IQ-C

International Group for Improving the Quality of Rail Transport in the North-South Corridor

3rd Progress- Report / July 2008

prepared in collaboration with the Dutch Ministry of Transport, Public Works and Water Management, the German Ministry of Transport, Building and Urban Affairs, the Italian Ministry for Transport, and the Swiss Federal Office of Transport.
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1. Management Summary

The International Group for Improving the Quality of Rail Transport in the North-South Corridor (IQ-C) has intensified the way of cooperation and has thus brought about some remarkable results. Volume of rail freight transiting on the corridor is still increasing annually by 6-8%. However, considerable efforts are still necessary in order to further improve the quality and punctuality standard in transalpine rail freight transport.

- In January 2003 the Memorandum of Understanding (MoU) was signed by the Ministers of the four corridor countries namely Italy, Germany, the Netherlands and Switzerland. This scheme includes a range of quality improving short term measures which focus on actions not only from Infrastructure Managers but also measures that have to be implemented by the Ministries.

- In July 2004 an agreement was reached for facilitating EU-CH transit customs procedure benefiting all railway undertakings;

- In 2005 Netherlands-German agreement was reached between the railway safety inspectorates on mutual recognition of drivers where possible;

- In March 2006, the Ministers signed – as a result of a mandate of the Ministers to the IQ-C Working Group – the “Letter of Intent ERTMS deployment on Rotterdam – Genoa corridor” (LoI) with the aim to complete the ERTMS/ETCS infrastructure on the corridor until 2015.

In May 2006, the Ministries agreed upon a new Action plan 2006-2010 to focus and amend the actions of the MoU of January 2003.

- In June 2007, the Ministers agreed on and signed a Memorandum of Understanding on the implementation of approval procedures for rolling stock and cross acceptance of approval procedures of the competent supervisory authorities.

- In July 2007, corridor A funding requests had been submitted to the EC for subsidies out of the TEN-T funding for ERTMS deployment on the corridors. In December 2007 the EC decided to grant € 89 m subsidies for corridor A (track side and rolling stock)

- In June 2007, the opening and beginning of operation of the Betuwe Route and the Loetschberg Base Tunnel stand for important steps on the way to an upgraded rail corridor with increased capacity and high quality performance.

- During 2006 and 2007 all fields of activities were further developed. The organisation for the deployment of ERTMS/ETCS in the corridor was established. The Infrastructure managers have set up the management committee to steer the overall improvement
program whereas the Ministries have created the executive board supervising the ERTMS implementation on the corridor.

The Infrastructure Managers have further developed their quality improving actions, such as: common deadlines for the planning and allocation process for timetabling, the development of customer relationship, the establishing of common and harmonised operations management processes as well as the further development of infrastructure and an international coordinated bottleneck elimination. Great efforts have been made to improve punctuality and analysis of the causes for delays.

**Conclusions**

The market for international rail freight traffic on the North-South-corridor is growing further and still has a big potential. The quality improving scheme, established by the Ministers of Italy, Germany, the Netherlands and Switzerland is affecting results due to the created network of the relevant stakeholders. The close monitoring of volumes, punctuality and costs shall be continued from 2008 onward and shall be made available to all interested stakeholders. The action plan 2006-2010 shall be updated and communicated to all stakeholders the 3rd Quarter of 2008. New actions like the coordination of railway noise source abatement measures will be added.

**2. Background information**

A range of competitive rail services in the North-South-Corridor in terms of both quality and quantity is the key to a successful policy aimed at shifting the highest possible volume of goods transport from road to rail.

On 9 January 2003 the transport ministers of Germany, Italy, the Netherlands and Switzerland signed a joint "Memorandum of Understanding" in Lugano aimed at enhancing the quality of cross-border freight transport by rail on the North-South-Corridor (see appendix I). The Ministers entrusted an international working group with the task of implementing a package of specific measures that were defined following a prior analysis of the main problems relating to freight transport by rail in the North-South-Corridor.

In July 2004 the first progress report was submitted to the Ministers. They took note of the report and gave the mandate to continue with the work and to carry out a study about the implementation of the ERTMS/ETCS in the North-South-Corridor. Together with the signing of the "Letter of Intent ERTMS deployment on Rotterdam – Genoa corridor" in Bregenz, 3rd March 2006 (see appendix II), the second progress report was presented to the Ministers. Based on the requests of the Ministers, the working group agreed upon an action plan 2006–2010.
Herewith the working group is submitting the third report to the Ministers. This report reflects on the issues of the IQ-C Action plan 2006–2010 (see appendix IV), the status of the activities, and the progress that has been achieved in specific areas to date.

The actual corridor organisation including ERTMS and the different Working Groups of Infrastructure Manager, National Safety Authorities and regulatory Bodies can be pictured as follows:

3. Implementation of the IQ-C Action plan 2006–2010 for rail freight corridor Rotterdam-Genoa

The Working Group IQ-C decided upon the Action plan 2006-2010 on 30th May 2006¹. The action plan is based on the requests from Ministers as expressed in the second progress report March 2006 in the Bregenz meeting (3rd March 2006). The new action plan has been discussed and accepted by the involved Infrastructure Managers, rolling stock and safety authorities and regulatory bodies. The original action plan from 2003 is in this way amended.

The IQ-C Action plan 2006 comprehends several actions which will be extended or optimised focusing on:

- **Digital coordination:** The focus of the former action "Corridor Control Center" will be changed to an IT data exchange mainly based on implementation and follow up of Europtirails and Pathfinder which are systems managed by the RailNetEurope cooperation scheme of Infrastructure Managers. Furthermore these systems have in

¹ Published on website [www.minvenw.nl](http://www.minvenw.nl/)
future to be coordinated with TAF/TSI development to avoid parallel activities and redundant processes.

- **One Stop Shop Optimisation:** with focus on the full use of organisational and technical possibilities to shorten response times for international train paths. The former actions "Pricing transparency" and "Integrated planning of schedules" will be integrated in this action.

- **Monitoring Allocation and Performance:** with focus on the monitoring process of the allocation of train paths, performed speed and punctuality.

- **Improvement International Capacity Allocation process:** with the goal of a new common planning concept for the implementation of equal dates for final capacity allocation by harmonising national laws and introducing authorised applicants on cross border basis.

- **Harmonisation of operational rules:** rules necessary for train operation – ETCS and non ETCS mode – will be analysed and proposed to ERA for harmonisation on the European and corridor level.

- **Mutual recognition of locomotives:** will be continued with focus on development and implementation of IRL list with the aim of a multilateral agreement.

- **Mutual recognition of engine drivers:** will be continued with focus on new possibilities of ETCS.

- **Monitoring of market regulations:** to continue the cooperation of the Regulatory Bodies.

The Action plan contains three accentuated new actions:

- **Improving punctuality:** to ameliorate the still not satisfying punctuality standard in the corridor to make transports on the corridor more reliable and attractive. The Infrastructure Managers have to develop a performance regime on the basis of punctuality measurements and a broader shared analysis of causes of delays.

- **ETCS implementation:** with the aim that international locomotives can use the corridor with just ETCS on-board by completing ERTMS/ETCS infrastructure in 2012, 2015 (for the stretch Oberhausen-Mannheim). With ERTMS/ETCS, infrastructure managers can improve traffic management.

- **Terminal issues:** with the aim to improve the interfaces between terminal operators, intermodal operators, railway undertakings and infrastructure managers.
4. Implementation of ERTMS/ETCS in the North-South-Corridor

On March 3rd 2006 the Ministers signed a Letter of Intent to deploy ERTMS on the corridor by 2012 (2015 for Oberhausen – Mannheim). This was based on a common deployment study and a cost-benefit analysis at corridor level.

Based on this letter of Intent the Infrastructure Managers have stepped up their cooperation by creating a management committee supervising all improvement measures from Infrastructure Managers (ERTMS, coordinating infrastructure bottlenecks, operational measures). The management committee have signed their mission statement in December 2006. The management committee has developed its business plan for the corridor by April 2007 indicating its key objectives and performance indicators (number of train paths, speed of train paths and punctuality) for 2025. The business plan does also take on board the items from the 2006-2010 IQC action plan. On its turn the Ministers have appointed their members in the executive board to steer the overall implementation process. The executive board adopted its mission statement by December 2006. The European advisor to the ERTMS implementation Mr Karel Vinck is supporting its functioning.

Regarding the deployment of ERTMS an important milestone has been the coordinated request by 20 July 2007 for EU TEN-T ERTMS funding for the period 2007-2012. The coordinated request did not only include funding for ERTMS roll-out but also requests for resolving bottlenecks and the corridor organisation. The European Commission has largely approved the coordinated funding request from the (EU) countries of the corridor (Annex VIII). This underlines the commitment also from European Commission to the corridor Rotterdam-Genoa. In total the Commission proposes to spend € 66 m for the corridor Rotterdam Genoa for trackside ERTMS equipment, app. €30mln on ERMS rolling stock and testing and organisation and €218 on priority projects (bottlenecks). Due to budget shortages the European Commission did not include in its proposal for approval funding requests from e.g. interlockings in Germany and connections to Amsterdam-port in Netherlands.

The Infrastructure Managers have made advanced preparations in 2007 to set up a Program Management Office based in Frankfurt am Main with a legal structure for the corridor organisation to support the coordinating role of the management committee. A so-called European Economic Interest Group is created consisting of ProRail, DB Netz and RFI which is cooperating on equal footing with the non-EU Infrastructure Managers SBB and BLS from the corridor. The registration of the EEIG was realised early 2008. The legal structure will serve in the first place as a common management board of the IMs for the corridor implementation. If the EEIG would be used to pay for common costs of the Infrastructure Managers (e.g. testing) this would need approval from executive board of Ministries if these expenses exceed Euro 1 mln.
Together with the Ministries involved the Infrastructure Managers have spent considerable resources to achieve a solid implementation plan for the corridor by 2012. The major challenges are to achieve a feasible interoperable ERTMS implementation by 2012 which serves the minimum operational and capacity requirements from the corridor Infrastructure Managers and is accepted by European standards. Furthermore the development of a rolling stock migration concept, which will enable the RUs to continue their transport services without loosing competitiveness and market share because of the high investment cost for the ETCS on board equipment. This intensive work has resulted in the Letter from the executive board to Mr Vinck on the ERTMS implementation by 24 January 2008 (see appendix). After cooperating between infrastructure managers with the European Railway Agency it is expected that European Commission will be able to confirm the feasibility of the ERTMS implementation by the end of 2008. Possible outcome is that in order to make sufficient progress in time certain change requests in ERTMS functionalities may have to be scheduled earlier in the process than the expected version 3.0.0

Practical experience with ERTMS

140 km of ETCS Level 2 had been commissioned and taken into operation in the Betuwe line and the Lötschberg Base Tunnel. Subsequently, there are now already 190 km of corridor lines in commercial service with ETCS. The success of these national ETCS installations testify, that the system is technically well advancing and proving its capability on the way to become the mature European ATC standard.

5. Status of implementation of measures in the responsibility of infrastructure managers

The IMs consolidated the corridor organisation by implementing the Programme Management Office as one common corridor management board, which develops, steers, monitors and reports all the corridor activities as integrated action and like one company. Furthermore, the CEOs of the corridor IMs decided to formalise the corridor organisation on European level by the foundation by February 2008 of the “European Economic Interest Group Corridor Rotterdam-Genoa” (EEIG) by ProRail, DB Netz and RFI, in parallel with a cooperation agreement with the non-EU Swiss partner Infrastructure Managers SBB/BLS. In brief, the following tangible results have been achieved:

- The activities of the IQ-C Infrastructure Managers working group and the ERTMS working group were merged under the umbrella of the Programme Management Office (PMO), and all activities had been rescheduled in six new working groups for the preparation of fundamental issues to be required for the corridor implementation.
The main IQ-C IM activities have been continued i.a. by the new working group (WG) “Capacity”, carrying out detailed capacity and traffic demand analysis as input for the bottleneck removal projects on the corridor in order to cope with the anticipated traffic growth in the future.

- The corridor strategic business plan had been completed and presented to the EC in April 2007. The EC used the business plan as basis for the evaluation of the TEN-T subsidies.

- The requests for European TEN-T funding of ERTMS installations on the corridor had been prepared and submitted to the EC in July 2007. Based on the requests the EC decided to subsidise ETCS on the corridor in the first call by 66 m €, which is about the maximum according to the regulations of the call.

- New structures and processes to steer, to monitor and to report the corridor related activities had been developed and introduced in the PMO. The working groups and programme managers of the PMO defined the work scopes and time schedules of the implementation plan, which from now on will serve as the corridor baseline.

- The statutes of the European Economic Interest Group and the contract for the association of the Swiss corridor IMs had been prepared and negotiated, and the statutes have already been signed by the CEOs of the EEIG members.

- First attempts could be achieved by the new WG “Traffic Quality”, monitoring the traffic quality in the corridor section Freiburg – Novara. The values received show not yet a significant improvement of punctuality due to extraordinary effects, but will serve as baseline for 2008. The international path allocation processes was improved by 1/3, using the Pathfinder application. In average, an international train path can now be allocated within 6.4 working days in comparison to 8.7 working days at the beginning of 2007. In addition, adjustments of the tuning time table across the corridor (train path internationally linked to a corridor solution) are realized since 2007.

In total, the achieved work progress until 2007, together with the new integrated corridor organisation provide first roots for the fast and controlled growth of the corridor implementation from now onwards, and represent an important step towards the future corridor success.

Despite all achieved progress, strong efforts in the field of capacity management and punctuality improvements are still necessary. Several milestones could not be realised until today. This requires an adaption of the timetable of the action plan as well as enhanced cooperation between the infrastructure managers of the corridor countries.
6. Status of implementation of measures in the responsibility of the National Safety Authorities

**Mutual recognition of rolling stock**

The Task Force of Interoperability (TFI) was founded to enforce the mutual recognition of rolling stock. Five authorities/ministries are involved: Austria: BMVIT (Federal Ministry of Transport, Innovation and Technology), Germany: EBA (Federal Railway Authority), Italy: CESIFER – Technical Directorate, Netherlands: IVW (Dutch Transport and Water Management Inspectorate), Switzerland: BAV (Swiss Federal Office of Transport), and three infrastructure managers: ÖBB Infrastruktur Betrieb AG, DB Netz AG and RFI S.p.A.

The results of the work of TFI group are the technical basis for the MOU on 7 June 2007 among the 5 Member States (N-D-A-CH-I, Appendix III). Regular TFI meetings are held with manufacturers of multi-voltage/multi-system locomotives.

The TFI group applies to a common requirement list and categorizes each item according A, B, C. Thanks to this work the Group has achieved a high level on expertise and trust among each other. Certificates according to the MOU were already delivered. The authorities provide each other with the results of their approval about the applicant’s reliability and if he might be able to take his responsibility for the safety of the vehicle at the state of authorization and throughout the lifetime of the vehicle. Procedures for authorization will be laid down within 2008 among TFI group.

The most important tool for the TFI group is the International Requirement List (IRL). IRL is a database which matches the regulation for authorization of vehicles of each Member State against the regulation of the others. It is planned to have access to IRL via Internet. The definitions and classification of A, B and C categories for locomotives will also be developed.

In January 2008, TFI presented their results to ERA, CER, and UNIFE. TFI will regularly update the IRL and improve the scope of vehicles and the A-B-C classification in order to increase the number of A-categories. The next step will be taken in 2008 for train sets and passenger coaches. These activities are driven by current requests of the market within framework of certain projects.

The approach will anticipate the upcoming European directive on cross acceptance 2008/57/EC published on 18 July 2008. There should be good migration planning towards the new role of the European Railway Agency envisaged in this directive.

**Enlargement towards ERTMS**

The cooperation of TFI group and ETCS corridor group is planned and will be applied among both groups to coordinate the ERTMS procedures for authorization of ERTMS on infrastructure
and on vehicle issues. The migration of class A and B systems and old and new and border transitions have to be taken into account as difficulties coming from the vehicle subsystem. Especially for this issue TFI and ETCS corridor group could monitor the migration steps in a positive way.

Beside of the coordination among the TFI group and the ETCS corridor group actions have to be taken to coordinate the operational issues on the corridor. ETCS corridor group will raise this issue during their next meetings and will report on the results.

**Enlargement towards other countries**

Several states have expressed their interest to join the MoU: Sweden, Denmark, Belgium, Luxembourg, France and other interested countries. The new interoperability directive will give the legal framework for states to apply to the cross acceptance method. The directive is foreseen to be put into national law probably earliest end of 2010. Therefore as long as there is no legislation which allows Member States to apply to the cross acceptance method, MoU will further on be the regulatory basis for it. The technical work as laid down in the Annex to the MoU could be done by corridor groups like TFI group by expanding the reference list with bi- or trilateral negotiations of the corridor members’ authorities.

To accelerate the spread of the cross acceptance method among Member States is seen as an advantage not only for the sector itself, but especially for IQ-C-Partners to improve cross border traffic on the corridor. Therefore it is suggested IQ-C to invite interested Member States to join the MOU.

**Mutual recognition of engine driver licences**

The mutual recognition of engine driver licences is furthermore one important action point of the IQ-C project. Qualifications of train drivers have partly a general character (for example eye tests) and partly a specific national character (for example track knowledge). National qualifications like track knowledge cannot be a subject for cross border recognition. The general qualifications can however be subject of cross border recognition. Germany and the Netherlands have developed a model for cross border recognition on these issues. This model will also be implemented at the borders Germany-Switzerland and Switzerland-Italy in a bilateral way. Germany and Switzerland have achieved good progress and there is the perspective for the recognition of several licence categories in 2008. The recognition between Switzerland and Italy is still not completely solved.

The approach on mutual recognition of drivers intends to be in line with and prepare the way for a full implementation of directive 2007/57/EC dated 3 December 2007 for international and at later stage national drivers.
7. **Enhanced cooperation of the Regulatory Bodies: Monitoring of market regulations**

The concern of the IQ-C Regulators was mainly directed towards the functioning of the international allocation process on the corridor in the last year. Therefore the IQ-C Regulators have decided to start a closer look on the actual allocation of train paths on the corridor. Therefore, the Regulatory Bodies are in discussion with the different actors in the corridor (see appendix VI).

8. **Status of implementation of measures in the responsibility of the Ministries**

**Terminal study**

In the action plan 2006-2010 it is planned to do a study on terminals of combined transport. The aim of the study is to assess the interface between terminal operators, infrastructure managers and railway undertakings. By increasing overall quality, efficiency and capacity of intermodal terminals, the competitiveness of the international rail freight transport on the corridor can increase considerably.

The following targets are set in the study:

- Assessment state of play status quo in terms of access conditions, ownership and management, quality, efficiency and capacity. Identify good practices (including improvement projects) on the corridor.

- Inventory of bottlenecks for improvements

- Identification of expected lacks of capacities (regional differentiation) on the basis of existing transport forecasts

- Draw up of an action plan for improvement of the quality, efficiency and capacity of terminals on the corridor within 5 years (quality and efficiency) resp. until 2020 (capacity).

Focus will be on intermodal rail transport on the corridor Rotterdam-Genoa (incl. maritime and inland waterway ports, terminals in private ownership). The time horizon of actions for measures to increase performance is up to 5 years and to increase capacities is up to 10/15 years.

The draft results of the study are presented in a workshop in Milan –Busto 24 June 2008. In the 2nd part of 2008 the study will be finished. One agreed follow-up item is to set-up a corridor terminal platform which should in collaboration with Infrastructure Managers develop a common approach to improvements on both capacity and quality aspects of terminals on the corridor.
Customs transit procedure

In February 2004, a simplified procedure for customs transit was laid down between the customs authorities of the participating countries on the basis of a Memorandum of Understanding („Swiss Corridor T 2“). This procedure grants considerable facilitations especially to railway enterprises which carry out transit operations not on the basis of the traditional cooperation procedure (“CIM consignment note”), but - as provided for as the regular case in EU Law – on their own behalf. As a matter of fact these transit transport operations already make up about 6 % of the rail transit transport through Switzerland, according to statements of the Swiss customs authorities.

Due to the most recent amendment of the EU customs law a continuation of the simplified procedure for transit through Switzerland will not be possible beyond 30 June 2009. The new customs law (Regulation 1875/2006/EC) envisages especially in case of third countries an electronic advance notification of security data which presents a considerable difficulty for the railway enterprises.

It is necessary to achieve urgently solutions for efficient and secure arrangements between EU and CH in order not to jeopardize the quality achieved on the corridor. On the one hand, the IQ-C working group appreciates it if the result of the current negotiations between the Commission and Switzerland could guarantee the security of trade in Europe, on the other hand, it should neither create additional administrative burdens within the exchange of goods between the EU and Switzerland nor increase costs unnecessarily for railway undertakings and operators as far as customs clearance procedures are concerned. The first results of the negotiations are directing towards a waiver of pre-announcement security declarations for shipments between the EU and Switzerland. This means, the Corridor procedure Swiss Corridor T 2 may be running beyond June 2009.

9. General Development of the rail freight transport on the North-South-Corridor

Infrastructure improvements, two new line sections of paramount importance had been taken into service, the Loetschberg base tunnel in Switzerland and the Betuwe line in the Netherlands. With a volume of about 9 bn € of investment, both projects implied a tremendous political and financial effort, and the very high technical standards a real challenge for the project teams in charge, which have timely completed the projects. Both openings had been celebrated in outstanding inauguration ceremonies and represented real highlights in 2007. The 140 km of new corridor lines sum up to additional capacities of about 100 train paths between Rotterdam and Zevenaar, as well as from Frutigen to Raron. However, this additional capacity does not yet fully contribute to the corridor capacity due to the limited connecting line capacities. Further
projects on the corridor advanced, respectively started or even completed initial plan studies, approvals of building licences etc.

The increase of transport volume in the corridor is a result of the efforts in the different fields of work of the working group IQ-C, but as well a challenge for future actions of the working group.

The growing market asks the ministries and all actors on the North-south-corridor to provide sufficient capacity and high qualitative products. Especially the growing importance of combined transport and the interfaces of multimodal transport have to be taken into account. An increasing number of railway undertakings and intermodal operators operating on the corridor can be observed. This proves that market access and competition rules on the corridor are successfully working.

Important further steps of work concern the early and punctual implementation of ERTMS, the mutual recognition of rolling stock with a special focus on the implementation process and the mutual recognition of the driver licences. Special attention should be given to: improvements in punctuality and the acceptance of the market concerning the different measures and innovations of ministries and infrastructure managers.

10. Recommendations

The international working group IQ-C recommends continuing with the quality improving scheme on an adapted basis. The established platform between the Ministries of the corridor countries is deemed by all the participants and stakeholders as valuable and necessary with view of further improving the quality of the rail freight transport in the North-South-corridor. The Corridor approach is also in line with the European transport policy which sees corridors as an important mean to enhance international rail freight (see Commission Communication on a railfreight oriented network and Council conclusions of 7th April 2008).

The key to success for rail freight on the corridor is the strong commitment by all parties involved to improve the quality of rail freight services and make it competitive. Therefore it is recommended to infrastructure managers to develop dialogue with market parties further and make transparent the work of infrastructure managers.

The Ministries recommend to update in 2008 the 2006-2010 action plan that was agreed in 2006 because of:

- Delay in the implementation of the improvement measures, in particular where the cooperation with RailNetEurope is involved (traffic and capacity management systems);
- schedules of the business plan of the infrastructure managers;

- The consensus to take on board new actions regarding the objective to harmonize the technical characteristics of the corridors (weights and dimensions e.g.)

- The consensus to take on board the exchange of information and coordination of measures concerning railway noise abatement to make possible a further growth of rail freight transports in the North-south-corridor without plaguing bordering population with growing noise pollution and to increase the acceptance of railway transport.

Therefore, the Ministries ask the Ministers of Transport in the Corridor to approve these adaptations. The new action plan will be presented in a separate document.
Memorandum of understanding

Schaffung einer internationalen Arbeitsgruppe zur Analyse der Probleme im Nord-Süd-Güterverkehrskorridor und zur Lösung derselben.

Der Staatssekretär im Bundesministerium für Verkehr, Bau- und Wohnungswesen der Bundesrepublik Deutschland, Herr Ralf Nagel, der Minister für Infrastruktur und Transport der Republik Italien, Herr Pietro Lunardi, der Minister für Verkehr, Wasserwirtschaft und öffentliche Arbeiten der Niederlanden, Herr Roelf H. de Boer und der Vorsteher des Eidgenössischen Departements für Umwelt, Verkehr, Energie und Kommunikation, Herr Bundesrat Moritz Leuenberger bekräftigen

im Bewusstsein,
- dass der Güterverkehr tragend zum Wachstum der europäischen Wirtschaft beiträgt,
- dass der Güterverkehr nach den Kriterien der Nachhaltigkeit erfolgen soll,
- dass eine Optimierung des Modal-splits zwischen Schiene und Straße im Güterverkehr mit Hilfe geeigneter Infrastrukturen und marktkonformer Anreize, ohne Diskriminierung und gemäß dem Prinzip der freien Wahl des Verkehrsmittels anzustreben ist,
- dass durch eine Stärkung des Güterverkehrs auf der Schiene die Funktionsfähigkeit der Straße verbessert wird,

sowie aufgrund der Tatsache, dass
- der Güterverkehr zwischen den vier Ländern sowie im Transit durch dieselben ein stetiges Wachstum aufweist,
- die Güterverkehrsverbindungen auf der Schiene im Nord-Süd-Komodor ausgebaut und gestärkt werden sollen, um sie gegenüber der Straße konkurrenzfähig zu erhalten,
- der Grenzübergang im Schienengüterverkehr besondere Schwierigkeiten aufweist,
- die Bestrebungen zur Verwirklichung des freien Netzzugangs im grenzüberschreitenden Schienengüterverkehr unterstützt und gefördert werden müssen,
- zu diesem Zweck eine Harmonisierung der technischen Bestimmungen im internationalen Schienengüterverkehr anzustreben ist

Ihren grundsätzlichen Willen zur Schaffung einer internationalen Arbeitsgruppe zur Analyse der Probleme im Nord-Süd-Güterverkehrskorridor und zur Lösung derselben. Folgende Rahmenbedingungen werden gesetzt:
Geographische Abgrenzung

Das Augenmerk soll auf die Nord-Süd-Achse gerichtet sein. Es handelt sich dabei insbesondere um die Verbindung Niederlande/Nordhafen/Rhein und Ruhrgebiet nach Italien (Raum Milano, Ligurische und hochtyrhenische Häfen mit Weiterführung nach den Verladeterminals in Campania, Gioia Tauro, Taranto und Palermo) durch die Schweiz.

Mitglieder der Arbeitsgruppe

Die Arbeitsgruppe setzt sich aus Vertretern der vier Verkehrsministernaten zusammen. Diese ziehen nach Bedarf die Transportunternehmungen, insbesondere die Infrastrukturbetreiber bei, welche zur Erfüllung des Auftrages beitragen können.

Aufgaben der Arbeitsgruppe

Ziel


Massnahmen

- Die Arbeitsgruppe erhebt die bestehenden Angebotsmängel im Bahngüterverkehr (Kapazität, Verspätungen, Schwierigkeiten bei Grenzübergreiten, Unterschiede in den technischen Vorschriften, fehlende Ressourcen usw.) und analysiert die Schwachpunkte.

- Die Arbeitsgruppe schlägt Massnahmen vor, um diese Schwachstellen so rasch wie möglich zu beheben und insbesondere dem freien Netzzugang auf den wichtigsten Güterverkehrselementen (siehe geographische Abgrenzung) zum Durchbruch zu verhelfen.

Umsetzung

- Die Arbeitsgruppe erarbeitet in Zusammenarbeit mit den Infrastrukturbetreibern unter allfälliger Anhörung übriger Interessierten (Eisenbahnverkehrsunternehmungen, Operateure, Speditonsunternehmungen), einen Massnahmenplan für Verbesserungsvorschläge und sorgt für die Umsetzung.
Zeithorizont

Vorbereitungsarbeiten


Weiteres Vorgehen

Die kurzfristigen Massnahmen sollen 2003, die mittelfristigen bis 2007 und die langfristigen bis 2015 umgesetzt sein.

Die vier Minister werden regelmässig über den Stand der Arbeiten orientiert.

Lugano, 9. Januar 2003

Herr Ralf Nagel
Staatssekretär im Bundesministerium für Verkehr, Bau- und Wohnungswesen der Bundesrepublik Deutschland

Herr Pietro Lunardi
Minister für Infrastruktur und Transport der Republik Italien

Herr Roelf H. de Boer
Minister für Verkehr, Wasserwirtschaft und öffentliche Arbeiten der Niederlanden

Herr Moritz Leuenberger
Vorsteher des Eidgenössischen Departementes für Umwelt, Verkehr, Energie und Kommunikation
LETTER OF INTENT ERTMS deployment on Rotterdam – Genoa corridor

Mr Moritz Leuenberger  
Head of the Federal Department of Environment, Transport, Energy and Communications of Switzerland  
Mr Pietro Lunardi  
Minister of Infrastructure and Transport of Italy  
Ms Karla M.H. Peijis  
Minister of Transport, Public Works and Water Management of the Netherlands  
Mr Wolfgang Tiefensee  
Minister of Transport, Building and Urban Affairs of Germany

In agreement with the EU Trans-European Network - Transport ERTMS coordinator Karel Vinck

Background

The Rotterdam-Genoa rail freight corridor is continuing to develop rapidly and is one of the main rail freight axes in Europe. The Ministers signed a Memorandum of Understanding on 9 January 2003 to improve framework conditions for the development of rail freight services (the ‘IQ-C project’). Following that Memorandum of Understanding the Ministers agreed in July 2004 to study the deployment of ERTMS on the corridor. A deployment strategy where ERTMS is implemented with priority on the main European rail corridors will improve the cost-benefit scenario considerably and can create a breakthrough for rail interoperability in Europe, which would facilitate integrated cross-border traffic. A cost-benefit analysis has been carried out, at the request of the Ministers, which showed, on the assumption of an annual 1.5-2.0% cost decrease of ERTMS equipment in the 2005-2015 period, a positive cost-benefit ratio in the medium-long term could be realised whereas the cost-benefit ratio would improve after more widespread ERTMS implementation on European corridors. Well targeted support can be justified to accelerate the roll out of the system. The cost-benefit ratio of ERTMS deployment on the corridor can improve considerably if ERTMS deployment is combined with a targeted programme of investments in infrastructure and of innovations in traffic management.

The Ministers,

Considering that:
• In the EU the interoperability standards for European Train Control Systems are being developed in the framework of interoperability Directives 96/48/EC and 2001/16/EC. The adoption of the TSI “Control-Command and Signalling” under Directive 2001/16 (interoperability of the trans-European conventional rail system) concerning ERTMS in the Committee on the Interoperability and Safety of the European Rail System from November 2005 should be respected. Also, Switzerland is going to adopt provisions which are equivalent to Directives 96/48/EC and 2001/16/EC as a separate package of the Swiss Railways Reform.


• The European Commission appointed in July 2005 Mr Karel Vinck as Coordinator for the deployment of ERTMS on the Trans-European Networks with special emphasis on major freight corridors such as Rotterdam-Genoa.

• The infrastructure managers involved have, at the request of the Ministers of Transport, developed a realistic implementation strategy on each section of the corridor for the deployment of ERTMS. DB NETZ is currently finalising its cost-benefit analysis regarding the fastest way to implement ERTMS on the section Oberhausen-Mannheim. The implementation strategy is further described in the project plan.

• The Infrastructure Managers have expressed their support for the Ministers’ Letter of Intent.

• ERTMS is the backbone of an optimised corridor to realise a high increase of transport volume and quality. Implementation requires a joint effort from the Governments, infrastructure managers and railway undertakings.

• The European Commission proposed to support ERTMS deployment both for infrastructure elements and for on-board devices. For that purpose, the European Coordinator will make recommendations concerning the financing period 2007-2013.

• The draft resolution from the European Parliament supports the rapid implementation of ERTMS on the Rotterdam-Genoa corridor (2005/2168 INI, from rapporteur Cramer, 07.02.2006).

• Measures to improve quality on the corridor implemented in the framework of the IQC project should be continued and a work programme should be developed to facilitate the deployment of ERTMS on the corridor.

Aim:

• Implementing ERTMS on the Rotterdam-Genoa corridor as fast as possible at the least cost.

Recommend the following further steps and actions to the extent that these steps and actions will be supported by the ERTMS implementation plans of all countries involved in the Rotterdam - Genoa rail freight corridor:

1. ERTMS deployment on the corridor should be realised in 2012 except for the stretch Oberhausen–Mannheim, which will be fitted with ERTMS at the latest by 2015. In 2015 locomotives equipped solely with ERTMS should be able to run on the whole corridor. In Germany alternative technical solutions
(STM/PZB-LZB) will be put in place to ensure interoperability along the whole corridor from 2012 in a non-discriminatory way.

2. The scope of the ERTMS project is described in the project plan.

3. A coherent programme of related infrastructure investments should be developed on the corridor. This programme should further improve the efficiency along the corridor owing to the fact that it delivers operational benefits to the railway undertakings concerned. The programme will be described in the detailed implementation plan. The EU Member States concerned will refer to the Letter of Intent and the project plan in their request for EU TEN financing.

4. Requests, submitted jointly where possible, from the EU Member States involved (except Switzerland) for EU TEN financing in line with this Letter of Intent must be prepared by 1 October 2006 at the latest by the EU Member States of the corridor for the financing period 2007-2013.

5. The Ministers concerned will take all the necessary measures, taking into account the national rules for budget allocation and, where applicable, the European rules for state aid and competition, for the required funding for the national parts of the ERTMS corridor.

6. The Ministers involved will set up an executive committee to steer the implementation of the project. The European Commission and infrastructure managers will also be invited onto the executive committee. The executive committee will adopt its mission statement as soon as possible. It may give advice to the Ministers regarding changes to national railway regulations if these regulations would hinder implementation of the project. The executive committee will not change the responsibilities and powers of the Ministers.

7. The infrastructure managers should create a common management committee to implement the project plan for ERTMS deployment on the corridor. The management committee will report to the executive committee in line with this Letter of Intent and the project plan. The management committee – acting as a permanent task force – has the function of developing the detailed implementation plan including measures to control different risks that may occur, organise where possible common purchasing of ERTMS equipment and organise financing of the implementation plan. The management committee should act as far as possible as a common body dealing with support groups of the European Railway Agency, the railway industry (UNIFE) and the railway undertakings (CER, ERFA, UIC) for the implementation of the project. Furthermore, the management committee ensures coordination with all other activities of the infrastructure managers for quality improvement on the corridor.

8. The safety authorities responsible for authorising the putting into service of ERTMS equipment on the corridor infrastructure and rolling stock will present to the Ministers and to the European Coordinator a cooperation agreement with practical measures to streamline the certification processes.

Done at Bregenz, 3 March 2006
Mr Moritz Leuenberger  
Head of the Federal Department of Environment, Transport, Energy and Communications of Switzerland

Mr Pietro Lunardi  
Minister of Infrastructure and Transport of Italy

Ms Karla M.H. Peijjs  
Minister of Transport, Public Works and Water Management of the Netherlands

Mr Wolfgang Tiefensee  
Minister of Transport, Building and Urban Affairs of Germany
Memorandum of Understanding
on the implementation of approval procedures for rolling stock
and cross-acceptance of approval procedures
of the competent supervisory authorities
between

The Ministry of Transport, Public Works and
Water Management of the Netherlands

The Federal Ministry of Transport, Building and
Urban Affairs of the Federal Republic of Germany

The Federal Department of the Environment, Transport, Energy
and Communications of Switzerland

The Federal Ministry of Transport, Innovation,
and Technology of Austria

The Ministry of Transport of Italy
Appendix III

Memorandum of Understanding on the implementation of approval procedures for rolling stock

Background

The goods rail transport in the European Union has been liberalised completely since 1 January 2007. With regard to international passenger transport, the European Council and the European Parliament have agreed the opening up of the market by 2010 in the framework of the negotiations on the third railway package. These measures and their expected acceptance by Switzerland present railway undertakings in the Participatory States with many and varied opportunities to achieve a favourable position with regard to other modes of transport and to exploit their special potential in the field of long-distance cross-border routes.

Despite the liberalisation, however, there still are obstacles which substantially hinder cross-border rail transport. The existing time consuming and expensive approval procedures to obtain a cross border approval for rolling stock considerably restrict international rail transport.

The European Commission has recognised the problem and in December 2006 has put forward proposals on the issue "Cross-acceptance" which aim at simplifying, accelerating and reducing the costs of approval procedures for internationally operated rolling stock, in particular locomotives.

The approach is based on the principle of mutual recognition of approval certificates for rolling stock which has already been put into practice successfully between some Member States by means of bilateral agreements.

It is a special concern of the States concerned to this Memorandum of Understanding to shift a considerable share of the trans-Alpine goods transport to the more environmentally-friendly railways. For this reason, the States concerned have already worked together intensively and confidently on different levels (ministries and infrastructure managers as well as supervisory, safety, and regulatory authorities).
Appendix III
Memorandum of Understanding on the implementation of approval procedures for rolling stock

In this context, the co-operation on the corridor Rotterdam-Genua within the framework of the “IQ-C project” and the measures implemented to improve the goods rail transport on the Brenner corridor deserve special mention.

Taking into account the following reasons:

➢ Rail transport in the Participatory States is characterized by very high safety standards. The safety standards are based on many years of confident co-operation between the competent authorities – the Inspectie Verkeer en Waterstaat Toezichtseenheid Rail for the Netherlands, the Eisenbahn-Bundesamt for the Federal Republic of Germany, the Bundesamt für Verkehr of Switzerland, the Federal Ministry of Transport, Innovation and Technology of Austria and the National Safety Authority/Ministry of Transport of Italy

➢ The principles for implementing the approval procedures for vehicles and the cross-acceptance of approval certificates are based on the basic ideas set out in the communication and the proposals for directives by the European Commission to the Council and the European Parliament of December 2006 regarding the facilitation of the movement of rolling stock across the European Union

➢ The present Memorandum of Understanding is completely consistent with the approach and the goals of the European Union and Switzerland. The Participatory States which are members of the European Union shall apply this Memorandum of Understanding in accordance with the EU directives 96/48/EC, 2001/16/EC and 2004/49/EC
The goal is to intensify the current confident co-operation and accelerate and simplify the approval procedures while maintaining the high railway transport safety standards in the States concerned.

The chosen approach is not a closed shop. In the contrary the Participatory States wish to invite other European countries to follow the example.

The Ministers recommend on:

- applying the procedure of the competent authorities for the approval of the placing in service of rolling stock which is described in detail in the Annex to this Memorandum of Understanding;

- supervising the implementation of this Memorandum of Understanding and providing, on the basis of a proposal issued by the multilateral working group established between the experts of the competent authorities of the Participatory States, the updating of the Annex corresponding to the technical evolution.
Signed at Luxembourg on 7 June 2007

Mr Carmel Eurlings
Minister of Transport, Public Works and Water Management, Netherlands

Mr Wolfgang Tiefensee
Minister of Transport, Building and Urban Affairs, Germany

Mr Moritz Leuenberger
Director Federal Department of the Environment, Transport, Energy and Communications, Switzerland

Mr Werner Faymann
Minister of Transport, Innovation and Technology, Austria

Mr Alessandro Bianchi
Minister of Transport, Italy
IQ-C Action plan 2006-2010 for rail freight corridor Rotterdam-Genoa

July 2006

The action plan has been decided upon by the Ministries of Transport from Germany, Italy, Netherlands and Switzerland on 30 May 2006. The action plan is based on the requests from Ministers as expressed in the Rotterdam-Genoa progress report March 2006 in the Bruganz meeting (3 March 2006). The action plan has been discussed and accepted by the involved infrastructure managers, rolling stock & safety authorities. The action plan is based on the MOU “Lugano” for the Rotterdam-Milan corridor from 9 January 2003 which was extended to Genoa by decision of Ministers of 10 July 2004 at Rotterdam. The original action plan from 2003 is in this way amended. The current action plan takes into account the Letter of Intent for FRTMS deployment on corridor Rotterdam-Genoa which was signed by Ministers 3 March 2006. On an annual basis the IQC-working group of Ministries will report to the Ministers on the progress of the project.
OVERVIEW 2006-2010 ACTION PLAN IQC CORRIDOR ROTTERDAM – GENOA

MoT = cooperating ministries of Transport, IM = cooperating Infrastructure Managers, RB = cooperating regulatory bodies, SA = cooperating safety and rolling stock authorities

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Explanation action points

1. Digital coordination

Aim
Infrastructure managers will organize their digital cooperation in such a way that virtual coordination of infrastructure management on the corridor is possible with one face towards railway undertakings on a cross border basis.

Explanation
For virtual coordination IT tools are needed before, during and after the driving of a train. These tools need to be compatible with:
- national systems of IM’s like, RUTH-K, VPT/PTI etc.
- systems of RU’s in order to facilitate seamless digital communication between IM’s and RU’s, also cross border.

Several tools are developed already by RailNetEurope in a broader EU context, like Pathfinder and EICIS. More is to follow in cooperation with other projects like Europtails. These tools will be implemented on the corridor in order to facilitate virtual coordination of capacity management, traffic management and performance monitoring. In this way it is not necessary to create a hardware center. The digital coordination can have a virtual character.

The digital corridor coordination should be set up in such a way that it is in conformity with the technical specifications for telematic applications of rail freight transport of the EU (TSI TAF). A Strategic European Deployment Plan (SEDP) is under construction. The corridor can play a leading role in the implementation of the SEDP for TSI TAF.

Milestones

⇒ Full implementation on the whole corridor of Pathfinder, EICIS and Europtails in 2007 at the latest.
⇒ Presentation of an implementation plan on the corridor for the SEDP regarding TSI TAF by upgrading of IT tools on basis of customer evaluation and cost benefit analysis in 2007, to be implemented after approval.

2. Shortening response time for train paths requests

Aim
Allocating preconstructed and tailor made train paths on a full cross border basis by infrastructure managers to railway undertakings and other applicants.

Explanation
RailNetEurope has set up One Stop Shops (OSS) in every EU member state and Switzerland. OSS are serving as the portals to railway undertakings. Railway undertakings no longer need to address the infrastructure managers of different countries in different languages. The OSS provide a spectrum of advising, co-ordination and sales services, before, during and after the train journey. This includes, for example, assistance to the customer on traffic planning, international co-ordination of tailor-made train paths and information on the level of infrastructure charges.

The OSS are also functioning on the corridor. They have proven they can fulfill a good role. Still a lot of work has to be done to optimize cooperation of the OSS. The OSS possess a quickly growing toolbox with better procedures, tools like Pathfinder etc. The challenge in the coming years will be to maximize customer satisfaction by optimizing the service levels through use of all new possibilities coming available. More in particular the response time for answering to specific requests for international rail freight paths to the infrastructure managers must be shortened.

Milestones

⇒ Full use of all organizational and technical possibilities to ensure response times for short term train path requests to 5 days for international train paths train paths in 2007.
⇒ Set up and implement a measurement system for response time regarding international requests for train paths in 2007
3. Monitoring traffic and performance

Aim
Ensure by monitoring that on the corridor use, quality and performance of train paths for international freight is of the highest possible level.

Explanation
Infrastructure managers are responsible for constructing train-paths on the corridor that are in line with the requests from railway undertakings. Infrastructure managers shall co-operate in order to make good connecting train paths. Three aspects are most important here:
- whether the infrastructure managers are able to offer a sufficient number of train paths (quantity) to the railway undertakings;
- whether the infrastructure managers can offer sufficient quality of train paths. E.g. the transition from Rotterdam-Genoa is important here;
- Whether the performance of trains on the allocated train paths is in practice as expected.

To implement this action the Infrastructure Managers will develop clear performance indicators and an implementation program to enhance performance. A corridor specific Management Information System is being developed within the framework of RailNetEurope. For this purpose basic data can be used from Eurotirails and the pilot with European Performance Regime (EPR). The implementation of ETCs can facilitate the improvement of quality and quantity of train paths. The ETCS corridor CBA study clearly shows the economic importance of good quality train paths. Where the legal priority rules for cases of congested infrastructure would form an obstacle in achieving the desired improvement the infrastructure managers should report this to the Ministries.

Minimum performance indicators, e.g.:
- number of train paths (e.g. per week / working day) requested and used by railway undertakings, number of train paths offered by IM for international rail freight for each section of the corridor;
- commercial speed and realised travel time for typical origin-destinations on the corridor.
- Average waiting time at border.
- Punctuality of train services on the corridor.
- Volume of international rail freight transport on corridor (data source to be assessed)

Milestones
- Design of corridor specific Management Information System by Infrastructure Managers with performance indicators by 2006;
- performance monitoring and improvement, 2007 onwards

4. Improving punctuality

Aim
Improve punctuality on the corridor by giving infrastructure managers and railway undertakings the right incentives

Explanation
Punctuality on the corridor is still not satisfactory; the progress report March 2006 from Rotterdam – Genoa stated 42-52% of all international freight trains through Switzerland had a delay of more than 30 minutes in 2005. The reasons for these ongoing delays must be clarified and discussed among stakeholders.

In addition to that, the Infrastructure managers will introduce a performance scheme to enhance quality on the corridor which is compatible with art 11 2001/14/EC. The Infrastructure Managers will consult stakeholders in the development phase. The Infrastructure Managers plan to measure punctuality of train services on the corridor including the causes of delay (delays caused by infrastructure manager, railway undertaking, other). Based on the number of delays caused by a particular infrastructure manager or railway undertaking a financial penalty will have to be paid. This
infra projects will be integrated in the ETCS project plan. Some examples are: removing 1500 Volt islands in the Netherlands, shortening the block length between Oberhausen and Emmerich by Germany, increasing capacity of the Sempione Platform by Switzerland and Italy. Other bottlenecks require more substantial investments and are often being dealt with on national or bi-national basis. All the bottlenecks have an impact on the functioning of the corridor. For this action point there needs to be in particular an active cooperation between the ERTMS corridor group (Executive Board, with special interest to bottlenecks with limited financial implication), IG-C and the existing bilateral cooperation between States. The IG-C project does not intend to change any responsibilities in these investments in infrastructure but merely wants to ensure the bottlenecks are treated at the right place and take well account of the corridor perspective.

Milestones

⇒ Annual monitoring of developments of bottlenecks at medium-long term for the corridor by the infrastructure managers, from 2006 onwards;
⇒ Annual discussion between Infrastructure Managers and Ministries to ensure the infrastructure bottlenecks are discussed at the right places (e.g. bilateral level between countries, EU-TEN-T financing, ERTMS corridor group) and take into account the corridor perspective, from 2007 onwards.

7. Mutual recognition of engine drivers

Aim

Mutual recognition of general qualifications of train drivers on the whole corridor.

Explanation

Qualifications of train drivers have partly a general character (for example eye tests) and partly a specific national character (for example track knowledge). It is clear that national qualifications like track knowledge cannot be a subject for cross border recognition. The general qualifications can however be subject of cross border recognition. This is also foreseen in the new EU directive that will be implemented around 2010. It is important to undertake action sooner for the corridor in order to prevent that trains must stop at borders to change drivers.

The general qualifications fit for cross border recognition are:

- Medical examination
- Psychological examination
- Language examination
- Examination and monitoring of knowledge of locomotive types
- Examination and monitoring of general professional knowledge

Germany and the Netherlands have developed a model for cross border recognition on these issues. This model will also be implemented at the borders Germany-Switzerland and Switzerland-Italy.

Milestones

⇒ Implementation of cross border recognition of general qualifications of engine drivers on a bilateral basis (D-CH, CH-I), 2007.
⇒ Scaling up to a corridor wide implementation in line with the new EU directive for engine drivers, 2008.

8. Mutual recognition of locomotives

Aim

Mutual recognition of certification processes for locomotives on the whole corridor.

Explanation

Certification of locomotives is a long and expensive process due to hundreds of items that must be checked and tested while there is virtually no cross border recognition. The result is that locomotives must pass the whole expensive procedure in every country again. This is not at all necessary as can be
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Milestones

⇒ Annual monitoring of developments of bottlenecks at medium-long term for the corridor by the infrastructure managers, from 2006 onwards;
⇒ Annual discussion between Infrastructure Managers and Ministries to ensure the infrastructure bottlenecks are discussed at the right places (e.g. bilateral level between countries, EU-TEN-T financing, ERTMS corridor group) and taken into account the corridor perspective, from 2007 onwards.

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8. Mutual recognition of locomotives

Aim
Mutual recognition of certification processes for locomotives on the whole corridor.

Explanation
Certification of locomotives is a long and expensive process due to hundreds of items that must be checked and tested while there is virtually no cross border recognition. The result is that locomotives must pass the whole expensive procedure in every country again. This is not at all necessary as can be
seen in the automotive sector. First steps are already made for cooperation of authorization bodies (which was started in the framework of the Brenner corridor) regarding certification for new locomotives on the corridor. The next step will be to draw up an International Requirement List (IRL) specifying more in detail which requirement exists currently on the corridor per country. In 2006 this work will be carried out.

When the IRL is ready the next step must be to examine which items are fit for mutual recognition and which items have a national character and are therefore not fit for mutual recognition (for example certification of national safety devices). The work on this issue shall be closely coordinated with the ongoing EU work on principles of cross-border certification of locomotives. Another issue that will be treated is mutual recognition of maintenance facilities for locomotives. This will be increasingly important the more locomotives are internationally used.

**Milestones**

- Implementing of the International Requirement List in conformity with the new EU guideline currently in development in 2007.

9. Monitoring of market regulations

**Aim**
Ensure cooperation of regulatory bodies for issues of common interest on the corridor.

**Explanation**

The regulatory bodies of the corridor have developed their cooperation for issues that are related to international freight transport on the corridor. Within this framework they will exchange information on their current work and work together on issues of mutual interest like access to services and capacity allocation process. Railway undertakings can address the cooperation of regulators for concerns that they may have.

**Milestones**

- The regulatory bodies will report at least yearly about the result of their cooperation.

10. ETCS implementation

**Aim**

International locomotives can use the corridor with just ETCS on-board equipment by completing ETCS in the infrastructure in 2015. As from 2012 ETCS will be installed in the infrastructure of Switzerland, Netherlands, Italy and partly in Germany, which means that in a first phase STM PZB will be required on board.

**Explanation**

Thanks to ETCS, infrastructure managers can improve their Traffic Management. Without national signalling systems a strong entrance barrier will be removed. The homologation of new locomotives on the corridor will become easier and is maybe even possible to allow drivers without national infra knowledge to enter to ETCS-2 sections of the corridor. As concluded by the Ministers concerned in the Letter of Intent of 3 March 2006, the implementation of the ETCS-project will be carried out by a joint project organisations of the infrastructure managers. IQ-C will initiate and observe the overall progress.

As from 2012 the ETCS locomotives can run along the corridor without the expensive signalling systems of The Netherlands (ATB), Switzerland (Signum), Italy (BACC) and the Germany (LZB). Only PZB, which remains at that time as single system between Oberhausen and Mannheim will be required on board. In practice most of the locomotives will need PZB for many years, even after completion of the ETCS on corridor in 2015, since PZB enables locomotives to divert from the corridor onto the extensive German network. Apart from saving costs on board the operational advantages of ETCS can be materialised already in 2012 by improving the performance of cross-border movements.
The corridor countries choose the ETCS technology, which meets their national policy. The Netherlands will install ETCS as a dual system on the remaining parts of their Betuwelijn. Germany will apply a dual system too since they don’t want to interfere the movement of national traffic and choose for ETCS level-2 for reasons of capacity of infrastructure. Switzerland wants to install level-1 Limited Supervision for reasons of cost. Italy needs radio infill in order to utilise their recent interlocking. Despite these variety of applications ETCS level-1 sufficiently offers technical interoperability. The tramborn equipment will be then limited to the electronic vital computer (EVC).

ETCS level-2 is a step further in the European Train Management System (ERTMS) and offers interoperability on an operational level. The ETCS train can run consecutively without any signal or information along the infrastructure. Level-2 offers opportunities for operational benefits to infrastructure managers and railway undertakings.

**Milestones**
- 2006/2007 Ministries and EU agree upon implementation of the “project 2012” incl. budgets.
- 2006 Infrastructure managers organise their cooperation.
- 2007/2008 tendering of the project, by the joint project organisations of the infrastructure managers.
- 2012 completion.

**11. Terminal issues**

**Aim**

Improve the interface between terminal operators and infrastructure managers.

**Explanation**

Quality of the corridor is not only dependent on infrastructure but also on terminals and how they are handled. Is the capacity of terminals sufficient? How is the cooperation between terminal operators and infrastructure managers in constructing and maintaining quality train paths? Also important is the quality of the work at terminals; if trains leave the terminal too late punctuality of trains on the whole corridor will be distorted. Information from the Netherlands shows that delay in terminal operations has a dramatic impact on punctuality on the whole corridor. Better cooperation in the logistical chain can lead to great improvement of punctuality on the terminal level with positive effect for the whole corridor.

The terminals are mostly nationally organised and it remains to be seen what can be improved at corridor level and who should be addressed. Therefore as a first step it is envisaged with infrastructure managers and terminals operators along the corridor to do a benchmarking study to define common problems and common areas of improvement. The action is dependent on the cooperation of infrastructure managers and terminal operators.

**Milestones**
- Study on quality of interface of terminals and infrastructure managers in 2007, taking into account other parties in the logistical chain like railway undertakings and intermodal operators.
Corridor A

Rotterdam – Genoa

Programme Management Office

Annual Progress Report
2007
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© PMO (G. Wende)
Appendix V
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0 Management Summary

In 2007, the corridor was marked by a number of outstanding results and made an exceptional step forward in the following areas:

1. **Infrastructure improvements**, two new line sections of paramount importance had been taken into service, the Lütschberg base tunnel in Switzerland and the Betuwe line in the Netherlands. With a volume of about 9 bn € of investment, both projects implied a tremendous political and financial effort, and the very high technical standards a real challenge for the project teams in charge, which have timely completed the projects within the planned scopes and baselines. Both openings had been celebrated in outstanding inauguration ceremonies and represented real highlights in 2007. The 140 km of new corridor lines sum up to additional capacities of about 100 train paths between Rotterdam and Zaventem. However, this additional capacity does not yet fully contribute to the corridor capacity due to the limited connecting line capacities. Further projects on the corridor advanced, respectively started or even completed initial plan studies, approvals of building licences etc.

2. **ETCS**, several line sections of ETCS Level 2 installators had been commissioned and taken into operation like the Betuwe line and the Lütschberg base tunnel. Furthermore, ETCS Level 2 is since spring/summer successful in operation on the Mannheim – Rothrist line. On this high speed line section 240 trains per day (passenger and freight) are safely and stable operated; running up to 200 km/h with a minimal headway time of 2 minutes. Subsequently, there are now already 190 km of corridor lines in commercial service with ETCS. The success of these national ETCS installators testify, that the system is technically well advancing and proving its capability on the way to become the mature European ATC standard. The Level 1 limited supervision mode was recognised to be an economic option to enhance the corridor migration process independently of the technical standard of the interlockings along the lines. It was analysed, that dense mixed mode traffic and the deployment of Level 1 limited supervision needs the higher system performance as specified in the baseline of SRS 3.0.0. Strategies had been investigated and elaborated, how to cope with the late availability of SRS 3.0.0 without jeopardising the corridor targets agreed by the Ministers in the letter of intent.

3. The IIMs consolidated the corridor organisation by implementing the Programme Management Office as one common corridor management board, which develops, steers, monitors and reports all the corridor activities as integrated action and like one company. Furthermore, the CEOs of the corridor IIMs decided to formalise the corridor organisation on European level by the foundation of the “European Economic Interest Group Corridor Rotterdam-Genoa” (EEIG). In brief, the following tangible results have been achieved:

- The activities of the IQ-C working group and the ERTMS working group were merged under the umbrella of the Programme Management Office (PMO), and all activities had been rescheduled in six new working groups for the preparation of fundamental issues to be required for the corridor implementation.

- The formerly IQ-C activities have been continued mainly by the new working group (WG) “Capacity”, carrying out detailed capacity and traffic demand analysis as input for the
bottleneck removal projects on the corridor in order to cope with the anticipated traffic growth in the future.

- The corridor strategic business plan had been completed and published to the EC in April 2007. The entire scope of corridor improvement options was explored and evaluated to be a 25 bn € investment from 2007 until 2023. The break even of investment versus savings from external costs will be reached by about 2025. The EC used the business plan as basis for the evaluation of the TEN-T subsidies.
- The requests for European TEN-T funding of ERTMS installations on the corridor had been prepared and submitted to the EC in June 2007. Based on the requests the EC decided to subsidise ETCS on the corridor in the first call by 66 m €, which is about the maximum according to the regulations of the call.
- New structures and processes to steer, to monitor and to report the corridor related activities had been developed and introduced in the PMO. The working groups and programme managers of the PMO defined the work scopes and time schedules of the implementation plan, which from now on will serve as the corridor baseline.
- The statutes of the European Economic Interest Group and the contract for the association of the Swiss corridor IMs had been prepared and negotiated, and the statutes have already been signed by the CEOs of the EEG members.
- The ETCS deployment strategy was extensively analysed in order to reduce functional complexity and investments for the benefit of timely implementation until 2012. Based on this information the final corridor strategy can now be adopted by the IMs and the EC in January 2008.
- First attempts could be achieved by the new WG “Traffic Quality”, monitoring the traffic quality in the corridor section Freiburg – Novara. The values received show not yet a significant improvement of punctuality due to extraordinary effects, but will serve as baseline for 2008. The international path allocation processes was improved by 1/3, using the Pathfinder application. An international train path can now be allocated within 6.4 working days\(^1\) in comparison to 8.7 working days at the beginning of 2007.

In total, the achieved work progress of 2007, together with the new integrated corridor organisation provide excellent results for the fast and controlled growth of the corridor implementation from now onwards, and represent a paramount step towards the future corridor success.

\(^1\) Please see explanations and definitions in chapter 2.3 for more details.
1 Introduction

1.1 Release Notes & Contact Details
This report has been set up, reviewed and finalized in quarter IV/ 2007 by the working
organisation of the Management Committee of Corridor A, the Programme Management
Office, located in Frankfurt. The contents and detailed information in this report has been
generated by the programme managers of ProRail (NL), DB Netz (D), SBB & BLS (CH) and
RFI (I) thus being under the responsibility of the related Infrastructure Managers (IMs). For
any questions or further details concerning the Corridor A programme please get in contact
with:

Stefan Wandel
Programme Director
Corridor A Rotterdam – Genoa
DB Netz AG
Haltestraße 49
60528 Frankfurt/ Main
Germany
Phone +49- (0) 69-265-45440
Fax +49- (0) 69-265-45442
stefan.wandel@behn.de

For any questions or further details concerning this report please get in contact with:

Andreas Ecter
Head of Programme Management Office
Corridor A Rotterdam – Genoa
DB Netz AG
Haltestraße 49
60528 Frankfurt/ Main
Germany
Phone +49- (0) 69-265-45450
Fax +49- (0) 69-265-45442
andreas.ecter@behn.de

1.2 Work Methodology & Organisation
The programme for the corridor from Rotterdam to Genoa consists of a number of domains
which should all lead to significant enhancements in reliability, capacity, transportation,
travel time and costs. These domains must be worked and followed up systematically. In addition
to that it must be assured that the range of projects, tasks and measures among each IM fit
together from the perspective of a pan-European corridor, because only a sound integrated
programme of all improvement measures will result in the aimed corridor success.

2 See Business Plan documents for more details.
Until beginning of 2007, the major improvement options on Corridor A were analysed and monitored by two IO-C ministerial groups and their related working groups of the IMs according to the set Corridor IO-C action plan. In beginning of 2007, the IMs decided to consolidate all corridor works in one integrated programme, which will be performed under the responsibility of only one overall responsible Management Committee. This Management Committee is supported by the Programme Management Office, which now takes care of the organisation and monitoring of both former IO-C working group activities as well as all further activities, which contribute to the corridor enhancement.

As the common vehicle for the successful implementation of the corridor programme the corridor IMs decided to found the "European Economic Interest Group Corridor A": ProRail, DB Netz and RFI are members of the EEIG. SBB and BLS have joint the EEIG as associates, because it is not possible for companies from non-EU member states – such as Switzerland – to join as EEIG as official members. The PMO in its duty as the management board of the corridor will fully represent the EEIG, whereas the MC members will take part in the General Assembly. The EEIG contracts are currently signed by the IMs and the official registration is expected in the beginning of 2008.

Under the umbrella of the PMO, the above considerations have now led to the establishment of six Working Groups, to which the former activities of the IO-C action plan are still related, and which are now chaired by Working Group Coordinators. The corridor organisation including the six Working Groups and their scope of major work packages are shown in the following chart.

The task of each Working Group is to develop answers and solutions for fundamental issues which are of great importance to the corridor programme as well as to support the general development of interoperability and European standards. The WGCs provide their results to the PIM of each IM. The PIMs are responsible to coordinate all their national implementation projects (see chart 2). Structuring the work this way leads to a synchronised step-by-step
implementation of the entire corridor and avoids national solutions which do not meet the integrated improvement of the freight transport on the Corridor.

![Chart 2: Roles of Working Groups and PIMs](chart)

All activities of the WGCs and the PIMs are coordinated and consolidated by the PMO. A two level monitoring system on a quarterly basis had been established to track the progress of the work on the corridor. The reporting of the WGCs and the PIMs is corresponding to the underlying baseline.

The PMO staff consists of three full-time employees located in Frankfurt. Five PIMs and five WGCs complete the working organisation and are the contact to the national IMs. Furthermore, several experts from the corridor IMs add their knowledge and their expertise in one of the Working Groups. In total, approximately 50 persons work at least part-time on tasks which are directly assigned to the corridor programme.

### 1.3 Baseline and Monitoring

The term “baseline” refers to a structured schedule of measures and activities which are necessary to progress in the corridor programme and comprises the time span from the planned start to the planned end. Each WGC and each PIM was asked to set up such a structured schedule containing all relevant actions with start and end dates according to the currently known scope in the forthcoming years. These plans of the WGCs, containing work packages and activities had been prepared and linked with the implementation plan of each IM, which contain key milestones of projects and project phases of all measures relevant to materialise the corridor. All the baselines are finally consolidated in one overall corridor implementation plan.

The monitoring process now compares each baseline planning and the actually achieved progress of the works. The baselines are frozen as the target and shall be kept. Of course, by implementing the plan during the forthcoming years, unpredictable risks such as budget cuts, delays or new requirements might occur and require the adaptation of the baseline in order to become a realistic plan again. In this case a change request management process

---

2 SIR and BLS subsume.
will first check the impact to the partners respectively to the corridor. Afterwards, the change may be approved and the baseline adapted accordingly.

Thus, the baseline is the list of planned actions whereas the quarterly reports inform about the work progress really made. In addition to that, the reports contain elements of risk management and change control management. All information from the reports of the WGs and the PIMs are used to control and steer the corridor implementation as one integrated undertaking. Derived from this information, the PMO as the corridor management board generates quarterly reports to be submitted to the MC, ExB, IQ-C ExB and to the CEOs (see chart 3).

![Chart 3: Reporting of the PMO](image)

The monitoring process is completed by a yearly report, presented in the underlying document, summarizing the results and the work progress of the year elapsed.

A final remark about the work progress, which is measured in [%]; the figures always refer to the baseline (a working plan for the WGs; an implementation plan for the IMs) which is currently valid. It is an accumulated statement of the work progress made since the beginning of the programme in January 2007. The planned work progress is calculated based on the duration of activities or projects. The actual work progress is a personal assessment of the WGs respectively the PIMs. The timeframe of the corridor programme comprises 2007 until 2015. The working plans of most WGs terminate by about 2009 or 2010\(^4\). However, some of the activities of the WGs are revolving or ongoing like e.g. capacity- and quality monitoring thus being continued until 2015 at least. The implementation plan contains also projects, which will be completed between 2020 and 2023 according to the current schedule.

\(^4\) As stated before, the WGs concentrate on fundamental issues, it would not make sense to solve fundamental questions too late and not having the time to use the results in the corridor projects. Therefore, the WGs work quite intensively at the beginning of the corridor programme.
The following information given in this report is based on the above mentioned principles. In total the current corridor implementation plan is comprised of about 160 infrastructure measures with 960 milestones plus 24 work packages performed by the WGs. It is our objective to report the most realistic and tangible facts about the corridor improvement development and progress of measures and traffic quality. However, the work progress, measured in [%], is partly still subject to an individual estimation by each PIM respectively WGC. Big infrastructure measures are performed over many years and thus not easily providing measurable progress every month. Wrong estimations will be identified by plausibility checks of a sequence of reported data in future. Thus the data quoted in this report is meant to provide a good orientation of the corridor progress and serve the awareness of possible risks and corrective measures to be required in future.

At the beginning of each chapter, some key performance indicators display the status of the WG or the projects of the IMs. Chart 4 displays such a header as an example.

<table>
<thead>
<tr>
<th>Due Date of Reporting</th>
<th>WG Result [%] Plan</th>
<th>WG Result [%] Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>07.12.07</td>
<td>4 Work Packages</td>
<td>1 Work Packages</td>
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<tr>
<td></td>
<td>Finished</td>
<td>Pending</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>End</td>
<td>31.12.15</td>
<td></td>
</tr>
</tbody>
</table>

PSP | WP | Results and Milestones achieved
---|----|----------------------------------
1.1 | Work Package 1 | Final report and documentation presented. Work package closed.
1.2 | Work Package 2 | Final analysis phase completed
1.3 | Work Package 3 | Work package to be started in 10/2008
1.4 | Work Package 4 | Work package to be started in 06/2008

Chart 4: Example Header and KPIs of a WG/ an IM

The due date of reporting is the day, up to which all progress, risk, changes and events are reflected in the underlying report. Usually, the due date the end of a quarter. The next figure displays the planned work progress of the WG (or IM projects), according to the latest baseline. This figure is given in [%], as explained above. The actual work progress made is given in the top right box. The second line of the header contains the number of work packages (projects for IMs dealt with by a WG respectively projects of an IM in total, the ones finished and the ones still pending. The work packages finished plus the work packages pending shall sum up to the total number of work packages. The start and end dates mark the total time span of planned work of the WG (or the IM). The second table of the header lists all work packages (projects for IMs), together with their PSP number of the baseline and the results and milestones recently achieved.

1.4 Goals in 2007

2007 was a year of transition and in some respect also a year of a new start for the corridor activities. The activities gathered in the IG-C group were handed over to the new PNO
organisation. Partly new teams have been formed and new processes had to be set up and coordinated. The 2007 goals of the PMO as the management organisation of the corridor can be summarised as follows:

- Completing the strategic Corridor A Business Plan (version April 2007)
- Restructuring the cooperation mode for the corridor organisation
- Integrating all corridor activities such as the IO-C action items
- Defining and setting up the working groups
- Setting up the baseline for each WG
- Reviewing the implementation plan for each IM
- Creating a monitoring process, including risk management and report templates
- Coordinating and submitting the funding requests for TEN-T MAP subsidies (EU)
- Transforming the PMO into an EEIG

Besides these activities and results which are mainly focused on organisational and structural issues, the working groups picked up their work and the project implementation continued. More detailed information about the results of the working groups and the implementation of the projects are given in the chapters 2 and 3.

1.5 Goals in 2008 (Outlook)

According to the currently valid baseline, the work on the corridor will continue with a strong focus on results. Some of these goals to be achieved in 2008 are:

- Official registration of the EEIG
- Continue TAF TSI gap analysis and finalise first part (short term path request scenario)
- Finalise an ETCS system deployment strategy and accomplish approval of EC and technical preconditions
- Set up and establish an expert group for the harmonisation of ETCS engineering rules
- Work out proposals for the harmonisation of ETCS and non ETCS operational rules and coordination at European level
- Analyse harmonisation potential of technical train parameters
- Conduct an CSS customer survey (RNE)
- Detailed analysis of track parameters and conditions
- Start drilling works at Canal-S base tunnel

More detailed information about the forthcoming work and results can be found in the paragraph Outlook in each and every WG and IM chapter.
2 Activities of the Working Groups

Until stated otherwise, e.g. by references or footnotes, the content of this chapter stems from the corresponding Working Group Coordinators who are leading these groups. For further information, please see also Annex B.

- TAF TSI (IQ-C Action Item #1): Laurens Berger
- ERTMS (IQ-C Action Item #10): Stefan Wendel
- Operations (IQ-C Action Items #12, #13): Antonio Garofalo
- Capacity (IQ-C Action Item #6): Heinz Puffer
- Traffic Quality (IQ-C Action Items #2, #3, #4, #5): Horstwedel Keeser
- Terminals (IQ-C Action Item #11): Thomas Schneider

2.1 TAF TSI (IQ-C Action Item #1)

2.1.1 Key Performance Indicators

<table>
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<th>WG Result [%] Actual</th>
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<tr>
<th>Work Packages Total</th>
<th>Work Packages Finished</th>
<th>Work Packages Pending</th>
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Start 01/11/07
End 31/12/15

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<th>PSP</th>
<th>WP</th>
<th>Results and Milestones achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Requirement Gap Analysis</td>
<td>Questionnaire had been prepared and sent out</td>
</tr>
<tr>
<td>1.2</td>
<td>Monitoring of other TAF TSI activities</td>
<td>Work package to be started in 01/2008</td>
</tr>
<tr>
<td>1.3</td>
<td>Development of value added services (Total Service Concept)</td>
<td>Work package to be started in 10/2009</td>
</tr>
</tbody>
</table>

2.1.2 Work Progress

2.1.2.1 Progress Management

The WG TAF TSI set up and approved a baseline starting in November 2007 and being completed to the utmost extent around December 2010. From 2011 to 2015, the WG TAF TSI shall monitor the implementation of TAF TSI in the national (IM) projects, which is something like a stand-by activity. In December 2007 no relevant work progress has been achieved. A number of meetings and workshops are planned in the first half of 2008 to close the gap.

Nevertheless, until the end of 2007, some activities had been carried out. A work plan for the next years for the WG TAF TSI had been set up. The first big step of this work plan is a detailed gap analysis, comparing today’s business processes with the future standards described in the TAF TSI. The goal is to document the need for reengineering the business process due to TAF TSI. A questionnaire had been set up and sent out, which shall draw up
an inventory of the state of the internal project planning of TAF TSI within each corridor IM. This work has been completed up to 8%. The answers of the questionnaire shall flow back to the WG TAF TSI by end of January 2008, just before the next meeting of the WG. The feedback from the questionnaire will also contribute to a first overview of ongoing TAF TSI activities on the national and the European level, which is the second WP. The third WP — development of value added services — is fully based on the results from the first WP — the gap analysis. Consequently, this work will not start before the gap analysis is complete.

An initial approach for TAF TSI has been formulated. This approach comprises to respect and to make use of the results delivered by the SEDP TSI TAF project. This project is governed by UIC for all European railway companies. Furthermore, the WG TAF TSI will have to coordinate the corridor IVs and, if possible, RUs to synchronise their activities in order to enable a smooth migration towards the functionalities described in the TAF TSI as early as possible. The WG will create benefits by making use of the applications which are already available for the corridor: Europitrails and Pathfinder. Both systems play an important role in the migration strategy of all IMs and RUs.

2.1.2.2 Risk Management
No risks to report.

2.1.2.3 Change Request Management
The underlying work plan has just been set up and approved by the WG. Therefore, there are no changes to report.

2.1.3 Outlook
The first meeting has proved that the introduction of TSI TAF is very complex. The complexity is of course due to the functionalities which are affected. There can be no doubt that this can be managed, because experts (e.g. for short term path request and management) are surely available within each IM company. Even more complex is the considerable amount of parties, projects and organisations which are somehow involved. This requires good networking, solid coordination and an intensive communication.

To solve all sorts of upcoming problems, choices will have to be made. Many of these decisions will be made outside the WG TAF TSI or even outside the corridor IVs etc. within the UIC project or within RNE. These decisions will surely have consequences for all parties and also for the corridor project. The corridor and the WG TAF TSI must try to organise its influence on this process, in order to end up with a solution that offers opportunities for the corridor and not all kind of restrictions. Besides continuing with the gap analysis, the monitoring of the other TAF TSI activities will be a major part of the working group’s activities in 2008.

Having a look into chapter 3, one can find a project for the national implementation of TAF TSI for each IM. Today, this project is actually not more than a placeholder. It is the objective of the WG TAF TSI to provide the content and the results which the IMs need to fill this project with life to enable an implementation.
2.2 ERTMS (IQ-C Action Item #10)

2.2.1 Key Performance Indicators

<table>
<thead>
<tr>
<th>Due Date of Reporting</th>
<th>WG Result [%] Plan</th>
<th>WG Result [%] Actual</th>
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<th>WP</th>
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<tr>
<td>2.1</td>
<td>Coordination of ETCS Working Group</td>
<td>Scope of the WG had been defined, Expert groups had been set up</td>
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<tr>
<td>2.2</td>
<td>Functionality</td>
<td>Analysis, definition and evaluation of consolidated corridor functionalities completed, Risk and scenario analysis completed, Proposal for an ETCS implementation strategy completed</td>
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<td>2.3</td>
<td>Technical Interoperability (7 expert groups)</td>
<td>Scope of the WG had been defined, Expert groups had been set up</td>
</tr>
<tr>
<td>2.4</td>
<td>Implementation</td>
<td>Roll out concept to be started in 02/2008</td>
</tr>
</tbody>
</table>

2.2.2 Work Progress

2.2.2.1 Progress Management

The WG ERTMS overall work progress sums up to about 9% compared to the new baseline of 9%. The originally intended works had to be finally subordinated with regard to the considerable analysis work, which became necessary for the development of a suitable ETCS deployment strategy based on the available system functionalities.

Until today, already 190 km of national ETCS Level 2 installations could be taken into service on corridor A:

- Betuwelijn (NL): 105 km of ETCS Level 2 (see chapter 3.1)
- High-speed line Matstetten – Rothrist (CH): 50 km of ETCS Level 2 (see chapter 0)
- Lötschberg base tunnel (CH): 35 km of ETCS Level 2 (see chapter 3.4)

This provides very good national experience regarding system performance, as well as of the implementation and homologation process. However, the ETCS deployment on the corridor needs more considerable works on fundamental issues of interoperability. As a direct consequence engineering rules, system functionalities, system performance, parameters and procedures as well as a concept for installation, homologation and acceptance works will have to be analysed in detail, coordinated and harmonised. Subsequently the ERTMS WG is dealing with these subjects, which are most vital for the corridor success.
The width and the depth of the above mentioned scope are also reflected by the very complex organisational structure of the WG. One top level group – the WG ERTMS itself – is collecting and consolidating the work results of in total seven so called expert groups, assigned to special topics of technical interoperability. Some of these groups had been set up by Corridor A whereas others which are already working under the roof of the ERTMS users group or the ERA have been connected to the WG ERTMS of the corridor. The issue cross acceptance and homologation is treated in the WP implementation. The subjects dealt with by the expert groups are presently:

- Harmonisation of DMI data entry
- Definition of braking curves and parameterisation process
- GSM-R voice coverage and roaming
- Interoperability
- Configuration management (change and release management) and definition of data management
- Crypto key management
- Static/dynamic border transitions

In spring 2007, the WG ERTMS had been set up and started to analyse and define its initial work scope, which had shortly be revised due to the complex issue of finding a common deployment strategy. Nevertheless, if during the corridor implementation further issues will be identified respectively become necessary according to the work progress and implementation phases, the WG will adjust its work scope accordingly.

Apart from the above scope, the WG was challenged with the investigation of a possible deployment strategy. The current available system versions of ETCS have not yet reached the functional performance, which will be required for the technically adequate and economical deployment of ETCS on the corridor, thus the analysis and evaluation of options for the final deployment strategy were the most important and most difficult concerns in 2007.

The following main issues are of high relevance for the deployment of ETCS until 2012:

a) in Germany, Switzerland and Italy the corridor consists mainly of mixed mode traffic lines, which require a much higher functional performance as single mode transport traffic lines

b) the financial constraints of the public sources do not allow the deployment of Level 2 installations to the extend originally planned, because for this level costly upgrades of interlocking equipment would become necessary to provide the interface for the connection of RBCs with interlockings

c) the European system version development is too late for the implementation schedule of the corridor, i.e. the basically required SRS version 3.0.0 will not be available in time for the targeted date 2012 of the corridor

The subject becomes even more difficult as until now neither firm information nor commitments are available, until when the SRS 3.0.0 version could be installed. Respectively it is not clear which technical, operational and financial implications have to be taken into account, if the corridor would start its operation with a preliminary solution and later be retrofitted once the SRS 3.0.0 is available.
Appendix V
Annual Progress Report Corridor A 2007 (Infrastructure Manager)

In order to find a solution, the WG analysed those functions, which are indispensable even for the preliminary start of operation and by accepting limited performance, interoperability and additional effort for a certain period. Because the SRS 2.3.0 version including reclassification proves now to be the only baseline, which can be counted on to be available, the functional requirements for the preliminary operation of the corridor had been reconsidered in an iterative process in order to compromise on the use of this baseline up from 2012.

The IMs want to maintain the basic migration process as communicated in the national deployment plans and the strategic Business Plan set up for the corridor. Besides that in Switzerland, in Germany as well as probably in Italy the deployment of ETCS Level 1 LS is now considered as the only alternative to facilitate the migration at those sections, where Level 2 installations turn out to be too expensive. Because the LS function is not part of the SRS 2.3.0, the signalling industry promised to offer a solution optional until 2010, which would be in time for the start of operation in 2012. SEB is presently preparing a MoU with the industry to formalise the development and procurement of limited supervision.

Currently, the WG and the PMO are preparing a risk and scenario analysis for the NC and the ExB to decide upon the final system deployment strategy on the corridor up from 2012. The final strategy will then be proposed to the EC and the European coordinator of the MoU corridors to support the proposal with the legal acknowledgement required from the EU.

2.2.2.2 Risk Management
The following risks are presently vital and need to be managed:

a) The ETCS system deployment strategy for operation up from 2012 will require the retrofit of the corridor by a better SRS version. The costs, timeline and hardware & software implications of this retrofit are not yet fully known.

b) Due to the need for the retrofit within only a few years, the RUs can not afford the installation of preliminary on board equipment thus the interoperability and actual ETCS operated traffic will be very limited during that period.

c) The impact of the retrofit with higher SRS versions regarding the homologation, e.g. testing and corridor certification respectively the overall system configuration control management is not yet experienced and needs to be defined and managed by a European process.

d) The roll out time to equip ETCS on the corridor requires the start of the purchasing process still in end 2008/ beginning of 2009. In order to enable this, the required system specifications and contractual agreements for the inclusion of the later retrofit, as well as the engineering for the tendering process must be possible and accomplished.

e) The resources of ETCS experts are very limited and have to be investigated and assured for the timely installation, commissioning, testing and certification. This also applies to the corridor WGs, for which sufficient expert man power has to be made available by the IMs.

f) The financing of ETCS has still to be assured for some parts of the corridor.

g) The lack of coordination of technical specifications and operational rules on the corridor, as well as an European level can lead to individual, redundant or incompatible solutions and has to be avoided, i.e. the coordination has to be managed in a way, that only
solutions corresponding to common European requirements will be developed by all parties.

In 2008, the works of the WG ERTMS and the WG Operations will liaise closely together. The work results and progress will also be shared by the PIMs in the PMO meetings in order to communicate and focus all activities on the actual common corridor targets. The link with the European TSI level has to be established via the WG members and the expert group members, who are involved in the ERTMS Users Group works as well as in the corridor works. Furthermore it is intended to liaise for some work packages with RUIs in order to learn about and consider their needs for their improved services.

2.2.2.3 Change Request Management

As the last adjustments of the baseline of the WG activities are still within the frame of the overall corridor programme and important results could be achieved, the changes are currently incorporated without additional risk. On the contrary, the gained results are part of the risk management to the benefit of the ETCS implementation. However, as soon as the decision about the right scope of SRS, indispensable CRs, capacity and ETCS levels needed is taken and the deployment strategy is fixed, another review of the work scope and change management process might become necessary in 2008.

The national migration of ETCS components related to the rolling stock also plays a major role for the corridor implementation and success as both, infrastructure and rolling stock have to function together to have the corridor running. Subsequently, in chapter 3 a still empty project is foreseen as a reminder. It is the responsibility of the PIMs to interface with their national rolling stock migration projects for the coordination with our infrastructure works on the corridor. As soon as this process has been started, these projects will become alive as part of the corridor implementation plan.

2.2.3 Outlook

For early 2008 it is aimed to agree together with the NC, ExSi and the EC on the final ETCS system deployment strategy. The WG ERTMS shall prepare the basis for the decision.

ETCS deployment and functional requirements are mainly suffering from different national application and engineering rules. Therefore it is aimed to agree to a certain extend on the harmonisation of these issues in order to simplify ETCS engineering and all following processes as much as possible. The WG will conduct the necessary workshops and develop solutions in the first half of 2008, as this is preconditioned for the preparation of the tenders.

The NSAs have established on their side two working groups, one for the development of a homologation process for the corridor and another to treat the technical issues regarding corridor functionalities and safety aspects. The WG ERTMS shall soon cooperate with the WGs of the NSAs for the joint preparation of all the grounds related to a smooth test and homologation procedure to be followed on the corridor. This also refers to the development and introduction of a configuration control process on corridor level.
As a guideline for the ETCS implementation projects the WG shall develop a proposed ETCS roll out plan including a common concept for the test and homologation procedure.

2.3 Operations (IQ-C Action Items #12, #13)

2.3.1 Key Performance Indicators

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<td></td>
<td></td>
<td>Exhaustive documentation collected</td>
</tr>
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<td>3.2</td>
<td>Training of Personnel</td>
<td>Work package to be started in 10' 2008</td>
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<tr>
<td>3.3</td>
<td>General Tasks</td>
<td>Scope of the work (adoption of the agreed methodology) defined</td>
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</tbody>
</table>

2.3.2 Work Progress

2.3.2.1 Progress Management

The WG Operations had been set up in Fall 2006 and picked up its work without any delay. The planned activities of the WG will end around December 2010. Until now, some 7% work progress had been realised, which is a bit more than planned (5%).

Three WP had been defined to cover the full scope of tasks: Operational Rules (OR); Training of Personnel (TP) and General Tasks (GT). The term interoperability is mainly used with regard to technical systems, but it is equally important to harmonise the rules and regulations of specific operational situation. That is exactly what the WG Operations has in mind: bringing the national rules for operating trains in line to make the traffic run more smoothly, without making any compromises with regard to safety. The WG Operations focuses on operational rules for normal and degraded mode plus the harmonisation of non-ERTMS rules and GSM-R operational rules.

The main activities being carried out in 2007 are directly rooted in the WP Operational Rules. To gain a common basis and a solid know how the existing documentation had been collected and assembled in a first step. This comprises for instance the TSI CR OPE or the EBG ERTMS Users Group. The collection of the documentation had been completed to full extent. As a second step, the documentation had been analysed in detail and the sensitive situations which are not related to ERTMS/ETCS had been identified. This work had been completed to the extent of 60% - which is absolutely in line with the working plan.
According to the baseline of the WG Operations, the WP Training of Personnel is about to start in October 2008. Consequently, no activities had been carried out in 2007. The WP Operational Rules is the basis for this kind of work.

The WP General Tasks contains some evolving and permanent activities, basically communication, information and reporting measures. The scope of work has been defined to the extent of 50%. The remaining part will consist in refining the methodology on the basis of the feedbacks of the activities carried out. Furthermore, it will have to take into account the need to face the risk of insufficient coordination between different corridors. To find a general solution for this issue is among the first tasks to be solved in 2008 (see next clause for more information). Finally, the WG operations coordinated its activities with the overall corridor programme. This activity is ongoing until the end of the corridor programme and had been completed up to 9%.

2.3.2.2 Risk Management

For the time being, two risks need to be highlighted for this specific working group:

a) Due to personal fluctuations within ProRail, there is currently no Dutch representative present in the WG. The designated expert left the company and until now no successor had been detected. This bears the risk that the perspective and the needs of operational rules at ProRail get lost - a situation which is in the end not comfortable to all involved sides. This issue has been addressed several times to ProRail. It is desirable and necessary that ProRail picks out an appropriate expert without any further delay.

b) The WG Operations is in need of coordination between the different corridors to avoid corridor specific solutions that differ from the rest of the network or - maybe even worse - that differ from one corridor to the next. Those different corridor solutions could create obstacles to interoperability instead of removing them. It is not acceptable that operational solutions for Corridor A could be different than solutions applied in other corridors for the same operational situation. For these reasons WG Operations suggests to have an agreed solution at TSI level. In the meanwhile the methodology will be refined and set up in a way that these problems do not block the current developments of activities.

2.3.2.3 Change Request Management

No changes to report.

2.3.3 Outlook

In 2008 the work of the WG will continue in completing the analysis for the existing documentation. Operational rules for ETCS L2; ETCS L1 and L1 LS and L1 RI will be discussed and developed. Furthermore, the group will cope with the harmonisation of operational rules not related to ETCS (all activities belong to the work package Operational Rules). The WP Training of Personnel is about to start with the analysis of TSI CR OPE requirements for driver rule book in October 2008. One of the most important activities within the WP General Tasks in 2008 will be to update the scope of work and to refine the methodology of the WG.
2.4 Capacity (IQ-C Action Item #6)

2.4.1 Key Performance Indicators

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Start 01.10.07
End 31.12.10

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<td>Existing bases confirmed</td>
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<tr>
<td>5.2</td>
<td>Capacity analysis 2008</td>
<td>Traffic measurement Thursday 27.06.07 defined for 2007. Capacity planning; national updates started. Major capacity projects; national updates done. Funding: new presentation, samples shown and discussed.</td>
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<td>5.3</td>
<td>Capacity analysis 2009</td>
<td>Work package to be started in 10' 2008</td>
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<tr>
<td>5.4</td>
<td>Capacity analysis 2010</td>
<td>Work package to be started in 10' 2009</td>
</tr>
<tr>
<td>5.5</td>
<td>Capacity analysis 2011</td>
<td>Work package to be started in 10' 2010</td>
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</tbody>
</table>

2.4.2 Work Progress

2.4.2.1 Progress Management

The baseline of the WG Capacity started in 2007 and ends in December 2010. The work progress which had been achieved is 17% vs. 30% planned. The delay is due to some small works remaining. However, it does neither impact on the corridor implementation nor require dedicated actions or special management attention.

Most of the members of this WG are the national representatives from the capacity planning departments. The newly formed WG continued the IQ-C reporting on actual traffic and forecast planning for the time horizons 2008/ 2010/ 2015/ 2020. This way of reporting and displaying the results turned out to be transparent and commonly accepted. This approach enables an easier reading and a certain continuity and consistancy in the results of the working groups.

Before updating the tables the common bases have been verified and agreed among the members of the WG. This WP has been completed up to 41%. It comprises the geographical condensation as well as a decision about an enlarged time horizon; the perspective of future traffic and capacity analysis in 2025 on the corridor will be added at the end of 2009. One important activity of this WP, the analysis of technical parameters, will be started in the beginning of 2009 (see chapter 2.4.3).
Appendix V
Annual Progress Report Corridor A 2007 (Infrastructure Manager)

The WP capacity analysis 2008 has been started and completed up to 40%, some works remain and will have been finished in January 2008. For measuring the traffic a typical day had to be chosen, which was not a trivial thing to do. The traffic on this specific day must be representative and – as far as possible – free from any external factors such as strikes, extreme weather conditions, public holidays, weekend effects etc. Discussing and analyzing the situation, the WP Capacity decided to choose a Thursday at the end of September as the day for measuring the traffic volume. In 2007, it turned out to be 27.09.07. Chart 5 shows the use of capacity use on 27.09.07 on the corridor Rotterdam – Genoa, accumulated for 24 hours. Displayed are the actual traffic (Trains run), the existing capacity (cap) and the degree of use (use %) for southbound freight train paths.
Chart 6 shows the use of capacity use on 27.09.07 on the corridor Rotterdam - Genoa, in 4-hour time segments. Displayed are the actual traffic (run), the existing capacity (cap) and the degree of use (use %) for southbound freight train paths. The colored boxes display the amount of capacity saturation.

The traffic growth on Corridor A continued in 2007. In comparison to the previous year, the rail freight traffic in the Netherlands grew by 8% in 2007. The rail freight traffic crossing the Alps grew approximately by 2%.

\[ \text{Both figures measured in trains.} \]
The development of line saturation is now represented in the “Scenario S” (secured) showing most lines on the corridor as saturated by 2020 – including the realisation of all today’s financed projects. The scenario S is defined as existing capacity plus capacity of projects currently under construction plus future capacity of financed projects. Scenario S is displayed below in chart 7 for the timeframe between 2008 and 2020.

Chart 8 displays the same scenario, but also comprises the names and the investment volume (if available) of secured major capacity projects along the corridor.

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2.4.2.2 Risk Management
No risks to report.

2.4.2.3 Change Request Management
No changes to report.

2.4.3 Outlook
In the first quarter of 2008 a new scenario P (funding needed) will be analysed in detail. The results will be presented to the Executive Board. This will show the main projects which are indispensable for the removal of bottlenecks on the corridor. In the second half of 2008 a scenario P (planned) will be developed showing further projects for bottleneck removal in the planning stage. Today it is already obvious, that even within scenario P some line sections of the corridor will remain critically saturated in 2020.

All of the above mentioned analyses about the corridor capacity follow the approach to increase train path capacity mainly by enlarging the track side capacity. Other - very interesting and powerful - measures to increase the capacity without building new tracks or line sections are the harmonisation and the improvement of several technical train parameters. These technical constraints are:

- Total train length [m]
- Total train weight [t]
- Maximum axle load [t]
- Maximum train speed [km/h]
- Maximum clearance gauge [classified profile]

These technical constraints differ to a great extent from country (IM) to country (IM), which causes several operational disadvantages on the side of the RUs and a potential loss of capacity on the side of the IMs. The WG Capacity will analyse these technical train parameters along the corridor, look for possibilities for improvement and finally try to assess the potential benefits in terms of capacity increase.

2.5 Traffic Quality (IQ-C Action Items #2, #3, #4, #5)

2.5.1 Key Performance Indicators

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<td></td>
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<td>September: Average response times measured</td>
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</table>

© PMO (D. Werner)
2.5.2 Work Progress

2.5.2.1 Progress Management

The activity planning for the WG Traffic Quality currently stretches until the end of 2008. The actual work progress is even better 19% vs. 13% planned as baseline. This delta can be explained by some activities of the WG which had been started a little bit earlier than planned.

Buying an international train path is far used to be a time consuming, complicated process. The customer had to contact each affected IM and ask for the train path in the specific section and finally had to puzzle together the train path sections to one appropriate train path meeting his demands. OSS is a business model that should enable customers to ask for an international train path at one single point of contact and get an integrated feedback to his path request within the shortest time possible. Currently, this service is performed with the web based application Pathfinder which was developed by FTE and its members and is hosted by RNE. In fact, Pathfinder is a workflow management system which can be accessed by authorized users at each IM and which supports their daily work. For the time being, the application does not yet have direct or automated access to the time table data bases of the IMs. It is up to the IMs to design and to build the technical interfaces within their national time table applications. These interfaces would grant direct electronic access from and towards the Pathfinder application. A quicker and safer data transfer and in the end a quicker short term path request would be the consequence. The PMO will support this process and emphasize the necessity of the above mentioned interfaces in the proprietary IT applications.

Within the work scope of the WG Traffic Quality is a WP that deals with the shortening of the response times to an ad-hoc international path request. According to the baseline, 27% of this WP has been completed so far. In April 2007 the average response times had been measured. Afterwards, the weak points and processes had been analysed and partly rearranged. In September 2007, the average response times had been measured again. The outcome was an improvement from 5.7 working days in April to 6.4 working days in September. The underlying activities – for 2007 – are almost complete. The aim was to come to response times for International ad-hoc train paths not longer than 5 days. The

4 The term “ad-hoc” does not necessarily imply an urgent short term path request with only few days between the initial request and the intended departure of the train. It is as well used for path requests within the running timetable period.
achievement reached encompasses short-term path requests (e.g., 3-4 days between request and intended departure) as well as mid-term path requests (e.g., 30-40 or more days between request and intended departure). Therefore, the IMs are absolutely able to provide a train path in less than 5 days if the customer request sets the deadline short. Nevertheless, this ongoing improvement process will continue in 2008.

Another work package is the monitoring of traffic quality based on MIS. The work progress of this WP is 77%. Reference traffic is the rolling highway on the relation from Freiburg (Germany) to Novara and v.v. (see charts 9 and 10). Punctuality is defined as a departure respectively an arrival on the scheduled time or not later than 30 minutes after the scheduled time. For 2007, the following average figures had been measured. See figures of 2006 for comparison purposes.

Direction north – south:
Freiburg departure: 87%  90% (2006)
Novara arrival:  65%  55% (2006)

![Chart 9: Punctuality Freiburg – Novara](image)

Direction south – north:
Novara departure: 79%  85% (2006)
Freiburg arrival:  65%  65% (2006)
Unfortunately, the figures for 2007 are not an improvement with regard to traffic quality on the corridor. In 2006 the traffic quality on the same route had been slightly better. The bad quality in the beginning of 2007 is due to bad weather conditions and the fact that the operator has changed from Tramitalia Cargo to SBB Cargo on the Italian line section. It took some time until all necessary processes had settled after this major change. The bilateral group of Swiss and Italian representatives (see chapter 3.3) chose the right measures to raise the traffic quality again. All activities for 2007 had been finished. In 2008 the optimisation process will continue.

The test runs for a European Performance Regime have been realised, which had been another activity. The tests show that an EPR is feasible. Data delivery from the national systems to EOPT has to be improved in the next months which is of course a difficult subject due to different technical standards and processes. The commercial model is another aspect of the complex EPR system. This model has to be worked out and refined by further tests. All activities foreseen in this work package for 2007 have been completed.

The fourth WP of this working group is to improve and to harmonise the international capacity allocation with a work progress of 19%. Different IMs have different deadlines in capacity planning and allocation. With harmonised deadlines and procedures on the corridor the customers have better conditions by ordering paths. The implementation of a tool like Pathfinder will support the planning and allocation process. The deadlines for the 2008 timetable update have been defined and are harmonised on the corridor.

2.5.2.2 Risk Management

As mentioned above, the tool Pathfinder is absolutely crucial to materialise further improvements in the international path allocation process. Major leaps can only be expected if the national time table databases have an interface to Pathfinder, which would enable quicker and safer data transfers. The realisation of interfaces is subject to the national IMs and their internal project planning. With regard to EPR it is necessary to further improve the data supply from the national systems to Eurotunnels.
2.5.2.3 Change Request Management
No changes to report.

2.5.3 Outlook
Concerning the OSS business model a customer survey will be conducted in order to achieve a further shortening of the response times. The punctuality reporting concerning the Rotterdam – Melco and the Köln – Collaro traffic will be worked out. It is foreseen to develop a reporting for all international freight trains on the corridor. An EPR test run on the Freiburg – Novara traffic will be done. The implementation of Pathfinder will be pushed by developing interfaces and the treating of a number of dossiers via Pathfinder.

2.6 Terminal Studies (IQ-C Action Item #11)

2.6.1 Key Performance Indicators

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Work Packages

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Start 30.10.07
End 30.07.08

PSP / WP / Results and Milestones achieved

6.1 Framework
Scope of the WP defined
Data collection started

6.2 Capacity of harbours/terminals
Scope of the WP defined
Scope was extended to the marshalling yards, sidings and intermodal stations
Data collection started

6.3 Connection to corridor
Scope of the WP defined
Data collection started

6.4 Financing and privatisation
Scope of the WP defined
Work package to be started in 01/2008

6.5 EU Application
Scope of the WP defined
Work package to be started in 01/2009

2.6.2 Work Progress

2.6.2.1 Progress Management
In the fourth quarter of 2007 the WG Terminals had been set up. the kick-off Meeting took place at 14.11.07. Each WM nominated an expert to join the WG: ProRail: Peter Anderson; SBBELS: Rudolf Ackermann; RFI: Vincenzo Prisco; DB Netz: Hans Frank Förster, Viktor Janz. The coordination of the WG is done by Mr Thomas Schneider (DB Netz). The first job of the WG was to define the scope and to cut meaningful work packages (see table above). The activities which the WG Terminals defined will be terminated by mid of 2009. Right now, with some 4% completion of its planned work scope, the WG is within the plan. 5 WPs had...
been defined which shall cover all the issues related to the improvement of the terminals according to the corridor development.

For the time being, the main work is collecting and analysing the existing documentation. The collection is progressing quite satisfying, 39% of the data collection has been completed. For some parts, the data analysis has already started; overall 10% of the analysis work is done. For the analysis of the various international studies the WG will get into contact with the different project managers. The relevant data will be collected and entered in a structured way in a data base. The master data sheet for collecting this data is currently developed (50% completed). The main aspect is to collect data about the capacity of the terminals themselves, data about the capacity of the tracks between the main line of the corridor and the terminals and to collect data with regard to the ETCS equipment on the track and the terminals. The term “terminal” comprises marshalling yards, sidings, sea ports and inland ports. The timeframe for assessing the capacities is 2007/2015/2025.

2.6.2.2 Risk Management
The main risk to be faced is the lack of detailed information from the terminals that are in private ownership. With regard to this it would be helpful if the terminal study from the transport ministries will support the acquisition of the data from the privately owned terminals.

2.6.2.3 Change Request Management
No changes to report.

2.6.3 Outlook
For 2008, the WG agreed to meet in monthly intervals, which gives all participants a considerable work load to do – within their home organisations and of course during the meetings. The main emphasis on the first quarter of 2008 will be the analysis and evaluation of all the data collected. During the second and third quarter the focus will be to develop the right measures for the future amendment according to the capacity in the terminals, so that by the end of 2008 a first draft proposal for investments and priorities will be prepared.
3 Activities of the Infrastructure Managers

Unless stated otherwise, e.g. by references or footnotes, the content of this chapter stems from the corresponding PIM who is in charge of the national project coordination. For further information, please see also Annex B.

- ProRail: Laurens Borger
- DB Netz: Thomas Schneider
- SBB: Heinz Pulfer
- BLS: André Berger
- RFI: Giovanni Zanelli

3.1 ProRail (IQ-C Action Items #6, #10)

3.1.1 Key Performance Indicators

<table>
<thead>
<tr>
<th>Due Date of Reporting</th>
<th>IM Result [%]</th>
<th>Projects Total</th>
<th>Actual</th>
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<td>9 Projects</td>
<td>1 Projects Pending</td>
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<tr>
<th>PSP</th>
<th>Project</th>
<th>Results and Milestones achieved</th>
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</thead>
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<tr>
<td>1.1.1.1.1</td>
<td>Zeevamaar to border electrification 15 kV</td>
<td>Initial plan study has been started</td>
</tr>
<tr>
<td>1.1.1.1.2</td>
<td>Third Track (Emmerich – Oberhausen) (NL part)</td>
<td>Initial plan study has been started</td>
</tr>
<tr>
<td>1.1.1.2</td>
<td>Elective line</td>
<td>Construction completed, go-live on 16.06.07</td>
</tr>
<tr>
<td>1.1.2.1</td>
<td>Maassluis 2 Extension Harbour</td>
<td>Initial plan study has been completed</td>
</tr>
<tr>
<td>1.1.3.1</td>
<td>Electrification of Marshalling Yard</td>
<td>Initial plan study has been started</td>
</tr>
<tr>
<td>1.2.1.1</td>
<td>ETCS Barendrecht – Hilversum</td>
<td>Initial plan study has been started</td>
</tr>
<tr>
<td>1.2.1.2</td>
<td>ETCS Zeevamaar to border</td>
<td>Initial plan study has been started</td>
</tr>
<tr>
<td>1.2.2</td>
<td>ETCS Rolling Stock</td>
<td>Awaiting fundamental work from WG ETMS</td>
</tr>
<tr>
<td>1.3.3</td>
<td>TAF TSI</td>
<td>Awaiting fundamental work from WG TAF TSI</td>
</tr>
</tbody>
</table>

3.1.2 Work Progress

3.1.2.1 Progress Management

With regard to Corridor A, ProRail has 9 projects in total, of which 3 are still pending. The actual work progress is about 8%, thus being in line with the agreed baseline.

Two Dutch projects deal with the harmonisation of the electrification system (PSP 1.1.1.1.1. and PSP 1.1.3.1). The projects had been set up and the initial plan studies have been...
started. The plan studies should be finished in May 2008, for the time being this work has been completed up to 50%. The term interoperability does not only refer to the ATC systems, but also to the technical parameters of the power supply. The standard on the Dutch network is 1.6 kV DC. The Betuwe line had been equipped with 25 kV AC which is to become the European standard within the next years. A DC traction power supply equipment on a locomotive differs totally from an AC traction power supply equipment. To avoid the double equipment with DC and AC electric power systems on each locomotive it is indispensable to eliminate the two remaining DC islands on the Dutch corridor sections. Then, a locomotive solely powered by an AC electric system is able to run from the port of Rotterdam southbound all the way down the corridor. One of these electrification islands is the line section from Zevanaar to the Dutch/ German border; the other one is the Kilhoek marshalling yard, one of the major hubs for rail freight in the Netherlands. For that time being, there has been no decision about the voltage of the AC power supply system: 25 kV is the future European standard; 15 kV is used on the whole German and Swiss network and corridor sections’. For the electrification projects, ProRail applied for grants from the European TEN-T fund. EU funding had been approved, though the amounts approved are below the amounts requested (50% vs. 30%), but according to the regulation, where a ceiling per km had been fixed.

It is important to note that a major line section project with huge impact for the Dutch network and for the corridor itself had been completed (100%) and put into operation in 2007: the Betuwe line. It is a strong contribution to a separation of the various traffic types on the rail network as it is a dedicated freight line and therefore provides tremendous capacities – meeting the future demand. Furthermore, the Betuwe line is fully and solely equipped with ETCS Level 2 as the ATC system. As such the Betuwe line can be seen as another ignition spark for ETCS/ERTMS – besides the Lötschberg base tunnel (see chapter 3.4) – on the corridor from Rotterdam to Genoa.

The Betuwe line ends in Zevanaar, only a few kilometres away from the Dutch-German border. To raise the track capacity from Zevanaar to Emmnich in Germany, a project for building a 3rd track had been set up. For this project the initial plan study has been started, the total work progress is 5%. The cooperation with DB Netz about the border projects has been set up, both on the level of project management and on the expert level (see also paragraph 3.2).

Expanding the capacities of the harbour network is another important Dutch project. This project is under the responsibility of the port of Rotterdam, but in strong cooperation with ProRail. For the project, which is called Maasvlakte 2: extension harbour, the initial plan study had been conducted and completed (100%) in 2007.

With regard to ETCS/ERTMS, the Betuwe line is of course a major leap forward. Nevertheless, two relatively small ETCS/ERTMS projects remain on the Dutch part of the

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7 The technical impact of the voltage (25 kV – 15 kV) on the power supply system and the locomotive itself is rather low, as it is basically a decision between technical parameters within the same system (AC).
corridor: ETCS between Berne - Künzelsau (PSP 1.2.1.1) and ETCS between Zaventem and the Dutch/German border (PSP 1.2.1.2). For both projects the initial plan study has been started and completed up to 50%. For the ERTMS projects, ProRail applied for grants from the European TEN-T fund. EU funding had been approved. This makes clear which amounts of national public financing have to be arranged.

3.1.2.2 Risk Management
The progress of the Project 3rd track Zaventem to Emmerich is closely connected with the progress on the German (DB) part of the line. There is also a certain dependency of the ERTMS choices and decisions to be taken by DB on this line section (see chapter 3.2).

3.1.2.3 Change Request Management
No changes to report.

3.1.3 Outlook
The outlook for 2006 and later is to continue the work according to the plans. The situation on the Betuwe line, where ERTMS is already operational, both trackside and on board of the locomotive creates positive expectations with regard to getting ERTMS fully operational from the Rotterdam port to the Dutch/German border.

3.2 DB Netz (IQ-C Action Items #6, #10)

3.2.1 Key Performance Indicators

<table>
<thead>
<tr>
<th>Due Date of Reporting</th>
<th>IM Result (%)</th>
<th>IM Result [%] Actual</th>
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<td>Projects Finished</td>
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<td>12</td>
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<tr>
<td>Projects Pending</td>
<td>132</td>
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| Start                  | 02.01.04 (earliest project) |
| End                    | 15.12.21 (last project)    |

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<th>PSP</th>
<th>Project</th>
<th>Results and Milestones achieved</th>
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<tr>
<td>2.1.1.1.1</td>
<td>Emmerich – Oberhausen/1, stage Node Oberhausen</td>
<td>Go-live (2004)</td>
</tr>
<tr>
<td>2.1.1.1.3</td>
<td>Emmerich – Oberhausen/3, stage 3rd track</td>
<td>Initial plan study started (2003)</td>
</tr>
<tr>
<td>2.1.1.2.1</td>
<td>Karlsruhe – Basel/1, stage: Rastatt Süd – Offenburg</td>
<td>Go-live (2004)</td>
</tr>
<tr>
<td>2.1.1.2.2.2</td>
<td>Karlsruhe – Essen</td>
<td>2 stage: ABS/ NBS Offenburg – Kenzingen</td>
</tr>
<tr>
<td>2.1.1.2.2.3</td>
<td>Karlsruhe – Essen</td>
<td>2 stage: ABS/ NBS Kenzingen – Buglingen</td>
</tr>
<tr>
<td>2.1.1.2.2.4</td>
<td>Karlsruhe – Basel</td>
<td>ABS/ NBS Kenzingen – Freiburg – Buglingen</td>
</tr>
<tr>
<td>2.1.1.2.2.5</td>
<td>Karlsruhe – Basel</td>
<td>ABS/ NBS Buglingen – Basel</td>
</tr>
<tr>
<td>2.1.2</td>
<td>Terminals harbours: several projects planned, scope will be reviewed</td>
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</tr>
<tr>
<td>2.1.3</td>
<td>Marshalling yards: several projects planned, scope will be reviewed</td>
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</tr>
<tr>
<td>2.2.1.1 – 2.2.1.42</td>
<td>ETCS projects (42 projects)²</td>
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<tr>
<td>2.2.2</td>
<td>ETCS rolling stock</td>
<td>--</td>
</tr>
<tr>
<td>2.2.4.1 – 2.2.4.42</td>
<td>GSM-R projects (42 projects)</td>
<td>Technical installations complete</td>
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<tr>
<td>2.3.3</td>
<td>TAF TSI</td>
<td>Awaiting fundamental work from WG TAF TSI</td>
</tr>
</tbody>
</table>

² Some of these 42 projects may result in more than one project at DB Netz, depending on the project development and definitions. Remark also applies to electronic interlockings and GSM-R.
3.2.2 Work Progress

3.2.2.1 Progress Management

DB Netz has considerable 140 national projects linked to the corridor, of which 8 had been finished so far, 132 remain open or pending. Nevertheless, the actual work progress of 12% is in line with the agreed baseline.

All works related to the 2nd construction stage of the line section between Emmerich and Oberhausen (PSP 2.1.1.1.2), e.g. an electronic interlocking, block consolidation, are progressing quite well. In 2003, the initial plan study has been completed and the budget was approved. To learn more about the next steps of this project, please see chapter 3.2.3.

For the project 3rd track Emmerich – Oberhausen the initial plan study has been started in August 2003. The work progress is approximately 50%, the work will be finished in 2008. Besides that, other planning activities have been conducted. This specific project is a good example for the necessity of the IMs to work closely together to develop the corridor. In this specific case, DB Netz and ProRail (see chapter 3.1) need to coordinate their activities for a stringent 3rd line from Zevenaar via Emmerich (border) to Oberhausen. The track can be seen as the extension of the Betuwelijn line to the German rail network and is strongly needed to cope with the future traffic demand. For the expansion of the line section from Emmerich to Oberhausen, DB has set up a project advisory council with the aim to strengthen the communication between the federal government, state government, politics, the local “working group Betuwelijn”, the affected population, the economy and the railway companies.

Besides these bottleneck elimination projects in the northern part between Emmerich and Oberhausen, some major bottleneck removal projects exist in the southern part on the German network between Karlsruhe and Basel. Among these is the project 1st construction stage of Karlsruhe – Rastatt Söld (PSP 2.1.1.2.1) which already had its go-live in 2004. The 2nd construction stage is split into five projects. The project ABS/ NBS Karlsruhe – Rastatt Söld has completed three steps so far: initial plan study, approval of budget and building license. The precise routing in Rastatt is still subject to discussion, a tunnel or an at-grade solution are the options which are discussed. The financing of the tunnel option is open, whereas the at-grade solution might lead to a delay of the project. The specific corridor section can be seen in chart 11.
The projects ABS'/NBS Offenburg – Kenzingen (PSP 2.1.2.2.2) and ABS'/NBS Kenzingen – Buggingen (PSP 2.1.2.2.3) have successfully finished two steps for the time being: the initial plan studies and the approval of the budgets. The application process for the building license has been completed to the extent of 20% and will take many more years.

The two remaining projects ABS'/NBS Kenzingen – Freiburg – Buggingen and ABS'/NBS Buggingen – Basel are currently scheduled to start 2009, respectively in 2012.

The last and the biggest capacity project to be mentioned here is the construction of the Katzenberg tunnel. The project is far advanced; the construction works are progressing well and are completed to the extent of 60%. All of those bottleneck projects in the southern part of the German corridor section are designed to provide tremendous network capacities for the corridor. In addition to that, they will contribute to a separation of the traffic types, namely passenger and freight. Both traffic types will benefit from that, because it allows a smoother and continuous traffic flow. This will not only shorten the travel time between Karlsruhe and Basel by about half an hour to 68 minutes then, but it will also result in greater timetable design options. During the day time, the tunnel tracks will be exclusively used by passenger trains. At night, freight trains will also benefit from the additional network capacities of the Katzenberg tunnel.
The Katzenberg tunnel is currently the largest tunnel project in Germany. The length of the tunnel is 9.3 km. The construction of one of the most modern railway tunnels in Europe started in August 2003. The tunnel will be built as a two-tube tunnel (see chart 12) with a total of 19 safety links between the main tubes. The installation of the slab track ("feste Fahrbahn") allows maximum speeds up to 250 km/h and at the same time provides a high level of travel comfort. The work of the two tunnel drilling machines started in summer 2005. In September 2007, the drill works had been complete.

The implementation plan of DB Netz contains a number of projects for enlarging and renewing terminals along Corridor A (PSP 2.1.2 et seqq.). The WG Terminals (see chapter 2.5) shall analyse the current and future capacity situation and make clear recommendations for prioritisation of the projects.

The German part of Corridor A is split into 42 ETCS sections respectively partial projects (PSP 2.2.1.1 – 2.2.1.42). None of them has been started so far. Accordingly, 42 projects for electronic interlockings (PSP 2.2.3.1 – 2.2.3.42) have been set up on the corridor. Depending on the age of an existing interlocking, capacity needs and other local constraints six of those electronic interlocking projects have been completed until now. The last one, located in the region of Osterpai ("ESTW Rechier Rhein, 1. BS"), had been put into operation in 2007. For an ETCS installation with Level 2, electronic interlockings are indispensable from the technical point of view. Among the TEN-T funding application DB Netz submitted this summer was one for the electronic interlocking projects in Germany. Unfortunately, this funding application had been rejected (see also chapter 3.2.2.2).

The technical installation of the basic equipment of GSM-R along the German corridor section is complete. Some additional configuration, testing and bug fixing of the GSM-R installations will be necessary as soon as a certain line section is supposed to go operational with ETCS Level 2. In different nodes such as Basle and Mannheim it is difficult to get the
right amount of channels according to the priorities of the different channel users. Several working groups have been set up to solve these problems.

### 3.2.2.2 Risk Management
With regard to ETCS the main risks to be faced are:

- **a)** The non-funding of the EU-applications for the electronic interlocking programme in Germany. The national budgets are limited. Consequently, the whole German part of the corridor must get a new evaluation to manage the realisation of the different sections.
- **b)** The missing of the SRS 3.0.0. The actual discussion will lead to an interim solution which is not the optimum for the German part. It will lead to a cost increase, operational performance constraints and as a consequence the quality and capacity of the corridor might be affected negatively.

The second risk mentioned here concerns other IVs as well and is not only in the control of DB Netz respectively the corridor organisation. Subsequently it has to be solved on European level in close liaison with the industry. The risk is currently managed actively by the ERTMS WG.

### 3.2.2.3 Change Request Management
No changes to report.

### 3.2.3 Outlook
For the bottleneck project, 2nd construction stage of the line section between Emmerich and Oberhausen (PSF 2.1.1.12), the next step will be the application for the building license. This process will be started in January 2008. Due to the legal situation in Germany the separation of the block consolidation and the electronic interlocking in two projects is worthwhile considering it.

The main emphasis on the first half of the year 2008 will be the analysis of all the data according to the track parameters. This should lead to the final decision which level of ETCS will be implemented on each part of the corridor in Germany, considering the traffic volume (freight and passenger traffic) up to the time of 2025.

### 3.3 SBB Infrastruktur (IG-C Action Items #6, #10)

#### 3.3.1 Key Performance Indicators

<table>
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<th>Due Date of Reporting</th>
<th>IM Result [%] Plan</th>
<th>IM Result [%] Actual</th>
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<td><strong>End</strong></td>
<td>31.12.25 (last project)</td>
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<td></td>
<td></td>
</tr>
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</table>
### 3.3.2 Work Progress

#### 3.3.2.1 Progress Management

The overall actual work progress for SBB's projects is 22% versus a planned work progress of 23%. The works in the Gotthard base tunnel and the Canari base tunnel — both major pillars of the NEAT project — are progressing within the plan. Regarding the Gotthard base tunnel project the drilling works are completed to an amount of more than 70%. The works on the last part started in November 2007. On the Canari base tunnel project the drilling machine has been set up and prepared. The drilling will start in 2008.

The new high-speed line from Bern to Olten had been equipped with ETCS L2 between Mattstetten and Rothrist. The total length of this section is 50 km. The phases with train operation based on the ETCS L2 were extended step by step. Since spring 2007 ETCS is used operationally 24h per day on this line section. The operation runs stable and satisfying and the maximum speed is now 200 km/h since summer. Also since summer 2007 the first freight trains run over this line section during night time. SBB is obliged by a Swiss court decision to route the freight trains during night time via this new line to protect the neighbouring citizens and residents on the old line.

The international coordination of 1Ms was focused in the north to the region of Basel with the trilateral ministerial planning group (Switzerland – France – Germany) continuing with its studies. In the south the contact with the Italian partners were intensified on all levels. Concrete results had been achieved for the integrated demand and capacity planning as well.

<table>
<thead>
<tr>
<th>PSP</th>
<th>Project</th>
<th>Results and Milestones achieved</th>
</tr>
</thead>
</table>
| 3.1.1.1.1 | Gotthard base tunnel | Initial plan study completed (1997)  
Budget approved (1998)  
Building license granted (1996)  
Drilling works ongoing |
| 3.1.1.1.2 | Canari base tunnel | Initial plan study completed (1997)  
Budget approved (1998)  
Building license granted (2006)  
Drilling works to start in 2008 |
| 3.1.1.3 | Basel – Chiancio headway reduction | -- |
| 3.1.1.2.1 | Codenazzo – Pino (Capacity) | -- |
| 3.1.1.3.1 | Bern – Thun headway reduction | Project start scheduled for 2009 |
| 3.2.1.1 | ETCS Basel – Gotthard – Chiancio | Initial plan study completed (2006)  
Budget approved (2006) |
| 3.2.1.2 | ETCS Basel – Gotthard – Bellinzona – Pino | Initial plan study completed (2006)  
Budget approved (2006) |
| 3.2.1.3 | ETCS Basel – Lötschberg – Simplon – Domo | Initial plan study completed (2006)  
Budget approved (2006) |
| 3.2.2 | ETCS Rolling Stock | Awaiting fundamental work from WG ERTMS |
| 3.3.2 | TAF TSI | Awaiting fundamental work from WG TAF TSI |
as the operating quality with the rolling highway Freiburg i Br. – Novara serving as a pilot project.

The Swiss parliament received SBB’s first input on the long term planning for the timeframe until 2030 including the capacity figures on the transit axes. This work will define the removal of bottlenecks on the access lines to the base tunnels and propose adequate solutions.

3.3.2.2 Risk Management
No risks to report.

3.3.2.3 Change Request Management
No changes to report.

3.3.3 Outlook
The priorities for 2008 are set for the ongoing coordination bilaterally as well as the planning of all the medium and smaller projects. A special task is the capacity planning with regard to the complete closure of the Monte Cimino gallery south of Chiasc. This implies the re-routing for 2009 of about 60 trains with clearance gauge larger than PC 22.

3.4 BLS Infrastruktur (IQ-C Action Items #6, #10)

3.4.1 Key Performance Indicators

<table>
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<th>IM Result [%] Actual</th>
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<th>PSP</th>
<th>Project</th>
<th>Results and Milestones achieved</th>
</tr>
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<td>3.1.1.3.2</td>
<td>1st stage of Lütchberg</td>
<td>Go-live (2007)</td>
</tr>
<tr>
<td>3.1.1.3.3</td>
<td>Completion of Lütchberg</td>
<td>Project start scheduled for 2017</td>
</tr>
<tr>
<td>3.2.3</td>
<td>ETCS Rollout Stock</td>
<td>Awaiting fundamental work from WG ERTMS</td>
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<tr>
<td>3.3.3</td>
<td>TAF TSI</td>
<td>Awaiting fundamental work from WG TAF TSI</td>
</tr>
</tbody>
</table>

3.4.2 Work Progress

3.4.2.1 Progress Management
The scope of BLS comprises 4 projects, of which one had been completed already. The total work progress for BLS is 50% for the time being, which is fully in line with the planning.
On 15.06.07, the Lötschberg base line between Frutigen and Visp was inaugurated in the presence of high-level representatives from the various national and European political bodies. Also present were executives from European infrastructure managers, railway undertakings and from other companies which will be affected by the completion of this construction in the European railway landscape. According to the definition of the programme management, this project has been completed to the full extent (100%). Besides providing more network capacity, the Lötschberg base line leads to a significant saving in travel or transport time. In comparison to the old Lötschberg mountain line, savings up to one hour are possible.

The Lötschberg base line is part of the NEAT project. Together with the Gotthard base line and several modifications and capacity enlargements on the leading network lines, the NEAT programme wants to stimulate and to strengthen rail as a means of transport in comparison with road. Both passenger and rail freight traffic are about to benefit from the NEAT programme.

After a construction period of approximately eight years, the construction had been successfully put into operation on the scheduled date. The Lötschberg base line includes the major construction of the Lötschberg base tunnel with a total length of 34.5 km, the links to the SBB network in Visp and the BLS network in Frutigen as well as the bypass in Frutigen with the 2.5 km long Engstligen Tunnel. In the period leading up to the full commercial operation between June 2007 and December 2007, the tunnel was open for 16th per day for the operation of commercial trains. The remaining 6 hours were required to complete the tunnel and for ETCS Level 2 test runs, including high speed tests up to 280 km/h. These tests had been successful.

Some major milestones in this 6-month-period between June and December 2007 had been passed. For instance, on 24.07.07 the trains of the rolling highway ("Rollecke Autobahn") began their commercial service via the Lötschberg base line. On 17.07.07 the commercial service for passenger trains started with 4 trains per day between Brig and Spiez. And since 26.10.07, also some international passenger trains run via the new line. Since the timetable change on 09.12.07 the first base tunnel of the Alps is operated under full commercial conditions. For the time being, it is foreseen that 36 national intercity trains, 8 international passenger trains and about 70 freight trains run via the new base tunnel. Approximately 40 other freight trains will still have to run via the mountain line.

A special feature of the Lötschberg base tunnel, worth underlining it, is the installation of ETCS L2 as the fully operational ATC and signaling system. ETCS L2 is necessary due to the extremely high capacity needs and the top speed for passenger trains of 250 km/h. Together with the Gotthard Base Line (see chapter 3.1) and the Swiss high-speed line (see chapter 3.3), the Lötschberg base tunnel is the start of ETCS on the corridor. Some final works remain on the Lötschberg base tunnel. Nevertheless, since the European timetable
change on 09.12.07 the Lötschberg base line is fully integrated into the European networks and timetables.

3.4.2.2 Risk Management
No risks to report.

3.4.2.3 Change Request Management
BLS and the PMO decided to condense the number of projects for the BLS part of the corridor network, to be monitored by the PMO, down to four. One of them has been recently completed – the Lötschberg base line. The corridor implementation plan had been modified accordingly.

3.4.3 Outlook
Some final work will have to be conducted in 2008 on the above mentioned project. These works are very small in comparison to the total volume of the project, so they are not listed as separate activities or projects. The project “Completion of Lötschberg” is not foreseen to start before 2017. To materialize the full capacity potential of the new base line, an end-to-end double track extension of the Lötschberg base tunnel is indispensable.

3.5 RFI (IQ-C Action Items #6, #10)

3.5.1 Key Performance Indicators

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<th>Due Date of Reporting</th>
<th>IM Result [%] Plan</th>
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Start: 02.07.01 (last project)
End: 30.04.26 (last project)

- **PSP 4.1.1.1**
  - **Project**: Simplon pass
  - Results and Milestones achieved: Initial plan study completed (2004) Project to be rescheduled soon

- **PSP 4.1.1.2**
  - **Project**: Novara Node overpass
  - Results and Milestones achieved: Initial plan study completed (2005) Project to be rescheduled soon

- **PSP 4.1.1.3**
  - **Project**: Linking of Novara-Domodossola track near Gozzano

- **PSP 4.1.1.4**
  - **Project**: Upgrading of Novara-Alessandria line
  - Results and Milestones achieved: Project start scheduled for 01/ 2012

- **PSP 4.1.1.5**
  - **Project**: Simplon platform
  - Results and Milestones achieved: Project start scheduled for 01/ 2012

- **PSP 4.1.2.1**
  - **Project**: Upgrade southern access Simplon pass
  - Results and Milestones achieved: Project start scheduled for 01/ 2012

---

1 NEAT Lötschberg (BLS), p. 59
3.5.2 Work Progress

3.5.2.1 Progress Management

The scope of RFI encompasses 19 projects which are still in progress. The overall actual work progress for RFI is about 20%, thus being ahead of the planning.

Looking at the Swiss/Italian border three different border crossing stations belong to Corridor A: Domodossola (West), Luino and Chiasso (East). From there three axes go southbound via Novara and Milan and they all meet in Genoa. Switches between these three axes are possible via several links. Several bottleneck removal projects have been set up along the three axes.

For the Simplon pass (PSP 4.1.1.1.1) the initial plan study is complete since 2004. The work encompasses the doubling of the line section between Vignale and Aena, a new track bed at Vignale plus new stations. Unfortunately, the approval of the financial resources from the state is still pending. The project will be rescheduled in due course. The same constraints apply to the project Novara to Vigo (PSP 4.1.1.1.2). Here, the initial plan study is complete since 2005, but the project will be rescheduled as well. For the link between Domodossola and Novara (PSP 4.1.1.1.3) the construction works had been started in 2005.

---

To be reported by RFI, respectively by the PMS

© PMS DJ 2010
the project is progressing with a little delay. Beside the track link, the work comprises a new station near Gossano and the elimination of six level crossings. For the Lume platform (PSP 4.1.1.2.2), the border crossing station in the centre, the project budget has been approved in 2005. The work aims at upgrading the line with some small infrastructure investments, such as module length and new ATC devices. The construction works were started and are progressing on time. The line section Chiasso – Monza (PSP 4.1.1.3.1), is going to be rescheduled soon. An initial plan study had been completed in 2005. Core of the project is the quadrupling of the lines. The upgrading of the Bargamo – Serago section (PSP 4.1.1.3.2) will be postponed as well. An initial plan study had been finished in 2005, but due to changed priorities the project will be rescheduled. The belt freight route south of Milan needs to be upgraded as well. The project (PSP 4.1.1.3.3) will be reprioritised and rescheduled soon. A start is not likely before 2012. Increasing the capacity by doubling the line between Bargamo and Travaglio (PSP 4.1.1.3.5) is another construction project of huge significance. The budget for the project had been approved in 2008 and afterwards the constructions started without delay.

Four ETCS projects are currently foresen in the implementation baseline of RFI (PSP 4.2.1.1 – 4.2.1.4). The preliminary design (initial plan study) started in October 2007 and is in progress. The forecasted end is in March 2008, to allow the issue of the tender for the lines belonging to the Corridor A. Right now, the necessary budgets are approved to the extent of 85% (78%), respecting the EU funding proposed from the TEN-T MAP.

3.5.2.2 Risk Management
No risks to report.

3.5.2.3 Change Request Management
As stated above, a number of projects is about to be rescheduled, due to changed priorities. Via the change management processes, RFI and the PMO will report and validate the changes and modify the baseline accordingly.

3.5.3 Outlook
The realisation of the projects which already started will continue in 2008.
4 Conclusions and Recommendations

As reported above, with the achievements and the new organisation of 2007, the corridor did a very considerable step forward, which is really decisive for the overall corridor success in future.

However, the very ambitious corridor goals need a stringent commitment throughout all levels. Although the interest of the IMs is surely focused on Corridor A, the PIMs seem not always to be empowered to that extend, which they need to fully assume their responsibility. The PMO as an umbrella organisation is fully relying on the collaboration of the delegated PIMs. Therefore it would be desirable if the IMs could commit to put their PIMs even in a stronger position within the national IM organisations and dedicate them the required resources. Furthermore, the WGs need access to the required resources of experts to fulfil their work programme.

Usually the interests, priorities and strategies are not necessarily identical and have to be carefully coordinated to achieve an optimum corridor result: It is the challenge and the permanent task of the PMO to jointly overcome these national and corporate interests.

Mostly acceptable ways of compromising could be found in 2007. In case of the ETCS deployment strategy, the strength of the corridor towards all involved parties, including the signalling industry, depends entirely on a coordinated and joint approach. It is hoped that this will now be achieved and followed in the first orders, as they have probably to be placed on temporary specifications in order to meet the target date of 2012.

Apart from the general support regarding the EU subsidies, the PMO can not take any responsibility and real influence on the corridor financing on behalf of the IMs. The PMO will monitor the implementation along the progress and indicate related risks. However, as the corridor success is also contingent on the timely availability of funds, the IMs and the ministries shall be aware of their commitment to raise the needed funds. The non-consolidation by the EU of subsidies for the electronic interlocking programme in Germany strongly affects on the ETCS migration strategy. As Level 2 installations along the entire German part will no longer be affordable. The PMO intends to submit additional Corridor A funding requests for the recall of the TEN-T MAP in 2009.
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List of Abbreviations

ABS  Ausbaustrecke (enhancing and upgrading an existing track)
AC  Alternating Current
AG  Aktiengesellschaft
arr.  arrival
ATC  Automatic Train Control (System)
bn  billion
BP  Bauprojekt (construction project)
BS  Baustufe (construction stage)
CEO  Chief Executive Officer
CR  Change Request
DC  Direct Current
Dep  departure
EEIG  European Economic Interest Group
EOPT  Eurorpoids
EPR  European Performance Regime
ERA  European Railway Agency
ERTMS  European Rail Transport Management System
ESTW  Elektronisches Stellwerk (electronic interlocking)
ETCS  European Train Control System
EU  European Union
ExB  Executive Board
GSM-R  Global System for Mobile Communication, subset Rail
Ih  hora (hour)
IBN  Inbetriebnahmee (putting into operation)
IM  Infrastructure Manager
IT  Information Technology
IG-C  International Group for improving the quality of rail freight traffic on the North – South corridor
Km/h  kilometres per hour
KPI  Key Performance Indicators
kV  kilo Volts
L  Level (ETCS), in combination with a number
LBT  Lötschberg base tunnel
LOI  Letter of Intent
LS  Limited Supervision (ETCS)
m  meter
m  million (£)
MAP  Multi Annual Programme
MIS  Management Information Systems
MoU  Memorandum of Understanding
NBS  Neubaustrecke (new track – high speed line)
NEAT  Neue Eisenbahn Alpen Transversale (new railway Alp transversale)
NSA  National Safety Authorities
OPE  (TSI) Operations
<table>
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<th>Description</th>
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<tr>
<td>OSS</td>
<td>One Stop Shop</td>
</tr>
<tr>
<td>p</td>
<td>page</td>
</tr>
<tr>
<td>PF</td>
<td>Pathfinder</td>
</tr>
<tr>
<td>PGV</td>
<td>Planungsverfahren (acceptance process of a construction plan)</td>
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<tr>
<td>PIM</td>
<td>Programme Implementation Manager</td>
</tr>
<tr>
<td>PMO</td>
<td>Programme Management Office</td>
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<tr>
<td>t</td>
<td>metric ton(s)</td>
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<td>TAF</td>
<td>Trafomatic Application (for) Freight</td>
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<td>TEN-T</td>
<td>Trans European Network (for) Transport</td>
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<td>TI</td>
<td>Technical Interoperability</td>
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<td>TSI</td>
<td>Technical Specification (for) Interoperability</td>
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<td>UIC</td>
<td>Union Internationale Chemin de Fer</td>
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<td>VP</td>
<td>Vorprojekt (pre-project)</td>
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# Annex

## Annex A: Terminology of Milestones and Planning Phases

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<th>Implementation Plan</th>
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<th>Germany DB Netz</th>
<th>Switzerland SBB / BLS</th>
<th>Italy RFI</th>
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Chart A3: Terminology of Milestones and Planning Phases
Annex B: Development and history of document

Delivery and Approval of the Working Groups chapters

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Delivery and Approval of the Infrastructure Managers chapters

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The remaining chapters 0, 1 and 4 have been created and written by the PMO.

Document History

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IQ-C Progress Report 2007

The IQ-C Progress Report 2007 presents the work of the IQ-C Working Group done in 2007 including progress achieved and the milestones planned for the common work of the regulatory bodies in the North-South Corridor between Rotterdam and Milan/Genoa in 2008.

I. Validity of the IQ-C Report of December 2006

After the IQ-C Report on international capacity allocation had been issued, the conclusions were presented during the working group Regulatory Bodies in Brussels on 16 January 2007. Several institutions (regulators, European Commission, infrastructure managers and others) commented on the contents of the document. The comments were of a general nature and were used for an intensive discussion between regulators, European Commission and the infrastructure managers. The so called "IQ-C Regulators" have unanimously agreed upon the conclusions of the Report.

As from the moment the report was issued, the infrastructure managers involved made progress in the field of capacity allocation procedures. For example: international capacity allocation procedures, final dates for application of the annual time table, application forms and Network Statements were harmonised.

The concern of the IQ-C Regulators is now directed towards the functioning of the international allocation process on the corridor. Therefore the IQ-C Regulators have decided to start an investigation on the actual allocation of train paths on the corridor.

Within this investigation, the IQ-C Regulators decided to focus on the functioning of the so called One Stop Shop (OSS). It has appeared that most path requests are still dealt with according to the national ordering procedure rather than through OSS. In general, the IQ-C Regulators want that the infrastructure managers should pay attention to the different allocation procedures for international paths that are used by the railway undertakings and by the infrastructure managers and to the outcomes thereof. The IQ-C Regulators think that all procedures should at least have the chance of a similar outcome for the procedure not to be discriminatory.

II. Progress achieved in 2007

In 2007, the IQ-C Working Group was engaged not only in collecting and evaluating facts of cases relevant to regulation but also in finding solutions to legal questions on the common basis of the European provisions concerning rail regulation.
1. IG-C and Rail Net Europe (RNE)

At the end of 2005, the IG-C Regulators started a debate with RNE about the ICT tool Pathfinder which has been introduced by RNE as a means for international capacity allocation. In general, the IG-C Regulators were concerned that the use of the Pathfinder tool would lead to a discriminatory outcome of the capacity allocation process and to a lack of transparency towards the regulators and the railway undertakings. This concern was acknowledged by all regulators and the European Commission so that in 2007 all other European regulators and the European Commission joined the discussion.

Another issue that concerns the IG-C Regulators is the different attitude towards and treatment of planning processes for passenger services (all planned through Pathfinder) versus freight services (only 10-15% planned through Pathfinder) which appeared to be the case when the Dutch regulator and the European Commission visited the technical meeting of RNE last year since this could mean that infrastructure managers give a certain priority to planning of passengers paths contrary to freight paths.

At several occasions RNE explained about the functioning of Pathfinder, one of which took place at a meeting of the European regulators in Brussels on 29 June 2007. During this meeting the discussion about potential discrimination and lack of transparency was raised again by the Regulators. Consequently, RNE invited the regulators to visit its office in Vienna in order to provide the Regulators with more information on the Pathfinder tool. This meeting took place on 20 December 2007.

Previous to the meeting in Vienna, the European Commission invited RNE and a task force group of regulators, consisting of the German, British and Dutch regulators, to meet in Brussels to discuss the issues at hand and to try to reach some kind of agreement which would be discussed the following week in Vienna. During this meeting, which took place on 13 December 2007, the regulators stressed that they felt that Pathfinder has to be considered an inherent element of the international path allocation procedure on which they have legal supervision. The regulators asked RNE to cooperate with them and to provide them with all the information asked for related to Pathfinder or to the international capacity allocation process in general in case of a complaint or an ex officio investigation. RNE agreed to this request. It was agreed to draft a memorandum of understanding concerning the way in which RNE supports the regulatory and appeal function of the regulators and grants access to databases, as far as they concern the process of allocation of international tracks. RNE also offered to invite regulators of the country in which the technical conferences are taking place to attend to this conference. The memorandum will be agreed upon as soon as possible. The next meeting between the Commission, the regulators and RNE will take place on 8 February 2008. Subjects of this meeting will be the use of the ICT tools Pathfinder and Eurotrails.
2. IQ-C Workshop in Tübingen in September 2007 – Interpretation of indefinite terms

Another focus was the interpretation of indefinite terms such as "discrimination", "congested infrastructure" and "infrastructure capacity", used in Directive 2001/14/EC. It is important to have a common understanding of these terms and to subsume them within the definitions used in the legal framework to avoid a distortion of competition resulting from differences in the application of national laws. Thus, the IQ-C members aim at an equal application in each individual case, having in mind the European as well as the national legal frameworks.

A first one out of a series of workshops on the topic of "interpretation of indefinite terms", held in Tübingen in September 2007, concentrated on the issue of "discrimination". The scope of the legal requirement of non-discrimination in providing access to the rail infrastructure was discussed in depth. This was done on the basis of a collection of different practical cases and experiences made by the regulatory bodies and of presentations by external experts. In Germany, for instance, the infrastructure managers plead for a very restrictive interpretation of the term "discrimination". The IQ-C members agreed that a clarification of the provisions stipulating a prohibition of discrimination would help to enforce the legal mandate of ensuring fair and effective competition in the rail sector. The provisions should therefore cover a large variety of cases of discrimination against access beneficiaries. According to the understanding of the IQ-C members, this should include cases of violation of the transparency requirement and potential discrimination, for instance through "hidden" discrimination.

III. Strategic plan 2008

The IQ-C members will continue to follow up the target of identifying and analyzing competitive barriers in the field of cross-border railway traffic on the North-South Corridor.

1. IQ-C Workshop in Zurich in February 2008

The upcoming IQ-C meeting in Zurich scheduled for February 2008 will first of all discuss the indefinite term of discrimination in railway law in order to obtain first results for a common understanding. The question of how to get real-time information on train paths and related services will also be dealt with, as will the allocation of capacity. Both questions are closely related to the discussion on discrimination. An additional topic on the agenda will be an overview of Forum Train Europe's (FTE) role as an alliance of railway undertakings and its relation to RNE. RNE's corridor manager for the North-South corridor will also report on the work done and progress achieved in 2007.
2. Long term agenda

The representatives of the regulatory authorities may agree that barriers to cross-border railway traffic do not only result from the different technical and operational standards of the individual member states. Deviating procedures in network timetable preparation, non-uniform priorities in path allocation and, in some cases, different methods in the field of customs clearance do not contribute to strengthening competition in the railway sector. In this context, current cases related to the work of RNE will appear as a topic on the long term agenda.

a) Discussion on the Interpretation of the indefinite terms “congested” and “capacity”

The joint identification and solution of legal questions has proven to be of great value and shall be pursued in the working periods to come. Further workshops will deal with the interpretation of the indefinite terms “congested infrastructure” and “infrastructure capacity” following the identification of the term “discrimination”. The definitions in Art. 2 of Directive 2001/14/EC show that both terms are closely related. The discussion will have to take this fact into account.

b) IG-C and Rail Net Europe (RNE)

By attending RNE meetings and conferences – expressly disapproved by RNE – the regulatory bodies seek to acquire information about RNE’s current development with a view to identifying and countering any potential discrimination at an early stage.

The standard software “Pathfinder” developed by RNE is applied throughout Europe. It is intended to give all European railway companies access to all line data on routing possibilities in Europe required for operations at fair and equal conditions. One of the IG-C working group’s tasks is to ensure the non-discriminatory application of this communication tool and to verify that an instrument of this kind simplifies, and reduces the cost of, international path requests in practice.

o) IG-C and Europtirails

Europtirails, a European project carried out by European infrastructure managers for the international railway transport, has the ambition to provide an information system in real time for the traffic management. The IG-C members intend to closely observe, assist and monitor this projected system, particularly with regard to discrimination potentials.
d) European Performance Regime (EPR)

A main subject on the long term agenda will also be the European Performance Regime (EPR). The International Union of Railway (UIC) is about to develop an incentive system at European level. The observation of this Performance Regime with regard to discriminatory guidelines will therefore also be in the focus of the IQ-C Working Group.

e) Other Items

aa) European Economic Interest Group (EEIG) and European Rail Traffic Management System (ERTMS)

Infrastructure managers have concluded an association agreement to implement the European Rail Traffic Management System (ERTMS) on the corridor Rotterdam Milan/Genoa. Most important issue for Regulators is to ensure that ERTMS will be implemented in a transparent and non-discriminatory way. According to Directive 2001/14/EC this means that all information has to be provided for in the network statement. This means that all relevant information must be distributed at the same time by including it in the network statement so that no railway undertaking profits from foreknowledge regarding the implementation of ERTMS. The regulators intent to observe the progress made as to transparency and discrimination. The implementation of ERTMS may also give an impulse to the development of harmonized catalogued paths on the corridor(s). Regulators intend to plan a meeting with the management board of the European Economic Interest Group (EEIG) and separately with their national infrastructure managers.

bb) Update of the open letter of 2006 describing the IQ-C-members

Since the roles and competences of IQ-C regulators have changed since 2006, this document will be updated.

signed on 15 January 2008 by:
Bundesnetzagentur (BNetzA, German RB),
Nederlandse Mededingingsautoriteit - Vervoerkamer (NMvA, Dutch RB),
Railways Arbitration Commission (RACO, Swiss RB),
Ufficio per la Regolazione dei Servizi Ferroviari (URSF, Italian RB)
MISSION STATEMENT EXECUTIVE BOARD ERTMS CORRIDOR ROTTERDAM – GENOA

Decreed by the Executive Board on the 30 November 2006

1. Introduction

The Ministers on the Rotterdam – Genoa corridor signed a Letter of Intent concerning ERTMS deployment on the corridor on 3rd March, 2006 in Bregenz. This Letter of Intent defined the role of the Executive Board and proposed the creation of a Management Committee as representation of the Infrastructure Managers.

In this mission statement the role and working method of the Executive Board is further defined.

2. Objectives and role of the Executive Board

The objective of the Executive Board is to implement the Letter of Intent signed by Ministers on the ERTMS corridor implementation on 3 March, 2006.

Following from the Letter of Intent it is the executive board’s role to:

- Adopt a corridor implementation plan, based on a proposal from the Infrastructure Managers / Management Committee, which includes the ERTMS implementation as well as other improvement options to provide a total service concept in coordination with the IQC project,
- Ensure sufficient resources to be available with the Infrastructure Managers, safety authorities for developing and implementation of the ERTMS as well as the other improvement options, taking into account the national rules for budget allocation
- Monitor progress ERTMS and other improvement option implementations on corridor level based on reporting from the Management Committee and report yearly to Ministers
- Coordinate requests from the respective EU Member States for EU-TEN-T funding for the Rotterdam - Genoa corridor

To support the Management Committee’s work in general and especially, when deficiencies are encountered, which are beyond their control

- The Executive Board will cooperate where necessary with European institutions and organizations (European Railway Agency, art 21 committee, notified bodies) and their national safety authorities.

3. Time-Period and Competences of the Executive Board

The Executive Board will act until the implementation of the ERTMS project on the corridor (current planning 2012/2015).

The Executive Board should steer the ERTMS and other improvement options to be deployed on the corridor. The Executive Board is composed of representatives from Ministries. Within the national framework, the Infrastructure Managers will propose the necessary projects to the national transport ministries. Then they will be discussed, agreed and consolidated for the entire corridor. All respective Infrastructure Managers are invited to
the Executive Board for dialogue with the Ministries. The Infrastructure Managers will be asked to develop a business plan as implementation plan for the total corridor concept. For this purpose the Executive Board will make clear their requirements.

The representatives of the Ministries will act within their national framework of responsibilities and obligations with the common aim of ERTMS deployment on the corridor. Therefore, the main competences of the Executive Board are:

- making agreements with Management Committee / Infrastructure Managers at corridor level concerning planning and implementation of ERTMS deployment. For this end a MOU between Infrastructure Managers and Ministries of Transport may be considered as a mean to establish a solid part of the corridor implementation plan.
- ensuring the availability of sufficient resources from ERTMS deployment for Infrastructure Managers and safety authorities, taking into account the relevant funding and budget regulations
- Giving advice to Ministers in case of national railway regulations that may hinder the implementation of the project

4. Organization of the Executive Board

The Executive Board will have as members:

- representatives of Ministries;
- EU TEN-T ERTMS coordinator Mr Vinck and his staff have a standing invitation to the meetings of the Executive Board;
- The representatives of the Management Committee are invited to provide the necessary technical and economic expertise and for dialogue within the Executive Board

Chairing and secretariat of the Executive Board:

The Executive Board decides to appoint a country who is principally responsible for the organization of the ERTMS Executive Board. The country concerned will chair the meetings and act as secretariat of the Executive Board. The country will be selected for a limited period (e.g. 12 months). The chairing country should maintain a close working relationship with the Management Committee to ensure a seamless workflow.

The meetings of the Executive Board will be in Brussels or elsewhere if the Executive Board decides so.

5. Decision making procedures of the Executive Board

The Executive Board will decide on all issues of a common interest concerning the implementation of the corridor respectively the Letter of Intent ERTMS corridor Rotterdam-Genoa signed 3rd March, 2006 in Bregenz.

The Executive Board will decide on the basis of consensus.
The Executive Board needs to find agreement with the respective Infrastructure Managers for those decisions that are related to the development and management of the infrastructure. The Executive Board will take into account the different national frameworks of decision making procedures and responsibilities between Ministries and Infrastructure Managers as far as possible.

In case the Executive Board can not find an agreement on the basis of consensus, the decision will be brought up to the Ministers who signed the Letter of Intent.

MISSION STATEMENT
MANAGEMENT COMMITTEE ERTMS CORRIDOR ROTTERDAM – GENOA

Final version, as per the meeting of the Management Committee on November 24, 2006.

1. Introduction

Given the result of the corridor study of the ETCS Task Force [Encl.] the Ministers on the Rotterdam – Genoa corridor signed a Letter of Intent concerning ERTMS deployment on the corridor on 3 March 2006 in Bregenz. This Letter of Intent defined the role of the Executive Board and proposed the creation of a Management Committee for the corridor implementation. On April 10, 2006, the representatives of the transport ministries decided to entrust an Executive Board with the implementation of the corridor concept

2. Objectives and principles of the Management Committee

The Management Committee

- will create the organizational, technical and operational conditions to that extend, that ERTMS will be operational with the exception of the sections Oberhausen-Mannheim, the Gotthard/Ceneri, the Milan South-East Belt and the Giovi new line in the Italian part of the corridor by 2012, respectively the entire corridor by end of 2015 the latest, which is in accordance with the findings of the corridor study Rotterdam-Genoa corridor [Encl.]

- will interface IQ-C team in order to define the conditions for harmonizing the other improvement options necessary for the corridor, taking into account the IQ-C action plan

- is responsible for the elaboration of the necessary documents ensuring the interoperability, the adequate performances of the operation and the related best cost effective corridor solution

- is responsible in coordination with the RUs and rolling stock requirements for the development of a corridor implementation plan on corridor Rotterdam - Genoa considering the interoperability as the highest priority and, taking also into account, the expectations as stated in the Ministers’ signed Letter of Intent (LoI)
• will evaluate the necessary resources for the activities to develop the interoperable corridor, proposing to the Infrastructure Managers the organizations for the timely development and implementation of ERTMS and indicating the other improving options to be defined and agreed upon, taking also into consideration the national rules for the budget allocation

• ensures the integral project implementation by all participating Infrastructure Undertakings and progress reporting to the Executive Board accordingly

• will in general support the Executive Board in fulfilling their obligations as stated in the Executive Board Mission Statement.

3. Time-period and competences of the Management Committee

The Management Committee will act until the implementation of the ERTMS project on the corridor is fulfilled (in the current planning the target date are 2012/2015), or until a decision to terminate the activities will be formally issued by the Executive Board (the Management Committee can propose to terminate the activities but cannot directly make this kind of decision).

The Management Committee should steer in coordination with the rolling stock migration of the RUs the ERTMS deployment and define the conditions for harmonizing the other improvement options on the corridor. The Management Committee consists of representatives from the relevant Infrastructure Railway Organizations, acting within their national framework with the common aim of ERTMS deployment on the corridor. Within the national framework, the Infrastructure Managers will propose the necessary projects to their national transport ministries. The Management Committee will be responsible that the project proposal will be discussed, agreed upon and consolidated for the entire corridor. Therefore, the main competences of the Management Committee are:

• come to common agreements with the relevant Infrastructure Managers respectively their organizations at corridor level concerning planning and implementation of ERTMS deployment
• request sufficient resources for ERTMS deployment through the participating Infrastructure Managers. Taking into account relevant national, European funding and budget regulations
• give advice to the Executive Board in case of national railway regulations that may hinder the implementation of the project

4. Organization of the Management Committee!

The Management Committee consists of responsible representatives from each infrastructure undertaking along the A Corridor (ProRail, DB Netz, SBB, BLS and RFI.)

The members of the Management Committee decide about structure, content and the financing of the future cooperation within the Management Committee and its suitable working organization (e.g. Programme Management Group). The Management Committee will ensure sufficient equipment and assignments required for an effective and successful working organization on the corridor. Those decisions are taken in accordance with national regulations and competencies.

The Management Committee will decide case by case on the participation, collaboration respectively involvement in the project organization of necessary third parties and according
to the actual development and needs of the project. Particular emphasize is given to the timely information of railway undertakings and appropriate consultation on their production and rolling stock plans. This will help to ensure an efficient migration path.

The secretariat of the Management Committee will be taken care of by its working organization.

5. Main Tasks of the Management Committee

In order to reach the objectives mentioned under point 2, the Management Committee, taking into account the experiences made, has to create solutions and manage primarily the following subjects:

- Elaborating coordinated infrastructure and rolling stock objectives (including homologation processes) for constructors, operators and net users in relation with the train control and management systems ETCS and GSM-R
- Elaborating the necessary objectives which the infrastructure operators have to include in their free access regulations
- Addressing the requirements, indications and objectives for elaborating the regulation of the system maintenance during the entire life cycle (e.g. instruction, change, release and configuration management, diagnostic, maintenance and test concepts)
- Addressing the requirements and indications for elaborating coordinated generic ETCS operation regulations as well as for managing the transition from SRS 2.3.0 to SRS 3.0.0 version (e.g. by introducing L1LS and Radio Infill change requests)
- Addressing the requirements and indications to elaborate coordinated roll-out of selected telematic applications for freight according to the requirements of TAF/TSI as well as selected operational rules according to requirements of the TSI Operations. The same applies to further improvement options to be defined and agreed upon
- Identifying and solving conflicts/deficiencies during implementation
- Elaborating and representing a common position for the consolidation and development of ETCS specifications through communication and knowledge sharing with relevant European bodies
- Coordinating the global net during the ETCS implementation
- Addressing the requirements, indications and options to I-QC for analysing and elaborating additional measures for further performance improvement of the corridor, e.g. in the area of cross-border, and managing the train path handling, the freight and carrier logistics, etc

The tasks taken up by the Management Committee aim to avoid unnecessary supplementary costs of the railway undertakings during planning, development, rollout and operation of the ETCS on the corridor. The coordination costs between the railways respectively with third parties shall be adequate and optimized to meet the requirements, and be shared among the Infrastructure Managers.

There are tasks which shall not be subjected to the Management Committee’s responsibility e.g.:
- the realization of specific performance mandates established to assist railway undertakings, infrastructure operators or third parties (for instance planning work for vehicle updates)
• the proofs of implemented safety and RAM (trustworthiness, availability, maintenance possibilities)
• the responsibility and management of commercial negotiations regarding the acquisition of line and vehicle equipment of third parties
• roll out management of the corresponding national projects belonging to implementation and operation of the corridor programme

6. Rights of the Management Committee

The rights of the Management Committee result from the tasks and duties agreed upon by the parties.

7. Duties of the Management Committee

In general the Management Committee contributes to the implementation of the objectives mentioned under point 2.

In the framework of its tasks, the Management Committee ensures a uniform, neutral and non-discriminatory treatment of all railway undertakings.

The Management Committee, taking into account the given Executive Board indications, will cooperate with the European coordinator for ERTMS and the European Railway Agency. It will establish the necessary cooperation with notified bodies and national safety authorities. It will also ensure where necessary the cooperation with the sector organizations, e.g. CER, EIM, RNE, ERTMS-user group, IQ-C etc.

Irrespective of responsibilities for infrastructure financing as per both, national and European rules, the Management Committee is to endeavor the availability of the necessary resources, so that implementation can take place on time.

The Management Committee informs the Executive Board timely and in an appropriate way on the current results and planned work, as well as on deficiencies and risks, which might jeopardize the project and need to be solved on the Ministries’ level.

The Management Committee will spend all its effort to direct and influence the activities on this corridor, ensuring maximum achievement of set expectations. Given the case that circumstances, conflicting with the common corridor targets may arise, the Management Committee will use all competences within the infrastructure organizations to solve the conflict to the extend national responsibilities will allow this. However, in such a case the Management Committee is not in the position to give directions.

8. Decision Making Process of the Management Committee

The Management Committee will decide on all issues of common interest concerning the implementation of the corridor respectively mandated by the Executive Board. The Management Committee needs to find agreement with the respective national Infrastructure Managers and taking into account the national framework decision makers and responsibilities.
The Management Committee will decide on the basis of consensus.

In case of not resolvable conflicts, it is not the competence of the Management Committee to decide and instruct on behalf of the Infrastructure Managers upon their implementation actions. The conflict then has to be solved via the Executive Board on Ministry and head of Infrastructure Undertaking level.
Overview selected projects for TEN 2007-2012 concerning corridor A

EC Proposal to EU-Ten-T committee November 2007

**ERTMS**

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**Priority Projects**

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EEIG Corridor Rotterdam-Genoa

The EEIG Corridor Rotterdam-Genoa is a European Economic Interest Group founded by the rail infrastructure companies Prorail, DB Netz and RFI. A association contract has been concluded as well with SBB/BLS as contractors to integrate the corridor infrastructure managers from Switzerland as a non-EU member state.

The general objective of the EEIG is to improve capacity and quality on the freight corridor Rotterdam-Genoa including the implementation of ERTMS. This shall be achieved by organising common specifications for ERTMS, infrastructure and quality measures on the corridor as fast as possible in the most economic cost in agreement with the members and contractors.

The tasks taken up by the EEIG aim to avoid unnecessary supplementary costs of the railway undertakings during planning, development, rollout and operation of the corridor implementation and managing the corridor implementation as one integrated project (undertaking).

The seat of the EEIG is Frankfurt/Main, Germany.

The EEIG will expire automatically at the end of 2015 but can be extended as project requires.

The EEIG is managed by two Managing Directors, placed by different members. The Managing Director acting is at the same time Programme Director as well.

The General Assembly consists of all members of the EEIG and is led by an appointed Chairman. The contractors take part in the GA. Further regulations about their participation, voting rights and other definitions of the partnership are subject to the association contract.
Ministerie van Verkeer en Waterstaat

European Commission
Directorate-General Energy and Transport
(DG TREN)
Mr. Karel Vinck
EU-TEN-T ERTMS-Coordinator
Rue De Mont 28
B-1049 Bruxelles

Contact
Hinne Groot
Date
28 January 2008
Our reference
VENW/DG/IP-2008/638
Subject
deployment plan ERTMS Rotterdam-Genoa

Dear Mr. Vinck,

Please receive this letter from the executive board for implementation of ERTMS on corridor Rotterdam-Genoa.

On 3 March 2006 the Ministers signed the Letter of Intent for the implementation of ERTMS on the corridor Rotterdam-Genoa and this political statement has geared a lot of activities for our corridor in the right direction.

Progress of work
After the signing of the Letter of Intent the Ministers appointed their members in the Executive Board ERTMS on the corridor. The Infrastructure Managers have set up their project organisation for the implementation: a management committee is steering the work, while a Program Management Office is coordinating all the work, for ERTMS and other measures to improve the quality of service on the corridor Rotterdam-Genoa. The Infrastructure Managers of the Netherlands, Germany and Italy have decided to found a European Economic Interest Group (to be registered in February 2008) with an association contract to include the Swiss partners SBB & ELV as the central management organisation to steer the corridor implementation. Moreover the Infrastructure Managers have developed their business plan covering all improvement measures for the corridor until 2025, with key performance indicators (number of train paths available, speed and reliability). On an annual basis Infrastructure Managers will report to the Executive Board on the progress achieved regarding the action plan and on the performance indicators.
The safety authorities are aware of the necessity of coordinated authorisation. Interoperability must be guaranteed concerning national requirements of operation as well as interfaces of products from different suppliers. The safety authorities have already achieved substantial progress by preparing the cross-acceptance of rolling stock approach, which was formalised by the MOU among Ministers (including Austria) signed 7 June 2007.

Infrastructure works were completed regarding the Lötschberg tunnel (CH) and the Betuwe route (NL) on which ERTMS is implemented. Both have been opened mid June 2007.

Implementation of ERTMS
All countries concerned remain fully committed to the implementation of ERTMS on the corridor following their national migration plans.

Under the following conditions ERTMS can be in operation on the corridor (except Oberhausen – Mannheim and the Milan belt) by 2012:
- ERTMS baseline 2.3.0 including reclassification (debugged) will be applied.
- In addition to this, harmonized braking curves and L1 LS are needed.
- Other functional and operational short comers will be solved by applying workarounds (e.g. by the “toolbox” proposed by the industry) until a more advanced ERTMS baseline (e.g. 3.0.0) is available and the retrofit is justified to be economical and necessary to adapt the system performance.

By 2015 ERTMS can be in operation on the entire corridor

Equipment of the section Oberhausen – Mannheim before 2015 is not feasible, because in particular this section of the German corridor part is relying on a performance improvement delivered from the deployment of ETCS, which will only be possible with the later baseline SRS 3.0.0. Furthermore, the interlockings in this section have to be upgraded to interface with ETCS. The realisation of the upgrade projects still has to be proven as economical and fundable and cannot be completed earlier.

The Milan belt track side ERTMS installations are planned after the realisation of some basic infrastructure upgrading.

ERTMS functionalities on Corridor A
At present ERTMS baseline 2.3.0 is formally available and the recast version, due to be voted on 13.02.2008 in the Art. 21 Committee however does not solve all operational needs of the railways.

The development of 3.0.0 is progressing. According to the roadmap of UNIFE 3.0.0 products will only be available by 2015/2016. Subsequently the implementation of ERTMS on the Corridor A cannot wait for baseline 3.0.0, and therefore has to be technically based on baseline 2.3.0. The deployment of ETCS on Corridor A until the end of 2013 is possible on the basis of the debugged baseline 2.3.0 plus L1 LS and harmonized braking curves.
which is currently specified by UNISIG in coordination with the ERTMS Users Group and ERA. The harmonised braking curve calculation model (CR 595) has urgently to be agreed and shall, by 2012, be used by trains running on Corridor A. The harmonised braking curve model shall be agreed by the sector and ERA and shall be offered by UNISIG until the end of 2009. The realisation of the braking curve model and L1 LS shall be considered as being in advance of and in consistency with baseline 3.0.0. It is important to note, that a harmonised braking curve model (CR 595) is a prerequisite for interoperability and performance in Europe. If this is not guaranteed, the railways risk to be not interoperable and their investments are not protected.

The underpinning is that implementation with United Supervision is by far the most economic way of ERTMS implementation, particularly for the German / Swiss parts as well as for other corridors and countries. Therefore, L3 considerably enhances the EICL migration process for the TEN-T Corridors and conventional networks within the EU. L1 LS is a first step in the migration towards ERTMS, its main benefit is, that the migration time can be kept short, which is an enormous benefit for the railway undertakings.

ERTMS equipment for locomotives by 2012 can be supplied by UNISIG based on the debugged ERTMS baseline 2.3.0 including the limited supervision functionality and braking curve model. Downwards compatibility shall be part for further versions starting from the debugged ERTMS baselines 2.3.0, i.e. all locomotives equipped with debugged 2.3.0, L5 and the braking curve model, respectively all higher versions in future shall be able to circulate on Corridor A as well as on other 2.3.0 based corridors.

System requirements necessary for Corridor A to fulfil the goals in the Lot A. The Executive Board endorsed the ERTMS plan of Infrastructure Managers and considers it essential that the European policy process takes account of the following conditions in order to safeguard the interoperability of Corridor A within EU. The executive board asks the Commission to confirm the following statements:

1. The debugged version SRS 2.3.0 shall be voted by the Art. 21 Committee early in 2008.

2. Corridor A is fully aware of the fact that, during the test and validation phases of version 3.0.0, error correctors cannot be excluded. It nevertheless expects the ERA to only modify the technical solutions related to L5 and braking curves if absolutely necessary and after consultation of Corridor A.

3. The harmonized braking curve model has to be specified by ERA no later than 30.06.08 and to be implemented no later than end of 2009.

4. The technical solution of L1 LS (CR 637) and the braking curves (CR 595) shall not change in the final realisation in an incompatible way. Specification of L1 LS and braking curves is supported by Corridor A. Once a technical solution is
agreed at the level of EBA, this solution shall be published on the Agency website and be used as a reference for later inclusion in version 3.0.0.

5. The functionality of ERTMS on Corridor A will be able to accommodate vehicles equipped with 3.0.0 functionalities. Since the industry is not able to deliver 3.0.0 equipped trains by 2012, at least trains equipped with 2.3.0 (debugged) and L1 L5 as well as the harmonized braking curve model shall be able to run during this transition phase. Corridor A asks the Commission to confirm that such a transitory installation has adequate "legal status" in order not to hamper the TEN-funding requirements and the homologation process.

6. In order to protect the ETCS investments trackside and onboard, and to ensure the interoperability of Corridor A within Europe, the scope of 3.0.0 shall be frozen now and the draft specification, which will serve as basis for tenders shall be ready by the end of 2008.

7. For the completion of the ETCS implementation on the corridor in 2015, and the retrofit of other parts of the corridor to enhance the system performance, the scope of the SRS 3.0.0 has to include the CRs 637, 595, 751/761, 742, 481, 757 and 342/638.

8. The Commission is asked to confirm that a validated SRS 3.0.0 will be submitted to the vote of Art.21 Committee in time (ultimately 2011) in order to ensure the availability of 3.0.0 trains for revenue service up from end 2015 latest. On trackside, the implementation will be in such a way that, if already available before 2015, 3.0.0 trains will be able to run. All necessary works related to this shall be scheduled accordingly and approved by all parties.

9. A European approach to specify, test and homologate of new ERTMS versions and equipment of different suppliers shall be well coordinated within the corridors and the ERTMS Users Group with strong involvement of Corridor A.

Completion and confirmation of the above mentioned items are essential. Corridor A will support this process.

We would like to receive your approval on the above mentioned items before the Article 21 meeting in February 2008.
Yours sincerely,

Deputy Director Rail Transport of the Netherlands Ministry of Public Works, Transport and Watermanagement,
Chairman of the Executive Board Corridor A,

Brigit Gijbers