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RETRACK

REorganization of Transport networks by advanced RAil freight Concepts

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A Framework for extrapolating the results from specific demonstration to Europe-wide intermodal network, and attainment of the EC's policy objectives

1 Introduction

1.1 Objective:

The overall objectives of the RETRACK project were: to conduct research, develop, commission and implement pan-European privately operated rail freight demonstration services (to achieve the EU key objective: modal shift to rail) between Rotterdam, The Netherlands and Constanza, Romania through Germany, Austria and Hungary (see illustration 1). This implied at least four border crossings if the entire route was to be used. The route serves major port and industrial complexes in Belgium, Luxembourg and The Netherlands (together with options to North German ports), major industrial areas in Germany and Austria and links to major cities in Hungary and Romania with new port potential in the latter as a longer term source of traffic.

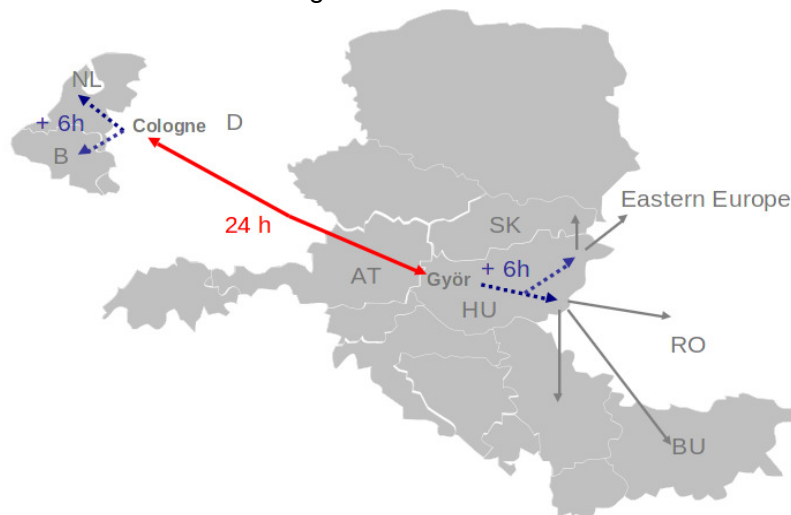


Illustration 1: RETRACK Pilot Route

The RETRACK pilot rail freight demonstration service has operated since February 2010 with demonstration costs partially supported (under FP6) by the EU. It will continue until February 2012. The objective of Work Package 9 is to evaluate the RETRACK pilot freight train service in relation to the degree of attainment of business and EU-policy objectives. The objective of this deliverable is to produce a framework for extrapolating the results from specific (in this case RETRACK rail freight pilot) demonstration to Europe-wide intermodal networks and attainment of the EC's policy objectives. The EC policy objectives are to demonstrate (RETRACK, 2011) whether or not:

- the RETRACK rail freight service has established itself as 'As a Commercial Service';
- the RETRACK service is offering reliable and competitive services;
- the RETRACK service has established long-term collaborative relationship among partners and also with customers;
- the asset utilisation of RETRACK service is on the rise;

- the RETRACK service is flexible/pragmatic/adaptive enough to cope with the different market demand/situation circumstances;
- the RETRACK service contributes to the development of the EU sustainable transport policy;
- the extent to which EU open non-discriminatory access freight transport policies contributed or was helpful to RETRACK as a commercial service;
- the extent to which the RETRACK service has been able to divert or shift cargo from other modes, in particular from road to rail;

RETRACK (2011) noted that the inherent intention of the project was to demonstrate that private rail operators would be able to collaborate and co-operate in the development of new services that would be competitive, reliable and attractive compared with the existing rail freight services provided by incumbents or other new entrants on national railways. The new services would exploit the freedoms made available through the railway reform packages established by the EU to open up the rail market to competition between the incumbents and new rail operators.

The overall objective of this deliverable is to present a framework for extrapolating the results from RETRACK demonstration to Europe-wide intermodal networks, and attainment of the EC's policy objectives

1.2 Methodology:

This report has been researched and prepared using some previous RETRACK deliverables such as D6.1, D6.2, D9.2 etc. using a qualitative descriptive method. The data collected from the pilot diary Excel sheet from the offices of TransPetrol, LTE, various sub-contractors and CER. This report covers the period from the start up of the service in February 2010 to June 2011. With these findings the framework for extrapolating the results from RETRACK demonstration to Europe-wide intermodal networks has been prepared.

1.3 Organisation of the report

In section 2 the RETRACK Pilot rail freight demonstration service is briefly discussed so that it can be a source of information for implementing such rail freight service in another corridor in Europe. In section 3 the importance of clear roles and responsibilities of the RETRACK operating is discussed keeping in mind that the future collaborative operators can define their roles and responsibilities and in section 4 the RETRACK freight train operation model is presented. Then in section 5 some overall lessons are discussed so that they can be learning source for future Europe wide rail freight operation. Finally the section 6 summarises the framework for Europe-wide rail freight network.

2 Preparation of demonstration preparation, changing scenario and required flexibility

The RETRACK pilot rail freight service has been successfully operated with a relatively small customer base and small numbers of operators involved in the routine provision of the service and the interviews and surveys reflect that position. But the path of the success was not all rosy. The demonstration phase of the project has to pass through a very rough and difficult path due to many reasons.

The original RETRACK pilot demonstration was scheduled to run in January 2008 to December 2010. This did not happen for the following reasons:

The first reason of the delayed and uncertainty was due to the fact that the European countries (along with other major Western economies) faced recession during 2008/2009. It was not the best time to develop and start up a new rail freight service. In the recession period the existing service providers were even struggling to keep the services on.

The RETRACK pilot rail freight was supposed to adopt an Anchor Customer Model of operation. Under this model the majority of the RETRACK freight service capacity would be bought by a few anchor customers and the remaining capacity would be left for the spot market for any customer. The promised anchor customers withdrawn their promised cargo for RETRACK rail freight service due to the recession. It is not unfair to say that as RETRACK was preparing to launch a cross border pan-European new rail freight services, rail freight traffic volume was falling off in response to the international economic recession and a significant investment and effort in such time in developing shipper contacts was effectively rendered useless as traffic volumes withered. Even the existing well placed rail freight service providers were cutting back on the provision of services.

In brief the timing for a wholly new entrant was not good. Thus the start up of RETRACK demonstration was delayed and finally it was started in February 2010 with the acceptance and realisation of low paying volume based cargo (grain) and the need to get a demonstration pilot operation into service. It can be noted here that the original RETRACK market research had identified a diverse range of potential commodities and shippers for whom the availability of a new service appeared to be of interest. These were primarily semi-finished, manufactured and consumer goods including containerised intermodal traffic with the balance of traffic presumed to be dominantly eastbound. Westbound flows were less readily identifiable through market research so there were inherent concerns about round trip load factors at the start of operations.

The reality was that the initial dominant flow was primarily westbound commodity based traffic (grain) which provided the underpinning revenue support as other traffic was induced onto the service. This had its own inherent problems of empty return wagons and the low freight rates applied to grain but it did allow the service to be operated and sustained.

The RETRACK pilot demonstration train services began operation on a single rotation per week basis. This has now been increased to three rotations per week and gives high asset (locomotive and equipment) utilization particularly for the base load traffic flows. RETRACK has had to overcome some difficulties (noted in the next subsection) and has been sustained and in fact is now recognised by shippers (and competitors) as a credible service option along the primary corridor and with the added flexibility of being able to serve traffic along the satellite branches. The core shippers have provided a basis upon which the service is developed and is now moving towards becoming a profitable entity. The operating ratio (the proportion of direct operating costs excluding debt divided by net revenue) has been improving and the service could potentially be profitable by the end of the RETRACK project in 2012.

The RETRACK service offered for most destinations at a considerably lower or at least equal transit time than existing competing rail services which has been a major issue to achieve success. It can be noted that the preparatory research was only able to identify a generalised view on traffic potential and opportunities. Traffic has been brought to the service through orthodox marketing and selling to cargo principals and forwarders. Core traffic to support the service (westbound grain from Hungary to The Netherlands) has provided the base traffic and revenue to allow the development of the service into a mixed traffic configuration. The grain traffic allows flexibility in the accommodation of other (more remunerative) traffic and has been a major factor in the development of the project. But it must be noted that such cargo (grain) was not in the planned cargo type to be run by RETRACK pilot service. This – for the rail market – unusual flexibility in terms of train size on a train to train basis has become possibly due to the high interest of the grain customer in supporting new rail solutions on this axis.

Another important scenario is that the single-wagon-load was not in the plan of RETRACK pilot demonstration scenario. But the use of single-wagon-load shipments in RETRACK pilot service, particularly chemicals and hazardous material has proved to be one of the strongest and most valuable traffic streams the RETRACK service. Many would term it re-inventing the wheel as the single-wagon-load is not a new concept. Many experts are sceptic about its applicability. The ability to capitalise on weight has been a primary commercial advantage for this type of commodity movement. Intermodal traffic has not figured as prominently as was anticipated in the earlier phases of the project, mainly due to the high level of competition by road transport, existing block-train and the change of the original Origin-Destination concept (maritime containers from/to Constanza and Rotterdam).

Another lesson is that whilst the project was conceived as operating on a core pan-European corridor or route the pragmatic approach adopted since the beginning of RETRACK operations led to the development of satellite services feeding to and from the main route/corridor. One of these has been a sizeable transfer of traffic from road to rail. In addition the use of Köln (Cologne) and Győr as major concentration points (instead of Rotterdam and Constanza) for the assembly of individual wagons and wagon groups has also been beneficial. Traffic is moving in and out of Köln to destinations elsewhere in Germany, Belgium and The Netherlands. The sizeable grain traffic is fed to Győr from a number of loading points for concentration and assembly into a train formation including the various single wagons & groups.

The train management process is focused on dealing with the basics of train operations, i.e. path requests (normally sanctioned), shunting operations, coordination with the loading / unloading sites and partner railways, train utilisation, and account activity including short notice traffic, crew allocation and planning and allocation of cargo volume whilst balancing wagon fleets to maximise availability and productivity. Connecting traction for movements to/from Benelux and wagon transports in Hungary and beyond is covered in this process. TransPetrol uses intra-company links through connected and owned businesses to plan shunting operations and train assembly/dispersal. The schedule is established as spot path shortly before train departure and closely and actively managed through direct communication with the local control centres of the rail infrastructure providers, thus, resulting in high flexibility and fast, reliable train runs, which has been a key selling point. The planning cycle is approximately 14 days before live operations, with continuous adaptation to operational changes & new demand.

3 Changes Operation Partners and Their Roles

The RETRACK pilot rail freight service faced turmoil from the operation partners' aspect as well. It must be noted that the RETRACK pilot freight was supposed to be run by commercial new entrants along the RETRACK corridor. For this, the key initial commercial and operational partners of the RETRACK pilot rail freight service were:

- European Bulls (Netherlands) (no longer involved)
- TransPetrol GmbH (Germany) (joined later on);
- • Rail4Chem (Germany); (no longer involved)
- LTE (Austria);
- CER (Hungary); and
- Servtrans (Romania) (dormant).

The Romanian partner (Servtrans) in the RETRACK project effectively left (or became inactive) early on in the project. Rail4Chem left the consortium when it was bought by another company (Veolia). European Bulls disappeared from the market due to the fact that

the project went through several changes. Finally the following key commercial and operational partners are involved in the pilot rail freight operations:

- TransPetrol GmbH (TransPetrol)
- LTE; and
- CER.

Another important aspect in this case is that before the arrival of TransPetrol, the roles and responsibilities of operating partners were not clear. To spell out these roles and responsibilities a series of meetings were convened but failed.

After facing a lot of ups and downs when the RETRACK started the pilot demonstration service, each partner had specific roles and responsibilities and thus shared the benefits (revenues) of the service. TransPetrol now leads the commercial and operational planning of the RETRACK train services including shipper contacts and pricing and – since mid December 2010 – provides traction services between Passau and Cologne through a 100% subsidiary railway. LTE (Austria) provides traction (dedicated locomotive) that is capable of operating across international (pan-European) borders and this eliminates one of the main stumbling blocks (multiple power supply systems) to rail freight's generic competitiveness. Shunting services and local traction services are provided by the incumbent rail operator CER (Hungary). Specific traffic destined to Austrian receivers is also moved by the national incumbent to/from the RETRACK train when in transit. The concentration and distribution of wagons to/from Köln is now performed by a railway undertaking owned by TransPetrol/VTG and provides a greater measure of flexibility and control of this activity than that formerly provided by contractors.

TransPetrol has established a lead position within the project consortium in particular for the pilot train operation. There is very limited commercial involvement from LTE & CER. CER acts as a traditional railway with the principal focus on operational matters within Hungary. TransPetrol had and maintains a strategic position to become a major rail freight player in the emergent liberalised market beyond the traditional role of the parent company as a wagon supplier. TransPetrol is completely involved in the operational control and management of the RETRACK train including the build up of wagon load offerings and pricing, in transit monitoring, disruption and delay response. TransPetrol is also involved in the arrangement of personnel (train crews) and shunting. It is largely dealing with known operational and technical issues on train length, weight, hazardous cargo rules and cargo priorities. Cargo pricing is fully within TransPetrol's remit.

TransPetrol has established a small RETRACK project office to plan and operate the train services on the new higher level of intensity. The office has access to the DB system as well as to a GPS-System installed on the Retrack locomotives to identify real time the location of the RETRACK train within Germany (and Austria). With this information system, the shippers and receivers can be readily advised of any changes in rail freight operation such as delays or disruptions and this information point acts as reinforcement to shipper confidence on the service. For this, TransPetrol used a simple board based system to plan train loading profiles around the three trains per week schedule on the main corridor with details of any satellite traffic able to be easily identified. This has now been replaced by an elaborate, Excel-based planning tool. The current plan uses the assigned traction resource intensively. There is an emergent need for direct identification of wagon location outside the main run and especially beyond Győr, as well as cargo condition in transit. One transport developed into a near critical rise of product temperature rise through vandalised wagon insulation. While Retracks safety management procedures proved adequate, a number of necessary changes in the connect informations flows of third parties have taken place as consequence to this incident.

Other considerations in the management of the operation include the maintenance of the grain wagons, wagon and traction maintenance, crew availability to allow the train to be operated at the booked timings and shunting space and shunting crew availability in Köln & Győr.

There is empty running but this is accounted for by the need to re-position the wagons back to the loading points to maintain the westbound loaded traffic. The majority of wagons involved are bound to a specific commodity and cannot be used for differing commodities without elaborate, thus expensive and time-consuming cleaning. Thus the empty runs cannot be avoided. The case for a hub for operational concentration of loaded traffic flows in Hungary is being considered to stabilise operations. There are issues in Hungarian interpretation of rail liberalisation making it impossible for individual parties in securing dedicated siding space from the incumbent operator for RETRACK services. In Hungary, it is deemed discriminatory to allocate infrastructure for exclusive use by one operator. The allocation is always linked to train operations, thus unwillingly favouring the incumbent.

The lead-time to secure drivers is +7 days prior to departure and a minimum of 5-6 drivers is required to sustain services. While driver performance and competence were at best generally acceptable by December 2010, a significant improvement was secured by changing the provider of drivers in 2011. Locomotive reliability has been somewhat problematic and the failure rate has been mildly disappointing, especially considering the normally very high reliability of the loco types employed. Problems were encountered with the receipt of electronic schedules by onboard devices. LTE has the responsibility and liability for the provision of traction and replacements in the event of failure and this arrangement appears to have worked adequately, operational co-operation with Transpetrol can be rated excellent. Dedicated stock has been made available by LTE for crew training. A tolerance of three hours is granted if required in the event of operational issues. The train path is retained in Germany in the event of this sort of delay but not automatically sanctioned on other parts of the route. Changes to schedule and routing are advised to the other operational partners as a matter of course.

4 New freight train operation model

It is already noted that the RETRACK freight service operation model was changed from the original plan: between Rotterdam and Constanza. Instead, the pilot adopted the operation model with two core hubs for the assembly and dispersal of traffic (Köln in Germany and Győr in Hungary) and the operation on demand of satellite operations. It was a pragmatic model considering the changes scenario and it has proven to be a flexible option to demonstrate the potential capabilities of rail freight operation. Another aspect of this operation model is the flexibility in the use of rolling stocks. The majority of rolling stocks used in the operation were provided by the shippers either as owned or leased equipment.

It was challenging but this operational and commercial integration has been achieved through the initiative of TransPetrol as the key partner. The success of this operation model is also due to the leadership role of key person in TransPetrol i.e. Mr Johannes Marg. Here the key lesson is that to make successful operation of such pilot service there is a need for key organisation as well as a leader in that organisation who is pragmatic, flexible and can face challenges. This operation model has included equipment sourcing, pricing enquiry responses and operational intervention and planning. Another aspect of the successful operational model of RETRACK is that the relatively small TransPetrol operations and commercial activity has allowed rapid decision taking and intervention as required to sustain and plan train services. Access to the DB infrastructure information system on train location, schedule performance and delays has proved to be of significant value.

There does appear to be a divergence of view as to the type of ICT systems required to support the rail freight service and whether the ICT solution developed by a key RETRACK partner SOPTIM, is wholly appropriate to the emergent service needs. This system has been used by LTE during the whole of the pilot and before, but as TransPetrol adopted the role of a train operator, it became clear that a comprehensive ICT solution will be needed. Whether this will be the SOPTIM RMS solution, or a bespoke solution, will be resolved outside the time frame of the project.

The need for complete control of the entire RETRACK operation including commercial planning, operational planning, train build up and cargo allocation, train path requests and monitoring and shipper contact was identified as a vital necessity to ensure the service was adequately managed and directed. This key finding could be usefully transferred to other new start up operations in the future. The diffusion of these responsibilities could potentially have weakened the effective operation of RETRACK rail freight service.

The forward planning of individual trains based on known cargo offerings and the requirements to maintain wagon circulation for the various businesses together with the recognition of the locomotive's availability profile and intervention on individual wagon issues presents a high and continuous workload to support the train plan. In relation to pricing there is the ever-present risk and vulnerability to price competition from the incumbent rail service providers and other transport modes especially road transport

The move to a raised frequency of three trains a week with a dedicated locomotive was important to provide a frequency of train runs minimising the idle times of wagons at the hubs. However, the full utilisation of the one allocated locomotive in this manner is a potential constraint, since additional departures can only be realised (on a regular basis) with additional locomotives. This does in turn requires a significant additional traffic secured for RETRACK to cover the additional traction costs. Securing traffic to fully employ another locomotive on a cost effective basis implies a major marketing and selling push to achieve the necessary cargo volume to justify this. Spot traction hire may be an option but growth beyond the present service level has inherent complications if competitive advantage is to be retained. The use of a dedicated locomotive for the existing RETRACK service rotations recognises the need for statutory maintenance windows to be complied with but this also puts pressure on the planning process to ensure the service integrity is maintained.

The grain traffic serviced through the Győr hub potentially offers an opportunity to develop a more structured network of services and this initiative has been proposed. The ability to pre-block wagons and run these to/from Győr may prove a more efficient and effective way of servicing this traffic. A key to the retention of this traffic on rail is the replacement of the existing wagons (20+ years old and a cause of major service failures in 2010). Commercial options for this have met with little success and other options possibly including support from national governments or the EU to provide this equipment may need to be considered. (This model was used in North America).

Systems have been developed to record train performance in terms of weight, length, payload, revenue, allocated costs with an indicative out-turn result that is able to be tracked. These are at present spread sheet based reports. Individual train and account record files are compiled in a format set by TransPetrol. There does not appear to have been a formal budget plan for the operation of the pilot with forecasts of volume and revenue and with means of identifying variances.

Pricing is a known entity in terms of prevailing competing rail, road and water served traffic. The key unique selling proposition has been the retention of price levels with higher flexibility of services for the shippers. Margins for special single wagon traffic (e.g. hazardous goods, chemicals, not for general SWL) have proved to be a very significant prop to revenue streams and demonstrate that rail can compete with other modes for this type of traffic if the operational and commercial aspects are attractive. The benefit of the additional weight rail vehicles can support compared with road operations has proved to be significant. Inter-modal

traffic commands a much lesser margin and has been a much lower proportion of traffic carried.

The model of commercial and operational measures that was adopted to support the pilot project could be extended into other lines or routes which may, or may not, connect with the core pilot route. The use of satellite operations to service traffic away from the main axis also offers a measure of flexibility to accommodate intermittent traffic. The key to the success of the pilot project has been to develop a common purpose amongst different rail freight industry actors and the allocation of specific areas of activity and responsibility amongst the RETRACK partners.

The route model adopted has been driven by cargo and commodity flows which are able to use the service and secure benefits by so doing. The actual traffic carried has been different to that which was envisaged at earlier stages in the project and perhaps indicates that the research effort should have been more closely focused on real traffic opportunities and accounts that were capable of being secured. In fact some of the basics of the original research are totally changed during the project (e.g. new origin-destination, traffic concept, new partner structure, etc.). The impact of the world wide recession in 2008-2009 should not be underestimated and the future new venture should take into consideration of such scenario. The core grain traffic has been an essential base traffic flow which has underpinned the development of the RETRACK operation and allowed the service to become established and recognised as a credible service option. The core business flow is still predominantly W/B and raises issues of the need to re-position wagons back for re-loading to sustain the flows.

The core number of shippers amount to 9-10 at this stage in the pilot operation. Some traffic has been intermittent and some has been lost. The competitive response has been largely muted as the price for transport has not been predatory to secure traffic. The RETRACK service model represents a challenge to the orthodox ones and is seen as a competitive alternative within the market. TransPetrol reported interest and comparisons being made by price sensitive cargo interests and this may indicate further potential to be secured. Marketing the service to date has not been a major focus and could be ramped up to secure greater cargo volumes and revenues. A key consideration will be the handling of the core grain business and the accommodation of better paying traffic in the future. There is an underlying mercenary position to be recognised that in the absence of financial start up support new fledgling rail services are unlikely to succeed en masse.

The case for strategic support to new rail operators and operations to secure modal shift and wider environmental benefits was made by the partners. The retro-fitting of energy consumption meters onto the assigned locomotive for the pilot has allowed greater precision in the monitoring of power used to move the train although this did cause some problems at border crossings.

A survey among the RETRACK service users reveals that some modal shift from road has been achieved.

The flexible response to traffic generation in the RETRACK pilot phase can be characterised by:

- The use of the traction for single wagons to maintain the round trip capability of the service;
- A willingness to refuse, defer or cancel services if required;
- A preparedness to use other existing train services if needed to maintain service integrity rather than lose the traffic or service round trip capability.
- Use of the EU status of the train as a measure of protection against immediate predation by the incumbent train service providers such as DB.
- Decision to maintain a minimal service profile until the grain wagon situation was resolved.

- Maintenance of services despite issues such as weather delays, varying responses to national and public holidays along the line of route.
- Flexible responses to varying crew availability together with traction and rolling stock.
- Train monitoring in real time with the identification of problems and the ability to intervene to resolve disruption.
- One partner (TransPetrol) is recognised as a railway undertaking.
- Development of a range of shunting and feeder options.
- The retro-fitting of energy consumption meters onto the assigned locomotive for the pilot has allowed greater precision in the monitoring of power used to move the train.

5 Overall lessons for future new entrant rail freight service

The RETRACK project has experienced in different phases (research, preparation of the pilot, recession and customer volatility, pilot service, introduction of satellite service etc.) of the implementation a number of issues that can be lessons for other existing or future new rail freight services:

- Relative positioning of new operators in relation to the market dominance (capacity, access to train paths in volume, opaque commercial practices and accounting) of existing operators.
- Market response (i.e. from the existing operators) to the pilot project is very important for any new service. In the case of RETRACK this has been muted to date but could be predatory if key relationships on traffic were threatened by the new competitive services (e.g. automotive traffic) on price, for example.
- The RETRACK pilot did not undercut prices in the market but has been able to offer better flexibility than the incumbents and this has induced traffic interest. Other existing or new services may take this as an important lesson.
- There was some naivety in the project proposal and at the start of the RETRACK pilot in the sense that the market strength of the incumbent operators along the corridor was not correctly assessed in particular in relation to the movement of inter-modal traffic. The project came to life in response to real time cargo opportunities and commercial potential to start up a wholly new service on the corridor with flexible satellite options.
- Exposure of the dominating role of the national incumbent (e.g. DB in Germany), especially in the area of SWL / wagon group traffics. The reality of the regulatory regime and its effectiveness in Germany is still questionable. The position appears to be less extreme in Austria and Hungary.
- The surprising difference in acceptance of the Retrack Service by the incumbent railways in west and east. While DB and its various subsidiaries (Railion Netherlands) are following an absolute strict policy of non-cooperation with private systems such as Retrack, the incumbent railways in Hungary and Romania are much more open to cooperation, though not through official statement.
- Intra-sector rivalries and positioning at a commercial and technical level still favour the incumbent rail operators despite the pressure from EU rail reforms. Developing cross border relationships, alliances, allegiances for train operations and ownership of railway companies further complicates the position. There has been some evidence of discrimination against the RETRACK new service (e.g. for allocating siding space) and this has led to the use of the parallel rail system to the incumbent that straddles the Austrian/Hungarian border.
- Access to train tracking systems on an unrestricted basis to monitor train activities in transit. TransPetrol's position of being a railway undertaking through acquisition made

- this process somewhat easier but could be seen as a barrier to effective market entry if this facility is not freely available to new service operators on pan-European cross-country routes.
- Access to sufficient specialist rolling stock fit for purpose on a sustained basis (a minimum number to be there for the duration of the pilot).
 - Retention or displacement of lower paying traffic/commodity flows (for example grain in the case RETRACK) that underpinned the start up operation.
 - The need for a clear equitable basis for cost and revenue sharing agreement in a consortium or the identification of specific contracted partner roles to be remunerated from train revenue. This should include locomotive and rolling stock re-positioning.
 - Recognition that short term commercial and marketing positions may have to be adopted as pragmatic measures to formulate, define and support the ultimate emergence of a credible commercial service concept.
 - Recognition that RETRACK service now has a strong commercial position to exploit and is approaching a break-even position.

6 Framework for Europe-wide rail freight network

From the RETRACK demonstration a framework for Europe-wide rail freight operation is proposed here. The path to achieve a successful pilot rail freight service must not be seen as an easy way. For this the RETRACK consortium partners conducted research. They have conducted corridor assessment, logistics service requirement, ICT development to prepare for the development of the demonstration phase. But the project has to face unforeseen scenario such as a major change of rail operating partners, failure to achieve agreement on sharing of roles and responsibilities and final bottleneck to the start of the demonstration-economic recession which resulted in the loss of anchor customers and freight. From the experience of RETRACK pilot rail freight service it is concluded that there may be need for future project support by the EU to sponsor new rail freight services on other corridor to start ups in the form of repayable working capital or similar facility. A framework for the Europe wide cross-border rail freight service in another corridor is proposed below.

Sustainable rail service as selling point

RETRACK has contributed by researching, developing and implementing a scheduled international rail freight service between the Benelux countries, Germany, Austria, and Hungary with links to Romania. As a result a wholly new rail freight service sponsored by private rail entities using the new open access rules is in operation. RETRACK has contributed in an increasing level of service between the Benelux countries and Hungary via Germany & Austria.

The RETRACK rail freight service (conforming to the EU co-modal policy) to competes with road to secure modal shift. The RETRACK service is competing with existing road, rail and water transport services. The services using rail have a lower carbon footprint compared to road based traffic. The services are operated using electric trains with a key CO₂ advantage together with the ability to use electrical power generated from a variety of inputs.

Development of long-term relationship with transport chain partners

Working in a collaborative and cooperative way is vital for any transport chain operation. RETRACK freight train operates along the transport chains. It has developed long terms relationship among partners in particular the train operators. There is now a clear distribution of responsibilities as to who does what. For example LTE provides traction under contract for

the trains between Cologne & Győr (the main service axis). CER provides supervision of rail operations in Hungary. TransPetrol performs the planning, human resources, commercial and marketing aspects of the operation. Neither LTE nor CER conducts major commercial or marketing support. This is largely performed through TransPetrol. According to the agreed roles and responsibilities, the cost and revenues are shared among the operating partners.

Operation as a commercial service

The RETRACK project has introduced a new freight service concept based on wagon load groupings between key concentration points. It has secured base load business (grain) and other accounts including single or small wagon groups and has been able to develop the latter in a very positive and profitable way. From the RETRACK pilot operations it can be identified that SWL traffic can be operated to positive commercial gain and not be dismissed as a commercially unattractive option. RETRACK service has achieved success because of the availability of railway sidings and spurs where rail wagons can be loaded and delivered to maximise payload and minimise any intermediate handling. The evolution of satellite points served from the main network has also been a useful option.

The progressive move from one train rotation to three per week on a reliable scheduled basis has given shippers options beyond a reliance on the services provided by the incumbent train operators. The operation is moving towards commercial viability (cash flow).

Service reliability

The RETRACK service has grown to three round trips per week with a dedicated locomotive. The schedule is a good fit to maximise the locomotive's productivity commensurate with requirements for maintenance and servicing. On average RETRACK's on-time service performance is ~90%. Reliability in the delivery of train services has been good and at least comparable to other services provided by other operators. There have been issues of on-time performance and delays induced by winter weather, derailments etc. but this has also applied to other service providers.

Service competitiveness

The RETRACK service is seen competitive by both customers and other operators. The RETRACK service is offering higher flexibility to the shippers with equal or lower transit time. Customers value it as a superior service to other offerings and RETRACK service is also seen as a reliable and available service beyond that provided by the incumbent state railways. The move to a three times per week service rotation indicates that there is market demand for this sort of service. Although RETRACK provides a faster transit time for shippers compared to existing services, it does not charge premium cargo rates. Because of this advantage, some road based commodity flows and some water based flows have been switched to RETRACK rail.

Development of long-term relationship with customers

Good and long term relationship with customers is very important for rail freight service. This is primarily a TransPetrol role with some limited marketing support from LTE. Some long term business relationships have been developed including Treibacher (Rebes) for aluminiumoxide, Sasol, Grillo and Evonik (eastbound) and Glencore for grain and aluminium slab traffic (westbound). The core traffic comes from about 10-12 shippers. Some other shippers have also used the train services on a routine basis.

Asset utilisation

The move from one round trip per week to three round trips per week has demonstrated the availability of traffic to utilize the train service and capacity. This has resulted in higher asset utilisation (locomotive, crew and other equipment). The base load traffic volume has been

westbound grain but is being matched by growing levels of eastbound traffic. But still there are serious operational constraints such as planning wagon round trips and be able to offer space to other type of cargo customers.

Moving towards profitability

The RETRACK train service is approaching the point of commercial profitability i.e. operating income exceeding operating costs. The current position suggests RETRACK is at the 75-80% mark of cost recovery stage and could be into profit by end of the demonstration period i.e. February 2012.

The availability of the EU funding to start up the service is probably best seen as working capital without which the service would probably not have been feasible. The RETRACK model might give support to other private rail operators to secure commercial funds to develop new services.

Flexible/pragmatic/adaptive service approach

The RETRACK pilot train service started with one train rotation per week. Over the months the service developed to gradually higher frequency level to the current three rotations per week which suggests that the RETRACK service is wholly flexible/pragmatic /adaptive. This also suggests that there is market volume that could be attracted to rail on the basis of pragmatic service availability and reliability together with attractive rates for wagon groups and individual wagons. The core concept of operating wagon groups between concentration points is not new and not even cutting edge. It represents a service and business model that has been proven in the context of available traffic, service times and route options. Responding to the market demand, the RETRACK train has been operated at different levels of traffic ranging from very low levels of traffic (single wagon) to extended length and weight limits (720m / 2300 t). This business model demonstrates adaptability to accommodate varying loads. The move to three rotations per week generates benefits in terms of asset utilization (locomotive and other equipment).

The adoption of the satellite concept for traffic served to points not directly on the main line also demonstrates some pragmatism, adaptability and flexibility in terms of commercial and operational response.

References

RETRACK, 2011, Assessment of degree of attainment of business and EU-policy objectives, Deliverable 9.2.

European Commission, 2010, EU Energy and Transport in Figure Statistical pocketbook 2010, European Communities, available at http://ec.europa.eu/energy/publications/statistics/statistics_en.htm, last accessed on 18.08.2011.

European Commission, 2006, Keep Europe Moving: Sustainable mobility for our continent-Mid-term review of the European Commission's 2001 transport White Paper, European Communities.

European Commission, 2001, White Paper-European transport policy for 2010: Time to decide, European Communities.