



Improving European Railways

retrack

An Integrated EU-Project

No. 1 - December 2007

Editorial



The RETRACK project is nearly six months old and we have had two consortium meetings, one in February and one in September. Officially we started on the 1st May (with an unofficial start on 15th February). The website has been installed (www.retrack.eu) and the first cost reporting on the website and progress reports have been delivered to the Commission. We have also had two contract amendments, which was foreseeable given the flexibility of the market in which we operate.

Judging from these accomplishments you could say the project is well underway. Of course, this is only the “outer box”, the success of the project depends not only on procedural and administrative progress but at the same time the project is actively scanning market potential. This is achieved by skilled people from the railway and logistics sectors identifying cargo for our pilot from Rotterdam to Constanza. A team of experts have been visiting the countries in the corridor and identified bottlenecks. This information will be used for developing an advanced train concept in which ICT plays a key enabling role. Our ICT specialists have started their work in WP2.2 and WP4.

It is expected that at the beginning of January we will have our train concept ready, which is in time for the pilot to start at the beginning of 2009. 2008 will be used for preparatory actions, such as training, equipment arranging, demanding trainpath, etc.

All in all a good start.

Arnaud Burgess

Shuttle Train Trial

First successful trial - just 65 hours between Germany and Romania.

Transpetrol have reported a successful privately run shuttle train trial to Romania. This was a collaborative exercise with HGK in Germany, WLC in Austria, CER in Hungary and Servtrans in Romania. The shuttle departed Germany (Ludwigshafen) in the evening and travelled via Austria and Hungary to Romania. The first trial was very successful taking just 65 hours. A trial using the state railway company was not acceptable as its transit time was approximately seven days.



Work Package Activity Updates

WP0 - Project Management

September meetings: Project Management Team, General Assembly. Project planning is on track and viable demand has been identified by WP1. Meeting with SERVTRANS in Sofia – they will join RETRACK on 1st December 2007. A visit to the project officer, Dr. Schlickmann in Brussels took place in October. The next General Assembly and Work Package Team meetings will take place in Budapest on the 7-8th February 2008.

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.



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Agreed at General Assembly:

- A new partner, Transpetrol, is to join the consortium.
- New Government Advisory Board to be installed, chaired by Mrs Brigit Gijsbers, head of Railway Transport at the Dutch Ministry of Transport.
- A Shippers Advisory Board will also be instituted.

RETRACK speeches were given at:

- Clustering Conference in Istanbul 25-26 October 2007
- Balkans Intermodal 7-8 November 2007

WP1: Logistics requirements

In order to assess the real-life requirements of shippers and logistics service providers concerning rail freight transport, the RETRACK Consortium has performed about 20 interviews with companies which are potential clients for the RETRACK rail freight service in 2009. These companies are active in different markets, e.g. chemicals, steel, automotive manufacturers or retail. In addition a number of European logistics service providers have been interviewed. Almost all of these companies are multinationals with manufacturing and/or distribution sites all across Europe.

The interviews show that there are four main market segments in which companies are interested in the use of the RETRACK rail shuttle. These four market segments are:

1 Transport of dry (e.g. cement, grains, coal) or liquid bulk (e.g. chemicals or liquids) goods in wagons or tank containers. In this market segment, the transported volume of dry and liquid bulk by rail is usually large and predictable. For the larger volumes block trains are used, but for new locations wagon loads can be an interesting market for RETRACK. Adequate safety and security is an important requirement in this market.

2 Transport of oversized/special goods (e.g. cars, steel products). Also in this market segment, the transported volume of special and oversized goods by rail is usually large and predictable (due to the manufacturing process). For the larger volumes block trains are used, but for new locations wagon loads can be an interesting market for RETRACK. Adequate safety and security is a little less important than in the first market segment, but reliability is of major importance, especially for the automotive industry.

3 Transport of maritime containers (unitised loads). This market segment shows major growth in demand, especially to destinations in Eastern Europe. A number of logistics service providers are already shipping up to 10 containers per week over the corridor Netherlands - Romania, and are interested in the use of rail transport if it is competitive against road transport.

4 Transport of continental swap bodies (unit loads). This market segment also shows a potential for major growth in demand, especially to destinations in Eastern Europe. A number of logistics service providers are already shipping up to 10 swap bodies per week along the corridor Netherlands - Romania. They are interested in the use of rail transport if competitive compared to road transport. In particular, in this market, Austrian logistics service providers provide network services by for example collecting containers from Benelux, Germany and France and putting them on a rail shuttle to Romania and vice versa.

Top 10 suggested improvements for rail freight transport services from RETRACK interviews:

- 1 Reliability of rail freight transport
- 2 Lower price of rail than road haulage
- 3 Cargo safety and security
- 4 Frequency of rail transport service
- 5 Transit times competitive to road transport
- 6 Improvement of activities of rail freight operators in case of delays
- 7 Tracking and tracing needs
- 8 Simplification of paperwork (e.g. customs)
- 9 Flexibility in rail freight service
- 10 Need of infrastructure repairs

So, the conclusion can be that interview data shows a firm potential for a RETRACK rail freight shuttle is emerging. Initially, the base load of the shuttle from Rotterdam to Constanza will be filled by tank containers from chemical containers (several contracts), while the other part of the shuttle capacity will be filled by several logistics service providers and shipping lines. When the shuttle starts, interest from companies having swap bodies will emerge, while also a viable feeder service for the automotive and steel manufacturers in Slovakia can be set up. When arriving in Constanza, the containers and wagons can in part be sailed to Turkey, the Ukraine, Russia and the Caucasus countries for final delivery. The RETRACK rail service could then start with one service per week at the end of 2008 between Rotterdam and Constanza, stopping at one to three terminals on the corridor according to customer demand. At the moment, stops in Duisburg, Wels and Budapest seem to be the most logical.

WP2: Current state-of-the-art of European rail freight services

WP2 is in the process of completing an extensive state of the art analysis of rail freight services in Europe. Each task has been a significant activity in its own right and the progress is summarised below:

Task 2.1: Transshipment techniques

Task 2.1 conducted a state-of-the-art survey on different types of intermodal loading units, the role of actors for efficient terminal operation, transshipment functional elements, transshipment area, design layout, and transshipment techniques and related EC funded projects. On the RETRACK corridor there are inland and port terminals. The port terminals are dominated by ISO containers whereas the inland terminal handles both continental and ISO containers. Thus, the transshipment technique for a rail terminal will depend on the type of container being handled.

Task 2.2: Information and communication techniques

The needs for ICT systems will vary with the business model that is chosen. Cross-border block trains serving relatively few customers is a different proposal to handling European-wide distribution of wagon loads. The unsuitability of a system can only be determined relative to what the customer needs. That is lack of essential features, lack of quality, problems in handling an increasing number of transactions etc.

The deliverable presents a range of previous EC-projects, results from interviews with the operators, and state of the art solutions.

An overview of different program architectures for building business solutions is presented.

Deliverable 2.2 thus covers the areas mentioned in the task description and presents a broad range of material. The document is a very good start-up description for WP 4 to develop just the solution a customer needs to run the train.



Task 2.3: Terminal technology and system

Task 2.3 evaluates terminal technology and systems that can play an important role in the movement of trains, lifting equipment, personnel and other resources to minimise terminal dwell time and cost. For this the literature review was conducted on previous projects including the SAIL study report (2002), INHOTRA WP2 Report (2002), and Compactterminal. The state-of-the-art survey discussed terminal handling equipment typology, terminal planning and operation, working procedures in intermodal rail terminals, advantages and disadvantages of generic conventional terminal and modern horizontal transshipment terminal with a detailed discussion on Compactterminal.

Task 2.4: Safety and security issues

Rail transport security faces new threats from international terrorism which are not well defined. A new rail freight service such as RETRACK requires an integrated approach to address current and future security threats and to assess the social as well as economic consequences of different risk management strategies. WP2.4 has used reliable, cost-effective tools in assessing, preventing and combating the novel threats of international terrorism over the wide range of physical, economic and cultural differences along the corridor. The objective is to identify terrorist threats and consequences whilst supporting the transport operators' competitiveness. This is done using threat-cost-benefit optimised solutions.

Security is dependent on efficient cooperation and coordination among Public Authorities along the RETRACK corridor. The threat posed by the criminal use of dangerous substances and the level of risk involved is also dependent on this cooperation and coordination. Customs and border protection requirements are constantly evolving. Traditional fiscal roles continue (such as the collection of excise duties), but there is now additional emphasis on the identification of threats to local and national security – a first line of defence against possible insurgent attacks.

The priorities have moved from monitoring cross-border cargo and reducing international shipments of contraband, to screening

for explosives, arms, dirty bombs and weapons of mass destruction. Identifying such threats is increasingly more difficult: devices could be hidden inside a vehicle or concealed in the middle of the shipment. The challenge is rapid detection without disrupting the daily flow of goods.

A lot has already been achieved concerning the security of dangerous substances (HCDG like explosives, radioactive products, etc) both in the Member States and at EU level. It is clear however that more can be done in such areas as enhancing the exchange of information, disseminating best practices, establishing coordination mechanism and taking joint actions on particular issues.

The issues of cargo tampering, people and contraband smuggling and terrorism have been assessed in WP2.4 based on a realistic freight "Risk" assessment associated with the transport mode and local threat scenarios. Tracking of cargoes, sensors to notify the operators of intrusion and performance of cargo control and protection have been evaluated to ensure security without harming transport chain fluidity, productivity and cost-effectiveness.

Task 2.5: Operation and technical resources

Task 2.5 is focused on operational and technical equipment and in particular a detailed overview and technical description of commonly used and available locomotives and wagons and their characteristics.

An overview of the most important operational and technical requirements for rolling stock between Rotterdam and Constanza has been made. Examples of border crossing freight transports that have at least partly similar routing, origin and destinations has been analysed.

A first draft outline for an operating schedule, potential intermediate terminal stops on the routing and technical parameters of trains has been made which is based on the following previously made analyses: operational requirements, commonly used and available rolling stock and locomotives on the route from Rotterdam and Constanza and the experiences of border crossing rail freight transport concepts to and from East and South-East Europe

Task 2.6: Human resources and operations

Task 2.6 addresses human resources issues along the RETRACK service area with regard to all train driver personnel who need to be certified for cross-border operations.

This report addresses in particular the human resources issues with regard to cross/border operations of train drivers, both at present and in the future. The Technical Specification of Interoperability relating to the subsystem "Traffic Operation and Management" of the trans-European conventional rail system" serves as a starting point and determines the course to be followed in order to make sure that the RETRACK operation will be in compliance with European standards.

The DG TREN study: "Training and staff requirements for railway staff in cross-border operations" serves as the model for storing the gathered information on the countries in the RETRACK corridor.

The first step in the report is an update of the DG TREN study to present the situation in 2007. In addition, based on the communication of the Commission on the 3rd Railway Package and the EC perspective on train drivers' certification, including

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the proposed legislative measure, this report presents the expected human resources issues along the RETRACK service area and cross-border operations following present EC policy.

Task 2.7: Legislative Analysis

WP 2.7 has addressed the legislative and regulatory requirements for the RETRACK rail freight service by examining the legislative and actual status in the countries involved in terms of such issues as division of responsibilities between governmental agencies and operators, and the transparent and non-discriminatory principles and procedures necessary for competition in the market. The information is based on written documents and interviews, partly done by the research group in earlier projects, and then extensively updated and revised in the RETRACK project.

Task 2.8: Infrastructure management and use issues

WP 2.8 conducted a state-of-the-art survey on infrastructure management and use issues, in particular the tension between maintenance and track use. It discusses European rail reform and implementation, liberalisation index and the case of British Rail reform. It evaluates planning processes for rail track use, different forms of collaboration among partners and railway maintenance procedures, track inspection, track maintenance, infrastructure maintenance contractors, nominal and reactive maintenance to avoid any accident and improve quality and reliability of rail services.

Task 2.9; Mapping corridor control systems

Task 2.9 has summarised the Command Control (CC) systems to be encountered by the proposed RETRACK corridor as it crosses five different countries. The report also provides a comprehensive overview of the European Traffic Management System (ERTMS), including specific details of its planned deployment along six freight corridors as well as describing the basics behind the system itself.

WP3: New Rail freight service concept

WP3, the "New rail freight service concept" of the RETRACK project held a workshop in Graz, Austria on 24th - 25th October. The objectives of the workshop were twofold: prepare the first two deliverables to the commission (Operational and technical barriers and Outline of business plan) and preparation for the commercial partners operations that have to apply for slots on the track next spring.

A draft route with potential stops/HUBs was presented by European Bulls, as well as a draft time-schedule. Excellent provided a logbook that will catalogue the technical conditions along the corridor and could be used by operators for train planning. TØI is progressing with the development of a Cost-

Revenue model for assessing the pricing strategies needed for balancing outlays generated by train operations.

WP4: Large Scale interoperability



Requirements analysis "IT requirements interoperability" is 75% finished regarding the topics Order Management, Planning and Scheduling, Data Structures and was finally discussed with Rail4Chem, Germany. Hartmut Gasser is organizing a meeting with LTE and EUB in November 07 to get their commitment. A specification is written (in German) and will be translated by us with respect to D4.1 deadline.

The SOPTIM Team is still working on the development of the prototype. We are focusing on the order management and the planning and scheduling processes. It is also necessary to develop a common understanding on the underlying data structures. (First step in our milestone planning has been presented in Delft.) Actual plan is to have a runnable demonstrator (modules: Order Management, Master Data) at the end of December 07.

Other workpackages have not started at the point of publication.

Keep Freight Moving

The European Commission is proposing a series of measures to promote the freight transport logistics, make rail freight more competitive, create a framework which will allow European ports to attract investment for their modernisation, put maritime freight transport on an equal footing with other transport modes and review progress made in developing Motorways of the Sea. Within this the Freight-Oriented Railway Network Communication from the Commission is significant for the development of rail freight across Europe in general and the RETRACK corridor in particular. The Communication and an interview with Vice-President Jacques Barrot is available online here: <http://tinyurl.com/yorero>

RETRACK CONTACT DETAILS

For further information, please visit our web site at www.retrack.eu or contact us:
RETRACK, Arnaud Burgess, TNO, PO Box 49, 2600 JA, Delft, The Netherlands
Email: Arnaud.Burgess@tno.nl +31 15 269 6903
Helpdesk: Karen McTigue +44 7875 006836

