new provisions clarifying responsibility when a train operator subcontracts carriage to another train operator; revised provisions on information to be included on tickets.

- makes RID a free standing regulation (Appendix C to COTIF 1999), so that the application of these rules is no longer contingent on the existence of a CIM contract.

Recognizing the importance of these issues for facilitating international traffic in a liberalized environment COTIF 1999 also introduces new appendices setting out Uniform Rules for:

- Contracts of use of vehicles in international rail traffic (CUV) (Appendix D)
  It has to be signaled that a new general agreement called GCU (General Contract of Use) will also be established in the near future. It is based on a voluntary participation of wagon owners, and will take precedence in international rail traffic over the CUV Uniform Rules (Annex D to the 1999 COTIF) and in domestic rail traffic over any national regulations that may be applicable, to the extent that this is admissible. This contract will apply only among participants to the GCU.

- Contracts of use of infrastructure in international rail traffic (CUI) (Appendix E)
- The validation of technical standards and prescriptions applicable to railway material intended to be used in international traffic (APTU) (Appendix F)
- The technical admission of railway material used in international traffic (ATMF) (Appendix G)

2. Type of partners:
States: COTIF is an intergovernmental treaty.

3. Main objectives:
The revised COTIF establishes uniform rules (some new, some revised) for a number of key processes and contractual relationships in international rail transport in this more liberal environment. In doing so, the revised Convention aims to reduce transactions costs and facilitate entry into, and operation of, international rail transport in this changed environment.

4. Legal / contractual basis:
COTIF 1999 will come into force three months after the 27th Member State has ratified it. This is currently forecast to occur on July 1, 2006.

COTIF 1999 includes provisions allowing Member States to derogate from, or declare that they will not apply, certain parts of the Uniform Rules.

The European Community has external competence in this Convention as its subject matter includes matters on which the Community has legislated or could legislate under the EC Treaty. COTIF 1999 includes, unlike its predecessor, provisions to enable
regional economic integration organizations such as the European Community to accede to it and exercise their competence of behalf of their Member States. Subject to the agreement of the European Council, the Community will accede shortly after COTIF 1999 enters into force.

COTIF 1999 includes provision designed to ensure that, for European Community (and European Economic Area) Member States, their obligations under the EC Treaty prevail over their obligations as signatories to the Convention.

5. Geographical coverage
42 countries, mainly European, but also in North Africa and in the Middle East.

6. Market segments
Passengers and freight.

7. Coverage
- provide a new transparent process for agreeing technical rules applying to, and technical acceptance of, vehicles used in international traffic - thus making it easier for new entrants to enter and operate in the international rail market;
- provide a new set of uniform rules for contracts for the use of infrastructure for the purpose of carriage of international passengers and freight - a key contract in operating international rail services in countries where the Infrastructure Managers is a separate legal entity from any train operator; and
- ensure clarity as to the responsibilities of individual train operators to customers in view of the more varied contractual arrangements between train operators that may be possible in conveying a passenger from origin to destination in liberalized markets (e.g. through haulage by one operator, subcontracting haulage, as well as traditional 'sequential' haulage by different operators).
Appendix 2. 2- 4: Rail Net Europe

1. Involved partners:
29 Infrastructure Managers, comprising almost all of Europe, with the exception of ex-Yugoslavia. (Croatia is joining soon).

2. Type of partners:
Infrastructure Managers are sometimes “independent” from the former national railway companies, sometime part of still integrated organizations.

3. Owner relationship between the partners.
Infrastructure Managers are usually State owned and are independent (from other Infrastructure Managers).

4. Main objectives:
- increase the rail traffic on the European rail infrastructure network,
- enable easy and fast access to the European rail infrastructure,
- enhance the quality of the rail services offered and
- raise the efficiency of the related timetabling and operations processes.

5. Legal / contractual basis:
The European Infrastructure Managers (IM) have signed an agreement on a common sales and marketing organization for international infrastructure capacity called RailNetEurope (RNE).
These Infrastructure Managers have set up One Stop Shops (OSS) working as a network of customer contact points within the framework of RNE. For international path requests, the customer needs only to contact one of these OSS, which will initiate the whole international path allocation process.
There is a Rail Net Europe Joint Office based in Vienna, conducting the day to day business of the association in compliance with the decisions of the Rail Net Europe general Assembly and under the control of the Management Board.

6. Geographical coverage

29 Rail Infrastructure Managers from 23 European countries are today members of RNE – serving a network of 230.000 km rail infrastructure.
7. Market segments
Pre constructed and tailor made paths.

8. Coverage
- offer to the customer support and information on the full product and service range of the Infrastructure Managers,
- supply all the information required to gain access to the infrastructure of any Infrastructure Manager participating in RNE,
- handle requests for any international train path within RNE,
- make sure that requests for the next timetable period are duly taken into account in the yearly timetabling process,
- provide train path offers for the whole international journey.

9. Strategic background – evaluation
RailNetEurope is the consequent step from bi- and multilateral co-operations among European rail infrastructure companies towards one common organization with a European focus. The members of RailNetEurope together harmonize conditions and introduce corporate approaches to promote the European rail business from the rail infrastructure point of view: to the benefit of the entire rail industry.

“Normal” customers are Railway Undertakings; but now some “authorized applicants”, like port authorities, envisage to have direct access to Infrastructure.

Of course, this new organization is not sufficient to prevent some major difficulties inherent to the lack of interoperability.

10. Volume of business
- About 230000 km railway infrastructure,
- 120 customers.
Appendix 2. 2- 5: BoxXpress

1. Involved partners:
   - ERS European Rail Shuttle Holding B.V., Rotterdam, (47%)
   - ERS is a subsidiary of Maersk Line
   - Eurogate Intermodal GmbH, Hamburg, (38%)
   - TX Logistik AG (15%)

2. Type of partners:
   - ERS (and its subsidiary ERS Railways) operate shuttle trains from Rotterdam and the German ports to various countries in Europe.
   - Eurogate is a logistic group and number one Container terminals owner in Europe.
   - TX logistic AG is a new Railway Undertaking, controlled by Trenitalia (51%), handling intermodal and conventional traffic, mainly on the German Italian route.

3. Owner relationship between the partners.
The three partners are independent companies.

4. Main objectives:
BoxXpress is a licensed private rail operator specialized on the reliable and fast transport of overseas containers between the German seaports and inland destinations.

Since June 2000 BoxXpress has developed a constantly growing network of block trains, with the aim of offering tailor-made and cost efficient transport solutions to their customers.

5. Legal / contractual basis:
BoxXpress is an independent company.

6. Geographical coverage
Since it’s start in June 2000 BoxXpress connects the German seaports of Bremerhaven and Hamburg overnight with the economic areas in and around Stuttgart, Munich and Nuremberg. The successful concept consists of mostly direct operation of block-trains, which provides a maximum in transport efficiency.

Today’s network connects Bremerhaven, the Hamburg terminals Burchardkai, Eurokombi and CTA with the inland terminals Konwestheim Ubf, Augsburg Oberhausen, Munich-Riem, Nuremberg-Harbour, Mainz Frankenbach and Ludwigshafen Triport.
European Rail Shuttle

<table>
<thead>
<tr>
<th>Port</th>
<th>Destination</th>
<th>Frequency</th>
<th>Transittime</th>
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<tbody>
<tr>
<td>Hamburg</td>
<td>Munich</td>
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<td>Bremerhaven</td>
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7. Market segments
Block trains of overseas containers.

8. Coverage
BoxXpress is a pure traction company, the business part and the bookings being made through ERS, Eurogate and TX Logistics.

9. Strategic background – evaluation
ERS wanted to expand its activity in Germany in the same way it had been developed before in the Netherlands. The reason was that the shipping lines involved in ERS were not satisfied with the pricing and quality of service of existing solutions.

BoxXpress has specialized in inland transport within Germany.

On a more general note, BoxXpress represents an original case of competition for the incumbent railway in Germany:

- ERS belongs to Maersk Line, which shows the major role now played by the maritime sector;
- Eurogate is the main competitor of HHLA (which in turn is closely connected to DB);
- Trenitalia has now a predominant share of TX Logistics.

10. Volume of business
Global capacity of 280000 TEU (yearly).
Appendix 2. 2- 6: Brenner Rail Cargo Alliance

1. Involved partners:
   - Rail Cargo Austria,
   - Railion Deutschland,
   - Trenitalia.

2. Type of partners:
   Three incumbent Railway Undertakings.

3. Owner relationship between the partners.
   Independent companies.
   BRC is a small company with only 6 employees (2 from each RU), based in Innsbruck.

4. Main objectives:
   - To improve steadily the quality of service of the Brenner Route.
   - To increase the rail market share against the road.

5. Legal / contractual basis:
   A trilateral “alliance” contract was signed on Jan. 1, 2003.

6. Geographical coverage
   The 450 km between Munich and Verona.

7. Market segments
   Block trains, combined transport, “Rollende Landstrasse”, wagonload traffic.

8. Coverage
   - Quality management.(day to day and medium term) with monitoring of quality standards,
   - Cross border procedures,
   - Optimization of time tables,
   - Information systems.

9. Strategic background – evaluation
   Competition is fierce on the European North South routes, firstly with the road transport. Nevertheless Rail has a competitive advantage due to the Alpine transit and limitations enforced in Switzerland and Austria against road traffic.
   There is also intra modal competition among Railway Undertakings, several routes being possible (via Brenner, Gothard, Simplon etc.)
   The main RU’s are not prepared to globally hand over their North South operations to a new full scale RU. BRC is a partial attempt to monitor quality on the whole route with 3 successive partners in charge of the operations.
   BRC is also used as a communication tool, to demonstrate the efforts made by three important incumbent companies on a major corridor.

10. Volume of business
    unknown
Appendix 2. 2- 7: CORTAX
Concentration et Redistribution des Trafics par Axe

1. Involved partners:
   - Cemat (Italy),
   - Novatrans (France),
   - TRW (Belgium).

2. Type of partners:
   - Cemat is the leading CT operator in Italy offering national and international services. The company is also managing more than 30 CT terminals in Italy.
   - Novatrans is the leading CT operator in France (national and international traffic). The company manages also their own fleet and terminals.
   - TRW is the leading CT operator in Belgium offering mainly international services to Italy and Spain.

3. Owner relationship between the partners.
   - CEMAT: -
   - NOVATRANS: participation of 2% for Cemat
   - TRW: participation of 21% for Novatrans and 21% for Cemat.

4. Main objectives:
The CORTAX system was developed in order to concentrate a part of the Belgian CT traffic coming from different local terminals (for example Antwerpen, Liège,...) on a main railway hub (named Ronet). From this hub, international block trains are built bound for France, Italy or Spain. The CORTAX network serves as starting point for building direct point-to-point trains. If a traffic is sufficiently developed, the CT operators can decide to adapt the CORTAX network by offering a direct train service (for example Liege-Novara).

5. Legal / contractual basis:
   It is an operational and commercial agreement between different CT partners. A special regime has been developed for this concept.

6. Geographical coverage
   The CORTAX network links local Belgian terminals through the Ronet hub to South of France, Italy and Spain.
7. **Market segments**
All kind of consignments: mainly swap bodies and containers but also semi-trailers.

8. **Coverage**
The CORTAX system is mainly a strategic collaboration between several CT operators to organize their traffic by harmonizing their operations (for example by creating a common wagon pool, creating common procedures) and commercial activities (prices and timetables) on some relations. This system allows the CT partners to offer to their different European customers destinations, which could normally not be proposed.

9. **Strategic background – evaluation**
The hub system has shown its growth limit and its difficulty in the daily operations (for example when TRW had to change the hub from Schaerbeek to Ronet in 2004). But the system is still proving its advantage: attracting small traffic day by day to finally build direct trains, which is the final objective for all CT operators.

10. **Volume of business**
unknown
Appendix 2.2- 8: European Bulls Alliance

1. Involved partners:
   - Ferrovie Nord cargo (Italy),
   - LTE Logistik und Transport (Austria),
   - Rail4chem (Germany),
   - Viamont (Czech Republic),
   - COMSA Rail Transport (as associated member, Spain).

2. Type of partners:
   - Ferrovie Nord cargo, LTE Logistik und Transport, Rail4chem and Viamont are Railway Undertakings,
   - COMSA is a company specialized in railway construction,
   - COMSA Rail Transport, its subsidiary, is also a newly created Railway undertaking.

3. Owner relationship between the partners.
   There is no owner relationship between the partners, which are totally independent companies.

4. Main objectives:
   - To offer the demand side of the market reliable, high-quality international rail freight products and related services.
   - To facilitate lobbying efforts for new entrants.

5. Legal / contractual basis:
   The general pattern of the legal arrangements is that one partner is the contractor (responsible towards the final customer), one or several others acting as subcontractors of the former. For the customer, there is only one interlocutor (one stop shopping), even if the product is delivered in association.

6. Geographical coverage
   All of Europe, but mainly in the countries of the founding companies (Benelux, Germany, Italy, Austria, Czech Republic and Slovakia).

7. Market segments
   Containers, cereals, chemicals in tank cars, coal, petroleum coke, cement etc.

8. Coverage
   The European Bulls Alliance is very flexible in essence: the form of co operation will evolve from one transport operation to the next. One single partner runs international open-access services for the alliance whenever this is technically and legally possible. Partners will share experience and resources, plan services jointly, optimize capacity and integrate IT systems. The also plan to combine their purchasing and to use English as a common language.
As an example, each company owns its own locomotives, but there is a common view on new interoperable rolling stock: In this way LTE bought in April 2005 a new diesel locomotive, in European Bulls design”, with permits and safety packages for Germany, Austria and Slovakia.

There is also a common back office for marketing, contracting processes and quality management at large.

9. Strategic background – evaluation

The Alliance is modeled on airline groupings such as Star Alliance: It is mainly a co-ordination and marketing platform; The objective announced are very high (+ 35% a year, market share of 35 % of European rail Freight by 2015).

One partner is responsible to the customer for handling the whole international service. Via European Bulls, each partner can guarantee that in all countries in which it does not operate itself there are partners ensuring under its responsibility the uniform quality of the transport services provided.

The highest expectations in added value come from cross border reliability, which has long been one of the major failings in the international rail freight operations.

There is another, more political goal for European Bulls to achieve: to be the voice of small or medium sized new entrants, especially where technical and administrative hurdles remain and hinder a quick and efficient access to a truly open market.

10. Volume of business

unknown
Appendix 2. 2- 9: European Rail Shuttle (ERS)

1. Involved partners:
European Rail Shuttle B.V. (ERS) was established in 1994 by its founders Royal Nedloyd, Sealand Service and P&O Containers, with the aim to transport containers throughout Europe in an effective - and cost efficient way. Soon after the start of the operations also Maersk joined the joint venture As per March 2000, after various re-organizations within the shareholders, ERS’ shareholders became Maersk Sealand and P&O Nedlloyd. As per 13 February 2006 ERS became a fully owned subsidiary of Maersk Line.

2. Type of partners:
The shareholders were from the beginning shipping companies. These companies were dissatisfied with the quality of service given by the traditional carriers and wanted at the same time put some pressure on the price level.

In 2002, ERS Railways, a new railway company and full subsidiary of ERS was established, with its own rolling stock and drivers.

ERS and ERS Railways has established a set of selective alliances Through Europe, in order to run efficient operations:

- ERS Railways has its own trains in Benelux.
- In Germany, most of the traffic is handled by BoxXpress, which belongs (47%) to ERS.
- For the southbound traffic to Italy, SBB was the chosen partner.
- ERS is open to other partnerships, depending on the needs and opportunities, e.g. with PKP Cargo for the new traffic to Warsaw.

3. Owner relationship between the partners.
There are no relations of that type among partners, with the exception of ERS Railways itself, totally owned by ERS. This situation brings a core business to ERS Railways. Nevertheless, and from the start, ERS has offered services to third parties.

4. Main objectives:
- To give the strongest possible position to the port of Rotterdam with a high level transportation service for its hinterland.
- To expand to Germany with the help of BoxXpress.
- To rely on a high reliability, good frequencies, connections and reasonable rates.

5. Legal / contractual basis:
Commercial agreements between partners.

6. Geographical coverage
Mainly from and towards Rotterdam, but also from and towards Hamburg and Bremerhaven.
Destinations are almost every country on the North South route: Belgium, Germany, Switzerland, Italy, Czech Republic, Slovakia, and also Poland, Hungary, Slovenia.

7. Market segments
Intermodal block trains for maritime containers.

8. Coverage
Global direct operations with ERS Railways or selected partnerships.

9. Strategic background – evaluation
To get a better control on pricing and quality of service.

10. Volume of business
unknown
Appendix 2. 2- 10: Kombiverkehr - ICA

1. Involved partners:
   - Kombiverkehr (Germany)
   - Intercontainer Austria (Austria)

2. Type of partners:
   - Kombiverkehr is the leading CT operator in Germany offering national and international CT services (mainly direct trains)
   - Intercontainer Austria is a CT operator offering mainly international unaccompanied CT services (wagonload and direct trains).

3. Owner relationship between the partners.
   - Kombiverkehr: -
   - ICA: participation of 26% of Kombiverkehr

4. Main objectives:
The mutual agreement between Kombiverkehr and ICA allows both partners to offer a much larger range of CT services. The idea is that one partner can use the CT services, network (for Germany: KombiNetz2000+), resources (set-up of a common wagon pool) and know-how of the other partner (CT market of different regions and countries). The partners buy and sell in close collaboration the CT services (direct trains) to their own ‘national customers’, which are using international lines for transporting their units. This reduces the commercial risk for the CT operators (often repartition of the risk 50% per partner). Each partner is then responsible to contribute with his loading units from his network and his customers in order to fill in the common trains.

5. Legal / contractual basis:
It is an operational and commercial agreement between Kombiverkehr and ICA.

6. Geographical coverage
The countries concerned by this agreement are (international relations from/to): Germany (based on the national network KombiNetz2000+) – Austria – The Netherlands – Italy – Eastern countries.
7. Market segments
Kombiverkehr and ICA are offering direct trains (with Gateway connections). All kind of consignments are concerned: mainly swap bodies and containers but also semi-trailers.

8. Coverage
See main objectives.

9. Strategic background – evaluation
This is a typical commercial collaboration in the CT market. This allows to share all the costs (and benefits) of the commercialized trains and to extend the CT network of each partner by offering much more CT relations by relying on the expertise of its commercial partners. This kind of collaboration can also be concluded with more than 2 partners (in case of very long CT relations).

10. Volume of business
unknown
Appendix 2. 2-11: Netzwerk Privatbahnen

1. Involved partners:
   - Boxpress GmbH, Hamburg
   - D&D Eisenbahngesellschaft mbH, Lagenow
   - Dillen & Le Jeune Cargo n.v., Deurne (B)
   - Duisport rail, Duisburg
   - EKO Transportgesellschaft mbH (EKO Trans), Eisenhüttenstadt
   - Eisenbahnbetriebe mittlerer Neckar GmbH, Kornwestheim
   - European Rail Shuttle BV, Rotterdam (NL)
   - Heavy Haul Power International, Erfurt
   - InfraLeuna Infrastruktur und Service GmbH, Leuna
   - Havelländische Eisenbahn AG, Berlin
   - Logistik Service GmbH, Linz (A)
   - LTE Logistik- und Transport- GmbH, Wien (A)
   - MEV Eisenbahn- Verkehrsgesellschaft mbH, Mannheim
   - Mittelweserbahn GmbH (MWB), Bruchhausen-Vilsen
   - rail4chem Eisenbahnverkehrsgesellschaft mbH, Essen
   - RCN Logistik GmbH, Nürnberg
   - Regental Bahnbetriebs-GmbH, +Regental Cargo, Neuenmarkt
   - Rhein-Sieg-Eisenbahn GmbH, Bonn
   - Rhenus Rail Logistics GmbH, Duisburg
   - SRS Rail Service GmbH, Offingen
   - Transport- und Logistik GmbH, Gründau
   - TX Logistik AG, Bad Honnef
   - Westfälische Almetalbahn GmbH, Altenbeken

2. Type of partners:
The 23 members mainly present private freight railways based in Germany, with the exception of four. Those are based in neighbor countries but may also be active in Germany.

3. Owner relationship between the partners.
None, independent companies.

4. Main objectives:
   - Promotion of intra-modal competition;
   - to counterbalance the dominant position of the incumbent railway;
   - to promote the necessary improvements of infrastructure and in procedures affecting the everyday business.

Hence, lobbying is the main objective, practical co-operation another one, but with minor priority so far.

5. Legal / contractual basis:
Netzwerk Privatbahnen is an association based on German Law. The Netzwerk has now an office and few staff in Berlin.
Decisions are taken by a board of Directors chosen among the representatives of the members. The annual budget is agreed by the members in an annual general meeting. The board of Directors is assisted by a secretary.

6. Geographical coverage
Germany and neighbor countries.

7. Market segments
Rail freight services and related businesses. All types of goods/commodities.

8. Coverage
- Communication to shippers that NP members are capable of providing high-quality and reliable rail services at national and international level:
- representation of NP members vis-à-vis policy makers, authorities and the railway supply industry;
- development of a framework for fair on-rail competition in Germany and Europe. Initiation of discrimination-free practice with regard to railway infrastructure, rolling stock, international services and rules and regulations;
- fostering constant exchange of information and experience among partners;
- practical co-operation of partners in regard to joint on-call service, procurements, insurances, public relations.

9. Strategic background – evaluation
Netzwerk Privatbahnen and their members practice a very lively co-operation. This concerns the more practical aspects of operations etc. as well as joint efforts to improve the framework conditions.

In several legal proceeding NP members successfully fought against discriminatory practice regarding charging by Infrastructure Managers, the charging of electricity and the like.

10. Volume of business
- The consolidated amount of revenues of the members is about 400 Million Euros.
- The total number of staff is approximately 1 000.
- 70% of the turnover of non-DB rail freight services is generated by Netzwerk partners.
Appendix 2. 2- 12: Rail Euro Concept (REC)

1. Involved partners:
   - Rail Euro Concept belongs jointly to Railion Deutschland and Fret SNCF. It is a limited company (Société anonyme simplifiée), with a staff of about 25, including CIFFA (centre d’interopérabilité fret franco-Allemand).
   - REC is located in Paris, the CIFFA in Forbach, the French-German border station.

2. Type of partners:
   - Railion Deutschland is former DB Cargo, the biggest rail freight operator in Europe.
   - Fret SNCF is the freight division of SNCF.

3. Owner relationship between the partners.
The repartition of shares in REC is 50% for each partner. Decisions are taken by the board of directors.

4. Main objectives:
The main objective of REC and CIFFA is to enhance the quality of service (punctuality and reliability) of international services between Germany and France. Railion and Fret SNCF having different production systems and rules (technical and administrative), the role of REC and CIFFA is to erase the negative effects that these differences have on interoperability.

5. Legal / contractual basis:
REC only deals with production matters. Strategy and commercial policy are not in the scope of the responsibilities of REC. There is a general (and non published) agreement between Railion and Fret SNCF about the role and functioning of REC.

6. Geographical coverage
Originally, Woippy- Manheim with only one border crossing (Forbach).
In a further stage, enlargement to the hinterlands (Ruhr Region in Germany, Area of Lyon in France).
One possible long term option is for the REC to handle part of the German Spanish traffic.

7. Market segments
All kinds of goods, but only in full trains (single wagon load is not concerned).
8. Coverage
REC and CIFFA have 2 levels of responsibility:

- planning:
  - a specialized team studies new interoperability rules to replace national and often contradictory ones.
  - production planning (drivers and rolling stock)
- day to day coordination of production.

9. Strategic background – evaluation
Cooperation between the two big incumbent railways has often been difficult, each partner wanting the leadership for himself. Performance used to be especially bad in the Ruhr-Lorraine area, despite a huge potential of traffic (steel, coal, chemicals).
Hence the idea of a common entity to smooth up the day to day and the medium term performance.

The owners of REC are not ready to set up a full scale new Railway Undertaking to handle completely the German-French traffic, each one wanting to keep its own commercial teams and, as a matter of fact, its own “national” production system.

Two ways of evolution could be followed in the future:
- deepen the scope of responsibilities of REC (Marketing, production staff)
- extend the geographical coverage (all the border points between Germany and France, Spain and Portugal etc.)

10. Volume of business
unknown
Appendix 2. 2- 13: Rail Traction Company/Lokomotion

1. Involved partners:
   - RTC (Rail Traction Company) S.p.a., Rome
   - Lokomotion Gesellschaft für Schienentraktion mbH, Munich

2. Type of partners:

RTC and Lokomotion are new Railway Undertakings specialized in traction on the Brenner route (Munich-Verona).

3. Owner relationship between the partners.

The shareholders of RTC are mainly STR (34%), controlled by Autostrada del Brennero and Railion (30%), the other shares being split between smaller shareholders.

Lokomotion belongs to Railion (30%), RTC (30%), Kombiverkehr (20%) and STR (20%), a project and financial company.

4. Main objectives:

The two companies, working in partnership, each one in charge of one side of the Brenner, aim to deliver a high quality product/service.

5. Legal / contractual basis:

Co-operation agreements (for planning and monitoring operations).

6. Geographical coverage

The Brenner route, but actually all the German-Italian traffic.

Newly some trains on the Tarvis route.

RTC has also initiated a domestic service in Italy.

7. Market segments

- Combined transport, steel, automotive.
- Customers are Stinnes, Kombi Verkehr, Cemat, ATG and the Swedish steel industry.

8. Coverage

Pure traction of block trains.
9. **Strategic background – evaluation**

The Brenner Corridor is one of the most loaded international transit corridor, where – on a length of only 448 km between Munich and Verona – three countries and thus railway infrastructures and the Alps (inclination Brenner north ramp 26 ‰) have to be bridged.

To distinguish from the existing services, RTC and Lokomotion positioned their product as a high quality service. Meanwhile both partners have increased their traction volume to approx. 60 trains per week.

Despite - or may be, because of - the disadvantageous conditions for small Railway Undertakings, Lokomotion and RTC developed innovative rail traction and locomotive staff employment schemes. These schemes were a substantial prerequisite for their major success so far: They achieved to improve the rate of punctuality of intermodal services on the Brenner corridor significantly.

10. **Volume of business**

- Market share on the Brenner route: 35% (50% in combined transport) in 2004.
- About 60 trains/week
Appendix 2. 2- 14: Railion North-South-route

1. Involved partners:
   - Subsidiaries: Railion Netherlands, Railion Denmark, Railion Italy.
   - Associates: BLS Cargo, TRC, Lokomotion, etc.

2. Type of partners:
   - Railion Netherlands, Denmark and Italy are former RU’s which were purchased by the DB organization from the incumbent national railway company in the Netherlands and Denmark, and from a private company called SFM in Italy.
   - BLS Cargo is the former freight division of BLS, the biggest private RU in Switzerland, and in which Railion Deutschland has acquired a share of 20%.

3. Owner relationship between the partners.
   Railion Deutschland has direct or indirect control over all partners on the North South route (via the east bank of the river Rhine)

4. Main objectives:
   To be able to propose a unified and “one shop stop” approach to the customers, to improve the level of quality and to be the head runner in the competition on the North South routes.

5. Legal / contractual basis:
   Railion is the owner or has a controlling power on the involved partners.

6. Geographical coverage
   All countries from Finland, Norway, Sweden and Denmark to Italy and the South east of Europe. The transit through Switzerland is privileged, but a particular effort is also made via the Brenner (with a specific “Brenner” Alliance).

7. Market segments
   Combined and conventional transport, mainly block trains.

8. Coverage
   Railion and its partners on the north south route co operate as Rail Carriers mainly. The main objective is to deliver an improved quality of service, in order to resist to the inter and intra modal competition.

9. Strategic background – evaluation
   Deutsche Bahn AG wants to play a major role in the freight transportation market in Europe in the new deregulated market. DB Logistics was created to that effect, with 3 main pillars: Schenker, integrated logistics provider and worldwide forwarding company; Stinnes, in charge of combined transport services and freight logistics; Railion, the main rail carrier in Europe. It has to be understood that Railion’s responsibility is to provide a good quality service, Stinnes being in charge of the business side with the customer.
The north south route (From Scandinavia and Benelux to Italy) is much more important than any other relation, and was worth of a special effort for Railion:

- 3 subsidiaries (of Stinnes) were created on the route, in the Netherlands, Denmark and Italy.
- partnerships/Alliances were established when necessary, especially with BLS Cargo.

In this way, there is a continuous control of the freight division of DB on the North South route (even if there exists now some competition with SBB and its own partners on the same route).

**10. Volume of business**
The volume of business of Railion is about 5 MM €.
Appendix 2.2- 15: SIBELIT

1. Involved partners:
   - SNCF 40%
   - SNCB 40%
   - CFL 15%
   - CFF 5%

SIBELIT stands for “Société pour l’itinéraire Benelux, Lorraine, Italie” and was launched on March 31, 2006.

2. Type of partners:
   Incumbent RU’s

3. Owner relationship between the partners.
   Sibelit has a registered office in Luxemburg, shares as shown above. The partners are independent companies.

4. Main objectives:
   - Better productivity.
   - Better quality of service (punctuality and reliability).

5. Legal / contractual basis:
   European GEIE “Grouping of Economic Interests”

6. Geographical coverage
   SIBELIT is in charge of operations between Muizen and Bale. But improvement of the Antwerp-Milan, and more generally Benelux-Italy route is the final goal.

7. Market segments
   All traffics.

8. Coverage
   Sibelit is mainly meant for improving co operation on the production side. About 300 trains weekly use the North south corridor between Belgium and Bale (via Luxemburg and France). Several RU’s are involved in the logistic chain (SNCB, CFL, SNCF, SBB and finally Trenitalia), with different production systems and different cultures. Interoperability is obviously a problem on a route with so many partners involved.

   With the help of shared resources, the following areas will be optimized: decreasing of the number of driver changes, better harmonization of the monitoring of the slots in the various countries, creation of an international track and trace system for the trains.

   A certain level of quality will be guaranteed to the customer.

   Sibelit is not a new RU and has for the time being no business goals.
9. **Strategic background – evaluation**
The Benelux-Italy corridor has 2 main routes, via France and via Germany (there are other routes of lesser importance via Austria or even central European countries. In the last three years, 2.5 Million tons of traffic were lost to the left bank via Germany.
To improve the “French” route and create a competitive advantage against inter- and intra modal competition.
There is also a long term possibility for Sibelit to be transformed into a RU.

10. **Volume of business**
300 trains each week.
Appendix 2. 2-16: Systemcargo

1. Involved partners:
   - Hellmann Worldwide Logistics GmbH + Co. KG
   - Stinnes Intermodal

2. Type of partners:
   - Hellmann is a traditional company (family business) that has grown from its northern German roots. They have already achieved a national presence via regional partners.
   - Stinnes Intermodal is part of Stinnes Freight Logistics. They offer national and international combined traffic services.

3. Owner relationship between the partners.

4. Main objectives:
Since 2004 Hellmann shifted transport volume from road to rail. Therefore “Systemcargo”-trains run between Hellmann locations in Northern Germany and intermodal stations in Middle and Southern Germany.

5. Legal / contractual basis:
It is an operational agreement between Hellmann and Stinnes Intermodal.

6. Geographical coverage

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intermodal station

turntable Hannover-Linden (train splitting/composing via shunting)
7. **Market segments**  
Primarily time critical system traffic.

8. **Coverage**  
Hellmann market the trains. The volume is from Hellmann and partners. The remaining capacities will be offered to other forwarders.  
Stinnes Intermodal orders the train paths and operates the trains.

9. **Strategic background – evaluation**  
Hellmann loaded part load into wagons until the seventies of the last century. Then they finished the dispatching because the transport by lorries became less expansive and more flexible.  
Hellmann and DB Cargo started again at the end of the last century shifting volume from road to rail by using the CargoSprinter between Hamburg/Osnabrück and Frankfurt/Main airport (Cargo City South). These transports stopped in 2000.  
Nevertheless Hellmann wants to shift volume. Hellmann and DB Cargo developed the project “Systemcargo” promoted by the BMFT. After a conception phase the demonstration phase started in January 2004 between six locations. Step by step the train capacity for swap bodies and the number of participating locations has been increased. The processes have been optimized during operation, so that the utilization of the train could be increased steadily. At the end of the demonstrating operation each day 200 swap bodies could be shifted.  
With the annual timetable change in December 2005, the demonstration has been transferred to a regular service and by that established in the market.

10. **Volume of business**  
The capacity of all trains are 240 swap bodies per day.
Appendix 2. 2- 17: UIRR model

The following document describes the ideal-typical partnership in the continental combined road-rail transport. This model was created at the end of the sixties and later implemented in up to 15 European countries. In principle this modal of cooperation is still valid today for about half of the combined road-rail transport in Europe. In the different countries there are variations and over the last decades, some developments which will be discussed at the end of this documentation.

1. Involved partners:
   - UIRR and member companies (CT-operators)
   - Traditional UIC member companies (Railway Undertakings)
   - Road transport companies and their associations

The different actors and their role

<table>
<thead>
<tr>
<th>Short haul road</th>
<th>Terminal</th>
<th>Main haul on rail</th>
<th>Terminal</th>
<th>Short haul road</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trans-shipment</td>
<td></td>
<td></td>
<td>Trans-shipment</td>
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</tr>
</tbody>
</table>

Coverage of the physical intermodal transport chain by the different actors:

- Logistic company, road haulage
- Combined Transport Operator
- Railway Undertaking
- Infrastructure manager

UIRR co-operative model: CT operator organizes the traffic from terminal to terminal on rail, the customer himself the terminal traction.

2. Type of partners:
   Cooperative approach to the market with collaboration and work division between:
   - Combined transport operators
   - Railway undertakings
   - Road hauliers, freight forwarders and logistic companies

3. Owner relationship between the partners.
   Majority of the shares of the combined transport operator is typically held by road hauliers, freight forwarders or their associations, so by customers.
A minority share is typically held by the traditional Railway Undertaking of the respective countries, so the suppliers of rail traction, and often of additional services, like transshipments in terminals or placing wagons at disposal.

4. Main objectives:
Railways and road transport or logistic companies are normally competitors. So the latter will not easily give their cargo to the railways as they must fear that Railway Undertakings will directly try to take over the goods from the original shipper. The setting-up of Combined Transport operators who are by a majority controlled by their customers gives them the necessary guarantee to entrust the operator with their transports. This coincides with the main philosophy of the UIRR companies never to contact directly the shipper. UIRR companies did also not invest in loading units themselves and concentrated on the organization of the main rail part of the transport from terminal to terminal: another guarantee that they would never compete with their customers.

From the Railway Undertakings point of view, especially in the times when they had a national monopoly of providing traction, the UIRR operators had the role of marketing and selling companies for the market of continental traffic.

5. Legal / contractual basis:
Road hauliers, freight forwarders and railway's participate as shareholders in the operators companies. In principle the sharing of capital has often a character of a cooperative association. Legally some companies are stock corporations, others companies with limited partnership, often with a great number of limited partners with sometimes even equal shares.

Prices of railway services were in former times calculated on the basis of single wagon units and now more and more in a way that it allows the operators to bear the risk of complete trains and to do the necessary investments in wagons, terminals, EDI. It is not the major objective of the CT-operators to make profit. The railways interest as companies which have high fix costs is to sell their services at prices which allow the development of combined transport. The market price is determined by the dominant continental transport mode road. As a lot of customers are shareholders they want the CT-operators to organize a good service for them at reasonable prices rather than to gain on profits of the companies.

On the European level the co-operation is represented by the collaboration between the organizations UIRR, regrouping the CT-operators and the UIC combined transport group, regrouping the (traditional) railway companies of the same countries. The collaboration of both organizations is organized within INTERUNIT, an association without legal identity. Interunit does legally take no part in the set-up of the business model, but represents a platform for discussion between Railway Undertakings, CT-operators and their customers in order to discuss conflicts and seek common solutions on mutual trust.

Legally this co-operative manner of combined transport is road transport which is on its major part rerouted on rail. For the shipper there is no difference if a transport is handed over to normal road transport or of it makes use of this co-operative combined
transport chain. Often the shipper does not even know if his logistic company will route one transport over road only or if the truck which always is the interface to him will only roll a short distance on road to the next terminal and will then be transported on rail for the longest part. Anyway at the destination a truck of his contracting transport company will pick up again the loading unit at the destination terminal and deliver the units to the final address. Often the logistic company sends a part of the goods on road, another part, where suitable, via combined transport. Especially this flexibility allows a good service to the final customer, the shipper.

The UIRR companies have elaborated common General Conditions to harmonize the legal situation of the customer, independent from his choice of the CT-operator and in order to be unique interface for the customer to avoid that he has to treat with the different actors of the combined transport chain as Railway Undertakings, terminal- and CT-operators.

International traffic is produced by normally two or (with transit country/company) three CT-operators on basis of a specific commercial and operative agreement. (See special description of the Business Model “CORTAX” or “KV-ICA”.)

6. Geographical coverage
Most continental countries of Europe are concerned.
7. Market segments
The UIRR companies are providing combined transport services in order to shift traffic from road to rail. The main market is continental road transport.

In the first decades till end of the eighties when railways national monopoly was still completely in place, there was a clear market separation between the UIRR companies on one side and the container companies or railway companies on the other side in Europe. The container traffic was organized either directly by the railway companies or by typically hundred percent daughter companies like CNC in France, Transfracht in Germany, or Intercontainer, a subsidiary of 28 railway companies for the organization of the international maritime container traffic.

The UIRR companies only transported “road units” like swap bodies, semi trailers or complete road trains on the rolling motorway. Initially there was even an interdiction by the railways for UIRR companies to transport containers. This “technical” definition of a market separation showed later difficulties as the differentiation between containers and swap bodies was fluid. Road transporters began to invest in non ISO standardized containers or even in ISO containers for transporting liquid goods in continental traffic. They wanted of course also to transport these units as all their others with “their” CT-operators. This led even to situations where the upper corner fittings of containers were hidden by a tarpaulin to let them appear as swap bodies.

On the other hand the railway companies or their container companies transported more and more swap bodies. This created mistrust of UIRR companies and their customers as they accused railway companies to give up their neutrality and give better prices to their daughter companies than to the UIRR companies.

The strong market segmentation was abandoned at the end of the eighties on intervention of the EU General Directorate for Competition. Since then all operators may transport all kinds of loading units.

Nevertheless the main business of the UIRR companies still is the continental market of loading units coming from the road side. The hinterland traffic with maritime containers is up to today an additional business outside of the mentioned Business Model.

8. Coverage
The UIRR co-operative Business Model covers the continental transports of loading units in Europe. Because of more favorable framework conditions by the alpine countries, mainly Switzerland two thirds of European combined transport is alpine crossing transport. More than 2 million consignments (truck load equivalents = 2,3 TEU) are transported each year.

9. Strategic background – evaluation
The UIRR business model is based on a co-operation of road and rail. This model had an incredible success over four decades. The growing rates were always higher than those of the container companies or the railways themselves, whose business model towards the continental transport market was to provide the full door-to-door transport including terminal haulage organized by themselves in competition to road transport.
We even see that in the fourth decade of combined transport, in the last years the container companies came into big financial troubles and had to give up either completely or at least important parts of their traffic, whereas the co-operative model continues to show good growth rates.

If some railway companies try in the last years to increase their participation in UIRR companies, there is a certain risk to leave the UIRR co-operative business model. It is the success of this business model which creates a tendency by traditional railway companies to counteract the initial philosophy: Combined transport has gained such an important part of freight traffic that railways often want to take more control of this strategic part of their traffic and want to increase their shares. An example is the German Kombiverkehr where DB held initially a minority participation, has stepped completely out of the company end of the nineties and has in the meantime increased their shares to a 50% participation. But in this case contractual agreements have been found to assure that road and rail shares vote separately so that no side may outvote the other and the co-operative business model may still be continued.

The dependency between operators and railway companies may not be judged by the part of the participation only. As long as there is for most traffic no free choice of railway traction and only the traditional provider offers traction, the operators are dependent on the tariffs and services of one Railway Undertaking. But with upcoming intra-modal competition the participation gains of cause importance.

In some cases the co-operative business model is maintained when more than one Railway Undertaking participate in the shares of the CT-operators. It is also maintained even with upcoming concentration of business, when bigger CT-operators participate in smaller ones. Example: the Belgian TRW with participations of Cemat and Novatrans. Often established CT-operators are participating in the foundation of operators in smaller EU-countries or East and Central European countries. They prefer this co-operative approach rather then to spread out on their own, to assure a company structure which guarantees the active participation of national and local transport companies.

10. Volume of business
About the half of all combined transport in Europe is handled by UIRR companies in line with the co-operative business model.

The volume on a normal working day represents the load capacity of 10,000 trucks shifted to rail on long distances (800 km in international, 560 km in national traffic), filling 500 trains.

The volume of international traffic nearly doubled in the last decade.
Appendix 2. 2-18: Air Cargo Interlining

1. Involved partners:
   Airlines world wide:
   - Air carrier, mixed passenger and freight
   - All-cargo carriers

2. Type of partners:
   Airlines providing air cargo services without regard to the nature of service: national, continental, intercontinental.

3. Owner relationship between the partners.
   Owner relationships may exist but do usually not exist. In case of existing owner relationships, more qualified co-operation agreements than interlining agreements are probably governing joint commercial activities of the partners, for example Air France and KLM.

4. Main objectives:
   Air cargo operators wish to extend their networks offered to their customers without operating flight themselves all over the world. Airlines therefore agree on terms and conditions under which shipments acquired by one airline are transported to their final destination by at least more than one operator. Operators hence improve their position on the market by expanding their services.

5. Legal / contractual basis:
   Interlining agreements provide the legal framework for the interlining of freight and passengers. The agreements mainly govern the following principles:
   - billing procedures;
   - handling of claims;
   - arbitration in case of disagreements;
   - waybills and other documents.

   Two types of interlining agreements exist:
   - the Multilateral Interline Traffic Agreement (MITA) governed by IATA; and
   - bilateral agreements between two carriers of which at least one has not signed the MITA agreement.

   The MITA is annually updated by a working group of the International Air Transport Association (IATA). Airlines wishing to operate under MITA have to sign a MITA agreement also indicating whether passengers and/or freight interlining is planned. Furthermore, each carrier has to directly contact any other carrier with whom he wants to interline passengers and/or freight. The contacted carrier will usually approve the request. The request may be rejected, for example, if the solvency of the requesting carrier is in doubt.

   Interline shipments have least priority after own and partner shipments. Billing and payments are handled either by the IATA Clearing House (ICH) or the Airline Clearing House (ACH). Rates are agreed on a case-by-case basis (special prorate agreement-
SPA). If no SPA is agreed in time, published rates will be applied, which are usually very high.

If a carrier does not want to work under the MITA agreement, he may enter into negotiations with any airline and conclude a bilateral agreement. Bilateral agreements usually consist of an individually modified MITA. Direct billing of partners is the most significant difference to MITA.

6. Geographical coverage

*Example of AirBridge Cargo and Emirates SkyCargo*
AirBridge Cargo (ABC), the scheduled cargo airline subsidiary of Volga-Dnepr Group, and Emirates SkyCargo signed an interline agreement in January 2006. The agreement gives ABC the ability to offer its Russian customers cargo capacity to destinations in the Middle East, India and Africa using the Emirates SkyCargo network. In exchange, Emirates SkyCargo has the opportunity to extend its network to Moscow’s prime cargo hub at Sheremetyevo Airport by interlining through ABC’s Frankfurt and Amsterdam hubs.

The agreement is of particular value to the aerospace and technology sectors in Russia, now better serving their clients in all the countries served by Emirates. With its thriving Moscow hub and extensive network in Russia, ABC’s services in return enable Emirates SkyCargo to effectively serve the huge demand for pharmaceutical products from the Indian subcontinent and carry large outsize shipments such as machinery and equipment to offline points in Russia.

7. Market segments
Air cargo, all commodities.

8. Coverage
Interline Agreements cover the co-operation between two or more airlines for the carriage over particular routes. Details are listed under point 5:

- billing procedures;
- handling of claims;
- arbitration in case of disagreements;
- waybills and other documents.

9. Strategic background – evaluation
Interlining provides good opportunities for air cargo carriers to expanding their networks without operating new services on their own, bearing full costs and full commercial risk of those services. Well designed co-operations enable the partners to improve capacity utilization by matching transport flows and by enlarging the number of destinations served by a service provider.

Multilateral interlining is based on conditions that have to match the requirements of all partners involved. These conditions laid down in the MITA may therefore reject carriers from joining MITA. Air cargo carriers therefore more and more conclude bilateral interline agreements to expand in areas which are strategically important to achieving
company objectives. Due to the high specific benefit of the partners and synergy effects, conditions may be much more attractive than MITA conditions.

Freight forwarders voice that freight interlining may have negative effects on performance quality due to possible deficiencies in interface management. They will certainly hold the first airline responsible in case of bad performance delivery.

**10. Volume of business**

Unknown. Dependant from the specific agreement.
Appendix 2. 2- 19: Antwerp Intermodal Network (AIN)

1. **Involved partners:**
   - Lead partner: Gemeentelijk Havenbedrijf Antwerpen, Belgium
   - 18 other partners, mainly terminal operators, barge operators and the like
     (10xBE, 1xDE, 3xFR, 4xNL)

2. **Type of partners:**
   Large consortium with partners from Belgium, Germany, France and The Netherlands.
   The lead partner is a port development company, leading a large team of professional
   transport companies, all benefiting from transport volumes generated by the port.

3. **Owner relationship between the partners.**
   Probably none.

4. **Main objectives:**
   Provision of port hinterland services with non-road transport modes, mainly inland waterway shipping.
   Transport of intermodal units between the port of Antwerp and various inland container terminals by barge or train.

5. **Legal / contractual basis:**
   The project is partly financed by the Marco Polo Program of the European Union. The contract with the European Commission is based on the proposal submitted for selection by the consortium. An internal contract or memorandum of understanding defining tasks and budget exists.

6. **Geographical coverage**
   Services start and end in the port of Antwerp. Services operate in Belgium, the Netherlands and Germany (Rhine only).

7. **Market segments**
   Transport of intermodal transport units, mainly container services (intermodal).

8. **Coverage**
   As far as it is known, the project focuses on the organizational structure of services/
   the project and the marketing of services.

9. **Strategic background – evaluation**
   The co-operation is intended to provide port hinterland services over relatively short distances (around 100 km). The project planned to benefit from heavy road construction activities on the motorway “ring” around Antwerp in 2004 and 2005, causing heavy road congestions in and around Antwerp, also affecting port hinterland traffic.
   It is known that the project fell behind the initial modal shift target but is also far from failing. The only rail service between Antwerp and Köln (Germany) had to be replaced by a shipping service for reasons not specified.
10. Volume of business
The project initially intended to shift 865 million tkm over a period of three years.
With an estimated average transport distance of 100 km (probably less) and an average net weight of freight of 10 t/TEU, this equals to 865 000 TEU moved in three years (roughly 290 000 TEU par year).
Appendix 2. 2- 20: Bonamare - Bonatrans

1. **Involved partners:**
   - Bonamare, Köln-based company representing five independent owner master operated ships;
   - Bonatrans, company assisting Bonamare members in mid- and long-term acquisition of contracts.

2. **Type of partners:**
   - Five owner masters, leasing ships belonging to five limited partnerships where the owner masters hold shares themselves.
   - Bonamare: GmbH (limited company).
   - Bonatrans Handels- und Befrachtungs-GmbH (assisting to commercial activities): GmbH (limited company).

3. **Owner relationship between the partners.**
   For the ships: limited partnerships. shareholders are Bonamare (average: 30 %), owner masters (between 10 and 30 %) and external shareholders, obviously original investors from the 1970s (time when the ships were built).
   - Bonamare: Limited company owned by a single owner.
   - Bonatrans: unknown, but probably also owned by the same owner.
   At the beginning of 2006, the owner relationships were modified, integrating the five independent limited partnerships into Bonamare. The leasing contracts and the ownership relations regarding the ships are not affected.
   The new, more centralized structure was established to improve the rating of Bonamare for the raising of private funds from banks.

4. **Main objectives:**
   - Capitalizing on economies of scale (fuel, insurances etc.);
   - sharing of economical risk of commercial activities, especially repair;
   - joint acquisition of contracts.

5. **Legal / contractual basis:**
   Bonamare owns shares in the limited partnerships. Probably contractual agreement regarding charges to be paid to Bonamare for acquisition and back-office tasks.

6. **Geographical coverage**
   Europe, all navigable waterways as from class Va

7. **Market segments**
   Inland waterway transport.
   Commodities: bulk goods, building materials, containers/swap bodies, hazardous materials, heavy loads, disposal transport.
8. Coverage
See. 4: Main objectives. Also:
- common marketing;
- central control of the implementation of technical innovation, especially electronic devices, for example for the minimization of empty runs;
- joint training.
Bonatrans assists Bonamare members in the acquisition of freight. Activities are focused on mid- to long-term contracts, for example on regular container services or on calls for tender.

9. Strategic background – evaluation
The inland waterway shipping market is to a large extent characterised by owner master operated units fully bearing the economical risk of their ship and operations. Due to the limited capacities of one single ship (and its owner), no strategic approach to marketing and acquisition of contracts is possible. Most shippers hence practice a hand-to-mouth living.
Bonamare overcomes this critical situation by establishing a shared risk community which now survived almost 30 years and was able to cope with rising fuel prices and heavy competition with eastern European ship owners so far. For example:
- Bonamare members bundle capacities to take over bigger and more complex tasks;
- Bonamare members jointly carry the risk of expensive, heavy maintenance and repairs of ships.

10. Volume of business
Overall Bonamare group:
- Five ships;
- 31 staff (on-ship and in Köln and Duisburg).
Appendix 2. 2-21: CargoLine/ABX

1. Involved partners:
   - CargoLine GmbH, Germany
   - ABX LOGISTICS Deutschland, Germany

2. Type of partners:
   - CargoLine:
     - co-operation of mid-size freight forwarders with focus on consolidated freight (LCL network);
     - 43 partners, thereof 15 shareholders and 28 franchise holders
     - 44 locations incl. one hub
   - ABX LOGISTICS:
     - transport and logistics service provider with focus on consolidated goods
     - formerly 30 locations in Germany
     - part of the international ABX LOGISTICS network

3. Owner relationship between the partners.
   None.
   CargoLine branches operated under a franchise regime or owned by shareholders.
   ABX Deutschland: a 100% subsidiary of ABX LOGISTICS worldwide.

4. Main objectives:
   Merging the activities of two LCL networks. Some sources talk about a merger already. The following objectives are pursued:
   - merging transport volumes of both companies, generation of synergy effects and economies of scales;
   - improving customer relations by enlarging the network;
   - optimization of two competitive networks with formerly 74 locations in total.

5. Legal / contractual basis:
   Co-operation agreement signed by both companies in January 2006. CargoLine opens its network to ABX, creating a single network and merging freight flows.
   Franchise agreements were signed in January 2006 for the integration of six ABX locations into the CargoLine network. ABX is the franchise holder for these six locations with the same rights and obligations as other franchise holders. Only these six ABX location will remain. Other branches will be bought by CargoLine partners, sold otherwise or closed.
   The agreed locations will become part of the CargoLine organization. Integration has to be negotiated with individual CargoLine partners.

6. Geographical coverage
   Germany
7. Market segments
National consolidated cargo (Germany)

8. Coverage
CargoLine is opening its network to ABX LOGISTICS. Six ABX branches will be fully integrated into the CargoLine network. CargoLine quality standards and product range will be implemented.

ABX gives up its own network in Germany but gains a reliable partner in its international network. Both the European CargoLine network and the European and international network of ABX LOGISTICS will not be affected by the co-operation.

9. Strategic background – evaluation
ABX Deutschland was in deficit for a several years already. ABX Deutschland is the successor of the former LCL branch of Deutsche Bundesbahn, now Deutsche Bahn AG. Selling ABX Deutschland proved to be impossible for some time.

Compared to selling ABX Deutschland, ABX does not have to give up its business in the most important European market. Now ABX has got a reliable partner.

CargoLine improves its network and largely benefits from increased transport volumes.

Three questions remain open for the time being:
- Do ABX customers accept the deal?
- Will CargoLine be able to manage the increase in volume?
- Will ABX Worldwide agree with the deal?

10. Volume of business
- CargoLine:
  - Consignments: 6 million (intra-German consignments only)
  - Trucks: 2,748 (2004)
- ABX LOGISTICS:
  - Consignments: 5 million (intra-German consignments only)
  - Turnover: 700 M€ of which 300 M€ correspond to domestic road services
Appendix 2. 2- 22: China Cargo Alliance (CCA)

1. Involved partners:
113 members: 67 'International' forwarders operating in 52 countries and 46 Chinese Class-A or NVOCC forwarders operating in all ports of China with about 90 offices. Apart from China, usually only one freight forwarder per country is allowed. Freight forwarders from abroad shall not whish to set up own offices in China.

Founding members in 1999: Daniel Wong (Chinese freight forwarder), Christos Spyrou (Spyrou Air Exelixi SA, Greece / Balkans), Stephan Haltmayer (Quick Cargo Service GmbH, Germany)

2. Type of partners:
Medium-sized freight forwarding companies being able to provide the full range of forwarding services in their home country. Most trade covered by CCA members is maritime based (approx. 80%).

3. Owner relationship between the partners.
CCA members pay an annual membership fee of 3 000 $ to the organization. CCA in return provides a range of services to their members with a focus on networking, analysis, information provision etc.

No owner relationship exists between the various partners.

4. Main objectives:
CCA members from China seek to co-operate with freight forwarding companies from abroad. CCA provides the Chinese forwarding industry with an network of international freight forwarders who not only handle their export shipments, but who allow to develop international business all over the world.

The main objectives of international partners are access to the Chinese market at reduced risk. Chinese partner companies provide a good knowledge of the Chinese market or of at least their port or region. They are able to provide the full range of services in China, extending the facilities of non-Chinese forwarders not having the capacities or not wishing to set-up own offices and networks in China themselves. CCA enables their members to compete with large multinational forwarders by having a reliable international forwarding network and thereby providing good services at competitive prices.

5. Legal / contractual basis:
The alliance claims to be neutral. All their members are free to trade their services with other alliance members. Furthermore, member agents are free to conduct business wherever and with whomever they choose.

CCA members agree on a kind of code of conduct which covers the following points:
- independency from exclusive agreement between any international and any Chinese forwarder;
- fairness and reliability in trading;
adherence to strict confidentiality regarding all business relations;
adherence to all contractual agreements.
Contracts are agreed on a case-by-case basis.

6. **Geographical coverage**
   - China: all major ports and cities closed to the coast. Less than five branches in the Chinese hinterland.
   - Worldwide: south Asian coast range (Indian Ocean), Europe, USA, Australia (South East), South America (west coast)

7. **Market segments**
   All market segments.

8. **Coverage**
   China is a new market unknown to many international trading companies. The freshly deregulated transport market provides many opportunities to Chinese and foreign companies but also holds many risks. A reliable network of local players and international players therefore provides a solid basis for new contacts and contracts. The first of both are claimed being indispensable to successful trading in China.
   The S.A.F.E. (Security-Alliance-Fund-Engagement) is a CCA protection program which will cushion outstanding amounts of Members that go out of business to agreed limits. As reported in early 2005, this fund had not yet to be activated.

9. **Strategic background – evaluation**
   CCA provides a platform for the establishment of new trading relations. Members commit themselves only to the adherence to the “code of conduct” which itself may serve as a quality criterion in the future. They retain their full independence and flexibility. Both are essential to SME in a very competitive market.
   CCA membership paves the way to new partners and businesses and provides a safe framework for businesses in a market new to most partners.
   The success of CCA lead to the launch of the China Worldwide Cargo Alliance (CWWA) organized under the same roof and following the same principles. The CWWA intends to attract air cargo forwarders which are not well represented in the CCA. The organizers expect a significant share of forwarders becoming member in both organizations. However, many partners will stick to only one membership.

10. **Volume of business**
    Unknown. Volumes are agreed on a bilateral basis. All partners seem to frequently use the network.
Appendix 2.2-23: City Logistics (Example: Bremen)

1. Involved partners:
   - 1991: Start-up of cooperation with six partners, located in the Freight Village (FV) of Bremen
   - 1994: Foundation of “City-Logistics Ltd”
   - 2000: FV forwarding agencies leave the “City-Logistics Ltd”
   - 2002: Restart of City-Logistic within the framework of EU project “VIVALDI” (Visionary and Vibrant Actions through Local transport Demonstration Initiatives)

2. Type of partners:
   Except for GVZ-E all shareholders listed above are Europe-wide shippers or even global players, offering all kinds of logistic services, mainly based on road transport.

3. Owner relationship between the partners.
   unknown

4. Main objectives:
   On the basis of Freight Village Bremen as a
   - common location of the shareholders,
   - logistic consolidation area,
   - gateway between long and short distance goods traffic
   the main idea of City Logistics was to coordinate the road distribution of groupage freight amongst the shareholders on common destinations for
   - dedicated customers,
   - the city of Bremen,
   - dedicated districts in town,
   - regional destinations and
   - the harbor of Bremen
   in order to
   - improve the trucks’ load factor on distribution tours or
   - reduce the necessary number of trucks for goods distribution respectively,
   - offer additional services (e.g. warehousing for retail companies)
   - release delivery problems (e.g. ramp waiting time) in customers’ and/or urban areas,
   - reduce the traffic load especially in the city.
5. **Legal / contractual basis:**
see point 1 and figure beneath.

Source: ISL, Bremen

6. **Geographical coverage**
Market segments see point 4.

7. **Market segments**
Mainly groupage freight

8. **Coverage**
see point 4

9. **Strategic background – evaluation**
This is a good example for rise and fall of many City-Logistics projects in Europe. The main reasons for the failure of this kind of co-operation are:

- Reducing City-Logistics performance to mere transport in practice, implicating a strong interdependency between project success and transport price (which is always a problem in the implementation phase of a new product). Profit contributions from other services are not available;
- Missing vertical cooperation (with customers);
- Profitable services are done by single shareholders, “problem services” are handed over to the cooperation,
- Requested minimum volume not available or strong volume fluctuation;
- Domination of single interests (of single partners);
- Problems with allocating transaction costs;
- Necessity to lay open internal data to the partners (e.g. purchasing prices, customer contacts, cost structures);
- Focus on short term profitability (“long breath” required).
On the other hand “success factors” can be described as follows:
- Neutral and competent moderator available;
- Active marketing and product image building;
- Start-up financing by public authorities;
- Use of existing structures within start-up phase possible;
- Offering of a variety of services;
- Implementation of new business areas;
- Local nearness of the cooperation partners.

10. Volume of business

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<td>9</td>
<td>12</td>
<td>17</td>
<td>11</td>
<td>8</td>
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</table>

Data source: ISL, Bremen

current volumes: unknown
Appendix 2. 2- 24: CoLog

1. Involved partners:
   - Goller Internationale Spedition GmbH, Himmelkron
   - Spedition Murrmann GmbH, Kulmbach
   - Söllner Logistics GmbH & Co. KGg, Tettau
   - Spedition Steinbach GmbH & Co. KG, Bayreuth
   - Spedition Vogel KG, Thurnau
   - Wedlich-Service-Gruppe GmbH & Co. KG, Bayreuth

2. Type of partners:
   Independent freight forwarders, medium-sized enterprises, with a total of 600 staff, more than 500 road tractor units, more than 120 00 m² storage and warehousing facilities.

3. Owner relationship between the partners.
   None, as far as known.

4. Main objectives:
   Six partners from the freight forwarding business jointly funded CoLog AG (plc.) in 2005 to provide mainly the regional supply industry with a competent partner in contract logistics. CoLog is intended to provide qualified services in the fields of intralogistics and transport logistics, being a close link between shippers and freight forwarders.

   CoLog provides the following services:
   - information about logistics systems;
   - elaboration of strategies for controlling and managing internal and external flows of material;
   - evaluation of services and costs to make transparent the benefits of a cooperation with CoLog;
   - planning of the implementation of strategies;
   - control of the day-to-day logistics business.

5. Legal / contractual basis:
   Public limited company (plc), the six partners holding equal shares.

6. Geographical coverage
   Focus on Franken (Franconia) in Central Germany, activities and partner companies all across Europe.

7. Market segments
   - consulting,
   - analyses and strategies,
   - all kinds of warehousing and distribution logistics,
   - procurement and disposal logistics,
   - print- and media logistics,
   - automotive, glass and beverage logistics,
- relocation/removal and furniture transport,
- export/import air, shipping and rail transport services,
- general goods for national and international shipping,
- European land-bound transport services.

8. Coverage
See points 4. (Main objectives) and 7. (Market segments). CoLog bundles existing know-how of the partners and provides one face to the customers as regards complex tasks and contracts.

Consulting services and related tasks seem to be a new field in the partner’s portfolio. CoLog mainly wants to pursue those companies to outsource their logistics management remaining to be sceptical towards the large and very large logistics providers.

9. Strategic background – evaluation
CoLog partners intent to increase their share of added value in the logistic chains. The CoLog philosophy is “together we are stronger”. CoLog provides a one face to the customer in terms of logistics. The individual partners to a large extent remain the executing companies behind the scenes.

CoLog emphasizes that it has the competences and qualifications of a group but will remain part of the “Mittelstand”, the medium-sized companies.

10. Volume of business
More than 75 M€ annual turnover of all partners in 2004.
Appendix 2. 2- 25: Deep freeze food logistics

1. **Involved partners:**
   - apetito (manufacturer of deep-freeze menus)
   - Conditorei Coppenrath & Wiese (manufacturer of deep-freeze bakery products)
   - Roncadin (manufacturer of ice cream)
   - Overnight Tiefkühl-Service GmbH

2. **Type of partners:**
   - Three manufacturers of deep-freeze food (see above)
   - One logistics provider specialized in handling and transporting refrigerated food (Overnight Tiefkühl-Service GmbH)

3. **Owner relationship between the partners.**
   Overnight Tiefkühl-Service GmbH is a 100 % subsidiary of Conditorei Coppenrath & Wiese GmbH & Co. KG, Osnabrück, Germany.

4. **Main objectives:**
   Optimization of the logistic chains of several manufacturers with almost identical logistics requirements in the food sector such as storage and almost identical trading partners.
   The delivery of food to the trading partners (mostly retailers) is optimized by the concentration of flows and the optimization of capacity utilization. Synergy effects and economies of scales may be achieved such as the increase of capacity utilization (lorries).

5. **Legal / contractual basis:**
   Unknown so far.

6. **Geographical coverage**
   Frequency of delivery:
   - Germany: twice a week nationwide, direct service to all partners
   - Benelux: three times per week per region
   - Great Britain: daily service
   - South of Europe: one to two times per week
   - East of Europe: one to two times per week.

7. **Market segments**
   Deep-freeze food products

8. **Coverage**
   Joint use of central storage and distribution facilities (hub) including the following processes:
   - order acceptance;
   - storage;
- packaging;
- transport.

Common procurement: package material, electricity, cols storage garments etc.

9. Strategic background – evaluation
Three food manufacturers took the initiative to optimize the performance of their distribution systems at minimum costs. Due to the similar requirements for storage and transport, one single system is able to meet all requirements.

A further advantage of the co-operation is that customers of all manufacturers are also almost identical. The variability of storage and transport demand of the partners are highly complementary.

10. Volume of business
Unknown
Appendix 2. 2- 26: eWit

eWit = Web-based Intermodal and Inland Waterway Transport Training for Europe

1. Involved partners:
   - via donau (Project Coordinator)
   - Babbage Institute for knowledge and Information Technology (BIKIT)
   - British Waterways
   - Bureau Voorlichting Binnenvaart
   - European Federation of Inland Ports (EFIP)
   - European Intermodal Association (EIA)
   - Fachhochschule Steyr
   - Imagination Computer Services GmbH
   - TINA Vienna – Transport Strategies GmbH

   Further 12 partners from all over Europe have testing and advisory functions

2. Type of partners:
   Three partners are public or semi-public (1/3/4) companies with a strong focus on inland waterway transport (IWT). Two partners are associations of the IWT sector (5/6), four partners are private commercial enterprises providing consulting and technical support.

3. Owner relationship between the partners.
   None

4. Main objectives:
   The project pursues three main objectives:
   - Provision of a consolidated source of information about intermodal inland waterway transport (IWT);
   - Provision of modern and attractive learning tools in the sector of logistics education and training on Intermodal IWT;
   - Increase of awareness for Intermodal IWT in the European logistics sector.

   In order to improve the use of multimedia technologies in education on Inland Waterway Transport (IWT), eWIT has implemented a new web-based approach for logistics training. Web-based applications have been developed which will provide European trainers and learners with up-to-date training methods and content on intermodal IWT. The tool shall replace current methods and content which is mostly reduced to a few outdated technical and nautical issues. Instead, eWIT provides users of the new platform with information displayed in several formats: text, graphs, audio and video animation.

5. Legal / contractual basis:
   The project is partly financed by the Marco Polo Programme of the European Union. The contract with the European Commission is based on the proposal submitted for selection by the consortium. An internal contract or memorandum of understanding defining tasks and budget will probably exist.
6. Geographical coverage
The project covers the transport mode inland waterway shipping and its intermodal inter-
faces with other transport modes. It is intended to foster knowledge about the IWT sector as a whole with a special focus on intermodal transport. The river Danube serves as an example in the application and stands for any inland waterway in Europe.

7. Market segments
All market segments except for express services. All modes, focus on inland waterway transport. Truly intermodal approach.

8. Coverage
Training covers all aspects of inland waterway transport: waterways, inland vessels, ports & terminals, information services, market & information, intermodal inland wa-
terway shipping, policy & law.

9. Strategic background – evaluation
The project started with the assumption that insufficient knowledge about the inland waterway sector, the opportunities it provides, the technologies which are available etc. hinders the market from prospering. As IWT provides many opportunities in intermodal transport chains (e.g. port hinterland transport), a strong focus has to be on intermodal interfaces with other transport modes. eWIT therefore needs to be re-
garded as a promotion project with positive long-term effects for the IWT sector.

Project completed in February 2006. Public access as from June 2006. The eWIT plat-
form will be maintained and updated by via donau. Follow-up projects are planned in mid-term to enhance the tool. Mainly the integration of further corridors is envisaged.

10. Volume of business
- Overall budget: 720 00 EUR
- Marco Polo funding: 361 000 EUR
Appendix 2.2-27: On road network Sweden

1. Involved partners:
   - AA-Bolagen (Vara)
   - Ekdahls Åkeri (Malmö)
   - Ljungby Fjärtränsport (Ljungby)
   - LBC Frakt I Värmland (Karlstad)
   - Alltransport (Norrköping)
   - Närkefrakt (Örebro)
   - Gävleborgs Transprot service (Gävle)
   - Vestberga Åkeri (Stockholm)
   - Skellefteå Lastbilsstation (Skellefteå)
   - Freight forwarder Kühne + Nagel AB, Sweden

2. Type of partners:
   Ten road transport operators and road transport co-operatives with more than 600 lorries all together.
   Freight forwarder Kühne + Nagel AB, Sweden, as lead partner of the co-operation without own trucking capacities.

3. Owner relationship between the partners.
   Road transport operators are independent. Some companies are jointly organized in co-operatives. No relationship between Kühne + Nagel and the road transport operators.

4. Main objectives:
   Implementation of a road transport network, being a true alternative to the three dominating service providers controlling 95% of the road transport market:
   - DHL (formerly ASG)
   - Bilspedition (Schenker)
   - Fraktarna (DFDS)
   The initiative was taken by Kühne + Nagel in 2005, also relying on the services of the incumbent operators.

5. Legal / contractual basis:
   The co-operation comprises nine partners with equal rights, including Kühne + Nagel. Two operators are member of On Road but are not financially involved in the co-operation.

6. Geographical coverage
   Mainly Sweden. The new network is built up of partners operating national long-distance services. The network serves 19 hubs spread across Sweden. Partners continue to provide local and regional services.

7. Market segments
   Not specified. Obviously focus on general cargo. Special services unknown.
8. Coverage
On Road is the selling brand of the joint activities of all On Road members. On Road provides a portal for booking, billing, tracking and tracing. Common IT standards are high, capacity and opening hours have to meet On Road standards.

9. Strategic background – evaluation
On Road is the new brand in Sweden for road transport services. The brand bundles the joint activities of the partners, facing strong competitors dominating the Swedish market so far. There is indication that undertakings operating on behalf of the incumbent companies as well as customers were not satisfied with the incumbents.

The initiative was by Kühne + Nagel (K+N), international freight forwarder, not possessing own vehicle resources to provide services in Sweden. This caused a high dependency on the incumbent service providers. The new co-operation does not actually allow K+N to control the business. But On Road partners probably very much welcome transport volumes generated by freight forwarder K+N.

On Road strives to becoming no. 3 on the Swedish market.

10. Volume of business
Commercial data are kept secret.
Appendix 2. 2- 28: Star Alliance

1. Involved partners:
Founding Members (1997):
- Air Canada (Canada)
- Lufthansa (Germany)
- SAS Scandinavian Airlines (Danmark, Norway, Sweden)
- Thai Airways International (Thailand)
- United Airlines (USA)

Other Members:
- Air New Zealand (New Zealand, joined in 1997)
- All Nippon Airways (Japan, 1999)
- Asiana Airlines (South Korea, 2003)
- Austrian Airlines Group (Austria, 2000)
- Bmi (United Kingdom, 2000)
- LOT (Poland, 2003)
- Singapore Airlines (Singapore, 2000)
- South African Airways (South-Africa, 2006)
- Spanair (Spain, 2003)
- Swiss International Air Lines (Switzerland, 2006)
- TAP Portugal (Portugal, 2005)
- US Airways (USA, 2004)
- VARIG (Brazil, 1997)

2. Type of partners:
Passenger airlines (carriers) of various sizes. Austrian Airlines joined the alliance as a group comprising the carriers Austrian, Austrian Arrows and Lauda Air.

3. Owner relationship between the partners.
Owner relationships exist in some cases:
- Swiss International Air Lines is a 49% subsidiary of Lufthansa which will be transferred into a 100% ownership as soon as possible.
- The SAS-Group own 49% of Spanish carrier Spanair.

4. Main objectives:
The Star Alliance is the first close alliance in the airline sector, funded in 1997. The main objectives are:
- extending the services offered to the customers by each carrier by linking the partner networks and services;
- usage of synergy effects at service and operational level;
- fostering innovation and setting of industry standards;
- capitalizing on economies of scale and alliance bargaining power.

5. Legal / contractual basis:
Contractual.
6. Geographical coverage
842 destinations in 152 countries. The 18 alliance members originate from 18 different countries.

7. Market segments
National and international air passenger services and related added value services.

8. Coverage
Joint commercial and operational activities:
- co-ordination of flight schedules to permit almost seamless travel which may include several different carriers within the alliance, on a single ticket;
- co-ordination of related services such as baggage handling to reduce transfer times between flights;
- harmonization of customer service processes to promote a consistent experience by passengers;
- co-operation in the development of a common information technology platform;
- joint acquisition of service rights for flight routes;
- joint acquisition of slots;
- joint purchasing or leasing of aircrafts;
- joint purchasing of spare parts for aircrafts.
Joint marketing activities:
- integration of individual frequent flyer programs;
- offering of extended services to frequent flyers under the labels “Star Alliance Silver” and “Gold”;
- joint marketing of special products or bargains such as the “Around-the-World Ticket”.

9. Strategic background – evaluation
Alliances in the airline sector are partly driven by the nationally oriented legal frameworks of the sector. For example, bi-lateral agreements between two states (open-sky agreements) may restrict services between the two states to services offered by carriers originating from either country thus excluding foreign carriers. Co-operations may at least partially overcome these limitations.
The Star Alliance is the first and still biggest alliance in the passenger aviation sector. It is heavily based on the co-operation of partners of whom only one originates from each participating country.
One of the most apparent benefits of the co-operation is the one-face-to-the-customer aspect, allowing each of the alliance partners to sell almost worldwide services. This process is supported by activities such as code sharing.
The European Commission feared that the alliance’ activities might be the first approach towards a universal merger of air carriers. It has proven so far that this development is not pursued by the alliance members.
Computer reservation systems (CRS) and competition

In Global Distribution Systems, such as Amadeus, Galileo, Worldspan, or Sabre, the practice of code sharing (see below) results in the same flight details, except for the flight number. Where at least one alliance member (or code sharing partner) provides good services (in general: direct and hence shortest service), these services are displayed on computer screens excessively forcing other airlines flights to be displayed on following pages where they may be missed by passengers searching for required flights.

10. Volume of business

Services: almost 16,930 flights to 842 destinations in 152 countries daily. The alliance operate 2,832 aircrafts which carry 390 M passengers per year.
Appendix 2. 2-29: System Alliance

1. Involved partners:
System Alliance GmbH (ltd.), Niederaula, Germany, owned by 14 mid-size logistics service providers:
   - Birkart Systemverkehre, Aschaffenburg
   - Cordes & Simon, Hagen
   - Cretschmar, Düsseldorf
   - Wilhelm Diehl, Esslingen
   - Elsen, Wittlich
   - Hellmann Worldwide Logistics, Osnabrück
   - Honold, Neu-Ulm
   - IHG Logistics, Unna
   - G. L. Kayser, Mainz
   - Militzer & München, Hof
   - Streck, Lörrach
   - Transit Transport Flensburg, Flensburg
   - Zufall, Göttingen

Three further co-operation partners;
   - Kunze, Karlsruhe
   - Lehnkering, Mannheim
   - Werndl, München

2. Type of partners:
Mid-size logistics service providers. Most partners are active in the logistics sector beyond the System Alliance activities.

3. Owner relationship between the partners.
None, as far as known. IHG Logistics has recently been bought by Rhenus AG & Co, KG (Rethmann Group), Germany.

4. Main objectives:
Opening up of new markets beyond regional activities: Provision of nation-wide transport and logistics services for consolidated cargo (packaged and palletised goods). European services via the European co-operation platform SystemPlus (System Alliance being the German shareholder).
By the end of 2001 a refrigerated cargo service was established by the group.

5. Legal / contractual basis:
Co-operation agreement. No further details known.

6. Geographical coverage
Germany, Europe via the SystemPlus co-operation.
7. Market segments
Consolidated goods (packaged and palletized).

8. Coverage
- Collection and distribution of consolidated cargo;
- procurement logistics;
- quality management;
- marketing;
- information technology/common IT platform;
- transport and system planning;
- hub organization;
- accounting and clearing house.

Three internal working groups:
- marketing and sales;
- organization and quality;
- clearing rates.

9. Strategic background – evaluation
Regionally based logistics providers, often having evolved from road hauliers, are seeking chances to compete with internationally operating logistics service providers. The establishing of co-operation networks is therefore an appropriate means of extending the portfolio (here: geographical coverage).

Partners in co-operation networks may hence cultivate their regional competence while expanding their business within the network.

10. Volume of business
- 1 central hub (Niederaula)
- 39 locations
- turnaround of 5.2 bn EUR
- 8.5 m national consignments
- 2.4 m tons lifted goods
- 6 000 vehicles in operation
- 10 000 staff
Appendix 2. 2- 30: The New World Alliance

1. **Involved partners:**
   - APL Limited (American President Lines)
   - Hyundai Merchant Marine (HMM)
   - Mitsui OSK. Lines (MOL)

2. **Type of partners:**
   - Shipping companies, APL and HMM container shipping only.
   - APL is subsidiary of the Singapore-based NOL group (bought in 1997).
   - HMM is a joint-stock company shares being well spread among share holders.
   - MOL is a subsidiary of the Japan-based MOL group.

3. **Owner relationship between the partners.**
   None.

4. **Main objectives:**
   - Broaden the global coverage of service networks;
   - increase service frequencies;
   - improving service quality for customers/ better responding to customers needs;
   - increasing economical efficiency.

5. **Legal / contractual basis:**
   The current co-operation agreement dates from September 2005 and is valid until 2012. Further details unknown.

6. **Geographical coverage**
   Major East-West container trade lines: Trans-Pacific, Trans-Atlantic, and Asia-Europe.

7. **Market segments**
   Worldwide container shipping.

8. **Coverage**
   - Co-ordination of schedules;
   - co-ordination of ports/terminals served;
   - sharing of vessel capacity.

9. **Strategic background – evaluation**
   The co-operating companies seek better market penetration without expanding own services, a practice which is also well known in the aviation sector. Partners seek to benefit from co-ordinated networks and schedules.

   The partners also capitalize on their high joint market power when negotiation port charges, transshipment charges etc.
Apart from The New World Alliance, two other alliances (Grand Alliance, CYKH Group) were created to better withstand competition from four leading companies Maersk Line, Evergreen Marine, MSC and CMA-CGM.

**10. Volume of business**
The partners:
- serve more than 40 ports;
- operate of more than 100 container ships.
Appendix 2.3: Overview about TRENITALIA Business Models
Including detailed descriptions of each co-operation
TREN workpackage B6 Working Paper

Actual company structure:

Under the date of June, 13, 2006, Trenitalia S.p.A. has a Board of Directors composed by five members. The legal representatives of the Company are the Chairman and the Managing Director, the latter within and with the limits of powers given to himself by the Board of Directors.

The Company is structured as follows (see the following organigramme):

- **Passengers domestic and international Direction, Passengers Regional Traffic Direction, High Speed Direction.**
  They are respectively responsible of the services on medium and long distances (Eurostar Italia trains, Intercity, Espress trains, Night), of urban, suburban, regional interregional and high speed services.

- **Industrial Planning Direction**, that is responsible for the annual and plurianual planning of the production resources and of the passengers business.

- **Passengers Care and Commercial Directions.**

- **General Logistics Operative Direction**, responsible for freight traffic.

- In addition there is a number of staff structures (see the following organigramme)
**Relationship to the holding:**
Trenitalia S.p.A. is a Company with a sole partner, subject to direction and coordination of Ferrovie dello Stato S.p.A.

**Subsidiaries:**
Under the date of June, 13, 2006, Trenitalia directly participates in twenty-eight companies, having controlling interest in five of them. Moreover Trenitalia has an indirect control of other eight companies through its controlled company FS Cargo S.p.A.; which owns seventeen participations.

It has also to be pointed out that Trenitalia indirectly participates in many other companies through its subsidiaries.

(see the following organigramme)

**Shareholder:**
Trenitalia is owned 100% by Ferrovie dello Stato S.p.a.

**Cooperations (Overview/Tables):**
See following sections
Appendix 2.3-1: Hannibal

1. Involved partners:
   - Sogemar (Italy)
   - Trenitalia SpA (Italy)

2. Type of partners:
   - Sogemar Spa, is a global logistic company, subsidiary of Contship Italia Group;
   - Trenitalia is a leading Railway Undertaking in Italy.

3. Owner relationship between the partners.
   Sogemar (Contship Group) 50%, Trenitalia 50%.

4. Main objectives:
   Hannibal is MTO operator. It is active in organizing, managing and commercializing logistics services focused on intermodal technique to and from Contship Italia terminals located in Italian seaports of Gioia Tauro, La Spezia, Livorno, Ravenna.
   Hannibal offers to the ship owners many routes, on the basis of an efficient handling in their Contship terminas and efficient containers delivering on the land by Trenitalia Logistica.
   Hannibal offer is very competitive in the transit time of the goods coming from Far East and to centre Europe, with a reduction from 22 days to 14 days, on the route through Gioa Tauro instead through Rotterdam.

5. Legal / contractual basis:
   Joint venture.

6. Geographical coverage
   Italy, Germany, Switzerland, Austria.

7. Market segments
   International intermodal development to assure to their customers available and fast service from South to Centre Europe.

8. Coverage
   Melzo-Mannheim, Padova-Villach.

9. Strategic background – evaluation
   This is a typical commercial collaboration in the CT market. This allows to share all the costs (and benefits) of the commercialized trains and to extend the CT network of each partner by offering much more CT relations by relying on the expertise of its commercial partners.
10. Volume of business
10 Thousand of TEU’s in 2005

With the new logistic model Hannibal expect to increase its traffic in volume by 100,000 TEU’s in the next years.
Appendix 2. 3- 2: TX Logistik

1. Involved partners:
   - Trenitalia (Italy)
   - TX Logistik (Germany)

2. Type of partners:
   Transport and logistics companies

3. Owner relationship between the partners.
   Trenitalia 51%,

4. Main objectives:
   The majority acquisition puts Trenitalia Logistica in the position to offer its customers out of one hand railway services, not only in Italy but, by TX, also in Germany, Austria, Switzerland and Sweden. In the next development steps is planned that TX will also start activities in Netherlands, Belgium and France.

   Trenitalia is the only railway company offering in Italy a nationwide service not only in the North and Trenitalia is the only railway company with a nationwide single wagon distribution network. In combination with TX and also some of the traditional Trenitalia railway partners Trenitalia offers to its customers not only nationwide but also European service on a very high quality level.

   In western Europe Trenitalia plans, in addition to the current partnership agreements, to offer by its subsidiary TX new high quality services providing an attractive alternative for growing current road traffic flows.

5. Legal / contractual basis:
   Subsidiary Company owned 51 % by Trenitalia.

6. Geographical coverage
   Italy, Germany, Scandinavia, Netherlands, Belgium (See map).

7. Market segments
   Intermodal, sea container, conventional rail goods traffic, produced vehicles distribution.
8. Coverage
Licence Obtained:
- Germany
- Switzerland
- Austria
- Sweden

9. Strategic background – evaluation
TX Logistik AG design and operates complex transport chains. We connect essential performance components such as company-owned rolling stock, quality locomotives drivers, procurements of tracks and power, integration of port and terminal operation to one complete and transparent performance chain.

10. Volume of business
- Total turnover 70 m €
- Of which Domestic:
  - Commercial forwarding and trucking 44% (11 m €)
  - Railway 14 % (3,41 m €)
  - Interplant traffic 42 % (10,71 m €)

The development over the last years shows that the most important growth potential will be in the combined transport.
Appendix 2.3-3: POL-Rail S.r.l.

1. Involved partners:
   - TI/FS Cargo (Italy),
   - Trade Trans (Austria).
   - PKP (Poland),
   - KTF Viafer S.A. (Italy)

2. Type of partners:
   - Trenitalia (Italy): Railway Undertaking
   - FS Cargo: sub-holding of Trenitalia
   - Trade Trans (Austria): The company consists of several, independently managed forwarding and logistics companies. The emphasis is on rail transport.
   - PKP (Poland): Polish Railways, Railway Undertaking
   - KTF Viafer S.A. (Italy): organisation of freight rail transport

3. Owner relationship between the partners.
   Share: 50% Trenitalia-FS Cargo / 25% Trade Trans / 21.77% PKP / 3.23% KTF Viafer S.A.

4. Main objectives:
   Pol-Rail is the ideal partner for all companies operating within the Eastern European area. Its business is rail freight transport for any kind of merchandise on any type of route.
   Thanks to its structural and partnership network, Pol-Rail can offer an impressive range of integrated logistics services to its customers, both in the industrial sector and among international shipping companies.

5. Legal / contractual basis:
   Limited company.

6. Geographical coverage
   Poland, Hungary, Romania, Czech Republic, Russia.

7. Market segments
   MTOs in the sector of rail freight transport to and from Eastern Europe.
   Offer of complete transport management services.

8. Coverage
   Romania Balcanik Area 31%, Czech and Slovakia Republic 8%, Poland 26 % Hungary, Ukraine 35%

9. Strategic background – evaluation
   Pol-Rail S.r.l. is a structure set up by the Italian Railways (Ferrovie Italiane FS) and the Polish Railways (PKP) to develop rail freight traffic between the two countries and, more in general, within Eastern Europe.
The initiative aims to create new routes to provide an alternative for the flows of traffic currently gravitating on other modes of carriage.

10. Volume of business
The customer Portfolio of Pol-Rail is quite concentrated: 20 big customers represent almost 70% of the global turnover.

Year 2005:
- Turnover: 50,5 mln of euros;
- Net Revenue: 753,241 euros;
- Volumes: 1,75 mln of ton;
Appendix 2. 3- 4: SIDEUROPA S.r.l

1. Involved partners:
   - Trenitalia (Italy)
   - SNCF (France)

2. Type of partners:
Both are Railway Undertakings

3. Owner relationship between the partners.
Trenitalia  50%, SNCF 50%

4. Main objectives:
To develop rail traffic of iron and steel products between Italy and France by an integrated logistic offer “door to door”.

5. Legal / contractual basis:
Limited company.

6. Geographical coverage
Italy, France.

7. Market segments
Iron and steel products.

8. Coverage
see above

9. Strategic background – evaluation
Not applicable.

10. Volume of business
The company has a portfolio of 50 customers and handles about 300.000 tons per year.
Year 2005:
   - Turnover: 15,6 m euros;
   - Net Revenue: 128.270 euros;
   - Volumes: 300.000 tons
Appendix 2. 3- 5: EAST rail S.r.l

1. **Involved partners:**
   - Hungarian Railways (Hungary)
   - Trenitalia (Italy)
   - “Tommaso Prioglio S.p.A.” (Italy)

2. **Type of partners:**
   - Hungarian Railways and Trenitalia are Railway Undertakings

3. **Owner relationship between the partners.**
   Hungarian Railways (32%), Trenitalia (32%), “Tommaso Prioglio S.p.A.” (36%).

4. **Main objectives:**
   The Company was founded with the main objective to develop freight traffic mainly on rail between Italy and Balkanian countries.

5. **Legal / contractual basis:**
   Limited company.

6. **Geographical coverage**
   Italy, Hungary, Balkan countries.

7. **Market segments**
   Conventional and combined transport services.

8. **Coverage**
   see main objectives

9. **Strategic background – evaluation**
   A lack of efficient rail freight offer in the East Centre Europe Countries.

10. **Volume of business**
    Year 2003
    - Total Revenue: 2,4 mln euro
    - Losses: -123.076 euro
    - Volumes: 118.413 ton
Appendix 2.3-6: East Gate Express

1. Involved partners:
   - Trenitalia (Italy)
   - ŠŽ Freight (Slovenia)

2. Type of partners:
   Both are Railway Undertakings.

3. Owner relationship between the partners.
   Not applicable.

4. Main objectives:
   The East Gate Express product results from successful cooperation between TI and the Slovenian railways.
   East Gate Express is a new integrated rail service offering rapid and flexible solution for the transport of freight between Milan, Ljubljana Balkan & Eastern Countries linked with Corridor V and X. The train takes just 15 hours to cover the distance between Milan and Ljubljana without stop and 48 hours for East.

5. Legal / contractual basis:
   Marketing/Sales Co-operation.

6. Geographical coverage
   Balkan & Eastern Countries (see map below).
7. Market segments
Conventional transport services.

8. Coverage
see above

9. Strategic background – evaluation
A lack of efficient rail freight offer in the East Centre Europe Countries.

10. Volume of business
100.000 tons per year
Appendix 2. 3- 7: East-West Rail Shuttle

1. Involved partners:
   - Trenitalia,
   - ŠŽ Freight

2. Type of partners:
   Both are Railway Undertakings.

3. Owner relationship between the partners.
   Not applicable

4. Main objectives:
   - Guaranteed and considerably shorter transportation time
   - Reliability and regularity of transport
   - Road time monitoring and supervision of consignment
   - Simple ordering of services
   - Shorter wagon turn-round times.

5. Legal / contractual basis:
   Marketing/Sales Co-operation.

6. Geographical coverage
   Italy, Slovenia, Balkan & Eastern Countries (See below).
7. Market segments
contventional and combined transport services

8. Coverage
see below

9. Strategic background – evaluation
The new East-West Rail Shuttle (EWRS) product results from successful co-operation between Trenitalia, and Slovenian Railways. EWRS ensures, from Tuesday to Saturday, reliable and fast direct daily connection between Slovenia and Italy. It runs between the Ljubliana Zalog and Bologna San Donato terminals.

It covers a route of about 400 km without any intermediate stops in a little more than ten hours. The 550 metres long train can carry 1,000 tons of freight at a time. For transportation of wagon consignment EWRS offers customers conventional and combined transport services. Antennas are foreseen in the Slovenian and Italian territory. EWRS is connected to the network of international train running towards the East and the South-East Europe, while the Bologna terminal provide the distribution of consignment throughout Italy.

10. Volume of business
Year 2005:
- 290 trains
- 4,730 wagons
- 189,200 gross tons
Appendix 2.3-8: New single wagon network

1. Involved partners:
   - Railion/Stinnes (Germany) and Trenitalia (Italy)
   - BLS (Stinnes holds a 20% share) (Switzerland)
   - Rail Cargo Austria (Austria)

2. Type of partners:
   All are Railway Undertakings.

3. Owner relationship between the partners.
   Not applicable

4. Main objectives:
   - Hub & Spoke system connecting the domestic networks of Stinnes and TI
   - Concentration of flows and reduction of complexity
   - Increased frequency of trains per relation
   - Optimization of resources and better quality

5. Legal / contractual basis:
   Operational Co-operation.

6. Geographical coverage
   All single wagon traffic between Italy and Germany as well as transit traffic from North Europe passing through Germany (See below)
7. Market segments
Conventional single wagon traffic.

8. Coverage
see above

9. Strategic background – evaluation
Improve the quality of the single wagon traffic on the north/south axis and the competitiveness of rail with respect to the road.

10. Volume of business
The TI/Stinnes single wagon traffic is about 3,5 mln tons.
Appendix 5:  Legal opinion on alliances in European rail freight services

by

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I. Introduction

Rail freight services within the European Union are still governed by national rules of law in respect of conditions of technical outline and concerning administrative approval requirements that a company has to undertake.

The most attractive part of the market for rail freight services is the one on long distance routes, crossing several European countries. In order to offer such services usually an official national admission of each country that is crossed is necessary. In addition interested railway companies need equipment, especially engines, which meet all technical requirements for border-crossing railway traffic or they need a separate engine for each country that is crossed.

These requirements lead to very high expenses in order to offer border – crossing rail freight transportation in Europe, which often exceeds the economic possibilities of small and medium sized railway companies. Therefore in this case such companies depend on cooperation with foreign railway companies which already own all required licenses and equipment. Cooperation can be structured very differently. There can be treaties concerning only one specific freight service, there can be investments of capital between the companies involved or one company may be merged with another or taken over.

Every form of cooperation has advantages and disadvantages concerning legal, economic and organizational issues. Legal issues can arise out of antitrust and competition law as well as out of questions concerning the contractual arrangements of cooperation.

Organizational issues most of the time deal with allocation and coordination of equipment and staff, as well as customers services. Economic issues can be the acquisition of transportation orders or distribution of costs and revenue. Attention has to be paid to economic and organizational matters already when contractual arrangements for cooperation are concluded.

An interesting, but in rail freight transportation so far almost unknown form of cooperation is the strategic alliance. This paper will present issues of antitrust and competition law as well as contractual arrangements which are possible. Experiences of strategic alliances on other carriers will be taken into consideration, especially for such alliances in civil aviation and maritime container shipping.
II. Strategic alliances

There are strategic alliances in all economic branches and on all levels of the value chain. Whether it is a new phenomenon or only a new expression for a special cooperation between companies does not matter. By all means strategic alliances are co-operations between legally independent companies that exceed a single business transaction or a normal business relationship.

For rail freight haulage a strategic alliance shall be defined as cooperation between at least two legally independent railway companies that exceeds a normal business relation in connection with rail freight services.

There can be numerous motivations for entering into a strategic alliance. Each alliance can have a very different structure.

1. Motivation for strategic alliances

A persistent improvement of the involved companies’ economic situation is the basic motivation for each strategic alliance. Going into detail, there is much more different motivation for the foundation of an alliance. At the end all parts of motivation support the basic motivation, though. In rail freight transportation the following aspects can lead to the foundation of a strategic alliance:

- Access to new markets
- Extension of the lines served
- Aggregation of rail freight services
- Access to rolling stock
- Improvement of rolling stock circulation and utilization
- Optimization of the personnel allocation

Access to markets is especially relevant in border-crossing rail freight transportation because a European railway company has not offhand access to the railway network of a foreign European country. Entering into cooperation with an already admitted company from an interesting foreign country can be useful in order to avoid expenses of getting an admission as railway company in this country oneself. Examples for this kind of alliance are “European Bulls” and the cooperation between Railion and BLS Cargo.
Especially small railway companies often have the problem that they do not have enough rolling stock to offer attractive rail freight services to their customers. This is why many railway companies that offer long distance connections in cargo business cooperate for the first and for the last few kilometers of a transport service with smaller, only locally working companies to extend the network, they can serve. On the other hand the alliance “O.N.E. NRW” is not aiming at the extension of the network of the involved companies but at its aggregation. In addition to offering block trains to the customers as it is done today, an offer in single waggon services is wanted.

It is a typical problem of private railway companies to obtain appropriate freight cars for a new traffic connection. Alliances with companies which offer freight cars for rent and / or alliances with companies that produce freight cars can be useful in order to have access to the rolling stock required for the expansion of business.

Finally, alliances can lead to a more efficient use of rolling stock as well as personnel.

Besides, motivation arising from other branches of business can lead to alliances in the rail freight transportation business, too. For example the goal of “European Rail Shuttle” and of “boxXpress” is to improve freight services between the sea ports and their hinterland, especially for container transportation.

Motivation for strategic alliances that are not compatible with competition law of the treaty of the European Community (ECT) is not considered in this paper.

2. Structures of strategic alliances

Possible structures of alliances can be as different as their motivation is.

There are horizontal and vertical alliances. Horizontal alliances are founded between companies belonging to the same level of the value chain, thus in rail freight haulage between two or more railway companies to jointly provide rail services. Vertical alliances are founded between companies of different levels of the value chain. In rail freight transportation this could be an alliance between railway companies on the one hand and companies renting or producing rolling stock or forwarders and loaders on the other hand. Alliances between railway companies and shipping companies or companies in road transportation cannot be allocated clearly at one or the other category. But they tend to be horizontal alliances because the common carriers belong to the same level of the value chain: freight
haulage.

Further there can be made a difference between incorporated alliances and those that are not. “European Rail Shuttle”, “boxXpress” and “rail4chem” are incorporated, the alliances “European Bulls” and “O.N.E. NRW” are not.

Goals of alliances differ, too. Regarding rail freight services this distinction is only relevant in respect of specialized alliances. In these alliances the production process is divided among the alliance members in such way that each part of it is offered only by one member of the alliance. One company can for example hold staff another company rolling stock at the disposal of the alliance or one company offers long distance connections with high performance engines whereas the other takes care of marshalling services, distribution and collection of freight cars.

3. Critical aspects on strategic alliances

Strategic alliances can significantly improve the economic situation of many companies, by providing access to new markets and business fields, allowing a more efficient use of staff and rolling stock as well as giving access to capital for bigger projects which would exceed the economic ability of one single company. Nevertheless more than half of all strategic alliances have to be regarded as failed. There are numerous reasons. Some alliances fail already in scheduling, but most of them fail due to mistakes in implementation.

Further to problems in implementation the following aspects can make a strategic alliance fail:

- Different, mostly adverse goals of members of the alliance
- Wrong selection of the members of the alliance
- Indistinct goals of the alliance
- Sketchy concept of implementation
- Differing or disproportionate expectations of the members of the alliance
- Cultural differences

Many horizontal alliances fail due to adverse goals of the members who are often competing directly with each other. Vertical alliances often have problems with the choice of the alliance’s members.

For an alliance to be successful goals have to be defined clearly. The concept of
implementation needs to be clear and suitable for reaching the goals. Expectations concerning the alliance must be realistic and congruent.

Moreover, it can be cultural differences which make an alliance fail that seemed to be a perfect match. Partners need to take this problem into consideration. Cultural differences do not only exist in international business but also in inter-regional business even within one European country.

Most alliances fail due to mistakes in implementation, not to those in scheduling. A classical mistake is to transfer too many tasks to the alliance without giving the required authority to the responsible persons. Also, the complexity of implementation of a strategic alliance often is underestimated.

A lack in communication and information within the alliance as well as incompatible data processing and information systems leads to significant additional expenses and less revenue. This is often followed by distrust the members of the alliance, what deprives the alliance of its basis.

Finally the distribution of costs and revenue of the alliance between the involved companies is the hyphenation point of every alliance. Clear rules of distribution as well as clear rules for adjustment in changing circumstances are absolutely necessary for a successful strategic alliance.

Strategic alliances are very fragile due to the reasons mentioned above. Often there is a high fluctuation of members. The more members belong to an alliance the more it looses its stability. Alliances in civil aviation and container navigation show such a high fluctuation of members. In civil aviation the huge number of members of alliances can explain this phenomenon.

There are also reasons outside of the alliance itself which can make it fail. One member can for example get into economic difficulties and for that be unable to fulfill its financial duties to the alliance. Or a member can be taken-over by a non-member company.

III. Antitrust and competition law

Theoretically every kind of cooperation between companies which is more than a single order can draw the attention of antitrust and competition authorities. Title VI, chapter 1, section 1 ECT contains European rules on competition. These rules are completed by the corresponding regulations.
1. Art. 81 par. 1 ECT: Cartel prohibition

Under art. 81 par. 1 ECT all agreements between undertakings or concerted practices are prohibited as incompatible with the common market if they may affect trade between the Member States and if they have as their object or effect the prevention, restriction or distortion of competition within the common market.

a) Agreements between undertakings

Agreements on strategic alliances between two or more railway companies are always agreements between undertakings according to art. 81 par. 1 ECT. Therefore this criteria is given.

b) Affecting trade between Member States

The element of affects on trade between Member States through an agreement between undertakings is of formal nature. No case has become known so far, in which the Competition Directorate General has not assumed a violation of art. 81 par. 1 ECT because the agreement in question would not affect trade between the Member States. This criteria is not given only if an agreement is limited to merely regional services which can in no sensible way be offered by competitors from another Member State.

Rail freight transportation on standard gauge lines therefore always affects trade between Member States if these tracks are connected to the remaining European network of railway lines. Accordingly, agreements between undertakings in this business can affect trade. The same applies to the broad gauge networks in the Baltic States, in Finland and on the Iberian Peninsula as they are integrated into the European rail freight transportation system by gauge changing devices.

This is only different for isolated lines or for most European narrow-gauge railways. Most of the time, these railway lines are not directly connected to the rail freight transportation system in the remaining network.

It is not necessary that all companies participating in an agreement have their domicile in a Member State of the EU. Agreements between undertakings with domicile in third countries can affect trade between the Member States in the legal sense of art. 81 par. 1 ECT, too.
c) Restriction of competition

For strategic alliances the key criteria is the one of prevention, restriction or distortion of competition within the common market under art. 81 par. 1 ECT is the deciding one. The Competition Directorate General treats it as uniform criteria of restriction of competition.

An agreement is seen as restricting competition if the involved companies restrict their own freedom of action on the market by the agreement. Examples are price arrangements, regional splitting of markets or agreements of exclusive cooperation for production and services. In this case a restriction to competition can also be given if the involved companies were not competitors at the time of the conclusion of the agreement. It is sufficient that they were potential competitors in case the agreement had not been concluded.

In addition it is seen as restriction to competition if the position of companies not involved in the agreement is derogated. Contracts between automobile manufacturers and authorized dealers are an example for such agreements because usually the dealers cannot sell other brands than those manufactured by their main contractual partner. They are bound to one brand by treaty. Consequently, it is very difficult for an automobile manufacturer to build up a network of dealers and enter a new market. The first attempt of Kia Motors to enter the German market failed in the 1990ies due to this problem.

The Competition Directorate General has stated that in general an agreement between companies can only restrict trade if the companies involved have a market share of at least 5% of the market in question. But this is only supposed to be a benchmark; it is not binding to the commission or to the European Court of Justice (ECJ) in specific cases. Due to the Announcement of Cooperation some agreements are never treated as restricting trade. For rail freight services this applies to jointly use of storage and transportation equipment as well as marketing and sale. The Announcement of Cooperation only applies to horizontal alliances though, not to vertical ones. In addition the announcement is not applicable to agreements that contain more provisions than published in the announcement. Therefore the Announcement of Cooperation is not very relevant for rail freight services.

In the opinion of the Competition Directorate General the market situation in railway transportation is a special one. Competition on this market is completely underdeveloped. Every agreement that might improve competition is rated positively.
The Competition Directorate General distinguishes the market by common carrier other than some national authorities of competition who distinguish by goods transported. The take-over of RAG Bahn und Hafen by Railion would have been rated much more critical by the Competition Directorate General. The Federal Cartel Authority approved the take-over imposing only few duties, whereas the Competition Directorate General would have imposed much stricter duties. It would also have been possible that the Competition Directorate General would have prohibited the take-over.

The distinction of the market by common carrier by the Competition Directorate General is consistent with European rules on railway business, especially directive 91/440/EEC that aims on the enforcement of competition in railway sector in order to strengthen this carrier. Agreements between companies are incompatible with European law if they restrict competition in the market for railway service. The distinction of the market by common carrier can also be observed in respect of special regulations of the Competition Directorate General on competition law in civil aviation and ocean shipping. Taking this into consideration the approval of the take-over of RAG Bahn und Hafen by Railion has to be judged as mistake.

In either case agreements between private railway companies will remain unobjectionable regarding competition law in the next time. This is independent from the location of their domicile within the same or in different Member States. Agreements between a former state railway and a private railway company from a different Member State are seen positively for the development of competition in rail freight transportation. Only agreements between at least two former state railways are treated as restricting trade. This applies also to agreements between one former state railway and one or more private railway companies from the same country, if their agreement directly leads to restrictions of competition. Such restriction takes place for example, when two companies that were competitors before they concluded their agreement offer services jointly. No restriction of competition is given, if a former state railway transfers specific traffic to private railway companies, though. Co-operations dealing only with utilization of staff and rolling stock are generally unobjectionable according to competition law.

d) Legal consequences

According to art. 81 par. 2 ECT all agreements prohibited under art. 81 par. 1 ECT are void. In addition third parties may take action against the parties of the contract
to cease and desist and sue for damages. Finally, according to regulation 1/2003 EC the commission can order the companies in question to cease cooperation which is prohibited under competition law. The order can be enforced by administrative fines. These fines can be reduced, if an affected company is willing to cooperate with the commission and by actively contributes to the clarification of the circumstances. If a company refuses to cooperate with the commission, fines can be increased.

2. **Art. 81 par. 3 ECT: exemption from cartel prohibition**

Exemptions from cartel prohibition are found in art. 81 par. 3 ECT. Agreements are permitted if they contribute to the improvement of production or distribution of goods. For rail freight services this exemption could only apply to agreements between at least two former state railways because at the moment they are the only ones who could conclude an agreement prohibited under art. 81 par. 1 ECT. Art. 81 par. 3 ECT can apply because in case two former state railways cooperate, there can be an improvement in competitive ability of rail freight services in comparison to other common carriers.

The exception would only apply though, if the agreement was limited to improvement of coordination between the companies involved, to rationalization of operational procedure or to cooperation in sales of transportation services.

3. **Other provisions in competition law**

Out of other clauses in European Competition law especially art. 82 ECT and regulation 1017/68 EEC are relevant to rail freight transportation.

a) **Art. 82 ECT: Prohibition of abuse**

Under art. 82 ECT any abuse by one or more undertakings of a dominant position within the market is prohibited. At the moment such abuse is only possible by one or more former state railways. Any deliberate use of a dominant position in order to place competitive disadvantages on competitors, customers or suppliers is prohibited. However normal activity in the market is not an abuse. Specific advantages resulting directly from the market position of an undertaking are legally allowed, whereas imposing unfair purchase or selling prices is an abuse as well as concluding exclusive agreements with specific companies in order to prevent them
doing business with third parties.

Concerning the prohibition of abuse the Competition Directorate General distinguishes the market by common carrier, too. Agreements or measures concluded by former state railways that are aiming at the prevention of contracts between other railway companies and shippers are prohibited under art. 82 ECT. The threat of a former state railway that it would stop servicing a shipper in single-car-traffic if he cooperated with another railway company in block train services is abusive under art. 82 ECT. Orders for network access by former state railways, which were not actually needed and which lead to capacity constraint of infrastructure are abusive, too.

b) Regulation 1017 / 68 EWG: Competition law in overland transportation

Regulation 1017 / 68 EEC is a special rule of competition concerning overland transportation and therefore is applicable to rail freight transportation. It was based on art. 71 and 83 ECT (former art. 75 and 87 ECT) and contained some procedural rules and some specific rules in competition law concerning overland transportation. These rules were only applicable to specified agreements, which were named in art. 1 of the regulation. They are congruent with art. 81, 82 ECT in reference to the contents discussed in this paper.

Only in terms of the exceptions from cartel prohibition there are provision in art 3 of the regulation in addition to the blanket clause found in art 81 par. 3 ECT that except agreements on the joint utilization of rolling stock and infrastructure facilities as well as agreements on joint labour utilisation from cartel prohibition. Further more agreements on the joint realisation of single car services are excepted from cartel prohibition.

For the rest the predominant part of regulation 1017/68 EWG, especially art. 2 and all rules on proceedings were revoked by regulation 1/2003 EG. Therefore art. 81 and 82 ECT does apply directly to rail freight haulage.

4. Proceedings in European competition law cases

The procedure concerning the enforcement of European rules on competition used by the Competition Directorate General has been changed in its basics by regulation 1/ 2003 EC. There is no more duty of application for agreements of cooperation. There is moreover no longer a declaration by the Competition Directorate
General according to art. 81 par. 3 ECT which is binding to the commission and to the ECJ. Consequently the Competition Directorate General will no longer consider a specific agreement nor will it supply a “comfort letter” declaring an agreement in line with competition law.

According the new procedural rules competition law embodied in the ECT is directly applicable. Therefore companies involved in an agreement of cooperation have to check themselves whether or not an agreement is restricting trade according to art. 81 par. 1 ECT. In case it does they have to check whether or not an exception according to art. 81 par. 3 ECT applies. One could say that nowadays there is a “do-it-yourself-competition-law” in Europe.

This kind of rules lead to a great legal uncertainty for companies involved. In case the Competition Directorate General does not share their view concerning the nature of an agreement in competition law, fines according to regulation 1 / 2003 EC menace. Therefore an informal procedure of consultation with the Competition Directorate General is offered to affected companies. In this procedure the Competition Directorate General presents its appraisal of an agreement. Nevertheless such appraisal is not binding to the Commission and to the ECJ.

In case the Competition Directorate General opens proceedings due to violation of competition law and in case companies involved offer concessions these concessions may be declared binding for the company according to art. 9 of the regulation by formal decision of the Competition Directorate General. The decision must contain a declaration that due to the companies binding concessions there is no longer a violation of competition law.

Finally, the Competition Directorate General can – under art. 10 of the regulation – state by formal decision that a specific agreement does not violate art. 81 par. 1 ECT or that the requirements of an exception according to art. 81 par. 3 ECT are met. Such decision is only made ex officio and only in case it is demanded by public interests. Companies cannot request such decision, they cannot file a claim for a decision either even if the corresponding substantial requirements of art. 81 ECT are met.

In connection with announcement 2004 / C101 / 08 the Commission has published guidelines concerning the application of European competition law. It is an orientation for companies which are evaluating their plans from the point of view of competition law. Hitherto jurisdiction of the ECJ offers numerous hints for interpretation of the rules in question, too.
IV. Contractual Alternatives

If a strategic alliance is admissible by matters of competition law the question of defining its contract arises. The legal form of the alliance itself has to be taken care of as well as of the contents of the implementation contract.

1. Legal form

There are different possible legal form available for a strategic alliance, some of them with, others without a separate legal personality:

- The alliance can be founded by agreement of cooperation concluded by the companies involved. In this case the alliance is not incorporated.
- The alliance can be founded as European Economic Interest Grouping (EEIG) to which regulation 2137 / 85 EC is applicable.
- The alliance can be a corporation according to the law of one Member State. In this case the national rules of the state, in which the corporation’s domicile is, do apply.
- The alliance can be a European Company (SE). The relevant rules for a SE are found in regulation 2157 / 2001 EC, directive 2001 / 86 / EC and the national incorporation law of the member state in which the SE has its domicile.

A merger of the companies that are involved in a strategic alliance under a national law or European law is not taken into consideration here, because then there are not two legally independent companies, which are necessary for a strategic alliance due to the definition given above.

Even if an alliance is incorporated, it does not necessarily execute the operational business. The alliance can only be dealing with administrative questions. It can also only be founded to own specific rights such as trademarks.

a) Cooperation agreement

The legal basis for a strategic alliance can be an agreement of cooperation between the companies involved. Corresponding examples are the alliances “European Bulls” and “O.N.E. NRW”. Such alliances are not incorporated. Legally binding decisions of the alliance can only be made with the approval of all members for each single question. This can lead to problems in daily business. The members of
the alliance can solve the problem by granting power of decision to a single person or to only a small group of persons. These persons could then act legally binding for the alliance in daily business. Their decisions would bind all members of the alliance, too. In case of an agreement of cooperation staff is employed and rolling stock is owned by the members of the alliance.

A disadvantage of an alliance that is not incorporated is that it cannot be litigant in a trial itself but instead all members of the alliance have to enforce claims against third parties together for the alliance. Moreover business partners of the alliance cannot assert a claim directly against the alliance. They can only file a claim against all companies participating in the alliance. Consequently, there is a great legal uncertainty when executing a contract that was concluded by the alliance. If the contractual party is not clearly recognizable potential customers might hesitate to do business with the alliance.

On the other hand an agreement of cooperation is the fastest and easiest way to establish a strategic alliance.

b) European Economic Interest Grouping (EEIG)

From a formal point of view an EEIG is the ideal structure for a strategic alliance between small and medium size companies. This is what the EEIG was made for. regulation 2137 / 85 EEC and the corresponding national implementation laws are its legal basis.

The EEIG is a legal entity and has legal duties due to art. 1 par. 2 of the regulation and can file a suit in its own name and it can be sued in all Member States of the European Union, no matter in which country it has its domicile. The EEIG has been the only uniform legal structure within the European Union prior to the introduction of the European Company (SE), which guaranteed easy transnational cooperation to the participating companies without significant legal problems.

According to the regulation an EEIG may be only of ancillary nature to the companies participating in the alliance. It must not replace the economic activities of its members. Under art. 3 par. 1 of the regulation it is not the purpose of an EEIG to make profit for itself. That does not mean that it cannot make any profit, though.

So far these restrictions have not been of importance. But they could lead to legal problems in railway business. It is for example possible that authorities of EU Member States deny admission as railway company with regard to the ancillary
nature of the alliance. So far there have been no judgments concerning the admissionable extent of business activities of an EEIG. An answer to this question can only be found by the ECJ. There is no statement of the juridical literature on is problem either.

According to art. 3 par. 2e of the regulation an EEIG cannot be member of another EEIG. It also must not hold shares of any kind of a member company whereas it can hold shares of third corporations as long as this is done on behalf of its members.

The EEIG must comprise companies that have their domicile in at least two different Member States (art. 4 par. 2a of the regulation). In compliance with art. 3 par. 2c of the regulation an EEIG itself can employ no more than 500 persons.

An EEIG is legally treated like a partnership. Details concerning the partnership are according to the applicable national law. The EEIG must be listed in the register provided by the Member State of its domicile.

It is an advantage of the EEIG that is can be founded easily. Because of the treatment as partnership there is no minimum capital required for the foundation. The EEIG can have branches in all EU Member States. Within the EU the legal rules applying to the EEIG are basically uniform.

Theoretically, it is possible that legal restrictions presented above influence the EEIG’s business activities in a negative way, but there is no known case in which these restrictions would have been of any relevance.

c) Corporations according to the law of a Member State

The members of an alliance can found a corporation according to the law of one Member State of the EU. Such corporations are for example “rail4chem” which was founded according to German law and “European Rail Shuttle” which was founded under Dutch law. Minimum requirements and expenses differ significantly from one Member State to the other and also depend on the selected legal form. It is impossible to describe all advantages and disadvantages in this paper.

After the rulings of the ECJ concerning freedom of establishment of corporations according to art. 43, 48 ECT many disadvantages coming up when founding a corporation according to a national law do not exist anymore. The judgments in the cases “Centros” (C-212/97), “Überseering” (C-208/00) und “Inspire Art” (C-167/01) are most important on this topic.
According to this jurisdiction a corporation which has its domicile in a Member State and which was founded under the law of this Member State may have branches in all other Member States without having to found affiliated companies under the law of the state in which the branch will be. So in theory every corporation which was founded according to the law of one Member State can start up business activity throughout the EU. Therefore for example every corporation could obtain an admission as railway company in every Member State. So far no company has tried doing so, yet. Significant reservation in some national licensing authorities is here to be expected, what can lead to substantial problems in implementation of such concept.

Moreover it is possible according to the above mentioned jurisdiction that a company founded under the law of one Member State can transfer its domicile to another Member State without having to adjust its legal structure to the national law of the Member State the domicile is transferred to. A “private limited company” (Ltd.) founded in Britain can for example transfer its domicile to the Netherlands while keeping the legal structure of an Ltd. Furthermore each corporation with domicile within the EU can sue and be sued in each Member State.

So far there is only “European Rail Shuttle b.v.” respectively its affiliated company “ERS Railways b.v.” that does business in two Member States without having founded another legally independent company. This is due to art. 10 par. 2 of directive 91 / 440 EEC though, which applies only to combined traffic. It can be expected that a railway company founded under the national law of one Member State that applies for admission as railway company in another Member State will find strong resistance, if it does not only provide intermodal services and therefore can avail the above mentioned provision.

From the legal point of view after the rulings of the ECJ a corporation founded under the national law of a Member State with domicile in another Member State is not restricted in its business activities within the EU anymore. But there are many legal problems developing out of the new rulings of the ECJ. Due to their extent they cannot be illustrated in this paper. For most of the problems solutions have not been found, yet.

d) European Company (SE)

As regulation 2157 / 2001 EC became effective a year ago, it is now possible to found a corporation under European law. For the first time there is a uniform legal
form in company law in Europe without any legal restrictions for its business activities in comparison to corporations founded according to the law of one Member State. This is the difference to a company founded under a national law. Therefore the SE is significantly different from the EEIG.

An SE can be founded in each Member State of the EU, it can have its domicile anywhere in the EU and transfer the domicile to each Member State. It can be founded by merger of at least two stock corporations with domicile in two different Member States. It is also possible to merge a stock corporation and its affiliated company with domicile in another Member State to an SE. Moreover two legal persons from at least two different Member States can found an affiliated company as SE.

According to art. 4 par. 2 of the regulation the minimum capital of an SE is 120.000 €. The shareholders of the SE can choose between the Board-System and the Dual System consisting of supervisory board and executive board.

From the shareholders point of view it is a big advantage of the SE that the national rules for worker’s participation do not apply to a SE under certain conditions. Details can be found in directive 2001/86 EG and the corresponding national implementing law.

An SE can be admitted as railway company in every Member State. Practical experiences do not exist, yet. Most probably national licensing authorities will at least require the SE to have a branch in the country for which it applies for license.

2. On the content of a corporate charter

Many aspects have to be taken into consideration in reference to the content of an alliance agreement. Many of them depend on the kind of the members of the alliance and on the alliance’s goals. Some points are relevant for all strategic alliances though. These points are:

- Strategic goals of the alliance
- Organization of the alliance
- Allocation of costs among the members of the alliance
- Division of revenue among the members of the alliance
- Access to resources of members of the alliance
It depends on the individual circumstances, which other aspects have to be considered in an alliance agreement. Overall the agreement should give as little reason as possible for dispute in daily business to ensure an unobstructed daily business of the alliance without unnecessary quarrel.

a) Strategic goals of the alliance

As discussed above a strategic alliance can only be successful if goals are clear. Therefore the goals of the alliance have to be expressed in the alliance agreement as the goal of an agreement is one of the most important criteria of interpretation in lawsuits and in case there is a loophole in a contract. Courts always consider the goal or purpose of an agreement for its interpretation.

It has already been discussed in the context of motivation for the foundation of an alliance that strategic alliances in rail freight transportation can have numerous goals. It is very important that these goals are expressed clearly and comprehensible in the agreement and that the members of the alliance agree on the goals as they are expressed in the contract.

b) Organization of the alliance

Special regard has to be dedicated to the organization of the alliance, as many alliances fail because of deficient organisation. First of all methods and tasks to reach the alliance’s goals have to be determined. Then the alliance has to be provided with enough staff and equipment to fulfill its tasks. It is absolutely necessary that at least one person is only taking care of tasks arising out of the alliance’s business activity. This person needs to be free of tasks arising out of the daily business of the members of the alliance. This is even if tasks of the alliance are modest.

Tasks have to be allocated clearly within the alliance. If the alliance is incorporated, is can act on its own behalf in business. The agreement has to include clear provision whether the alliance executes its business activities itself or partly been taken over by the alliance members. If such a provision is not appropriate because the corresponding requirements are not foreseeable, proceedings have to be determined in the agreement that provide the alliance management with a possibility to allocate tasks and is suitable for daily business.

In addition the management of the alliance must be provided with the competence to make decisions adequate to goals and extent of the activity of the alliance. The
agreement needs to determine who has which power of decision or it has to determine proceedings how authority can be given within the alliance. These proceedings also need to be suitable for daily business.

In the agreement on an incorporated alliance it is not necessary to deal with all aspects of organization. This is true for the actual agreement of cooperation concerning an alliance that is not incorporated, too. Usually the top – management of the members of the alliance make framework decisions whereas the lower management makes more detailed decisions. In a framework contract information on procedural aspects and on the competence of each deciding body can be found. Alliances in civil aviation and container navigation have several deciding bodies on each level of organization. The closer it gets to daily business the more often these deciding bodies meet in order to make decisions fast enough.

In the alliance in container navigation for example the “Prinzipal Committee” consists of the members of the board of each member of the alliance. It meets twice a year. The “Executive Committee” consists of the higher management of the members. It meets four times a year. Finally, there are several “Operational Committees” which deal with different tasks in coordination and handling of the alliance’s daily business. Consequently, under the “Alliance Agreement” which sets the framework there are several contracts dealing each with all necessary tasks of the alliance. The framework contract only states who is responsible for the preparation of which rules and it states how agreements are made legally binding.

c) Allocation of costs

Distribution of costs among the members of an alliance is one of the most critical aspect in each alliance agreement. Many provisions are possible in detail.

It has to be made a difference between alliances that are incorporated and those that are not. If the alliance is incorporated, it is an obligation to keep books according to the relevant rules of law. In this case the question arises of whether of not losses of the alliance have to be compensated by the members of the alliance and who has to pay how much, what can be determined by a permanent or variable key. A fixed key can be determined congruent with the shares of the members of the alliance for example, a variable key by the amount of freight, the personnel provided or the rolling stock kilometres accomplished.

Is the business of the alliance operated by the alliance members, as it is always the case when the alliance is not incorporated, the question of the allocation of
costs originating from the alliance business arises.

Basically, there are three methods of distribution of costs available:

- Distribution of all costs among the members of the alliance
- No distribution of costs at all
- Distribution of parts of all costs among the members of the alliance

Shall all costs be distributed among the alliance members, they have provide special accounting and reporting for all costs deriving for the alliance business. The distribution of costs itself results from a prior determined key as mentioned above. This option causes a considerable amount of administrative effort and holds a significant potential for quarrel in terms of the question, which costs can be imputed to the alliance, even if this question is already considered in the alliance agreement. There is a great attempt for the alliance members to impute as much costs to the alliance as possible.

For this reason many alliances forego distribution of costs at all. This minimises the administrative effort of course. Furthermore each alliance partner can keep economic advantages arising from own efforts for itself and does not need to share them with other alliance partners that mostly have not contributed to these advantages. A disadvantage of this option is that it can lead to unjust results due to a disproportionate allocation of costs as a result of the allocation of tasks within the alliance.

In order to avoid such unfair results some alliances have agreed on distribution of parts of the alliance’s costs. Only administrative costs can for example be shared whereas each member bears its own operative costs. Distribution is done by a key that has been determined in advance.

In any case expenses for distribution of costs have to be deliberated about the expected benefit. The benefit can also be a greater satisfaction of the alliance members and therewith connected a greater commitment to the alliance.

d) Division of revenue

Just like the distribution of costs the distribution of revenue is a critical aspect, too. Mostly it is possible to find an independent key for the distribution of revenue from the one for distribution of costs. In transportation business there are so far only two methods of revenue distribution. Either there is no distribution of revenue or all
revenue is collected and finally distributed among the members of the alliance according to a key.

Depending on the structure of the alliance it can make sense not to distribute revenue. In container shipping each member of an alliance usually market a share of the capacity on a liner service operated by the alliance. The share of each shipping company depends on the share that its ships represent in reference to the total capacity of the liner service. In rail freight transportation two railway companies could offer a shuttle service running six sets of trains each week. One company could operate two sets of trains, the other four. Consequently, one partner could market one third of each train’s capacity (for example in form of container positions) whereas the other partner could market two thirds. By this way each alliance member can gain the results of its own marketing and does not need to share them with a partner, whose marketing may be less successful. If one company needs more capacity than it is entitled to, it can buy the extra capacity from the other partners, if they have some left. Moreover, a motivation for the abdication of a division of revenue lies in the resulting minimal administrative effort.

The other option of division of revenue is the so called “common cash box”. In this case the complete revenue goes in a kitty. Then either first all costs of the alliance are paid and the potential surplus is distributed among the members of the alliance or each member bears its own costs and the entire revenue is distributed among them.

A critical aspect in terms of the division of revenue can be that certain members benefit indirectly in their own business from the alliance activities. These benefits cannot be imputed to the alliance directly. They can result from a positive image or business contacts arising from the alliances activities. Are these benefits spread very unequally among the alliance members, this can hold a potential for quarrel. Eventually it can be necessary to provide a compensation for such benefits to maintain the alliance. The precise definition of such a compensation is very difficult, as the correlation of the respective benefits to the alliance causes substantial problems.

As for the allocation of costs there has to be an analysis of benefit and expenses arising from the division of revenue. The advantage of a common cash box is a better sense of connection among the employees of the alliance members that increases significantly their motivation to contribute to the success of the alliance.
e) Access to resources of members of the alliance

As mentioned above it can be the goal of an alliance in rail freight transportation to optimize utilization of rolling stock and staff. In this case it has to be discussed at which level of priority the alliance has access to resources its members. If it is the only goal of the alliance to improve circulation of rolling stock and personnel allocation it can make sense that the alliance has access only to free capacity of its members, which they do not need for their own business outside the alliance. In case the alliance needs more capacity it has to find it on the market or it has to set from the business activity in question aside. The alliance „O.N.E. NRW“ is basically structured in this way.

If the business activity of the alliance represents a large part of the members’ activity it can be useful to guarantee highest priority to the alliance. Consequently, if all capacity within the alliance is in use, members of the alliance might have to find extra capacity on the market for their own business activity.

As the alliance can be of different economic importance to its members, individual graduated provisions can be reasonable. The cooperation between BLS Cargo and Railion for example has a significant greater economic importance to BLS Cargo than it has to Railion. Therefore, it is sensible for BLS Cargo to provide the cooperation with resources at a high priority whereas Railion estimates the priority of the services in this cooperation somewhat lower.

A clear provision on this point in the alliance agreement is necessary to avoid significant and unnecessary dispute about resources for the alliance’s daily business. Such dispute can wear out the alliance.

V. Conclusion

Railway companies can improve their competitive strength significantly through strategic alliances. They can combine their resources, optimise the utilisation of the resources and thus generally improve their productivity. Efficiency can in general be improved by an optimum and collective use of resources. Especially small railway companies can access new markets and new business fields, which were inaccessible for them alone. The special charm of strategic alliances for these companies consists in the opportunity to broaden business activity without loosing legal independence.

On the other hand strategic alliances are very fragile entities. They can only be
successful, if all partners strive for the same goals, agree upon the way, how to reach these goals and the concept to implement the alliance is deliberate and realistic.

Most strategic alliances are not successful economically due to a multitude of most different reasons. It is impossible to avoid all of these reasons by good scheduling and good implementation. Strategic alliances can fail for example because of the personal animosity of the top managers of two participating companies. But many reasons for failure of strategic alliances can be avoided by choosing a legal form that is suitable for the goals and tasks of the alliance and by elaboration the legal basis of the alliance. This legal basis has to provide clear rules for all critical aspects but it also has to grant enough tolerance for adjustment for the case of changing circumstances. It can be difficult in certain cases to find an agreement to a contract that meets all of these requirements. These difficulties can be an indicator for a difference in the goals of the potential alliance partners that would endanger the success of the alliance. In either case, a thorough preparation of a strategic alliance ensures an early discovery of problems for the potential alliance partners and thus a reliable basis for the decision whether the project shall be continued or not for all participants.

From the point of view of the Competition Directorate General strategic alliances in rail freight transportation can presently only be a problem if two or more members of the alliance are former state railways. Though such cooperation is not in any case inadmissible due to competition law. But it is recommended to have such cooperation examined concerning incompatibility with competition law by the Competition Directorate General in a consultation procedure. The decision depends on the structure of the cooperation in each single case. Problems can also arise from cooperation between a former state railway and another railway company with domicile in the same Member State as the state railway in question, since the Competition Directorate General determines the relevant market in accordance with European railway legislation by common carrier to judge a cooperation in rail freight services in terms of its compliance with the European competition law. Thus the relevant market is the one for rail freight services and not the market for overland transport and also not the markets for the transportation of certain goods.

The Competition Directorate General of the Commission of the EU explicitly appreciates all other strategic alliances in rail freight transportation, as they strengthen competition in this traffic sector. Therefore strategic alliances in rail
freight transportation are also welcome from the economic point of view. They lead to an increase in competition, strengthen the efficiency in this transport sector and thus improve the entire European transportation market.

Köln, October 28th, 2005
Appendix 6: Technical Specification for Interoperability (TSI), Telematic Applications for Freight Services

1 Content of the TSI Telematic Applications for Freight

1.1 Scope

1.1.1 General

The commercial operation of trains, wagons and Intermodal units throughout the European rail network requires efficient interchange of information between the involved actors as Infrastructure Managers, Railway Undertakings and other service providers. Performance levels, safety, quality of service and cost depend upon the quality of such interchanges.

The purpose of this TSI is to ensure that efficient interchange of information is at all times best adapted, with regard to quality and quantity, to changing requirements so that the transport process may remain as economically viable as possible and that freight transport on rail recovers its hold on the market against the intense competition it has to face.

The interfaces between the various partners involved in freight transport are seen as critical points: to manage shipments under the conditions of so many interfaces by means of information exchange is the final goal of the TSI Telematic Applications for Freight.

1.1.2 Functions

Functions within the scope of the TSI

- Applications for freight services, including information systems (real-time monitoring of freight and trains),
- Marshalling and allocation systems, whereby under allocation systems is understood train composition,
- Reservation systems, whereby here is understood the train path reservation,
- Management of connections with other modes of transport and production of electronic accompanying documents.
Functions outside the scope of the TSI

- Payment and invoicing systems for customers are not within the scope of this TSI, nor are such systems for payment and invoicing between various service providers such as Railway Undertakings or Infrastructure Managers.
- Also the long term planning of the timetables is out with the scope of this Telematic Applications TSI.

1.2 Involved Entities

This TSI takes into account

- the present service providers and
- the various possible service providers of the future involved in freight transport as they are for (this list is not exhaustive):
  - Wagons
  - Locomotives
  - Drivers
  - Switching and Hump shunting
  - Slot selling
  - Shipment management
  - Train composition
  - Train Operation
  - Train monitoring
  - Train controlling
  - Shipment monitoring
  - Inspections & Repair of Wagon and / or Locomotive
  - Customs clearance
  - Operating Intermodal Terminals
  - Haulage management

Some specific service providers are defined explicitly in the directive 2001/14/EC and 2001/16/EC (1.2.1); others were defined following the functional requirements (1.2.2):

1.2.1 Entities as defined by Directives 2001/14/EC and 2001/16/EC

Infrastructure Manager (IM):

Infrastructure Manager (IM) means any body or undertaking that is responsible, in particular, for establishing and maintaining railway infrastructure. This may also include the management of infrastructure control and safety systems. The functions of the Infrastructure Manager on a network or part of a network may be allocated to different bodies or undertakings.

Based on this definition, this TSI regards an IM as the service provider for the allocation of paths, for controlling / monitoring the trains and for train / path related reporting.

According to Directive 2001/14/EC the body or undertaking to which an IM allocates a path is defined as an applicant:
Applicant:
Applicant means a licensed Railway Undertaking and/or an international grouping of Railway Undertakings, and, in Member States which provide for such a possibility, other persons and/or legal entities with public service or commercial interest in procuring infrastructure capacity, such as public authorities under Regulation (EEC) No 1191/69 and shippers, freight forwarders and combined transport operators, for the operation of railway services on their respective territories.

Railway Undertaking (RU):
A Railway Undertaking (RU) is defined as any public or private undertaking, licensed according to applicable Community legislation, the principal business of which is to provide services for the transport of goods and/or passengers by rail with a requirement that the undertaking must ensure traction; this also includes undertakings which provide traction only.

Based on this definition, this TSI regards the RU as the service provider for operating trains.

1.2.2 Functional entities

Fleet manager, Keeper:
The provision of wagons is a service that can be related to a Fleet manager. If this service for a transport is one of the services offered by the RU, the RU acts also as Fleet manager. A fleet manager again can manage his own wagons and / or wagons from another Keeper (another service provider for freight wagons). The needs for this kind of service provider are taken into account independent of whether the legal entity of the fleet manager is an RU or not.

Lead Railway Undertaking (LRU):
When taking into account the needs of a customer, one of the services is to organise and manage the transport line according to the commitment to the customer. This service is provided by the Lead Railway Undertaking (LRU). The LRU is the single point of contact for the customer. If more than one Railway Undertaking is involved in the transport chain, the LRU is also responsible for the co-ordination with the other Railway Undertakings.

This service can also be undertaken by a forwarder or by any other entity.

Intermodal service integrator:
The involvement of an RU as LRU can differ from one type of transport flow to another. In the Intermodal business the managing of capacity in block trains and the preparing of waybills is done by an Intermodal service integrator, who could then be customer for the LRU.

This TSI does not create new legal entities and does not force an RU to involve external service providers for services which the RU itself offers but it does name, where
necessary, a service by the name of a related service provider. If the service is offered by an RU, the RU acts as the service provider for that service.

### 1.3 Considered Processes

The main point, however, is that the RUs and the IMs and all other Service Providers (in the sense as defined above) must work together, either through co-operation and/or open access, as well as through efficient interchange of information, to deliver seamless services to the customer.

This TSI for the railway freight transport industry is limited according to Directive 2001/16/EC to the processes to be carried out by IMs and RUs / LRUs with reference to their direct customers.

### 2 Implementation of the TSI

#### 2.1 Modalities of Application of the TAF TSI

This TSI is oriented to provide information support to the rail freight business process that can lead to a major enhancement of the quality of transportation services. As such its application is independent from the notions of new/upgrade or legacy infrastructure or rolling stock assets as it is usual in other TSI called for by Directive 2001/16.

Due to its pervasive nature the impact of this TSI will be profound on the business and operational processes of the whole of the European rail industry. Moreover, the continuous growth of international freight transport demands a European-wide information management perspective. These facts compound to call for the set-up of a coherent trans-European implementation plan for this TSI. This plan should provide both a vision of what is to be achieved when implementing the TSI and the way and timing to migrate from the present framework of fragmented information systems towards a comprehensive European-wide information highway that can provide value-added to all rail transport stakeholders – Infrastructure Managers, Railway Undertakings, freight forwarders and ultimately the client alike.

Set against this background the concept of a Strategic European Deployment Plan (SEDP) is mandated. The SEDP defines the target system that is to be achieved in order to implement this TSI together with its underpinning rollout plan.

#### 2.2 Legal character of the TSI

The TSIs are mandatory rules which supersede within their scope any existing national rules.

Normally, TSIs are published as "Decisions of the European Commission" requesting the Member States to apply and enforce the rules. For the TSI Telematic Applications for Freight, the EC decided to publish it under the form a "regulation" addressing directly the actors involved. The reason is given in the Part 1 of the TSI:

"(15) The TSI Telematic Applications for Freight has a functional nature. As a consequence, the main addressees of the provisions contained in the TSI will be the mar-
ket actors. A Regulation addressed to a suitable range of actors is more appropriate than a Decision addressed to the Member States, in view of the implementation of the provisions of the TSI.”

Consequently, the TSI addresses firstly the professional representative bodies from the railway sector acting on a European level to set up a European strategy for the implementation of a Telematic TSI.

2.3 Implementation Procedure

As required by the TSI (Article 7), the European representative bodies from the railway sector (CER, EIM together with UIC) have started to set up a Strategic European Deployment Plan (SEDP). At present, this work makes good progress; the SEDP will be presented in time to the Member States and the Commission at the end of 2006, what is about one year after the date of publication of this Regulation.

2.4 Involvement of the actors

For the purpose of the elaboration of the SEDP the following requirements do apply:

- Railway Undertakings and Infrastructure Managers shall contribute by providing functional and technical information about the existing individual Telematic applications for freight3;
- Once the Strategic plan is completed, all activities related to the implementation of the subsystem Telematic Applications for Freight have to be justified against this deployment plan.
- Any proposed non-adherence by a RU or IM should be justified in the implementation dossier submitted to the Member State, to the European Railway Agency and to the EC.

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3 Existing telematic applications for freight are telematic applications for freight that are already in service before this TSI enters into force.