Rail
Freight
Corridor

1/A

# Rhine - Alpine

## Progress-Report 2013
## Executive Board

prepared in collaboration with the Dutch Ministry of Infrastructure and the Environment , the German Ministry of Transport and Digital Infrastructure, the Italian Ministry for Transport, the Federal Public Service Mobility and Transport of Belgium, and the Swiss Federal Office of Transport.

**COVER NOTE from the executive board rail freight corridor 1 / A Rhine Alpine**

**Ongoing Activities of the Executive Board in 2014 are:**

- *to act in close cooperation with the Management Board*
- *within several meetings of the Executive Board and of task forces on special corridor issues*

- **Setting up an agreement of the Ministers of Transport regarding the establisment of the Executive Board of the Rail Freight Corridor Rhine-Alpine, to be signed 8th October 2014**

- **Revision and finalisation of the ERTMS roll out plan according to changing strategies and concepts mainly in Germany and Italy. The roll out plan serves as an internal aid for the ERTMS planning on the corridor and includes data on roll out phases, project management, technology foreseen, tendering procedures and financing situation. The implementation plan contains the objective to complete the ERTMS corridor Rotterdam-Genoa by 2018.**

- **Focusing on ERTMS implementation on cross border line sections. The adoption decision of the implementation plan includes the objective to close the border line sections in such a way that from 2016 onwards no Dutch and Swiss Class-B system is needed.**

  **Monitor the functioning of the Corridor One-Stop-Shop and the procedures of publication and allocation of pre-arranged paths for time table 2015**

- **Evaluate - together with the Management Board - the allocation process, product- and service offer of C-OSS**

- **Analyse and coordinate issues related to multi corridor requests for pre-arranged train paths**

- **Support cooperation of Infrastructure Managers applying incentive schemes to accelerate retrofitting rail freight wagons for noise in order to promote existing schemes and identify possible ways of harmonizing administrative procedures**

- **Participation at Trans European Networks Core Network Corridor meetings and reporting on CNC reports**

- **Monitor the cooperation between National Safety Authorities of the Corridor with particular focus on border crossing issues, cross acceptance of rolling stock and the development of the Track Train System Validation concept**

- **Monitor the cooperation between Regulatory Bodies of the Corridor**

- **Inform stakeholders about the ongoing work on the corridor, e.g., organisation of a corridor conference together with RFC 2 (inauguration event) on 20th March 2014 in Gent, Belgium.**

## 1. Introduction

Corridor 1/A - Rhine-Alpine is the rail freight corridor from Rotterdam, Zeebrugge, and Antwerp to Genoa along the River Rhine through the industrial heart of Europe. The corridor was extended to Antwerp and Zeebrugge in the course of 2010. The “Zeebrugge-Antwerp/Rotterdam-Duisburg-Basel-Milan-Genoa” rail freight corridor No. 1/A is continuing to develop rapidly and is one of the main rail freight axes in Europe. Its position is strategic because it connects some of Europe's biggest ports, industrial centres and major market areas. It is part of a group of European rail freight corridors, which have gradually been identified in order to develop technical and commercial interoperability.

Corridor Rhine-Alpine runs between the major (sea) ports of Rotterdam/Antwerp and Genoa, right through the heart of the EU along the so-called "Blue Banana". This is the most heavily industrialised North-South route in Central Europe and connects Europe's prime economic regions. The "Blue Banana" includes the economically strong urban centres such as Rotterdam, Amsterdam, Zeebrugge, Gent, Antwerp, Duisburg, Cologne, Frankfurt, Mannheim, Basel, Zurich, Milan and Genoa. All these centres are served and connected by Corridor 1/A - Rhine-Alpine. This outstanding position together with the resulting fact that Corridor 1/A - Rhine-Alpine carries by far the greatest transport volume in Europe, makes the Rotterdam/Zeebrugge/ Antwerp-Genoa route one of the pioneers for international rail freight transport in Europe.

Since 2003, the Ministries of Transport of the Corridor 1/A have intensified the way of cooperation and have thus brought about some remarkable results.

The most important milestones of the work and progress of the freight corridor Rotterdam – Genoa are:

I. 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. With the MoU, the **I**nternational Group for Improving the **Q**uality of Rail Transport in the North-South**-C**orridor Rotterdam - Genoa (IQ-C) started its work dealing with the aim to further improve the quality and punctuality in international rail freight transport on the Corridor. The Ministers entrusted the 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. 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.

As output of this work:

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

III. In *2005* the agreement between the railway safety inspectorates of the Netherlands and Germany on mutual recognition of drivers where possible was reached;

IV. 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. As result, the organisation for the deployment of ERTMS/ETCS on the corridor was established in 2006. The Infrastructure Managers have set up the Management Committee and founded the EEIG Corridor Rotterdam-Genoa EWIV to steer the overall improvement programme integrating all ERTMS and other improvement activities of IQ-C, whereas the Ministries have created the Executive Board supervising the ERTMS implementation on the corridor. From 2008 on, the IQ-C Working Group of the Ministries of Transport and the ERTMS Executive Board worked together in very close cooperation and coordinated their actions and time schedules. In the discussions between Executive Board and Management Committee the development of a successful implementation of ERTMS was in the focus of work. Between 2008 and 2010 all fields of activities were further developed.

The Infrastructure Managers have further developed their quality improving actions, such as the development of harmonised key performance indicators (KPI) concerning traffic volume, modal split, punctuality and commercial speed. Common deadlines for the planning and allocation process for the yearly 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 process of coordinated bottleneck elimination have been initiated. Great efforts have been made to improve punctuality and analysis of the causes for delays.

V. 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 National Safety Authorities (NSA).

VI. In May *2009*, the Ministers signed a common declaration in Genoa on the ERTMS corridor A and re-emphasised to implement ERTMS on the corridor by 2015. The Minister's declaration also included decisions on procurement and authorisation of ERTMS equipment and on the necessary European development of ERTMS baseline 3.

VII. In June *2010*, Ministers of three ERTMS corridors signed a common declaration in Rotterdam. The Ministerial meeting showed the clear political backing of the development of rail freight corridors throughout Europe. For the first time the cooperation of several corridors and the connections between corridors was discussed, recognizing as step towards the European network approach was discussed. The Ministers asked the Infrastructure Managers of Corridor A to enable long trains on the entire corridor by providing at least 750m tracks, to continue with common procurement of ERTMS, and to

seek for a common testing and authorisation concept for Corridor A under the lead of the NSAs and in cooperation with ERA. The Ministers also invited Belgium to participate in the ERTMS Executive Board and the IQ-C Working Group as an observer, and as full member after the entry into force of the Regulation (EU) No. 913/2010 which was in discussion as a proposal at the time of the Ministerial meeting.

VIII. On 9th November *2010*, the Regulation (EU) No. 913/2010 of 22 September 2010 concerning a European rail network for competitive freight entered into force. This Regulation brought an extension of the existing IQ-C/Corridor A to the Belgium harbours of Zeebrugge and Antwerp and a renaming of the Corridor A into 'Corridor 1'. It aims mainly at strengthening the previous corridors, from either the Intergovernmental field (e.g. ERTMS), or from Infrastructure Managers, by institutionalizing their business objectives and methods in a legal community framework, to reinforce cooperation at all levels along teh rail freight corridors, to provide rail freight services of good quality to become more competitive with other transport modes.

IX. On 27th June *2011*, a Mission Statement concerning the Corridor 1 was agreed in a conference in rail corridors in Antwerp. By adoption of the Mission Statement, the Executive Board of Rail Freight Corridor 1 was established. The Mission Statement gave the Corridor 1 a new governance structure as the former working group IQ-C and the Executive Board ERTMS Corridor A are fully merged now. Regarding the institutional requirements of the Regulation (EU) No. 913/2010, the new Mission Statement ensures the establishment of a corridor framework according to the new Regulation, especially the extension of the Corridor to the Belgium ports of Antwerp and Zeebrugge. The Executive Board appointed a special task force as a working group with the objectives to deliver a strategic approach for the implementation of the Regulation (EU) No. 913/2010 on corridor 1.

X. On 20th December *2012*, the Corridor Framework was signed by the Ministers as a Decision of the Executive Boards of Rail Freight Corridors No 1 and No 2 establishing the Framework for capacity allocation on the Rail Freight Corridors No 1 and No 2. The Corridor-Framework describes rules for the allocation process linked to the pre-arranged train paths and to the reserve capacity given to the Corridor One-Stop-Shop ('C-OSS') for freight trains, crossing at least one border on a corridor as foreseen by Article 14.4 of the Regulation (EU) No. 913/2010.

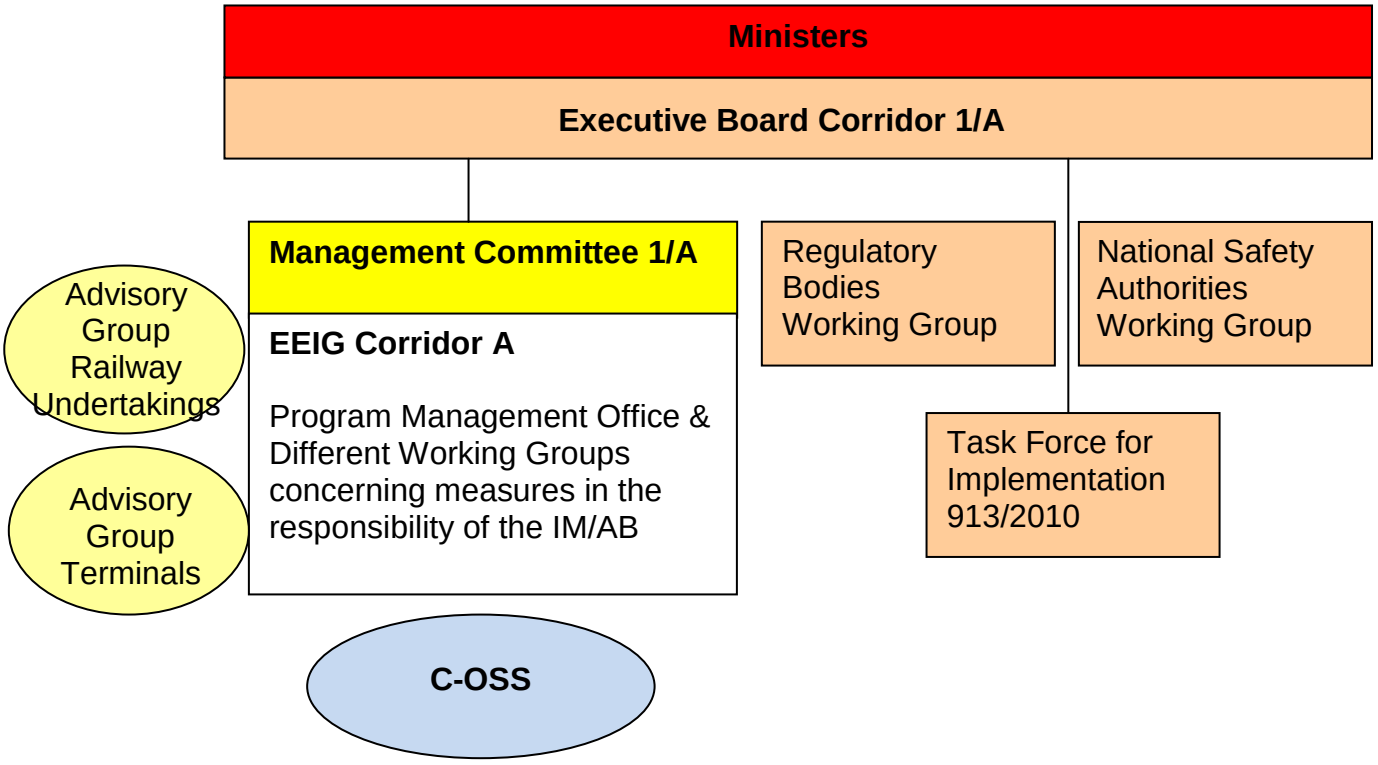
XI. On 5th December *2013*, the Corridor Implementation Plan was approved by the Ministers of Transport which are member of the Executive Board of the Corridor 1/A as it is foreseeon in Article 9 of the Regulation (EU) No. 913/2010. The implementation plan is the necessary basis to make the freight corridor operational. In December 2013, the C-OSS has been established by agreement of the members of the Management Board of Corridor 1/A. The Ministers decided also to have the objective to install ERTMS on corridor A (Rotterdam-

Genoa) by 2018. Priority will be given to the border zones in such a way that locomotives running on the corridor are able to run without the Swiss and Dutch class-B system from 2016 onwards.

XII. On 11th December 2013, the Regulation (EU) No 1315/2013 on Union guidelines for the development of the Trans-European Transport Network and the Regulation (EU) No 1316/2013 establishing the Connecting Europe Facility were adopted by the European Parliament and the Council.

## 2. Corridor organisation

With the actual Mission Statement, the governance structure of the Corridor 1 organization can be illustrated as follows:




The tasks of the Executive Board - following the adoption of the Mission Statement - are:

- To prepare and implement the decisions from Ministers to develop the corridor. The implementation includes in particular the Lugano MoU (2003), the Bregenz LoI (2006), Genoa declaration (2009) and the Rotterdam declaration (2010).

- to ensure that the Rail Freight Corridor No. 1 will be established according to the article 3 of the Regulation, at least three years after the entry into force of the Regulation, namely no later than the 10th of November 2013, in line with the fact that the draft implementation plan

needs to be submitted by the Management board for approval at latest on the 10th of May 2013;

- to define a framework for the allocation of infrastructure capacity on the rail freight corridor in accordance with article 14, paragraph 1 of the directive 2001/14/CE (Art. 14 § 1 Regulation), and this prior to the approval of the implementation plan.

- to ensure that the Management board will submit an investment plan for approval, in May 2013 at the latest (Art. 11 Regulation). The Executive board will encourage the Management board to update the plan regularly and to take into account the corridor's needs.

- to support the need of Infrastructure Managers to have sufficient resources for the development and the deployment of the ERTMS, but also for all the other measures of the corridor's coming investment plan intended to improve the corridor's quality, by respecting the national and community budgetary procedures.

- to assess on all matters of common interest of the corridor whereas the mandate of the Executive board is without prejudice to the competence of Member States regarding planning and funding of rail infrastructure;

- to supervise the realized progress with regard to the implementation plan's measures on the basis of the reporting performed by the Management board. This monitoring will be carried out during the meeting of the Executive board.

- to ask, if applicable, the Management board on any matter relating to smooth functioning of the corridor (works and studies);

- to support the Management board's work, in particular, if the latter encounters difficulties to succeed in its actions;

- to support the establishment of the Advisory Groups of terminals owners/operators and railway undertakings in accordance with the requirements of the Regulation (Art. 8) ;

- to support the request of the Management board for European subsidies within the framework of TEN-T;

- to cooperate, in case this is required, with the European institutions and organizations

- to cooperate, in case this is required, with their national railway safety authorities;

- to cooperate, in case this is required, with the regulatory bodies.

- to transmit reports to the Ministers to keep them informed of the corridor's progress with regard to the implementation plan.

- to inform the European Commission every two years on the development of the freight corridor due to Art 22 of the Regulation.

Taking into consideration the provisions laid down in Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the Trans-European Transport Network and Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, the members of the Executive Board agreed to set up a new establishment agreement for the rail freight corridor with the new name 'Rhine-Alpine' and extend the Corridor to Vlissingen.

On the side of Infrastructure Managers, the Programme Management Office is implemented and works for the Management Board, which develops, steers, monitors and reports all the corridor activities as integrated action and as one company. In 2008, the EEIG Corridor Rotterdam – Genoa EWIV was founded. The Infrastructure Managers of the corridor can act as a legal entity, financially borne by its members and associates.

## 3. Corridor Action plan 2006-2014

Until now, the Working Group IQ-C (in close cooperation with the Executive Board ERTMS) worked on the Action Plan since the start of the working group in 2002. The actual Action plan was updated, concretised and prolonged until 2014 by the Ministers. It is one main gudieline for the work of the Executive Board of Corridor 1/A. The focus was and is on the following actions:

1. *Digital coordination:* The aim is that Infrastructure Managers will optimize their IT support of business processes in such a way that virtual coordination of infrastructure management on the corridor is possible with one face towards the customers, especially for the RUs focused on international rail freight traffic. Therefore, corridor wide application of the Train Information System (TIS) shall be ensured, also the access to applications (e.g. TIS) for terminal operators and other involved parties (e.g., intermodal operators). The implementation of TAF TSI in the EU and among the corridor partners shall be ensured and monitored.

2. *Services:* The aim is the regular check-up of essential service quality and performance indicators on the corridor and the development of additional added value services for the clients. The focus is on measuring service quality (e.g., response time of the One Stop

Shop, number and speed of train paths, punctuality of freight services, corridor coordinated customer satisfaction survey). Added value services are also investigated by Infrastructure Managers.

3. *Improving punctuality:* to improve punctuality on the corridor by setting the right commitment and incentives by Infrastructure Managers and railway undertakings. Measures are a study about the feasibility of the European Performance Regime in the corridor (as a pilot) with decision about implementation and production supervision with monitoring and improvement using EPR on Rotterdam – Genoa for important traffic flows.

4. *International capacity allocation:* with the goal of improving transparency and efficiency of the capacity allocation process for the annual timetable and the short-term requests for train paths, and introducing corridor wide catalogue paths where feasible (corridor wide catalogue with harmonised international freight train paths or development of customer oriented overviews of harmonised international freight train paths).

5. *Capacity / bottlenecks:* includes a broad package of measures to improve international traffic by analysing the existing infrastructure bottlenecks on an integrated (corridor) basis. Action points concern the infrastructure inventory (all client relevant infrastructure parameters, e.g. train length, clearance gauge), the assessment of essential developments on the basis of the results of a corridor-wide cost-benefit-analysis, the analysis of the client needs for infrastructure parameters and the definition of the future development for those values, the identification of infrastructure bottleneck by combining traffic demand forecasts with capacity (actual and planned, per five year planning steps, e.g. 2015 and 2020), proposals to eliminate infrastructure bottlenecks, and making transparent the financing of bottleneck removal projects at national and EU level.

6. *Cross acceptance:* to make the country-specific acceptance processes for production resources (locomotives, wagons, locomotive drivers) easier, faster and less expensive than today for the applying bodies (RUs, wagon keepers and leasing companies), while maintaining the same safety level. This includes the mutual recognition of engine drivers with a corridor wide implementation in line with the new EU directive 2007/ 59 for engine drivers respectively the continuation and extension of an intermediate approach of bilateral agreements on acceptance of train drivers until the full implementation and application of the driver license directive. The mutual recognition of locomotives is also part of this action by implementing cross acceptance (international requirements list) of certification of locomotives in conformity with the EU directive 2008/57.

7. *Market regulation:* to continue the cooperation of the Regulatory Bodies for issues of common interest on the corridor. This includes the reporting on recommendations for improvements of the allocation process of capacity (assessment of allocation for international freight train paths on the corridor), the analysis and relief of congested infrastructure with focus on legal application of priority rules, the access of the clients to terminals and other service facilities in line with EU-legislation and the non-discriminatory application of priority rules by the IM's in case of disturbance of traffic.

8. *ETCS / ERTMS:* to install seamless ETCS operations on the corridor by 2015 to enable safe and interoperable international rail freight traffic to enhance modal shift from road to rail and to support the future market demands and development of the European market. The Infrastructure Managers prepare the corridor implementation plan and will propose this to the Executive Board for adoption. The realization of the corridor implementation plan includes border transition procedures and installations. An implementation plan for ETCS authorization process based on an application of IM (with annual update) has to be developed and realised by Infrastructure Managers and National Safety Authorities.

9. *Terminal facilities:* to improve the interface between terminal operators and IMs. Ministries and Infrastructure Managers update within the Corridor terminal platform (in close collaboration with terminal operators) the corridor terminal inventory (capacity, equipment, etc.), - monitor the traffic development including bottlenecks to and from terminals, ensure the coordinated national planning for long term development of terminals, develop solutions for regulatory problems of the last mile (in cooperation with the regulatory bodies) and assess the access lines regarding equipment with ETCS.

10. *Harmonisation of operational rules:* to aim for an harmonisation of essential operational rules on the corridor and presentation of an interim result to NSA and ERA, and to make an inventory as input for ERA

11. *Railway noise:* The countries on the corridor cooperate with regard to combat railway noise on the corridor caused by freight trains and aim at considerably reducing rail noise at the source by retrofitting freight wagons.

12. *Customs:* to facilitate smooth customs procedures for goods transiting by rail EU-CH.

13. *Rail freight regulation:* To facilitate the implementation of the Regulation (EU) No. 913/2010 on Corridor A, an analysis of the impacts of the regulation is necessary, concerning the development of a business plan, the implementation plan,the extension to Belgium, the involvement of Switzerland as non-EU member, and the impact on existing actions.

With the adoption of the Implementation plan of the Management Board, the corridor action plan will be part of the Implementation plan in future. Most of the actions are transferred. The Implementation plan includes a special chapter which describes measures in addition to Regulation 913/3010 which were part of the former Corridor 1 Action plan and are not related to the Regulation.

## 4. Implementation of Regulation (EU) No. 913/2010

The Executive Board decided to set up a task force with participants of all Ministries to support the proper implementation of the Regulation establishing the rail freight corridors. Terms of reference for the task force were set up.

Modifying the existing governance structure of the corridor to comply with the requirements of the Regulation is a pre-condition. The Mission Statement of the corridor Executive Board was adopted and sent to the European Commission on the 27th June 2011. Infrastructure Managers are on the way to modify their existing arrangements for the Management Committee and their legal entity (EEIG) to bring them in line with the Regulation and to take full account of Infrabel's participation in the corridor since 2010. Terms of reference for both the Railway Undertakings Advisory Group (RAG) and the Terminal Advisory Group (TAG) were developed and members were proposed by the Executive board to the Management Committee. Further measures may be needed to ensure a stable and effective consultation mechanisms. As result, RAG and TAG have periodically meetings and workshops with the Management Committee to reach an intensive cooperation.

The task force also signalled the need of setting up a corridor framework for capacity allocation for the Corridor one stop shop according to articles 13 and 14 of the Regulation. This has to be done to ensure that pre-arranged train paths along the corridor will be supplied by the Corridor One Stop Shop (C-OSS) starting from January. The framework was signed by the Ministers in December 2012 and published in the Official Journal of the European Union[1]. Switzerland declared its agreement with the regulations of the corridor framework in form of a support letter.

With the formal adoption of the corridor implementation plan in December 2013, one more important milestone for the corridor was reached. With it, the corridor lines are defined, mainly based on the annex of the Regulation (EU) No. 913/2010 and on the European Deployment Plan (Decision 2012/88/EU). The defined lines are derived from the results of the transport market study which describes the expected traffic demand for the upcoming years. The offer of

[1] English version: http://eur-lex.europa.eu/JOHtml.do?uri=OJ%3AC%3A2013%3A065%3ASOM%3AEN%3AHTML

pre-arranged train paths is derived from these results. On this basis, the Corridor One-Stop-Shop starts its work.

## 5. Implementation of ERTMS/ETCS on Corridor A

ERTMS development on the corridor Rotterdam-Genoa was open since the decision of the German State Secretary Scheurle to opt for an alternative strategy. Germany proposed to amend European legislation in that direction. The European Commission, Germany and other countries on the corridor have discussed the matter since then intensively to come to a common approach.

The 2012/ 2013 period has led to a positive change for the implementation of ERTMS. The German ministry informed the European Commission by letter in April 2013 about its intention to install ERTMS on the corridor. The letter was in response to the notification procedure foreseen for 2012 with regard to notifying progress on ERTMS as planned in the European Deployment Plan. After this notification the European Commission is planning to decide on the request for additional implementation time of maximum 3 years (2018) in justified cases.

The intention was followed by the agreement in October 2013 from German ministry and DB Netz on the planification studies on deployment of ERTMS on the corridor and the inclusion of ERTMS in the corridor implementation plan of Rail Freight Corridor 1. The general strategy is to deploy ERTMS Level 1 Limited supervision to guarantee interoperability on the corridor while some stretches of the corridor that are being renewed / extended will be equipped with Level 2.

In the Netherlands planning progressed by finalizing the planification and financing of the 2 remaining non-ERTMS sections Kijfhoek and Zevenaar. ERTMS will be installed by end of 2014 (partly level 1, partly level 2) . The installation will be done in such a way that ERTMS equipped locomotives can run into the German network without having the need to have also the Dutch Class-B system on board. In the Netherlands the new government agreement from November 2012 showed the intention to equip the whole railway network with ERTMS and that a strategy for this will be developed in 2013/2014.

In Switzerland the ERTMS development continued as planned, completion of the corridor sections foreseen for December 2015, ERTMS for the whole Swiss network foreseen for December 2017.

The border section in the area of Basel (beloning to DB-Netz) and also the border sectiona Iselle-Domodossola and Ranzo-Luino (beloning to RFI) will not be ready by December 2015. To run locomotives with just ETCS in to Switzerland is therefore not possible.

In Italy the ERTMS planning progressed, and shortly will be finalised with an indication of which lines will be equipped with L1 and/or L2. This finalization will also depend on the outcomes of tests gathered from the ERTMS test lines just settled up.

The Belgian part of the corridor is not part of the European deployment plan ERTMS. The Belgian implementation strategy is part of a network wide implementation strategy in Belgium foreseen in 2022. The Belgian part of the Corridor will be equipped by 2020. In accordance with the Decision 2012/88/EC BE will have to connect Zeebrugges and Gent in ERTMS to an ERTMS corridor by 2020 and notify it to the European Commission three years before. Therefore BE will notify to European Commission the connection of those ports to the ERTMS corridor A in 2017.

The corridor study CIACA (cross impact analysis for Corridor A) carried out by the Infrastructure Managers analysed common risks for the implementation of ERTMS. One of the follow-up actions is the focus to complete border sections of the corridor with ERTMS as a priority; it reduces risks and lowers operational costs for the railway undertakings by reducing the required number of Class-B systems. The concept is to complete border sections by end of 2015 for the Dutch and Swiss borders in such a way that no longer the Dutch en Swiss class B systems are necessary. The prioritisation of border sections is also important for the authorization of ERTMS infrastructure. National Safety Authorities should work together and exchange information to solve the criticalities foreseen for authorizations on border crossing lines and vehicles. For the authorization of CCS (Control Command and Signalling subsystem) that equips vehicles operating on Rail Freight Corridor 1, National Safety Authorities issued a guideline. This guideline will be the procedure to be used by the corridor NSAs when authorizing on-board CCS) and should reduce authorization costs and speed up the process.

During 2012 at European level baseline 3 was delivered and voted in the Railway Infrastructure and Safety Committee (based on 2008/57/EC). This important milestone facilitates equipment of infrastructure and rolling stock on the corridor. Presently the first maintenance release is being delivered by the European Railway Agency and is planned to be adopted by mid of 2014.

At European level the proposed Regulatiosn on TEN-T guidelines and Connecting Europe Facility (CEF) were being negotiated between EC, Council and European Parliament. The guidelines do include objectives to install ERTMS on the core network corridors by 2030 and the comprehensive network by 2050. The CEF gives a framework for partly European financing for ERTMS deployment.

## 6. Status of implementation of measures in the responsibility of the Infrastructure Managers

Regarding the corridor programme, the measures related to the implementation of Regulation (EU) No 913/2010 had priority in the corridor's work in 2013. The results of the transport market study (TMS) executed in 2012 have been used as basis for the definition of the pre-arranged path offer (PaP offer), the corridor routing, selection of terminals and the mid and long term bottleneck analysis.

The corridor organisation and working groups focused on the preparation of the Corridor Information Document (CID) including the Corridor Implementation Plan which has been finalised on time and approved by the ministries on Dec 5th. In the same month the C-OSS has been also successfully established by agreement among the Allocation Body Trasse Schweiz and the Infrastructure Managers represented in the Management Board. Regarding the organisational structure new statutes and a frame contract have been signed, including Infrabel as a full member of the EEIG and Trasse Schweiz as a contractor from 2014 on.

In order to investigate increasing demand for information management as a consequence of Regulation (EU) No 913/2010 a study about the feasibility and benefits of a Corridor Information Management Environment (CIME) was concluded in May. Afterwards the management Board agreed on a second step of development to continue with a study about the demonstration of a professional Customer Information Platform (CIP). The activity was tendered in July and the decision was taken in the beginning of September. A first version has been delivered until the go-live of the RFC 1 for publication of the corridor information documents requested by the Regulation (EU) No 913/2010.

A working group carried out a study about the efforts for upgrading the infrastructure and timetable construction in order to facilitate operations of 740m long trains in future. In respect of the major interest of RUs in operating longer trains the WG Longer Trains 740m invited RAG members to two workshops.

In the RU Advisory Group (RAG), prioritised topics from the RU Position Paper have been analysed and proposals for solutions have been discussed as well as the concept for the PaP offer, coordination of works, C-OSS procedures and the results from the consultation phase of the implementation plan.

The Terminal Advisory Group (TAG) focused on the corridor implementation plan, the feedback from the consultation phase (regarding selection of terminals, routing, connecting lines), the terminal information required by Regulation (EU) No 913/2010 and the extension of the train information system (TIS) for terminals.

In all the elaborated topics and measures, Corridor A/1 liaised closely with RNE and the management of Corridor C/2 in order to establish coherent and compatible concepts and feasible implementations.

A high interest about the Corridor Rotterdam-Genoa was noted on all levels. Our experts participated and contributed in many working group meetings from RNE, ERTMS Users Group, ERA, NSAs, ERTMS Corridor Group, RU and Terminal Advisory Groups, Noise and Terminal Platform, as well as in other freight corridors. Furthermore, the Corridor was represented by the Managing Director at high level meetings such as the Corridor Conference in Thun, the Corridor Steering Group and SERAC meetings of the EC, CODE 24 Political Advisory Board, RNE Business Conference, etc. This led to fruitful and constructive dialogues with all stakeholders relevant to the Corridor.

The annual CEO meeting of the Corridor took place in Zürich at the occasion of the CER/EIM High Level Infrastructure Meeting at the beginning of June.

In order to ensure the financial means for continuing the successful activities of the Corridor 1/A EEIG and IM organisations, the EEIG applied in February for co-financing in the annual TEN-T call 2013-2015. In November the EU granted the EEIG the necessary funds.

## 7. Status of implementation of measures in the responsibility of the National Safety Authorities (NSA)

As stated in the Letter of Intent signed 3 March 2006, the NSA shall present to the Ministries and to the European Coordinator a cooperation agreement with practical measures to streamline the processes for authorising the placing into service of ERTMS equipment on the corridor infrastructure and vehicles.

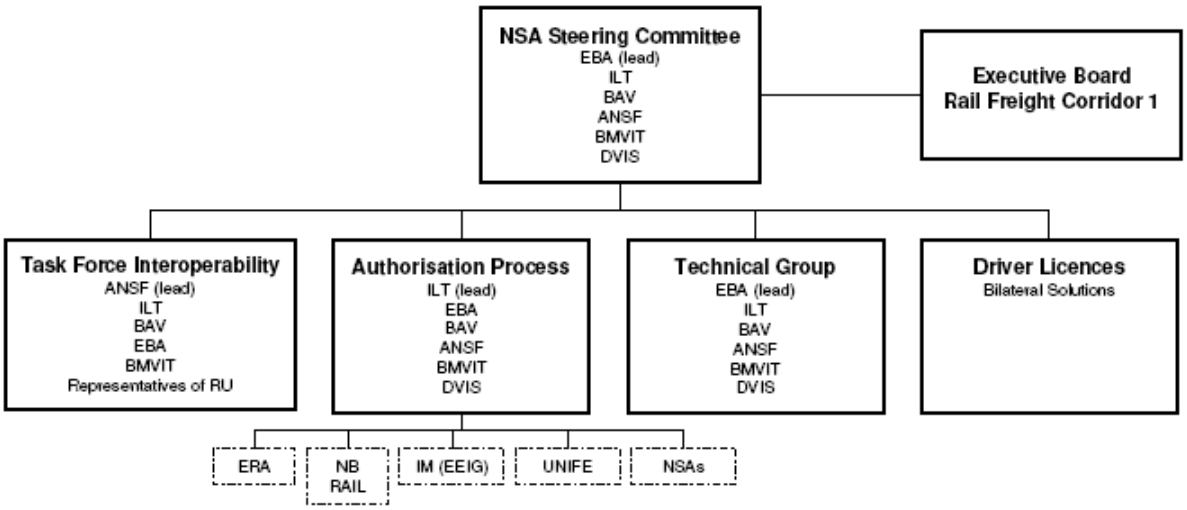
The aim has been clarified further in the Common Declaration of the Ministers of Transport on 26 May 2009. The National Safety Authorities were asked to develop by 2010 a common process for authorising the placing into service of ERTMS equipment on the corridor infrastructure and vehicles. All relevant partners (EC/ERA, notified bodies, IMs and industry) were to be involved.

In order to achieve the target, a common and sound understanding about the technical, operational and safety related aspects of ERTMS has to be gained. Further, as a precondition, the different national requirements for authorising the placing into service have to be understood before a common approach could be agreed upon to achieve transparency and to streamline the authorisation process in order to gain the much desired synergetic effects.

The experiences made with ERTMS pilot projects underline the above mentioned prerequi-sites. Therefore, the group has decided to take a multitude of measures to cover the identified two major work fields including the existing interfaces to other groups and to the European Railway Agency.

The project is coordinated by a Steering Committee consisting of representatives of the participating national safety authorities. Two working groups have been established which are concerned with ERTMS. The working group “Technical Issues” is focused on the technical issues of the authorisation of placing into service of ERTMS equipment whereas the working group “Authorisation Process” has the aim to develop a harmonised process for the authorisation of placing into service of ERTMS equipment. The results of both working groups are crucial preconditions for a streamlined, effective and transparent authorisation process for placing into service of ERTMS. Further in order to cover all important questions regarding the efficient operation on RFC 1, the already existing and well established working group Task Force Interoperability and the issues on driver licences have been put under the umbrella of the NSA project.

**Organisation NSA Project RFC 1**




In 2013, the working groups of the National Safety Authorities were mainly engaged in the following topics:

I. The working group “Technical Issues” has the task to develop a common understanding of the ERTMS technical issues (errors, interpretations, open points) in order to achieve one common ERTMS standard on RFC 1. As the focus of the ministries is set on the develop-

ment of a harmonised authorisation process for placing into service as stated in the Common Declaration of 26 May 2009, it was decided to give special attention to the process-related tasks.

In order to facilitate the discussion of technical issues immediately, it was agreed in 2012 to open the German Reflection Group on ERTMS for these discussions arising on RFC 1. As this group meets on monthly or bimonthly basis, the regular exchange is given. The approach was successfully tested in 2013.

II. The authorisation process: The infrastructure managers of RFC 1 have stated in 2010 that they are not able to deliver a harmonised customer requirement specification for the ETCS-infrastructure on RFC 1. The track-side ERTMS deployment will be specified by each infrastructure manager separately. Therefore the benefit of one harmonised process for the placing into service of the infrastruc-ture on RFC 1 is not given any more. This fact leads to the change of the focus of the work-ing group towards a harmonised process for the authorisation of placing into service vehicles (ERTMS onboard). In 2012 the focus of the work has been on the drafting and development of the guideline for CCS Authorisation on Corridor A and of an APS template called “The on-board CCS subsys-tem related part of the Authorisation for placing in service of vehicles”. During 2013, the comments of the NSAs of RFC1 and partly from RFC3 and Spain, IMs, RUs, NoBos, ERA, UNIFE and other respective stakeholders on the draft guideline have been collected and discussed. Several meetings were used discussing important adjoining issues like national requirements for ERTMS, DV29 follow up and testing. Finally, in December 2013 the version 1.0 of the guideline was successfully adopted by the NSAs RFC1 and the NSA of Austria (BMVIT) and published online on their websites.Furthermore, AWG and ERTMS Users Group started their discussion on operational test case scenarios for RFC1 in December 2013.

III. Task Force Interoperability (TFI): The Task Force Interoperability (TFI) is a working group aiming facilitating the authorisation for placing in service vehicles for the networks of Austria, Germany, Netherlands, Switzerland and Italy. The NSA and infrastructure manager of these countries are permanent members of the group. Since December 2011, RFI attends TFI meetings as infrastructure manager. Before the establishment of ANSF, RFI acted as both NSA and IM. TFI was established in 2001. In 2007 TFI was incorporated into the IQ-C Group being the predecessor of today’s Executive Board of RFC 1. Furthermore, TFI invited respective managers of vehicle manufacturers on a regular basis to discuss the authorisation processes of current multi-system-vehicles. Moreover, since 2012 representatives of ERA`s Cross Acceptance Working Party were invited to the meetings as guests to attend discussions about actual and future processes / activities of mutual recognition. In order to facilitate Cross Acceptance (CA) of vehicle authorisations, TFI have set up a da-tabase (IRL) containing all national technical requirements for locomotives,

train-sets and coaches. The technical requirements are discussed project related in order to maximise the benefit. As national authorisation processes for vehicles applied by TFI-states differ from each other common solutions for cross acceptance were defined. ERA is developing RDD as database containing all technical requirements for locomotives, trainsets and coaches of all member states. For the TFI – member states it is foreseen to transfer the content of the IRL into RDD.

IV. Driver Licenses: The Directive 2007/59/EC on the certification of train drivers has been implemented nationally through the Train Drivers Licence Regulation (Triebfahrzeugführerscheinverordnung, TfV) in April 2011. The mutual agreements of recognition of drivers between Germany, Austria and the Nether-lands are valid only during the transition periods according to Art. 37 of directive 2007/59/EC. The mutual agreement of recognition of drivers between Germany and Switzerland is in course of being adapted to the German Train Drivers Licence Regulation. EBA and BAV have agreed 21th of March 2012 to elaborate an agreement to handle the transition period until the EU-Regulations are fully implemented. This work is still ongoing. Since 2010, the dialogue between Switzerland and Italy has been continued. For the time being, the qualifications for driving trains in Italy have been issued to about 60 Swiss drivers. BAV and ANSF signed on 07.07.2014 a bilateral agreement to allow the access on the cross border network.

In addition, further work done by the NSA group was:

- Support of NSAs in cross border infrastructure projects (e.g., Project Zevenaar-Oost (NL) – Emmerich (DE), Nodal point Basel (CH – DE), Iselle – Domodossola (CH - IT))
- Short distance interoperability
- Contributions to ERA Control Group
- Work on the national requirements for ERTMS

## 8. Enhanced cooperation of the Regulatory Bodies: Monitoring of market regulations

The main focus of the Working group of the Regulatory Bodies is on distinctive problems that can only be dealt with on corridor level. Since 2003 Regulatory Bodies of Germany, Italy, the Netherlands and Switzerland cooperate within the former framework of IQ-C to improve the quality at the North-South railway corridor, reporting relevant administrative and judicial decisions and exchanging experiences on problems related to the corridor. Following the new regime of Regulation (EU) No. 913/2010, it was agreed among regulatory bodies that corridor related meetings of regulatory bodies should be established also for the other corridors.

Following this idea, the IQ-C Regulatory Bodies group finally was replaced by the working groups of regulatory bodies of Corridors 1 and 2.

In 2013 the regulatory bodies of corridor Rhine-Alpine continued their close cooperation. In regular meetings they discussed current developments on the corridor.

Regulation 913/2010/EC stipulates that regulatory bodies which are member of the EU are responsible to monitor competition on the corridors and ensure a non-discriminatory access, but falls short of precise procedural and jurisdictional guidance. Therefore one focus of the regulatory bodies was on a common agreement on major aspects of the regulation, especially on cooperation among them along the corridor. Accordingly, the group developed harmonised and transparent processes for complaints processing in cross-border freight transport especially when it comes to complaints against the OSS. The cooperation agreement of the regulatory bodies was signed in October 2013. Switzerland as a non EU-member signed a letter of intent.

The work of the regulatory bodies also focused on the starting phase of freight corridors in the last months as the corridor came into operation on 10 November 2013.

The regulatory bodies of corridor rhine-alpine also made a paper on the monitoring tasks of the regulatory bodies along the corridor as described in Art. 20 of the Regulation 913/2010/EC. The main focus lies on the monitoring of the corridor information document (CID). The monitoring of the C-OSS (incl. the capacity allocation) is another central task for the regulatory bodies along the corridor. Also the priority rules and priority rules in case of disturbance as well as the coordination of maintenance will be monitored by the regulatory bodies. Additional points mentioned in the paper are the monitoring of the availability of sufficient capacity on the corridor according to the transport market study and that the terminals are part of the corridor.

The group also continued with the close cooperation with the executive board in the development of the framework for the allocation of the infrastructure capacity according to Art. 14 para. 1 of the Regulation, in which the regulatory bodies actively took part. The group of regulatory bodies also attended the meetings of the Executive Board.

Furthermore, the group exchanges opinions with stakeholders of the railway market, for example with Rail Net Europe (RNE) and also with the C-OSS.

## 9. Status of implementation of measures in the responsibility of the Ministries

### *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 undertakings 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 9 % of the rail transit transport through Switzerland, according to statements of the Swiss customs authorities.

The EU is currently working on a recast of the Modernised Customs Code as Union Customs Code. Is it foreseen that the current simplified procedure will be abolished and replaced in order to harmonise transit procedures in rail and road transport. In connection with the modernisation of the EU customs code, it is planned to abolish the Swiss Corridor-procedure (1 May 2016). The Ministries of Transport of Corridor 1/A work in close cooperation with customs authorities on solutions for customs procedure for EU goods on Corridor 1/A which consider both the special characteristics of rail freight transport and the need for an efficient and secure transport of EU goods on the Corridor 1/A crossing Switzerland.

The Memorandum of Understanding „Swiss Corridor T 2“ was prolonged until beginning of 2016 by the customs authorities of the Corridor.

### *Noise*

The Infrastructure Managers on the corridor applying bonus schemes to retrofit rail freight wagons started to work together on common promoting of the existing bonus schemes and intend to harmonise administrative procedures for applying for the bonus schemes where possible. A single entry point for the corridor to apply for the bonus schemes is being considered.

At the European level work is ongoing to adopt an implementing act for Noise Differentiated Track access charges following art 31.5 of directive 2012/34/EU. This harmonization of bonus – malus schemes should help introducing such schemes in EU Member States in an harmonized way.

The European Commission included in its 2014 workprogram the intention to deliver a Communication on rail noise following an impact assessment analyzing different options for phasing out noisy rail freight wagons from the European network including the option of banning

noisy freight wagons from the European network from a certain date onwards. Meanwhile the Communication is expected by early 2015 under the new European Commission.

## 10. General Development of the rail freight transport on Corridor 1/A Rhine-Alpine, impact of implementation actions on 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 investments, 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. 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. Further projects on the corridor advanced, respectively started or even completed initial plan studies, approvals of building licenses etc.

The following table gives an updated overview from the Infrastructure Managers point of view of the planned infrastructure investments on corridor 1/A, with the aim to make the corridor more competitive:

## Investment Plan - Corridor A/1

**Project list with funding status, elaboreted by PMO**

**State: 30.06.2013**

**checked by: ProRail, Infrabel, DB Netz, SBB, BLS, RFI**

| Period | Year of implementation | Country | Line section (from North to South) | Project | Cost estimation [Mio. €] | Funding Status |
|---|---|---|---|---|---|---|
| 2007-14 | 2007 | NL | Kijfhoek - Zevenaar | Betuwe Line | 4.580 | Used |
| | 2007 | CH | Frutigen - Brig | Base Tunnel | 2.800 | Used |
| | 2008 | IT | Bergamo - Treviglio | 2nd track | 86 | Used |
| | 2010 | CH | Castione | upgrade | 18 | Used |
| | 2010 | IT | Luino - Laveno | upgrading for 600m | 21 | Used |
| | 2011 | CH | Bern | 3rd track Rüttli-Zollikofen | 61 | Used |
| | 2011 | IT | Domodossola - Novara | Gozzano bypass | 31 | Used |
| | 2011 | IT | Novara-Alessandria | upgrade line | 13 | Used |
| | 2012 | NL | Maasvlakte II - Maasvlakte I | New line + Marshalling Yard | 30 | Used |
| | 2012 | BE | Zeebrugge - Brugge | Bocht ter Doest | 9,5 | Used |
| | 2013 | IT | Borgo Ticino | Upgrade for 600 m | 4 | Approved |
| | 2014 | CH | Bern - Thun | Headway 2' | 18 | Approved |
| | 2014 | NL | Zevenaar - Border | Zevenaar1: ERTMS level 2 2.3.0d from Zevenaar to border | 113 | Approved |
| | 2014 | BE | Kallo - Antw Noord | Liefenshoek Rail Link | 765 | planned & not approved (approved only for 2013) |
| 2015-19 | 2015 | CH | Corridor A/1 lines | ERTMS equipment | 115 | Approved |
| | 2015 | IT | Corridor A/1 lines (fase prioritaria Chiasso-Milano-Genova e Domodossola-Novara) | ERTMS equipment | 66 | Approved |
| | 2015 | CH | Basel Bad - Basel SBB | upgrade to 4 tracks | 40 | Approved |
| | 2016 | NL | Zevenaar - Border | Zevenaar2: change power supply 1500V into 25kV (and 15kV border - Emmerich) | *incl. in project Zevenaar 1 | Approved |
| | 2016 | CH | Erstfeld - Biasca | Gotthard base tunnel | 8.235 | Approved |
| | 2016 | CH | Bellinzona-Luino | line upgrade, incl. 700m Bellinzona - border, automatisation | 60 | Approved |
| | 2016 | IT | Domodossola - Novara via Borgomanero | upgrade 4 stations for 650m | 25 | Planned |
| | 2016 | IT | Vignale - Oleggio | new crossing station (750) | 4 | Planned |
| | 2016 | IT | Domodossola - Novara via Arona | Upgrade for 750m (Premosello) | 2 | Planned |
| | 2016 | IT | Chiasso - Milano Smistamento | Upgrade for 750m | 5 | Planned |
| | 2016 | IT | Chiasso - Monza | Headway 3' | 48 | Approved |
| | 2016 | IT | Genova Campasso | Potenziamento della stazione di Campasso | 12 | Planned |
| | 2016 | IT | Monza - Milano Smistamento | Headway 3' | 6 | Planned |
| | 2017 | IT | Milano - Pavia | Headway 3' | 22 | Planned |
| | 2017 | IT | Gallarate - Parabiago | Headway 3' | 24 | Planned |
| | 2017 | IT | Novara | Node upgrade (access) | 80 | Planned |
| | 2017 | IT | Potenziamento infrastrutturale Voltri-Brignole | Potenziamento infrastrutturale Voltri-Brignole | 642 | Approved |
| | 2018 | NL | Zevenaar - Border | Zevenaar3; 3rd track Zevenaar-Emmerich + power supply | *incl. in project Zevenaar 1 | Approved |
| | 2018 | DE | Border - Oberhausen | ERTMS equipment existing line | *part of project Emm. - Oberh. | Planned |
| | 2018 | DE | Knoten Basel Bad Bf | ERTMS equipment existing line | tbd | Open |
| | 2018 | IT | Telecomando Gallarate - Domodossola | ACC-M | 90 | Planned |
| | 2018 | IT | Rho - Parabiago | upgrade 4 tracks and link "Y" with FN | 402 | Approved |
| | 2018 | IT | Scavalco di Rho | Upgrade station | 30 | Planned |
| | >2018 | DE | Border - Emmerich - Oberhausen | 3rd track | 1.700 | Planned |
| | 2019 | CH | Basel - Bellinzona - Chiasso | Block headway 3', node Bellinzona, incl. 750m Bellinzona+Chiasso | 230 | Approved |
| | 2019 | CH | Bellinzona - Lugano | Ceneri Basetunnel | 2.048 | Approved |
| 2020-24 | 2020 | BE | Belgian part Corridor A | ETCS | 153 | planned & not approved (approved only for 2013) |
| | 2020 | CH | Basel - Bellinzona - Chiasso / Luino | Profile upgrade to 4 m | 700 | Planned |
| | 2020 | IT | Monza | Station upgrade | 1 | Planned |
| | 2020 | IT | Nodo di Genova: bretella Borzoli-succursale | Additional link | 1 | Planned |
| | 2020 | IT | Adeguamento sagoma (linea dei Giovi) | PC 45 on the line succursale between Alessandria and Bivio Bretella | 15 | Planned |
| | 2020 | IT | Tortona - Voghera | Upgrade to 4 tracks (realizzazione per fasi funzionali) | 600 | Planned |
| | 2020 | IT | Arquata - Genova | Terzo valico (Giovi pass), 5th+6th track | 6.200 | Planned / Approved |
| | 2020 | IT | Corridor A/1 lines (completamento corridoio) | ERTMS equipment | tbd | Planned |
| | 2020 | IT | Domodossola - Gallarate | Upgrade for 750m (Arona) | 27 | Planned |
| | 2020 | IT | Gallarate - Milano | Upgrade for 750m | 5 | Planned |
| | 2020 | IT | Luino - Laveno - Sesto Calende | Upgrade 3 crossing stations for 700m | 31 | Planned |
| | 2020 | IT | Luino - Laveno | Nuovo punto di incrocio Luino-Laveno | 15 | Planned |
| | 2020 | IT | Chiasso - Milano Smistamento | Upgrade power supply | 21 | Planned |
| | 2020 | IT | Chiasso - Milano Smistamento | Profile upgrade to 4 m | 40 | Planned |
| | >2020 | NL | Maasvlakte I - Kijfhoek | upgrade | tbd | Open |
| | >2020 | NL | Breda - Boxtel | upgrade | tbd | Open |

**Investment Plan - Corridor A/1**
**Project list with funding status, elaboreted by PMO**

**State: 30.06.2013**
**checked by: ProRail, Infrabel, DB Netz, SBB, BLS, RFI**

| Period | Year of implemen-tation | Country | Line section (from North to South) | Project | Cost estimation [Mio. €] | Funding Status |
|---|---|---|---|---|---|---|
| 2020-24 | >2020 | NL | Kijfhoek - Zevenaar | additional links Betuwe | tbd | Open |
| | 2021 | BE | Gent-Sint-Pieters - Schellebelle | Y-bifurcation Ledeberg & Schellebelle + Merelbeke (partial project) | 21 | planned & not approved |
| | 2022 | BE | Zeebrugge - Brugge | New hub Zwankendamme 24 tracks | 105 | planned & not approved (approved only for 2013) |
| | 2023 | IT | Novara - Oleggio | 2nd track Vignale - Oleggio | 371 | Planned |
| | 2024 | BE | Zeebrugge - Brugge | 3rd track Brugge - Dudzele | 79 | planned & not approved (approved only for 2013) |
| 2025 + later | 2025 | BE | Brugge - Gent-Sint-Pieters | 3rd and 4th track Gent-Brugge | 258 | planned & not approved (approved only for 2013) |
| | 2025 | BE | Ekeren | Construction Y-bifurcation Oude Landen (L27A) | 76 | Approved |
| | 2025 | BE | Mortsel | Modernisation Y-bifurcation Krijgsbaan (L27A) | 79 | Planned |
| | 2025 | CH | Basel - Bellinzona - Chiasso / Luino | Upgrade for 750m (Luino 640m) | tbd | Planned |
| | 2025 | CH | Liestal | fly-over | 290 | Approved |
| | 2025 | IT | Adeguamento P/C 60 Luino-Gallarate | --> PC60 in corso di valutazione | 1 | Planned |
| | 2025 | IT | Oleggio - Arona | 2nd track and 4meter gauge | 164 | Planned |
| | 2025 | IT | Milano Rogoredo- Pieve Emanuele | Upgrade to 4 tracks | 250 | Planned |
| | 2025 | IT | Brig - Domodossola | capacity improvement for 4m-trains | tbd | Open |
| | >2025 | BE | Belgian part Corridor A | Level crossing removal | 88 | planned & not approved |
| | >2025 | CH | Frutigen - Brig | Base tunnel, 2 track, part 2 | 640 | Open |
| | 2030 | IT | Chiasso - Seregno - Monza | 4 tracks | 1.412 | Planned |
| | 2030 | IT | Seregno - Bergamo (-Treviglio) | Gronda est | 1.000 | Planned |
| | 2030 | IT | Parabiago-Gallarate | upgrade 3 tracks | 326 | Planned |
| | >2030 | IT | Laveno - Luino - Cadenazzo | Gronda ovest | 1.270 | Planned |
| | >2030 | IT | Novara | Node upgrade (passante) | 503 | Planned |
| | >2030 | IT | Voghera-Treviglio via Piacenza-Cremona | 2nd track on critical section and upgrade lines Voghera-Piacenza, Piacenza-Cremona, Cremona-Treviglio | 1.200 | Planned |
| | open | BE | Antw.-Noord-Antw.-Berchem | Port of Antwerp: 2nd rail acces to the port | tbd | Open |
| | open | BE | Hasselt | Hasselt tracks reorganisation | tbd | Open |
| | open | DE | Karlsruhe - Offenburg | 3rd + 4th track | 2.100 | Used / Approved |
| | open | DE | Offenburg - Basel | 3rd + 4th track | 4.100 | planned/approved/used |
| | open | DE | Oberhausen - Basel | ERTMS equipment existing line | tbd | Open |
| | open | DE | Mainz/Wiesb. - Mannheim | HS Line | 2.200 | Planned |
| | | | | Total Investments (M€) | 46.777 | |

| Explanation Funding status | |
|---|---|
| | Used = Funds spent |
| | Planned = not yet financed or approved projects |
| | Approved = Funds released |
| | Open = Funding which is not yet part of any formal funding plan |

*International transport volume*

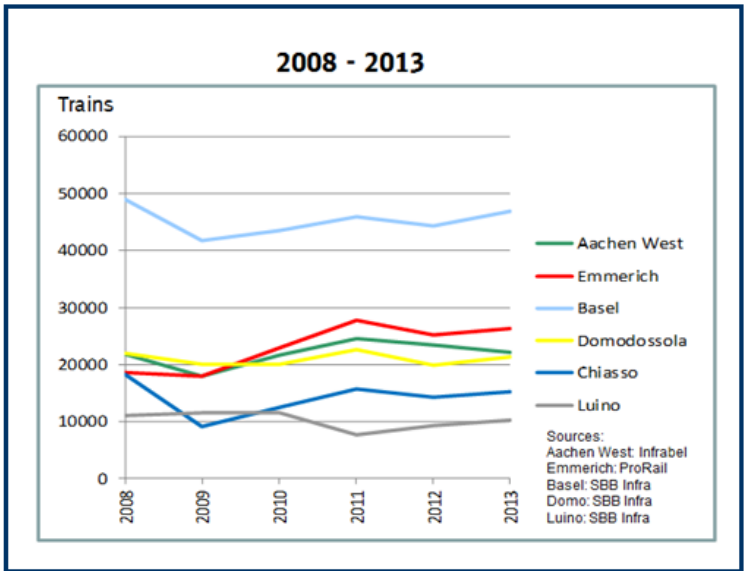
The multi-annual chart (figure 7) shows the development of the last five years until 2013. For the first time results are even slightly above 2008 (+0.4%), the last year before the onset of the financial crisis. Compared to 2012 rail freight has recovered considerably though the economic and financial conditions have improved only marginally. Volumes on the Corridor have increased by 5.3%, primarily on the Trans-Alpine axis (in average +6%).

Growth in Trans-Alpine traffic overcompensated a decline of rail freight in Montzen/Aachen West that suffered from less single wagon load and a loss of market share for maritime containers in the Port of Antwerp as well as the closure of an automotive plant.

In 2013 traffic growth via Emmerich was comparatively low (+1.7%), but regarding transport to the Netherlands the line via Venlo, which is not yet shown in this KPI, is also of importance (+8%) because of shorter distances between the sea ports and some hinterland terminals and

as back-up to Emmerich. As capacity in Emmerich was temporarily limited due to works, additional trains were re-routed via Venlo.

On the Swiss and Italian border points Luino saw the strongest increase of traffic (+9.8%) which was influenced by the rerouting of trains from Chiasso after works.




International traffic volume

**Definition:** number of international freight trains per year crossing one (or more) of the border stations of Corridor A/1 in both directions, regardless of origin or destination.
Border stations are:
NL-DE: Zevenaar - Emmerich
DE-BE: Aachen West - Montzen
DE-CH: Basel
CH-IT: Domodossola, Chiasso and Luino

The following figure displays the data used in the graph of the figure above:

| 2008 | Aachen West | Emmerich | Basel | Domodossola | Chiasso | Luino |
|---|---|---|---|---|---|---|
| Trains (year) | 21.825 | 18.592 | 48.947 | 21.908 | 18.196 | 11.073 |
| | | | | | | |
| **2009** | **Aachen West** | **Emmerich** | **Basel** | **Domodossola** | **Chiasso** | **Luino** |
| Trains (year) | 18.005 | 17.892 | 41.669 | 19.979 | 9.042 | 11.568 |
| | | | | | | |
| Delta to 2008 | - 3.820 | - 700 | - 7.278 | - 1.929 | - 9.154 | 495 |
| Delta in % | - 17,50 | - 3,77 | - 14,87 | - 8,81 | - 50,31 | 4,47 |
| | | | | | | |
| **2010** | **Aachen West** | **Emmerich** | **Basel** | **Domodossola** | **Chiasso** | **Luino** |
| Trains (year) | 21.698 | 22.871 | 43.552 | 20.023 | 12.477 | 11.463 |
| | | | | | | |
| Delta to 2009 | 3.693 | 4.979 | 1.883 | 44 | 3.435 | - 105 |
| Delta in % | 17,02 | 21,77 | 4,32 | 0,22 | 27,53 | - 0,92 |
| | | | | | | |
| **2011** | **Aachen West** | **Emmerich** | **Basel** | **Domodossola** | **Chiasso** | **Luino** |
| Trains (year) | 24.471 | 27.674 | 45.899 | 22.625 | 15.671 | 7.589 |
| | | | | | | |
| Delta to 2010 | 2.773 | 4.803 | 2.347 | 2.602 | 3.194 | - 3.874 |
| Delta in % | 11,33 | 17,36 | 5,11 | 11,50 | 20,38 | - 51,05 |
| | | | | | | |
| **2012** | **Aachen West** | **Emmerich** | **Basel** | **Domodossola** | **Chiasso** | **Luino** |
| Trains (year) | 23.380 | 25.200 | 44.295 | 19.868 | 14.233 | 9.262 |
| | | | | | | |
| Delta to 2012 | - 1.091 | - 2.474 | - 1.604 | - 2.757 | - 1.438 | 1.673 |
| Delta in % | - 4,67 | - 9,82 | - 3,62 | - 13,88 | - 10,10 | 18,06 |
| **2013** | **Aachen West** | **Emmerich** | **Basel** | **Domodossola** | **Chiasso** | **Luino** |
| Trains (year) | 22.128 | 25.500 | 46.955 | 21.282 | 15.139 | 10.265 |
| | | | | | | |
| Delta to 2011 | - 1.252 | 300 | 2.660 | 1.414 | 906 | 1.003 |
| Delta in % | - 5,66 | 1,18 | 5,66 | 6,64 | 5,98 | 9,77 |

*Intramodal competition*

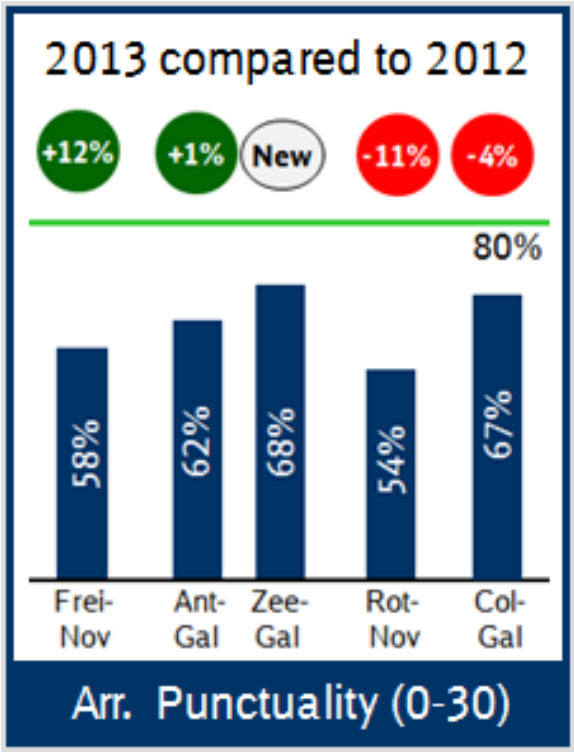
Intramodal competition is well established on the whole corridor Rotterdam – Genoa. The activities of a rising number of railway undertakings and intermodal operators in the rail freight market are a good sign for an open market access and functioning competition between railway services. The existing intramodal competition enhances the productivity of the freight rail market and stimulates new market activities.

*Arrival punctuality*

The punctuality figures 2013 are shown in figure below. The figures relate to the overall quality of all involved stakeholders. The KPI from Zeebrugge to Gallarate is available for the first time. In 2013 no major events like rock slides or flooding affected punctuality on the Corridor.

Especially the Rolling Highway shuttle between Freiburg and Novara (via Lötschberg) took advantage of the fact that no other freight trains had to be rerouted from the Gotthard due to emergency situations (force majeure) like the year before. But arrival punctuality is still not satisfying.

On the other destinations the effect of construction works and partially limited capacity in Germany is noticeable. Trains between Rotterdam and Novara suffered from a major renewal of rails on a five km long line section between Emmerich and Oberhausen that continued over two months, many trains had to be rerouted or were delayed.




**Definition:** average punctuality level (arrival at destination within a 30 minutes time span) for selected relations of: Freiburg–Novara; Antwerp –Gallarate, Zeebrugge – Gallarate (new), Rotterdam–Novara and Cologne–Gallarate (all start / end points of these transport relations are directly located on Corridor A/1). A level of 80% is targeted.

The targeted value of 80% arrival punctuality could not be reached. The overall result lies in the average of the recent years. Considering a period of five years, the results per destination range between 55 and 70%. The picture appears to be different if we have a look on the departure punctuality. On three out of five destinations departure punctuality is above 80% (Freiburg – Novara, Antwerpen – Gallarate and Cologne –Gallarate), the others are at 74 % (Zeebrugge – Gallarate) and 69 % (Rotterdam – Novara).

*Modal split*

The modal split for Corridor 1/A is illustrated in the figure below. As a consequence of stable infrastructural and operational conditions the share of Trans-Alpine rail traffic recovered significantly in 2013 and increased from 63.2% in 2012 to an all year high of 66%. Trans-Alpine rail transport was the major booster on the Corridor this year.

Regarding the sea port of Rotterdam market share of barge transport slightly dropped by 1% in 2013 after an increase of 2% the year before. Transport by barge was limited by high watermarks and flooding along the Rhine in June. Rail transport was not able to benefit from this situation at short notice and market share remained at 11%, road improved by 1%. Nevertheless it is expected that market share of rail and barge will grow in the coming years.

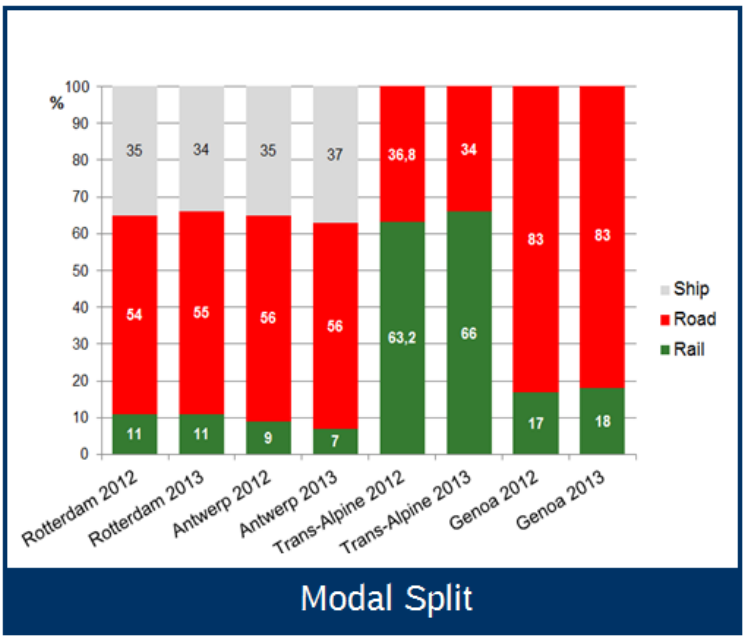
In Antwerp, the market share of rail in contrast declined in 2013 again by 1%. Conditions for rail transport are more difficult in Antwerp:

- Classical single wagon load still is of importance but declining as railway undertakings reduce shunting activities all over Europe due to insufficient profitability
- Bulk cargo like ores, coal or steel - which is suitable for block trains - has by far not the importance like in Rotterdam or Amsterdam.
- Intermodal transport is the main sector of growth but highly competitive.
- Barge is seen the primary transport mode to solve congestion in the port area
- Most hinterland-destinations are within a radius less than 300 km (about 85%). Barge and truck are currently at an advantage on these short and middle distance services to inland terminals.

Rail traffic may benefit from putting the Liefkenshoek Rail Link into operation in 2014, which will connect the rail network on the left and the right bank of the river Scheldt in the port.

In 2011 the Port Authority of Genoa and RFI have agreed to modernise the rail infrastructure in the port in the upcoming years; works are ongoing. Again a slight increase of modal share of

1% can be observed; nevertheless modal share of rail transport is targeted at 40% in the future. Currently direct rail traffic to hinterland destinations is limited to selected places in Northern Italy (e. g. container rail shuttle Voltri Mare <–> Rivalta Scrivia).



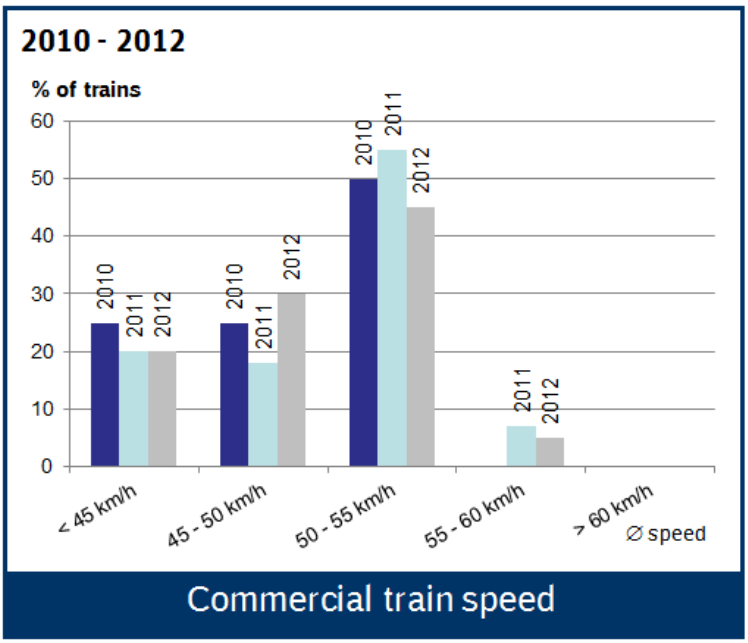

**Definition:** modal split [%] of freight traffic at seaport of Rotterdam, seaport of Antwerp, seaport of Genoa and Trans-Alpine. For Rotterdam and Genoa the modal split is calculated based on TEUs (containers) for the hinterland traffic. For the Trans-Alpine freight traffic the basis is net tons. It is separated by rail, road and inland waterways (if applicable). Measurements are performed on an annual basis.

*Commercial train speed*

The figure below shows the distribution of commercial train speed for four selected traffic relations on Corridor A/1. 30 pairs of trains were analysed. The result of the analysis shows a slight shift in the distribution of shares; nevertheless the average speed of all measured trains was again 49 km/h. Taking the different destinations into account, the range of the average speed offered, spreads within 9.2 km/h which is slightly more than 2012.

The clusters 50-55 km/h and above are dominated by trains of the Rolling Highway shuttle as well as the destination Cologne and- Gallarate. The other destinations receive timetables with an average speed slower than 50 km/h. In respect of the high loss of punctuality of the Rolling Highway shuttle and Cologne – Gallarate (see figure 9), the difference in average train speed in daily operations should be smaller.

The minimum speed in 2013 has been 33.6 km/h whereas the fastest connection offers 61.4 km/h according to the timetable.




**Definition:** average speed [km/ h] of trains according to valid time table for selected relations: Freiburg–Novara; Antwerp – Gallarate, Rotterdam–Novara and Cologne –Gallarate (all start / end points of these transport relations are directly located on Corridor A/1) in both directions. Measured based on annual timetable and classified in five different categories. Basis: 35 freight train services on 4 different relations.

## 11. Conclusions and recommendations

Regarding the development of Corridor 1/A Rhine-Alpine in 2013, following the decisions and discussions inside the Executive Board and between Executive Board and Infrastructure Managers, the Executive Board gives the following recommendations:

***Recommendation 1: ERTMS deployment***

Although there was an political agreement signed by the Ministers of the corridor on a strategy for implementing by 2015 (border) and 2018 (full corridor), it is not secured that these deadlines can be met . From today onwards it is crucial to define, time to time the planning operational as tendering procedures, cross border cooperation, cooperation with ERA and NSA's.

***Recommendation 2: Noise***

The context for noise retrofitting improved considerably in 2012 / 2013 with the authorization of LL blocks, the introduction of incentive regimes in place in Netherlands, Germany and Switzerland and the adoption of the Swiss ban on noisy wagons per 2020.

From 2014 ministries and Infrastructure Managers have to step up their cooperation to make these frameworks work and improve where needed to mutual coordination.

***Recommendation 3: Corridor-One Stop Shop and Offer of Pre-Arranged Train Paths***

To promote the work of the Corridor–One Stop Shop and to develop the offer of pre-arranged trains paths on the Corridor Rhine-Alpine to reach a common success.

***Recommendarion 4: Rail Freight Corridor Rhine-Alpine as part of the Core Network Corridor***

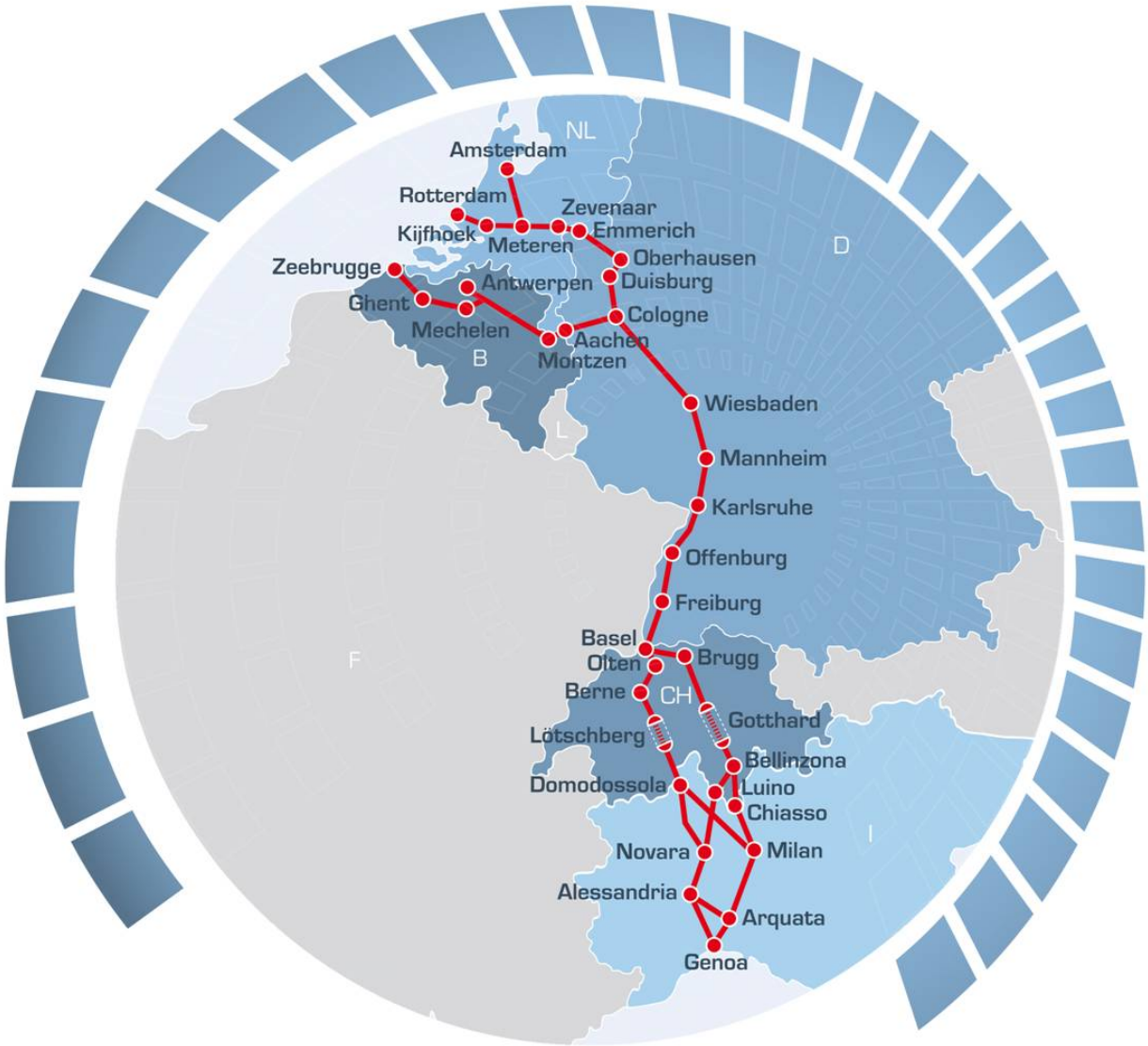
There is the strong need to build up the new established Rail Freight Corridor contributing to the Core Network Corridor Rhine-Alpine, to set up a functioning CNC governance and coordinate investments to reach better co-modality.

***Recommendation 4: Approval***

Therefore, the Ministries ask the Ministers of Transport in the Corridor 1/A Rhine-Alpine for their approval of the Progress Report 2013 of the Executive Board Corridor 1/A Rhine-Alpine and its recommendations.

**Appendix: Management Board Coridor A/1 Annual Progress Report 2013**

# CORRIDOR A/1
# ROTTERDAM - GENOA




Annual Progress Report
2013



Co-financed by the European Union
Trans-European Transport Network (TEN-T)

# Table of Contents

# 0 Executive Summary

In 2013, the overall traffic development on the Corridor Rotterdam-Genoa was positive. Less disturbances in the infrastructure provided a general recovery of rail freight despite stagnant economy. Nevertheless rail transport struggled in some markets due to strong competition. Details are as follows:

a) From 2012 to 2013 the increase of the overall traffic volume on the Corridor was noted at about 5.3% on average

b) Trans-Alpine traffic was the driving force behind rail transport as no unplanned or other major line closures occurred
- Overall growth in average roughly 6%
- Increase of market share to 66% (63.2% last year)

c) Montzen/Aachen West border traffic declined by 5.7% due to decreasing volumes of single wagon load and the closure of an automotive plant.

d) The modal split developed heterogeneously. Besides Trans-Alpine traffic, rail market share increased by about 1% in Genoa; in Rotterdam market share was stable at 11%, but in Antwerp it lost 2% to inland waterways for maritime containers and went down to 7%. Considering the transport policy objectives the development of the rail market share in Rotterdam and Antwerp is not satisfying, especially because the market share for trucks still stays at over 50%.

e) Investments of about 0.9 bn Euro had been made in 2013. The budget until 2015 has been reduced again from about 24.1 bn to 22.5 bn Euro now. From 2016 onwards, total budget increased by 1.3 bn which indicates that planned investments have been postponed.

In general, the European market stabilised in 2013 and for rail freight the perspective for growth set in again. However, the steady reduction and postponement of budgets regarding necessary investments on the Corridor needs urgently to be stabilised in order to be able to fulfil the expectations of the market.

Equipment of ERTMS progressed according to plan in The Netherlands and in Switzerland. In Germany detailed implementation planning has started and in Italy implementation was tendered for a first line section. As a full ERTMS implementation on the Corridor until 2015 cannot be achieved, focus turned on the completion of the cross-border sections. Efforts of the IMs grew considerably in the frame of the preparation of the implementation plan for the Rail Freight Corridor 1. A definition of the corridor lines related to the installation of ERTMS and detailed descriptions had to be developed.

Regarding the corridor programme, the measures related to the implementation of Regulation (EU) No 913/2010 had priority in the corridor's work in 2013. The results of the transport market study (TMS) executed in 2012 have been used as basis for the definition of the pre-arranged path offer (PaP offer), the corridor routing, selection of terminals and the mid and long term bottleneck analysis.
The corridor organisation and working groups focused on the preparation of the Corridor Information Document (CID) including the Corridor Implementation Plan which has been finalised on time and approved by the ministries on Dec 5th. In the same month the Corridor One-Stop-Shop (C-OSS) has been also successfully established by agreement among the Allocation Body Trasse Schweiz and the Infrastructure Managers represented in the

Management Board (MB). Regarding the organisational structure new statutes and a frame contract have been signed, including Infrabel as a full member of the EEIG and Trasse Schweiz as a contractor from 2014 on.

In order to investigate increasing demand for information management as a consequence of Regulation (EU) No 913/2010 a study about the feasibility and benefits of a Corridor Information Management Environment (CIME) was concluded in May. Afterwards the MB agreed on a second step of development to continue with a study about the demonstration of a professional Customer Information Platform (CIP). The activity was tendered in July and the decision was taken in the beginning of September. A first version has been delivered until the go-live of the RFC 1 for publication of the corridor information documents requested by the Regulation (EU) No 913/2010.

A working group carried out a study about the efforts for upgrading the infrastructure and timetable construction in order to facilitate operations of 740m long trains in future. In respect of the major interest of RUs in operating longer trains the *WG Longer Trains 740m* invited RAG members to two workshops.

In the RU Advisory Group (RAG), prioritised topics from the RU Position Paper have been analysed and proposals for solutions have been discussed as well as the concept for the PaP offer, coordination of works, C-OSS procedures and the results from the consultation phase of the implementation plan.

The Terminal Advisory Group (TAG) focused on the corridor implementation plan, the feedback from the consultation phase (regarding selection of terminals, routing, connecting lines), the terminal information required by Regulation (EU) No 913/2010 and the extension of the train information system (TIS) for terminals.

In all the elaborated topics and measures, Corridor A/1 liaised closely with RNE and the management of Corridor C/2 in order to establish coherent and compatible concepts and feasible implementations.

A high interest about the Corridor Rotterdam-Genoa was noted on all levels. Our experts participated and contributed in many working group meetings from RNE, ERTMS Users Group, ERA, NSAs, ERTMS Corridor Group, RU and Terminal Advisory Groups, Noise and Terminal Platform, as well as in other freight corridors. Furthermore, the Corridor was represented by the Managing Director at high level meetings such as the Corridor Conference in Thun, the Corridor Steering Group and SERAC meetings of the EC, CODE 24 Political Advisory Board, RNE Business Conference, etc. This led to fruitful and constructive dialogues with all stakeholders relevant to the Corridor.
The annual CEO meeting of the Corridor took place in Zürich at the occasion of the CER/EIM High Level Infrastructure Meeting at the beginning of June.

In order to ensure the financial means for continuing the successful activities of the Corridor 1/A EEIG and IM organisations, the EEIG applied in February for co-financing in the annual TEN-T call 2013-2015. In November the EU granted the EEIG the necessary funds.

## 0.1 Management Dashboard

Figure 1 displays the progress of the implementation of the corridor programme (input KPIs) for 2013.[1]

In 2013 full working capacity was available and backlog was reduced significantly; the total work progress of the WGs reached 68.5% compared to planned 80%. All tasks for the implementation of the Regulation (EU) N° 913/2010 were completed while the finalisation of internal areas in the innovative new customer information platform (CIP) had to be shifted to 2014.

The actual progress of the projects of the IMs sums up to 50.8% vs. 55.4% planned. The progress in 2013 was driven by projects in The Netherlands, Belgium, Germany and Switzerland. Some of the planned works in Germany and in Italy could not be started yet due to delays in the planning procedures or lack of funding.

In 2013 installation of ETCS balises continued in Switzerland. After a change in strategy the German MoT and DB Netz agreed on a detailed implementation planning. In Italy tendering was started on a first line section. Regarding the target date 2015, German and Italian MoT asked the EC for additional time for the completion of ERTMS on their line sections in the notification report. In Belgium plan studies in the frame of the national master plan, which foresees ETCS deployment on the corridor lines by 2020, are ongoing.

In 2013 the sum of used funds increased by 4% to 20.8bn €. Nevertheless the original target of implementing ERTMS on the Corridor until 2015 is out of reach because planned budgets were shifted to the period after 2015. In view of the consequences of the financial crisis, in the period after 2015, the funding status of significant investments is still open.

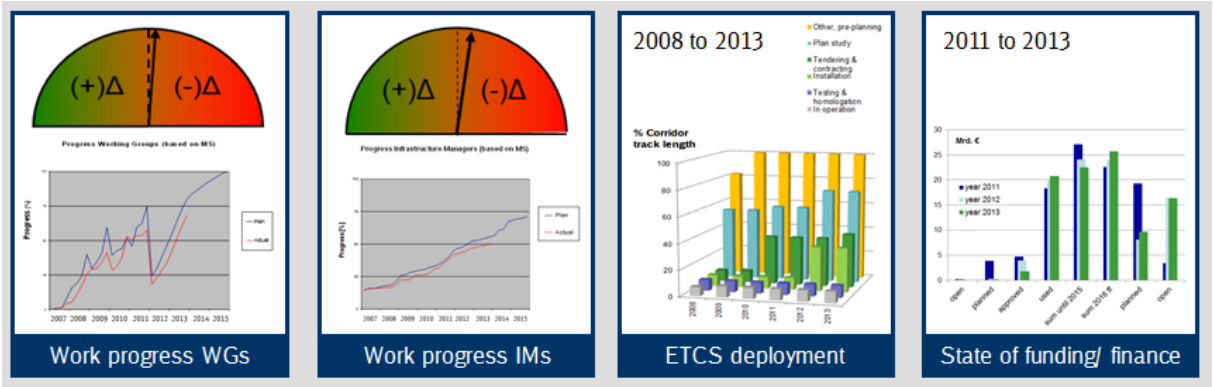



**Figure 1: Management Dashboard 2013 (part 1)**

[1] For more detailed information regarding KPIs and dashboard, definitions and legend please see chapter 0.3.

The progress of the corridor performance can be seen in figure 2. Although 2013 the economic activity remained in stagnation, rail transport recovered significantly. Compared to 2012 no major interruptions occurred in 2013. On a steady available railway infrastructure, traffic demand on the Corridor increased by 5.3%, primarily on the Trans-Alpine axis. Apart from Aachen West all border points showed higher figures (ranging from +1.7% to +9.8%). Luino saw the strongest increase because of rerouting of trains from Chiasso due to works.

The part of rail transport in the modal share developed heterogeneously. Rail transport in Rotterdam stayed stable and could not fully benefit, neither from a national transport strategy, nor from infrastructure development or the relatively high proportion of long distance hinterland destinations. In Antwerp inland waterways benefit from the development of inland ports to hinterland hubs while rail transport declined. Trans-Alpine rail traffic took advantage from good availability of infrastructure in Switzerland.

The higher number of freight trains had an impact on punctuality mainly on long distance routes due to a lack of capacity. The Rolling Highway benefited from better availability of infrastructure in Switzerland after landslides and works affected operations in 2012. A similar picture arises for the commercial train speed. Increasing train figures result in a reduced average speed for long distance trains due to works and a lack of capacity on some line sections.

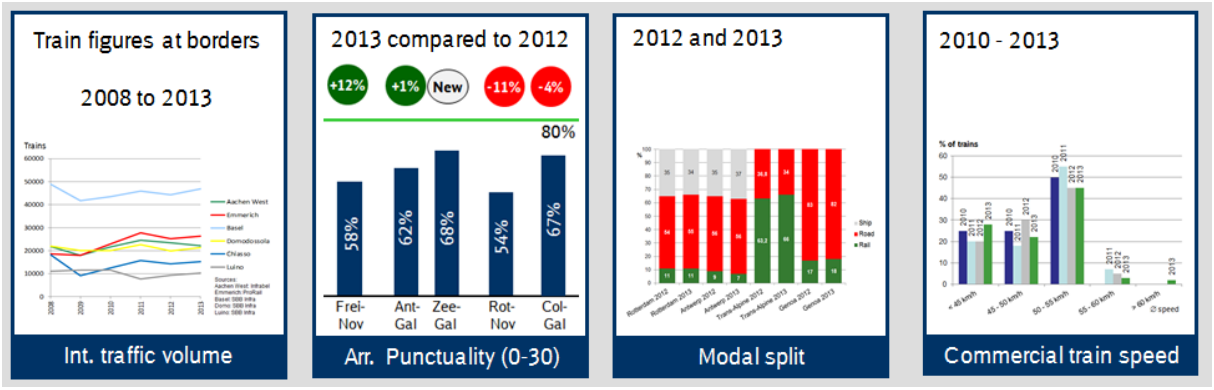



**Figure 2: Management Dashboard 2013 (part 2)**

## 0.2 Management Summary

In 2013, the corridor programme progressed mainly in those measures, which needed to be completed by November 2013, as defined in Regulation (EU) No 913/2010. In this respect, big efforts were undertaken by temporary expert working groups for the definition of concepts and descriptions for the new C-OSS, pre-arranged path (PaP), coordination of works, corridor performance management and corridor information management. The Corridor was also well represented and contributed in the RNE working groups for setting the standards and the preparation of common RNE guidelines in the above mentioned topics.

The TMS was concluded as planned at the end of 2012 and provided important input for the definition of the further corridor layout and the preparation of dedicated rail freight capacity in the form of PaPs. The essential elements of the TMS were published in the frame of the implementation plan.

Regarding the definition of corridor lines and terminals, market demand had to be considered but – in respect of investments and other obligations - also the requirements from Regulation (EU) No 913/2010 as well as the Decision 2012/88/EU. Subsequently, defining the corridor lines including handover stations and connections to the terminals was a major task which turned out to be more difficult than expected. The classification of lines in principal lines, diversionary lines and connecting lines, which covers operational requirements as well as political aspects from transport and infrastructure policy of the European Union and from national plans has been finalised timely. Many discussions were held between IMs and the ministries of transport, who are basically responsible for the financing of the infrastructure and therefore had to take the final decision.

Following the structural specifications of a RNE-guideline all required information was collected and prepared for publication in the Corridor Information Document (CID). The implementation plan of the Rail Freight Corridor 1 is included therein; as the central document it has been confirmed by the ministries. The CID itself is embedded in a Customer Information Platform (CIP), which has been designed and built as a second focus of the information and publication activities in 2013.

Three RU Advisory Group (RAG) meetings focused on the one hand on prioritised topics from the RU position paper (coordination of works, terms & conditions, short penetration at borders and longer trains) and on the other hand on the concept for the PaP offer, C-OSS procedures and the results from the consultation phase for the implementation plan.

The Terminal Advisory Group (TAG) came together twice. The terminal information requested for the CID and draft versions of the implementation plan have been discussed intensely. TAG representatives agreed to provide a common template with terminal information on their facilities for linkage with CIP. The provision of train information to the terminal operators from RNE Train Information System (TIS) was the second important topic as terminals expect more efficient operations. A field test was organised under the lead of RNE.

After the decision of the German Ministry of Transport, to finance trackside installation after all instead of STMs for locomotives, DB Netz was asked to propose a deployment concept by taking into account the operational mode Level 1 LS in addition to Level 2, as well as completion of the German section until the end of 2018. The German MoT and DB Netz agreed on the execution of a detailed implementation planning.

In The Netherlands preparation of ERTMS equipment on the border section Zevenaar – Emmerich level 2 until 2014 was started. In Belgium, execution of the ERTMS master plan covering the equipment of the entire network by 2022 was ongoing as well as the roll-out of ETCS Level 1 LS on the remaining network in Switzerland. In Italy, RFI tendered a first line section of the Corridor (Domo – Novara, via Borgomanero).

The corridor WG ERTMS revised the ERTMS deployment plan by considering the changed situation in every country and prepared the chapter interoperability in the implementation plan.

The missing notification of Germany about the current state of play of ERTMS implementation was sent to the European Commission by mid-2013.

The corridor working group of the NSAs completed the corridor guideline for testing and authorisation, which was a major step forward regarding projectable and successful authorisation.

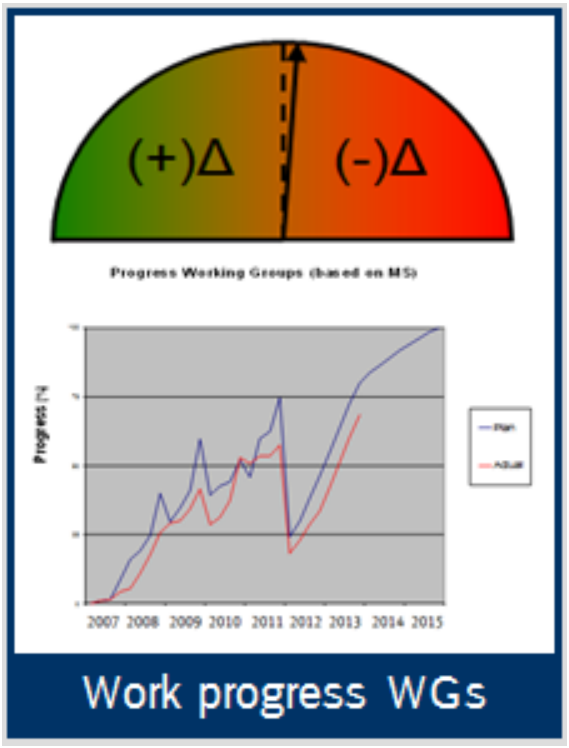
The bilateral working groups of the IMs for the border sections Zevenaar - Emmerich and Basel node progressed well in preparing the basic concept for the border crossing engineering of ETCS on either side of the border, as well as the connection of the third track and the traction power transition at Zevenaar / Emmerich. Furthermore, bilateral working groups for the three border transitions between Switzerland and Italy intensified their activities, e.g. on cross-border acceptance.

Regarding the financing of the corridor activities, the EEIG Corridor Rotterdam-Genoa started preparations to apply for co-financing in the frame of the annual TEN-T call 2013-2015 published in November 2012 for the proof of concept of an economical corridor information platform, a study for a new performance management concept as well as for the corridor coordination and management of the corridor programme and received the money as mentioned further in the document.

## 0.3 Work Results in 2013

**Work Progress of WG Activities**

Figure 3 indicates the work progress of the corridor WGs which sums up to 68.5 % compared to 80 % planned. The backlog from 2012, which was mainly caused by delays during the setup of a new working group structure, was reduced significantly. For some tasks related to the fulfilment of Regulation (EU) No 913/2010 specific temporary subgroups had to be implemented. In 2013 full working capacity was available and tasks related to Regulation (EU) No 913/2010 were completed timely.




**Definition:** percentage [%] of the total work amount completed, based on completed activities (WGs) of the baseline (earned value). The blue line displays the planned work progress whereas the red line shows the actual work progress. The speedometer indicates the trend of the delta between plan and actual.

**Figure 3: KPI Work progress WGs**

### Main Results of the Working Groups

### PMO Subgroups

C-OSS: Development of procedures and process descriptions for CID and establishment of C-OSS

PaP: Definition of PaP offer for TT 2015

CID: Monitoring of contributions, timely completion of books recommended in the RNE guideline “Corridor Information Document Common Structure”
Preparation of terms of reference and tendering an implementation study about a corridor information platform (CIP)

LM: Update of EEIG statutes and frame contract, development of a contract for the C-OSS

### WG Infrastructure &Terminals

In 2013 the working group focused on the contributions for the implementation plan (e. g. bottleneck analysis and investment plan) and the steering of the subgroup “Longer trains 740m study” which had to execute the study until the end of the year.

The subgroup “Longer trains 740m Study” made efforts to comply with schedule because two workshops with RUs had to be organised. The final report was presented in November.

The subgroup TMS expired in spring after acceptance of the final report of TMS by the MB and the ExB. The essential elements were prepared for publication in the implementation plan.

### WG Traffic and Performance Management

In 2013 the working group focused on its contributions to the implementation plan. Measures for the implementation of a Traffic and Performance Management on the corridor were described; objectives and KPIs revised.

The WG consists of three subgroups that work on Performance Management, Coordination of Works and Cross-border issues

The subgroup Performance Management extended regular monitoring of trains on five routes in 2013 (Zeebrugge – Gallarate newly added).

The subgroup Coordination of Works developed a process of coordination on the corridor and a template for regular publication of works. Involvement of RUs is still under further discussion at the Railway Advisory Group.

The subgroup “Cross-border issues & operations” is a follow up of the former WG Operations. The composition of the working group and the work programme were relaunched during the year; issues such as the integration of Annexes A and C of the TSI Operations into the border agreements, the impact of terms and conditions (e.g. train control systems, communication or the reduction of stops at border stations) as well as the updating of the local operational border agreements were defined.

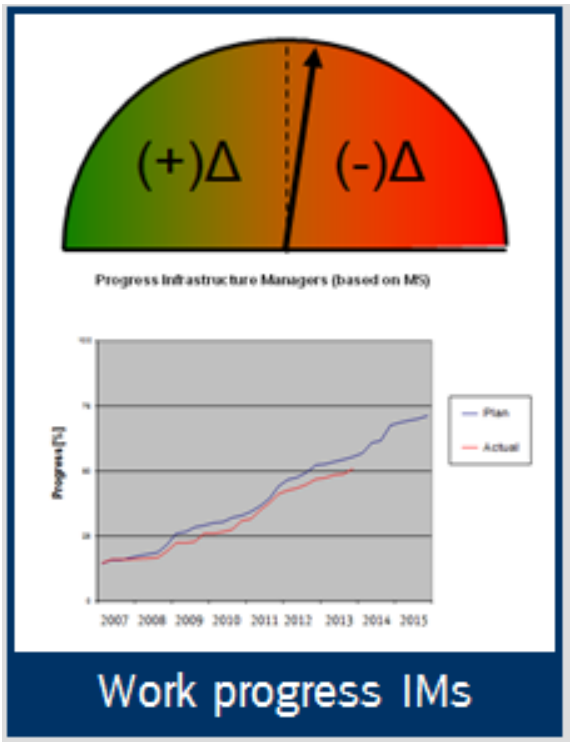
Further operational issues, such as the harmonization of the different train identification systems or a common process for the maintenance of operational and technical equipment will be initiated.

### WG ERTMS

Although the WG ERTMS was not able to meet the planned progress of the current baseline due to delays in the overall progress of ERTMS deployment, work became more extensive. Intensive discussions on national and bilateral level led to a frequent change in planning. Nevertheless the chapter interoperability had been prepared for publication in the implementation plan of RFC 1.
From the second half of 2013 on, a member of the ERTMS Users Group regularly joined the working group meetings to support in the matter of track-train validation.

## Work Progress of IMs Project Implementation

The actual progress of the projects of the IMs sums up to 50.8% vs. 55.4% planned work progress, see figure 4. In figures, compared to the year before, the backlog decreased from 5.5% to 4.6%. The current target line has been established in 2012 and considers a shift of projects to the time period after 2015 due to a lack of funding. Despite of this, as a result of the financial situation in some countries, the backlog remains relatively stable in relation to the current baseline.




**Definition:** percentage [%] of the total work amount completed, based on completed project phases (IMs) of the baseline (earned value). The blue line displays the planned work progress until the end of the observation period whereas the red line shows the actual work progress. The speedometer indicates the trend of the delta between plan and actual.

**Figure 4: KPI Work progress IMs**

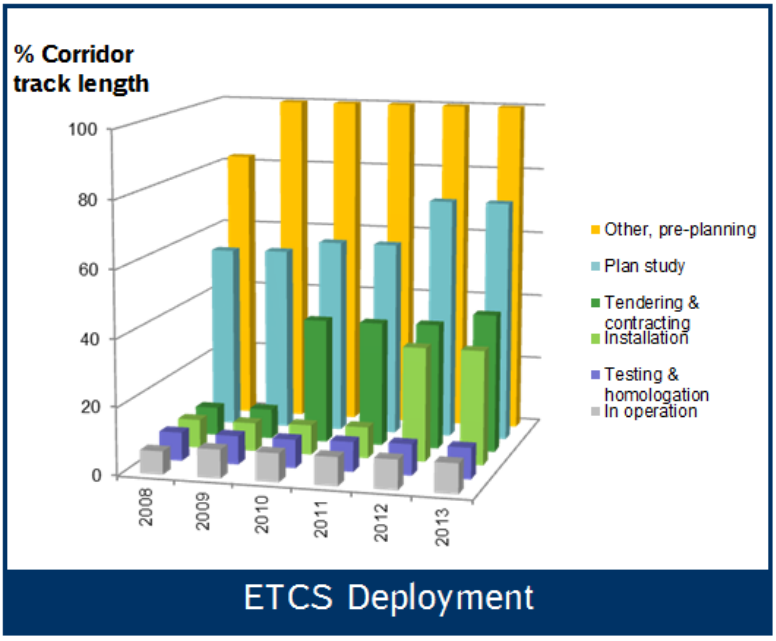
With the commissioning of Maasvlakte II an important infrastructure project was concluded for future operation in the Netherlands. In Belgium, the government approved a new multi-annual investment plan for the period 2013-2025. Negotiations are ongoing for a number of projects for which financing by the Regions can be foreseen. After more than 20 years of planning and approval construction works for the tunnel in Rastatt started in Germany. Also a financing agreement with the German government was reached regarding planning of ETCS deployment and 3rd track Emmerich – Oberhausen. Planning approval procedures have been initiated for Emmerich –Oberhausen too. Most of the infrastructure projects in Switzerland are progressing well and are slightly ahead of schedule.

Delays were registered regarding the expected completion of major infrastructure projects such as ABS/NBS Karlsruhe -Basel, 3rd track Emmerich – Oberhausen, ETCS deployment in Germany and upgrading of line sections in Italy among others.

In the frame of the implementation plan of RFC 1, high efforts were made in the development of an ERTMS implementation plan. Upon request of the Ministries, special chapters have been added about the ERTMS installation on the border-crossing railway lines.

## ETCS Deployment

In the context of the Level 2 decision in the NL the installation of ERTMS and 25 kV have been split into separate projects. ERTMS L2 is now scheduled for the end of 2014 and implementation of 25 KV between Emmerich and Zevenaar is scheduled for the end of 2016.
In Belgium first section overlapping with RFC2 was put into service.
The German MoT confirmed the EC its intention to equip ETCS with a mix of Level 2 and Level 1 LS. German MoT also asked the EC to grant additional time for the completion of the German corridor section until 2018. Negotiations between the ministry and DB Netz about an updated deployment concept are ongoing at the end of 2013 but an agreement about the technical installation of ERTMS has been agreed between the German MoT and DB Netz.
As a result of a revision of its ERTMS strategy, Italy presented a new proposal to the EC. According to this plan at least on routing from the borders down to Genoa will be equipped with ERTMS by 2018. Nevertheless implementation on a first line section has been tendered.
In 2013, implementation of balises for ETCS Level 1 LS on the lines of Corridor A/1 in Switzerland is ongoing. Subsequently, 1.423 track km are in the contracting & installation phase (figure 5). Switzerland is right on track to complete ETCS installation on the corridor lines until the end of 2015.



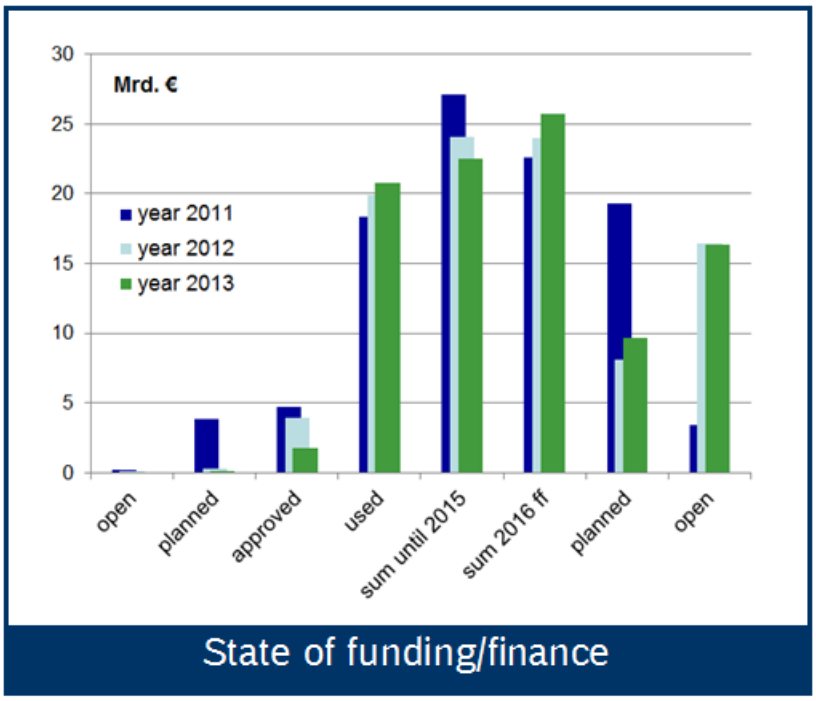

**Definition:** Yearly progress in [%] of ETCS corridor track length [Basis 5071 km] which went through the phases of pre-planning / plan study / tendering & contracting / installation / testing & homologation or in operation.

**Figure 5: KPI ETCS deployment**

## State of Funding/ Finance

The state of funding as shown in figure 6 displays the situation of the overall corridor programme (all IMs, all project types) as per end of 2013 in comparison to 2012 and 2011.

In 2013 investments of circa 0.9 bn. Euro have been accomplished. By this the total sum of used budgets increased by 4% to 20.8 bn. In 2013 significant funds were shifted to the period after 2015 the third year in a row, mainly due to a delay in realisation (e.g. third track Emmerich – Oberhausen). This leads to an increase of the total investment for the period from 2016 on by 6%, while sums decrease by 5% for the period until 2015.
Nevertheless the overall budget remains stable at 52 bn. Euro.




**Definition:** amount of planned/ approved/ open/ used budget [bn. €] for all kinds of Corridor A/1 projects (interoperability, bottlenecks, total service concept) at the end of the year related to the total budget planned until 2015 (open, planned, approved, used, total) respectively from 2016 to 2025 (total, planned, open).

**Figure 6: KPI funding**

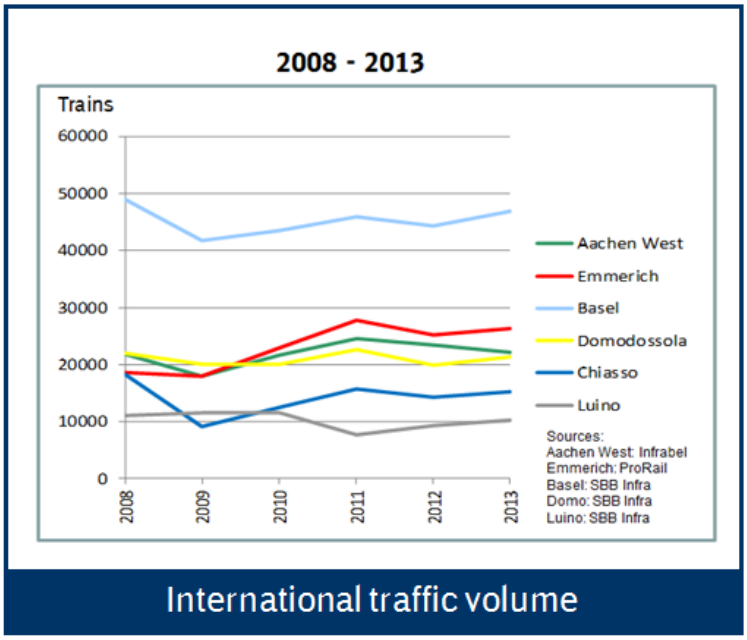
### International Traffic Volume

The multi-annual chart (figure 7) shows the development of the last five years until 2013. For the first time results are even slightly above 2008 (+0.4%), the last year before the onset of the financial crisis. Compared to 2012 rail freight has recovered considerably though the economic and financial conditions have improved only marginally. Volumes on the Corridor have increased by 5.3%, primarily on the Trans-Alpine axis (in average +6%).

Growth in Trans-Alpine traffic overcompensated a decline of rail freight in Montzen/Aachen West that suffered from less single wagon load and a loss of market share for maritime containers in the Port of Antwerp as well as the closure of an automotive plant.

In 2013 traffic growth via Emmerich was comparatively low (+1.7%), but regarding transport to the Netherlands the line via Venlo, which is not yet shown in this KPI, is also of importance (+8%) because of shorter distances between the sea ports and some hinterland terminals and as back-up to Emmerich. As capacity in Emmerich was temporarily limited due to works, additional trains were re-routed via Venlo.

On the Swiss and Italian border points Luino saw the strongest increase of traffic (+9.8%) which was influenced by the rerouting of trains from Chiasso after works.




**Definition:** number of international freight trains per year crossing one (or more) of the border stations of Corridor A/1 in both directions, regardless of origin or destination.
Border stations are:
NL-DE: Zevenaar - Emmerich
DE-BE: Aachen West - Montzen
DE-CH: Basel
CH-IT: Domodossola, Chiasso and Luino

**Figure 7: KPI international traffic volume**

Figure 8 displays the data used in the graph of figure 7

| 2008 | Aachen West | Emmerich | Basel | Domodossola | Chiasso | Luino |
|---|---|---|---|---|---|---|
| Trains (year) | 21.825 | 18.592 | 48.947 | 21.908 | 18.196 | 11.073 |
| | | | | | | |
| **2009** | **Aachen West** | **Emmerich** | **Basel** | **Domodossola** | **Chiasso** | **Luino** |
| Trains (year) | 18.005 | 17.892 | 41.669 | 19.979 | 9.042 | 11.568 |
| | | | | | | |
| Delta to 2008 | - 3.820 | - 700 | - 7.278 | - 1.929 | - 9.154 | 495 |
| Delta in % | - 17,50 | - 3,77 | - 14,87 | - 8,81 | - 50,31 | 4,47 |
| | | | | | | |
| **2010** | **Aachen West** | **Emmerich** | **Basel** | **Domodossola** | **Chiasso** | **Luino** |
| Trains (year) | 21.698 | 22.871 | 43.552 | 20.023 | 12.477 | 11.463 |
| | | | | | | |
| Delta to 2009 | 3.693 | 4.979 | 1.883 | 44 | 3.435 | - 105 |
| Delta in % | 17,02 | 21,77 | 4,32 | 0,22 | 27,53 | - 0,92 |
| | | | | | | |
| **2011** | **Aachen West** | **Emmerich** | **Basel** | **Domodossola** | **Chiasso** | **Luino** |
| Trains (year) | 24.471 | 27.674 | 45.899 | 22.625 | 15.671 | 7.589 |
| | | | | | | |
| Delta to 2010 | 2.773 | 4.803 | 2.347 | 2.602 | 3.194 | - 3.874 |
| Delta in % | 11,33 | 17,36 | 5,11 | 11,50 | 20,38 | - 51,05 |
| | | | | | | |
| **2012** | **Aachen West** | **Emmerich** | **Basel** | **Domodossola** | **Chiasso** | **Luino** |
| Trains (year) | 23.380 | 25.200 | 44.295 | 19.868 | 14.233 | 9.262 |
| | | | | | | |
| Delta to 2012 | - 1.091 | - 2.474 | - 1.604 | - 2.757 | - 1.438 | 1.673 |
| Delta in % | - 4,67 | - 9,82 | - 3,62 | - 13,88 | - 10,10 | 18,06 |
| **2013** | **Aachen West** | **Emmerich** | **Basel** | **Domodossola** | **Chiasso** | **Luino** |
| Trains (year) | 22.128 | 25.500 | 46.955 | 21.282 | 15.139 | 10.265 |
| | | | | | | |
| Delta to 2011 | - 1.252 | 300 | 2.660 | 1.414 | 906 | 1.003 |
| Delta in % | - 5,66 | 1,18 | 5,66 | 6,64 | 5,98 | 9,77 |

**Figure 8: KPI international traffic volume - Absolute data**

## Arrival Punctuality (0 – 30 min)

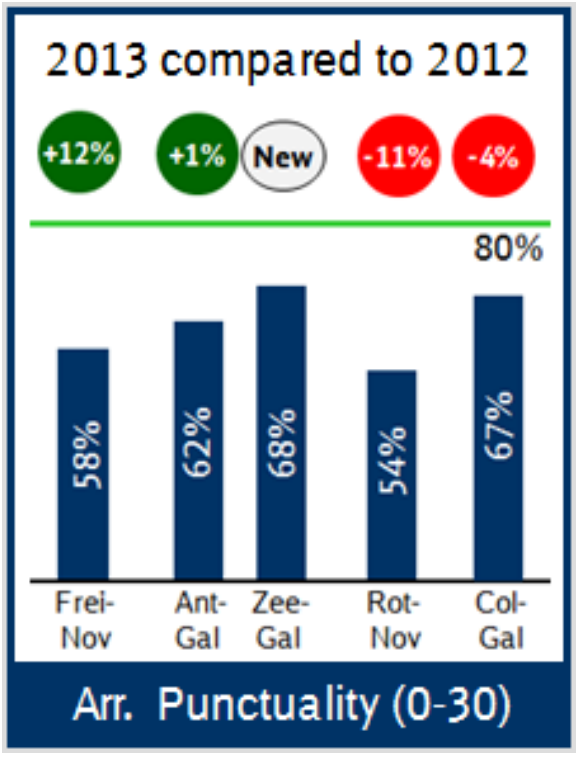
The punctuality figures 2013 are shown in figure 9. The figures relate to the overall quality of all involved stakeholders. The KPI from Zeebrugge to Gallarate is available for the first time.

The stated increase of traffic in 2013 on already heavy used infrastructure generally may lead to delays in certain hot spots. Ongoing capacity projects will have a positive effect on these delays.

In 2013 no major events like rock slides or flooding affected punctuality on the Corridor.

Especially the Rolling Highway shuttle between Freiburg and Novara (via Lötschberg) took advantage of the fact that no other freight trains had to be rerouted from the Gotthard due to emergency situations (force majeure) like the year before. But arrival punctuality is still not satisfying. The main reason is capacity conflicts with passenger trains in Switzerland during daytime.

On the other destinations the effect of construction works and partially limited capacity in Germany is noticeable. Trains between Rotterdam and Novara suffered from a major renewal of rails on a five km long line section between Emmerich and Oberhausen that continued over two months, many trains had to be rerouted or were delayed.




**Definition:** average punctuality level (arrival at destination within a 30 minutes time span) for selected relations of: Freiburg–Novara; Antwerp –Gallarate, Zeebrugge – Gallarate (new), Rotterdam–Novara and Cologne–Gallarate (all start / end points of these transport relations are directly located on Corridor A/1). A level of 80% is targeted.

**Figure 9: KPI Punctuality**

The targeted value of 80% arrival punctuality could not be reached. The overall result lies in the average of the recent years. Considering a period of five years, the results per destination range between 55 and 70%. The picture appears to be different if we have a look on the departure punctuality. On three out of five destinations departure punctuality is above 80% (Freiburg – Novara, Antwerpen – Gallarate and Cologne –Gallarate), the others are at 74 % (Zeebrugge – Gallarate) and 69 % (Rotterdam – Novara). Trains of the Rolling Highway shuttle Freiburg – Novara have the largest loss of punctuality (-28%), followed by Cologne – Gallarate (-17%) and Rotterdam – Novara (-15%).

## Modal Split

The modal split for Corridor A/1 is illustrated in figure 10. As a consequence of stable infrastructural and operational conditions the share of Trans-Alpine rail traffic recovered significantly in 2013 and increased from 63.2% in 2012 to an all year high of 66%. Trans-Alpine rail transport was the major booster on the Corridor this year.

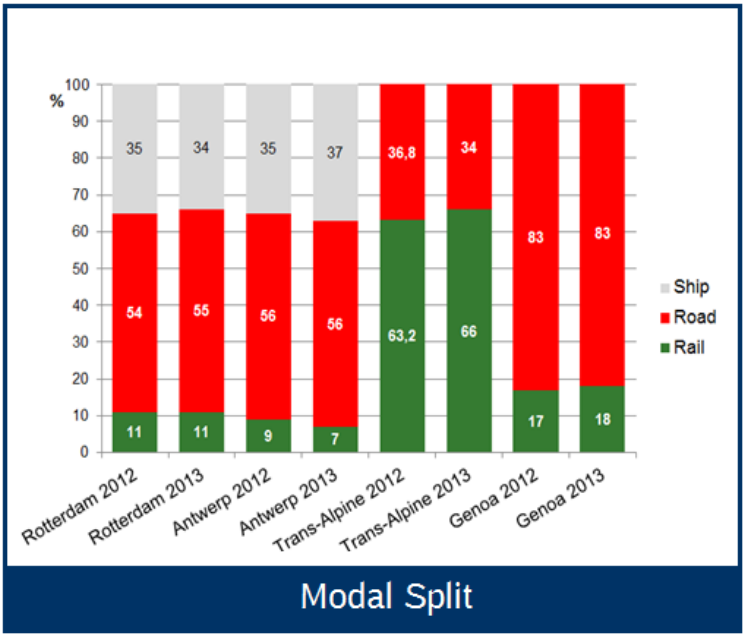
Regarding the sea port of Rotterdam market share of barge transport slightly dropped by 1% in 2013 after an increase of 2% the year before. Transport by barge was limited by high watermarks and flooding along the Rhine in June. Rail transport was not able to benefit from this situation at short notice and market share remained at 11%, road improved by 1%. Nevertheless it is expected that market share of rail and barge will grow in the coming years.

In Antwerp, the market share of rail in contrast declined in 2013 again by 1%. Conditions for rail transport are more difficult in Antwerp:

- Classical single wagon load still is of importance but declining as railway undertakings reduce shunting activities all over Europe due to insufficient profitability
- Bulk cargo like ores, coal or steel - which is suitable for block trains - has by far not the importance like in Rotterdam or Amsterdam.
- Intermodal transport is the main sector of growth but highly competitive.
- Barge is seen the primary transport mode to solve congestion in the port area
- Most hinterland-destinations are within a radius less than 300 km (about 85%). Barge and truck are currently at an advantage on these short and middle distance services to inland terminals.

Rail traffic may benefit from putting the Liefkenshoek Rail Link into operation in 2014, which will connect the rail network on the left and the right bank of the river Scheldt in the port.

In 2011 the Port Authority of Genoa and RFI have agreed to modernise the rail infrastructure in the port in the upcoming years; works are ongoing. Again a slight increase of modal share of 1% can be observed; nevertheless modal share of rail transport is targeted at 40% in the future. Currently direct rail traffic to hinterland destinations is limited to selected places in Northern Italy (e. g. container rail shuttle Voltri Mare <–> Rivalta Scrivia).




**Definition:** modal split [%] of freight traffic at seaport of Rotterdam, seaport of Antwerp, seaport of Genoa and Trans-Alpine. For Rotterdam and Genoa the modal split is calculated based on TEUs (containers) for the hinterland traffic. For the Trans-Alpine freight traffic the basis is net tons. It is separated by rail, road and inland waterways (if applicable). Measurements are performed on an annual basis.

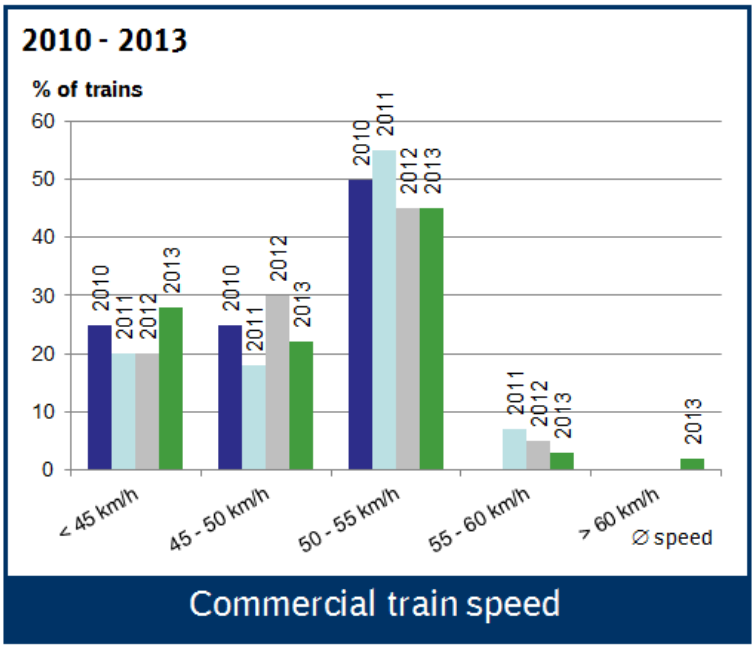
**Figure 10: KPI Modal split**

**Commercial Train Speed**

Figure 11 shows the distribution of commercial train speed for four selected traffic relations on Corridor A/1. 30 pairs of trains were analysed. The result of the analysis shows a slight shift in the distribution of shares; nevertheless the average speed of all measured trains was again 49 km/h. Taking the different destinations into account, the range of the average speed offered, spreads within 9.2 km/h which is slightly more than 2012.

The clusters 50-55 km/h and above are dominated by trains of the Rolling Highway shuttle as well as the destination Cologne and- Gallarate. The other destinations receive timetables with an average speed slower than 50 km/h. In respect of the high loss of punctuality of the Rolling Highway shuttle and Cologne – Gallarate (see figure 9), the difference in average train speed in daily operations should be smaller.

The minimum speed in 2013 has been 33.6 km/h whereas the fastest connection offers 61.4 km/h according to the timetable.




**Definition:** average speed [km/h] of trains according to valid timetable for selected relations: Freiburg–Novara; Antwerp – Gallarate, Rotterdam–Novara and Cologne –Gallarate (all start / end points of these transport relations are directly located on Corridor A/1) in both directions. Measured based on annual timetable and classified in five different categories. Basis: 30 freight train services on 4 different relations.

**Figure 11: KPI Commercial train speed**

**Summary**

Figure 12 sets the 2013 values in the context of the previous year and the target 2015. In addition, it shows the delta in absolute or relative figures. The strong progress of the KPI "Work progress WGs" is due to the fact that resources and activities in the current baseline period are focused on the implementation of Regulation (EU) No 913/2010, in 2013 several special temporary subgroups, e. g. for pre-arranged path, implementation of the C-OSS and the "Longer Trains 740 m study", have been pushing progress significantly.

The development of the KPI "Work progress IMs" results from progress in a few big ongoing projects, mainly in Switzerland and Germany, and the commissioning of the railway connection to Maasvlakte II in The Netherlands.

Regarding ERTMS Italy started tendering and contracting for the line Domodossola to Novara, installation in Switzerland is ongoing.

In 2013 another shift of planned and approved budgets beyond 2015 has been noticed, essentially caused by the delay of major infrastructure projects and ERTMS implementation in Germany and Italy.

| KPI | 2012 (Actual) | 2013 (Actual) | Delta [%] | 2015 (Target) |
|---|---|---|---|---|
| Work progress WGs [%] | 33,5 | 68.5 | +37.9 | 100 |
| Work progress IMs [%] | 46.9 | 50.8 | +7.7 | 71 |
| ETCS deployment [%] | | | | |
| Pre-planning, other | 100,0 | 100,0 | ±0 | - |
| Plan Study | 72,6 | 72,6 | ±0 | - |
| Tendering and Contracting | 37,7 | 41,5 | +10 | - |
| Installation | 34,1 | 34,1 | ±0 | - |
| Testing and homologation | 9,3 | 9,3 | ±0 | - |
| In operation | 8,9 | 8,9 | ±0 | 100 |
| State of funding [bn. €] | | | | |
| Open | 0,05 | 0,0 | -100 | - |
| Planned | 0,3 | 0,03 | -88 | - |
| Approved | 3,9 | 1,8 | -55 | - |
| Used | 19,9 | 20,8 | +4 | 22.6 |
| Int. traffic volume [trains] | | | | |
| Montzen / Aachen West | 23.380 | 22.128 | -6 | |
| Emmerich / Zevenaar | 25.200 | 25.500 | +1 | |
| Basel | 44.295 | 46.955 | +6 | |
| Domodossola | 19.868 | 21.282 | +7 | |
| Chiasso | 14.233 | 15.139 | +6 | |
| Luino | 9.262 | 10.265 | +10 | |
| Arrival punctuality [%] | | | | |
| Rotterdam – Novara | 61 | 54 | -7 | 80 |
| Antwerp – Gallarate | 61 | 62 | +1 | 80 |
| Zeebrugge - Gallarate | - | 68 | N/A | 80 |
| Freiburg – Novara | 51 | 58 | +7 | 80 |
| Cologne – Gallarate | 70 | 67 | -3 | |
| Modal split rail [%] | | | | |
| Port of Rotterdam | 11 | 11 | | |
| Port of Antwerp | 9 | 7 | | |
| Trans alpine | 63 | 66 | | |
| Port of Genoa | 17 | 18 | | |
| Commercial train speed [%] of trains above average 50 km/h | 51 | 50 | -2 | |

**Figure 12: Development of KPIs**

## 0.4 Summary of general activities 2013

**Launch of new website**
In 2013 the IMs spent great effort in implementing a data base called “Customer Information Platform” (CIP) to facilitate easy access to all corridor information like the progress in the corridor programme, the specific situation regarding ETCS implementation trackside and on-board, as well as the implementation plan containing all corridor measures, coordination of works, performance management information and terms and conditions for track access of our customers. This CIP can be reached via the corridor website, which was also modified for providing this access and additional information, which is of highest interest to the customers and need to be published at most prominent location.
CIP was taken into service in November 2013 and since then allows all interested public to gather all current corridor information of Corridor A/1 from a single source.

**Corridor One-Stop-Shop (C-OSS) implementation**
In the frame of Regulation (EU) 913/2010, the IM/ABs started the implementation of the Corridor OSS by recruiting the necessary experts and infrastructure, as well as preparing the related OSS contract among the corridor IMs/ABs. Furthermore, the IMs prepared and coordinated the offer consisting of PaP, for publication by the C-OSS on 14th January 2014 for the time table period 2015.

**Railway Undertaking &Terminal Advisory Groups (RAG & TAG)**
In April 2013, the Corridor offered the draft implementation plan (IP) for consultation to the RAG and TAG members and collected their comments and requests. All input was analysed in the corridor and discussed with the Executive board members. Main issue was the definition of the corridor routing with principal lines, diversionary lines, connecting lines and corridor terminals, which was also based on the results of a transport market study carried out for the Corridor. After thorough evaluation, the ministries decided upon those requests which had been finally considered and included in the IP.

In two more RAG and TAG meetings, the processes for time table coordination at borders and works, as well as the capacity offer prepared by the IMs was extensively discussed and adapted to the requirements of the RAG where ever feasible. Furthermore, topics from the RU position paper published by the RUs in December 2010 were further analysed with the aim to support harmonisation. Priority was given to the harmonisation of terms and conditions at borders cross acceptance on cross-border lines, as well as the possibilities of operating longer trains.

With the TAG members templates had been prepared and agreed upon, which are used to publish terminal information for all types of terminals in a similar structure in order to support easy finding and access.

In the Train Information System (TIS) of RNE, the function for displaying ETA information also to terminal operators was completed and offered to terminals for testing. The test results came out very positive and the opening of TIS for the terminals was started.

**RU ERTMS advisory platform**
The RU ERTMS advisory platform was started by the corridor in 2012 by involving all responsible players such as experts from the RUs, EC, ERA, NSAs, ERTMS Users Group and IMs. In 2013, this initiative was handed over and continued by the ERTMS Users Group in Brussels as the competence centre of the IMs regarding ERTMS specification and development. The RUs heavily complained about the instable system version management and specification, as well as the consequence that no sufficiently mature products can be ordered and taken into service at reasonable cost. The platform supported the

communication of the current state of play of ERTMS and to learn about the practical problems of our customer in implementation.

**Executive Board and Task Force Meetings of the Ministries of Transport**
The preparation of the implementation plan including the detailed definition of the corridor lines and terminals was the major task of the IMs and ExB in 2013. The implementation plan was completed and published in November and approved by the ministers of transport in December 2013.

The ExB was further dealing with the progress of ERTMS implementation which is still behind schedule and on risk in Germany and Italy. Finally it could be achieved that the German MoT concluded a financing agreement with DB Netz for starting the ERTMS planning and engineering in Germany. The Swiss/German bilateral working group prepared a concept for ERTMS implementation in the hub of Basel which still needed confirmation from the German supervisory body (Eisenbahnbundesamt, EBA). Furthermore, the German MoT also decided to deploy ETCS level 1 limited supervision in all sections with sufficient capacity.
The Luino line was extensively discussed with the result, that it will be equipped with ERTMS although it is not declared to be a principal corridor line.

The corridor working group of the NSAs completed and published their guideline for authorisation of ERTMS on the corridor. The guideline foresees cross acceptance for vehicle authorisation referring to a track/train system validation process (TTSV), which is based on operational test cases of the corridor. Meetings took place with ExB members, the NSAs as well as the ERTMS Users Group for defining the requirements needed for performing the TTSV process.

The IMs completed and presented the study on long trains 740 m of the corridor. As a result, about 150 million Euro are needed additionally to the current corridor investment programme to upgrade the corridor for 740 m long trains until 2025. As this is of highest priority to the RUs the ministries were asked to look into the possibilities to raise the financing of the additional budget.

The Framework for Capacity Allocation (FCA) published by the ministries already in 2012 was differently translated in German and English, which led to a different interpretation of the German MoT on the use of the priority rule on PaPs for requests on more than one corridor. As a result it was concluded that the priority rule, which is part of a RNE guideline, needs to be revised to include more criteria if the request involves several corridors. Meetings with RNE started to investigate suitable options.

**CODE 24 Project**
The Political Advisory Board and regional steering group meetings of CODE24 took place on 12th September 2013 in Zürich. Corridor A/1 was represented by Stefan Wendel, who is also a member of the Political Advisory Board of CODE 24. He participated in workshops of the conference.
On 13th December 2013, the CODE 24 conference took place in Genoa. Stefan Wendel participated on behalf of the Management Board of Corridor A/1.

**CEO Meeting Corridor A/1**
The CEOs of Corridor A/1 met on 11th June 2013 in Zürich. The CEOs were very much interested in the development and progress of the corridor programme to meet the target date of ERTMS. The quantities of PaPs offered by the Corridor OSS for time table period 2015 were considered to be well balanced and attractive. The intention was to start with an

attractive offer allowing the C-OSS to succeed neither being an “offensive offer” with maximum amount of PaPs, nor a “defensive offer”, which hardly presents benefits and might not be used by the applicants. The CEOs appreciated the information and expressed their expectations about the focus for the next year.
The next CEO meeting shall be organised in connection with the High Level Infrastructure Meeting of CER and EIM in June 2014.

**TEN-T Call**
In November 2012, the Innovation  Networks Executive Agency (INEA) of the European Commission (former TEN-T Executive Agency) launched the annual Call 2013–2015 for requesting European funding of studies and works for rail freight corridors. Corridor A/1 requested in February for subsidies for the corridor coordination and management, the piloting of an economic corridor data and information management as well as a study for improvement of the corridor performance management. We received a positive Commission decision in November. The request covers funding for the PMO in the years 2014 and 2015.

**Corridor Conference Thun**
In view of the opening of the Gotthard base tunnel in 2016, the Swiss Federal Office of Transport organised the third international Corridor 1 conference on 25th June in Thun. These series of conferences are meant to inform and prepare the operators, politicians, experts, citizens and companies, in each country linked to the Corridor for the smooth and successful start of flat traffic in the Gotthard axis, as well as to discuss about the future development of international freight transport on the Corridor. Statements were delivered by BR Doris Leuthard, head of Swiss Federal Department Environment, Traffic, Energy and Communication; Peter Flüglistaler, Director Swiss Federal Office of Transport; Winfried Hermann, Minister of Traffic and Infrastructure of Baden Württemberg; Karel Vinck, ERTMS Coordinator of the European Commission, and many others.
The corridor organisation supported the conference with a corridor exhibition consisting of 3 information stands and a life presentation of the Customer Information Platform (CIP). The audience, consisting of high ranked representatives from politics/ministries, the European Commission, railway undertakings, operators and terminals, as well as infrastructure managers, showed high interest in the development achieved so far on the Corridor. In particular, the life demonstration of the Customer Information Platform was appreciated as a major step forward as a means of transparent and easy-to access communication.

**General Events**
In general, Corridor A/1 was represented in several events and occasions, as well as meetings on ministerial and European level by Felix Loeffel (President) and Stefan Wendel (MD and Programme Director) of the Corridor, who also contributed as active speakers and promoted the Corridor.

**Representative for National Safety Authorities**
In order to support the work of the NSAs with regard to enhancing the European authorisation process through iterative cross acceptance in track/ train integration and other safety issues, the EEIG contracted an ERTMS expert for the assistance of the NSA working group in order to facilitate their work.
In addition, Corridor A/1 took part in the meetings of the Corridor NSA Working Group.

## 0.5 Outlook for 2014

Activities in 2014 will basically include:

- Revision and finalisation of the ERTMS implementation plan according to changing strategies and concepts mainly in Germany and Italy

- Mitigation of ERTMS and corridor programme implementation risks
- Set up of the TTSV project for economising ERTMS authorisation on vehicles
- Focusing on ERTMS implementation on cross border line sections
- Organisation of a corridor conference together with RFC 2 (inauguration event)
- First year of experience with Corridor One-Stop-Shop
- Publication and allocation of pre-arranged paths for time table 2015
- Evaluation and improvement of allocation process, product- and service offer of C-OSS in workshops together with RNE
- Preparation and allocation of Reserve Capacity for time table 2015
- Preparation of pre-arranged paths for time table 2016
- Analysis and coordination of issues related to multi corridor requests
- Enhancement of working procedures through reviewing the corridor programme and organising work and reporting in a common corridor data base
- Final roll out of the train information system for terminals
- First update of the corridor implementation plan, mainly regarding corridor description, corridor lines, corridor terminals, ERTMS implementation and investments
- RAG/TAG meetings and analysis of terms and conditions, etc.
- Participation at CNC meetings and checking of and reporting on CNC reports
- Updating and revision of media works such as the corridor webpage, improvement of the customer information platform, corridor calendar etc.

## 0.6 Organisation

The legal body of the Corridor Rhine-Alpine consists of a European Economic Interest Grouping (EEIG). This corridor company under European law with its registered address in Frankfurt/Main was founded in 2008 by the participating railway infrastructure managers (IM) from the Netherlands (ProRail B.V.), Germany (DB Netz AG) and Italy (RFI S.p.A.). The Swiss IMs, SBB Infrastruktur and BLS Netz AG, joined as associated partners since companies from non-EU member states – such as Switzerland – cannot join an EEIG as an official member. New statutes and a frame contract have been signed, including Infrabel as a full member of the EEIG and Trasse Schweiz as a contractor from 2014 on.

Since the very beginning, Claudia Cruciani of RFI has acted as Deputy Managing Director and Stefan Wendel of DB Netz as Managing Director of the EEIG. In 2013 Ann Billiau (Infrabel) was replaced by Peggy Esseldeurs and Oliver Sellnick (DB Netz) became successor of Klaus Roleff. The associated partners were represented by Nicolas Germanier (SBB Infrastruktur) and Felix Loeffel (BLS Netz). In addition, the allocation body (AB) “Trasse Schweiz” joined the associated partners and was represented by Daniel Haltner.

The overall corridor organisation including the EEIG is shown in figure 13.

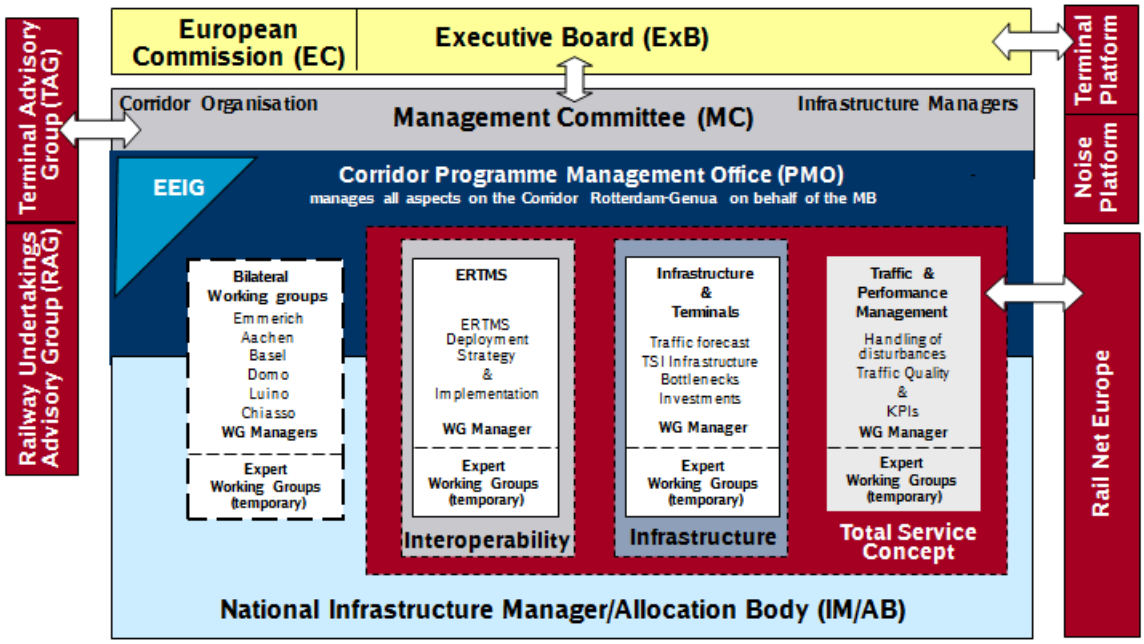



**Figure 13: Corridor Organisation 2013**

The organisation structure consists of an Executive Board (ExB) of the Ministries and a Management Board (MB) consisting of the IMs/AB. The ExB represents the joint interests of the ministries of transport in dealing with the European Commission and the European Coordinator for ERTMS, as well as giving the mandate for the work related to the corridor implementation programme to the IMs/AB. The MB is made up of high-ranking management representatives from ProRail B.V., Infrabel S.A., DB Netz AG, SBB Infrastruktur, BLS Netz AG, Trasse Schweiz and RFI S.p.A. who are responsible for the implementation of the Corridor within their national IMs/AB.

The Management Board set up a Programme Management Office (PMO) as permanent working organisation of the Infrastructure Managers with three main working groups in order to materialise the production and delivery of tangible corridor results in an effective and systematic way. The development of specific corridor topics are delegated to about 20 expert

sub working groups, which are set up mostly temporary by the Corridor IMs/AB and steered and monitored by the main working groups. Only the composition and integrated development of all corridor activities regarding the strategic directions of “Interoperability, infrastructure and total service concept” allows maximising the synergies and benefits in the corridor progress.

The corridor organisation is also supported by two advisory groups, one consisting of representatives of RUs (RAG) and another with representatives from terminal operators and owners (TAG). The interests and concerns of both advisory groups are taken on board in the corridor programme and work via regular RAG and TAG meetings with the MB of the Corridor.

## 0.7 Monitoring & Reporting Methodology

The working methodology of the corridor organisation remained unchanged in 2013 except for minor adjustments based on experience gained. For interested or new readers, detailed explanations can be found in annex A.

## 0.8 Release Notes & Contact Details

The general content of the report was elaborated and integrated by the PMO, whereas the detailed information was a contribution respectively elaborated by the programme infrastructure managers (PIMs) of ProRail (NL), Infrabel (BE), DB Netz (DE), SBB (CH), BLS Netz (CH), Trasse Schweiz (CH) and RFI (IT), thus being under the responsibility of the related IMs/AB and the corridor WGs. For any questions or further details concerning the Corridor A/1 programme please contact:

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# 1 Activities of the Working Groups

Unless stated otherwise, e.g. by references or footnotes, the content of this chapter stems from the corresponding Working Group Managers who are leading these groups.

- PMO: Stefan Wendel
  Subgroup Pre-arranged Path: Daniel Haltner
  Subgroup Info Document & CIME: Martin Ruiz
  Subgroup Implementation C-OSS: Pia Erlenkämper
  Subgroup Legal Matters: Manfred Gross
- ERTMS: Stefan Wendel
- Infrastructure & Terminals: Jan Praagman
- Traffic and Performance Management: Hansruedi Kaeser
  Subgroup Coordination of Works: Hansruedi Kaeser (on an interim basis)
  Subgroup Performance Management: Karl Guntern
  Subgroup Cross-border Issues & Operations: Sebald Stumm

## 1.1 PMO

### 1.1.1 Key Performance Indicators

| | | | | | |
|---|---|---|---|---|---|
| **Due Date of Reporting** | 31.12.13 | **WG Result [%] Plan** | 100 | **WG Result [%] Actual** | 86 |
| **Work Packages Total** | 5 | **Work Packages Finished** | 1 | **Work Packages Pending** | 4 |
| **Start** | 01.01.11 | | | | |
| **End** | 31.12.13 | | | | |

| PSP | WP | Results and Milestones achieved |
|---|---|---|
| 1.1 | PMO tasks | Monitoring corridor programme and master plan for implementation<br>Establishment of governance structure, |
| 1.2 | Pre-arranged Path (PaP) | Definition of a common corridor methodology for PaP. Preparation of PaP offer TT 2015. Definition of terms and conditions for PaP |
| 1.3 | Info Document & CIME | Preparation and publication of the Corridor Information Document. Doing CIME/CIP data management study |
| 1.4 | Implementation C-OSS | Description of C-OSS tasks and obligations. Preparation of process description of C-OSS, C-OSS desktop (e. g. path register) |
| 1.5 | Legal Matters | Preparation of revised Statutes incl. C-OSS contract |

### 1.1.2 Work Progress

The PMO is carrying out the overall coordination and monitoring of all measures and tasks related to the implementation of the corridor programme including the ERTMS implementation and all further work packages of the corridor programme, which now have to be established also under the legal framework of Regulation (EU) No 913/2010.

In this respect, the PMO has its own main working groups “ERTMS”, “Infrastructure and Terminals” as well as “Traffic and Performance Management”, which are working out specific topics and report on the results of their work to the PMO and the MB. The progress of these WGs is reported below in more detail.

In addition, the PMO is carrying out the 5 specific work packages listed above. The achieved progress regarding the overall corridor programme of 86% versus 100% planned is due to the fact that some minor work had to be extended to 2014 (e. g. Pre-arranged path) and external risks, which did not allow a full implementation of CIP in time.

In general the direct subgroups of the PMO called “Pre-arranged Path”, “Info Document & CIME”, “Implementation C-OSS” and “Legal Matters”, performed very well in 2013 and reached their progress nearly in the plan, all milestones had been reached.

The achievements of the PMO are described in detail in the following chapters of the corridor working groups.

### 1.1.3 PMO Tasks (PSP 1.1)

The corridor programme was steered and monitored in 13 PMO meetings, 7 Management Board meetings, 4 Executive Board meetings, 3 RAG meetings and 2 TAG meetings.

In the course of the year the activities of the PMO were focusing on the preparation of the documents required by Regulation (EU) No 913/2010 among which the CID, including the implementation plan and an updated investment plan.

Regarding CID, preparations followed the structural specifications given in a RNE guideline. High efforts have been taken to collect and prepare all required information. The implementation plan of Rail Freight Corridor 1 (RFC 1) as the central document of the CID is included therein. Ministries confirmed the implementation plan in a formal act on Dec 5th 2013. A first update is foreseen in 2014.

In 2013 the IMs also spent great effort in implementing a Customer Information Platform (CIP) with the help of an external consultant to facilitate easy access to all corridor information, e.g. like the progress in the corridor programme or CID.

### 1.1.4 Subgroup Pre-arranged Path (PSP 1.2)

On RFC 1, a dedicated expert group composed of specialists from the IMs/AB finalised in 2013 the task for a strategy regarding PaPs which have been defined on RFC 1 as an assembly of several PaP sections (segments) and not just only an entire PaP from Rotterdam, Antwerp or Zeebrugge to Genoa. PaPs are based on standard parameters for rail freight and previously coordinated between the IMs/AB at the borders to enable attractive running times. A common understanding of the relevant characteristics of the PaPs and their planning and construction principles was agreed and has been applied for the first time for the timetable 2015.
For the timetable 2015, the expert group defined the exact PaP quantity per corridor segment based on the results of the Transport Market Study, input from applicants as well as IMs own experiences with existing and previous traffic. For the German part of the corridor, national framework agreements between RUs and DB Netz had to be respected. The foreseen PaP offer for the timetable 2015 was agreed on by the Corridor Management Board and acknowledged by the Executive Board. The catalogue of PaPs will be published by the C-OSS in mid-January 2014.

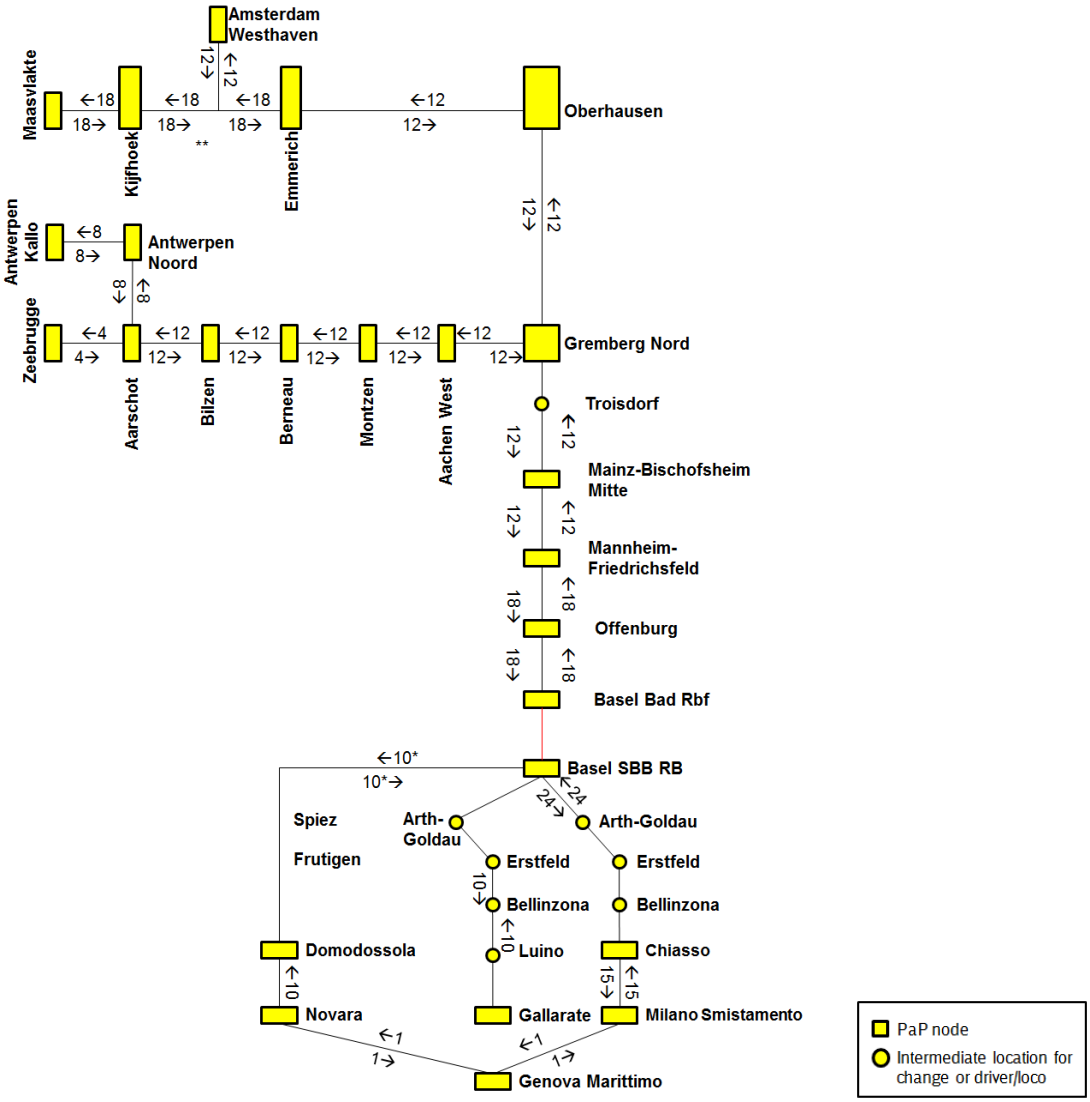


**Figure 14: PaP offer per day and corridor segments, timetable 2015**

In late summer 2013, the expert group started as well the preparation of PaPs to be offered as Reserve Capacity (RC). The group intended to develop a new product. Instead of publishing minute-to-minute path details, a number of capacity slots per day and corridor segments with standard journey times would be offered.

A subgroup of the core group was in charge for gathering the various national conditions and rules regarding the path management. Their result is now part of the Corridor Information Platform, chapter “Procedures for capacity & traffic management” (Book 4). Initially, the aim of this group was the development of own conditions for the PaPs and RC on the corridor. However, national regulations in the corridor member states do not allow the possibility of having different conditions for booking, allocating, modifying or cancelling an international path product in comparison with national traffic. Short and mid-term solutions for the harmonisation of conditions for corridor capacity products will remain a major topic on the agenda.

### 1.1.5 Info Document & CIME (PSP 1.3)

In 2012, the PMO tendered and launched a contract about a study and prototype for the optimisation of the Corridor Information Management Environment (CIME), which was

finished in June 2013. A report describing the study and its results has been done by the consulting enterprise.
The main objective of CIME is the coordination and exchange of information regarding all internal works for Corridor A/1. The approach, content, layout and required functionalities have been agreed upon in consensus with all Programme Infrastructure Managers.
The basic functionalities had been specified together with the consultant, roles and parameters for the study, as well as corridor data delivered for the establishment and testing of a prototype for carrying out the proof of concept, which was completed as foreseen in 2013.
During the months of August and September of the reporting year, a new tendering process took place in order to implement the previous study and demonstrate the operability of the Customer Information Platform (now CIP – former CIME). This tool was launched at the implementation date of the Rail Freight Corridor RFC 1, on 10th November 2013. In the following months, a series of improvements have been done to CIP in order to fulfil the needs and demands of customers and users of the platform.
The main goal of the demonstration phase is to finish all fine tuning necessary for the optimum operation and functioning of the Customer Information Platform by the end of 2014.

### 1.1.6 Subgroup Implementation C-OSS (PSP 1.4)

To prepare the implementation of the C-OSS in November 2013 the WG Implementation C-OSS was set up in July 2012 with the relevant experts from all involved IMs/AB and chaired by Steffi Klughardt (DB Netz). The expert group agreed on a work plan to elaborate the relevant legal and organizational prerequisites for the go life of the C-OSS.
According to the agreed work plan in 2013 two work packages - C-OSS desktop and customer info - were finalized and several meetings of the C-OSS subgroup took place in this respect:

Desktop:
The WG prepared the staff and the location (C-OSS office) as well as the equipment of the C-OSS with all necessary tools (email file, email address, etc.). Suitable templates for the administration and documentation of the path requests were also discussed and elaborated.
The working group detected the C-OSS specific requirements for PCS and contributed to its implementation by RailNetEurope. In addition the WG was actively involved in the PCS testing group and participated in several testing workshops at RNE in Vienna along with other experts.

Customer Info:
A communication concept for promoting the future C-OSS benefits to the rail freight customers along the Corridor (e.g. C-OSS website, flyers etc.) has been established.
The major work of the WG focused on the development and establishment of the C-OSS website as part of the Corridor Homepage. In this respect the relevant texts and lay-outs were discussed and developed in several WG meetings. In addition a C-OSS brochure has been developed and published to promote the new PaP product. The corridor conference in Thun was a good opportunity to present the new products of the C-OSS.

All working packages, deliverables and results were adopted by the Managing Board of RFC 1.
The work of subgroup Implementation C-OSS was finalized so that the C-OSS could be implemented on 10th November 2013.

For the preparation of the product a “PaP constructing kick-off meeting” with all involved IMs/AB along the corridor was organized. The new player C-OSS and its processes were introduced, common procedures, construction philosophies and timelines discussed and adopted.

The C-OSS checked and monitored the process of PaP constructing and the MB could agree on the results in time. The product preparation for publication of the first PaP catalogue was done so that the PaP catalogue for timetable 2015 could be created until January 2014.

### 1.1.7 Subgroup Legal Matters (PSP 1.5)

The subgroup Legal Matters had the task to facilitate the transition from ERTMS Corridor A to Rail Freight Corridor 1 by providing the contractual framework. Starting in August 2012 the group adapted the existing Statutes of the EEIG and the Frame Contract with the Swiss members to consider changed requirements by inclusion of additional members (Infrabel and Trasse Schweiz AG) and of additional business objectives derived from the Regulation (EU) No 913/2010. In the Frame Contract the group also foresaw provisions defining the tasks and obligations of the Management Board and operating procedures e.g. decisions and voting rights. The Legal Matter-Group finally prepared the draft of an OSS-Contract that sets up the tasks and obligations of the Corridor-OSS and the Corridor IM/ABs, the delegation of power, the liability etc. Specific tasks and the process descriptions however were prepared and negotiated by the OSS-Group and were added to the OSS-Contract as annexes, i.e. the designation of DB Netz as Hosting IM/AB (Annex I), the detailed process descriptions (Annex II) and additional tasks that are assigned by the Management Board to the Corridor-OSS (Annex III). Annex IV, defining procedures for checks and audits of the Corridor-OSS, still has to be prepared by the PMO.

### 1.1.8 Risk Management and Chances

No risks reported.

### 1.1.9 Change Request Management

No changes reported.

### 1.1.10 Outlook

The coordination, monitoring and reporting of the corridor programme will be continued in 2014. The study about CIP will be completed and deliver a concept for the final implementation of the platform. In 2014 PaP allocation and all related processes and tools will be applied for the first time; experience shall be included in the PaP offer for TT 2016. Besides the yearly timetable a product for the supply of reserve capacity shall be introduced to the market. The C-OSS shall be introduced as the single point of contact for the customers on corridor level.
CIP shall be introduced and fully implemented on corridor level to support working groups and customers in the best possible and most beneficiary way.

## 1.2 ERTMS

### 1.2.1 Key Performance Indicators

| | | | | | |
|---|---|---|---|---|---|
| **Due Date of Reporting** | 31.12.13 | **WG Result [%] Plan** | 70 | **WG Result [%] Actual** | 55 |
| **Work Packages Total** | 3 | **Work Packages Finished** | 0 | **Work Packages Pending** | 3 |
| **Start** | 01.01.07 | | | | |
| **End** | 31.12.15 | | | | |

| PSP | WP | Results and Milestones achieved |
|---|---|---|
| 2.1 | Common implementation strategy Corridor A | ERTMS roll out concept, joint procurement strategy, coordination with operational requirements, definition of transition processes |
| 2.2 | Specification and product | Monitoring and supporting of ETCS specification, definition of test procedures and tools, definition of data and configuration management |
| 2.3 | Common processes and responsibilities | Roll out management structure, risk management, Harmonisation of requirements for authorisation of NoBos, Harmonisation of authorisation procedures |

### 1.2.2 Work Progress

#### 1.2.2.1 Achievements

In 2013, the work progress of the ERTMS working group was reported at 55% compared to 70% planned. Although the new baseline increased and therefore the overall ERTMS progress is behind schedule, the working group ERTMS was very busy reviewing and adopting its work to the changing conditions.

- The effort grew considerably for some activities due to multiple changes in scope and some national implementation strategies, e.g. in Germany and Italy. Considerable extra effort became necessary for the analysis, development and coordination. Due to the very short time left until 2015 and unstable political decisions, the implementation concept for the Corridor had to be reviewed and modified several times to comply with the national planning.

- The progress of the European TSI specification and version management of baseline 3 raised issues regarding ERTMS implementation on vehicles and trackside installations, especially regarding needs for upgrades, maintenance release concept and new change requests to be discovered from first installations. The working group ERTMS was involved in these issues and supported in their treatment agreement on solutions.

- The requirement from the Regulation (EU) No 913/2010 to publish a detailed corridor description by November 2013 forced the MoTs and IMs to analyse thoroughly the layout, technical standards and operational requirements of lines which finally were defined as a first proposal for the corridor lines related to the European Deployment Plan (EDP). The working group ERTMS assisted in this definition and prepared maps, line lists and descriptions of the ERTMS corridor as part of the overall corridor implementation plan.

In the Netherlands and in Switzerland, the implementation of ERTMS on corridor lines progressed within the schedule planned.

In 2013, the working group ERTMS continued its work with the regular members Adri Verbraak (ProRail), Didier Léautey (DB Netz), Martin Zürcher (SBB/ BLS), Stefano Geraci (RFI) and Stefan Wendel of the EEIG as working group leader. In 2012, Infrabel joined the working group and was first represented by Jean-Luc Ghisbain, who was substituted by Koen Dekeersmaeker in spring, after his retirement. Furthermore, Stefan Bode of DB Netz, who also takes part in the Corridor NSA Working Group, attended the meetings as a standing guest. In the second half of 2013, Ernst Kleine from the ERTMS Users Group joined the meetings on a regular basis in order to support the TTSV project in his function as project manager. This ensured the linking of all relevant parties in an effective manner. For specific topics the WG was further supported by additional experts from the Corridor IMs.

The working group meetings were scheduled on a monthly basis.

### 1.2.2.2 Common Implementation Strategy Corridor A (PSP 2.1)

It is of utmost importance and our final goal to provide one seamless integrated ETCS corridor installation to our clients. So far this was very difficult to achieve due to the different implementation strategies in each country. Although the time for completion of ETCS on the Corridor until 2015 comes closer and closer, it was not yet possible to prepare an implementation concept for the entire corridor that could meet this goal. Thus the working group analysed possibilities on how to support the establishment of a mature ERTMS corridor implementation by first focusing upon the implementation on border sections. By jointly solving technical and authorisation problems at the borders, the remaining national installations should benefit and be completed much smoother and faster. The Executive Board supported this implementation strategy by requesting the IMs to complete installations at borders until 2015.

At the end of 2012, the MoTs of the Netherlands, Belgium and Italy timely submitted their ERTMS notification report to the European Commission. The ERTMS implementation in the Netherlands and in Switzerland progressed well in 2013 and is on time as scheduled.

The German MoT submitted its notification report mid 2013 requesting the EC to grant additional time for the completion of the German corridor section until 2018. This delay was justified by the late validation of Baseline 3, which is a prerequisite in the German deployment concept, as well as by delays in the major infrastructure projects Emmerich-Oberhausen and Karlsruhe-Basel due to problems in obtaining construction permits. These projects represent a precondition for ERTMS implementation in sections with level 2 because the necessary renewal of the interlocking equipment is included.
DB Netz and the German MoT negotiated about the financing of the ERTMS implementation and concluded in a first step a financing agreement covering technical engineering and planning up to 5 million Euro. In addition, meetings between the EC and the German MoT took place, and the EC offered co-financing up to 50% if the conditions of the TSI CCS will be met. DB Netz started the work with the aim of completing the engineering works in spring 2014.

In line with the provision of the Decision 2012/88/EU the Italian MoT submitted in December 2012 the plan for the deployment of ETCS on the Italian network. Following the request for some explanation by the Commission, the Italian MoT presented an updated plan in December 2013. According to this plan at least on routing from the borders down to Genoa will be equipped with ERTMS by 2018.

In the frame of the implementation of Regulation (EU) 913/2010, the working group was faced with the difficulty of preparing a detailed ERTMS implementation plan until November 2013. In this context, many discussions took place with the MoTs on national level as well as

in the Executive Board meetings in order to agree on the ERTMS corridor definition with detailed information on the lines to be equipped and their technical standards. This task needed also the assessment of the operational requirements at borders, hubs, terminals and last miles, which needed to be included in the considerations of ERTMS lines. Finally, the detailed implementation plan could be completed just in time by the beginning of November; however the German and the Italian MoT requested another internal review prior to its publication on the corridor internet site. Subsequently, the publication of the implementation plan had to be delayed for some weeks until the beginning of December.

The working group ERTMS focused additionally on the analysis of cross border projects to reduce risks in ERTMS implementation along the Corridor regarding the ETCS products, test and authorisation procedures, as well as of interoperability and the organisation of cross border installation projects. Finally, all these aspects needed also to be taken into account by the working group in the preparation of the Corridor implementation plan.

### 1.2.2.3 Specification and Product (PSP 2.2)

The OBU test cases (subset 76) for SRS 2.3.0d have been finalised and published at the end of 2012. In 2013, ERA started with the creation of the OBU test cases (subset 76) for SRS 3.3.0 for the first ERTMS maintenance release, which was originally planned to be finished at the end of 2013.
In spring 2013, during shadow runs in ETCS level 1 limited supervision mode, SBB discovered a safety problem related to the specification of the DMI indications. Due to the urgency of the matter, SBB and DB Netz together forwarded a request to ERA asking the inclusion of a new change request in the validation of the first maintenance release and its approval by the RISC already in June 2013. As this change request and the publication of the first maintenance release were indispensable for the timely continuation of the works, the corridor supported this request.

The ERTMS RU Advisory Platform, which was founded by the corridor in 2012, was transferred to the ERTMS Users Group in Brussels as requested by RUs because they are basically not limited to only one corridor, and the coordination of all requirements from the sector is part of the role of the Users Group. Two meetings had been organised during the reporting year. The RUs appreciated this initiative and complained heavily about the still unstable and immature situation regarding the specifications and availability of products from the industry. This unsatisfactory situation is spoiling the business cases of the RUs due to the fact that necessary upgrades and related test and authorisation works are not predictable.

### 1.2.2.4 Common Processes and Responsibilities (PSP 2.3)

Regarding ERTMS authorisation, the working results of the Corridor NSA Working Group are seen as a major step forward in the finalisation and publication of their guideline for CCS authorisation on RFC1 by the end of 2013. This guideline focuses primarily on the authorisation activities related to the on board CCS subsystem as part of the vehicle authorisation. It also facilitates the economical authorisation of vehicles during the transition period, until sufficient mature trackside installations are available, that would cover the full range of the baseline-3-functionalities. The guideline, which is based on and respects the European regulations, provides practical recommendations for improvements. The WG ERTMS had accompanied the work of the NSAs and provided necessary information such as national technical requirements, as well as the corridor provided assistance in its elaboration.

In order to facilitate the work according to the authorisation process in the guideline, the corridor working group was asked by letter from the NSA steering committee to support the economical test and authorisation process through the possibility of applying cross

acceptance based on operational scenarios, which have to be prepared and delivered by the corridor IMs. A concept for track-train system validation (TTSV) was developed together with the Users Group and the NSAs asked the IMs to deliver the necessary operational test cases related to the corridor lines. Several working group meetings took place together with the Users Group in order to define in detail the format of data and TTSV process needed.

### 1.2.2.5 Risk Management and Chances

The external A1 risk of not being able to complete a sound ETCS trackside implementation on the Corridor by 2015 has become evident reality in 2013. The German MoT has indicated that the completion of the entire Corridor until 2015 is no longer possible and has to be postponed until 2018.

The RISC of the European Commission has not yet decided and informed upon their acceptance of the extended completion dates applied for by the German and Italian MoTs. The acceptance might depend on the further developments and proceedings in these countries.

The risk for not having enough available experts still exists, because substantial information about the implementation and related roll-out of ETCS installations in Germany and Italy is still missing. The impact has to be investigated as soon as details are available.

Regarding the current status of Baseline 3, the class B 2 risk is still evident because it is not yet confirmed which CRs and functionalities will be included in the first B3 maintenance release to be published in 2014. Furthermore, baseline compatibility has not been proven so far and is being analysed by a study from UNISIG and the ERTMS Users Group with the involvement of ERA, which is expected to be finalised in spring 2014.

Due to the multiple changes and delays announced, the working group ERTMS could neither complete the ERTMS implementation plan nor prepare a more mature corridor ERTMS roll out plan.

Throughout 2013, the risks were reported at every ExB meeting.

### 1.2.2.6 Change Request Management

Changes due to the revised concepts in Germany and Italy will be considered in the revision of the work plan and baseline as soon as final concepts and confirmation of its implementation are available.

## 1.2.3 Outlook

ProRail continues with the ERTMS installation on the border section Zevenaar-Emmerich and it should be completed by the end of 2014.
Infrabel continues its work in order to equip the Belgian network by 2022 and the Belgian part of RFC1 by 2020. Belgium is also hoping to come to a solution with Germany regarding the border section.
DB Netz intends to complete the technical planning of ERTMS in the German sections by mid-2014. Based on this, the German MoT and DB Netz have to conclude the financing agreement for the building of ERTMS and start the tendering process for the border section Basel first. The technical planning should also inform about completion dates for all German sections.
SBB will continue equipping the Swiss corridor lines aiming to put them all into service by the end of 2015.
RFI intends to take final decisions on the technical deployment strategy and start preparations for tendering and technical planning.

Considering the work in progress, the working group ERTMS should be able to finalise and publish the complete ERTMS implementation plan covering all sections of the corridor by the end of 2014.
In 2014, the working group ERTMS will continue with the major tasks supporting the corridor authorisation process for vehicles as described in the guideline of the corridor NSA working group in order to initiate the preparation of the Track Train System Validation (TTSV) project together with the Users Group in Brussels.

## 1.3 Infrastructure & Terminals

### 1.3.1 Key Performance Indicators

| | | | | | |
|---|---|---|---|---|---|
| **Due Date of Reporting** | 31.12.13 | **WG Result [%] Plan** | 75 | **WG Result [%] Actual** | 74 |
| **Work Packages Total** | 4 | **Work Packages Finished** | 2 | **Work Packages Pending** | 2 |
| **Start** | 01.07.11 | | | | |
| **End** | 31.12.15 | | | | |

| PSP | WP | Results and Milestones achieved |
|---|---|---|
| 3.1 | Capacity analysis 2013 | Definition of methodology for forecast, calibration of terminal/infrastructure capacity,<br>Capacity analysis 2013, update of investment plan |
| 3.2 | Terminal Advisory Group (TAG) | TAG meeting preparation, information gathering terminals and harbours, capacity analysis on infrastructure connecting terminals |
| 3.3 | Transport Market Study | Securing contributions of the IMs. supervision of the consultant, execution of TMS long term part, technical approval of report |
| 3.4 | Study Longer trains (740 m) | Preparation of study, analysis of current situation and demand, infrastructure, operational and timetable measures for accommodating longer trains, presentation of report |

### 1.3.2 Work Progress

In 2013, the work progress of the working group Infrastructure & Terminals was reported at 74% compared to 75% planned.
For the WG Infrastructure & Terminals (I&T) the work done during the year 2013 focused on what was needed for the corridor to go live on November 10th 2013. The Transport Market Study (TMS) was finished and the final report was delivered at the beginning of the year. The Study “Longer Trains 740m” (SLT) was finished at the end of the year. Both final reports were approved by the Management Board and the Executive Board.
New input and updates were given for the Investment Plan and information was used for necessary changes regarding bottleneck analysis in different time horizons. This was done to be able to add the last available information in the Implementation Plan and the Corridor Information Document.
Presentations were prepared for the TAG and RAG meetings focusing on SLT.

#### 1.3.2.1 Achievements

The WG I&T started the year with the following representatives:
Christian Witt (SBB), Jan Praagman, as its chairman and Eric Blaas (ProRail), Dr-Ing Albrecht Hinzen, Oliver Pflüger and Dirk Bartsch (DB Netz), Eveline Lehmann (BLS Netz), Giulia Costagli (RFI) and Michel Geubelle (Infrabel).
During the year Burghard Könnemann became the SBB representative, Kris Van Crombruggen joined the WG as the representative of Infrabel and Fabrizio Polito became member for RFI.

The WG I&T met six times in 2013. During these meetings the coordination of the work in the TMS and SLT took place. As already mentioned above, the TMS and SLT were finished

during the year. The final TMS report contained the short term and long term view on market developments.

Another topic that took much time during the year, was finding answers to the question on how to act in the new working group I&T. The WG I&T started by the end of 2012 by merging the former WG Capacity and WG Terminals. This in combination with the go-live of the corridor asked for a new orientation on the work to be done by the WG I&T. The discussions in the WG resulted in two documents, the first document describing the way to cooperate within the WG I&T and the second one focuses on tasks and requested products. In the first quarter of 2014 the documents will have to be approved by PMO/MB.

Further topics for the WG I&T were related to coordination of information in the WG I&T field; needed for the Implementation Plan.

### 1.3.2.2 Capacity Analysis 2013 (PSP 3.1)

The WG I&T managed and updated the corridor inventory, i.e. the extensive data collection for the entire corridor established in 2009 and kept it updated. The investment plan which can be found in the implementation plan of RFC 1 (subchapter of book 5 CID) was used to update the bottleneck analyses for the different years 2015, 2020 and 2025. The results were shown in different Jumping Jacks (JJ). These JJs show the remaining bottlenecks in future years knowing the expected capacity demand (the TMS results) and the available capacity (based on the investment plan information).

### 1.3.2.3 Subgroup Transport Market Study (PSP 3.3)

In 2013 the subgroup Transport Market Study (short-term part) had to achieve two aims:

(1) Handing in the final report of the Transport Market Study (TMS) short term part;
(2) Consolidating TMS short term part with the long term part and thus handing in one complete document of the TMS.

In 2013 the Subgroup Transport Market Study short term part consisted of the following representatives from the IMs along the corridor:

| | |
|---|---|
| DB Netz: | Dr. Daniel Thelen (chairman), Arne Humpert |
| Infrabel: | Gersende Bidelot |
| ProRail/Keyrail: | Eric Blaas |
| SBB: | Nadine Wirnitzer |
| BLS Netz: | Eveline Lehmann |
| RFI: | Patricia Cicini, Margherita Castelli |

Both goals have been achieved by handing in the final complete version in May 2013.

The TMS (complete version) consists of three parts:

- A short-term part considering the current situation and the period up to 2016 (written by the external consultants, see below);
- A long-term outlook with a perspective up to 2020/2025 (written by the IMs' experts) and
- First proposals for routing and terminals (including train formation yards; written by the IMs' experts).

The general scope of the short-term TMS is the international freight transport market on Rail Freight Corridor 1. The study's forecast horizon is 2016. The short-term TMS has two general aims: The first is to enable the Infrastructure Managers (IMs) and Allocation Body (AB) along the corridor to offer pre-arranged paths (PaP) in accordance with market needs. This includes providing the necessary information to determine the routing, terminals, and amount of PaPs. The second aim is to enable the IMs/ABs to implement measures to increase the competitiveness of rail freight.

The general scope of the long-term TMS is to identify the long-term traffic demand for rail freight services on the corridor-related rail network. The results have been used for an infrastructure bottleneck analysis at a later stage.

On the basis of the results of the short-term and long-term parts of the TMS, first proposals for routing and terminals (including train formation yards) were worked out serving as a starting point for further decisions on the corridor. Apart from the results of the TMS, other aspects relevant for defining corridor terminals and routing were taken into consideration.

To reach these goals a consultant was contracted. The contractor was HaCon Ingenieurgesellschaft mbH with the subcontractors KombiConsult GmbH, Panteia BV (business unit: NEA), and ProgTrans AG. The consultants' tasks were to draw up the short-term TMS and combine it with the long-term TMS into one document.

A management summary ("Essential Elements of the Transport Market Study – Rail Freight Corridor 1") is published in the Implementation Plan.

In 2013 Subgroup Transport Market Study - short term part - has developed the following activities for handing in the TMS:

- Constant monitoring of the consultants' progress. This includes:
  - Constant communication with the consultants;
  - A live meeting in February 2013 followed by several telephone conferences in February through April 2013, in which the final version was discussed and the last necessary specifications were defined in order to hand in and publish the final version of the complete TMS, respectively the "Essential Elements".
- Working on editorial aspects in order to consolidate the short term with the long term part.
- Coordination of the work on the first proposals for routing and terminals.

### 1.3.2.4 Subgroup Longer Trains 740m Study (PSP 3.4)

The Subgroup Study Longer Trains 740m continued the work started in June 2012 and finished the study in October 2013. Both the Management Committee and the Executive Board accepted the study and its findings, which were presented in November 2013.

In 2013 the Subgroup Study Longer Trains (740m) consisted of the following representatives from the IMs along the corridor with an external consultant as chairman:

| | |
|---|---|
| Chairman: | Heinz Pulfer |
| DB Netz: | Michael Schulz-Wildelau |
| Infrabel: | Kris van Crombruggen |
| ProRail/Keyrail: | Patrick Timmermans |
| SBB: | Burghard Könnemann |
| BLS Netz: | Eveline Lehmann |
| RFI: | Fabrizio Polito |

Based on the data collected and completed in 2012, two workshops with the clients (RUs) served to understand and check potential long trains with the specific traction aspects. Three potential longer trains and maximum train weights for multisystem locos were defined.

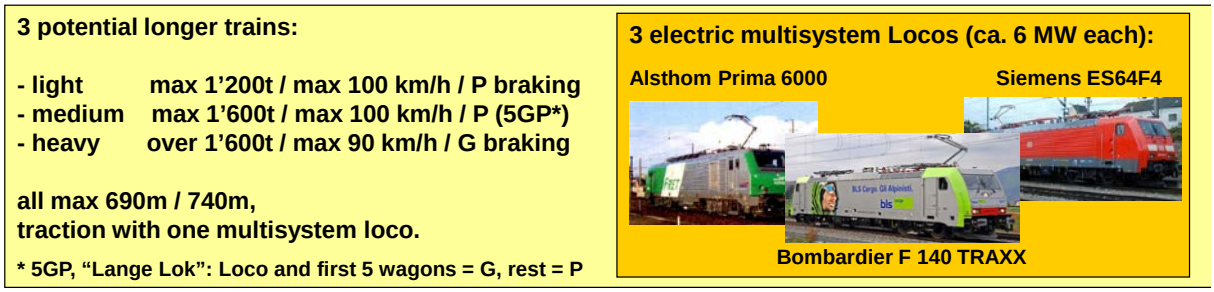


**Figure 15: Potential 740m train compositions**

The Subgroup met five times during 2013. A central part of the study were the national IM studies (short and long term) for opening the corridor for longer trains. The results are integrated at corridor level. Finally, the study and the presentation were set up. In the short term (up to 5 years) two operational solutions seem possible. These solutions have to be checked in detail under supervision of the WG Infrastructure & Terminals. With the target date of 2020 eight "consistency projects" are defined to close most missing links, making (some) 740m trains already possible on the major part of the corridor. This means investments of € 130-180 million Euro on top of the already planned investments for the next 10-15 years.
Once all these investments are done, 740m trains will be feasible on the entire corridor.

The development of the corridor with all upgrades can be seen in the following chart:

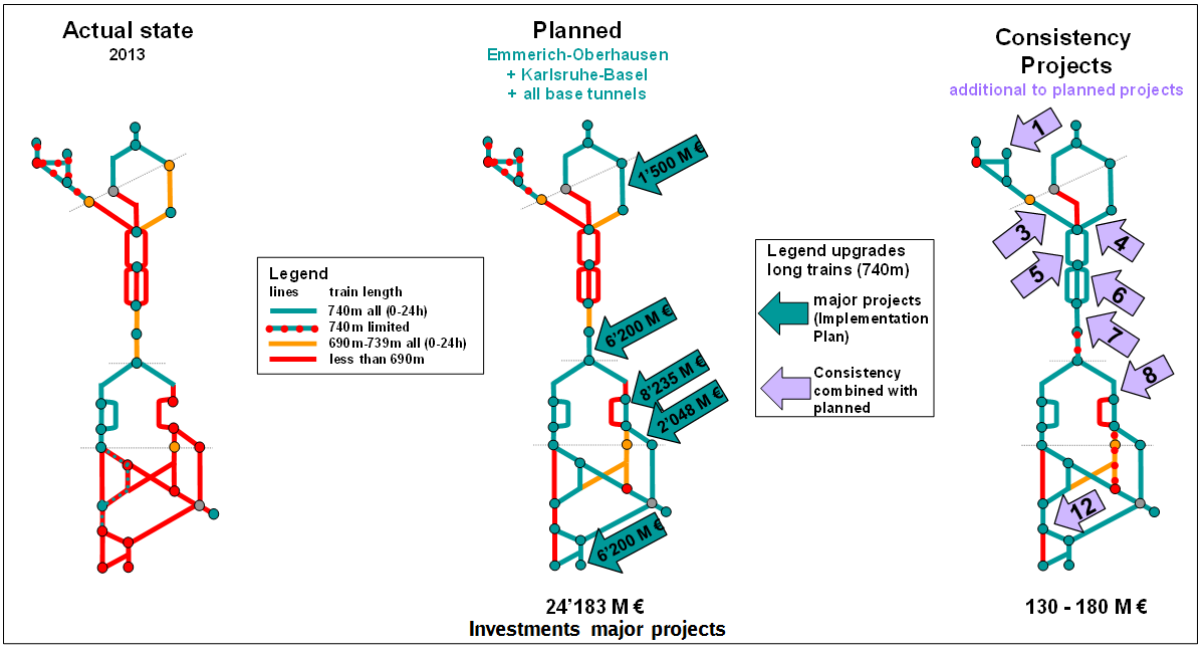


**Figure 16: Topology development with upgrades**

The study shows that with relatively small additional investments most line sections can be opened for long trains in a reasonable time horizon. Furthermore, Italy has the task to look for solutions adapting their current limit of 1'600t max train weight to the usual corridor values.

#### 1.3.2.5 Risk Management and Chances

No risks to report.

#### 1.3.2.6 Change Request Management

No changes to report.

### 1.3.3 Outlook

The focus in 2014 will lie on an update of the bottleneck analysis on the basis of the infrastructure and current investment plan of RFC Rhine-Alpine.

An update of the work plan shall be agreed on PMO/MB level reflecting the tasks from Regulation (EU) No 913/2010.

# 1.4 Traffic and Performance Management

## 1.4.1 Key Performance Indicators

| | | | | | |
|---|---|---|---|---|---|
| **Due Date of Reporting** | 31.12.12 | **WG Result [%] Plan** | 75 | **WG Result [%] Actual** | 67 |
| **Work Packages Total** | 4 | **Work Packages Finished** | 2 | **Work Packages Pending** | 2 |
| **Start** | 01.01.12 | | | | |
| **End** | 31.12.15 | | | | |

| PSP | WP | Results and Milestones achieved |
|---|---|---|
| 4.1 | WG Traffic Management | Proposal for common performance schemes,<br>Proposal for traffic management on RFC Rhine-Alpine |
| 4.2 | SG Coordination of works | Proposal how to coordinate works<br>Proposal how to publish capacity restrictions |
| 4.3 | SG Performance Management | Monitoring rail freight performance,<br>Publishing results of performance monitoring |
| 4.4 | SG Cross-border issues & operations | Analysis of reasons for stops at borders,<br>Collection of operational themes along the Corridor,<br>Update of bilateral agreements |

## 1.4.2 Work Progress

### 1.4.2.1 Achievements

In 2013, the work progress of the working group Traffic & Performance Management was reported at 67% compared to 75% planned. The backlog results from delays caused by a missing leader for the SG Coordination of Works and a delayed set up of the SG cross-border issues.

Along with the reorganisation of the working groups, a new work programme was developed and a new baseline became effective in 2013. The WG Traffic and Performance Management consist of three subgroups which mainly focused on fulfilment of tasks from the Regulation (EU) No 913/2010. By the end of 2013 all subgroups have been staffed and initial meetings were organised.
The SG Performance Management meets 4 times a year, two of them together with the RUs. In close cooperation with the service provider RNE data quality was improved and reports could be produced for different traffic flows.
The SG Coordination of Works did not have a SG leader that would have to be provided by an IM of RFC Rhine-Alpine. The group was chaired ad interim by Hansruedi Kaeser. As a result of the activities performed within the SG, a template was produced and with its help restrictions on the RFC could be coordinated and published.
The SG “cross-border issues” listed the operational agreements on borders and is still harmonizing the border commitments between the IMs.

### 1.4.2.2 Corridor Traffic Management (PSP 4.1)

The WG “Corridor Traffic Management” consists of three sub-groups and is led by Hansruedi Kaeser. As part of the traffic management, the fundamental principles and participation in RNE are managed.

**Traffic Management**

The RNE General Assembly approved in December 2012 the Traffic Management Guidelines. These Guidelines set up an overall framework of standard procedures and tools supporting traffic management along the rail freight corridors. These procedures represent the fulfilment of Regulation (EU) No 913/2010.
The agreed coordination procedure should be applied only if no coordination procedures are in place or if existing procedures are not working well.
RFC Rhine-Alpine has an institutional, international exchange between traffic control centres.

### 1.4.2.3 Subgroup Coordination of Works (PSP 4.2)

The task of coordination of works is getting more and more important. Major renewal works on transit lines reduce the path capacity and alternative routes should not be blocked at the same time. In 2013 the Subgroup Coordination of works consisted of the following representatives from the IMs with Hansruedi Kaeser as the interim leader:

| | |
|---|---|
| ProRail/Keyrail: | Eric Bekke |
| Infrabel: | Peter Meys |
| DB Netz: | Jens Dänner |
| SBB: | Bruno Marenghi |
| RFI: | Giuseppe Carcasi |

For many years, Infrastructure Managers have been coordinating their works but mostly with a national focus. Due to the big influence on capacity, the contact to neighbouring Infrastructure Managers has been made. In 2013 bilateral, trilateral and multilateral meetings between RUs and IMs have taken place in order to have a cross-border coordination of works on one side and a close involvement of our customers on the other side. Good examples are the renewal works of the Simplon tunnel, the helical tunnel of Varzo or the noise protection works on the Luino line.

Impacts that cannot be planned such as landslides on the Gotthard line showed the importance of international cooperation and coordination. The efforts of international coordination of works are growing and have to be improved.

Some years ago, a list of construction and renewal works with influence on the capacity has been created and published. This is the so called X-24 list which means that projects during the next two years are reported between the IMs of Belgium, the Netherlands, Germany, Switzerland and Italy.

**Outlook**

These coordination efforts have to be improved and managed in order to use the capacity in an efficient way and to offer the Railway Undertakings paths according to their needs.
A kick-off-meeting with the nominated specialists was held in January 2013. Then in May and November 2013 coordination meetings took also place. The IMs together with RNE created a template to show the important restrictions on the corridor. This template has been published on the “Corridor Information Platform” of RFC Rhine-Alpine.
The focus must be broadened to other RFCs; for example RFC 1 is working together with the future RFC 8 in order to join efforts in this regard.

### 1.4.2.4 Subgroup Performance Management (PSP 4.3)

All the IMs on RFC Rhine-Alpine provide the SG with a Performance Manager. In 2013 the Subgroup Performance Management consisted of the following representatives from the IMs:

| | |
|---|---|
| ProRail/Keyrail: | André Beerthuizen |
| Keyrail: | Thijs Smit |
| Infrabel: | Ann Verstraelen |

DB Netz: Siegfried Nierichlo
SBB: Karl Guntern (leader of the subgroup)
BLS Netz: Alexander Paulus
RFI: Roberto Caruso

The subgroup was led by Karl Guntern
These Performance Managers monitored the different traffic flows, investigated quality problems and defined measures for improvement. Together with stakeholders such as RUs, neighbouring IMs, terminals and ministries these measures of improvement are checked and realized.
RNE, as a common service provider, supported the work of the SG with IT tools such as TIS, templates and handbooks. Bilateral meetings with RUs and IMs between DE and CH, IT and CH worked out measures for consequent improvement.

### 1.4.2.5 Subgroup Cross-border Issues & Operations (PSP 4.4)

The subgroup is a follow-up activity of the working group „Working Group Operations Corridor 1“ which has reviewed approximately 400 operational scenarios since its establishment and tried to harmonize them for Corridor A/1. As a result, about 15 scenarios were passed on to ERA at the beginning of 2012 asking them to include them into Annex B of the TSI Operations. Also, another approximately 15 scenarios that were identified are being treated in the same way by all IMs on Corridor A/1.

As law, rules and regulations differ in the affected states, 10 scenarios could not be harmonized.

In the course of restructuring the activities of the working groups on Corridor A/1 in 2012, it was decided that a working group of operational experts would still be needed to support the corridor organisation in the handling of operational issues with a special focus on border crossings along the corridor. Issues such as the implementation of Annexes A and C of the TSI Operations into the border agreements, the impact of terms and conditions for the IMs (e.g. train control systems, communication or the reduction of stops at border stations) as well as the updating of the local operational border agreements were identified.

In 2013 the Subgroup Coordination of works consisted of the following representatives from the IMs:
ProRail/Keyrail: Eric Blaas
Infrabel: Alexandre Cools, Eddy Verzelen
DB Netz: Sebald Stumm (leader of the subgroup)
DB Netz (CH): Dirk Früh, Michael Wiederhold
SBB: Philipp Hirt
BLS Netz: Alexander Paulus
RFI: Stefano Marcoccio

Further operational issues, such as the harmonization of the different train identification systems or a common process for the maintenance of operational and technical equipment will be initiated.

#### 1.4.2.6 Risk Management and Chances

**No risks to report.**

#### 1.4.2.7 Change Request Management

**No changes to report.**

### 1.4.3 Outlook

In 2014, the Working Group Traffic & Performance Management and its subgroups will handle and harmonize the above-mentioned topics.

# 2 Implementation of Corridor Measures by Infrastructure Managers

The following chapters refer to infrastructure projects that are being realized by each Corridor Infrastructure Manager.

## 2.1 ProRail

### 2.1.1 Key Performance Indicators

| | | | | | |
|---|---|---|---|---|---|
| **Due Date of Reporting** | 31.12.13 | **IM Result [%] Plan** | 95 | **IM Result [%] Actual** | 75 |
| **Projects Total** | 9 | **Projects Finished** | 5 | **Projects Pending** | 4 |
| **Start** | 03.01.00 (earliest project) | | | | |
| **End** | 31.12.17 (last project) | | | | |

| PSP | Project | Results and Milestones achieved |
|---|---|---|
| 1.1.1.1.1 | Zevenaar to border electrification 25 kV AC | Initial plan study has been completed<br>Strategic technical study completed<br>Revision of technical study has been started<br>Budget is approved (2012)<br>Building licence is given (2012) |
| 1.1.1.1.2 | 3rd track (Zevenaar – border) | Initial plan study has been completed<br>Budget is approved (2012)<br>Building licence is given (2012) |
| 1.1.1.2 | Betuwe line | Go live (2007) |
| 1.1.2.1 | Maasvlakte 2: Extension harbour | Construction works have been completed (2012)<br>Go-live (2013) |
| 1.1.3.1 | Electrification of marshalling yard of Kijfhoek | Initial plan study has been started<br>Strategic technical study completed<br>Revision of technical study has been started |
| 1.2.1.1 | ETCS Barendrecht – Kijfhoek | Building licence is given (2012)<br>Construction started (2012) |
| 1.2.1.2 | ETCS Zevenaar to border | Building licence is given (2012)<br>Construction started (2012) |
| 1.2.1.3 | Upgrade ERTMS Betuwe line from 2.2.2.c to 2.3.0d | Construction works have been completed (2012)<br>Go-live (2012) |
| 1.4 | Harbour line | Havenspoorlijn Go-live (2009) |

### 2.1.2 Work Progress

#### 2.1.2.1 Achievements

At the end of 2013, the overall actual work progress sums up to 75% compared to 72% last year. After completion of works - the year before - the rail link to the Maasvlakte II was put into operation. Planning of the infrastructure projects on the cross-border line section is completed; construction depends on progress on the German side. In November 2013 the line section Meteren (Betuweroute) - Amsterdam became officially part of the Rail Freight Corridor.

**ETCS/ traction power in Kijfhoek and Zevenaar to border (PSP 1.1.1.1.1; 1.1.3.1; 1.2.1.1; 1.2.1.2)**
In connection with ERTMS, the solutions for the 15/25 kV on the border section Zevenaar – Emmerich was developed and approved, too. In Zevenaar the preparation for the construction of 25KV and ETCS started this year.

**3rd Track Zevenaar Border – Emmerich (PSP 1.1.1.1.2)**
In 2011 the necessary choices were made in connection with the 15/25 kV project study. As this project is of cross-border nature, ProRail and DB Netz work closely together for the planning and layout. DB Netz will build the 3rd track in phases from Oberhausen in direction of Emmerich border. ProRail's part will fit in this planning in a seamless way, although it#s foresee that the construction will be finished earlier in the Netherlands than in Germany.

**Betuwe Line (PSP 1.1.1.2 / PSP 1.2.1.3)**
The number of trains started to grow after the economic crisis in the last quarter of 2009 and continued, resulting in 2013 in a weekly number of trains above 480.

**Extension of Harbour (PSP 1.1.2.1)**
The formal start of construction works for Maasvlakte II began in October 2009 and was finished in October 2012. Since May 2013 the line and the marshalling yard are in use. As part of these works, which include the reclamation of 2000 ha of land from the sea for harbour, terminal and industrial activities, the corridor is extended by a 12 km railway line. The construction of the extension of the port line equipped with ERTMS is integrated in the tender of Maasvlakte II.

### 2.1.2.2 Risk Management and Chances
With the acceptance of the technical solutions at the Zevenaar border section some important risks could be eliminated.
Although the ERTMS, 25 kV and third track projects are still complex, specific risks are not reported yet. However, the 25 kV at Kijfhoek still lacks some financing.

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

## 2.1.3 Outlook
Looking at the actual progress of all projects, it can be expected that ERTMS will be installed and in operation along the whole corridor between Rotterdam Harbour and Zevenaar border by 2015. Also the projects to expand capacity are running successfully.
One item, the realization of non-stop 25 kV from the border to the starting point is still insecure due to the complexity and, hence, high costs at Kijfhoek.

The new Maasvlakte represents a further increase in volume and, subsequently, further growth of transport volume on the corridor.

## 2.2 Dutch-German Bilateral Working Group

### 2.2.1 Activities and Achievements

**Overview**
The status of specifications and design regarding the interfaces between the infrastructure of DB Netz and ProRail in the section Zevenaar – Emmerich was elaborated by bilateral working groups and several subgroups of the common DB Netz – ProRail organisation which were established in November 2010.

The following technical interfaces were studied by the common organisation:
- ERTMS interface
- GSM-R interface
- Interlocking interface
- Traffic Control interface
- 25kV Traction Power interface
- 25kV Catenary interface
- 25kV Electrical grounding system interface
- Hotbox detection interface
- Environmental Impact Analysis (EIA)
- Third track interface.

Due to the fact that German and Dutch railway systems do not have standard interfaces which easily fit together, specifications and designs were needed in order to determine what will be built exactly and how technical and organizational interfaces have to be defined. Finally, this will lead to agreements between ProRail and DB Netz which clearly define a plan about the scope of building activities and the related time schedule.

The projects Zevenaar – DE/NL and the Emmerich – DE/NL border are responsible for the design and construction activities between Zevenaar and Emmerich.

The main goals of the project are:
- Realisation of 25kV and 15kV
- Realisation of ERTMS
- Realisation of a third track.

Other goals of the project to be fulfilled are:
- The realisation of the communication between the German and Dutch traffic control systems in order to optimise traffic flows as a significant increase of trains is expected between 2013 and 2025;
- The realisation of a hot box detection system between Emmerich and the border to prevent trains with hot axles running into the Zevenaar tunnel.

**ERTMS Interface**
Based on the decisions which were made early 2010, a detailed study was performed to compare possible solutions in the border section of Zevenaar – Emmerich regarding the implementation of ERTMS Baseline 3 & PZB in Germany and ERTMS Baseline 2, V2.3.0d in the Netherlands. The study resulted in a solid technical analysis of ERTMS transitions between Level 1 in the Netherlands and Level 2 in Germany as well as Level 2 in the Netherlands and Level 2 in Germany. The transitions were elaborated for both directions from Germany to the Netherlands and vice versa.

The decision for ETCS L2 (SRS 2.3.0d) in the Netherlands was made in February 2012. In a first step the implementation will start with the transition from PZB to ETCS L2. A common Interface Requirement Specification (IRS) for Step 1 was signed in February 2013.

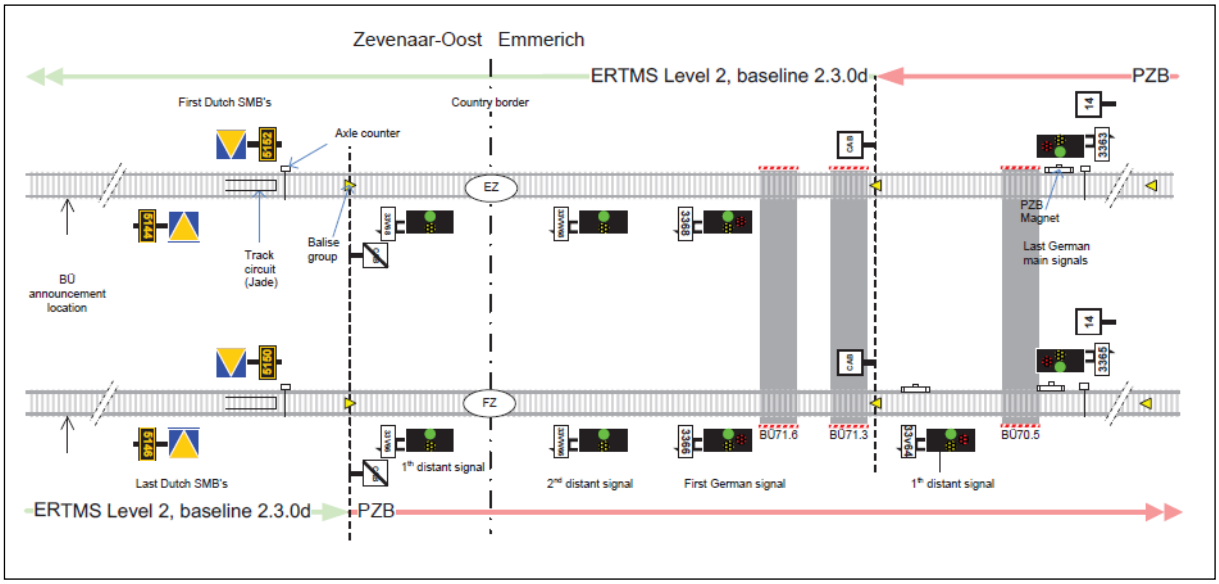


**Figure 17: Interface CCS for Step 1**

The final layout of the interface (ETCS L2, SRS 2.3.0d in NL and ETCS L2, Baseline 3 in Germany) can be seen in figure 18.

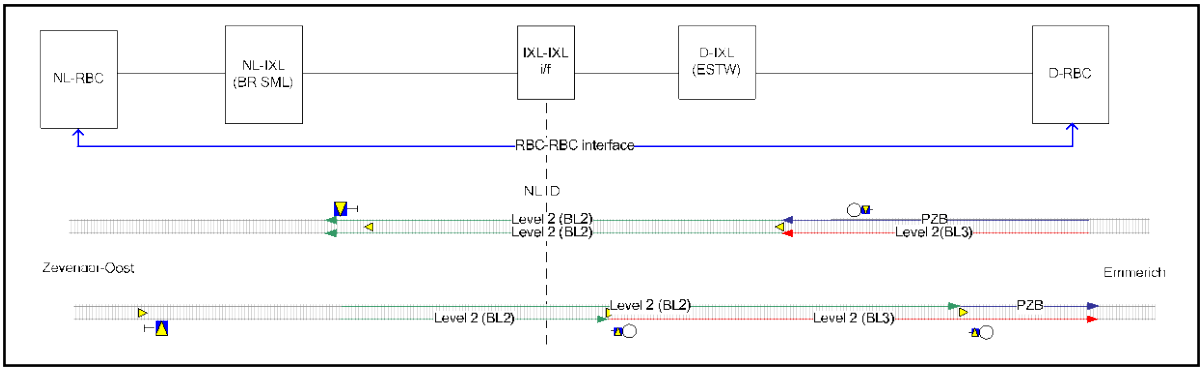


**Figure 18: Level 2 – Level 2 solution border NL**

Activities during 2013 were among others:

- Elaborating on a common ProRail-DB Netz Planning in the border section;
- Elaborating on a common ProRail-DB Netz test plan for the ERTMS-PZB transition;
- Testing of the Dutch Alstom balises in DLR laboratory;
- Installation of the Dutch Alstom ERTMS balises in German infrastructure;
- Start of “four seasons test”.
- Preparing the commissioning process in cooperation with EBA and ILT.
-

**GSM-R Interface**

Activities concerning GSM-R are depending on the activities of the trackside implementation of ETCS Level 2. Parallel to the planning of the ETCS projects, it has to be clarified if the existing GSM-R network has to be adapted.

Together, DB Netz and ProRail have performed additional measurements which were used to define the final configuration on the border section. A common nominal cell plan (NCP) for the border section was planned and signed by DB Netz and ProRail at the beginning of 2013. Preparation of the installation of the GSM-R assets has started at the end of 2013.
ProRail and DB Netz are both responsible for the changes in their own networks. Nevertheless, whenever there are combined activities possible, ProRail and DB Netz shall help each other.

**Building and Migration**
For the tasks Building and Migration, the Sub-Working Group "Construction operations planning - planning the construction phases" between DB Netz/DB ProjektBau and ProRail/KeyRail was founded in 2013.
Task of this subgroup is to coordinate both, works on the section Oberhausen - Emmerich – Zevenaar to establish the new infrastructure and its link to the existing network, as well as works on the diversionary route via Venlo (and Bad Bentheim, which is RFC 8). The schedule of the construction sites on the corresponding deviation routes must also be harmonized. The aim is to preserve additional capacity of the deviation routes for extra traffic over a period of probably nine years.
The working group met five times in the reporting period. Points of discussion were the organisation of construction works for the commissioning of ERTMS on the Dutch side in December 2014 between Zevenaar and the border including clarification of a number of “start-up problems" of the intensive international cooperation. Furthermore, the specification of the construction-schedule in 2015, also a first preview of the anticipated activities in 2016 were discussed.
For the years from 2017 onwards, DB Netz suggested an alternating concept about “out-of service periods” in order to provide reliable time windows for the necessary construction works on the diversionary route. The Dutch side is currently considering the proposal.

**Energy (Catenary systems / Voltage Change Over 25kV Traction Power interface / 25kV Catenary interface / 25kV Electrical grounding system interface)**
Based on the decisions which were made in early 2010 regarding the location of the Voltage Change Overs in Germany and the Netherlands, the activities focused on the three main interfaces to connect the Catenary and Traction Power systems of DB Netz and ProRail:

- The catenary interface between the German Re200 system and the Dutch B4 system
- The interface between the Dutch 25kV and the German 25kV traction power system
- The interface between the German and Dutch earthing/grounding systems.

For these three interfaces, suitable solutions were found to connect the German and Dutch systems.

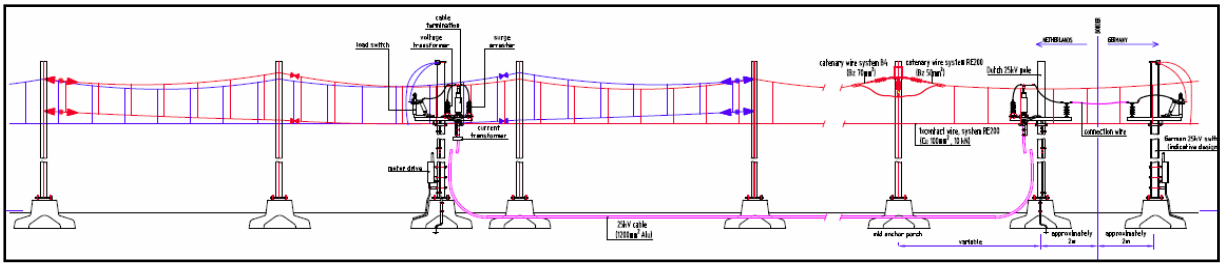

**Figure 19: Detailed drawing of the interfaces**

The design will comply with the TSI Energy requirements. Height of the overhead wire will be 5.5 m and trains with both 1.600 mm and 1.950 mm pantographs will be able to use the line.

For each interface, technical proposals were made:

- Catenary:
  - A fixed point interface will be built on the Dutch side of the border
  - Insulated overlap will be built on the Dutch side of the border
  - Only German overhead wire will cross the border

- Traction:
  - ProRail will supply the energy which is needed for the German 25kV system.
  - Both DB Energy and ProRail can switch off the 25kV system in Germany.

- Earthing/Grounding:
  - The German and Dutch grounding systems will be connected to each other.

In 2012 the preliminary planning was completed and approved for the blueprint planning. The work on the blueprint-planning is still on-going.

**Hot box detector**
In the present situation, a hot box detection system was installed at the Dutch-German border to prevent trains with a hot axle to enter the tunnel Zevenaar. In the future situation, the location of the Dutch hot box system at the border will have to be shifted into the direction of Emmerich because of the higher speeds.

ProRail is responsible for the realization of the shifting of the hot box detection system which is now located at the border.

DB Netz will assist ProRail in the procurement and the project management of these activities which will take place in Germany on the infrastructure of DB Netz.

The type of hot box, which is going to be build, should have an admission for TEN-High-speed tracks in both countries Germany and the Netherlands.

The installation will start in August/September 2014. The commissioning is projected for December 2014.

In the figure below, the new location of the hot box system has been indicated

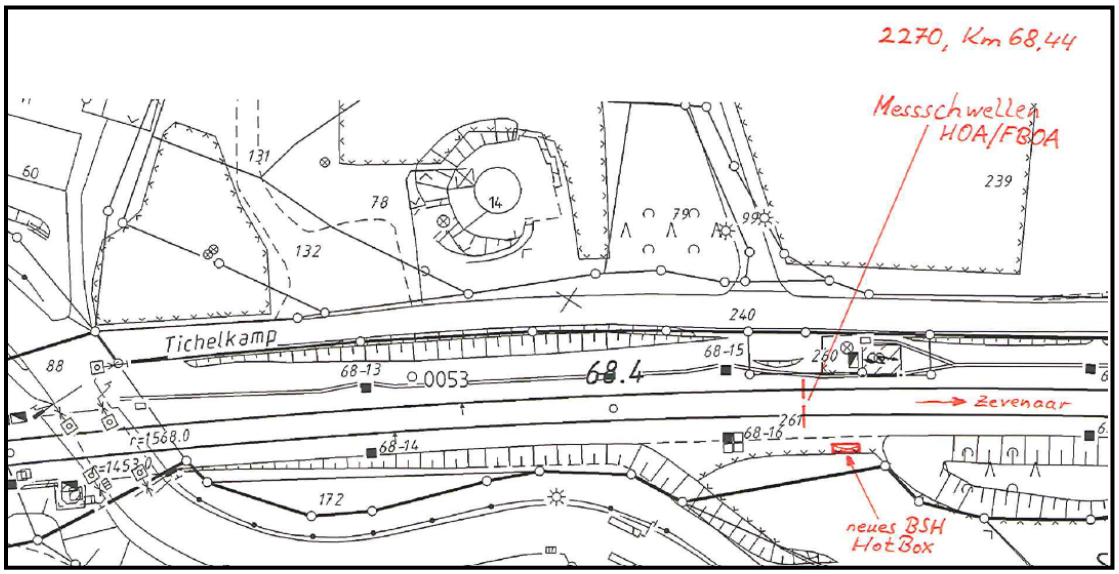


**Figure 20: New location of the hot box detection system**

## Environmental Impact Analysis (EIA)

The Dutch environmental impact studies were laid open to public in Emmerich in September 2012. The German environmental impact study was finished in 2013. It is part of the planning approval documents of section 3.5, which were sent in October 2013 to the EBA.

## Third Track

For the last one of the 12 planning approval sections the approval procedure was started in October 2013.

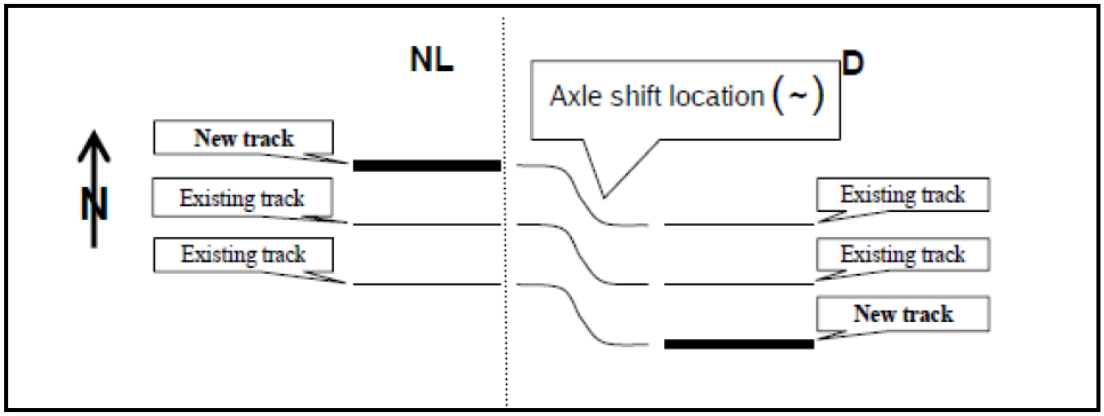


**Figure 21: Overview axle shift third track**

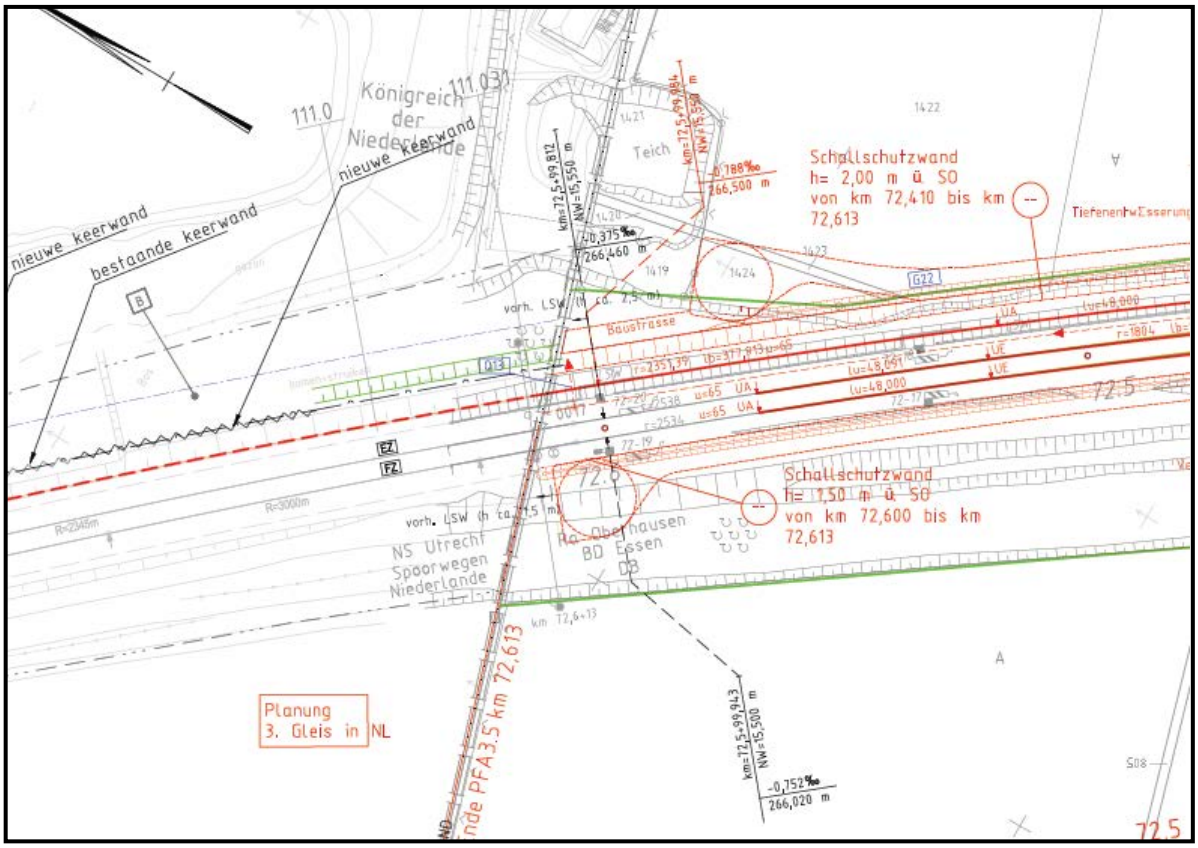


Figure 22: **Interface of the third track at the German-Dutch border**

## 2.2.2 Outlook

Expectations for 2014 include:

**ERTMS Activities**

On-going planning will lead to completion of construction and the commission of ERTMS in summer 2014. Based on a common plan DB Netz - ProRail, the final commissioning has been scheduled for December 2014. DB Netz has the responsibility to organize the approval with the EBA, ProRail will organize this with ILT.

**GSM-R Activities**

The extension of the Dutch GSM-R network in Germany has been scheduled in the first quarter of 2014, before the tests of the ERTMS – PZB transition start (1st quarter of 2014).

**Operations**

Operational scenario's Zevenaar – Emmerich which have been elaborated by ProRail and DB Netz will be tested. All relevant aspects will be included in the "Grensbaanvakovereenkomst".

**Building and Migration**

In 2014 continuous bilateral meetings of the Working Group will take place about every second month to harmonise further construction management plans, but also to solve short-term problems from other bodies.

**Energy**

Blueprint concept and approval of planning of 25kV and the 15kV-25kV voltage changeover have to be continued. The tendering process for realisation shall be started.

**Hot Box Detectors**
The hot box system will be installed in August. Testing and commissioning will take place at the end of 2014.

**Third Track / Environmental Impact Analysis (EIA)**
The publication of planning approval documents for the planning section 3.5 will start in fall 2014. In parallel, the German planning documents will be published in the Dutch Provincie of Gelderland. Parallel to this action, the exchange about the blueprint planning of the third track will be continued.

## 2.3 Infrabel

### 2.3.1 Key Performance Indicators

| | | | | | |
|---|---|---|---|---|---|
| **Due Date of Reporting** | 31.12.13 | **WG Result [%] Plan** | 26 | **WG Result [%] Actual** | 26 |
| **Work Packages Total** | 10 | **Work Packages Finished** | 1 | **Work Packages Pending** | 9 |
| **Start** | 03.01.2010 | | | | |
| **End** | 31.12.2025 | | | | |

| PSP | WP | Results and Milestones achieved |
|---|---|---|
| 2.1.1.1.1 | Level Crossing removal | Ongoing |
| 2.1.1.1.2 | Side tracks 750 m | Ongoing |
| 2.1.1.2 | Brugge - Dudzele L51, L51A, L51C construction 3rd track | Start of construction |
| 2.1.1.3 | Gent - Brugge L50A-B 3rd and 4th track | Building licence + Start of construction |
| 2.1.1.4 | Construction curve Ter Doest | Go Live (2012) |
| 2.1.1.5 | Junction Ledeberg, Melle and Schelle-belle + Merelbeke | Initial plan study |
| 2.1.2.1 | Master plan port of Zeebrugge | Zwankendamme: initial plan study |
| 2.1.2.2 | Port of Antwerp | 2nd access: initial plan study |
| 2.1.3.1 | Hasselt tracks reorganisation | Initial plan study |
| 2.2.1 | ETCS Equipment | Belgian part foreseen to be equipped by 2020 |

The work packages of Infrabel were integrated in the business plan in 2011, the monitoring of the work progress (baseline) has started in 2012.

### 2.3.2 Work Progress

#### 2.3.2.1 Achievements

By the end of 2013, the overall actual work progress sums up to 26% compared to 23% last year. Although this is only a small step forward the development is according to plan. On the 19th of July 2013 the multiannual investment plan (2013-2025) was approved by the government. A number of projects, such as the Hasselt tracks reorganisation, were shifted beyond 2025. A number of projects financed by the Regions can be foreseen, but negotiations on this issue are still ongoing.

One of these projects is the construction of the second access to the port of Antwerp, whose realisation will depend on additional financing. The aim of this new infrastructure is to enhance the possibilities of circulating from Antwerp-North in the direction of Lier. The routes are being studied and a decision should be taken by the Flemish Region in 2015 now. Another important project in the port of Antwerp is the Liefkenshoek Rail Link, connecting the

left bank with the right bank of the river Scheldt. The construction works for the new railway line were completed in autumn 2013. In spring 2014, Infrabel will complete the last section of track installation and the tunnel is scheduled to be put into service in December 2014.

Regarding ETCS, Infrabel is carrying out its Master plan ETCS, which was approved in June 2011 and aims at equipping its whole network by 2022. The Belgian part of the Corridor is foreseen to be fully equipped by 2022. On RFC1 the section between Hever and Wijgmaal was equipped with ETCS in 2013.

A number of major infrastructure works are ongoing or are being planned in the port of Zeebrugge aiming at increasing the capacity for receiving and sending trains to and from this port, such as the new arrival and departure yard with 24 electrified tracks near Zwankendamme and the expansion of the current yard. The request for a building licence for Zwankendamme will be introduced in the first quarter of 2014.

Others concern the access to the port, such as the third track between Dudzele and Brugge and the 3rd and the 4th track between Brugge and Gent. The construction of the “Blauwe Toren” fly-over started in May 2011 and is still ongoing. The railway investments contribute to the further improvement of intermodal, sustainable transport.

In 2013 works on removing some level crossings on the lines of the corridor were started and are to be finished in 2014 and 2015.

The corridor also carried out a study on longer trains (740m). In this frame it’s being analysed whether extra investments are possible in Belgium to allow 740m trains to run also during the peak hours.

In the frame of the implementation plan for Rail Freight Corridor 1, which became operational in November 2013, an investment plan had to be elaborated. Since the methodology was slightly changed a number of new projects were added. Reporting according to this investment plan will start in 2014.

#### 2.3.2.2 Risk Management and Chances

Depending on the choices that will be made by the Regions, this will have an influence on the investment projects planned along the Belgian part of Rail Freight Corridor 1.

#### 2.3.2.3 Change Request Management

Due to the insecurity of financing, some projects are postponed or will be realised at a later date as planned.

### 2.3.3 Outlook

In accordance with the available budget projects will be continued in 2014.

## 2.4 DB Netz

### 2.4.1 Key Performance Indicators

| | | | | | |
|---|---|---|---|---|---|
| **Due Date of Reporting** | 31.12.13 | **IM Result [%] Plan** | 77 | **IM Result [%] Actual** | 60 |
| **Projects Total** | 64 | **Projects Finished** | 27 | **Projects Pending** | 37 |
| **Start** | 02.01.84 (earliest project) | | | | |
| **End** | 15.12.2030 (last project) | | | | |

| PSP | Project | Results and Milestones achieved |
|---|---|---|
| 3.1.1.1.1.1 | Emmerich – Oberhausen/ 1. stage: Node Oberhausen | Go-Live (2004) |
| 3.1.1.1.1.2 | Emmerich – Oberhausen/ 2. stage: Electronic Interlocking | Initial plan study completed (2003)<br>Budget approved (2003)<br>Building licence granted (2008)<br>Start of construction (2008)<br>Start of acceptance and certification (2010/2011)<br>The first part of ILX Emmerich went into service in September 2012. (Emmerich – Wesel)<br>The second part (Wesel - Oberhausen went into service in 2013 |
| 3.1.1.1.1.3 | Emmerich – Oberhausen/ 3. stage: 3rd track | Initial plan study completed (2008)<br>Preparation for the planning approval procedure finalised, except Zevenaar – Emmerich (2009)<br>Start update of planning approval procedure due to BVWP-Prognosis 2025 (2010/2011/2012)<br>Restart planning approval procedure PfA 1.1., 3.1 and 3.3. (2011)<br>Open the planning approval procedure for PfA 1.4 and 3.2 (2011)<br>Open the planning approval procedure for PfA 1.2, 1.3, 2.1, 2.2., 2.3 (2012)<br>Open the planning approval procedure for the last two sections 3.4 and 3.5 (2013)<br>Financial agreement signed (2013) |
| 3.1.1.2.1 | Karlsruhe – Basel/ 2. stage ABS/ NBS Karlsruhe – Rastatt Süd (StA 1) | Initial plan study completed (1994)<br>Planning approval (1994)<br>Building licence granted (1998)<br>Financial agreement signed (2012)<br>Start of construction (2013) |
| 3.1.1.2.2 | Karlsruhe – Basel/ 1. stage: Rastatt Süd – Offenburg (StA 2-6) | Commissioning (2004) |
| 3.1.1.2.3 | Karlsruhe – Basel/ 2. stage: ABS/ NBS Offenburg – Kenzingen (StA 7) | Initial plan study completed (1998)<br>Budget approved (1999)<br>Planning approval process on hold (2010) |

| PSP | Project | Results and Milestones achieved |
|---|---|---|
| 3.1.1.2.4 | Karlsruhe – Basel/ 2. stage: ABS/ NBS Kenzingen – Buggingen (StA 8 NBS) | Initial plan study completed (1998)<br>Budget approved (1999)<br>Planning approval process on hold<br>Preparation of planning approval for alternative routing started (2013) |
| 3.1.1.2.5 | Karlsruhe – Basel ABS/ NBS Kenzingen – Freiburg – Buggingen (StA 8 ABS) | Initial plan study completed<br>Preparation of planning approval process on-going |
| 3.1.1.2.6 | Karlsruhe – Basel ABS/ NBS Buggingen – Basel (PfA 9.0, 9.2, 9,3) | Initial plan study completed<br>Budget approved<br>Planning approval process PfA 9.0 on-going<br>Financial agreement PfA 9.0 signed (2012)<br>Planning approval PfA 9.2 (2010)<br>Start of construction PfA 9.2 (2010)<br>Preparation planning approval process PfA 9.3 on-going<br>Financial agreement PfA 9.3 signed (2010) |
| 3.1.1.2.7 | Katzenbergtunnel (PfA 9.1) | Initial plan study completed (2002)<br>Budget approved (2002)<br>Planning approval granted (2002)<br>Commissioning, Go-Live (2012)<br>Final and remaining works on-going |
| 3.1.2.1 | Terminal KV Drehscheibe Westliche Ruhr (Duisburg) | Initial plan study completed<br>Budget approved<br>Building licence granted<br>Start of construction (2010)<br>Commissioning 1. Building step (2011)<br>Start of construction 2. Building step (2012) |
| 3.1.2.2 | Terminal Köln Eifeltor | Initial plan study completed<br>Budget approved<br>Building licence granted<br>Start of construction (2009)<br>Commissioning (2012) |
| 3.1.2.3 | Terminal Basel | Commissioning (1999)<br>Continuously extended afterwards |
| 3.1.2.4 | Terminal Basel (Southern access) | Initial plan study completed<br>Budget approved<br>Building licence granted |
| 3.1.3.1.1 | Marshalling Yard Oberhausen Osterfeld 1. stage | Commissioning (2008) |
| 3.1.1.3.2 | Marshalling Yard Oberhausen Osterfeld 2. stage | Initial plan study completed |
| 3.1.3.2 | Marshalling Yard Duisburg-Ruhrort Hafen | See 3.1.2.1 |
| 3.1.3.3 | Marshalling Yard Köln Gremberg (North-South | Commissioning (2011) |

| PSP | Project | Results and Milestones achieved |
|---|---|---|
| | system) | |
| 3.1.3.4 | Marshalling Yard Köln Gremberg (South-Nord system) | Initial plan study (2007)<br>Approval of budget (2007)<br>Building licence (2007)<br>Start of construction (2008)<br>Commissioning 2011 |
| 3.1.3.5 | Marshalling Yard Mannheim (West-East system) | Commissioning (2004) |
| 3.2.1.1 – 3.2.1.16 | ETCS projects (16 projects) | Emmerich – Oberhausen: plan study started (2008)<br>Emmerich – Oberhausen: plan study completed (2009, update in 2011 due to decision of NL to implement L1 on Dutch side)<br>Opladen (Solingen 1. BS): plan study completed (2009)<br>Sections between Darmstadt (3.2.1.8) and Basel (3.2.1.16): plan studies completed (2009)<br>Basel: Initial plan Study completed (2010) |
| 3.2.2.1 – 3.2.2.23 | Electronic interlocking projects (23 projects) | Emmerich (ESTW-A Elten, Empel-Rees, Mehrhoog, Wesel): Commissioning (2012) Emmerich: ESTW-A Dinslaken, ESTW-A Sterkrade - Commissioning 2013<br>Troisdorf: Commissioning (2001)<br>Osterspai: Commissioning (2007)<br>Duisburg Wedau: Commissioning (2006)<br>Opladen (Solingen 1. BS): initial plan study completed (2009); Approval of budget; building licence; approval for realisation (all 2010); start of construction works (2011) commissioning (2012)<br>Gremberg: initial plan study completed; approval of budget; start of construction works (all 2010), commissioning (2011)<br>Rechter Rhein (2. BS): construction works ongoing<br>Bensheim (ILX Nördliche Bergstrasse): initial plan study completed; approval of budget; start of construction works (all 2010), partially commissioning (2011); commissioning (2012)<br>ILX Südliche Bergstrasse: commissioning (2012)<br>Karlsruhe: Initial plan study completed (2009); approval of budget; start of construction works (all 2010), commissioning (2011)<br>Rastatt: Initial plan study completed (2009); approval of budget; start of construction works (all 2010), commissioning (2011)<br>Achern: commissioning (1996)<br>Appenweier: Initial plan study completed (2009); approval of budget; building licence (all 2010), commissioning (2011)<br>Offenburg: commissioning (1997)<br>Orschweiler: commissioning (1999)<br>Denzlingen and Leutersberg: Initial plan study completed (2009); approval of budget; start of construction works (all 2010), commissioning (2011) |

| PSP | Project | Results and Milestones achieved |
|---|---|---|
| | | Buggingen: commissioning (2009)<br>Rheinweiler: Commissioning (2013)<br>Efringen-Kirchen: Commissioning (2013) |
| 3.2.3.1 – 3.2.3.4 | GSM-R projects (4 projects) | Technical installations completed, adaptation on ETCS Level 2 areas are expected |

## 2.4.2 Work Progress

### 2.4.2.1 Achievements

At the end of 2013, the actual work progress of the German projects (infrastructure, ETCS) is 60% which is a slight progress compared to last year's 56% while planned progress in 2013 was expected at 77%. Out of 82 national projects along the Corridor, 23 could be completed, 59 remain open or pending. Especially major infrastructure projects as "3rd track Emmerich – Oberhausen" and "ABS/NBS Karlsruhe – Basel" and "ETCS deployment" are delayed and causing further backlog.

**Emmerich – Oberhausen (PSP 3.1.1.1.1.1 - 3.1.1.1.1.3)**

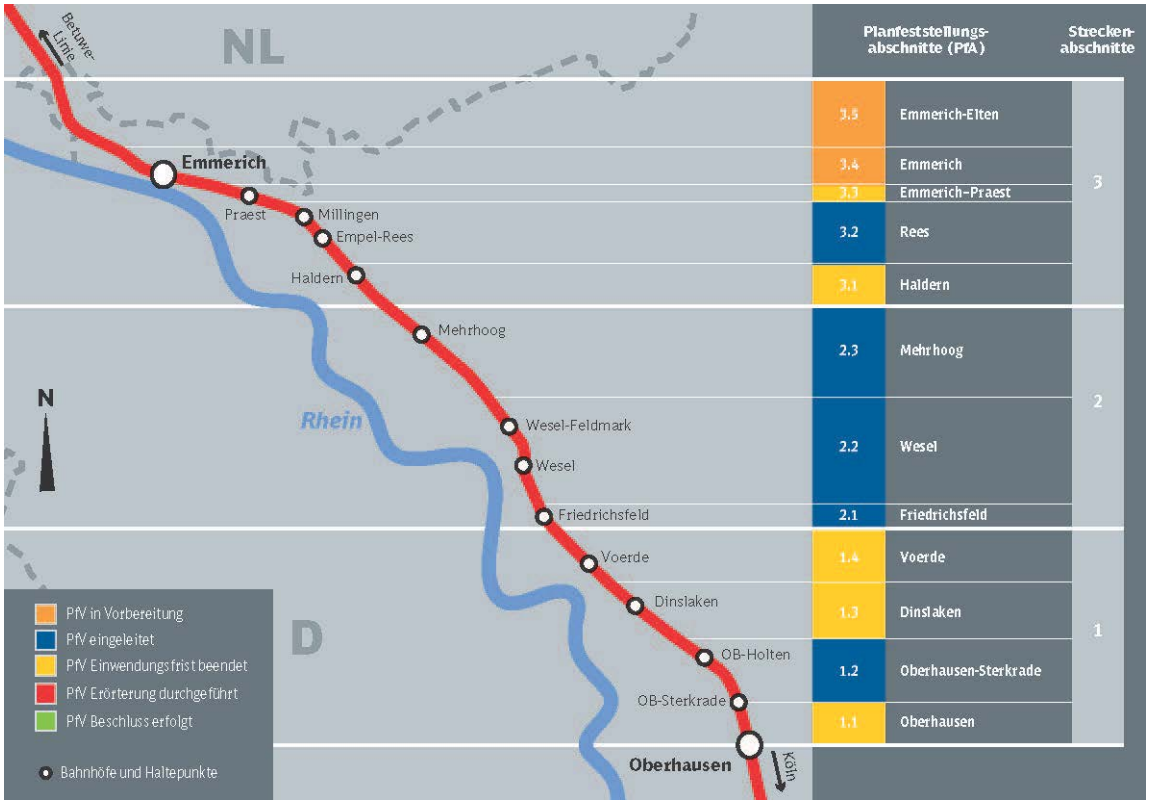


**Figure 23: Update Emmerich – Oberhausen, level of planning 2013**

The Emmerich electronic interlocking went into operation for the whole line from Oberhausen to Dutch/German border in June 2013.
All of the 12 planning approval procedures started by the end of 2013 for the third track topic. An agreement was reached with the City of Emmerich on substitutes for the elimination of the railway crossing in planning sections 3.4 and 3.5 which were crucial for starting the planning approval procedures. As an important milestone the financial agreement with the German government was reached in July 2013.

Further information can be found in Chapter 2.2 - Dutch-German bilateral working group.

**Karlsruhe – Basel (PSP 3.1.1.2.1 – 3.1.1.2.7)**

**StA 1**

The preliminary construction work in the most northern section of the project Karlsruhe – Basel started in summer 2013. Currently two trough sections are built at the beginning and end of the future tunnel. The starting pit of the tunnel boring machine will be located in connection to the trough north. The tender process for the tunnel civil works is foreseen to take place in 2014. The first submission will be in February 2014, contract award is planned in September 2014.


**Figure 24: Overview StA 1**

**StA 2-6**

The sections 2-6 of the project Karlsruhe – Basel were put in operation in 2004.


**Figure 25: Overview StA 2-6**

**StA 7**

As a result of a political initiative by the Federal Ministry of Transport and Infrastructure (BMVI) and the State of Baden-Württemberg an advisory committee for the project Karlsruhe – Basel was set up in 2009. Members of this committee are among others the German government, the State Baden-Württemberg and DB. The common goal of the committee is to obtain the acceptance of rail freight operations by local residents and to minimise the impact of rail noise. To reach this goal several alternative routes are under discussion.

Two of these alternative proposals affect section 7. Since some of the proposed routes indicate significant changes to the alignment which was submitted for the planning approval, the planning approval process was put on hold until a final decision of the advisory committee is available. In 2013 feasibility studies for the alternative routes were prepared and presented to the committee. In 2014 a final decision on the alternative routes is expected.


**Figure 26: Overview StA 7**

**StA 8**

Section 8 of the project Karlsruhe – Basel is also affected by two alternative proposals which were discussed in the advisory committee. The decision on these two alternatives was made in 2013. In 2014 the revision of the preliminary and basic design is planned to meet the requirements of the alternative routes. Aim is to submit the new design for the planning approval process in 2014.


**Figure 27: Overview StA 8**

**STA 9**

In section 9.0 the planning approval is expected in the first quarter of 2014. The financial agreement was already signed in 2012. After the planning approval, the tender process for the construction works will start.

The Katzenbergtunnel (PSP 3.1.1.2.7) was commissioned in December 2012 in section 9.1 including connections to the existing line in the North and South of Schliengen and Eimeldingen. The 9.4 km long tunnel is the biggest civil structure of the project and a direct link between the stations Bad Bellingen and Efringen-Kirchen. Due to the new alignment a significant improvement of travel time and more operational flexibility can be achieved. The Katzenbergtunnel is designed according to the latest international standards with two single lined tunnels and cross-cuts every 500m. In addition to that the Katzenbergtunnel is the first high speed railway tunnel in Germany with emergency routes accessible by vehicles and hence meets the highest safety requirements. After Go-Live remaining works in this section are still on-going.

Construction in section 9.2 began in the last quarter of 2010 and is still on-going.

Section 9.3 is on Swiss territory. In 2013 an architectural competition for a bridge structure crossing the river Wiese was conducted. The architectural competition was a pre-condition to enter the planning approval process in Switzerland. The submission of the documents for the planning approval process is foreseen to take place in the first quarter of 2014. Construction works will start in 2015.


**Figure 28: Overview StA 9**

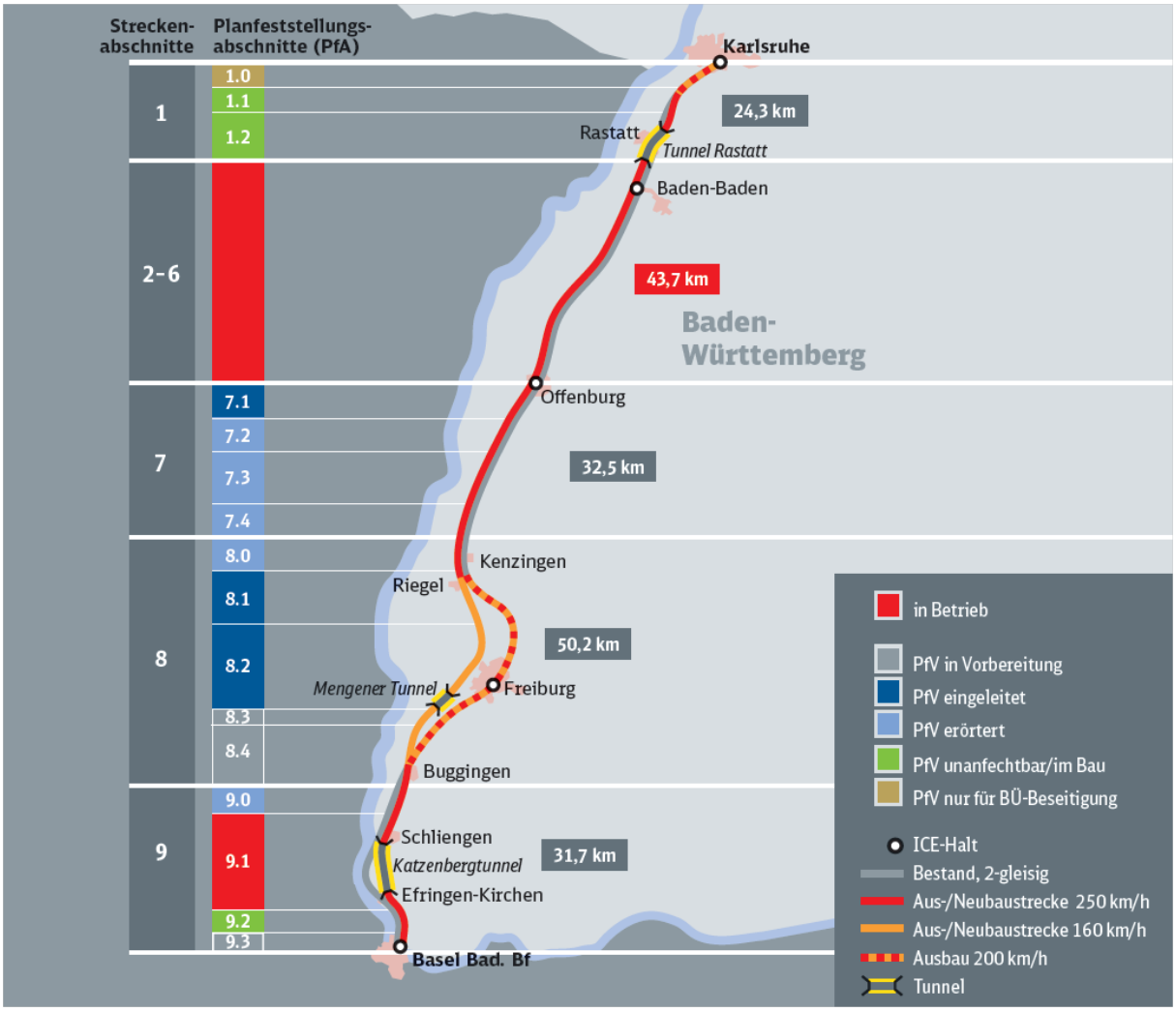


**Figure 29: Update Karlsruhe – Basel planning 2013**

## ETCS Projects – 16 Projects (PSP 3.2.1.1 – 3.2.1.16)

### Achievements in 2013
### What was planned?

Mix level equipment of Corridor A with ETCS Level 2 and Level 1 Limited Supervision in order to fulfill the requirement of fitting the Corridor A with ETCS pursuant to the TSI CCS

- 6 newly built interlocking systems in the planned ETCS L2 section
- L2 to be installed on line sections where this is necessary for capacity reasons or due to V > 160 km/h, or where this is possible for infrastructure reasons (electronic interlocking systems or remote controls to connect relay interlocking systems, that are all newly installed)
- L1 LS to be installed on line sections where this is sufficient for capacity reasons and V <= 160 km/h

This includes in detail:

- Equipping 283 km with ETCS L2 and 315 km with ETCS L1 LS
- Connecting terminals/ shunting yards with ETCS L1 LS in the freight areas Duisburg, Köln, Mannheim/ Ludwigshafen
- Building new electronic interlocking systems for ETCS L2: Ladenburg, Muggensturm, Rastatt (Ötigheim), Riegel, Emmendingen, Bad Krozingen, Heitersheim and Müllheim (Baden)
- Equipping existing interlocking systems with ETCS L2 interfaces
- Adaptation of LZB centres and GSM-R coverage
- Adaptation of external signals in the L1 LS section, if necessary.

**What has been achieved?**

- Decision of the German MoT of equipping Corridor A according to the proposal of DB Netz AG (ETCS L2 & L1LS)
- Financial agreement reached on 14.11.2013 with the German MoT on works to be performed regarding basic evaluation and pre-design of works to be performed to equip Corridor A.
- Initiation of a central Task Force for a project setup for planning and realising Corridor A, and involving the 3 regions West, Centre and South-West in the planning activities
- Alignment of the Corridor A activities to the so-called Bedarfsplan projects (requirements plan for upgrading and new lines) (up-dated line Emmerich – Oberhausen, node of Basel, etc.)
- Conclusion of so-called license agreements of DB owned infrastructure with the supplying industry to install components and run tests with possible technical solutions for ETCS L1 LS

**What is planned in 2014?**

- Negotiating a module contract with the supplying industry on ETCS L2 – Baseline 3
- Performance of NTZ (Neue Typzulassung) process on the Baseline 3 tender specification
- Running tests for ETCS L1 LS and obtaining approval of prototypes
- Finalization of the pre-design of works
- Reaching a financial agreement on planning and realisation of works to be performed on the whole Corridor A
- Applying for EU funding on complementary financing of ETCS and interlocking implementation works

Due to the decision of the German MoT, the ERTMS projects are on hold. Nevertheless, the financing activities for the Corridor will be an on-going process between the German MoT and DB Netz. In 2013 a financing agreement about technical engineering and planning was signed for Corridor A. In 2014 it is expected, that a financing agreement for the building-phase will be signed.

An exception is the section Emmerich – Oberhausen financed out of the "Bedarfsplan", where in 2011/2012 a detailed study was performed to compare possible solutions in the border section of Zevenaar – Emmerich regarding the implementation of ERTMS Baseline 3 & PZB in Germany to ERTMS Baseline 2, V2.3.0d in the Netherlands. The decision to realise the preferred transition from ETCS L2 (SRS 2.3.0d) in the Netherlands to PZB/ETCS L2 (Baseline 3) in Germany was made in February 2012.

Because of the different schedules for ETCS realisation in NL and DE, the project was divided in different steps. These steps are:

1. ETCS implementation in the Netherlands with transition from ETCS L2 (NL) to PZB (DE) (step 1)
2. ETCS L2 (Baseline 3) in Germany with transition from ETCS L2 (NL) to PZB/ETCS L2 (DE)

For step 1 a common interface requirement specification (IRS) was signed between DB and ProRail in March 2013. The IRS is currently in the process of detailed planning. The realisation of Step 1 should start in May 2014, in August 2014 ATB will be switched off on the German part of the border section because of necessary signal shifting. Step 1 should go in operation in December 2014.

**Electronic Interlocking Projects – 23 Projects (PSP 3.2.2.1 – 3.2.2.23)**
In 2013 following e-interlockings were going live on the corridor:

- 2nd part-commissioning of e-interlocking Emmerich: ESTW A Dinslaken, ESTW A Sterkrade
- ESTW Rheinweiler
- ESTW Efringen-Kirchen

**GSM-R – 4 Projects (PSP 3.2.3.1 – 3.2.3.4)**
Activities concerning GSM-R are depending on the activities of the trackside implementation of ETCS Level 2 (see above). Parallel to the planning of the ETCS projects, it has to be clarified if the existing GSM-R network has to be adapted.

## 2.4.2.2 Risk Management and Chances

With regard to the implementation of ETCS on the German corridor sections the pending decision concerning financing the trackside ETCS equipment leads to an implementation after 2015. The German MoT will give its indication according to the new timeline for the realisation of TSI CCS.

The risks to be mentioned are the timeline for the realisation of ETCS which cannot be evaluated seriously due to the open question of financing.

Due to the necessity to update the planning documents for the 3rd track of Emmerich - Oberhausen and to restart planning approval procedures started in 2011, the actual commissioning date can only be determined when the plan approval is finalised.

The expected rise in freight traffic (even dangerous goods) leads to critical discussions with concerned communities regarding major investment projects such as Emmerich-Oberhausen, Rhine/Main-Rhine/Neckar and Karlsruhe-Basel. This leads to time risks and higher investment volumes if e.g. planning approval procedure is extended by objections and lawsuits.

In general, procedures in the construction law proceedings are delayed by political influence, studies of new versions (including key demands of the region) as well as legislative and

policy changes. This has a major impact on PfA 7 Offenburg – Kenzingen. It was decided to look at a scenario called “Offenburger Tunnel” and a second scenario called “Autobahnparallele”.

Therefore, a specification of the timing of the planning approval (building law) is currently not possible. This development has an impact on all infrastructure projects and leads to unpredictable timelines.

### 2.4.2.3 Change Request Management

Due to the financial framework for ETCS, the baseline containing all corridor projects of DB Netz was adapted in 2013 without changing the overall scope.

The timeline for projects concerning the realisation of Karlsruhe-Basel leads to uncertainties due to political influence, studies of new versions (including key demands of the region) as well as legislative and political changes. The commissioning of the infrastructure projects cannot be predicted before the planning approval procedure has been finalised.

**Project Rhine/Main – Rhine/Neckar** (project not yet plan of the baseline)
The review of the federal demand plan by the ministry (November 2010) includes significant changes in the Traffic Forecast 2025 compared to the Traffic Forecast 2015 (in which the consensus route Darmstadt and the exclusive access Mannheim was assumed). Because of remaining bottlenecks there is a need for optimization in the relation Darmstadt - Mannheim - Friedrichsfeld.
The testing order of the BMVI to DB Netz AG to clarify the open questions is now completed. DB Netz AG has proposed to the BMVI on 24.10.2012 to investigate a traffic control variant in the Middle Rhine study.
Due to the demand plan validation (Traffic Forecast 2025) and the ongoing BMVI study about the Middle Rhine, the plan approval procedure currently cannot be applied or continued at the Federal Railway Office. Therefore, the plans are currently suspended until the end of the Middle Rhine study of the BMVI, latest until the announcement and decision of the next Federal Infrastructure Plan (Bundesverkehrswegeplan, BVWP) expected in 2015.

## 2.4.3 Outlook

The main emphasis in 2014 will be the realisation of building activities:

**1. Emmerich – Oberhausen (PSP 3.1.1.1.1.1 - 3.1.11..1.3)**

- Hot box detection systems – the installation of – 3 hot box detection systems are ongoing and the commissioning will be in 2014.
- Going on with planning of the blueprint and approval procedure for all 12 sections (incl. third track increasing the number of block sections).

**2. Karlsruhe – Basel (PSP 3.1.1.2.1 – 3.1.1.2.2.7)**
The execution of the architectural competition and preparing documents for approval procedure is ongoing in 2014.

**3. Electronic Interlocking Projects (PSP 3.2.2.1 – 3.2.3.23)**
For 2014, the following commissioning is planned:

- ESTW Rechte Rheinstrecke,
- ESTW-A Linz, ESTW A Bad Honningen,
- ESTW A Leutersdorf,
- ESTW A Assmannshausen,
- ESTW A Eltville, ESTW A Geisenheim

## 2.5 Swiss – German Bilateral Working Group

### 2.5.1 Activities and Achievements

The cross border activities between Haltingen and Basel SBB have a complex structure due to the realisation of several infrastructure projects in Germany and Switzerland – e.g. reconstruction of the node of Basel (see figure 30), as well as the ABS / NBS Karlsruhe – Basel, and a new bridge over the river Rhine. While reconstructing the node of Basel, framework ETCS installation has to be integrated during many different building steps.

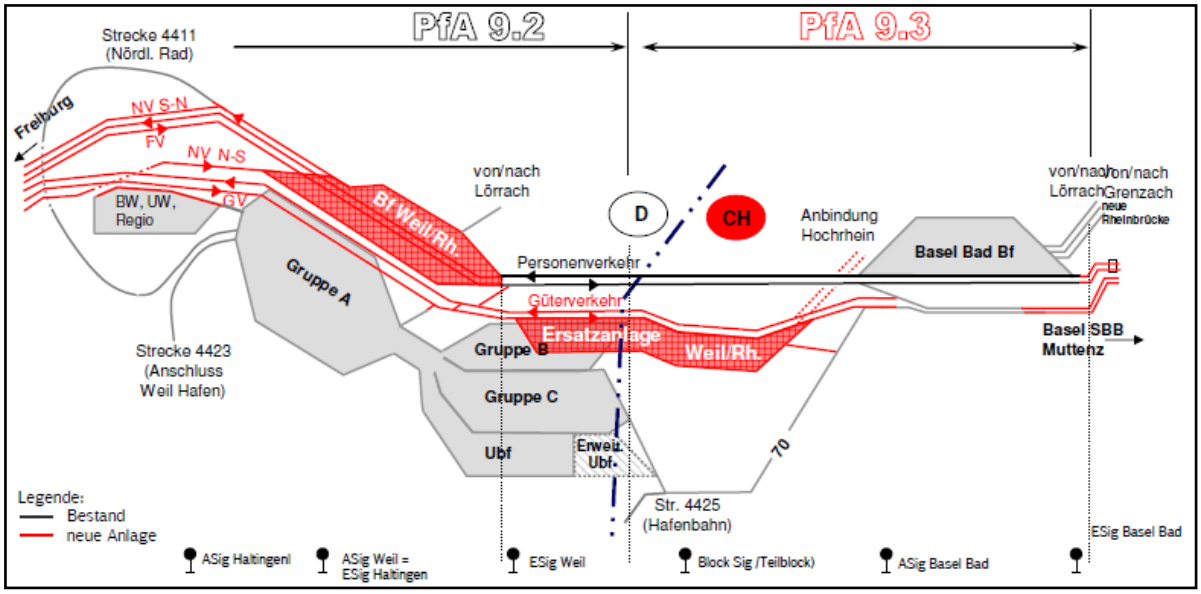


**Figure 30: Planning approval sections node of Basel**

**Border Section Node of Basel - Progress in 2013**

NSAs of Germany (EBA) and Switzerland (Bundesamt für Verkehr, BAV) have defined and signed a concept document regulating their competences and responsibilities regarding the authorisation and approval process of train control systems at the border sections between DE and CH.

### 2.5.2 Outlook

Expectations for 2014 include:

- Design engineering and execution planning of ETCS L1 LS and EuroSignum/-ZUB for "state of construction 0-ETCS"
- Contracting implementation of the planning with the manufacturing industry
- Submission of planning approval procedure to the BAV
- Potential start of construction works.

## 2.6 SBB Infrastruktur

### 2.6.1 Key Performance Indicators

| | | | | | |
|---|---|---|---|---|---|
| **Due Date of Reporting** | 30.12.13 | **IM Result [%] Plan** | 49 | **IM Result [%] Actual** | 58 |
| **Projects Total** | 8 | **Projects Finished** | 0 | **Projects Pending** | 8 |
| **Start** | 01.01.90 (earliest project) | | | | |
| **End** | 31.12.25 (last project) | | | | |

| PSP | Project | Results and Milestones achieved |
|---|---|---|
| 4.1.1.1.1 | Gotthard base tunnel | Initial plan study completed (1997)<br>Budget approved (1996)<br>Building licence granted (1996)<br>Breakthrough at GBT in 10/ 2010 East tunnel<br>Breakthrough West tunnel in 2011 |
| 4.1.1.1.2 | Ceneri base tunnel | Initial plan study completed (1997)<br>Budget approved (1996)<br>Building licence granted (2006)<br>Drilling works on-going (74% completed) |
| 4.1.1.1.3 | Basel – Chiasso headway reduction | Initial plan studies finished<br>Construction on-going (1st project Axentunnel)<br>Construction (2nd project Castione) started in 2009<br>Progress of works as planned |
| 4.1.1.2.1 | Cadenazzo – Pino (Capacity increase) | Initial plan study started (2009)<br>Progress of works as planned |
| 4.1.1.3.1 | Bern – Thun headway reduction | Initial plan study for final project started in 2009<br>Progress of works as planned |
| 4.2.1.1 | ETCS Basel – Gotthard – Chiasso | Initial plan study completed (2006)<br>Budget approved (2006)<br>Go life end of 2015 |
| 4.2.1.2 | ETCS Basel – Gotthard – Belinzona – Pino | Initial plan study completed (2006)<br>Budget approved (2006)<br>Go life end of 2015 |
| 4.2.1.3 | ETCS Basel – Lötschberg – Simp-lon – Iselle -Domo | Initial plan study completed (2006)<br>Budget approved (2006)<br>Go life end of 2015 |

### 2.6.2 Work Progress

#### 2.6.2.1 Achievements

By the end of 2013, the overall actual work progress sums up to 58% versus 49% of planned work progress. Due to good progress at GBT works and progress of ETCS roll-out as planned, SBB is again ahead of schedule.

**Gotthard and Ceneri Base Tunnels (PSP 4.1.1.1.1 and 4.1.1.1.2)**
After the break through the railway technique is being built in and first test runs started. As a result of the excellent progress of the construction works, Alp Transit Gotthard AG revised its time schedule. Subsequently, the commissioning and handover of the tunnel to its future operator SBB Infrastruktur is now scheduled for the end of May 2016. In spite of the early

commissioning date the process of testing, trial operation and authorization will not be affected and the starting date of the commercial operation by SBB remains unchanged.

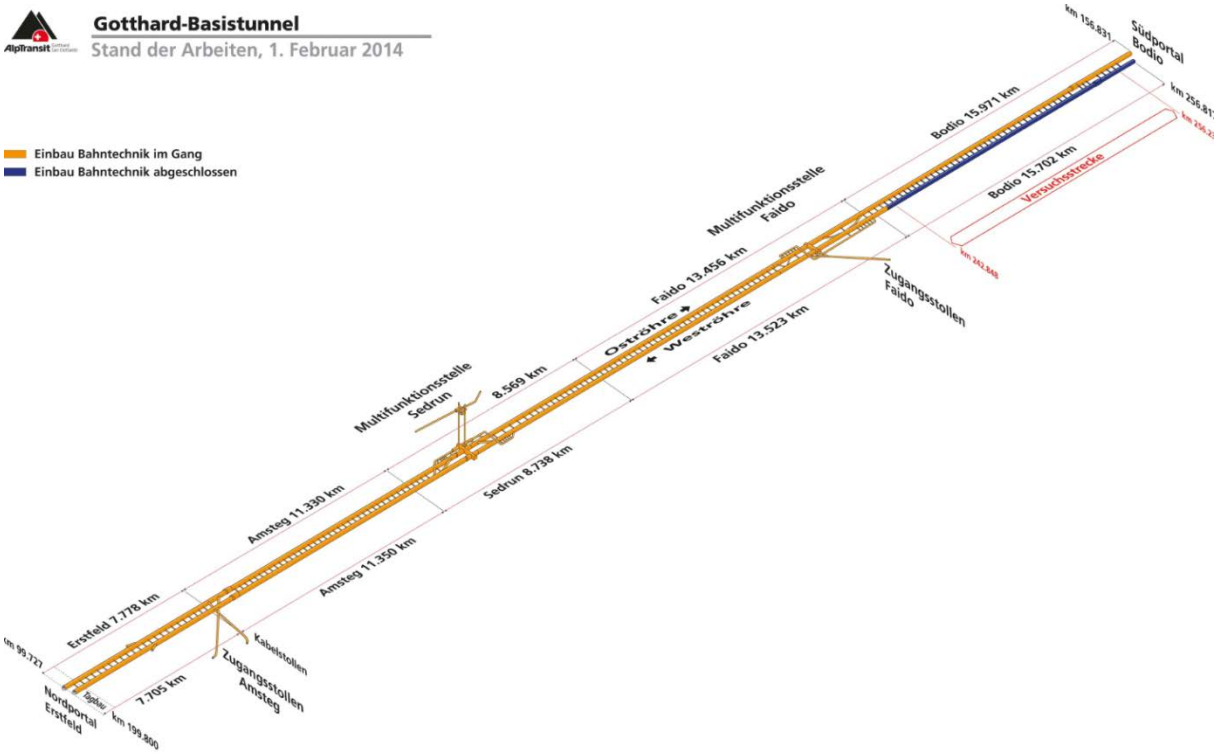


**Figure 31: Drilling works at Gotthard base tunnel (31.12.2013)**

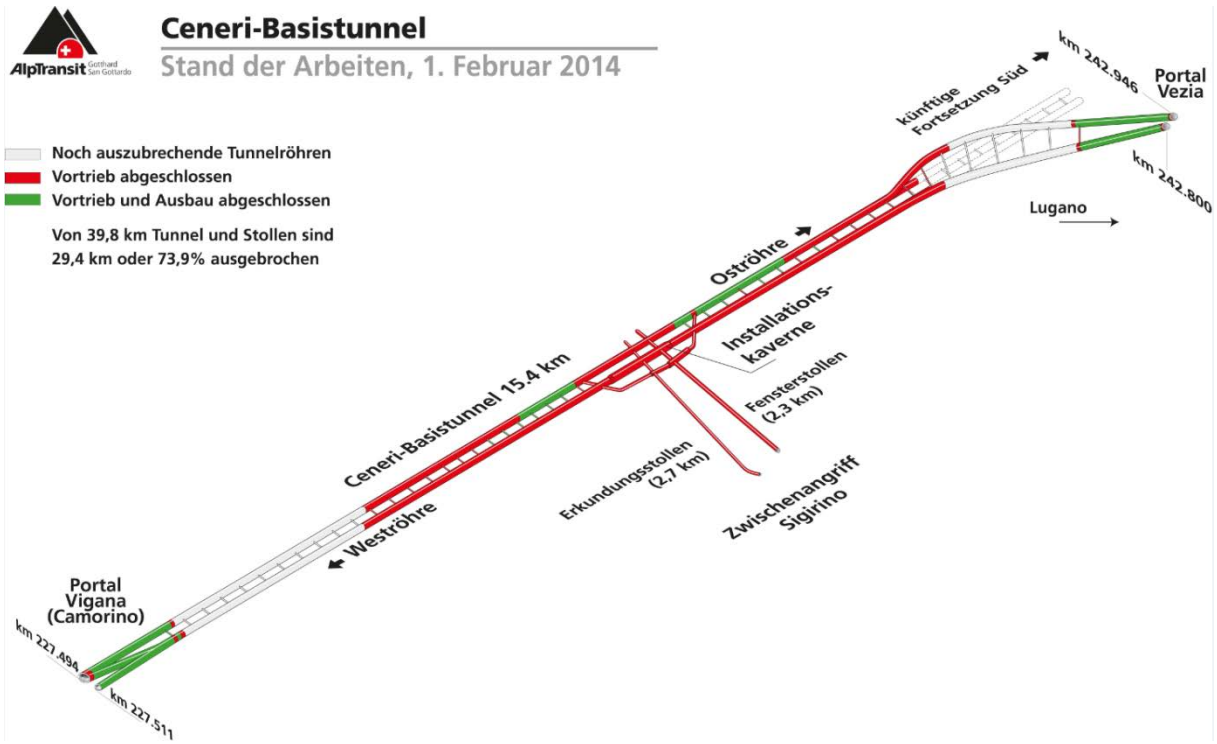


**Figure 32: Drilling works at Ceneri Tunnel (31.12.2013)**

### 2.6.2.2 Risk Management and Chances

The major risk rated A1 regarding braking curves / ETCS L1 LS which jeopardized the performance of trains / lines operated in ETCS L1 LS mode could be mitigated in 2009.

### 2.6.2.3 Change Request Management

No changes to report

## 2.6.3 Outlook

In 2014 several important topics are on the agenda. The financing of the railway infrastructure will be a major discussion and needs further votings (in which the Swiss already agreed in the past on the financing of round about 5 Billion Euros). The preparation of the 4 meter gauge for the Gotthard and Ceneri base tunnel branch line has to be done.

# 2.7 BLS Netz AG

## 2.7.1 Key Performance Indicators

| | | | | | |
|---|---|---|---|---|---|
| **Due Date of Reporting** | 31.12.13 | **IM Result [%] Plan** | 80 | **IM Result [%] Actual** | 80 |
| **Projects Total** | 2 | **Projects Finished** | 1 | **Projects Pending** | 1 |
| **Start** | 01.01.90 (earliest project) | | | | |
| **End** | 31.12.30 (last project) | | | | |

| PSP | Project | Results and Milestones achieved |
|---|---|---|
| 3.1.1.3.2 | 1st stage of Lötschberg | Go-live (2007) |
| 3.1.1.3.3 | Completion of Lötschberg | Project start scheduled for 2025<br>Variants and conditions for further expansion of LBT are identified |

## 2.7.2 Work Progress

### 2.7.2.1 Achievements

In 2013 the traffic volume on the Lötschberg-Axis remained on a high level. A traffic increase of 2.4% was recorded, compared to 2012, when the additional rerouted traffic from the Gotthard led to a volume record (above capacity limits) during June. Without the Lötschberg Base Tunnel (LBT) the traffic demand could no longer be satisfied. The average utilisation of the LBT is almost 80% of the available train paths, on peak days it reaches regularly 100%.
Especially dedicated slots for trains with high cube containers or swap bodies [Simplon-Intermodal (SIM) – Corridor] are scarce. The “Rolling Highway Trains” operated by RAlpin AG recorded 2013 an all-time high of 109.000 lorries transported on almost 5500 trains (87% utilization).

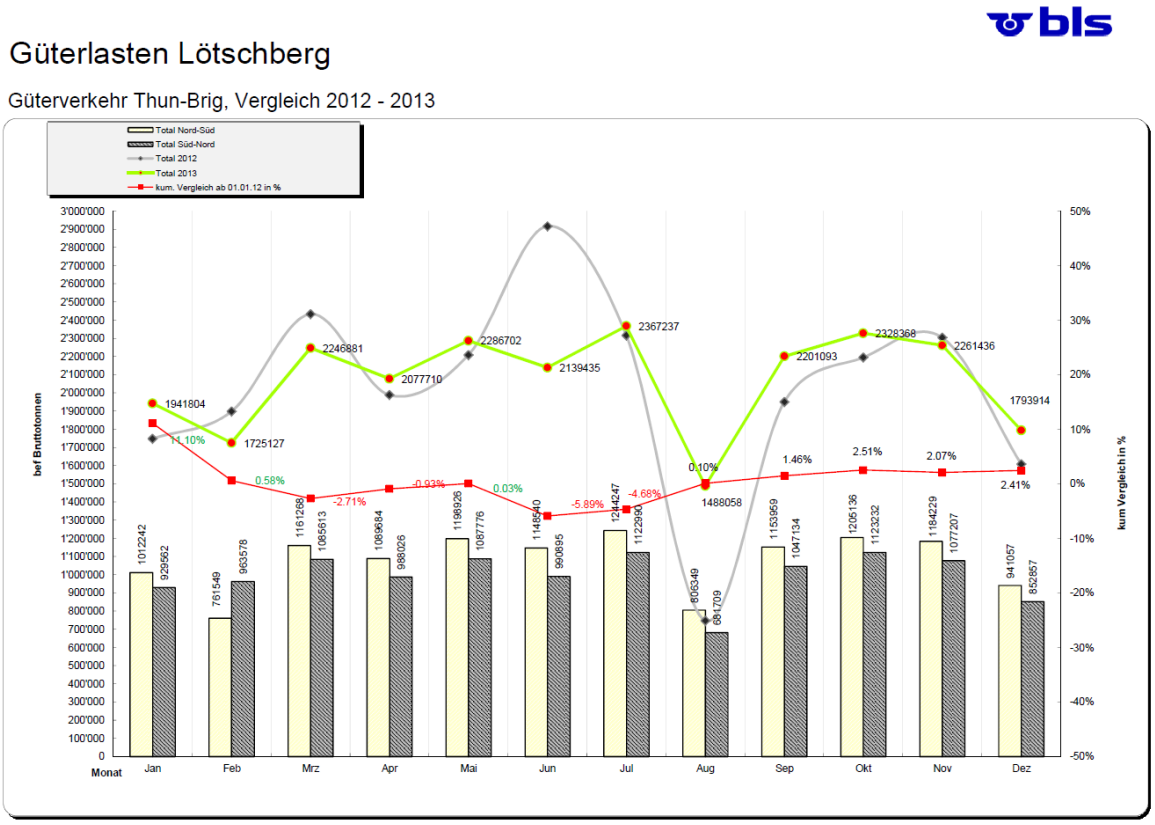


**Figure 33**: **Freight traffic Thun-Brig (2012-2013)**

A considerable quantity of trains runs over the Mountain-Line which celebrated in 2013 its 100th anniversary. Thanks to anticipatory planning in the early 20st century and extension on double track on the northern and the southern ramps (opened in 1992) this line still has an important function in the Swiss and international transalpine traffic.

**Performance Management and Data Quality**

For improvements in the daily work, institutionalised information exchange and regular bilateral meetings with the involved IMs and RUs are well established. Reporting tools based on international TIS data have been further improved. The gathered information about the quality of selected traffic on the Corridor is the basis for the work on measures of the performance managers.

The CCL[2] project which SBB started together with RFI and BLS in 2010 has been adjourned. The realisation of a full integration of train running data from Italian database in the dispatching systems of the BLS traffic control centre in Spiez and SBB systems shall be realized together with TAF/TAP TSI adaptions. The therefore needed Common Interface is planned for end of 2015. An intermediate solution failed due to complexity and cost reasons.

## 2.7.2.2 Risk Management and Chances

No risks to report.

## 2.7.2.3 Change Request Management

No changes to report.

[2] CCL = controllo circolazione linea; Italian system for communication of train positions

## 2.7.3 Outlook

**Completion of Lötschberg (PSP 3.1.1.3.3)**

Growth of transit traffic through Switzerland will continue. On the BLS network the main bottleneck for optimised operations is the Lötschberg Base Tunnel (LBT) as capacity limits are almost reached. Significant traffic increase will only be possible by upgrading the middle section of the LBT with the second track respectively in a second step the completion of the tunnel on its full length. Nevertheless, the usability of additional capacity in the LBT depends also strongly on the capacity of the connecting lines (Aaretal, Simplon south side, Domodossola II and lines South of Domodossola).

Mayor political discussions about the financing of the further development of the Swiss railway network took place in 2013. The projects “FABI” (*Finanzierung und Ausbau Bahninfrastruktur*) and “BIF” (*Bahn Infrastrukturfonds*) will determine the next steps and projects. Swiss people will have to confirm the financing projects in a vote in February 2014. Planning of the second track in the LBT middle section is part of the defined budget and a start of works within the timeframe between 2025 and 2030 becomes realistic if the vote will be positive.

## 2.8 Italian – Swiss Bilateral Working Group

### 2.8.1 Activities and Achievements

The following bilateral working groups are in place between Italy and Swiss:

**1) Member States level**

In November 1999 a bilateral agreement was signed by the Italian Ministry of Transport and the Swiss Ministry for environment, transport, energy and communication to guarantee a competitive connection between the Italian rail network and the new rail transit through the Alps (NEAT - *Neue AlpenTransversale* or NFTA - *Nuova Ferrovia TransAlpina*).

The agreement's validity ends in 2020. In order to monitor the progress of the approved actions and the quality of the traffic in general a steering committee was appointed by representatives of the Ministries. The steering committee organised itself in four working groups:

- WG1 Infrastructure and Monitoring
- WG2 Rolling stock, Capacity, Interoperability
- WG3 Simplon Operational Agreement
- WG4 Transport Policy, Road, Statistics.

WG1 follows the progress of rail infrastructure and it is supported by representatives of RFI, SBB and BLS.

- In December 2012 a new MoU was signed between the Italian and Swiss Ministries based on the correspondent MoU signed by the Infrastructure Managers in August. The new MoU recalls and strength the objectives already declared in the agreement of 1999 both for freight and passenger transport in terms of quality of the offer.

**2) Infrastructure Manager Level**

Two MoUs were signed in August 2012 addressing respectively:

a) the quality of the offer and
b) the realisation of train control systems at the border .

**MoU a)**

After establishing dedicated working structures in 2013 the working groups focused on:

- Set up of a monitoring procedure in order to ensure the continuous monitoring of the progress of all projects mentioned in the MoU
- Verification of the technical feasibility to extend the loading gauge of the Luino-Line to P/C 80 which has been concluded with a positive result and consequently the formulation of a contractual basis between BAV and RFI to provide funding.
- New intermodal terminals in Milano: the feasibility study conducted by FS group, Cemat and Hupac has been submitted with a request to funding to the BAV

**MoU b**

In 2013 the works of the ETCS Swiss-Italy bilateral working group were mostly dedicated to:

- Agree on the technicalities needed for the border realization of ETCS
- Establish an operational working plan for the realization of the projects
- Identify external needs and pursue their overcoming

For the three cross border sections (Sections: Iselle-Domodossola and Ranzo-Luino and the station of Chiasso) the date for completion of the installation was agreed by end of 2015.

**Technical solution**

The choice for the technical solution is ERTMS Level 1 limited supervision for the border Iselle-Domodossola-DOMO II and Ranzo-Luino (BL 3.0.0), for the station of Chiasso ERTMS Level 2.

The lines Iselle - Domodossola and Ranzo - Luino are situated on Italian territory. These lines are operated by RFI. The signalling system and the operation are run following the Swiss signal rule book and Swiss operation rules. Nowadays trains on these lines are supervised by the Swiss train protection system SIGNUM which offers only Warning/Halt functionalities. This system will be replaced by standard ETCS technology by inserting the SIGNUM and ZUB functionalities into the ETCS packet 44 (NID_XUSER=2). Parallel to these so called EuroZUB/EuroSIGNUM functionalities:

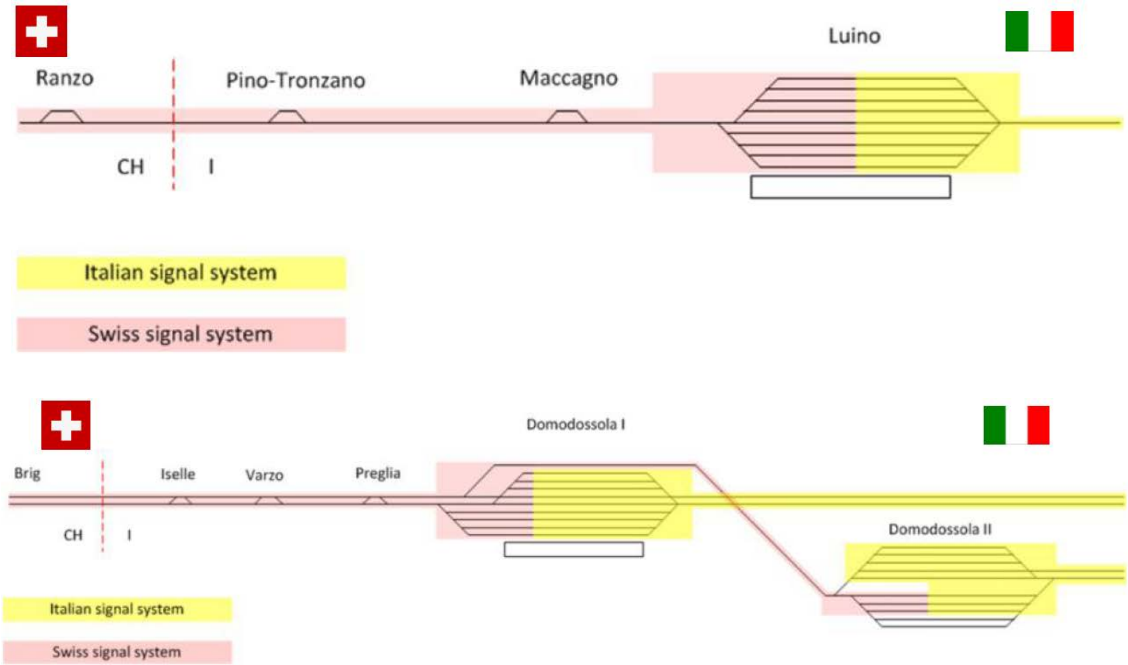


**Figure 34**: **Freight traffic Thun-Brig (2012-2013)**

After the completion of technical specification for the procurement, the WG worked on the definition of a document (Cooperation contract) in which the responsibilities for the project and roles of the involved parties are clarified. The agreement is still under discussion and

foresees that an international tendering will be launched by the Swiss partner while the full costs of ERTMS deployment on the Italian part will be borne by RFI.

The signature of this document is foreseen for beginning 2014.

In parallel the WG recognized the necessity to involve the national safety authorities in order to clarify by whom the responsibility of the system validation lay.

### 2.8.2 Outlook

During 2014, the main focus will be to advance the realisation of the new terminal in Milano, the conclusion of the contract between FOT and RFI and the launch of a construction project to extend the loading gauge of the Luino-line. Still ongoing are the efforts to ensure a timely solution for pending discrepancies of the ETCS equipment at border sections (cross-acceptance).

## 2.9 RFI

### 2.9.1 Key Performance Indicators

| | | | | | |
|---|---|---|---|---|---|
| **Due Date of Reporting** | 31.12.13 | **IM Result [%] Plan** | 45 | **IM Result [%] Actual** | 31 |
| **Projects Total** | 18 | **Projects Finished** | 3 | **Projects Pending** | 15 |
| **Start** | 02.07.01 (earliest project) | | | | |
| **End** | 30.04.26 (last project) | | | | |

| PSP | Project | Results and Milestones achieved |
|---|---|---|
| 5.1.1.1.1 | Upgrade southern access Simplon/ Doubling Vignale – Arona (0264.PO) | Initial plan study completed (2004)<br>Start of the studies for the building licence re-scheduled for 2016 |
| 5.1.1.1.2 | Simplon platform (several small projects) | (*) |
| 5.1.1.1.3 | Novara Node (0223.PO) | Initial plan study started (2008)<br>Preliminary project of the first sub-project completed.<br>Financing not granted. |
| 5.1.1.1.4 | Linking of Novara-Domodossola track near Gozzano (0239.AM) | Initial plan study completed (2001)<br>Budget approved (2005)<br>Building licence granted (2007)<br>Construction completed (2011)<br>Go live (2011) |
| 5.1.1.1.5 | Upgrading of Novara-Alessandria line (1178.PO) | Go live (2007) |
| 5.1.1.2.1 | Luino platform (several small projects) (1282) | (*) |
| 5.1.1.2.2 | Doubling of Laveno-Luino (0265.PO) | Project start scheduled for 2016 |
| 5.1.1.3.1 | Chiasso-Monza section (0266.PO) | Initial plan study completed (2003)<br>Project start scheduled for 2016 |
| 5.1.1.3.2 | Bergamo-Seregno section upgrade (0277.PO) | Initial plan study completed (2005) – building licence completed in 2012<br>Works start scheduled for 2017 |
| 5.1.1.3.3 | 1. Quadrupling of the track Rho-Parabiago<br>2. Improving of the section Rho - Gallarate (0294.PO) | Initial plan study completed<br>Project postponed after 2016 |
| 5.1.1.3.4 | Giovi pass and double track Genoa –Milan (AV 20) | Executive project completed. Geognostic activities started. |
| 5.1.1.3.5 | Doubling of Bergamo – Treviglio (0222.PO) | Go-live (2007) |
| 5.1.1.3.6 | Doubling of Bergamo – Treviglio (0222.PO) | Extra measures for noise mitigation on-going (until 2014) |
| 5.1.1.3.7 | Quadrupling of Tortona-Voghera section (0286.PO) | Initial plan study completed (2006)<br>Building licence completed (2011)<br>Start of works expected in 2017. |
| 5.2.1.1 | ETCS Domodossola-Genoa | The whole Italian ERTMS project has been reviewed and the proposal has been presented to the European |
| 5.2.1.2 | ETCS Luino-Genoa | |

| PSP | Project | Results and Milestones achieved |
|---|---|---|
| 5.2.1.3 | ETCS Chiasso-Milan | Commission in December 2012 according to the provisions in the decision 2012/88/EU. |
| 5.2.1.4 | ETCS Milan-Genoa | |

(*) The Luino and Simplon Platforms are a set of measures of different nature agreed upon at bilateral level. Their contents and changes are now embedded in the new baseline.

## 2.9.2 Work Progress

### 2.9.2.1 Achievements

The new MoU between RFI and the Italian Ministry of Transport was signed mid-2012. It does not foresee significant improvements in the financing of the works so that the main financial constraints are still not overcome and the postponement of some major projects is confirmed also in 2013.
To alleviate bottlenecks and according to bilateral agreements between the Italian and Swiss ministries the preliminary studies of smaller interventions such as the reducing of travel time by means of shorter safety sections and the increase of siding lengths are now in the stage of planned financing.

**Upgrading of Southern Access Simplon Pass/ Doubling Vignale – Arona (PSP 5.1.1.1.1/ PSP 5.1.1.2.1)**
The start of the project is scheduled for 2016.

**Simplon Platform (PSP 5.1.1.1.2) and Luino Platform (PSP 5.1.1.2)**
The projects included in this Platform and those of the Luino Platform are now included in the new bilateral MoU between the Ministries of Italy and Switzerland signed in December 2012. In 2013 the analysis of the needed actions for the upgrading of the gauge was finalised.

**Novara Node (PSP 5.1.1.1.3)**
The building licence of the first sub-project has been concluded mid-2012. At the moment no further financing is available to progress in the project.

**Link of Novara-Domodossola line near Gozzano (PSP 5.1.1.1.4)**
In operation

**Novara – Alessandria Line (PSP 5.1.1.1.5)**
In operation

**Doubling of Laveno – Luino section (PSP 5.1.1.2.2)**
The start of the project is scheduled for 2016.

**Chiasso – Monza (PSP 4.1.1.3.1) / (PSP 5.1.1.3.6)**
The start of the building licence is postponed. Works are not financed. Due to lack of funding alternative actions has been planned able to satisfy the need for capacity along the section. These projects are part mostly of technical nature and are included in the program agreed in the bilateral MoU of 2012.

**Bergamo – Seregno (PSP 5.1.1.3.2)**
The project is on-going. Building licence completed mid-2012. Start of works is planned in 2017.

**Improving of the section Rho-Parabiago-Gallarate (ex 3rd track Gallarate – Rho (PSP 5.1.1.3.3)**

The project is structured in two sub-projects: a) quadrupling Rho-Parabiago and Y link; b) third track between Parabiago and Gallarate. Sub project a) is on-going. The preliminary project is completed but delay is occurring due to rejection by local authorities. Sub-project b) is postponed to 2017.

**Giovi Pass and Double Track Line Genoa – Milan/ Alessandria (PSP 5.1.1.3.4)**

The project consists of an about 53 km long line, a relevant part of which in tunnels. The technical requirements meet those of a high speed (HS)/high capacity (HC) line: mixed traffic, max speed 250 km/h, max gradient 12‰, max axle load 25 tons, 3 kV DC / 25 kV AC, ERTMS / ETCS Level 2.

The realisation of the new pass will allow re-planning the rail traffic of the area around the port of Genoa, considerably improving the rail freight connection from the maritime area to the European hubs and main destinations in Italy.

The cost of the whole project is estimated at € 6,200 Mio. In 2012, 1,100 Mio were assigned to the project to finance the second sub-project.

Recipients of the funding (Sub-projects 1 and 2) are preliminary activities linked with the Northern and Southern accesses of the tunnel, and the realisation of a first tunnel in Campasso.

The go-live of the project is planned for the second half of 2020.

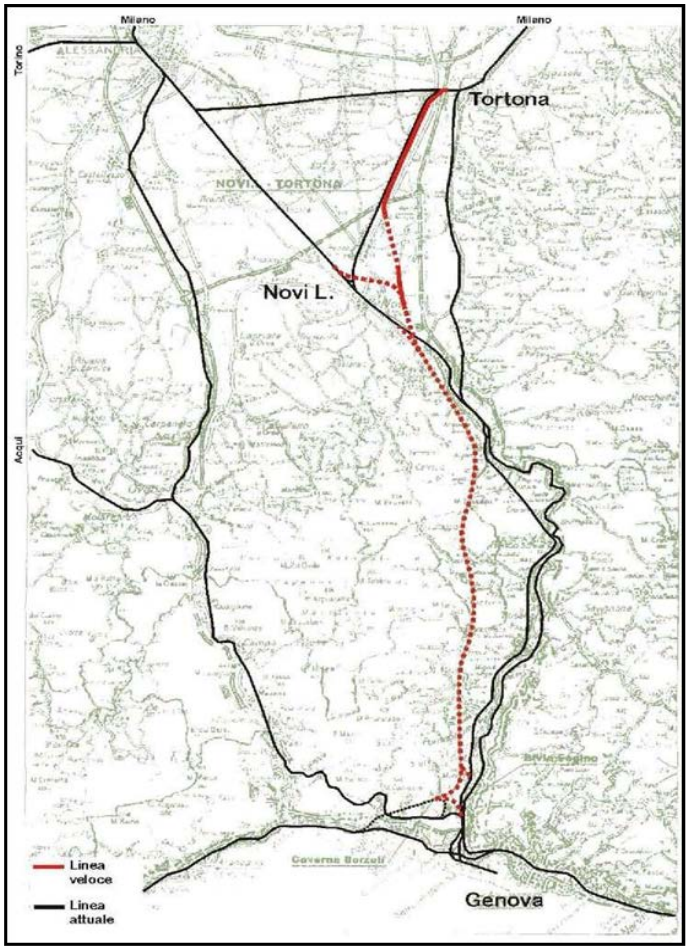


**Figure 35: Giovi Pass**

The executive project has been completed. The preparation of the work sites is ongoing and first activities for the geognostic tests have been started in Val di Lemme.

In 2013 the studies regarding the shunt in Novi Ligure and bypass of Pozzolo Formigaro

were finalised. At the same time the project registered some delay in the administrative procedures such as postponed deadline for the land expropriation and regional approvals. The financing was also affected by a temporary reduction that should be recovered by 2014.

**Doubling of the Bergamo – Treviglio Line (PSP 5.1.1.3.5)**
Is in operation

**Doubling of the Bergamo – Treviglio line – noise Mitigation (PSP 5.1.1.3.6)**
The doubling of the capacity of this section led to additional environmental requirements. In order to mitigate the noise emissions and to protect the affected residents, noise screens became necessary. These works are still on-going and will be finished approximately in 2014.

**Quadrupling of Tortona – Voghera Section (PSP 5.1.1.3.7)**
The building licence has been submitted. The start of works has been postponed to 2017.

**ETCS Projects (PSP 5.2.1.1 to 5.2.1.4)**
During 2013 the technical specifications for the following sections were finalised:
- Milano-Monza-Chiasso
- Domodossola-Novara (via Borgomanero)

Regarding the section Milano-Monza-Chiasso the chosen technical solution is ERTMS level 2 (BL 3.0.0). The documentation needed for the tender has been finalised and the tender procedure is expected to start at the beginning of 2014.

Regarding the section Domodossola-Novara (via Borgomanero) the technical solution is ERTMS Level 1. The contractor has been selected and the activities will start in 2014.

The progress of the projects on the cross border sections is presented in paragraph 2.8.1.

### 2.9.2.2 Risk Management and Chances
The risk for the Italian infrastructure investments continues to be the funding. For projects including relevant works the “financing life cycle” was split in two phases: financing up to the building licence and financing of the works. The latter phase has been delayed for several projects.

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

## 2.9.3 Outlook
Since the lasting financial constraints we expect for 2014 to proceed with the analysis and preliminary studies of technical projects that can contribute to increase the capacity and the interoperability of the Italian section of the corridor with limited financial.

# 3 Noise Platform of the Ministries

Railway noise remains a key topic for the future growth of freight traffic on the Corridor. The goal is to achieve considerable and lasting reductions in train noise by 2020. Although noise is a European issue, there are different approaches within the Corridor to cope with this problem.

The retrofitting of existing wagons is one of the most efficient and effective ways to significantly reduce the noise by 2020. The noise platform of the ministries of transport of Corridor A/1 continued to discuss the further development and introduction of incentive schemes in the corridor countries.

In 2013, the following approaches existed on the Corridor:

**The Netherlands:**
On the Dutch rail network, the incentive system gives a bonus to silent wagons used per kilometre, which are older than 2008 and retrofitted with low noise brakes.

**Germany:**
A noise differentiated track access charging system (NDTAC) was started on 9 December 2012 with financial incentives for silent wagons, which had been retrofitted with silent brakes since September 2012, as well as for silent axles 2012.
The system consists of two components:

a) A track access surcharge of 1% on freight trains, which consist of less than 80% of silent wagons, is applied.
b) Wagon owners receive a bonus based on the kilometres run per axle, which are retrofitted with low noise braking systems.

**Switzerland:**
In Switzerland, the RUs receive a bonus on the track access charges per kilometre for each silent axle running on the network. Moreover, there is an announcement for 2020 that there will be further measures to ban "non-silent" wagons from the Swiss network.

**Belgium and Italy:**
No incentive programmes are yet introduced by the ministries. Italy is interested in the results from the German programme, and furthermore the financing has to be solved.

**EU:**
The EU has re-established the noise working group and works on a regulation to implement a European wide approach. Moreover there are discussions on EU-funding for retrofitting of freight wagons, as well as a revision of the TSI Noise, so that the maximum noise levels are also obligatory for existing rolling stock about 10–12 years after a transition period.

# 4 Conclusions

For the future development of the Corridor, the following aspects may have an impact and should be taken into account:

Critical aspects:

- Rail transport is facing more and more strong competition from inland water-ways and road transport, which is far more flexible and has less fixed costs;
- In general, the internal market mainly in the southern part of Europe still stagnates thus limiting the import and export trade. However, there is a very small tendency for revival, but it will still need some years to significantly contribute to the economic growth;
- Single wagon load is further declining and no longer an option for market growth. New logistics and business concepts are needed to compensate this loss of rail freight services;
- Railway noise becomes more and more a serious critical issue because the public no longer accepts an increase in rail freight traffic. This endangers also the implementation of railway infrastructure projects by increasing investments and causing considerable delays for completion.

Supportive aspects:

- Firm strategic objectives of the European Commission and in the national plans of the ministries to enhance shift towards rail transport are noted;
- The Trans Alpine rail transport recovers and becomes the driver of growth due to political decisions like upgrading the lines to PC 80 400 intermodal gauge, ERTMS implementation on the entire Swiss network and infrastructure improvements like the Gotthard and Ceneri base tunnel etc.;
- Go life of Maasvlakte 2 in 2014 with new container terminals and train connections should boost rail transport, especially as it is favoured in the contracts of terminals with the port company;
- Go life of the Liefkenhoek Rail Link in 2014 will connect the left and the right bank of the river Scheldt in the port of Antwerp;
- Go life of further extensions of hinterland terminals along the Corridor such as Logport III in Duisburg, Basel Kleinhüningen and upgrades in terminals in Milan/Melzo will improve logistics and capacity;
- Increasing the train length to 740m along the Corridor would deliver additional capacity of around 15% on the existing lines. The implementation of the required measures would amount to additional investments of about 150 million Euro, which are now depending on the ministries to raise the funding;
- The allocation of international train paths dedicated to freight from one single Corridor One-Stop-Shop considerably eases the access to rail capacity. The further development of this marketing concept and enlargement of the C-OSS offer is key for improving the competitiveness of the RUs in future

The corridor will continue to make major steps forward in the scope and implementation of the corridor programme, the implementation plan, the publication of corridor information and

the marketing concept for corridor capacity exclusively dedicated to freight. This development is very important in view of the scarcer budget situations of ministries, because these measures are less expensive and deliver also high potential in addition to big investment projects.

The still existing instable situation and immaturity regarding the specification, products and conditions for deployment of ERTMS complicates considerably the planning of the implementation, for track-side as well as for on board equipment of the RUs. The corridor will continue to mitigate this difficult situation by supporting the preparation of economical test- and authorisation processes, as well as taking into account the specific needs of the RUs and providing comprehensive information which is needed in time for equipping and starting operations with ERTMS.

The national funding situation of rail infrastructure is not in line with the investments needed to provide and maintain the required quality of service in future. In addition, costs are increasing, also due to more regulations asking always for higher standards. In particular in Germany and Italy, the member states need urgently to dedicate more budgets to rail transport in order to support the corridor idea for a joint development of the corridor infrastructure thus enabling growth of rail transport as it is aimed for in the White Paper on the European transport policy. The corridor will continuously discuss the budget requirements with the Executive Board members and point out the related risks.

The products and services to be offered by the C-OSS should be reviewed after the first allocation phase. Possible improvements and lessons learned should be considered in the preparation of the time table period 2016. In this respect, the corridor will strongly favour the introduction of a more flexible pre-arranged path concept, which allows a much higher capacity usage. Furthermore, the processes for construction, offering and allocating of international capacity should be reviewed and the guidelines and the Path Coordination System (PCS) adapted accordingly. This includes also the finalisation of the interfaces between PCS and the national booking tools by the IMs.

The Rail Freight Corridor Rotterdam – Genoa, respectively Rhine-Alpine (from 2014 on) is the nucleus for developing competitive rail transport solutions for the whole of Europe. It has to be concluded, that the overall situation justifies the continued and strong support through the ministries and the European Commission in providing stable and sufficient budgets, which is now of utmost importance to establish the corridor targets as they have been announced and expected by the rail freight market.

# List of Figures

# List of Abbreviations

| | |
|---|---|
| ABS | Ausbaustrecke (enhancing and upgrading an existing track) |
| AB | Allocation Body |
| AC | Alternating Current |
| AG | Aktiengesellschaft (German public limited company) |
| ANSF | Agenzia Nazionale per la Sicurezza delle Ferrovie |
| BAV | Bundesamt für Verkehr (Swiss Ministry of Transport) |
| BIF | Bahn Infrastrukturfonds |
| BLS | Bern Lötschberg Simplon (Swiss railway) |
| BMVI | Bundesministerium für Verkehr und Digitale Infrastruktur (German Ministry of Transport) |
| bn | Billion |
| BP | Bauprojekt (construction project) |
| BS | Baustufe (construction stage) |
| B.V. | Besloten Vernootschap (Dutch private limited company) |
| BVWP | Bundesverkehrswegeplan |
| B3 | ETCS baseline 3 (SRS version 3.x.x) |
| CBT | Ceneri base tunnel |
| CCS | Control Command and Signalling (TSI) |
| CEO | Chief Executive Officer |
| CER | Community of European Railway and Infrastructure Companies |
| CHF | Swiss Franks |
| CID | Corridor Information Document |
| CIME | Corridor Information Management Environment |
| CIP | Customer Information Platform |
| C-OSS | Corridor One-Stop-Shop |
| CR | Change Request |
| DB | Deutsche Bahn (German railway) |
| DC | Direct Current |
| EBA | Eisenbahnbundesamt (Germany) |
| EC | European Commission |
| EEIG | European Economic Interest Grouping |
| EIA | Environmental impact assessment |
| EIM | (association of) European Rail Infrastructure Managers |
| ERA | European Railway Agency |
| ERTMS | European Rail Traffic Management System |
| ESTW | Elektronisches Stellwerk (electronic interlocking) |
| ETCS | European Train Control System |
| EU | European Union |
| EWIV | Europäische wirtschaftliche Interessenvereinigung (EEIG) |
| ExB | Executive Board |
| FABI | Finanzierung und Ausbau Bahninfrastruktur |
| FRS | Functional Requirement Specification |
| GA | General Assembly |
| Gbf/ GB | Güterbahnhof (cargo station) |
| GBT | Gotthard base tunnel |
| GSM-R | Global System for Mobile Communication, subset Rail |
| ha | hectares |
| HC | High capacity |
| HS | High speed |
| Hz | Hertz ($^1/_s$) |
| IBN | Inbetriebnahme (putting into operation) |

| | |
|---|---|
| IM | Infrastructure Manager |
| INEA | Innovation & Networks Executive Agency |
| IT | Information Technology |
| IQ-C | International Group for improving the quality of rail freight traffic on the North–South corridor |
| IWW | inland waterways |
| KPI | Key Performance Indicators |
| kV | kilo Volt |
| L | Level (ETCS), in combination with a number |
| LBT | Lötschberg base tunnel |
| LL | composite brake blocks |
| LoI | Letter of Intent |
| LS | Limited Supervision (ETCS) |
| m | meter |
| MAP | Multi Annual Programme |
| MB | Management Board |
| mio | Million (€) |
| MIT | Ministero delle infrastrutture e dei trasporti (Italian ministry of transport) |
| MoT | Ministry of Transport |
| MoU | Memorandum of Understanding |
| MS | Member state |
| NBS | Neubaustrecke (new line) |
| NEAT | Neue Eisenbahn Alpen Transversale (New Railway Alp Transversals) |
| NTFA | Nuova Trasversale Ferroviaria Alpina |
| NDTAC | Noise differentiated track access charges |
| NSA | National Safety Authority |
| OPE | (TSI) Operations |
| p. | page |
| PaP | Pre-arranged Path |
| PfA | Planfeststellungsabschnitt (planning sections) |
| PGV | Plangenehmigungsverfahren (acceptance process of a construction plan) |
| PR | public relations |
| PIM | Programme Infrastructure Manager |
| P.M. | Posto Movimento (evasion tracks) |
| PMO | Programme Management Office |
| PP | Priority project |
| PSP | Project Structure Plan (Number) |
| RBC | Radio Block Centre |
| RC | Reserve Capacity |
| RFI | Rete Ferroviaria Italia (Italian IM) |
| RI | Radio Infill (ETCS) |
| RNE | RailNetEurope |
| RU | Railway Undertaking |
| SBB | Schweizerische Bundesbahn (Swiss railway) |
| SIM-Corridor | Simplon-Intermodal Corridor |
| StA | Streckenabschnitte (line sections) |
| S.p.A. | Società per azioni (Italian public limited company) |
| SRS | System Requirement Specification (ETCS) |
| t | metric ton(s) |
| TAF | Telematic Applications (for) Freight |
| TAP | Telematic Applications (for) Passengers |
| TEIV | Transeuropäische-Eisenbahn-Interoperabilitätsverordnung |
| TEN-T | Trans European Network (for) Transport |
| TEN-T EA | TEN-T Executive Agency (now INEA) |

| | |
|---|---|
| TEU | Twenty foot equivalent unit (standard container) |
| TIS | Train Information System |
| TSI | Technical Specification (for) Interoperability |
| TTSV | Track Train System Validation |
| UG | Users Group (ERTMS) |
| UIC | International Union of Railways |
| URL | Uniform Resource Locator (internet address) |
| UVS | Umweltverträglichkeitsstudie (EIA) |
| V | velocity (speed) |
| VP | Vorprojekt (pre-project) |
| WG | Working Group |
| WGM | Working Group Manager |
| WP | Work Packages |
| ZEB | Zukünftige Entwicklung der Bahninfrastruktur (Switzerland)<br>Future development of rail infrastructure |

# Annexes

**Annex A:** Work methodology and organisation

In the 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 former IQ-C working group activities, measures related to the implementation of Regulation (EU) No 913/2010 (since 2011) as well as all further activities, which contribute to the corridor enhancement. Under the roof of the PMO working groups have been established, chaired by Working Group Managers.

All activities of the WGMs and the PIMs are coordinated and consolidated by the PMO. A monitoring system has been established to track the progress of the work on the corridor. The reporting of the WGMs and the PIMs is corresponding to the underlying baseline.

The term *"baseline"* refers to a structured schedule of measures and activities which are necessary to progress in the corridor programme and comprises the timespan from the planned start to the planned end. Each WGM and each PIM is 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 WGs, containing work packages and activities had been prepared and linked with the implementation plans of each IM[3], 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 work. The baselines are frozen as the target and shall be kept. Of course, by implementing the plan during the 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, the changes may be approved and the baseline adapted accordingly. The monitoring process is completed by a yearly report, presented in the present document, summarizing the results and the work progress of the year elapsed.

At the beginning of each chapter, some key performance indicators display the status of the WG or the projects of the IMs. Figure 37 displays such a header as an example.

[3] SBB and BLS subsumed

| | | | | | |
|---|---|---|---|---|---|
| **Due Date of Reporting** | 07.12.07 | **WG Result [%] Plan** | 10 | **WG Result [%] Actual** | 10 |
| **Work Packages Total** | 4 | **Work Packages Finished** | 1 | **Work Packages Pending** | 3 |
| **Start** | 01.11.07 | | | | |
| **End** | 31.12.15 | | | | |

| PSP | WP | Results and Milestones achieved |
|---|---|---|
| 1.1 | Work Package 1 | Final report and documentation presented. Work package closed. |
| 1.2 | Work Package 2 | First 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/ 2009 |

**Figure 36: 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 present report. Usually, the due date is 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.

A final remark about the work progress, which is measured in [%] based on the “earned value”: 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. Plans have been overworked in 2012.

Earned value means that only tangible results providing an (intermediate) outcome are counted. In other words: the work progress sticks to the milestones which have been passed up to certain date. Each milestone marks an earned value and a certain result: a completed plan study, an approved budget, a go live of a project or a draft or final concept. Activities or project phases which have been begun but not fully completed do not count for the overall work progress.

The information given in this report is based on the above mentioned principles. 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 WGM. 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.