Improving European Railways
retrack
An Integrated EU-Project

No. 3 - January 2009

EDITORIAL

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At this time we enter a crucial stage of the RETRACK project: all efforts are going into the preparation of the demonstrator. As a project we are now evolving from research tasks to activities focused on the preparation of the demonstrator.

During the implementation of the demonstrator practical problems will have to be solved. One factor is that the railway market is constantly in motion: it is characterized by mergers in railway undertakings, changes in terminal ownership, cooperation with other transport companies and logistics providers, etc. So far cheap capital has been available to the railway industry for investments. Now, however, the question is how far the global financial crisis will affect the rail industry. It has already been reported by railway undertakings that the multimodal market has diminished by 5 to 10% in the last few months. So the combination of lowering real demand and a drying up of financial means for investment might prove a difficult condition in railway markets in the near future and thereby also for RETRACK. We will watch to see how far this will affect RETRACK, so far I am pleased to report that all signs are on green.

One of the products of RETRACK is the development of strategic business models. A fruitful synthesis between academia and the private railway undertakings has been undertaken by the RETRACK project. Different business models have been identified and developed within the RETRACK project that form the basis for setting up a rail corridor. For example, the anchor customer model has been selected as central to the development of the demonstrator. Further the requested trainpaths in each country have been assigned to RETRACK although we have had a delayed response from the RNE in Vienna. This shows that the one stop concept is not yet proving advantageous relative to requesting a trainpath within each country of the corridor. Johanna Ludvigsen reports on the different business models in this newsletter.

In September the Trans European Rail Freight Seminar was held in Delft. This provided a platform for presenting the RETRACK project to a wider audience and also to confront the RETRACK results with the observations and experiences from the stakeholders. There is a separate news item in this newsletter about the seminar.

Arnaud Burgess

PROPOSAL ON THE RETRACK BUSINESS MODEL
Johanna Ludvigsen

A business model adopted by the RETRACK operators will define what cargo segment they target, and what kind of business bonds they establish with shippers and/or logistics service providers (LSPs). One type of business links with RETRACK clients could be a long-term, blanket contract chartering a large part of the RETRACK train's loading capacity on, say, the entire Rotterdam-Constantza corridor. Another may involve several small, short-term spot contracts for freight transfer over shorter corridor segments, i.e., between Ludvigshafen in Germany and Budapest, Hungary, or between Constantza in Romania and Vienna in Austria.

Model 1: Train Operator & a Third Party Logistics Provider

In this business model one train operator sells and/or leases the
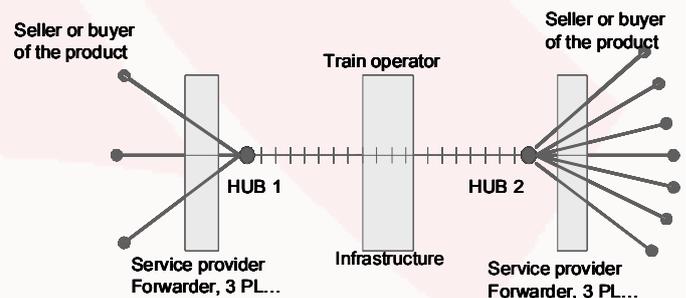
load carrying capacity of the entire consortium to a third party logistics (3PL) provider, who in turn concludes contract(s) with shippers, consignors and/or other end-users. Division of roles in this working arrangement is pretty straightforward: train operator(s) perform long haul between single-modal and/or

WHAT IS RETRACK?

The RETRACK project is applying an innovative rail freight service concept to the movement of rail freight across Europe. RETRACK is the "Reorganisation of Transport networks by advanced Rail freight Concepts". It is funded under the European Commission (EC) FP6 Programme. The project started in May 2007 and will run for four years.

inter-modal hubs while the LSPs negotiate with clients the conditions of sales and the levels of quality.

Model 2: Anchor Customer
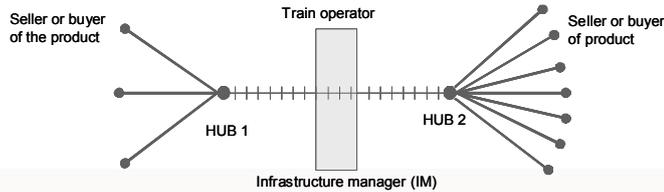
In the Anchor Customer Model one train operator leads a network of rail carriers providing transport services, concludes contracts with buyers (shippers or consignors) without any intermediaries, and organises freight movement between international origins and destinations. The Anchor customer is a large client who frequently ships large freight volumes along a given corridor, and buys and/or charters a considerable part of the RETRACK operators' load carrying capacity. This model is highly prevalent in traditional railway segments where carriage capacity is sold to a limited number of large buyers who ship trainloads and/or block trains with unitised, non-unitised bulk, steel, and/or paper rolls.

Model 3: Agent Model
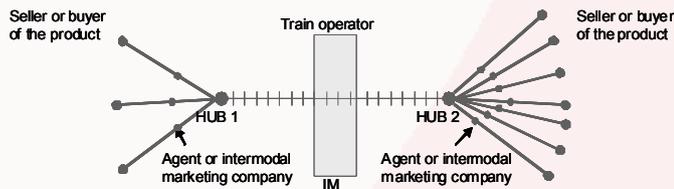
In the Agent Model, the rail freight operators offer services through intermediaries such as brokers and/or inter-modal marketing companies who sell the load carrying capacity to international clients against fast commission. This model is a modification of the previous one; train operator(s) move freight along a given corridor while agents sell the load transfer capacity either on particular corridor segments or along the entire Rotterdam-Constantza pipeline.

Model 4: A 3 PL and/or 4 PL Supplier Model
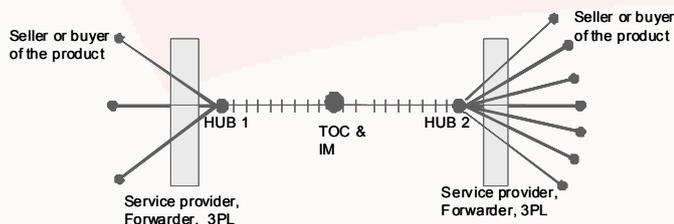
In the 3PL Model, the LSP concludes all sales of combined logistics and transportation service. A train operator is just one of the subcontractors who provide line-haul between hubs and/or inland origins and destinations. A given LSP either cooperates with other LSPs within a given corridor, or competes. If they cooperate, only a few operators will run trains along this corridor. If they compete, many other freight operators are involved, and a fierce intra-rail competition emerges.

The work on the choice of appropriate business model(s) in progress suggests that the Anchor Customer Model is of some interest. The benefit of this solution is that it reduces the risks of empty haulage because loading capacity could be pre-ordered. However, a considerable strategic disadvantage is that price becomes the main competitive criterion for transport buyers who easily compare the costs of similar service offered by different carriers or their consortia. In the case where a given train carries homogenous cargo or just a few cargo categories, and/or when dispatches are destined to a small number of receivers, there is not much need for advanced ICT solutions, and information about freight in motion and after arrival can be provided by a lock driver equipped with mobile phone. This may considerably reduce the cost of service provision and, improve the RETRACK carriers' competitive standing, at least at the beginning of the consortium's business life.

CONNECTING RAILWAY UNDERTAKINGS USING RETRACK INFORMATION and COMMUNICATION TECHNIQUES FOR COLLABORATIVE RAILWAY PLANNING & EXECUTION
A report from Semir Husagic (WP4 project manager SOPTIM AG)

The seamless running of internal and external processes along the RETRACK supply chain is the key success factor for the whole project. This is crucial for the collaborative use of human and material resources, the ability to react to changes and to meet customer satisfaction in terms of time, costs and service quality.

The business analysis carried out at the beginning of the project brought up a very heterogeneous structure in order processing, planning and scheduling methods and ICT landscapes when comparing the different RETRACK network partners. It is for this reason that a

Semir Husagic SOPTIM AG

common understanding of master data management had to be defined, with asset management and order structures first. In the next step a reference railway operation process was worked out based on the SCOR-model (Supply Chain Operation Reference model).

With this framework it was possible to develop integrated IT services for the RETRACK Train Control Centre (TCC).

The RETRACK TCC enables all partners involved in the supply chain to manage contracts and orders, to create optimized train schedules and to execute the real business.

In combination with the RETRACK Railway Integration Platform and Services (RIPS) collaborative railway planning and execution was established as well as the provision of information to customers via a Customer Information Centre CIC.

RAIL4CHEM Germany and Benelux have been successfully managing about 400 trains per week using RETRACK IT services for planning and scheduling for over a year now.
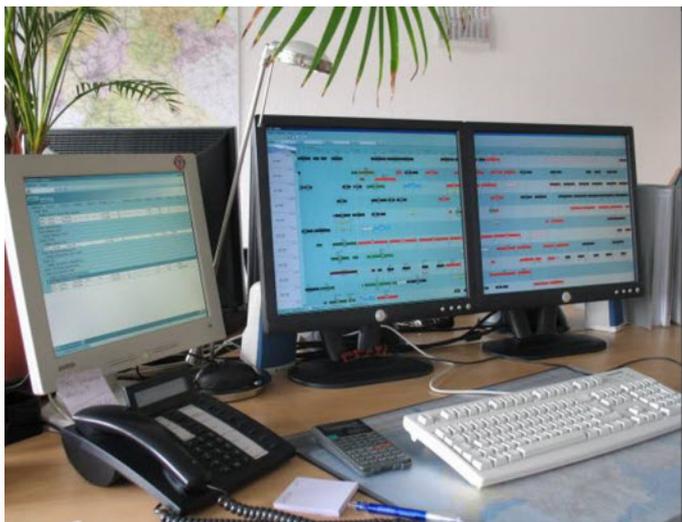
RETRACK RIPS can be used to put together schedules of different partners and to synchronize production scheduling as well as demand and logistics planning. This transparency along the whole transport chain gives early warnings to RETRACK partners about operational problems and the consequences of unforeseen events and allows them to intervene proactively.

Currently different XML-message types are being implemented for standardized communication within the network.

The next steps will be the rollout of the IT platform at LTE Austria and to establish IT based collaborative planning and execution between R4C and LTE.

REPORT ON THE TRANS EUROPEAN RAIL FREIGHT SEMINAR

Over ninety people attended the Trans European Rail Freight Seminar hosted by TNO in Delft on 3rd September 2008. All the presentations can be viewed on the RETRACK website in the Downloads section. Here follows a summary of the day:

The participants were welcomed by Arnaud Burgess of TNO who gave an overview of the RETRACK project.

Two key note speeches followed. The first by Brigit Gijsbers from the Ministry of Transport in the Netherlands outlined the enormous growth of rail freight

Brigit Gijsbers
(Netherlands Ministry of Transport) and Sandra Krupe (TNO)

transport volume in the Netherlands. She observed that the infrastructure in the Netherlands is ready for further growth and investment and recommended the corridor approach for rail freight services, in particular saying that RETRACK will help develop international rail freight transport.

The second key note speech by Max Philips of Rail Cargo highlighted the growing interest by road transport companies and shippers in rail freight. He thought there was a need for a critical mass to be created to push more freight onto rail. He observed that one of the new market segments for rail was fresh goods logistics.

Gerwin Zomer of TNO then spoke on the **logistics requirements for rail freight services in Europe** and how this was being assessed. He outlined the top four logistics requirements and the top four satisfaction gaps derived from a survey of 330 shippers and suggested ten improvements to rail freight along the RETRACK corridor.

Robin Martins of Archicom followed with an overview of the **intermodal transport situation and potential in Romania** all of which showed that Constantza has the potential to become a gateway to Central and Eastern Europe. Current inter-modality in Romania is in its infancy but a rapid development should occur in the near future.

Martin Dudink of the Corus Group addressed **logistics requirements for rail freight transport from a client perspective**. The highest share of freight from Corus is transported by barge and truck to major destinations in Europe and North America. The problems Corus has with rail freight services are the same it had 30 years ago which can be summed up as a lack of flexibility.

Phil Mortimer of NewRail at Newcastle University **summarised the assessment of the rail corridor**. He reported on terminal technologies, the need to define an ICT requirement for RETRACK, safety and security and the systems governing power, signalling and command controls. He also reported on open access in corridor countries to the national network and the condition of their respective infrastructures.

Kjell W. Johansen and Johanna Ludvigsen of TOI reviewed **the competitiveness of the RETRACK rail freight service** by defining what the service would offer. They then looked at the target markets and identified the challenges to meeting customers' quality requirements. They presented four types of business model.

Juraj Bansky of Transpetrol presented the **RETRACK pilot demonstrator** which will start running early in 2009. Operational, commercial, competition and financial risks for rail operators have been identified.

Kjell Werner Johansen, TOI

Semir Husagic of Soptim spoke on **collaborative planning in rail transport** and the IT systems needed to underpin it. There is a need for an IT based data exchange system and to this end, intra-corporate railway operations IT processes need to be improved. At the same time value-added services for rail freight customers should be created.

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The state-of-the-art in European collaborative planning must be adopted to develop such a system. The tensions between co-operation and competition between rail operators must be managed to achieve this.

In closing Arnaud Burgess announced that the next seminar will be held in the autumn of 2009 by which time experience will have been gained from operating the RETRACK demonstrators.

RAIL INFRASTRUCTURE AND INTEROPERABILITY ISSUES
Report from Phil Mortimer

Phil Mortimer
NewRail

During August and September a review of inter-operability key issues was undertaken as was an assessment of inter-operability take-up and its implications for the RETRACK corridor.

Many contacts were established with UK centres of knowledge/information on inter-operability (Department for Transport, Office of the Rail Regulator, NewRail, Rail Safety Standards Board) and information has been gathered on inter-operability and the use of key performance indicators in the rail sector. Meetings in Hamburg were held with TransPetrol & Ronald Mauck on inter-operability issues relating to commercial issues and technical issues.

Key issues centre on the identification of progress towards the adoption of the railway reform packages in detail by each country and overall along the corridor and the need to understand the implications of this for RETRACK. There are critical issues to be addressed in terms of uniform application to achieve what the EC has set out in the reform packages

On key performance indicators (KPIs) the main problem was to identify from within the rail sector which KPIs were used, and which were relevant and could be made available for consultation purposes. The definition of KPIs is fuzzy and the term is freely interchanged with other forms of measurement of performance.

Only one commercial operator was prepared to release KPI information for consultation purposes. Others refused information citing commercial confidentiality. Other parts of the rail sector use KPIs but for peripheral non-commercial activities. Some of these are more focused on sustainability and green issues and are not front line commercial and operational measures. It took time to weed out those which were irrelevant

Other sources including other transport activities (maritime/aviation) were consulted about KPIs to get a measure of the level of use and value attributed to the use of such measures.

The first draft on the scale and pace of inter-operability was completed at the end of October 2008. The KPI component was also completed by the end of October 2008 but the financial KPI material was slightly delayed . Preliminary drafts on the findings in this section have now been received and are being integrated with the balance of the report.

A preliminary draft report on the commercial and technical issues that have a potential impact on RETRACK has been received. This was reviewed on the 5th November in Hamburg and a final draft was received on the 14th November.

TRAINING ACTIVITIES FOR NEW FREIGHT SERVICES (WP5)
Report from Roberto Palacin

Artist's Impression of a training suite

The training to be developed for RETRACK will consist of support for "supply chain management" dealing with the RETRACK concept of logistics in the reorganised rail network and the training of train drivers for ERTMS/ETCS Level 2.

The training has an innovative approach by combining and applying state-of-the-art know-how and making it available in a flexible (modular) way to mitigate risks for new rail transport networks and to perform an integral training for the individuals involved.

The Training Work Package, led by Newcastle University, has so far identified the training structure, consisting of a simulated train run to train personnel at the goods train control centre in managing the service whilst operating the software. The training toolkit will use simulation and management tools. DeltaRail will deliver the hardware, the simulation software and the scenarios. DeltaRail and Soptim will develop the training for the users of the software and the script for the trainers. Newcastle University will prepare the user manual. Other partners include TCI and Veolia Cargo.

RETRACK CONTACT DETAILS