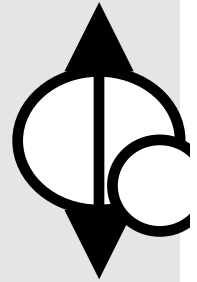


**Corridor A / IQ-C**



**International Group for Improving the  
Quality of Rail Transport in the North-South  
Corridor and  
Executive Board ERTMS Corridor A**

**5<sup>th</sup> Progress-Report  
May 2010**

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

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0.	Management Summary .....	3
1.	Background information.....	5
2.	IQ-C Action plan 2006–2012 for rail freight corridor Rotterdam-Genoa .....	6
3.	Implementation of ERTMS/ETCS in the North-South-Corridor .....	7
4.	Status of implementation of measures in the responsibility of Infrastructure Managers.....	10
5.	Status of implementation of measures in the responsibility of the National Safety Authorities.....	11
6.	Enhanced cooperation of the Regulatory Bodies: Monitoring of market regulations .....	12
7.	Status of implementation of measures in the responsibility of the Ministries ...	13
8.	General Development of the rail freight transport on the North-South-Corridor, impact of implementation actions on the corridor .....	15
9.	Recommendations.....	21

#### Appendices:

I	Memorandum of Understanding, 9 January 2003
II	Letter of Intent deployment ERTMS, 3 March 2006
III	Memorandum of Understanding on the implementation of approval procedures for rolling stock, 7 June 2007
IV	Ministers declaration Genoa, 26 May 2009
V	Action Plan IQ-C 2006 – 2008 – 2012, June 2008
VI	Annual Progress Report Corridor A 2008 (Infrastructure Manager), May 2010
VII	Progress Report of the Regulatory Bodies Group 2009, April 2010
VIII	Progress report of the National Safety Authorities Group, April 2010
IX	Mission statement management committee IM and executive board Rotterdam – Genoa, 30 November 2006
X	Summary statutes of EEIG of Infrastructure Managers

## 0. Management Summary

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

- In January 2003 the Memorandum of Understanding (MoU) was signed by the Ministers of the four corridor countries namely Italy, Germany, the Netherlands and Switzerland. This scheme includes a range of quality improving short term measures which focus on actions not only from Infrastructure Managers but also measures that have to be implemented by the Ministries.
- In July 2004 an agreement was reached for facilitating EU-CH transit customs procedure benefiting all railway undertakings;
- In 2005 the Netherlands-German agreement was reached between the railway safety inspectorates on mutual recognition of drivers where possible;
- In March 2006, the Ministers signed – as a result of a mandate of the Ministers to the IQ-C Working Group – the “Letter of Intent ERTMS deployment on Rotterdam – Genoa corridor” (LoI) with the aim to complete the ERTMS/ETCS infrastructure on the corridor until 2015.
- In May 2006, the Ministries agreed upon a new Action plan 2006-2010 to focus and amend the actions of the MoU of January 2003.
- In June 2007, the Ministers agreed on and signed a Memorandum of Understanding on the implementation of approval procedures for rolling stock and cross acceptance of approval procedures of the competent supervisory authorities.
- In July 2007, corridor A funding requests had been submitted to the EC for subsidies of the TEN-T funding for ERTMS deployment on the corridor. In December 2007 the EC decided to grant € 89 million subsidies for corridor A (track side and rolling stock)
- In June 2007, the opening and beginning of operation of the Betuwe Route and the Loetschberg Base Tunnel stand for important steps on the way to an upgraded rail corridor with increased capacity and high quality performance.
- In May 2009, the Minister signed a common declaration in Genoa on the ERTMS corridor A and re-emphasised to implement ERTMS on the corridor by 2015, to “adopt solid implementation of decisions regarding financial commitments from national government” and “to request the Infrastructure Managers to make public the ERTMS implementation

plan". Also the Minister declaration included decisions on procurement and authorisation of ERTMS equipment and on the necessary European development of ERTMS baseline 3. At the same time a meeting on PP246 (railway axis Rotterdam/ Antwerp – Duisburg – Basel – Lyon/ Genoa) was held under the lead of EC vice-president and commissioner for transport Antonio Tajani.

- Between 2007 and 2009 all fields of activities were further developed. The organisation for the deployment of ERTMS/ETCS in the corridor was established. The Infrastructure managers have set up the Management Committee and founded the EEIG Corridor Rotterdam-Genoa EWIV to steer the overall improvement program 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. Since 2008, the IQ-C Working Group of the Ministries of Transport and the ERTMS Executive Board are working together in very close cooperation and coordinate 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.
- The Infrastructure Managers have further developed their quality improving actions, such as 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 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.

### *Conclusions*

The market for international rail freight traffic on the North-South-corridor has been affected by the ongoing economic crisis in 2009. However the market share of rail freight on the corridor is slightly increasing and since 4<sup>th</sup> quarter of 2009 transalpine traffic on the corridor volume is picking up again. The market still has a big potential. The quality improving scheme, established by the Ministers of Italy, Germany, the Netherlands and Switzerland is affecting results due to the created network of the relevant stakeholders. The close monitoring of volumes, punctuality and costs shall be continued from 2008 onward and shall be made available to all interested stakeholders.

For the further development of the corridor A, the main focus of work is on the successful implementation of ERTMS which is a task of all involved parties and stakeholders.

## 1. Background information

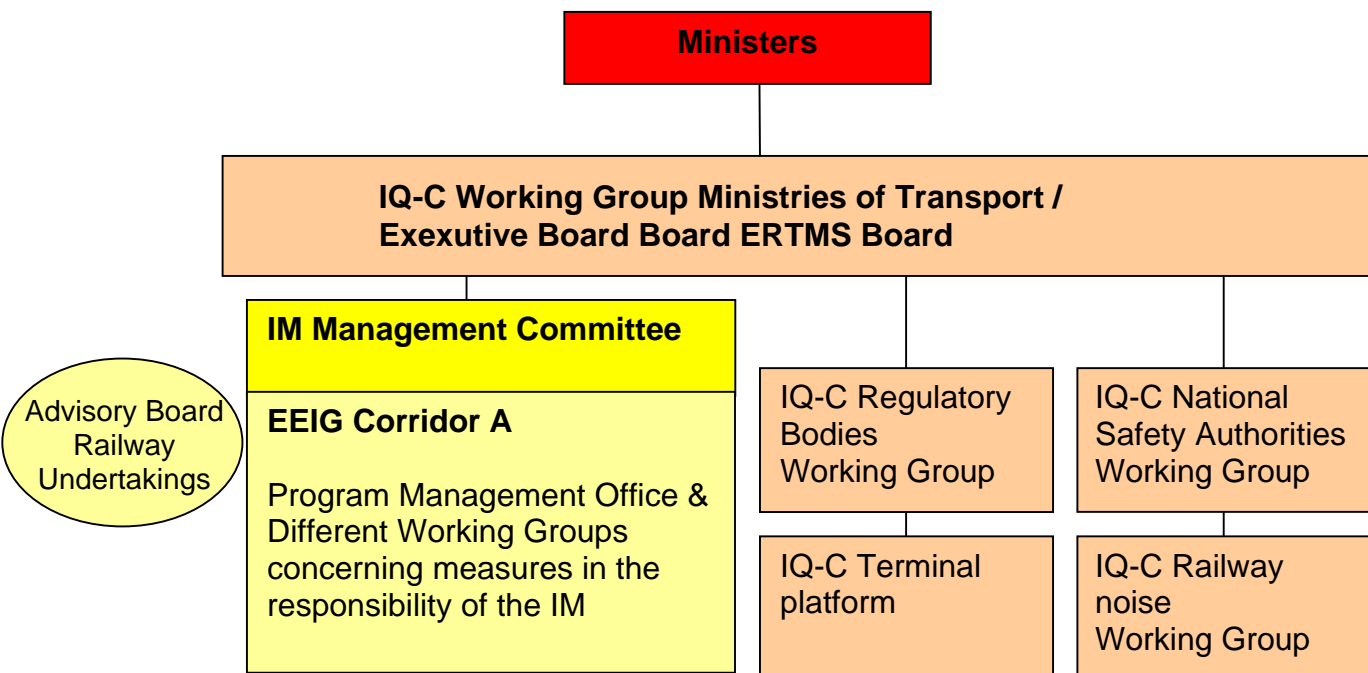
A range of competitive rail services in the North-South-Corridor in terms of both quality and quantity is the key to a successful policy aimed at shifting the highest possible volume of goods transport from road to rail.

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

In July 2004 the first progress report was submitted to the Ministers. They took note of the report and gave the mandate to continue with the work and to carry out a study about the implementation of the ERTMS/ETCS in the North-South-Corridor. Together with the signing of the "Letter of Intent ERTMS deployment on Rotterdam – Genoa corridor" in Bregenz, 3 March 2006 (see appendix II), the second progress report was presented to the Ministers. Based on the requests of the Ministers, the working group agreed upon an action plan 2006–2010.

Herewith the working group is submitting the 5th report to the Ministers. This report reflects on the issues of the IQ-C Action plan 2006–2012 (see appendix V), the status of the activities, and the progress that has been achieved in specific areas to date.

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



With the year 2009, the corridor organisation includes a “Terminal platform” and a Working Group on Railway noise as new parts of the organisation from ministerial side. These new working groups will get in full operation during 2009 with respect to the aim of the Action plan (especially concerning Railway noise and Terminal issues).

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

## **2. IQ-C Action plan 2006–2012 for rail freight corridor Rotterdam-Genoa**

The Working Group IQ-C (in close cooperation with the Executive Board ERTMS) works on the Action Plan since the start of the working group in 2002. The actual Action plan was updated, concretised and prolonged until 2012 by the Ministries in August 2008. The focus of the last years was on the following actions:

- *Digital coordination*: IT data exchange mainly based on implementation and follow up of Europtirails and Pathfinder which are systems managed by the RailNetEurope cooperation scheme of Infrastructure Managers. Furthermore these systems have in future to be coordinated with TAF/TSI development to avoid parallel activities and redundant processes.
- *Monitoring Allocation and Performance*: with focus on the monitoring process of the allocation of train paths, performed speed and punctuality of freight services.
- *Improving punctuality*: to ameliorate the still not satisfying punctuality standard in the corridor to make transports on the corridor more reliable and attractive. The Infrastructure Managers have to develop a performance regime on the basis of punctuality measurements and a broader shared analysis of causes of delays. This includes the implementation of European Performance Regime on the corridor.
- *Improvement International Capacity Allocation process*: with the goal of a new common planning concept for the implementation of equal dates for final capacity allocation by harmonising national laws and introducing authorised applicants on cross border basis.
- *Integrated elimination of infrastructure bottlenecks*: includes the monitoring of actual traffic flow and a common planning of capacity development (e.g. number of available train paths and standardised infrastructure parameters) for medium and long term due to a still growing traffic volume on the corridor.

- *Mutual recognition of engine drivers*: has to be continued with focus on new possibilities of ETCS.
- *Mutual recognition of locomotives*: has to be continued with focus on development and implementation of IRL list with the aim of a multilateral agreement.
- *Monitoring of market regulations*: to continue the cooperation of the Regulatory Bodies for issues of common interest on the corridor.
- *ETCS implementation*: with the aim that international locomotives can use the corridor with just ETCS on-board by completing ERTMS/ETCS infrastructure in 2015. With ERTMS/ETCS, infrastructure managers can improve traffic management and enable safe and interoperable international rail freight traffic.
- *Terminal issues*: with the aim to improve the interfaces between terminal operators, intermodal operators, railway undertakings and infrastructure managers.
- *Harmonisation of operational rules*: rules necessary for train operation – ETCS and non ETCS mode – will be analysed and proposed to ERA for harmonisation on the European and corridor level.
- *Railway noise*: to realise harmonised and coordinated national approaches to cope with railway noise and to find proposals at corridor level.

The Ministries decided to adopt the Action Plan for the period 2010 – 2014 for the following reasons: (1) delays in the implementation of the improvement measures, (2) new schedules of the business plan of the infrastructure managers, (3) clarify the relevance of actions in the context of developments on EU level and (4) the overall consensus to take on board new actions regarding the objective to harmonise the technical characteristics of the corridor. The IQ-C Working group asks the Ministers of Transport of the corridor countries to approve the adopted action plan.

### **3. Implementation of ERTMS/ETCS in the North-South-Corridor**

#### **A. ERTMS development on Corridor level**

The work on ERTMS implementation is a core activity on the development of the corridor Rotterdam – Genoa. This was again recognised at the Genoa conference of Ministers 26 May 2009. The Ministers decided to implement ERTMS on the corridor by 2015, to “adopt solid implementation of decisions regarding financial commitments from national government..” and

“to request the Infrastructure Managers to make public the ERTMS implementation plan” (see appendix IV). Also the Minister declaration included decisions on procurement and authorisation of ERTMS equipment and on the necessary European development of ERTMS baseline 3. ERTMS implementation on the corridor is also progressing in practice. In 2009 another part of the corridor was taken into operation (Rotterdam port railway line equipped with ERTMS baseline 2 level 1) bringing the implementation of ERTMS on the corridor lines up to 10%. Because of the lack of funding conditions in Germany the corridor is facing serious risks of delaying the process of the agreed implementation by 2015.

Generally, preparations are well advanced to start procuring ERTMS equipment by mid 2010.

## **B. European progress**

### *EU Masterplan ERTMS published*

On 22nd of July 2009 the European Masterplan for ERTMS is published<sup>1</sup>. The Masterplan is in line with the Genoa declaration of Ministers and requires implementation of ERTMS on the corridor by 2015. The EU Masterplan foresees further implementation of ERTMS at 5 other European corridors as from 2015 and connects a number of ports and terminals by 2020. The Masterplan will be evaluated by 2015 regarding its 2020 milestones.

The European Masterplan is an important mutual commitment from the EU Member States to implement ERTMS and integrates the ERTMS corridors into a coherent network for freight transport. The masterplan should also encourage Railway Industry and Railway sector to work actively together.

### *ERTMS Baseline 3*

At European level work is progressing regarding the development of the necessary specifications of baseline 3 of ERTMS. The EU institutions (EC and ERA) work together with industry on the basis of the MOU from 4th July 2008 regarding the development of ERTMS baseline 3 per 2012. The new baseline contains a number of technological improvements important for the corridor (like Limited Supervision, Radio Infill, Braking Curve etc.).

It was clarified by the European Commission by letter from director general Mr Ruete that tendering of ERTMS equipment could already start on the basis of baseline 3 which is under development. This is important to secure timely implementation of ERTMS.

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<sup>1</sup> Commission decision 2009/561/EC of 22.7.2009 amending Decision 2006/679/EC as regards the implementation of the technical specification for interoperability relating to the control-command and signaling subsystem of the trans-European conventional rail system.



The Infrastructure Managers continue to work very closely with European institutions and European coordinator ERTMS Karel Vinck to ensure development of ERTMS in line with the interests of the corridor. In a pro-active way solutions are developed and getting accepted for upcoming issues like Braking Curve model, Krypto Key Management.

#### *TEN-T funding*

In 2009, European Commission launched the 2nd call TEN-T ERTMS and a call in the framework of the EU economic recovery plan for the 2007-2013 period. Applications were done for ERTMS in Germany, for the Programme Management Office of the corridor by the EEIG and for the creation of an European testing platform (called ETIP). EC did not approve the ETIP request because of the limited maturity of the proposal.

#### **C. *Financing and the corridor ERTMS implementation plan***

The Infrastructure managers of the corridor were not able to publish the corridor ERTMS implementation plan as was requested by the Ministers in the Genoa declaration. This is due to the lacking financial framework on the German part of the network. Dialogue on this issue is ongoing between German Ministry of Transport and Deutsche Bahn.

#### **D. *Cross-border authorisation of putting into service of ERTMS equipment***

The safety authorities are asked to develop a framework for testing and authorisation for putting into service ERTMS equipment in infrastructure and rolling stock on the corridor. The safety authorities clearly recognise the need for close cooperation for the authorisation process of ERTMS equipment. Where possible the principle of cross-acceptance of approval decisions will be used among the safety authorities to reduce costs and time of the authorisation process. Close cooperation between safety authorities, infrastructure managers is established to support this process. By means of this process the number of required tests necessary for authorisation can be reduced substantially. A testing platform, supported at European level, may help to further reduce costs and time required for the authorisation.

#### **E. *Cooperation on procurement of ERTMS equipment***

The Infrastructure Managers have considered the possibility of cooperation in common procurement procedures for the purchasing of ERTMS. Common purchasing is not recommended by them because of several reasons (interfaces with national systems, issue of buyers syndicate under competition law etc.). The Infrastructure Managers do recommend and have elaborated the possibility to use common procurement clauses (to allocate the risks to the parties concerned) especially necessary for coordinated cross border ERTMS implementations.

Where possible, the Infrastructure Managers will do the procurement of ERTMS equipment in a parallel way.

#### **4. Status of implementation of measures in the responsibility of Infrastructure Managers**

As a follow up from the works already started in 2008, the EC, the Executive Board and the CEOs from all corridor IMs fully approved the baseline 3 deployment strategy in spring 2009. At a meeting of the transport ministers in Genoa the new strategy was officially adopted, including a slightly revised timeline. The corridor organisation has continued its work to prepare the coordinated tendering of the first ETCS lots/ projects on the corridor. Approximately three years after the MC mission statement for Corridor A, the MC revised and slightly modified the vision for the corridor in a workshop. More important, it was a strong endorsement of the works carried out so far and an important indication that the direction of the corridor programme is assessed as the right one.

The PMO/ the EEIG set up and submitted a 2nd TEN funding application for the corridor organisation, following a call from the TEN-T EA (EC). In a pre-notification the EEIG was informed that European co-financing is proposed for 2010 – 2013; summing up to a total volume of 2.7 Mio. €. Based on the same call, some additional ETCS measures and projects (all trackside) along Corridor A were proposed for a co-financing:

- Upgrade of Betuwe line to 2.3.0d (2 Mio. €)
- Three Corridor A sections in Germany (13.8 Mio. €)
- ETCS L1 LS prototype in Germany (3 Mio. €)

The EEIG established appropriate ways to communicate with clients and stakeholders. Apart from daily communication three official RU advisory board meetings were held. In cooperation with the ministries terminal owners and intermodal operators were consulted in two dedicated terminal platform meetings. This led to constructive discussions and actions, e.g. a task force quality managed by HUPAC. The EEIG is also in contact with various communities, regions and cities close to the corridor. They assess the development of the corridor as an opportunity for local/ regional business partners but are also interested in reducing railway noise to protect their local residents as good as possible. Following the need for an open communication and more transparency, the corridor organisation developed a webpage in 2009, which will go live in the 1st quarter of 2010.

A major ETCS risk (ETCS L1 LS braking curves safety parameters) was resolved in 2009, thanks to a joint work group of SBB, SNCF and ERA. Unfortunately, the other major risk of the corridor remains unsolved: ETCS funding in Germany. In total, the WGM and the PIMs reported 10 risks which are still open by end of 2009. Most items out of the risk portfolio refer to

technology (e.g. interfaces between the proprietary IT systems and Europtirails or Pathfinder) or funding (e.g. infrastructure projects in Italy).

In total, the achieved work progress until 2009, together with the new integrated corridor organisation provides first evidence for the fast and controlled growth of the corridor implementation from now onwards, and represent an important step towards the future corridor success (see appendix VI).

Despite all achieved progress, strong efforts in the field of capacity management and punctuality improvements are still necessary. A few milestones could not be realised until today because the effort calculated in the beginning was underestimated. This requires an adaption of the timetable of the action plan as well as enhanced resources from the infrastructure managers of the corridor countries.

## **5. Status of implementation of measures in the responsibility of the National Safety Authorities**

The members of the group are the representatives of the National Safety Authorities of the four bordering states of corridor A and Austria (Netherlands: IVW Dutch Transport and Water Management Inspectorate; Germany: EBA Federal Railway Authority; Switzerland: BAV Swiss Federal Office of Transport; Italy: ANSF Italian Railway Safety Authority; Austria: BMVIT Federal Ministry of Transport, Innovation and Technology; and as guests: representatives from ERA, the Corridor A Programme Management Office, ERTMS Users Group and Infrastructure managers) (see also appendix VIII).

### *Aim of the Group*

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

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

In order to achieve the target, a common and sound understanding about the technical, operational and safety related aspects of ERTMS had to be gained. Further, as a precondition, the different national requirements for authorising the putting into service have to be understood

before a common approach can be agreed on in order 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 prerequisites. 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 ERA.

### *Organisation*

The project is coordinated by a steering committee consisting of representatives of the participating national safety authorities. Two working groups have been established. The working group "Technical Issues" is focused on the technical issues of the authorisation of putting into service of ERTMS equipment whereas the working group "Approval Process" has the aim to develop a harmonised process for the authorisation of putting into service of ERTMS equipment. The results of both working groups are the crucial preconditions for a stream-lined, effective and transparent authorisation process for putting into service of ERTMS.

### *Mutual recognition of engine driver licences*

The mutual recognition of engine driver licences is furthermore one important action point of the IQ-C project. Qualifications of train drivers have partly a general character (for example eye tests) and partly a specific national character (for example track knowledge). National qualifications like track knowledge cannot be a subject for cross border recognition. The general qualifications can however be subject of cross border recognition. Germany and the Netherlands have developed a model for cross border recognition on these issues since 2005. This model will also be implemented at the borders Germany-Switzerland and Switzerland-Italy in a bilateral way. Germany and Switzerland have achieved the mutual recognition of several licence categories in 2009. The recognition between Switzerland and Italy is still not completely solved.

The approach on mutual recognition of drivers intends to be in line with and prepare the way for a full implementation of directive 2007/57/EC dated 3 December 2007 for international and at later stage national drivers.

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

The concern of the IQ-C Regulators was mainly directed towards the functioning of the international allocation process on the corridor in the last years. Therefore the IQ-C Regulators have decided to start a closer look on the actual allocation of train paths on the corridor.

Therefore, the Regulatory Bodies are in discussion with the different actors in the corridor (see appendix VII).

The regulatory bodies of the corridor are working together both on the basis of complaints received and on the basis of ex-officio investigations.

## **7. Status of implementation of measures in the responsibility of the Ministries**

### ***Terminal platform***

Based on a study on terminals of combined transport in 2008<sup>2</sup> a corridor terminal platform was set up in 2009 to assess the interface between terminal operators, infrastructure managers and railway undertakings. By increasing overall quality, efficiency and capacity of intermodal terminals, the competitiveness of the international rail freight transport on the corridor can increase considerably.

The present work of the terminal platform group is focussing on:

- examinations of the regulatory situation of the 'last mile' in the corridor countries and about possible regulatory needs,
- possibilities of opening of tracking and tracing applications for international trains for the needs of terminal operators
- development of additional measures concerning the monitoring of terminal capacity on the corridor as well as the capacity of the connecting lines to terminals on the corridor. 44 terminals are actually in the IM database. Further terminals can be included. The investigation is also relevant for decision making for connecting lines to be equipped with ERTMS.

### ***Customs transit procedure***

In February 2004, a simplified procedure for customs transit was laid down between the customs authorities of the participating countries on the basis of a Memorandum of Understanding („Swiss Corridor T 2“). This procedure grants considerable facilitations especially to railway enterprises which carry out transit operations not on the basis of the traditional cooperation procedure (“CIM consignment note”), but – as provided for as the regular case in EU Law – on their own behalf. As a matter of fact these transit transport operations already make up about 7 % of the rail transit transport through Switzerland, according to statements of the Swiss customs authorities.

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<sup>2</sup> Published on website [www.bav.admin.ch/verlagerung/01510/02367/index.html?lang=de](http://www.bav.admin.ch/verlagerung/01510/02367/index.html?lang=de)

The new customs law (Regulation 1875/2006/EC) envisages especially in case of third countries an electronic advance notification of security data which presents a considerable difficulty for the railway enterprises. EU and Switzerland have reached agreement that there is no prior notification requirement in the transfer of goods between Switzerland and the EU even after the introduction of the new EU security regulations. This has been made possible due to the contracting parties recognising the equivalence of their standards. This means, the corresponding Memorandum of Understanding can be prolonged and the procedure Swiss Corridor T 2 can be applied until 2011 (and eventually until 2013 as alternative to the NCTS New Computerized Transit System and the entry into force of the EU modernized customs code).

### **Noise**

The Ministers recognised in their Genoa declaration of May 2009 to coordinate their efforts with regard to creating incentives for retrofitting freight wagons for noise. It was recognised that retrofitting existing freight wagons is an essential part of an overall policy to reduce noise from the increasing amount of freight trains in an economic way. Developing noise barriers at the infrastructure is necessary in cases but the need for additional noise barriers may be reduced by effective measures at source.

Critical questions are analysed such as how wagon owners / railway undertakings can be convinced to take swift action from their part; retrofitting will involve additional investments for freight wagons.

Late 2009, a common study was launched with the aim of investigating existing national approaches for noise, to analyze incentive models for noise and the business cases for individual companies.

Also here the European perspective is very important to:

- Speed up the process of authorizing LL blocks to be put in service at European level;
- To support to give incentives / differentiate for external costs of railway noise, including the appropriate state aid regime;
- Asses the need to no longer allow the use noisy wagons on the European network by a certain date (e.g. between 2020-2025).

The study identifies 4 scenario's how retrofitting could be stimulated:

- Scenario 1: subsidies for initial investments in LL blocks plus 3 years of subsidies for additional life cycle costs. With pessimistic (1a) and optimistic (1b) scenario for costs development. Application scope country wide
- Scenario 2: subsidies for initial investments for K blocks plus 6 years of subsidies for additional life cycle costs;
- Scenario 3: subsidies for initial investments in K and LL blocks plus 6 years of subsidies for additional life cycle costs. Application scope: only corridor infrastructure lines.
- Scenario 4: subsidies for initial investments for LL blocks, no subsidies for additional life cycle costs. Prohibition of cast iron blocks to be introduced within 5 years. Application scope: country wide.

Based on this analysis the study concludes :

- A coordinated approach with the countries on the corridor (and over time at EU level) is potentially highly effective compared to national approach.
- Currently retrofitting on the basis of K blocks is economically not a viable approach;
- Limited impact on volume of freight is to be expected once subsidy scheme for additional life cycle costs is ended. This is highly dependent on development of costs of retrofitting and related life cycle costs.
- Subsidies can be limited in scenario 4, whereas the effectiveness if the scenario is highly dependent on the prohibition over time of cast iron blocks at European level.
- By subsidizing for a period of time the additional life cycle costs impact on volume of freight traffic can be reduced / avoided for that period. Again the financial impact is dependent mainly on the development of the cost level of LL blocks life cycle costs.

Based on the study the Ministries of the corridor recommend to develop a coordinated approach to stimulating retrofitting and make a proposal for coordinated measures to be introduced. Cooperation with EU and ERA is vital for the success of such approach.

## **8. General Development of the rail freight transport on the North-South-Corridor, impact of implementation actions on the corridor**

Infrastructure improvements, two new line sections of paramount importance had been taken into service, the Loetschberg base tunnel in Switzerland and the Betuwe line in the Netherlands. With a volume of about 9 bn € of investment, both projects implied a tremendous political and financial effort, and the very high technical standards a real challenge for the project teams in

charge, which have timely completed the projects. Both openings had been celebrated in outstanding inauguration ceremonies and represented real highlights in 2007. The 140 km of new corridor lines sum up to additional capacities of about 100 train paths between Rotterdam and Zevenaar, as well as from Frutigen to Raron. However, this additional capacity does not yet fully contribute to the corridor capacity due to the limited connecting line capacities. Further projects on the corridor advanced, respectively started or even completed initial plan studies, approvals of building licences etc.

The following table gives an updated overview of the planned infrastructure investments on corridor A, with the aim to make the corridor more competitive:

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



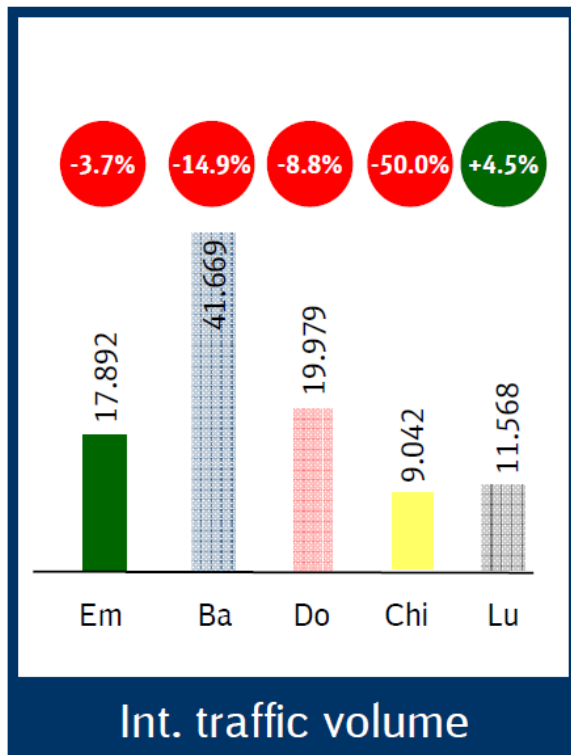
Investment Plan - Corridor A							State: 22.10.09
Project list with funding status, elaborated by WG Capacity							checked by: ProRail, DB Netz, SBB, BLS, RFI
Period	Year	Country	Line section (from North to South)	Project	Cost (M €)	Funding Status	Remarks
2007 - 2014	2007	NL	Kijfhoek - Zevenaar	Betuwe Line	4.580	Secured	
	2007	CH	Frutigen - Brig	Base Tunnel	2.800	Secured	
	2009	NL	Maasvlakte I - Kijfhoek	25 kV + ERTMS	-	Secured	(included in Betuwe project)
	2009	NL	Meteren	improving links Betuwe Line	6	Secured	
	2010	CH	Castione	upgrade	18	Secured	
	2011	CH	Bern (Rüti - Zollikofen)	3rd track	40	Secured	
	2011	IT	Domodossola - Novara	Gozzano bypass	31	Secured	
	2011	IT	Novara-Alessandria	upgrade line	13	Secured	
	2011	IT	Luino-Laveno	upgrading	21	Secured	
	2012	CH	Bern - Thun	Block distance	25	Planned	
	2013	NL	Maasvlakte II - Maasvlakte I	New line + Marshalling Yard	30	Secured	
	2013	NL	Kfh (Barendrecht - Kijfhoek)	ERTMS	36	Secured	
	2013	NL	ZvO Zevenaar - Border	ERTMS, 3rd track, voltage chg.	100	Secured	Dates to be confirmed by NL/DE
	2014	DE	Emmerich - Oberhausen	3rd track	900	Secured	Dates to be confirmed by NL/DE
2014	IT	Bergamo-Treviglio	2nd track	95	Secured		
2014	IT	Novara	Node upgrade	471	Planned		
2015 - 2019	2015	IT	Brig - Domodossola	RoLa 4m (P/C 80)	tbd	D / R	to be planned
	2015	IT	Domodossola - Novara	upgrade 4 stations for 4m	15	D / R	to be planned
	>2015	DE	Border - Emmerich	3rd track	200	Secured	Dates to be confirmed by NL/DE
	2016	DE	Mannheim - Offenburg	3rd + 4th track	600	Secured	
	2017	DE	Mainz/Wiesb. - Mannheim	HS line	2.600	Planned	
	2017	CH	Basel - Bellinzona - Chiasso	Block distance 3' freight trains	250	Planned	incl. 750 m Chiasso
	2017	CH	Erstfeld - Biasca	Base tunnel	6.000	Secured	
	2017	CH	Bellinzona-Luino	line upgrade	70	Planned	
	2018	IT	Gallarate - Rho	upgrade	500	Planned	
	2018	IT	Tortona - Voghera	4 tracks	600	Planned	
2019	CH	Bellinzona - Lugano	Ceneri Basetunnel	1.400	Secured		
2019	IT	Novara - Oleggio - Arona	2nd track 4meters	535	Planned		
2020 - 2024	2020	NL	Maasvlakte I - Kijfhoek	tbd	tbd	D / R	study harbourline
	2020	NL	Breda - Bortel	tbd	tbd	D / R	programme high frequencies
	2020	NL	Kijfhoek - Zevenaar	additional links Betuwe	tbd	D / R	programme high frequencies
	2020	DE	Offenburg - Basel	4 tracks	3.100	Secured	
	2020	CH	Liestal	fly-over	120	Planned	
	2020	IT	Seregno - Bergamo (-Treviglio)	Gronda est	1.000	Planned	
	2021	IT	Chiasso - Seregno - Monza	4 tracks	1412	Planned	
2025 + later	2025	CH	Biasca - Bellinzona	tbd	tbd	D / R	
	2025	CH	Bern - Thun	3rd track part	200	D / R	
	2025	CH	Frutigen - Brig	2 track, part 2	300	D / R	
	2025	IT	Laveno - Luino-CH	Gronda ovest	1.270	Planned	
	2026	IT	Arquata - Genova	Terzo valico, Giovi pass	5.060	Planned	
Total Investments for bottleneck elimination (M €)					34.398		
Legend	Secured = Financed and approved projects						
	Planned = not yet financed or approved projects						
	D / R = (Development and Review) Studies or projects to be shifted in time						

Figure 20: Corridor investment plan<sup>10</sup>

### International traffic volume

The global financial and economic crisis resulted in a significant decline in traffic volume on Corridor A, as can be seen in the figure below. The border station of Emmerich faced a moderate decline, whereas in Basel and Domodossola the downturn was even worse. The moderate decline of traffic via Zevenaar shows also the increasing usage of the Betuweroute at the expense of the old routes (such as Venlo). Besides the given economic and traffic situation, capacity in Chiasso was reduced due to constructions works at Monte Olimpino II, which led to

a partly closing of the line since June 2009 (to be reopened in April 2010). The traffic was redirected to other routes. This is also the reason why in Luino the volume of the international traffic grew by 4.5%, contrary to the overall economical situation. The strongest decline in the traffic volume was visible in the first half of 2009, whereas the second half already showed signs of recovery.



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

### *Intramodal competition*

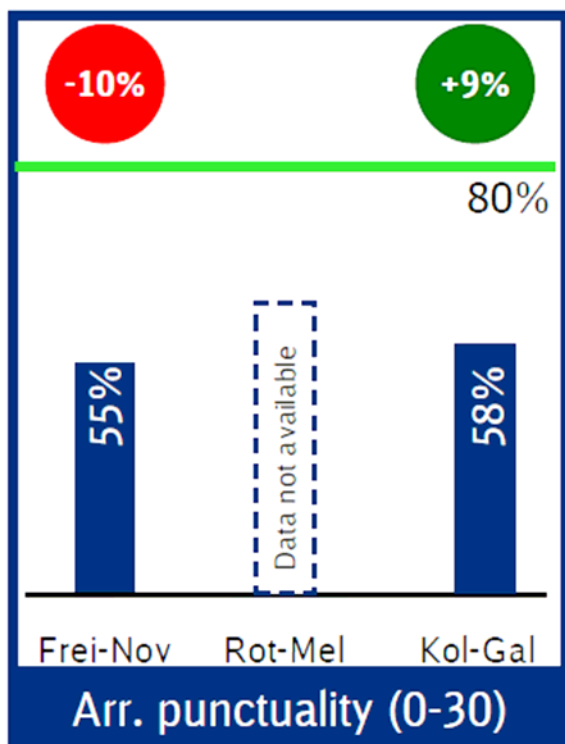
Intramodal competition is well established on the whole corridor Rotterdam – Genoa. The activities of a rising number of railway undertakings and intermodal operators in the rail freight market are a good sign for an open market access and functioning competition between railway services. The existing intramodal competition enhances the productivity of the freight rail market and stimulates new market activities. In 2009, e.g. there were 7 railway undertakings active on the Swiss part of the corridor.

### *Arrival punctuality*

The arrival punctuality for freight trains on selected traffic relations can be seen in the figure below. A heterogeneous feedback must be drawn. For the rolling highway traffic (“Rollende Landstrasse”) Freiburg – Novara and v.v. the arrival punctuality figures dropped by 10%. This non-satisfying situation was predominantly caused by an increased amount of construction works in the section between Freiburg and Basel in Germany. As the rolling highway train

service is calculated with a relatively high average speed in the time table, each pause or interruption of the train affects directly the arrival time.

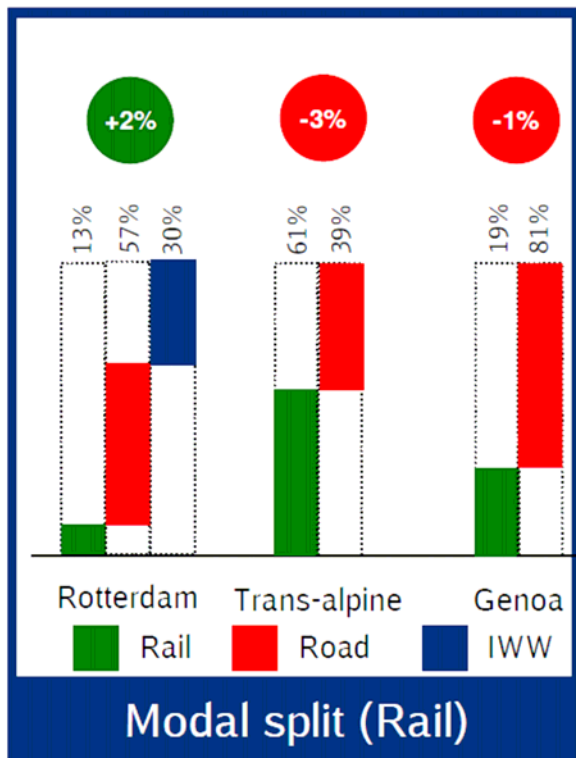
Significant quality improvements could be achieved for the transport between Cologne and Gallarate (and v.v.). Coming from a poor quality level of only 49% in 2008, the arrival punctuality climbed up to 58%. As a conclusion, all figures are still non-satisfying. Besides the reasons mentioned above, it must also be noted that more and more passenger services are offered and planned in the time table, especially during daytime. This narrows the free slots for freight trains, in the time table planning phase as well as in daily operations.



**Definition:** average punctuality level (arrival at destination within a 30 minutes time span) for selected relations of: Freiburg - Novara; Rotterdam - Melzo and Köln - Gallarate (all start/ end points of these transport relations are directly located on Corridor A). A level of 80% is the target.

### Modal split

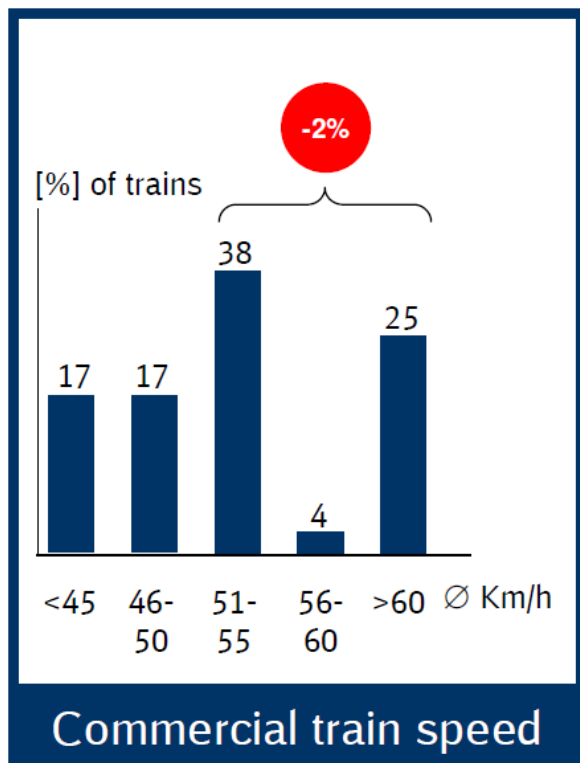
To measure the modal split (see figure below) three decisive locations had been chosen on the corridor. Rotterdam faced a slight increase in favour of rail, whereas Genoa lost a small part of rail transport. Trans-alpine traffic through Switzerland also lost a bit of its share from 64% down to 61%. This decrease has two main reasons. First of all rail transport is strong for raw materials (e.g. wood, coal) and products which are directly linked to heavy production industries like steel, cars etc. The downturn of the European industry production directly cut back the traffic volumes on rail, whereas road has a competitive advantage in goods for daily consumption. Secondly, road transport with its rather low amount of fixed costs reacted on the dropping traffic volumes with reduced transportation fees.



**Definition:** modal split [%] of freight traffic at sea port of Rotterdam, sea port 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). Measured on an annual basis.

### *Commercial train speed*

The transport time is a very important factor with regard to the performance and competitiveness of rail bound freight services. The Figure below shows the distribution of the commercial train speed. The train speed “as sold to the clients” is at a relatively high level, though the amount of train paths with an average speed of 50 km/h (or more) decreased by 2%. Complementing this statement, it could be recognised that the average speed of the fastest train paths grew. For some traffic relations and depending of the timely position of a train path throughout the day, the customers can be offered train paths of 65 km/h or even more than 70 km/h at average.



**Definition:** average speed [km/ h] of trains according to valid time table for selected relations: Freiburg - Novara; Rotterdam - Melzo and Köln - Gallarate (all start/ end points of these transport relations are directly located on Corridor A) in both directions. Measured based on annual time table and classified in five different categories.

## 9. Recommendations

The international working group IQ-C recommends continuing with the quality improving scheme on an adapted basis. The established platform between the Ministries of the corridor countries is deemed valuable and necessary by all the participants and stakeholders as it contributes significantly to further improvement of the quality of the rail freight transport in the North-South-corridor. The Corridor approach is also in line with the European transport policy which sees corridors as an important mean to enhance international rail freight. The corridor approach is also reflected in the European proposal for a regulation "towards a network competitive for freight" (COM(2008)852 dated 11 December 2008) proposing to make the setting up of corridor structures partly compulsory. The EU council of Ministers reached a political agreement about it in June 2009, recognizing the corridor A as one of the corridors to be developed. An extension to Antwerpen was foreseen. Also rail freight corridors are reflected in the green paper to review the Trans-European Networks for the 2014-2020 period.

The key to success for rail freight on the corridor is the strong commitment of all parties involved to improve the quality of rail freight services and to make it competitive. Therefore it is highly recommended that infrastructure managers further develop their dialogue with all market participants and enhance the transparency of their own work for the corridor, whereas the other parties shall be invited with the support of the ministries to contribute with improvement works under their responsibility.

The Ministries recommend:

- to supervise the implementation of ERTMS on the corridor closely by the Ministries, to request the implementation plan to be presented by the Infrastructure managers Management Committee and to assure the financing of the implementation of ERTMS as part of the national budget programmes, and to involve the national safety authorities closely in the implementation of ERTMS;
- to focus on the improvement of punctuality and traffic quality regarding all parties acting on the corridor and the harmonisation of technical characteristics of the corridor in the next stage of work. The renewed action plan 2010-2014 is the basis for this;
- to continue to involve the stakeholders via i.a. the terminal platform and the railway undertakings advisory board in the further development of the corridor, complemented by dialogue at national level with the stakeholders;
- to approve the amended and updated action plan for the years 2010 – 2014;
- to support efforts of all actors to obtain the realised traffic volumes and the rail traffic's share in the modal split of the corridor during the present economic crisis;

Therefore, the Ministries ask the Ministers of Transport in the Corridor for their approval of the 5<sup>th</sup> Progress Report 2010 and its recommendations.

## **Memorandum of understanding**

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

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

im Bewusstsein,

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

sowie aufgrund der Tatsache, dass

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

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

### **Geographische Abgrenzung**

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

### **Mitglieder der Arbeitsgruppe**

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

### **Aufgaben der Arbeitsgruppe**

#### **Ziel**

- Die Arbeitsgruppe soll den Weg bereiten für qualitativ und quantitativ konkurrenzfähige Bahnangebote, insbesondere einer bedarfsgerechten Bahninfrastruktur im Nord-Süd-Verkehr.

#### **Massnahmen**

- Die Arbeitsgruppe erhebt die bestehenden Angebotsmängel im Bahngüterverkehr (Kapazität, Verspätungen, Schwierigkeiten bei Grenzübertritten, Unterschiede in den technischen Vorschriften, fehlende Ressourcen usw.) und analysiert die Schwachpunkte.
- Die Arbeitsgruppe schlägt Massnahmen vor, um diese Schwachstellen so rasch wie möglich zu beheben und insbesondere dem freien Netzzugang auf den wichtigsten Güterverkehrsrelationen (siehe geographische Abgrenzung) zum Durchbruch zu verhelfen.

#### **Umsetzung**

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



## Zeithorizont

### Vorbereitungsarbeiten

Ab Mitte des Jahres 2001 wurde eine Analyse der Probleme im Nord-Süd-Korridor durchgeführt und im Frühjahr 2002 wurde die Umsetzung des im erarbeiteten Analyseberichtes enthaltenen Massnahmenplans an die Hand genommen.

### Weiteres Vorgehen

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

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

Lugano, 9. Januar 2003

### Herr Ralf Nagel

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



### Herr Pietro Lunardi

Minister für Infrastruktur und Transport  
der Republik Italien



### Herr Roelf H. de Boer

Minister für Verkehr, Wasserwirtschaft  
und öffentliche Arbeiten der Niederlanden



### Herr Moritz Leuenberger

Vorsteher des Eidgenössischen Departementes für  
Umwelt, Verkehr, Energie und Kommunikation



**LETTER OF INTENT ERTMS deployment on Rotterdam – Genoa corridor**

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

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

Background

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

The Ministers,

Considering that:

- In the EU the interoperability standards for European Train Control Systems are being developed in the framework of interoperability Directives 96/48/EC and 2001/16/EC. The adoption of the TSI “Control-Command and Signalling” under Directive 2001/16 (interoperability of the trans-European conventional rail system) concerning ERTMS in the Committee on the Interoperability and Safety of the European Rail System from November 2005 should be respected. Also, Switzerland is going to adopt provisions which are equivalent to Directives 96/48/EC and 2001/16/EC as a separate package of the Swiss Railways Reform.
- The European Commission postulated a deployment strategy in the Member States in its Communication to the European Parliament and the Council on the deployment of the European rail signalling system ERTMS/ETCS (document COM(2005)298) in July 2005.
- The European Commission appointed in July 2005 Mr Karel Vinck as Coordinator for the deployment of ERTMS on the Trans-European Networks with special emphasis on major freight corridors such as Rotterdam-Genoa.
- The infrastructure managers involved have, at the request of the Ministers of Transport, developed a realistic implementation strategy on each section of the corridor for the deployment of ERTMS. DB NETZ is currently finalising its cost-benefit analysis regarding the fastest way to implement ERTMS on the section Oberhausen-Mannheim. The implementation strategy is further described in the project plan.
- The Infrastructure Managers have expressed their support for the Ministers’ Letter of Intent.
- ERTMS is the backbone of an optimised corridor to realise a high increase of transport volume and quality. Implementation requires a joint effort from the Governments, infrastructure managers and railway undertakings.
- The European Commission proposed to support ERTMS deployment both for infrastructure elements and for on-board devices. For that purpose, the European Coordinator will make recommendations concerning the financing period 2007-2013.
- The draft resolution from the European Parliament supports the rapid implementation of ERTMS on the Rotterdam-Genoa corridor (2005/2168 INI, from rapporteur Cramer, 07.02.2006).
- Measures to improve quality on the corridor implemented in the framework of the IQ-C project should be continued and a work programme should be developed to facilitate the deployment of ERTMS on the corridor.

Aim:

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

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

1. ERTMS deployment on the corridor should be realised in 2012 except for the stretch Oberhausen–Mannheim, which will be fitted with ERTMS at the latest by 2015. In 2015 locomotives equipped solely with ERTMS should be able to run on the whole corridor. In Germany alternative technical solutions

(STM/PZB-LZB) will be put in place to ensure interoperability along the whole corridor from 2012 in a non-discriminatory way.

2. The scope of the ERTMS project is described in the project plan.
3. A coherent programme of related infrastructure investments should be developed on the corridor. This programme should further improve the efficiency along the corridor owing to the fact that it delivers operational benefits to the railway undertakings concerned. The programme will be described in the detailed implementation plan. The EU Member States concerned will refer to the Letter of Intent and the project plan in their request for EU TEN financing.
4. Requests, submitted jointly where possible, from the EU Member States involved (except Switzerland) for EU TEN financing in line with this Letter of Intent must be prepared by 1 October 2006 at the latest by the EU Member States of the corridor for the financing period 2007-2013.
5. The Ministers concerned will take all the necessary measures, taking into account the national rules for budget allocation and, where applicable, the European rules for state aid and competition, for the required funding for the national parts of the ERTMS corridor.
6. The Ministers involved will set up an executive committee to steer the implementation of the project. The European Commission and infrastructure managers will also be invited onto the executive committee. The executive committee will adopt its mission statement as soon as possible. It may give advice to the Ministers regarding changes to national railway regulations if these regulations would hinder implementation of the project. The executive committee will not change the responsibilities and powers of the Ministers.
7. The infrastructure managers should create a common management committee to implement the project plan for ERTMS deployment on the corridor. The management committee will report to the executive committee in line with this Letter of Intent and the project plan. The management committee – acting as a permanent task force – has the function of developing the detailed implementation plan including measures to control different risks that may occur, organise where possible common purchasing of ERTMS equipment and organise financing of the implementation plan. The management committee should act as far as possible as a common body dealing with support groups of the European Railway Agency, the railway industry (UNIFE) and the railway undertakings (CER, ERFA, UIC) for the implementation of the project. Furthermore, the management committee ensures coordination with all other activities of the infrastructure managers for quality improvement on the corridor.
8. The safety authorities responsible for authorising the putting into service of ERTMS equipment on the corridor infrastructure and rolling stock will present to the Ministers and to the European Coordinator a cooperation agreement with practical measures to streamline the certification processes.

Done at Bregenz, 3 March 2006

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



Mr Pietro Lunardi  
Minister of Infrastructure and Transport of Italy



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



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



Memorandum of Understanding  
on the implementation of approval procedures for rolling stock  
and cross-acceptance of approval procedures  
of the competent supervisory authorities  
between

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

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

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

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

The Ministry of Transport of Italy

## Background

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

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

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

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

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

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

Taking into account the following reasons:

- Rail transport in the Participatory States is characterized by very high safety standards. The safety standards are based on many years of confident co-operation between the competent authorities – the Inspectie Verkeer en Waterstaat Toezichtseenheid Rail for the Netherlands, the Eisenbahn-Bundesamt for the Federal Republic of Germany, the Bundesamt für Verkehr of Switzerland, the Federal Ministry of Transport, Innovation and Technology of Austria and the National Safety Authority/Ministry of Transport of Italy
- The principles for implementing the approval procedures for vehicles and the cross-acceptance of approval certificates are based on the basic ideas set out in the communication and the proposals for directives by the European Commission to the Council and the European Parliament of December 2006 regarding the facilitation of the movement of rolling stock across the European Union
- The present Memorandum of Understanding is completely consistent with the approach and the goals of the European Union and Switzerland. The Participatory States which are members of the European Union shall apply this Memorandum of Understanding in accordance with the EU directives 96/48/EC, 2001/16/EC and 2004/49/EC

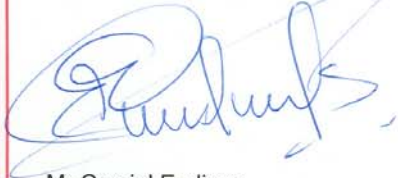


- The goal is to intensify the current confident co-operation and accelerate and simplify the approval procedures while maintaining the high railway transport safety standards in the States concerned
- The chosen approach is not a closed shop. In the contrary the Participatory States wish to invite other European countries to follow the example

The Ministers recommend on

- applying the procedure of the competent authorities for the approval of the placing in service of rolling stock which is described in detail in the Annex to this Memorandum of Understanding;
- supervising the implementation of this Memorandum of Understanding and providing, on the basis of a proposal issued by the multilateral working group established between the experts of the competent authorities of the Participatory States, the updating of the Annex corresponding to the technical evolution.

Signed at Luxembourg on 7 June 2007



Mr Camiel Eurlings

Minister of Transport, Public Works and Water Management, Netherlands



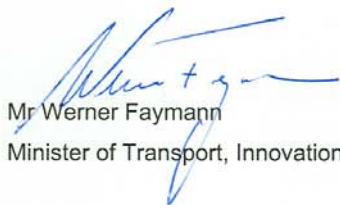
Mr Wolfgang Tiefensee

Minister of Transport, Building and Urban Affairs, Germany



Mr Moritz Leuenberger

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



Mr Werner Faymann

Minister of Transport, Innovation and Technology, Austria



Mr Alessandro Bianchi

Minister of Transport, Italy

Appendix IV  
Genoa declaration of the Ministers of Transport  
on the ERTMS corridor A between Rotterdam and Genoa

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**COMMON DECLARATION**  
of the Ministers of Transport  
of The Netherlands, Germany, Switzerland and Italy  
on the ERTMS corridor A between Rotterdam and Genoa,

**Background**

The co-operation on the development of the rail freight corridor Rotterdam-Genoa has matured. Based on the MoU, signed in Lugano on the 9<sup>th</sup> of January 2003 to improve the framework conditions for the rail freight corridor, progress has been made in several areas such as: customs, cross-acceptance of drivers and rolling stock, co-operation for capacity allocation and traffic management and co-ordination in solving infrastructure bottlenecks. This co-operation was working under the condition of considerable market growth in the past with a valuable long-term potential. The ongoing competition between railway undertakings has further supported this positive development trend.

Considering the deployment of the ERTMS system as a base for the future development of the corridor, the Ministers signed a Letter of Intent on the 3<sup>rd</sup> of March 2006. ERTMS, which is already in operation in new infrastructure links like the Betuweroute, Mattstetten- Rothrist and the Lötschberg Base Tunnel since 2007, will be deployed over the whole corridor by 2015.

The Letter of Intent has been followed by the structured cooperation of the infrastructure managers, who set up an IM management committee (December 2006) to steer the co-ordination, developed an Infrastructure Manager corridor business plan 2007-2025 for the corridor (April 2007), appointed dedicated staff for the corridor's development starting in 2007 and set up a Program Management Office in Frankfurt, supported by the foundation of an Economical legal entity (EEIG) among themselves to support the co-ordination activities of the Infrastructure Managers (August 2008). Based on these activities applications for TEN-T funding for the corridor in 2007 were granted during the course of 2008, for ERTMS deployment and infrastructure bottlenecks. The Infrastructure Managers have developed the ERTMS implementation plan for the corridor, also based on the agreement initiated by the European Commission from 4 July 2008 with European Railway Associations and the industry on the development of the new ERTMS baseline 3. These developments were carried out in a successful cooperation with the EU Coordinator for ERTMS, Mr. Karel Vinck.

**The Ministers**, in the presence of the Vice-president of the European Commission Mr Antonio Tajani

Considering that:

- Having regard for the Letter of Intent signed on the 3<sup>rd</sup> of March 2006 in Bregenz by the Dutch, German, Swiss and Italian Ministers of Transport on the deployment of ERTMS along rail freight Corridor A Rotterdam - Genoa.
- Having regard for the draft Commission Decision amending Decision 2006/679/EC as regards the implementation of the technical specification for interoperability relating to the control-command and signaling subsystem of the trans-European conventional rail

Appendix IV  
Genoa declaration of the Ministers of Transport  
on the ERTMS corridor A between Rotterdam and Genoa

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system (TSI CCS) with a new Chapter 7 and the European Deployment Plan (hereafter called ERTMS-EDP) which is expected to be published soon by the European Commission providing the obligation for implementation of ERTMS, with priority on European rail freight corridors as well as ports and major terminals by 2015 / 2020, thus paving the way for a European rail freight ERTMS network. Part of the present TSI CCS is the provision that Member States shall make every effort for the availability of an external Specific Transmission Module (hereinafter referred to as "the STM"), as defined in Chapter 7 of the Annex, for their legacy Class B command-and-control systems enumerated in Annex B of the TSI by 31 December 2007.

- Having regard for the Memorandum of Understanding, signed by the European Commission and the European Railway Associations on the 4<sup>th</sup> of July 2008 in Rome concerning the strengthening of cooperation for speeding up the deployment of ERTMS including the needed development of baseline 3.
- Taking note of the aim of the European Commission to create a European rail network for competitive freight, setting out rules for the selection, organisation and management of freight corridors, through a legislative Regulation proposal that Member States are actually discussing (COM (2008) 852 final).
- Having regard for the green paper (COM (2009) 44 final) on the revision of the Trans-European Networks for the 2014 2020 period;
- Recalling the efforts already undertaken in the corridor sector through:
  - the setting up of the Executive Board of Ministry representatives;
  - the setting up of the Management Committee representing the Infrastructure managers;
  - the foundation by 2008 of the EEIG of Infrastructure Managers of Corridor A Rotterdam-Genoa;
  - the preparations for the deployment of ERTMS supported by the Member States concerned and the European Union;
  - the co-ordinated planning in the form of a business plan from the Infrastructure Managers 2007 2025;
  - addressing capacity, quality and interoperability issues;
  - updating the overall corridor 2006 2008 2012 action plan in 2008 by the Ministries;
  - and having set up the railway undertakings advisory board and the terminal platform in the 1<sup>st</sup> quarter of 2009.
- The negotiations between the European Community and the Swiss Confederation on the simplification of inspections and formalities in respect of the carriage of goods and on customs security measures are in progress with the aim of finalising an agreement by 1 July 2009.
- Having regard for the sections already realised along the corridor:
  - In the Netherlands, the Betuweroute which was put into service in June 2007
  - In Germany, the additional high-speed tracks between Rastatt and Offenburg - in service since 2004 - increasing capacity on the existing tracks

Appendix IV  
Genoa declaration of the Ministers of Transport  
on the ERTMS corridor A between Rotterdam and Genoa

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- In Switzerland, the new line Mattstetten Rothrist, which was put into service in December 2004 and the Lötschberg Base Tunnel, which was put into service in June 2007.

Recognising:

- Important and continued growth of rail freight traffic on the Rotterdam-Genoa corridor in previous years and the urgent need to accommodate this existing market demand.
  - Despite current economic recession the prognosis of continued growth of corridor traffic over medium to long term is maintained, at least doubling of freight traffic is expected in the period 2006-2020.
  - The important progress reached by the infrastructure managers in their cooperation to improve the quality of the corridor, notably with capacity allocation including one-stop-shop, monitoring of traffic, punctuality and co-operation with terminals.
  - The impact of continued traffic increases on railway noise for the citizens living close by the railways and the need to co-operate among the corridor countries on reducing railway noise particularly from rail freight wagons.
  - The importance of common analyses of the Infrastructure Managers of infrastructure bottlenecks like such as the solutions elaborated and proposed to optimise the use of the existing railway capacity along the corridor and in this way make the impact of infrastructure decisions for the whole corridor transparent to all parties.
- Recalling the deadlines and activities for infrastructure development that were agreed upon or made public:
    - In Switzerland, the completion of the Gotthard Base Tunnel by 2017 and the Ceneri Base Tunnel by 2019.
    - In Germany, the aim to upgrade the entire line Emmerich Oberhausen to three tracks by 2013 (MoU between Ministers from 2007).
  - Working on the planning and financing of further infrastructure capacity improvements on the corridor:
    - Border section Netherlands - Germany: upgrade of the border section Zevenaar - Emmerich to three tracks (MOU between Ministers 2007);
    - In Germany, upgrade of the entire line Karlsruhe - Basel to four tracks
    - Supporting the working in a coordinated manner on a programme for further alleviating infrastructure bottlenecks, based on a structured corridor analysis of transport needs and infrastructure capacities for the period 2008 2015 2020 from the Infrastructure Managers.

**Ask the European Commission for that purpose to**

- Take into account the need for co-ordinated development of the freight corridors in the ongoing TEN-T revision process, giving due attention to improvements in the utilization of capacity, assessment of the infrastructure needs in the framework of corridor / networks with the effects of alleviating bottlenecks, improving cost-benefit analyses and ratios at EU level;

Appendix IV  
Genoa declaration of the Ministers of Transport  
on the ERTMS corridor A between Rotterdam and Genoa

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- Arrange communitarian co-funding, as enabled through the above-mentioned financial regulation Nr. 680/2007, taking into account the priorities set in the present declaration.
- Have the European Co-ordinator will support the full realisation of this railway axis according to the corridor programme proposed by the Infrastructure Managers as early as possible, taking into account the deadlines referred to therein.

**Decide for the Rotterdam - Genoa corridor A to**

1. Adopt the ERTMS implementation plan for the corridor by 2015 as proposed by the Infrastructure Management Committee to the executive board which is according to the ERTMS-EDP, in this way amending the previous deadlines contained in the Letter of Intent signed on the 3<sup>rd</sup> of March 2006 in Bregenz. The implementation of ERTMS on the corridor will be based on ERTMS baseline 3 for implementations in Germany, Switzerland and Italy. The Infrastructure Managers are requested to make public the ERTMS implementation plan on the corridor.
2. Support the solid implementation of decisions regarding the financial commitments from the national governments as stated in the ERTMS implementation plan with regard to the measures to eliminate infrastructure bottleneck while already the allocated TEN-T funding continues to be secured for the 2007 2013 period.
3. Continue to work in close co-operation towards the alleviation of bottlenecks on the corridor based on the periodic monitoring report by the Infrastructure Management Committee concerning the corridor project programme. Special focus will be given to further improving the utilisation of the capacity of existing infrastructure e.g. by harmonising infrastructure parameters for gauge, axle load, and train length to enable better production.
4. Cooperate closely with all parties concerned to ensure time planning of the development of the ERTMS baseline 3 agreed at the MOU of the 4<sup>th</sup> of July 2008 and signed in Rome between the European Commission and the railway sector, including appropriate risk management.
5. No longer require in the implementation strategy, to the benefit of railway undertakings, the development of intermediary interoperable solutions on the corridor for the rolling stock (STM) as was foreseen in the Letter of Intent signed on the 3<sup>rd</sup> of March 2006 in Bregenz. Rolling stock equipped with solely ERTMS (baseline 3) will be able to run over the whole corridor by 2015.
6. Have the Infrastructure Managers prepare for common procurement of ERTMS equipment where possible, based where applicable on the baseline 3 of ERTMS, and to make a proposal for this to the Executive Board by the end of 2009;
7. Ask National Safety Authorities together with EC/ERA, notified bodies, IM'-s and industry to develop by 2010 a common certification process for authorising the putting into service of ERTMS equipment on the corridor infrastructure and on rolling stock with the aim of making this efficient and transparent to all parties involved.
8. Ensure maximum support to the recommendations included in the annual report for the Corridor Rotterdam - Genoa (annexed to this declaration), which contain improvement actions concerning quality, capacity, interoperability aspects of infrastructure management, access to the market and safety procedures.
9. Reinforce the efforts to improve the quality of rail freight on the corridor by all parties concerned, which is even more necessary in the light of the ongoing economic

- situation. An agreement on this should be envisaged between the Management Committee of the corridor and its railway undertakings advisory board by mid 2010.
10. Arrange a proposal before the end of 2009 in order to share in the development of a common approach to the incentives, which does not produce high costs for implementation and administration, and for retrofitting freight wagons to obtain lower noise emissions.
  11. Steer and supervise the implementation of this declaration by the Executive Board constituted by delegates of the Transport Ministries on the Corridor.

Appendix IV  
Genoa declaration of the Ministers of Transport  
on the ERTMS corridor A between Rotterdam and Genoa

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Drafted in Genoa, 26 May 2009



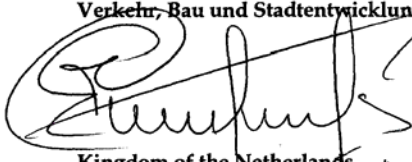
Republic of Italy  
Sen. Roberto Castelli,  
Il Viceministro delle Infrastrutture e dei Trasporti,



Swiss Confederation  
Bundesrat Moritz Leuenberger, Vorsteher des Eidgenössischen Departements für  
Umwelt, Verkehr, Energie und Kommunikation



Federal Republic of Germany  
Achim Grossmann, Parlamentarischer Staatssekretär im Bundesministerium für  
Verkehr, Bau und Stadtentwicklung



Kingdom of the Netherlands  
Camiel Eurlings, Minister van Verkeer en Waterstaat



## **IQ-C Action plan 2006-2008-2012 for rail freight corridor Rotterdam-Genoa**

July 2006 (Initial Document)  
August 2008 (Update)

The action plan has been decided upon by the Ministries of Transport from Germany, Italy, Netherlands and Switzerland in August 2008 and is an update from the May 2006 action plan for 2006-2010. The action plan is based on the progress report 2008 on the Rotterdam-Genoa corridor. The progress report explains the renewed governance structure of the corridor with the executive board composed of representatives of the Ministries working together with the management committee composed of representatives of the Infrastructure Managers. The infrastructure Managers have set up a legal entity (EEIG) to organize the practical cooperation among infrastructure managers. The action plan has been discussed and accepted by the involved infrastructure managers, regulators, rolling stock & safety authorities. The action plan is based on the MOU "Lugano" for the Rotterdam-Milan corridor from 9 January 2003 which was extended to Genoa by decision of Ministers of 10 July 2004 at Rotterdam. The original action plan from 2003 is in this way amended. The current action plan takes into account the Letter of Intent for ERTMS deployment on corridor Rotterdam Genoa which was signed by Ministers 3 March 2006. On an annual basis the Ministries will report to the Ministers on the progress of the project. Harmonized with baseline of the Infrastructure Managers and updated in August 2008.

**OVERVIEW 2006-2012 ACTION PLAN IQC  
CORRIDOR ROTTERDAM – GENOA**

MoT: cooperating ministries of transport  
 IM: cooperating infrastructure managers  
 RB: cooperating regulatory bodies  
 SA: cooperating safety and rolling stock authorities  
 S: to be started  
 O: ongoing  
 F: finished

#	Action	Body	Milestone	Year	Status
1	Digital coordination	IM	Development of Pathfinder, EICIS and Eurotrails	2007	F
		IM	Implement additional functionalities and improvements in the tools	2008 – 2012	O
		IM	Presentation of an implementation plan on the corridor for the SEDP regarding TAF TSI	2007	F
		IM	TAF TSI implementation (follow the SEDP) Enhance and monitor the European implementation and among the corridor partners	2008 - 2014	O
2	One stop shop optimization: shortening response time	IM	Set up and implement measurement system for response time regarding international requests for train paths	2007	F
		IM	Ensure convenient response times* for international ad hoc path requests *target: 90% in half of the time between order entry and first day of train running, max. 20 working days	2008 - 2012	O
3	Monitoring traffic and performance	IM	Corridor Management Information System with performance indicators, e.g. number of train paths, speed of train paths, punctuality of freight services. Corridor dashboard operational	2008	O
		IM	Performance monitoring and improvement	2008 - 2012	O
4	Improving punctuality	IM MoT	Development of European Performance Regime including corridor aspects on the basis of punctuality measurements and broader shared analysis of causes of delay	2006	F
		IM	Pilot Phase European Performance Regime on Rotterdam – Genoa	2007 and	O

Appendix V  
Action plan IQ-C 2006 – 2008 - 2012

#	Action	Body	Milestone	Year	Status
				2008	
		IM	Supporting and enabling the implementation of European Performance Regime on Rotterdam – Genoa	2008	O
		IM	Check on installation of Performance Managers	2008 and 2009	O
5	Improvement international capacity allocation process	IM MoT	Introduction of authorised applicants on cross border basis on the basis of a feasibility study	2007	F
		IM	IMs fully apply common deadlines for elaboration of yearly timetable and bi-monthly timetable updates as well	2006 - 2012	O
		IM	Harmonized catalogue Corridor wide catalogue with harmonised continuous international freight train paths	2006 – 2012	S
		RB	Assessment of allocation for international freight train paths on the corridor by the IMs	2008 - 2012	S
6	Integrated elimination of infrastructure bottlenecks	IM	Development of actual traffic flow with saturation degrees	2006 – 2012	O
		IM	Planning for medium/ long term in scenarios related to financing state	2006 – 2012	O
		IM MoT	Annual analysis of all activities listed in 6) to ensure the financing of bottleneck removal projects at national and EU levels (e.g. bilateral level between countries, EU-TEN-T financing)	2006 – 2012	O
		IM	Research for production improvements (hard and soft factors as rerouting, faster, heavier, longer, larger, etc.)	2008	O
7	Mutual recognition of engine drivers	SA	Implementation of cross border recognition of general qualifications of engine drivers on a bilateral basis (D-CH, CH-I)	2008 and 2009	O
		SA	Scaling up to a corridor wide implementation in line with the new EU directive 2007/ 59 for engine drivers	2008 to 2010	S
8	Mutual recognition of locomotives	SA	Implementation of cross-acceptance MOU 7 <sup>th</sup> June 2007 and communication with railway market	2008	O
		MoT SA	Implement the international requirements list for certification of locomotives in conformity with the EU guideline. Plus extension MOU with BE FR LU DK SE PL CZ	2008 and 2009	O
9	Monitoring of market regulations	RB	The regulatory bodies will report at least yearly about the result of their cooperation: Allocation of capacity and the concept of congested infrastructure	2006 – 2012	O

Appendix V  
Action plan IQ-C 2006 – 2008 - 2012

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#	Action	Body	Milestone	Year	Status
			IQ-C and RailNetEurope The traffic monitoring system Europtirails The European Performance Regime to be tested (corridor) and introduced (across Europe) The EEIG established by the Infrastructure Managers with aim of implementing ERTMS on the corridor		
10	ETCS	IM MoT	Ministries, EU and IMs steer the implementation of the "project 2012" incl. budgets and European version management	2006 – 2012	O
		IM MoT	Adoption corridor implementation plan	2008	O
		IM	Tendering of the project by the joint project organisations of the infrastructure managers	2010	O
		IM SA	Completion of ERTMS installations and operations on Corridor A	2012 and 2015	S
11	Terminals	IM MoT	Adoption with stakeholders of action plan based study on quality of interface of terminals with railways	2007 and 2008	O
		IM	Terminal study on capacity, access conditions, equipment and connection to the corridor	2007 – 2010	O
		MoT-IM	Setting up of corridor platform with aim to define corridor terminal action plan by 2009	2008/ 2009	O
12	Operational Rules	IM SA	Harmonisation of essential operational rules	2010	S
13	Railway noise	IM MoT	Overview of national approaches to cope with railway noise and proposals for objectives and cooperation at corridor level	2008 and 2009	O
14	Customs	MoT/ customs	Agreement on how to implement 1875/ 2006/ EC for rail freight transiting CH	2009	O

## EXPLANATION OF ACTION POINTS

### 1. Digital coordination

#### Aim

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.

#### Explanation

IMs as well as RUs operate proprietary IT systems and tools that support their processes and meet the needs of their business. Standardization, interoperability and stringent business processes are needed to enable a virtual (digital) coordination of the international (cross border) rail freight traffic. To reach this goal, two options should be followed:

- Tools like Pathfinder (capacity), EICIS (price levels) and Europtirails (traffic management and performance), which have been jointly developed, by RNE and its members shall be served with data from the IMs systems. The applications shall be developed and enhanced to customize them to the utmost extent to the business needs of the IMs and the RUs
- The digital corridor coordination should be in conformity with the TSI TAF. A strategic European deployment plan (SEDP) has been drafted. The corridor can play a leading role in the implementation of the TSI TAF, though it cannot implement TSI TAF decoupled from the European developments in this field. Under UIC umbrella it is planned to develop the TSI TAF common components from 2008 onwards and to steer the overall implementation of the project.

#### Milestones

- Full use of Pathfinder, EICIS and Europtirails among the corridor IMs (2007)
- Implementation of additional functionalities and improvements (2008 – 2012)
- Presentation of an implementation plan on the corridor for the SEDP regarding TSI TAF by upgrading of IT tools (2007).
- Implementation of TAF TSI according to the SEDP. Enhance and monitor the European implementation and among the corridor partners (2008 – 2014)

### 2. Shortening response time for train paths requests

#### Aim

Enhancing and shortening of the time-to-market process for ad hoc path requests of the RUs.

#### Explanation

The One Stop Shops (OSS) initiated by RNE in every EU member state and Switzerland are the face to the customers. They support the RUs in ordering an international freight train path as they do not need to address the IMs of different countries in different languages. The OSS provides a spectrum of advising, coordination and sales services, before, during and after the train journey. More in particular the response times to ad hoc requests for international rail freight paths to the IMs must be shortened.

#### Milestones

- Set up and implement a measurement system for response time regarding international requests for train paths (2007)

- Ensure convenient response times (time to an ad hoc train path request in half of the time between the path request and the desired departure of the train ) at a service level of 90% (2008 – 2012)

### 3. Monitoring traffic and performance

#### Aim

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

#### Explanation

IMs are responsible for constructing and offering train paths that are in line with the requests from the RUs. Three aspects are most important here:

- Quantity: are the IMs able to offer a sufficient number of train paths to the RUs?
- Quality: are the IMs able to offer sufficient quality (transit time, commercial speed) of train paths?
- Reliability: is the performance of trains on the allocated train paths in practice as expected?

To implement this action the IMs will develop clear performance indicators based on figures from the IMs as well as from RNE. In addition to that, the corridor will support the introduction of European Performance Regime (EPR). Where the legal priority rules for cases of congested infrastructure would form an obstacle in achieving the desired improvement the infrastructure managers will report this to the ministries.

#### Milestones

- Design of a corridor specific system of key performance indicators (management information system) by Infrastructure Managers with performance indicators (2008)
- Performance monitoring and improvement (2008 – 2012)

### 4. Improving punctuality

#### Aim

Improve punctuality on the corridor by setting the right commitment and incentives by the IMs and the RUs

#### Explanation

Punctuality improved on the corridor in the recent two years, but has not reached a stable and satisfactory level. An economic model, identifying responsibilities, rewarding punctuality and fining delays has recently been developed in cooperation between RNE and UIC. The Corridor A served several times as a test field for the project EPR. The IMs will support the full introduction of EPR on the Corridor Rotterdam – Genoa.

In addition to that, the IMs will consider the inauguration of Performance Managers. This is a new role within the organisation of the IMs. It is a role fully dedicated to quality, punctuality and traffic performance. These persons should cooperate and network across borders and IMs to fulfil their task.

#### Milestones

- Development of European Performance Regime including corridor aspects on the basis of punctuality measurements and broader shared analysis of causes of delay (2006)
- Pilot Phase European Performance Regime on Rotterdam – Genoa (2007 and 2008)
- Support the implementation of European Performance Regime on Rotterdam – Genoa (2008)

- Consider the introduction of Performance Managers (2008 and 2009)

## 5. Improvement international capacity allocation process

### Aim

Improve transparency and efficiency of the capacity allocation process for the annual time-table and the short-term requests for train paths (art 20 - 22 plus 23 2001/14/EC)

### Explanation

IMs develop a cooperation scheme for the allocation of capacity on the corridor. At present railway undertakings ensure their international paths in very different ways, e.g. via the OSS, via combined national procedures or via RNE. In total, this leads to a non-transparent and less efficient process for all players. The cooperation shall result in more coordinated and harmonised train path allocation process for all RUs / applicants.

The introduction of the concept of authorised applicants (e.g. ports, logistics service providers etc.) on the whole corridor could be another possibility to improve the international capacity allocation process. A feasibility study shall analyse this.

The allocation of international train paths shall be assessed by the regulatory bodies on a yearly basis.

### Milestones

- Introduction of authorised applicants on cross border basis on the basis of a feasibility study (2007)
- Implementation of the improved new capacity allocation process by the IMs. As part of this the IMs will introduce and apply common deadlines in the allocation process (2006 – 2012)
- Introduce a corridor wide catalogue with harmonised continuous international freight train paths (2006 – 2012)
- Assessment by regulatory bodies of international cooperation of ministries and IMs regarding allocation of capacity for international freight trains on the corridor (2008 – 2012)

## 6. Integrated elimination of infrastructure bottlenecks

### Aim

Improvement of international traffic by analysing the existing infrastructure bottlenecks on an integrated basis

### Explanation

For the time span between 2005 and 2020 the traffic volume is expected to double on the corridor. This may lead to new bottlenecks and may worsen existing ones. From the corridors point of view an integrated analysis is strongly desired. It will clearly indicate where and when infrastructure should be enlarged and enhanced. All bottlenecks (and the projects removing them) have an impact on the capacity and the performance of the entire corridor.

### Milestones

- Annual monitoring of developments of capacity and actual traffic flow (2006 – 2012)
- Planning for medium and long term for the corridor by the IMs (2006 – 2012)
- Annual analysis between Infrastructure Managers and Ministries to ensure the infrastructure bottlenecks are discussed at the right places (e.g. bilateral level between countries, EU-TEN-T financing, ERTMS corridor group) and take into account the corridor perspective (2006 - 2012)
- Research for production improvements with regard to train parameters (2008)

## 7. Mutual recognition of engine drivers

### Aim

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

### Explanation

Qualifications of train drivers have partly a general character (for example eye tests) and partly a specific national character (for example track knowledge). The general qualifications can be subject of cross border recognition. This is foreseen in the new EU directive that will be implemented around 2010. It is important to undertake action sooner for the corridor in order to prevent that trains must stop at borders to change drivers. The general qualifications fit for cross border recognition are: medical examination, psychological examination, language examination, examination and monitoring of knowledge of locomotive types, examination and monitoring of general professional knowledge.

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

### Milestones

- Implementation of cross border recognition of general qualifications of engine drivers on a bilateral basis (D-CH, CH-I) (2008 and 2009)
- Scaling up to a corridor wide implementation in line with the new EU directive for engine drivers (2008 – 2010)

## 8. Mutual recognition of locomotives

### Aim

Mutual recognition of certification processes for locomotives on the whole corridor

### Explanation

Certification of locomotives is a long and expensive process due to hundreds of items that must be checked and tested while there is no cross border recognition. The result is that locomotives must pass the whole expensive procedure in every country again. This is not at all necessary as can be seen in the automotive sector. First steps are already made for cooperation of authorization bodies regarding certification for new locomotives on the corridor. The next step will be to draw up an International Requirement List (IRL) specifying more in detail which requirement exists currently on the corridor per country. In 2006 this work was carried out. The IRL needs to be analyzed whether there are parts which are appropriate for mutual recognition. The work on this issue shall be closely coordinated with the ongoing EU work on principles of cross-border certification of locomotives. Another issue that will be treated is mutual recognition of maintenance facilities for locomotives. This will be increasingly important the more locomotives are internationally used.

### Milestones

- Implementation of cross acceptance MoU 7<sup>th</sup> June 2007 and communication with railway market (2008)
- Extending cross-acceptance MoU with Belgium, France, Luxemburg, Sweden and Denmark and finalize migration agreement (2008 and 2009)
- Transition to European directive on cross/acceptance 2008-57-EC with roles for NSA's and ERA



## 9. Monitoring of market regulations

### Aim

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

### Explanation

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

### Milestones

- The regulatory bodies will report at least yearly about the result of their cooperation: concept of congested infrastructure, IQ-C and RNE, Europtirails, EPR, EEIG (2006 – 2012)

## 10. ETCS implementation

### Aim

Install ETCS on the corridor by 2012 (Rotterdam - Oberhausen and Mannheim - Genoa) respectively by 2015 (Oberhausen - Mannheim) to enable safe and interoperable international rail freight traffic to enhance modal shift from road to rail and support the future market demands and development of the European market.

### Explanation

Due to different national technologies with regard to ATC systems, international rail freight traffic requires loco changes at the borders or expensive multi-equipment locos. Both options are workarounds, whereas ETCS tackles the problem by its cause by creating an interoperable and powerful European standard. Operating trains beyond ETCS will result in less stand-still times, enhanced reliability and partially in increases track capacity. In the long-term perspective (>20 years) ETCS will also contribute to a cost decrease in train operations and the maintenance of ATC systems, as soon as ERTMS will remain as the only ATP in use. The corridor A as one of the first freight corridors of major importance is pioneering the introduction and deployment of ERTMS in Europe.

### Milestones

- Adoption of corridor implementation plan ERTMS by executive board (2008)
- Ministries, EU and IMs steer the implementation of the "project 2012" incl. budgets (2006 – 2012)
- Tendering of the project by the joint project organisations of the infrastructure managers (2010)
- Completion of Corridor A (2012 and 2015)

## 11. Terminal issues

### Aim

Improve the interface between terminal operators and IMs

### Explanation

Quality of the corridor is not only dependent on infrastructure but also on terminals and how they are handled. Information from the Netherlands shows that delay in terminal operations has a

dramatic impact on punctuality on the whole corridor. Better cooperation in the logistical chain can lead to great improvement of punctuality on the terminal level with positive effect for the whole corridor.

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

#### **Milestones**

- Study on quality of interface of terminals and infrastructure managers, taking into account other parties in the logistical chain like railway undertakings and intermodal operators (2007 – 2008)
- Setting up terminal platform with aim to define corridor action plan terminals (2008 and 2009)
- Terminal study by IM on capacity, access conditions, equipment and connection to the corridor (2007 – 2010)

## **12. Operational Rules**

#### **Aim**

Harmonise a number of operational rules among the corridor (or on the European level)

#### **Explanation**

The rules for the safe and efficient operation of railway services follow and meet the national requirements. Anyhow, for a RU performing multinational train services the variety of different national rules leads to a number of disadvantages, inefficiency and higher costs. The personnel needs to be trained to handle identical operational situations in different countries, locos and on-board equipment (e.g. safety and recovery devices) need to meet the national requirements. The aim of the group is to identify operational situation with a potential for the harmonisation among the corridor IMs or even on the European level (in cooperation with ERA).

#### **Milestones**

- Identification and analysis of operational situations to be harmonised, including a list of proposals for a harmonised solution. Escalation to ERA (TSI level) for a solution on European level and coordination with other corridors (2010)

## **13. Railway noise**

#### **Aim**

Harmonised and coordinated national approaches to cope with railway noise and proposals for cooperation at corridor level

#### **Explanation**

It is the explicit goal of the EC and the ministries of transport to minimise the noise emissions caused by railways, especially by rail freight trains. To reach this goal, a number of measures is foreseen which affect RUs, IMs and the corridor programme as a whole: incentives to retrofit the rolling stock with wheels and brakes that lead to less noise emissions, total noise contingencies for certain network or corridor sections, noise mitigation works such as noise barriers along the trackside etc. For the corridor, a sound and coordinated concept is required to avoid island solutions.

**Milestones**

- Overview of national approaches to cope with railway noise and proposals for objectives and practical cooperation at corridor level (2008 and 2009)

**14. Customs**

**Aim**

Efficient and stable implementation of directive 1875/ 2006/ EC by 1 July 2009

**Explanation**

The directive amends regulation EEC 2454/ 93 laying down provision for the implementation EEC 2913/ 92 establishing the Community Customs Code. With regard to Switzerland as a non-EC country and its significant role as a transit country especially on the North-South axis (Corridor A) a proposal for the practical handling of day to day operations is required.

**Milestones**

- Agreement on how to implement 1875/ 2006/ EC for rail freight transiting CH (2009)

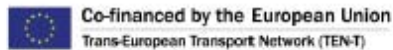
# Corridor A

## Rotterdam – Genoa

### Programme Management Office



[www.corridora.eu](http://www.corridora.eu)



Annual Progress Report  
2009

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## Table of Content

0	Executive Summary .....	4
0.1	Management Dashboard .....	4
0.2	Management Summary .....	6
1	Activities on the corridor level.....	8
1.1	Work results in 2009.....	8
1.2	Outlook for 2010.....	21
1.3	Organisation.....	21
1.4	Monitoring & Reporting Methodology .....	23
1.5	Release Notes & Contact Details .....	23
2	Activities of the Working Groups .....	24
2.1	TAF TSI (IQ-C Action Item #1).....	24
2.1.1	Key Performance Indicators .....	24
2.1.2	Work Progress .....	24
2.1.2.1	Achievements .....	24
2.1.2.2	Risk management and chances .....	26
2.1.2.3	Change request management .....	26
2.1.3	Outlook .....	26
2.2	ERTMS (IQ-C Action Item #10).....	27
2.2.1	Key Performance Indicators .....	27
2.2.2	Work Progress .....	27
2.2.2.1	Achievements .....	27
2.2.2.2	Risk management and chances .....	31
2.2.2.3	Change request management .....	31
2.2.3	Outlook .....	31
2.3	Traffic Quality (IQ-C Action Items #2, #3, #4, #5) .....	32
2.3.1	Key Performance Indicators .....	32
2.3.2	Work Progress .....	33
2.3.2.1	Achievements .....	33
2.3.2.2	Risk management and chances .....	35
2.3.2.3	Change request management .....	35
2.3.3	Outlook .....	35
2.4	Operations (IQ-C Action Items #12, #13) .....	36
2.4.1	Key Performance Indicators .....	36
2.4.2	Work Progress .....	36
2.4.2.1	Achievements .....	36
2.4.2.2	Risk management and chances .....	38
2.4.2.3	Change request management .....	38
2.4.3	Outlook .....	38
2.5	Capacity (IQ-C Action Item #6) .....	38
2.5.1	Key Performance Indicators .....	38
2.5.2	Work Progress .....	38
2.5.2.1	Achievements .....	38
2.5.2.2	Risk management and chances .....	42
2.5.2.3	Change request management .....	42
2.5.3	Outlook .....	42
2.6	Terminal Studies (IQ-C Action Item #11).....	43
2.6.1	Key Performance Indicators .....	43
2.6.2	Work Progress .....	43

2.6.2.1	Achievements .....	43
2.6.2.2	Risk management and chances .....	48
2.6.2.3	Change request management .....	48
2.6.3	Outlook .....	49
3	Activities of the Infrastructure Managers .....	50
3.1	ProRail (IQ-C Action Items #6, #10) .....	50
3.1.1	Key Performance Indicators .....	50
3.1.2	Work Progress .....	51
3.1.2.1	Achievements .....	51
3.1.2.2	Risk management and chances .....	52
3.1.2.3	Change request management .....	52
3.1.3	Outlook .....	52
3.2	DB Netz (IQ-C Action Items #6, #10) .....	52
3.2.1	Key Performance Indicators .....	52
3.2.2	Work Progress .....	54
3.2.2.1	Achievements .....	54
3.2.2.2	Risk management and chances .....	58
3.2.2.3	Change request management .....	59
3.2.3	Outlook .....	59
3.3	SBB Infrastruktur (IQ-C Action Items #6, #10) .....	59
3.3.1	Key Performance Indicators .....	59
3.3.2	Work Progress .....	60
3.3.2.1	Achievements .....	60
3.3.2.2	Risk management and chances .....	62
3.3.2.3	Change request management .....	62
3.3.3	Outlook .....	62
3.4	BLS Netz (IQ-C Action Items #6, #10) .....	62
3.4.1	Key Performance Indicators .....	62
3.4.2	Work Progress .....	63
3.4.2.1	Achievements .....	63
3.4.2.2	Risk management and chances .....	64
3.4.2.3	Change request management .....	64
3.4.3	Outlook .....	64
3.5	RFI (IQ-C Action Items #6, #10) .....	65
3.5.1	Key Performance Indicators .....	65
3.5.2	Work Progress .....	66
3.5.2.1	Achievements .....	66
3.5.2.2	Risk management and chances .....	68
3.5.2.3	Change request management .....	68
3.5.3	Outlook .....	68
4	Other IQ-C Action Items .....	69
5	Conclusions and Recommendations .....	70

List of Figures  
List of Abbreviations  
Annex

## 0 Executive Summary

Corridor A performed quite well in a year marked by difficult framework conditions. Despite the dropping traffic volumes (between 3.7% and 14.9% less international freight trains) due to the economic crisis, rail freight on Corridor A kept its modal share (13% in Rotterdam; 61% trans-alpine; 19% in Genoa). The average commercial speed of trains also maintained its already high level, whereas for the punctuality a heterogeneous feedback must be drawn. The MC endorsed its vision for the corridor focusing also on soft measures and quick wins with low investments. The corridor manager responsible for Corridor A in RNE has now joint fulltime our corridor team (PMO) as programme manager of SBB and working group manager for Total Service Concept thus inspiring both, the corridor as well as RNE. Regular communication with the RUs (advisory board), adjoining cities, communities and regions (code 24 project) and with the terminals (terminal platform meetings, hosted by the Ministries) have been established and led to a fruitful and constructive dialogue.

ProRail successfully put its port line in Rotterdam in operation with ETCS L1 and baseline 2.3.0d. The difficult funding situation for ETCS in Germany exposes a serious threat to the envisaged ETCS operations on the corridor. This evident problem has been reported continuously to the ExB and the EC as it now endangers the completion date 2015. Thus, the topic is currently being discussed on highest level within the ministries. Therefore the EEIG is still confident that a solution will be found in due course. The contents of the corridor MoU referring to the baseline 3 implementation could finally be agreed including the board approvals required.

The infrastructure projects progressed well on the Swiss sections. In Italy, although RFI was very much occupied by taking into service the high speed lines, it could be agreed with the ministry to launch a study in order to allow the circulation of some longer trains per day on the corridor lines, which is a vital success factor for the RUs. The German projects basically progressed as planned, the approval procedures have been started and are still ongoing. A bilateral expert team of ProRail and DB Netz could almost complete the design of the transition at the Dutch-German border.

The corridor organisation complied with their works with the request for European subsidies and the decision taken by the EC in the call 2007 to 2009. The new request submitted for European co-financing for 2010 - 2013 was evaluated to 100% positively and has been proposed by the European TEN-T Agency. The final decision of the EC is expected until mid 2010.

### 0.1 Management Dashboard

Figure 1<sup>1</sup> displays the progress of the implementation of the corridor programme (input KPIs) for 2009. The WGs delivered some remarkable results; the total work progress is 41.5%.

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<sup>1</sup> For more detailed information regarding the KPIs and the dashboard, definitions and a legend please see chapter 1.1.

This is 15.7% more than 12 months before. Work backlog from 2008 and the fact that the KPIs reflect also the progress needed from works at European level like ERA, UIC and Users Group, as well as the standstill of the activities of the WG Operational Rules are the reasons for this deviation. Overall, the outweighing part of the IM projects is in line with the planning, stating a total of 28% actual work progress. The projects between Zevenaar - border - Emmerich (infrastructure, traction power voltage system, ATP system) face high technical complexity, thus making it very difficult to meet planned budgets and time. Both IMs analysed the subject very carefully in 2009 and a solution will be found. Another 2% of ETCS lines have been put into operation, now having full 10% of the corridor installations already in daily operation.

The overall budget situation improved, the open amount due until 2015 could be reduced by 35%. Regarding the full time frame of the corridor programme, 11.8 bn. € are still open.

Progress of the corridor implementation (input)

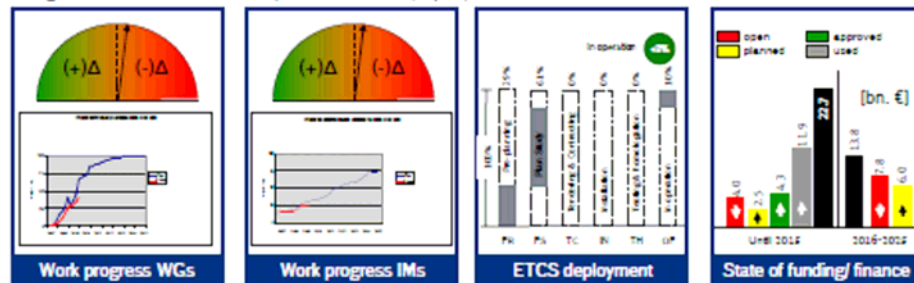


Figure 1: Management Dashboard 2009 (part 1)

The progress of the corridor performance can be seen in figure 2. Traffic volumes dropped on Corridor A as a consequence of the economic recession, but significantly less as it was expected. Arrival punctuality could be raised for some relations. Making an opportunity out of the falling traffic volumes, some IMs increased their trackside construction activities to increase capacity and to maintain/ enhance the quality level of the infrastructure. Some of these construction projects have negatively impacted the traffic quality. Despite of the crisis, rail could basically keep its modal share throughout the corridor. The predominant part of the train paths sold to the customers in 2009 enables an average speed of 50 km/h and more, which is a competitive value on the transport market.



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Annual Progress Report 2009

Performance of corridor (output)

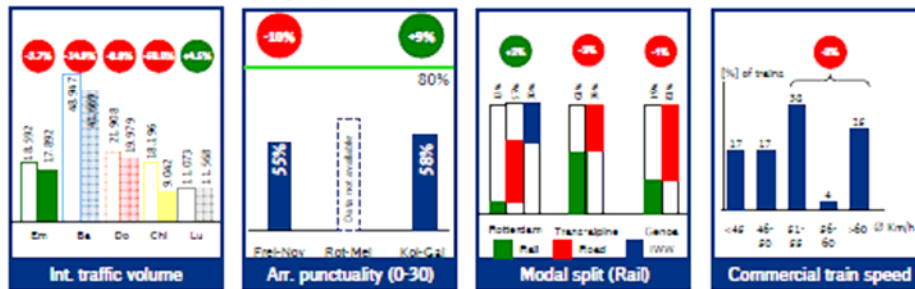


Figure 2: Management Dashboard 2009 (part 2)

## 0.2 Management Summary

As a follow up from the works already started in 2008, the EC, the Executive Board and the CEOs from all corridor IMs fully approved the baseline 3 deployment strategy in spring 2009. At a meeting of the transport ministers in Genoa the new strategy was officially adopted, including a slightly revised timeline. The corridor organisation has continued its work to prepare the coordinated tendering of the first ETCS lots/ projects on the corridor. Approximately three years after the MC mission statement for Corridor A, the MC revised and slightly modified the vision for the corridor in a workshop. More important, it was a strong endorsement of the works carried out so far and an important indication that the direction of the corridor programme is assessed as the right one.

The PMO/ the EEIG set up and submitted a 2<sup>nd</sup> TEN funding application for the corridor organisation, following a call from the TEN-T EA (EC). In a pre-notification the EEIG was informed that European co-financing is proposed for 2010 - 2013; summing up to a total volume of 2.7 Mio. €. Based on the same call, some additional ETCS measures and projects (all trackside) along Corridor A were proposed<sup>2</sup> for a co-financing:

- § Upgrade of Betuwe line to 2.3.0d (2 Mio. €)
- § Three Corridor A sections in Germany (13.8 Mio. €)
- § ETCS L1 LS prototype in Germany (3 Mio. €)

The EEIG established appropriate ways to communicate with clients and stakeholders. Apart from daily communication three official RU advisory board meetings were held. In cooperation with the ministries terminal owners and intermodal operators were consulted in two dedicated terminal platform meetings. This led to constructive discussions and actions, e.g. a task force quality managed by HUPAC. The EEIG is also in contact with various communities, regions and cities close to the corridor. They assess the development of the corridor as an opportunity for local/ regional business partners but are also interested in reducing railway noise to protect their local residents as good as possible. In addition, IMs were invited to participate in the MoT noise study. Following the need for an open

<sup>2</sup> Final decision/ notification still pending.

Corridor A Rotterdam - Genoa  
Annual Progress Report 2009

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communication and more transparency, the corridor organisation developed a webpage in 2009, which will go live in the 1<sup>st</sup> quarter of 2010.

A major ETCS risk, rated A1 (ETCS L1 LS braking curves safety parameters) was resolved in 2009, thanks to a joint work group of SBB, SNCF and ERA. Unfortunately, another major risk for the corridor remains unsolved: ETCS funding in Germany (rated A1). The other risks which are still open by end of 2009 are rated lower (probability, impact). Most items out of the risk portfolio refer to technology (e.g. interfaces between the proprietary IT systems and Europtirails or Pathfinder) or funding (e.g. infrastructure projects in Italy).

## 1 Activities on the corridor level

### 1.1 Work results in 2009

#### Work progress of WGs activities

Figure 3 shows the work progress of the corridor WGs which sums to 41.5% compared to 66.8% planned work progress. The work is proceeding slower than planned in some areas, due to the following reasons: the WG Operational Rules was forced to interrupt its work in July 2009 and could not take it up until now, due to fluctuation of the WG members and especially the leave of the WGM. The WG Traffic Quality, especially the activities performed together with RNE face a number of risks, mainly of technical nature with regard to the running applications and interfaces used. Some of these problems could not be solved yet and lead therefore to a delay of works. ETCS issues, especially on the European level also face a backlog. It must be taken into consideration that these activities are difficult to plan, to steer and to monitor solely from the corridor point of view, as this is not work which is exclusively dedicated to and influenced by Corridor A.

To catch up the works again, the MC and the corridor organisation will adjust some of the baselines, considering the new given circumstances. New experts for the WG Operational Rules will be assigned to this task until end of March 2010. Moreover, solving the complex challenges regarding ETCS and the works at RNE will require additional expertise combined with management attention.

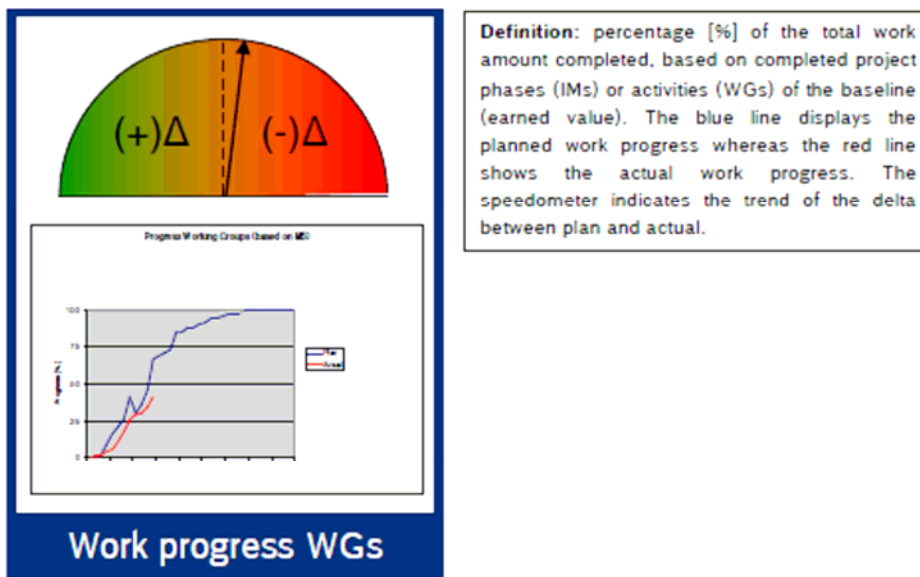
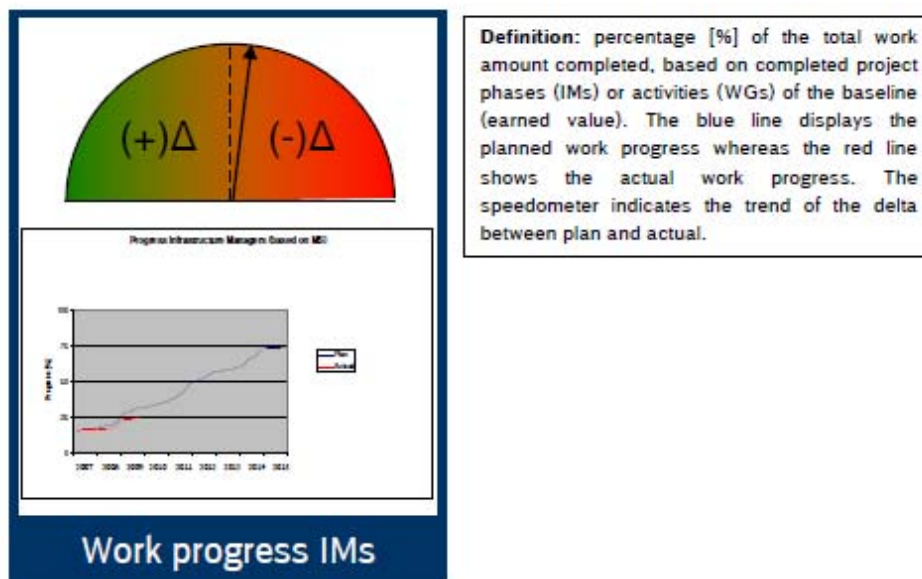


Figure 3: KPI work progress WGs

**Work progress of IMs project implementation**

The actual progress of the projects of the IMs sums up to 28% vs. 31.7% of planned work progress. Both values can be seen in figure 4. Most of the infrastructure projects are ongoing and well on schedule. Most of the backlog is caused by the complex technical settings and requirements given for all cross-border related infrastructure projects of ProRail and DB Netz (Zevenaar - border - Emmerich). Though some decisions could be made based on the technical study carried out in 2008/ 2009, some questions remain open, requiring a second study which is currently conducted. Major works for studying and preparing the ETCS projects in Germany can not be carried out due to the non-solved funding situation. More than ever, solving the ETCS funding problem in Germany is crucial for the corridor programme. The current situation produces a risk rated A1, escalated to the ExB.



**Figure 4: KPI Work progress IMs**

**ETCS deployment**

Figure 5 displays the state of the ETCS deployment on the corridor as per 31.12.09. Over entire Corridor A, approximately 4.171 km (single track km) have to be equipped with ETCS. The ETCS projects are predominantly in an early planning phase, showing roughly the same picture as in the previous year. For the time being, 10% of the total ETCS installations on Corridor A are already in operation, which is 2% more than the year before. The harbour line in the Netherlands has been put into operation in 2009 based on SRS 2.3.0d in Level 1 (full supervision).

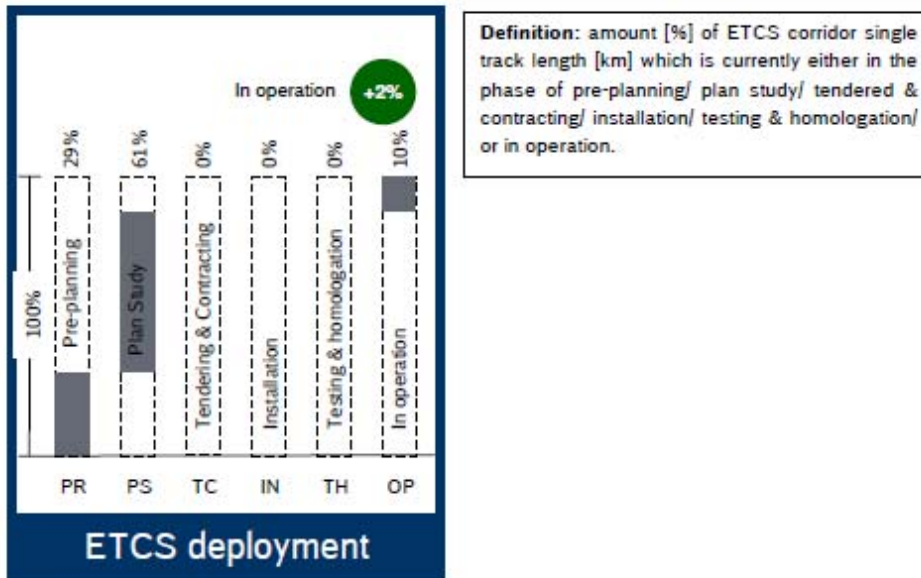


Figure 5: KPI ETCS deployment

**State of funding/ finance**

The funding situation in figure 6 displays the situation of the overall corridor programme (all IMs, all project types) as per end of 2009. Regarding the short/ mid-term period (until 2015) the budgets become firm and more binding. The budget still open could be reduced by 35%, or more than 2 bn. €. Complementing this statement the amounts planned (+900 Mio. €) and approved (+600 Mio. €) could be raised significantly. The IMs invested ≈ 700 Mio. € in corridor related projects in 2009. As per end of 2009 the total amounts already invested in the corridor add up to almost 12 bn. €.

A considerable amount of budget still needs to be raised to implement the full scope of the corridor programme. 4 bn. € in the short/ mid-term period and another 7.8 bn. € in the long-term planning remain open.

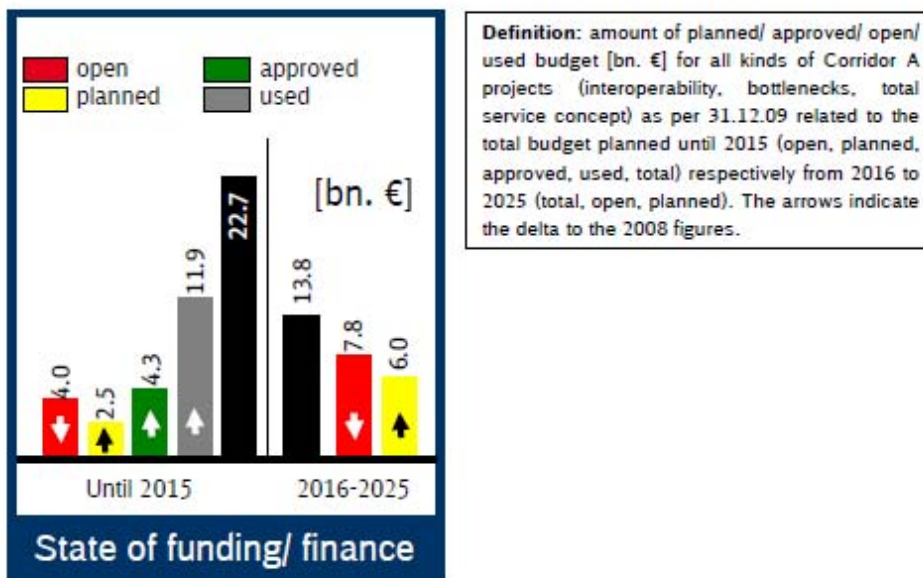


Figure 6: KPI funding

**International traffic volume**

The global financial and economic crisis resulted in a significant decline in traffic volume on Corridor A, as can be seen in figure 7. The border station of Emmerich faced a moderate decline benefitting from positive operational development of the Betuwe route, whereas in Basel and Domodossola the downturn was even worse. Besides the given economic and traffic situation, capacity in Chiasso was reduced due to constructions works at Monte Olimpino II, which led to a preliminary closing of the entire line since June 2009 (to be reopened in April 2010). The traffic was redirected to other routes. This is also the reason why in Luino the volume of the international traffic grew by 4.5%, contrary to the overall economical situation. The strongest decline in the traffic volume was visible in the first half of 2009, whereas the second half already showed signs of recovery.

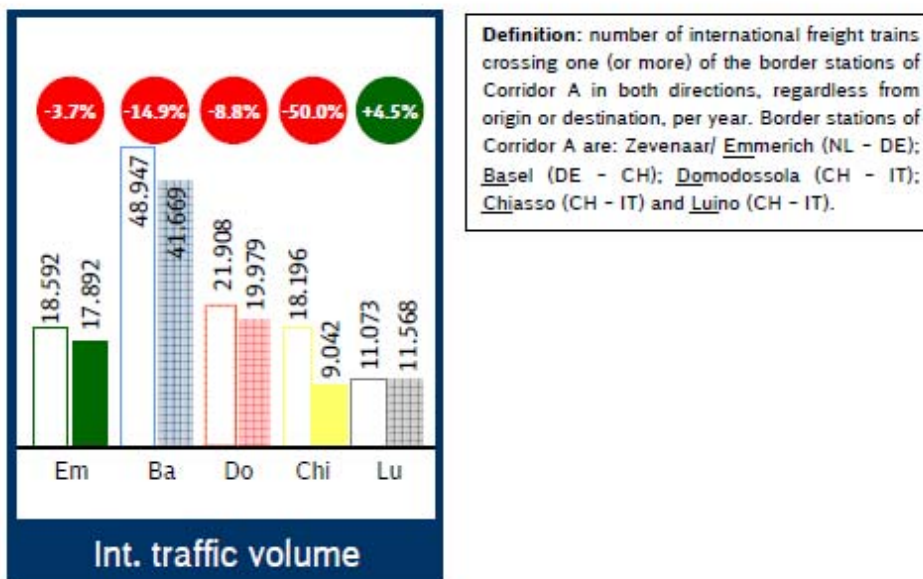


Figure 7: KPI international traffic volume

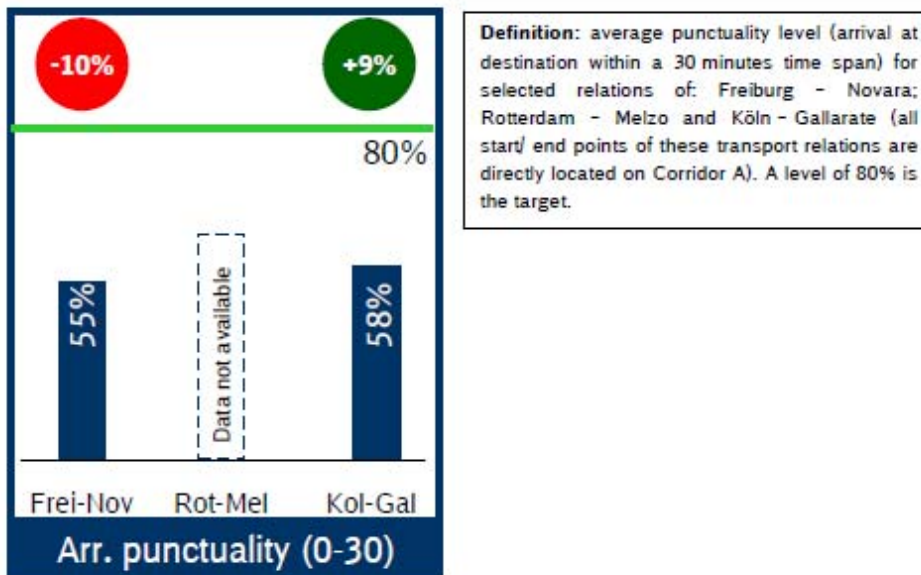
**Arrival punctuality (0 – 30)**

For the three selected traffic relations the punctuality figures for 2009 can be seen in figure 8. A heterogeneous feedback must be drawn. For the rolling highway traffic ("Rollende Landstraße") Freiburg - Novara and v.v. the arrival punctuality figures dropped by 10%. Construction works in the section between Freiburg and Basel and capacity constraints thereafter. Though being a conceivable incident, the capacity constraints and longer transport times are only considered partly in the actual time table. As the rolling highway train service is calculated with a relatively high average speed in the time table, each pause or interruption of the train affects directly the arrival time.

The figures for Rotterdam - Melzo could not be taken directly from the Europtirails system. The figure derived from manual analysis is misleading and will not be published due to the following reasons:

- § Only trains travelling from Melzo to Rotterdam could be considered
- § The usual time span used to measure arrival punctuality is 30 minutes. The only data source available set the time span to measure arrival punctuality to 5 minutes
- § Freight trains that already arrive with a delay on the Dutch network automatically receive a new train number and a new (rescheduled) train path. Consequently, the systems do not trace the original train (number and path) any longer

Significant quality improvements could be achieved for the transport between Cologne and Gallarate (and v.v.). Coming from a poor quality level of only 49% in 2008, the arrival punctuality climbed up to 58%. As a conclusion, all figures are still non-satisfying. Besides the reasons mentioned above, it must also be noted that more and more passenger services are offered and planned in the time table, especially during daytime. This narrows the free slots for freight trains, in the time table planning phase as well as in daily operations.



**Figure 8: KPI punctuality**



**Modal split**

The modal split for Corridor A can be seen in figure 9, showing roughly the same picture as last year. Rotterdam faced a slight increase in favour of rail, whereas Genoa lost a small part of rail transport. Trans-alpine traffic through Switzerland also lost a bit of its share from 64% down to 61%. This decrease has two main reasons. First of all rail transport is strong for raw materials (e.g. wood, coal) and products which are directly linked to heavy production industries like steel, cars etc. The downturn of the European industry production directly cut back the traffic volumes on rail, whereas road has a competitive advantage in goods for daily consumption. Secondly, road transport with its rather low amount of fixed costs reacted on the dropping traffic volumes with reduced transportation fees.

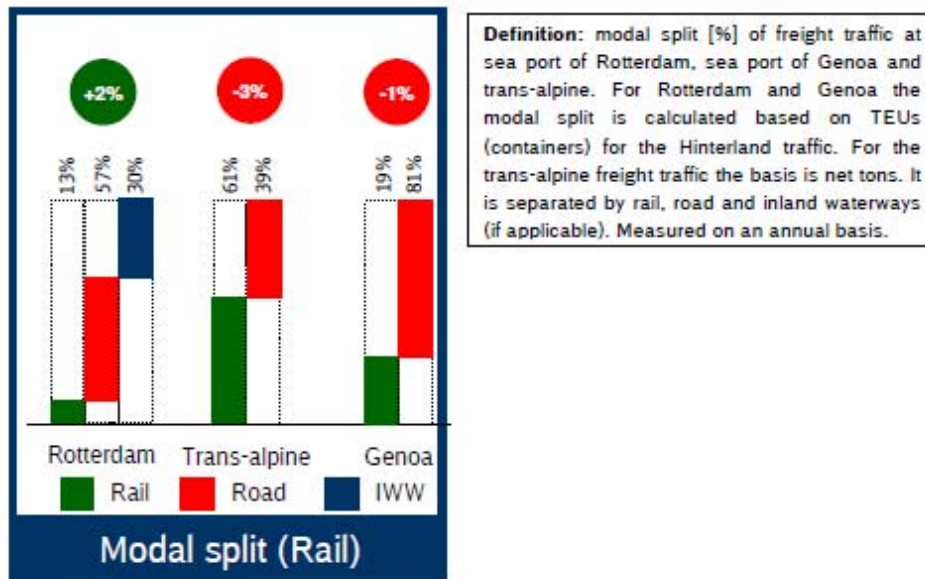
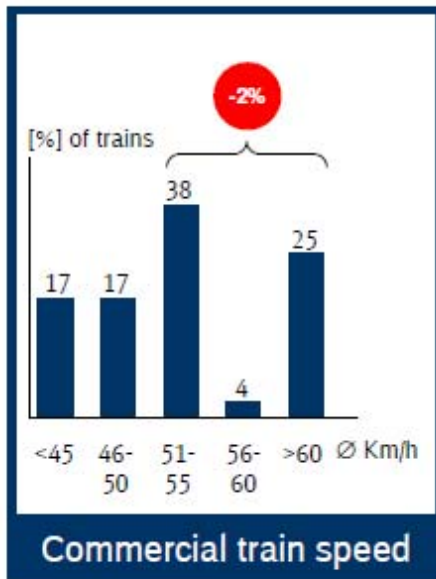


Figure 9: KPI Modal split

**Commercial train speed**

Figure 10 shows the distribution of the commercial train speed. The train speed "as sold to the clients" is at a high level, though the amount of train paths with an average speed of 50 km/h (or more) decreased by 2%. Complementing this statement, it could be recognised that the average speed of the fastest train paths grew. For some traffic relations and depending of the timely position of a train path throughout the day, the customers can be offered train paths of 65 km/h or even more than 70 km/h at average. As a benchmark, road transport reaches an average speed of 60 km/h at most on long distance transport relations. Barges on inland water ways reach an average speed of 10 - 20 km/h.



**Definition:** average speed [km/ h] of trains according to valid time table for selected relations: Freiburg - Novara; Rotterdam - Melzo and Köln - Gallarate (all start/ end points of these transport relations are directly located on Corridor A) in both directions. Measured based on annual time table and classified in five different categories.

Figure 10: KPI train speed

### Summary

Figure 11 sets the 2009 values in the context of the previous year and the target for 2015. Furthermore, it shows the delta in absolute or relative figures.

KPI	2008 (Actual)	2009 (Actual)	Delta	2015 (Target)
Work progress WGs [%]	25.8	41.5	15.7	100
Work progress IMs [%]	20.4	28.0	7.6	81
ETCS deployment [%]				
Pre-planning	29	29	±0	-
Plan Study	61	61	±0	-
Tendering and Contracting	0	0	±0	-
Installation	0	0	±0	-
Testing and homologation	2	0	-2	-
In operation	8	10	+2	100
State of funding [bn. €]				
Open	6.2	4.0	-35%	-
Planned	1.6	2.5	+58%	-
Approved	3.6	4.3	+18%	-
Used	11.2	11.9	+6%	22.3
Int. traffic volume [trains]				---
Emmerich	18.592	17.892	-3.7	
Basel	48.947	41.669	-14.9	
Domodossola	21.908	19.979	-8.8	
Chiasso	18.196	9.042	-50.0	
Luino	11.073	11.568	+4.5	
Arrival punctuality [%]				
Freiburg - Novara	65	55	-10	80
Rotterdam - Melzo	84	N/A	N/A	80
Köln - Gallarate	49	58	+9	80
Modal split rail [%]				3.5% growth for rail/ total corridor (2005-2020) <sup>3</sup>
Rotterdam port	11	13	+2	
Trans alpine	64	61	-3	
Genoa port	20	19	-1	
Commercial train speed [%] of trains above average 50 km/h	69	67	-2	See remark <sup>4</sup>

**Figure 11: Development of the KPIs**

### MC workshop

On 25<sup>th</sup> and 26<sup>th</sup> March 2009 the MC met in a workshop to review the strategy of the corridor and the mission statement of November 2006. The MC endorsed the existing direction and the work carried out by the PIMs, the WGMs and the PMO in many ways. However, an updated vision was formulated for the corridor. The essence of this vision is to focus the corridor enhancements even more on "soft" aspects and in particular on service with tangible improvements for the clients.

<sup>3</sup> Corridor A Business Plan 2006 presentation, April 2007 (PMO), p. 17.

<sup>4</sup> A trend towards a desired average speed of 60 km/ h can be recognised from the client's side. On the other hand side, clients confirm that reliability (punctuality) is more important than transport speed.

**In 2020 we will have a corridor which...**

- § Has flexible train paths for our customers
- § In which trains have a common way to operate
- § In which we have one face to the customer while remaining individual IMs
- § Has a reliable and predictable service
- § All required info is available
- § Has a continuous improvement process in place
- § Is to the benefit of all stakeholders
- § Meets market demands (price, capacity...)
- § Offers good connections to main terminals
- § Is part of an integrated European freight network

**Figure 12: Vision 2020 for Corridor A**

**TEN-T application (2<sup>nd</sup> call 2010 – 2013)**

Following a call from the TEN-T EA the EEIG submitted an application for European co-funding from the TEN funds in May 2009. This time the EEIG was able to submit a single-beneficiary application on behalf of the members of the EEIG. The volume of the TEN funding request from the EEIG sums up to 5.4 Mio. € total eligible costs for the timeframe between 2010 and 2013, with a maximum of 50% (2.7 Mio. €) of co-financing. In December 2009 the EEIG received the information, that it is proposed to support the work of the EEIG with 2.7 Mio. € for the timeframe 2010 – 2013. The first TEN-T funding action<sup>5</sup> for the PMO for the timeframe 2007 – 2009 will end in December 2009.

**Meeting of transport ministers in Genoa**

The transport ministers from the Netherlands, Germany, Switzerland and Italy convened in Genoa in May 2009. The meeting became necessary to adopt the B3 deployment strategy for Corridor A officially; including consequently the approval of the slightly modified timeline for the ERTMS deployment. The official goal for the go-live of ERTMS operations on the entire corridor is now 2015. In presence of the transport ministers, a brief status of Corridor A was presented and some of the related subjects were discussed in detail. A follow up meeting of the transport ministers is already planned in Rotterdam in June 2010.

At the same time a meeting on PP24<sup>6</sup> (railway axis Rotterdam/ Antwerp - Duisburg - Basel - Lyon/ Genoa) was held under the lead of EC vice-president and commissioner for transport Antonio Tajani. A closer cooperation of the IMs of Corridor A with the IMs from Belgium and France may be the consequence in future.

**Communication concept and Corridor A website**

The PMO, together with the PIMs and communication/ PR experts from all IMs, worked intensively on this task throughout 2009. A third workshop was conducted in March to give

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<sup>5</sup> Commission decision C (2008) 7579, TEN-T action 2007-EU-60410-P

<sup>6</sup> Part of the TEN-T network.

the MC a clear recommendation for communication measures. The MC approved this recommendation in the MC meeting/ GA in March to realise the following communication measures for Corridor A:

- § Corridor A logo/ branding, including corporate design for letters, presentations and business cards
- § Corridor A internet presence/ website, including an internal communication platform
- § Flyer/ brochure (draft)

To implement these measures, a professional agency was hired. The IMs were involved in the development process at any time, e.g. commenting and voting for the preferred logo variant and contribution to the content (pictures, photographs, text etc.) of the website. The website of Corridor A will contain an information offer for the clients. Therefore, it serves as an integral part of the service concept of Corridor A. A  $\beta$ -version of the web presence for internal testing will go-live still in December 2009, whereas the website offer will be fully online<sup>7</sup> in the 1<sup>st</sup> quarter 2010. The corporate design for letters and presentations was finalised and will be used officially from 2010. The brochure has been drafted, but for the time being it is only available in an electronic version (pdf). The MC decided to update, finalise and print the brochure once there is a special need for it, for instance for the representation at a business fair.

#### **RU advisory board**

The idea to establish a formal and regular information platform with our clients was already born in 2008. Throughout 2009 three meetings (February, June and November) were organised and held. After these meetings, a mixed feedback must be drawn from the perspective of the EEIG. The amount of nominated members actually participating in the meetings is rather poor. Though the dates were announced several months in advance, a plenary session with all 10 members of the advisory board present in the meeting was not possible.

Due to the considerable amount of RUs performing their services (partly) on the corridor, the EEIG cannot maintain the communication towards all of the clients. The RU advisory board is supposed to be a representative group of customers, from all countries with a mixed relation of incumbents and newcomers. In this context the two associations in the advisory board, CER and ERFA, play an important role as they shall serve as multipliers. CER participated in all of the three meetings. From the EEIGs point of view it is disappointing that ERFA did not use its mandate in the advisory board so far. ERFA did not participate in any of the three meetings of the RU advisory board in 2009. The second German seat in the board is now vacant since 12 months, and the EEIG urges the German representatives in the ExB to nominate an appropriate candidate to take this responsibility.

Apart from the moderate participation, the topics selected and the discussions hold in the meetings showed the need of the board and its added value to the clients, but also for the EEIG. Some of the topics presented and discussed in the advisory board meetings were:

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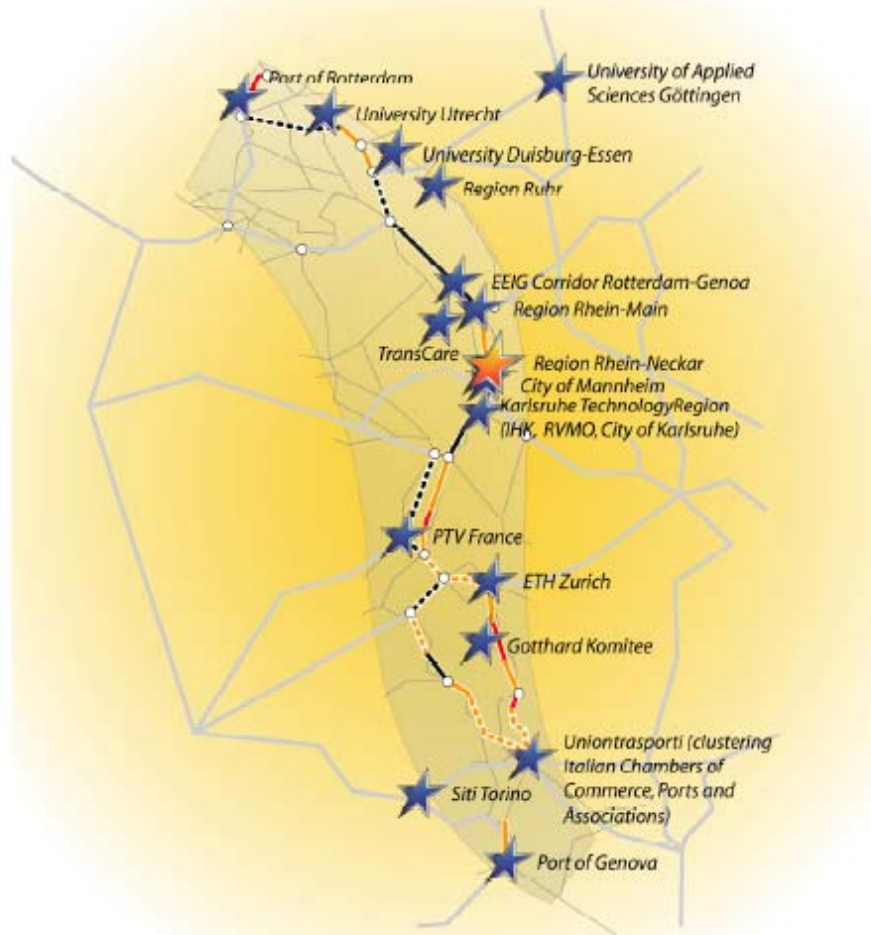
<sup>7</sup> URL: [www.corridora.eu](http://www.corridora.eu)

- § General presentation of the corridor programme
- § ERTMS migration plan
- § Traffic Quality (work scope, status, analysis and measures)
- § Railway noise and noise mitigation
- § Expectations of the RUs, regarding the corridor work and the advisory board

The EEIG will continue this service as part of the corridor service concept; three meetings are agreed with the RUs in 2010.

**INTERREG – Code 24 project**

Corridor A crosses and links the most important and dynamic economic regions in Central Europe, such as Rotterdam, Amsterdam, Duisburg, Cologne, Mainz/ Wiesbaden/ Frankfurt, Mannheim/ Ludwigshafen, Karlsruhe, Basel, Bern, Milan, Turin, Alessandria and Genoa. The corridor has an international and an interregional significance. Several of these corridor regions and cities, together with universities, port authorities and chambers of commerce (see figure 13) launched a project called "Code 24 programme". The lead partner of the project is the city of Mannheim.



**Figure 13: Code 24 INTERREG participants**

The code 24 project partners prepared and submitted a joint request for co-financing from the European INTERREG funds. The work is structured in four work packages with several related activities:

- § Railway and settlement development
- § Environmental issues (including noise)

- § Integrated management of logistics
- § Communication and stakeholder involvement strategies

The project contacted the EEIG and asked for support and involvement. The MC decided to cooperate in this programme with the status of a (permanent) guest. The EEIG supported and advised the project partners in railway/ infrastructure related questions. The cooperation will continue in 2010.

## 1.2 Outlook for 2010

In 2010 the corridor works will continue as planned, whereas some important landmarks are to be highlighted here:

- § Completion of corridor noise study (MoT)
- § Meeting of the transport ministers in Rotterdam/ The Hague in June
- § Go-live of webpage of Corridor A
- § Tendering of first ETCS lots, sections or pilot projects on Corridor A in mid 2010
- § Drilling breakthrough at the GBT, all drilling works at GBT completed
- § Re-start of WG Operational Rules
- § Assessment of opening Europtirails application for terminal operators
- § Go-live of interface between proprietary IT system - Europtirails at ProRail/ Keyrail
- § Assessment of benefits to be achieved by harmonising the train length on the entire corridor

## 1.3 Organisation

The corridor IMs succeeded in 2008 in founding and registering the "European Economic Interest Group Corridor Rotterdam - Genoa EWIV (EEIG)" as the common legal entity for the successful implementation of the corridor programme. ProRail B.V., DB Netz AG and RFI S.p.A. are members of the EEIG. SBB Infrastruktur and BLS Netz AG have joined the EEIG as associated partners, because it is not possible for companies from non-EU member states - such as Switzerland - to join an EEIG as an official member.

The EEIG is managed by Mrs. Claudia Cruciani from RFI as Managing Director Deputy, and Mr. Stefan Wendel from DB Netz as Managing Director Acting. The members of the General Assembly are Mr. Michel Ruesen (ProRail), Mr. Klaus Junker (for DB Netz) and Mr. Umberto Foschi (RFI). The function of the chairman was given to Mr. Michel Ruesen. The associated partners are represented by Mr. Johann Haller until 30<sup>th</sup> June 2009 and Mr. Heinz Pulfer from 1<sup>st</sup> July 2009 (both SBB Infrastruktur) and Mr. Kees van Hoek until 30<sup>th</sup> April 2009 and Mr. Daniel Pixley from 1<sup>st</sup> of May 2009 (both BLS Netz). The seat of the EEIG is Frankfurt/ Main (Germany). The overall corridor organisation including the EEIG is shown in figure 14.



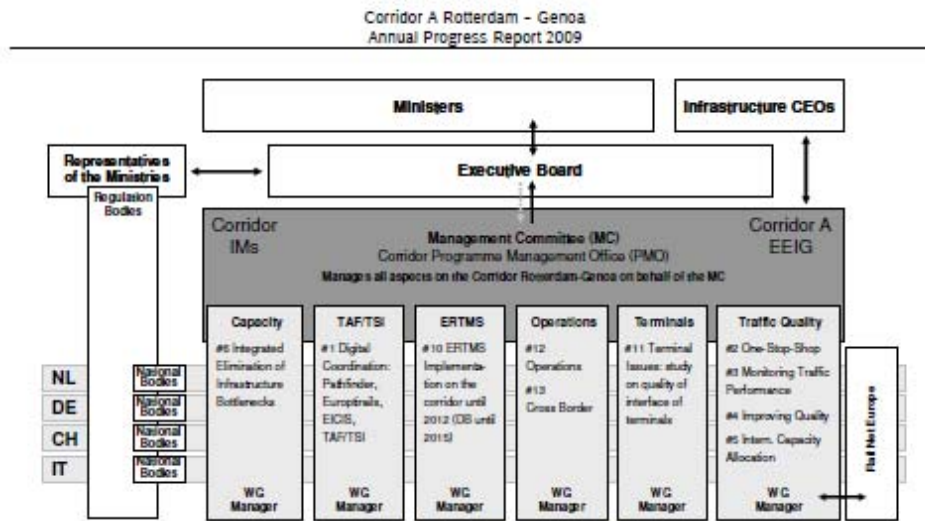


Figure 14: Corridor Organisation

The Programme Management Office (PMO) of the corridor including the EEIG consists of three full-time employees located in the corridor offices in Frankfurt. Five Programme Infrastructure Managers (PIMs) and five Working Group Managers (WGMs) in joint responsibility for the corridor activities on national and on PMO level complete the working organisation. They establish the interface contact between national IMs, WGs and the PMO. Furthermore, several experts from the corridor IMs add their knowledge and their expertise to the WGs and expert WGs managed by the corridor, as well as to WGs established on European level at the ERA, UIC, ERTMS Users Group etc. In total, about 50 persons work at least part-time on tasks which are assigned to the corridor programme.

## 1.4 Monitoring & Reporting Methodology

The working methodology of the corridor organisation basically remained unchanged in 2009 except for minor adjustments according to the experience gained. For interested or new readers, detailed explanations can be found in annex C.

## 1.5 Release Notes & Contact Details

This report has been set up, reviewed and finalised between November 2009 – April 2010 by the working organisation of the Management Committee of Corridor A, the Programme Management Office (PMO). The legal body for the working organisation is the EEIG Corridor Rotterdam - Genoa EWIV. The general content was elaborated and integrated by the PMO management, whereas the detailed information in this report had been contributed respectively elaborated by the programme managers (PIMs) of ProRail (NL), DB Netz (DE), SBB & BLS (CH) and RFI (IT) thus being under the responsibility of the related IMs. For any questions or further details concerning the Corridor A programme please contact:

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## 2 Activities of the Working Groups

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

- § TAF TSI (IQ-C Action Item #1): Laurens Berger
- § ERTMS (IQ-C Action Item #10): Stefan Wendel
- § Operations (IQ-C Action Item #12, #13): Antonio Garofalo until 31.07.09
- § Capacity (IQ-C Action Item #6): Heinz Pulfer/ Daniel Gerhard
- § Traffic Quality (IQ-C Action Items #2, #3, #4, #5): Hansruedi Kaeser
- § Terminals (IQ-C Action Item #11): Thomas Schneider

A cross reference table mapping the IQ-C action items with the structure of the annual report can be found in figure 37 (see annex D).

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

#### 2.1.1 Key Performance Indicators

<b>Due Date of Reporting</b>	30.12.09	<b>WG Result [%] Plan</b>	18	<b>WG Result [%] Actual</b>	15
<b>Work Packages Total</b>	3	<b>Work Packages Finished</b>	0	<b>Work Packages Pending</b>	3
<b>Start</b>	01.01.07				
<b>End</b>	31.12.15				

PSP	WP	Results and Milestones achieved
1.1	Analysis/ design of TSI TAF by corridor IMs	Work package to be started in 2010
1.2	Monitoring of European activities	UIC CCG established IM cluster (RNE) started its works Tendering of common components completed Implementation of common components started Coordination of works with RNE, UIC and RUs
1.3	Development of value added services (Total Service Concept)	Work package has started in 2009

#### 2.1.2 Work Progress

##### 2.1.2.1 Achievements

The following representatives are members of the WG TAF TSI: Laurens Berger (ProRail), Frits van der Meer (ProRail), Stephan Breu (DB Netz), Hans-Peter Pfister (SBB) and Andreas Exter (PMO). During 2009 no plenary meeting of this working group took place; via small meetings with some of the WG Members the general progress in the field of TAF TSI

was monitored and discussed. By end of 2009, the total actual work progress of the group sums up to 15% versus 18% of planned work progress.

**Analysis/ design of TSI TAF by corridor IMs (PSP 1.1)**

Besides the common part (see next clause), it is necessary to adapt the local proprietary train operation systems with the companies involved in corridor/ network train operation. This is necessary in order to generate respectively interpret all messages which are defined for the planning, preparation and running of trains.

Three important remarks:

1. With the Europtirails system - available today - it is possible to work on quality improvements on the corridor as well. Nevertheless it appears to be a challenging task to get this system operational all over the corridor.
2. Contrary to Europtirails, TSI TAF does not have an incorporated registration of train performance, which is a necessary element in quality improvement.
3. It must be kept in mind that TSI TAF is primarily a country/ network system and not a corridor system

Anyhow, as stated already, it remains an important task of the WG to monitor and stimulate the development of the necessary systems with all the players on the corridor in order to get the TSI TAF system operational for all traffic on the corridor, in a way which is valuable for the quality improvement process. The WP will be started in 2010.

**Monitoring of European activities (PSP 1.2)**

Hosted by UIC, a group of IM's and RU's is working at the development of the TSI TAF. These "common components" will form the common basis for the message exchange system between all players in freight train operation and business. All corridor IM's are taking part in this group as shareholder. Also the bigger RU's operating on the corridor are members in this common components group (CCG). This group has clarified and solved the indistinctness (missing definitions, unclear definitions, ambiguous and/ or non-complete business processes) in the TSI specification. The development of the common components has started in 2009 and is almost on schedule, which means that around 2012 some functionalities from TSI TAF can come into operation.

**Development of value added services (Total Service Concept) (PSP 1.3)**

The WG took the first initiative and started this WP in the first months of 2009. The WG developed, in cooperation with the WG Quality/ TSC, the following vision: systems like Europtirails and TSI TAF can and will support quality improvements in train operations by their ability to supply the correct train running data. The initiatives for such improvements will come from the WG Quality; the task of the WG TSI TAF will be to monitor and stimulate the development of the necessary systems with all the players on the corridor, in order to have the TSI TAF system operational as early as possible.

In June a presentation was held for the RU Advisory Board, with three main issues:

- § Inform the RUs about the plans of the corridor regarding TSI TAF
- § Ask the RUs to what extent they are preparing the introduction of TSI TAF

- § Discuss the development of a vision about how TSI TAF (and other systems) can contribute to a so called total service concept

The discussion which followed this presentation showed that the operational divisions of the RUs are not yet working at the opportunities with TSI TAF. TSI TAF is mainly seen as a debit. Any benefits are supposed to be cashed already with the introduction of their current systems.

Consequently, the initiative for the development of value added services has to come from the IMs and the RUs must be offered a clear advantage.

#### **2.1.2.2 Risk management and chances**

Although the application of TSI TAF is mandated by a European Regulation, there is a risk that (some) RUs are either not keen on modifying their applications, or experience technical and/ or financial barriers.

Looking at the good progress made by the CCG, this common development is no more seen as a risk for the time being.

#### **2.1.2.3 Change request management**

No changes to report.

#### **2.1.3 Outlook**

The works at RNE and especially within the common components group will continue in 2010, at the level of testing the software for the Common TSI TAF system.

During 2010 the WG will:

- § Renew the plans and progress within the various players (IMs and RUs) on the corridor
- § Together with the WGM Quality/ TSC come to a vision about the role which can be played by TSI TAF in quality improvements and in the development of the total service concept during its introduction phase

It can be seen as a major milestone that the Pathfinder application (hosted and developed by RNE) will be working according to TSI TAF processes, somewhere in the first half of 2010, depending on the release of the new version. According to the current planning the common components software can go live in 2013.

## 2.2 ERTMS (IQ-C Action Item #10)

### 2.2.1 Key Performance Indicators

<b>Due Date of Reporting</b>	30.12.09	<b>WG Result [%] Plan</b>	63	<b>WG Result [%] Actual</b>	22
<b>Work Packages Total</b>	3	<b>Work Packages Finished</b>	0	<b>Work Packages Pending</b>	3
<b>Start</b>	01.02.07				
<b>End</b>	30.06.12				

PSP	WP	Results and Milestones achieved
2.1	Common strategy Corridor A	Finalising ETCS strategy B3, incl. approval of EC Developing an MoU according to ETCS strategy Developing an ETCS masterplan for Corridor A Developing an ETCS cost breakdown structure
2.2	Specification and product	First draft of DMI specification on B3 (ERA WG) FRS "Crypto Key Management" finalised and delivered to UNISIG
2.3	Common processes and responsibilities	First draft of ETIP presented, corridor priorities defined

### 2.2.2 Work Progress

#### 2.2.2.1 Achievements

According to the above KPI with actual work progress of 22% versus 63% planned, the ERTMS working group seems to be far behind the plan. Besides the own works the working group also monitors the work results of non corridor own national and European working groups such as of the Users Group ERTMS, NSAs, ETIP, UIC, ERA and bilateral working groups etc. whose inputs are needed for the ERTMS implementation on the corridor. Subsequently, this KPI shows the entire progress on ERTMS which is needed to assess and mitigate the risks for the corridor implementation.

In 2009, the working group ERTMS consisted of the regular members Adri Verbraak (ProRail), Martin Zürcher (SBB/ BLS), Giovanni Zanelli (RFI), Frank-Bernhard Ptok (DB), Miroslav Obrenovic until 30<sup>th</sup> September 2009 (DB Netz), Didier Leautey (DB Netz) from 1<sup>st</sup> October 2009, Rainer Erbe (DB Holding) and Stefan Wendel from the EEIG as working group manager. For specific topics the WG was further supported by experts from the IMs, the Users Group ERTMS or other bodies. The WG met on a monthly basis.

In the beginning of 2009, the work structure had been changed. In particular, the number of work packages had been reduced down to 3, whereas the scope of WP 2 covers all ETCS/ERTMS activities on European level.

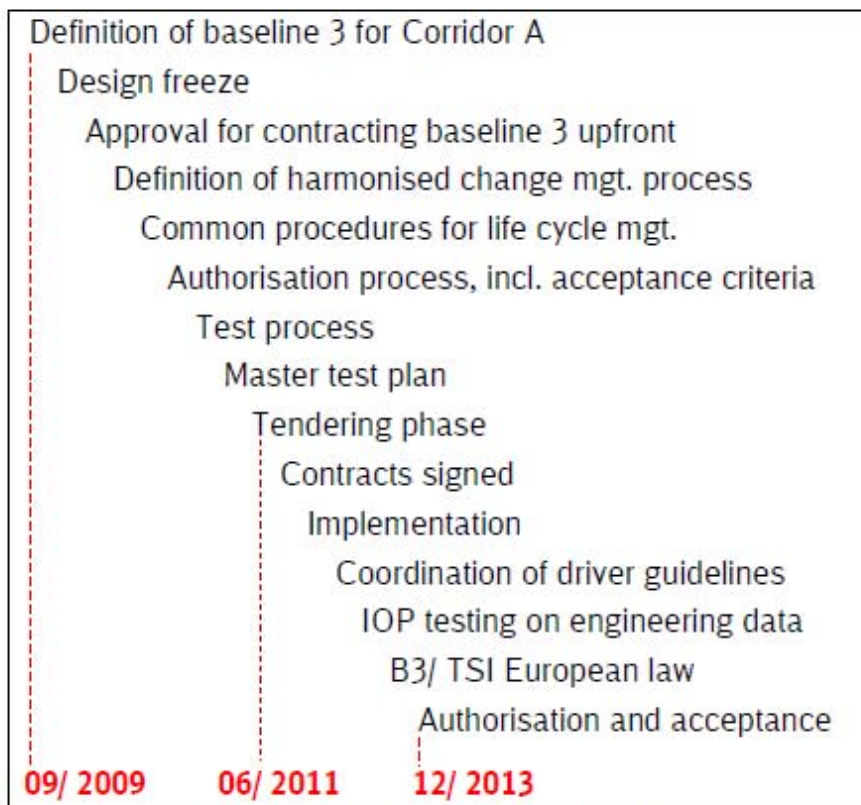
#### Common strategy Corridor A (PSP 2.1)

A major task was to finalise the joint corridor ETCS baseline 3 concept and to achieve approval of the ministries. The ExB confirmed its agreement in the second ExB meeting, and

in addition on 5<sup>th</sup> March 2009, the RISC committee endorsed a corresponding declaration supporting the corridor approach to place orders for baseline 3 prior to its voting in the TSI. This act was documented in an official writing from Mr. Ruete (DG TREN, Director-General Energy and Transport). In general, with this strong political support the baseline 3 corridor concept is now accepted by the IMs, ExB and EC, with the exception of the funding, which could not be solved for the German part.

As the last essential element of the baseline 3 concept, the conclusion of a Corridor A MoU between the IMs, UNIFE, ERA and NSAs could nearly be finalised. This MoU refers to the early ERTMS implementation with baseline 3 and outlines the obligations and duties of all parties involved (ERA, NSAs, IMs, industry) throughout the entire testing, authorisation, acceptance and taking into operation ERTMS on Corridor A. The EEIG with the support of the WG ERTMS made a great progress in coordinating the contents within the IMs as well as negotiating this MoU in a series of meetings with UNIFE representatives, the NSAs and ERA.

Furthermore, the MoU is based on a jointly prepared master plan documenting common goals, which are needed to meet the completion of ERTMS until 2015. The master plan focuses on technical, functional and organisational aspects (see figure 15).



**Figure 15: Corridor A masterplan major milestones**

During the works on a joint procurement strategy, it became obvious that joint ETCS procurement or even one common tender of the corridor IMs will not be possible on Corridor A. This has several reasons:

- § Predominantly, national funding sources require national tenders
- § European/ national laws do not allow buyer syndicates and the exchange of information about tenders, suppliers and offers
- § Heterogeneous starting position for ERTMS trackside installations on Corridor A:
  - Pure system upgrades from SRS 2.2.2 to a higher SRS version
  - Upgrades from national class B systems to ETCS installations (L1 LS and L1 RI)
  - Different engineering and signalling systems in each country
  - Heterogeneous interface conditions in each country
  - Different contracting strategies of IMs such as turn-key projects, supply-only contracts, maintenance contracts covering life cycles etc.
- § Very limited potential to achieve better prices by bigger procurement lots ("economies of scale") as besides balises, all systems will be different to comply with the different national situations.

However, the WG ERTMS conducted a workshop to analyse the technical implications in detail. A detailed cost breakdown structure for the procurement of ETCS parts, systems and turnkey projects was elaborated and proposed for common use, as well as common contractual content with regard to the testing and authorisation process.

#### **Specification and product (PSP 2.2)**

This WP summarises the various activities of ETCS related working groups at ERA, UIC, NSAs etc. The WG ERTMS defined the requirements of Corridor A as an input to these working groups and tracked their progress with regard to the needs of Corridor A.

The Driver-Machine-Interface (PSP 2.2.1.1) group had ERA succeeded in getting the DMI specification, based on SRS 2.3.0d, endorsed by the ERA control group in March 2009. Almost in parallel, the works to specify the DMI on the basis of SRS 3.0.0 started. The specification could be completed during summer.

The group working on key management system (PSP 2.2.1.6) stopped its work from mid of 2009 onward. The group was awaiting the results of the crypto key management group, which works on the "operational document" and "key management FRS". The EEIG ERTMS users group finalised the FRS document by end of October, the operational document is about to be finalised at the beginning of 2010. As soon as the document is completed and released, the KMS group will continue its work.

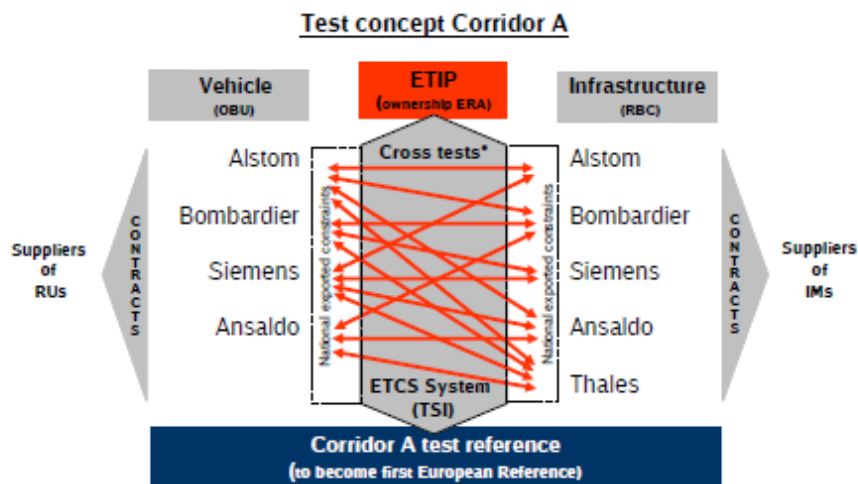
The exchange of keys between SBB and ProRail had been agreed in a contract concluded in 2008. The KMC in Germany is in a test phase since spring 2009. By end of October the integration tests with the two existing national KMC (The Netherlands, Switzerland) were not conducted. Once the German KMC is operational, the contract template between SBB and ProRail can be adopted to the needs of DB and ProRail, respectively DB and SBB.



**Common processes and responsibilities (PSP 2.3)**

The procedures for testing, authorisation and acceptance developed and practiced by SBB on the HSL and Lötschberg line are mainly based on extensive cross testing due to the lack of generic clean products and a test reference. The results are very good and serve as a basis for the corridor implementation. The WG ERTMS proposed a corridor test concept which is based on similar procedures and to great extent in line with the subsets 110, 111 and 112 proposed by UNISIG. This concept was also compared to a similar concept of Corridor C and aims to establish a common test data base containing all relevant engineering data of Corridor A, which shall be used to test generic and application scenarios thus serving as test reference.

The definition of the test processes and the common data base is part of the ETCS TEST and Implementation Platform (ETIP), an initiative among UNISIG and the sector represented by the ERTMS Users Group in order to support the ERA by developing proposals. Corridor A supports ETIP and prioritised the tasks according to the corridor needs (see figure 16).



The concept relies on cross testing with all contracted suppliers against the common reference database. Furthermore, most of the tests shall be performed in laboratories. Basis for the test cases shall be the TSI plus notified national requirements.

By the attendance of the working group manager, the WG ERTMS is closely connected and involved in the works of the cross acceptance working group of the NSAs of Corridor A. The NSA working group has prepared the basis for a guideline regarding the authorisation process on corridor A and a first draft of the national requirements had been collected in close cooperation with the IMs for the future notification by ERA. Rules, obligations and duties shall be commonly laid down in the contracts between IMs and their suppliers.

The sufficient funding of the ERTMS on the corridor is a prerequisite for the timely preparation of basic design works and calls for tenders. In ProRail, SBB/ BLS and RFI the

funds are mostly allocated and work is progressing. The master plan shows that many processes, obligations and duties have to be clearly defined in the contracts. All the preparation works like completion of FRS, pre-design, time roll out planning, as well as the test and authorisation process are monitored by the WG ERTMS, as the tendering activities for corridor A projects are intended to start in the third quarter of 2010. Up to the end of 2009, also DB Netz continued those preparation works for ETCS implementation in Germany as a part of the German recovery programme, which shall be decided upon in February 2010 latest. However, up to now ETCS implementation is covered by a financing agreement for the section Emmerich to Oberhausen only. The lack of funds for ETCS in Germany (sections Oberhausen - Mannheim; Mannheim - Basel) has been a major obstacle since the beginning and did not allow the corridor to publish the corridor implementation plan yet. The funding situation for ETCS in the Netherlands, Switzerland and Italy is secured.

#### **2.2.2.2 Risk management and chances**

The corridor faced a severe A1 risk throughout the first half of 2009. Additional requirements mainly asked for by SNCF on safety margins in the braking curve model in ETCS L1 LS mode jeopardized the capacity for SBB's operations. A bilateral working group in cooperation with ERA, UNISIG, CER and EIM agreed on a common solution in July 2009.

A continuous risk is the funding situation in Germany. Due to this the WG ERTMS could not set up and finalise the detailed implementation plan for the corridor. This is reported as a pending A1 risk of the WG ERTMS, who helped to mitigate the impact on the overall ETCS implementation until now as much as possible.

#### **2.2.2.3 Change request management**

The working structure of the WG ERTMS has been partly revised in the beginning of 2009. It now focuses also on the development of common aspects important for call for tenders (e.g. testing, authorisation and liability issues, roll out information etc.), the development of the specifications and national requirements, topics which are currently in elaboration also in close coordination with the NSAs and ERA.

#### **2.2.3 Outlook**

As in 2010 the first tenders will be released and the first contracts shall be signed, the WG ERTMS will seek to

- § Clarify those issues, which need to be defined in a coordinated way to appear in all the national contracts and prepare a common annex in cooperation with the purchasing departments in order to assure smooth implementation among all the contractors to be employed
- § Cooperate with the NSAs and the ERTMS Users Group in the definition of national requirements and pending specifications needed for the corridor implementation
- § Draft a master test plan for the corridor, which shall serve as a basis for the planning of cross impact activities as well as inform about the principle roles and processes related to the authorisation of the corridor

- § Define in cooperation with UNIFE technical risks and design/ engineering issues at borders, which shall be specified and coordinated in a harmonised and economic manner
- § Support the corridor implementation by solving raising problems through the Corridor A steering committee ETCS
- § Continue to support the European migration process in the frame of the corridor group meetings of the European ERTMS Coordinator by sharing best practices

The WG ERTMS will also assist where appropriate in solving respectively mitigating the funding problem in Germany.

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

### 2.3.1 Key Performance Indicators

Due Date of Reporting	31.12.09	WG Result [%] Plan	100	WG Result [%] Actual	76
Work Packages Total	4	Work Packages Finished	1	Work Packages Pending	3
Start	01.11.07				
End	30.11.09				

PSP	WP	Results and Milestones achieved
3.1	One Stop Shop	International path request (ad hoc) from customer can be answered in less than 5 working days if requested Process optimisation done Handbook published
3.2	Monitoring Traffic Performance	Geographical points and traffic defined Traffic monitoring Freiburg - Novara improved Monitoring Cologne - Gallarate and Rotterdam - Melzo established Monitoring of passenger traffic Basel/Zürich - Milan in preparation Regular meetings with customers held
3.3	Improving Quality, Implementation of EPR	EPR dry run on Corridor A (Freiburg - Novara; Mannheim - Milan) completed Working Groups (Commercial, Operation, Legal Matters, IT) active Validation and calculation tools are in development. Preparation of pilot application in 2010
3.4	International Capacity Allocation, Implementation of Pathfinder	Catalogue paths 2010 published Optimized international path coordination with COBRA Path Catalogue 2011 in preparation

## 2.3.2 Work Progress

### 2.3.2.1 Achievements

The WG Traffic Quality works in cooperation with RNE. Hansruedi Kaeser (SBB) functions as the manager of this group as well as a link between the activities of Corridor A and essential services performed by RNE. Within RNE Hansruedi Kaeser has the position of the corridor manager at RNE for this essential North-South freight axis<sup>8</sup>. He works together with a team of experts:

- § OSS: Esther Romijn (Keyrail), Marlies de Groot (Keyrail), Henk Sack (ProRail), Harald Heusner (DB Netz), Rudolf Achermann (SBB/ BLS) and Simona Garbuglia (RFI)
- § Time Table: Erik Schut (ProRail), Klaus Kaiser (DB Netz), Beat Affolter (BLS), Peter Bigler (SBB) and Gian-Piero Gagliardi (RFI)
- § Quality and Operations: Marlies de Groot (Keyrail) Frits van der Meer (Prorail), Siegfried Nierichlo (DB Netz), Daniel Gerhard (BLS), Rudolf Achermann (SBB), Roberta Torella (RFI)

The responsibilities and organization between EEIG and RNE has been clearly defined. The corridor manager became part of the PMO and the EEIG as a working group manager. The MC takes over the function of the corridor steering group. The former RNE corridor steering group will take over a supporting role.

By the end of 2009 the total work progress sums up to 76% versus 100% planned work progress. The delay is rooted in the following WP, respectively activities:

- § Monitoring Traffic Performance (PSP 3.2): The monitoring and reporting could not be expanded to all international trains, mainly due to technical reasons.
- § European Performance Regime (PSP 3.3): The time planning for EPR was a bit too optimistic in the current baseline. EPR could not be put in the stage of full commercial operation until the end of 2009. The project faced many organisational, technical and external risks which led to this delay.
- § International Capacity Allocation (PSP 3.4): The application Pathfinder is not customized for the processes predominantly used in the freight business. Moreover, some technical risks emerged, especially the interfaces between the proprietary systems and the central IT application. As a consequence, COBRA has set up as a preliminary workaround.

#### One Stop Shop (PSP 3.1)

Formally this WP was already completed in 2008, besides a continuous optimisation process which had been set up. As a result the OSS process for international path ordering has been defined in an optimised way. Customers operating on an international level can place their order at the OSS of their choice. Due to the OSS service, there is no need to order an international train path at the different IMs.

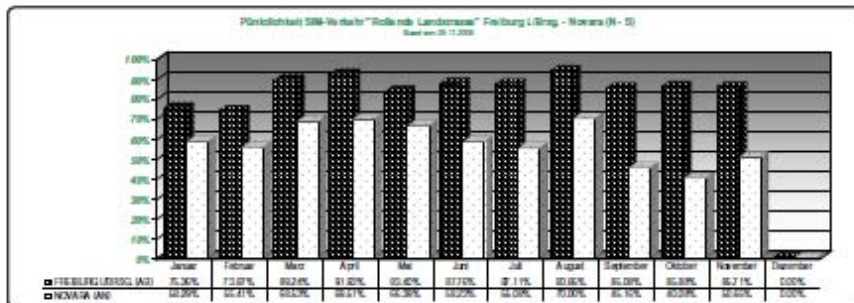
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<sup>8</sup> The corridor definition from RNE differs slightly from the ERTMS related geographical definition of Corridor A. RNE defines this corridor from Antwerp and Rotterdam to Milan and Genoa.

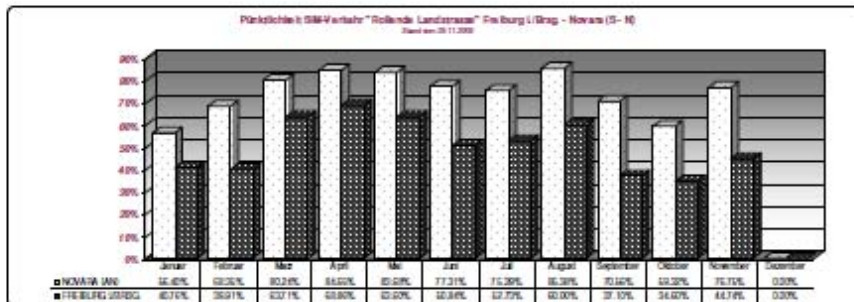
**Monitoring Traffic Performance (PSP 3.2)**

Monitoring the traffic performance is a permanent task. In the GA of November 2008 RNE decided to have so called European performance managers installed at each IM. In December 2008 the names of the persons have been identified and the kick-off meeting took place 22<sup>nd</sup> January 2009. These persons now network and meet on a regular basis to analyse quality problems and to submit adequate proposals for improvements. Reporting for the relations Freiburg - Novara, Köln - Gallarate and Rotterdam - Genoa have been created. The tool Europtirails has been improved by RNE. Data completeness, correct measuring points and the production of correct reports out of EOPT are challenges to be faced by RNE and the IMs. A new release of the ProRail operating system is desirable to establish the information link between the Netherlands and Europtirails. Data completeness is also a vital problem in Switzerland. Since the time table change in December a very poor data delivery to EOPT could be provided.

In the past, many train control alarm messages were caused by rolling highway trains. The amount of alarms could be reduced significantly in 2009 by analysing the loading process in the terminal of Freiburg. Nevertheless, in 2009 the punctuality of the rolling highway traffic decreased due to several reasons (arrival Novara: 58%; arrival Freiburg: 52%), see figures 17 and 18. First of all, many trackside construction sites have had a negative influence on punctuality of the trains. The lower priority of freight train versus regional passenger trains in Italy led to delays as well. RFI has been contacted in this concern. The monitoring and reporting of the passenger traffic relation Basel/ Zürich - Milan is in preparation by the RFI performance manager.



**Figure 17: Average punctuality for rolling highway in North - South direction**



**Figure 18: Average punctuality for rolling highway in South - North direction**

### **European Performance Regime (PSP 3.3)**

EPR is a project which is basically driven by the UIC in cooperation with European IMs. The start of the project was in 2004. The philosophy of EPR is to provide a financial incentive for quality improvements and not to give a full monetary compensation for the disturbance caused by a certain delay<sup>9</sup>. The actual traffic performance of each train is monitored, whereas the causes for a delay are identified and recorded based on UIC leaflet 450-2. In case of a delay, the originator is charged with a malus, whereas an on-time arrival is rewarded with a bonus. Based on a reference model, a malus (bonus) means a payment into (from) a common fund. In 2009 new working groups like commercial, operations, legal matters and IT have been set up. The development of a calculation and a validation tool is going on. A pilot application for June 2010 is in preparation. Depending on the European progress, the operational start of EPR is planned in 2015.

### **International Capacity Allocation (PSP 3.4)**

The path catalogue for the 2010 time table has been published in time in January 2009. A major milestone has been realised with the "Corridor Border Adjustment" (COBRA). This is an intermediate solution until Pathfinder will be used in full scope for freight traffic. The interfaces to the national planning tools are not yet ready. COBRA is a simple system, internet based and destined to enhance the cross border path planning. During the technical meeting in Brussels a lot of time could be saved due to this application.

### **2.3.2.2 Risk management and chances**

The WG Traffic Quality reported mainly technical risks (rated C3) in context of the EOPT application. EOPT is vital for international traffic management and monitoring as well as a source of data for the EPR. Main problems are the connection of the central tool (data base) with the proprietary systems of the IMs. The item had been escalated to the Management Board of UIC via the EPR test run and of course to the Managing Board of RNE. Moreover the monitoring module is not available in a sufficient quality. The application Pathfinder needs to be re-designed to cater for the needs of the rail freight business.

### **2.3.2.3 Change request management**

No major changes to report, only a few activities were added to the existing baseline at the beginning of 2009.

### **2.3.3 Outlook**

In 2010, major challenges like improving the system EOPT or Pathfinder will continue. The delay reasons will be built in order to get a good background to define measures to improve the quality. Performance management had a good start but still a lot of work has to be done to install the performance managers at each IM. A new working plan ("baseline") for the

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<sup>9</sup> UIC press release nr. 126, 15.12.08 (UIC), p.9.

group has been defined, picking up new targets as well as non-completed tasks from the previous baseline for 2007 - 2009.

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

### 2.4.1 Key Performance Indicators

<b>Due Date of Reporting</b>	31.12.09	<b>WG Result [%] Plan</b>	63	<b>WG Result [%] Actual</b>	7
<b>Work Packages Total</b>	3	<b>Work Packages Finished</b>	0	<b>Work Packages Pending</b>	3
<b>Start</b>	01.01.07				
<b>End</b>	31.12.10				

PSP	WP	Results and Milestones achieved
4.1	Operational Rules	Analysis of existing documentation completed First set of decision transformed in operational rules Identification of sensitive situations not ETCS Results used to complete annex B of TSI OPE (by EIM and CER WG)
4.2	Training of Personnel	Work package not yet started
4.3	General Tasks	Scope of the work (adoption of the agreed methodology) defined

### 2.4.2 Work Progress

#### 2.4.2.1 Achievements

The WG Operations focuses on operational rules for normal and degraded modes and for emergencies plus the harmonisation of non-ERTMS rules and GSM-R operational rules. Until mid of 2009, this WG consisted of the following members: Herman Tijmsma (ProRail), Rainer Meffert (DB Netz), Erich Fluck (SBB) and Antonio Garofalo (RFI) who manages the activities of the group. The expert from SBB had been withdrawn and the WGM from RFI moved to a new assignment within RFI, giving up all his corridor related activities. This caused a standstill of the works related to Operational Rules since July 2009. By the end of 2009, the overall actual work progress sums up to 7% versus 63% planned work progress. Besides the fluctuation of personnel within the WG and the consequential stop of the work, this delay is due to the following reasons:

- § Complexity of topics higher than initially foreseen
- § Non-availability of ETCS L1 LS specification

#### Operational Rules (PSP 4.1)

The existing documentation has been collected and analysed by the WG. This work resulted in 42 specific subjects (non exhaustive list), such as:

- § Shunting operations
- § Trackside signals
- § Overpassing signals
- § Emergency stop signals
- § Catenary signals

- § Rules for ETCS (Level 1 and Level 1 LS)
- § Assistance to broken down train
- § Route book/ timetable
- § Management of stops (scheduled, non-scheduled)
- § Train composition
- § Diversion of trains

For each subject, one or more decision cards were prepared by the group. A decision card structures the problem in a systematic way:

- § Reference of existing documentation
- § Description of the issue
- § Existing national rules applicable to the subject (Dutch, German, Swiss, Italian)
- § Related explanations
- § Decision of the WG

By a comparison of the national rules, differences as well as similarities were analysed. The results of the comparison and the proposal (recommendation) of the group are documented in the last section. The resume of the group after having analysed all subjects can be seen in figure 19.

Harmonisation easy by using existing rules	Harmonisation possible by adapting existing rules	Harmonisation possible only with new rules	Specs not yet available/ analysis to be completed
3	8	19	12

**Figure 19: Results of analysis of operational subjects**

A list with proposals for harmonised operational rules had been submitted to ERA. It must be noted that the adaption of existing rules, the introduction of new rules or even the removal of existing rules is very difficult, as it is a legislative issue in some countries. Furthermore, corridor specific operational rules shall be avoided, as it would worsen today's situation.

On 10<sup>th</sup> December 2009 a meeting of EIM's Working Group TSI OPE Revision was held in Brussels. During this meeting the results of Corridor A regarding Operational Rules were presented and discussed in relation to the not yet completed Annex B of TSI OPE. It has been agreed by EIM's Working Group to use these results for completing Annex B, which is a strong confirmation for the work of the group performed so far. It was suggested that EIM and CER will work on together on this issue.

**Training of Personnel (PSP 4.2)**

WP has not yet been started.

**General Tasks (PSP 4.3)**

The methodology of the group was adapted and further developed to a new "process based approach", instead of a "rule based approach". The new approach shall make it easier to realise harmonisation potential, as not every national rule has to be harmonised. This new



methodology defines for which operational scenarios interaction between drivers - signalmen and train preparers is necessary and defines the content of this interaction.

#### 2.4.2.2 Risk management and chances

The fluctuation of personnel within the WG Operational Rules has caused a total standstill of the works since July 2009. It is necessary to re-start the activities of the group.

#### 2.4.2.3 Change request management

No changes to report.

#### 2.4.3 Outlook

The future work of the group is primarily depending on the re-nomination of experts from SBB and RFI. It is likely that the baseline (the working plan) of the group will be slightly adjusted as soon as the works continue under the lead of a new WGM.

### 2.5 Capacity (IQ-C Action Item #6)

#### 2.5.1 Key Performance Indicators

Due Date of Reporting	31.12.09	WG Result [%] Plan	82	WG Result [%] Actual	66
Work Packages Total	5	Work Packages Finished	3	Work Packages Pending	2
Start	01.10.07				
End	31.12.10				

PSP	WP	Results and Milestones achieved
5.1	Common bases	Existing bases confirmed Refinements agreed Work package completed
5.2	Capacity analysis 2008	Work package completed
5.3	Capacity analysis 2009	Work package completed
5.4	Capacity analysis 2010	Work package started in 10/ 2009
5.5	Capacity analysis 2011	Work package to be started in 10/ 2010

#### 2.5.2 Work Progress

##### 2.5.2.1 Achievements

This group under the lead of Heinz Pulfer (SBB) met six times throughout 2009. Its members are: Hugo vandenBerg (ProRail), Dr. Albrecht Hinzen (DB Netz), Daniel Gerhard (BLS) and Patrizia Cicini (RFI). By the end of 2009 the overall work progress sums up to 66% which is a bit behind the planned progress of 82%. The delta can be explained with the capacity

analysis 2010 (WP 5.4) which is not yet completed. Out of the 5 work packages, 3 are completed for the time being.

**Capacity analysis 2009 (PSP 5.3)**

The group compiled and finalised an extensive data collection for the entire corridor, called "corridor inventory". By reasonable geographical sections this data table contains relevant corridor characteristics and attributes, such as:

- \$ Maximum inclination
- \$ Loading gauge
- \$ Train length
- \$ Line class
- \$ Axle load
- \$ Meter load
- \$ Train weight
- \$ Train speed
- \$ Power system
- \$ Number of tracks
- \$ Language used (for operations)
- \$ Planned ETCS equipment (SRS, level)

This list was completed by an investment plan for the corridor (see figure 20), including the funding status of the specific project. The largest extent of these projects (and the corresponding investment volume) is dedicated to the enlargement of infrastructure, but the list also contains ERTMS and traction power (25 kV) projects.

Appendix VI  
Annual Progress Report Corridor A 2009 (Infrastructure Manager)

Corridor A Rotterdam - Genoa  
Annual Progress Report 2009

Investment Plan - Corridor A							State: 22.10.09
Project list with funding status, elaborated by WG Capacity							checked by: ProRail, DB Netz, SBB, BLS, RFI
Period	Year	Country	Line section (from North to South)	Project	Cost (M €)	Funding Status	Remarks
2007 - 2014	2007	NL	Kijfhoek - Zevenaar	Betuwe Line	4.580	Secured	
	2007	CH	Frutigen - Brig	Base Tunnel	2.800	Secured	
	2009	NL	Maasvlakte I - Kijfhoek	25 kV + ERTMS	-	Secured	(included in Betuwe project)
	2009	NL	Meteren	improving links Betuwe Line	6	Secured	
	2010	CH	Castione	upgrade	18	Secured	
	2011	CH	Bern (Rüti - Zollikofen)	3rd track	40	Secured	
	2011	IT	Domodossola - Novara	Gozzano bypass	31	Secured	
	2011	IT	Novara-Alessandria	upgrade line	13	Secured	
	2011	IT	Luino-Laveno	upgrading	21	Secured	
	2012	CH	Bern - Thun	Block distance	25	Planned	
	2013	NL	Maasvlakte II - Maasvlakte I	New line + Marshalling Yard	30	Secured	
	2013	NL	Kfh (Barendrecht - Kijfhoek)	ERTMS	36	Secured	
	2013	NL	ZvO Zevenaar - Border	ERTMS, 3rd track, voltage chg.	100	Secured	Dates to be confirmed by NL/DE
	2014	DE	Emmerich - Oberhausen	3rd track	900	Secured	Dates to be confirmed by NL/DE
2014	IT	Bergamo-Treviglio	2nd track	95	Secured		
2014	IT	Novara	Node upgrade	471	Planned		
2015 - 2019	2015	IT	Eng - Domodossola	RoLa 4m (P/C 80)	tbd	D / R	to be planned
	2015	IT	Domodossola - Novara	upgrade 4 stations for 4m	15	D / R	to be planned
	2015	DE	Border - Emmerich	3rd track	200	Secured	Dates to be confirmed by NL/DE
	2016	DE	Mannheim - Offenburg	3rd + 4th track	600	Secured	
	2017	DE	Mainz/Wiesb. - Mannheim	HS line	2.600	Planned	
	2017	CH	Basel - Bellinzona - Chiasso	Block distance 3' freight trains	250	Planned	incl. 750 m Chiasso
	2017	CH	Erstfeld - Biasca	Base tunnel	6.000	Secured	
	2017	CH	Bellinzona-Luino	line upgrade	70	Planned	
	2018	IT	Gallarate - Rho	upgrade	500	Planned	
	2018	IT	Tortona - Voghera	4 tracks	600	Planned	
2019	CH	Bellinzona - Lugano	Ceneri Basetunnel	1.400	Secured		
2019	IT	Novara - Oleggio - Arona	2nd track 4meters	535	Planned		
2020 - 2024	2020	NL	Maasvlakte I - Kijfhoek	tbd	tbd	D / R	study harbourline
	2020	NL	Breda - Bostel	tbd	tbd	D / R	programme high frequencies
	2020	NL	Kijfhoek - Zevenaar	additional links Betuwe	tbd	D / R	programme high frequencies
	2020	DE	Offenburg - Basel	4 tracks	3.100	Secured	
	2020	CH	Liestal	fly-over	120	Planned	
	2020	IT	Seregno - Bergamo (-Treviglio)	Gronda est	1.000	Planned	
2025 + later	2021	IT	Chiasso - Seregno - Monza	4 tracks	1412	Planned	
	2025	CH	Biasca - Bellinzona	tbd	tbd	D / R	
	2025	CH	Bern - Thun	3rd track part	200	D / R	
	2025	CH	Frutigen - Brig	2 track, part 2	300	D / R	
	2025	IT	Laveno - Luino-CH	Gronda ovest	1.270	Planned	
2026	IT	Arquata - Genova	Terzo valico, Giovi pass	5.060	Planned		
Total Investments for bottleneck elimination (M €)					34.398		

Legend  
 Secured = Financed and approved projects  
 Planned = not yet financed or approved projects  
 D / R = (Development and Review) Studies or projects to be shifted in time

**Figure 20: Corridor investment plan<sup>10</sup>**

Both documents are significant achievements, as they provide valuable information also for the work of the other WGs and for the steering of the entire corridor programme.

It is part of the regular activities of the WG Capacity to monitor current and future traffic demand and to compare it with the capacity supply. The group works with time slices of 5 years until the time horizon of 2025. The final results of this work are coloured corridor maps, displaying the saturation degree of the line sections. For 2020, figure 21 displays the updated scenarios S, P and D+R.

<sup>10</sup> Due to capacity analysis reasons, additional projects than the ERTMS Corridor A are considered as well. ERTMS only included where within scope of infrastructure project.

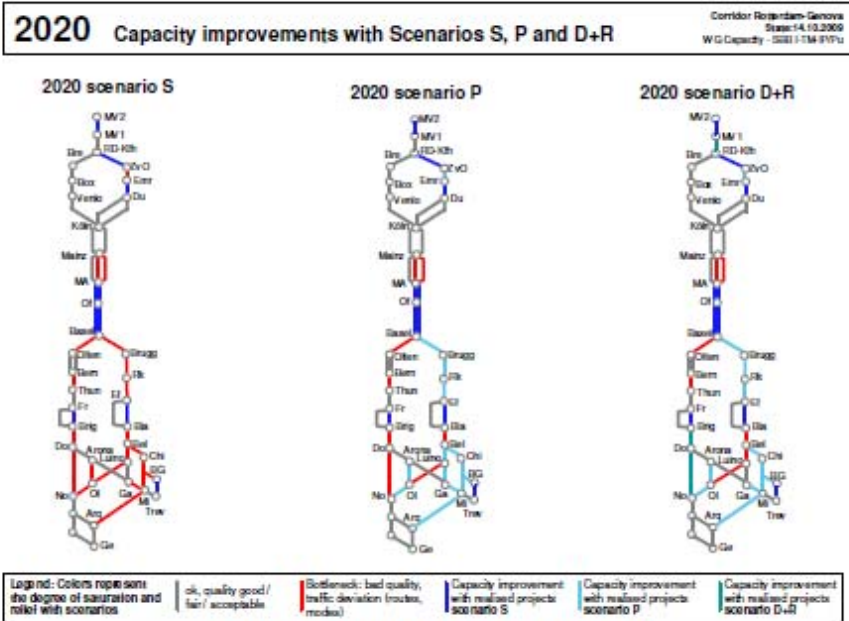


Figure 21: Scenarios S, P and D+R for 2020<sup>11</sup>

The general conclusion which can be drawn from the pictures is still the same. Given the expected increase in traffic volume, the corridor will face severe capacity problems without further investments in 2020 (or even earlier). In particular, this will be the case in the corridor sections south of Basel.

Another activity of the WG was to analyse the infrastructure parameters on Corridor A in detail and to search for quick wins. The following conclusions can be drawn:

- § RUs have a clear demand for longer trains with a relatively low total weight. These kind of trains are typically used for combined transport/ intermodal traffic
- § Specialised block trains (short, heavy) for raw materials can be facilitated by appropriate organisational measures
- § There is also a clear demand from the RUs for a train profile enabling 4m high cube containers

The IMs are asked to align their infrastructure investment planning accordingly. Figure 22 shows the (indicative) costs for modifications of the infrastructure.

<sup>11</sup> Due to capacity analysis reasons, additional lines than the ERTMS Corridor A are considered as well.

Corridor A Rotterdam - Genoa  
Annual Progress Report 2009

Parameter	Realization time	Investment	Cost per km (ERIM)	Benefit for RU	Soft measures	Upgrade to (UIC ERIM)
Train length	> 2 years	small	0.6 M €	large	yes	750 m
Train load	> 2 years	medium	1.2 M €	large	?	1'500 t
Axle load / meter load	> 5 years	small - medium	0.9 M €	medium	?	D4 22.5t / 8.0 t/m
Train speed	> 5 years	large	1.8 M €	small	no	100 km/h
Train profile / gauge	> 5 years	large	2.8 M €	large	no	GB
Bottleneck elimination	>10 years	very large	5.9 M €	large	no	(for comparison only)

**Figure 22: Indicative costs for infrastructure modifications**

A clear quick win is the extension of the infrastructure in order to cope with longer trains<sup>12</sup>. Extending the profile requires heavy investments. Therefore the developments in the container traffic and the demands arising from this must be monitored very carefully as such infrastructure enlargements are very expensive.

### 2.5.2.2 Risk management and chances

No risks to report.

### 2.5.2.3 Change request management

No changes to report.

### 2.5.3 Outlook

WG Capacity will revise the development of demand in traffic volume on the entire Corridor A until the end of 2010 especially regarding the drop in transport volume due to the economic crises and extend the methodology to the year 2030. As a consequence of that the WG Capacity sees a realistic chance to plan and realise the urgent projects just in time within the foreseen timeframe of the economical recovery. In the meantime the WG will report about the actual status and the developments by country of the most critical train parameters length (750m) and profile (4m) in every ExB Meeting. The ExB also expects an assessment of the benefits for longer trains.

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<sup>12</sup> Especially true for the Italian section of the corridor. See also Annual Report 2008 (PMO), p. 36.

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

### 2.6.1 Key Performance Indicators

<b>Due Date of Reporting</b>	31.12.09	<b>WG Result [%] Plan</b>	75	<b>WG Result [%] Actual</b>	63
<b>Work Packages Total</b>	3	<b>Work Packages Finished</b>	1	<b>Work Packages Pending</b>	2
<b>Start</b>	01.10.07				
<b>End</b>	31.01.13				

PSP	WP	Results and Milestones achieved
6.1	Information collection	Identification of relevant terminals completed Master data sheet (data collection) completed Review 2009 of national/ international studies completed Review 2009 of harbours/ port selection completed
6.2	Active study with partners	Data collection started Task force quality completed
6.3	Active studies of WG	Track capacity terminals - corridor completed Interoperability parameters completed Work package completed

### 2.6.2 Work Progress

#### 2.6.2.1 Achievements

Thomas Schneider (DB Netz) is leading and coordinating the activities of this group. Peter Andersson (ProRail), Viktor Janz, Dirk Bartsch (DB Netz), Anne Greinus (SBB) and Vincenzo Prisco (RFI) are the representatives of the other IMs in this WG. Anne Greinus from SBB has left the WG in 2009 and has so far not been replaced. The group conducted 6 regular meetings throughout the year.

By end of 2009 63% of the work progress has been completed whereas the group planned to complete 75%. The delay of the WG has several reasons:

- § Additional time needed to collect the required data for the analysis of the terminals
- § Scope of WP 6.3.2 (Interoperability, in particular connection to corridor main line) more complex than planned
- § Additional effort for supporting the MoT terminal study in QII and QIII/ 2008 (backlog from 2008) and joining the task force quality in 2009

#### Information collection (PSP 6.1)

In 2009 the WG reviewed the terminal listing of the corridor. These terminals are mainly along the line or are strategically relevant for the corridor. It was a decision of the WG to have a closer look on the possibilities to connect Amsterdam as on of the big three deep sea ports in Western Europe to Corridor A. Dortmund Westerholz and Frankfurt (Main) Ost were removed from the list as there is hardly any traffic to/ from these facilities via Corridor A. Karlsruhe and Karlsruhe Gbf (marshalling yard) were added to the list, as they are directly

located on Corridor A. The following terminals (see figure 23) are assessed as being relevant and will be regarded in future:

#	Name	Country
1	Zeeland Seaports	Netherlands
2	Moerdijk	Netherlands
3	Amsterdam Ceres	Netherlands
4	Rotterdam RSC	Netherlands
5	Rotterdam Delta (ECT)	Netherlands
6	Rotterdam Euromax	Netherlands
7	Europoort	Netherlands
8	Botlek	Netherlands
9	Pernis	Netherlands
10	Emmerich	Germany
11	Duisburg DIT Rheinhausen	Germany
12	Duisburg Hafen DeCeTe	Germany
13	Duisburg Ruhrort Hafen PKV	Germany
14	Duisburg Ruhrort Hafen (planned Rhein-Ruhr)	Germany
15	Neuss-Hessentor	Germany
16	Gremberg Rbf	Germany
17	Köln Eifeltor	Germany
18	Köln Godorf (planned)	Germany
19	Köln Nord	Germany
20	Köln Niehl	Germany
21	Ludwigshafen BASF	Germany
22	Ludwigshafen Triport	Germany
23	Mannheim Handelshafen	Germany
24	Mannheim Wincanton	Germany
25	Mannheim Rbf	Germany
26	Karlsruhe	Germany
27	Karlsruhe Gbf	Germany
28	Kehl	Germany
29	Offenburg Gbf	Germany
30	Freiburg	Germany
31	Basel - Weil am Rhein	Germany
32	Basel GB	Switzerland
33	Aarau	Switzerland
34	Rekingen	Switzerland
35	Niederglatt	Switzerland
36	Chiasso	Switzerland
37	Gallarate/ Busto (Hupac)	Italy
38	Novara Boschetto	Italy
39	Novara Boschetto CIM	Italy
40	Milano Segrate - Terminali Italia	Italy
41	Brescia Scalo	Italy
42	Voltri Terminal Europe (VTE)	Italy
43	Southern European Container Hub (SECH)	Italy
44	San Giorgio Terminal	Italy
45	Messina Terminal	Italy

**Figure 23: Terminals Corridor A**

Besides the above mentioned list of terminals, the actual EC decision 561/ 2009<sup>13</sup> leads to focus on 8 regions along Corridor A where the focus will be on 29 terminals, as displayed in figure 24. These terminals have to be connected to the ERTMS Corridor A within the timeframe of 2015/ 2020 on a legal and compulsory basis.

**Obligation for equipment of connecting lines to a certain amount of terminals and harbours due to the TSI CCS, Chapter 7**

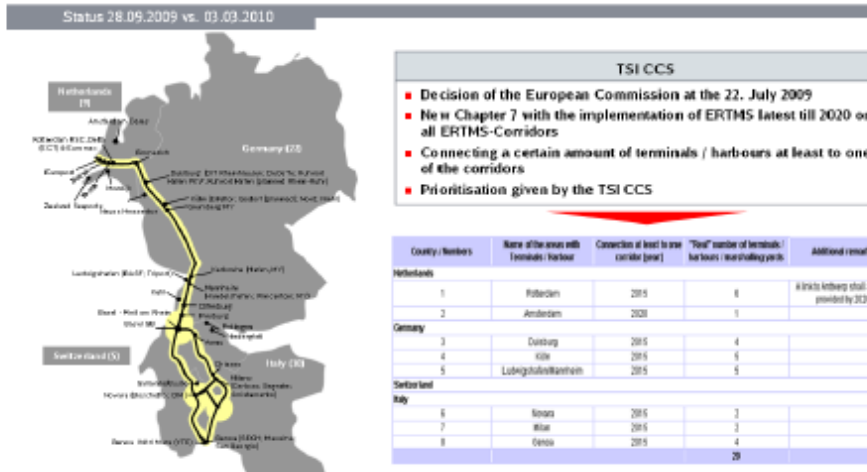


Figure 24: Terminals to be connected to ERTMS Corridor A according to TSI CCS

**Active study with partners (PSP 6.2)**

Under the umbrella of the 2009 established terminal platform meeting the terminal operators and IMs have assembled a quality taskforce to determine and the quality needs on corridor and terminals. The analysis should also provide recommendations for measures. Four areas of improvement were identified, assessed and ranked by the task force (see figures 25 to 28): trains, shuntings, administration, working processes.

<sup>13</sup> Implementation of the TSI CCS on the conventional European rail system, commission decision of 22<sup>nd</sup> July 2009, Official Journal of the European Union of 25.07.09, p. 13 - 15.



### Terminal: Trains

What	Why	How	Priority	Benefit
1 Punctuality of the trains	<ul style="list-style-type: none"> <li>The combined transport wins in credibility</li> <li>Punctual collections</li> <li>More capacities in the Terminal and on the railway net</li> </ul>	<ul style="list-style-type: none"> <li>Precise Monitoring</li> <li>Quality contract (penalty)</li> <li>Goods traffic = Passenger traffic</li> </ul>	1	★ ★ ★
2 Tracking and Tracing	<ul style="list-style-type: none"> <li>Better resources planning in the Terminal</li> <li>Precise notices to the customers</li> </ul>	<ul style="list-style-type: none"> <li>System (Pilot Project) for the train position recognition, usable also by the Terminal</li> </ul>	1	★ ★
3 Simplification of the administrative processes	<ul style="list-style-type: none"> <li>less (unnecessary) working cost</li> <li>Better information exchange</li> </ul>	<ul style="list-style-type: none"> <li>Electronic consignment note</li> <li>Interoperable train documentation (brake weight, technical data)</li> </ul>	2	★

Figure 25: Quality measures for trains

### Terminal: Shuntings

What	Why	How	Priority	Benefit
1 No discrimination (Last Mile)	<ul style="list-style-type: none"> <li>Organisation depends on the railways</li> </ul>	<ul style="list-style-type: none"> <li>Regulations / legislations change</li> <li>Independent organisation or organisation which depends on the terminal</li> </ul>	1	★ ★
2 Costs control	<ul style="list-style-type: none"> <li>High costs</li> </ul>	<ul style="list-style-type: none"> <li>Comparison with other costs in Europe</li> <li>Standard parameters (Europe)</li> </ul>	2	★ ★ ★
3 Simplification of the processes according to regulations	<ul style="list-style-type: none"> <li>Lack of clearness concerning the responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Definition of the responsibilities (agreements)</li> <li>Shuntings according to COTIF/CIM</li> </ul>	2	★

Figure 26: Quality measures for shuntings

### Terminal: Administrative management of the trains

What	Why	How	Priority	Benefit
1 Electronic consignment note	• Process simplification according to the Interoperability	• Pilot project	2	★ ★
2 Technical train documentation valid for the whole distance	• Process simplification according to the Interoperability	• Pilot project	1	★
3 Data transmission in accordance with European standard	• Cost reduction	• Pilot project	2	★
4 Simplified customs or security checks (EG 1875/2006)	• More clarity in all over Europe	• Realization in phases	3	★

Figure 27: Quality measures for administrative management

### Terminal: Working processes

What	Why	How	Priority	Benefit
1 Higher productivity: tracks	• Higher terminal productivity	• Factor: min. 2 train couples per track	1	★ ★ ★
2 Higher productivity: Transhipment sidings	• The terminal is not a depot	• Example: Bonus-Malus system	1	★ ★
3 Integrated information system	• Better administration of the information	• Data exchange terminal-terminal (i.e. damages)	1	★
4 More co-ordination	• Integrated system	• Integration in the value added chain of the railways	1	★ ★

1 = High priority  
2 = Medium priority  
3 = Low priority

★ Operational benefit

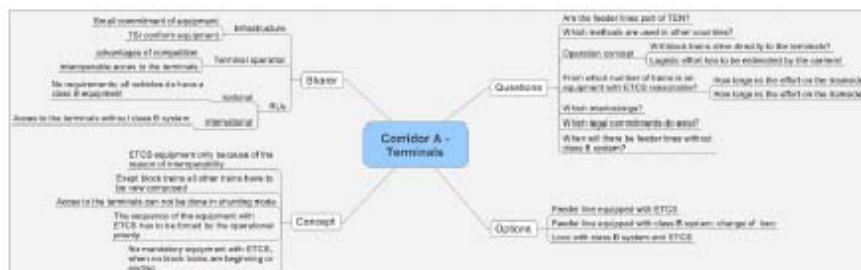
Figure 28: Quality measures for working processes

The results prove that the corridor organisation is working on the right tasks. Other items, such as the insufficient tracking & tracing system (see figure 25, item 2) were followed up in the terminal platform meeting (please see chapter 2.6.3 for more details).

**Active study within WG (PSP 6.3)**

This WP consists of two main activities: analysis of the track capacity of the last mile and the analysis of potential interoperability constraints regarding the ETCS equipment on the last mile. This WP could be completed in 2009. The track capacity for the connecting lines between the terminal facility and the corridor main line is evaluated as satisfactory. Bottlenecks or capacity shortages appear either on the corridor main lines or on the terminal facility, but not on the last mile.

Equipping the terminal connections with ETCS is important to create a business volume for RUs, intermodal operators and forwarders. The terminals represent major freight hubs, which would then be accessible by trains equipped only with ETCS. The WG set up crucial parameters regarding the equipment of the last mile with ETCS (see figure 29).



**Figure 29: Parameters for the equipment of connecting lines with ETCS**

Following this detailed analysis, another 600 km of line have to be equipped with ETCS to connect the terminal facilities all along the corridor with the corridor main line. Out of this, a considerable investment volume will be required. The feeder lines are actually equipped with the existing national Class B systems. At minimum the ETCS equipment will have to cover the same area as the existing Class B-systems.

The electrification was also a part of the analysis. Currently, in most cases the tracks of the last mile are not electrified. An electrification until the intersection area of the terminal facility (or even on both sides of the terminal facility) would be beneficial. Freight trains starting their journey would not have to change the locos after the train set has been pulled away from the loading/ unloading track. Instead, they would be able to leave the terminal with only one train movement which would lead to a reduction of travelling time.

The WG Terminals jointly decided in 2009 not to apply for TEN-T co-financing as the TSI CCS was only available in a draft version by the time the application had to be submitted.

**2.6.2.2 Risk management and chances**

No risks to report.

**2.6.2.3 Change request management**

The structure of the WG Terminals has been slightly changed in 2009. One WP deals with the circular revision of the terminal capacity and its connection to the corridor main line as a

basic data collection. A second WP is foreseen for analysis and studies with partners (e.g. contracted consulting companies) and a third WP contains analysis done directly by the WG Terminals.

### **2.6.3 Outlook**

In 2010 the WG will continue its work, while some important parameters (e.g. new traffic forecast in Germany, issued by the German MoT) will require a review of the capacity figures. Some items out of the work from the task force quality have to be considered more in depth, and may become part of the work scope of the WG Terminals. In close cooperation with RNE, an enlargement of the IT system EOPT will be considered to provide the terminal operators a better tool for the tracking and tracing of trains.

### 3 Activities of the Infrastructure Managers

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

- § ProRail (IQ-C action items #6, #10): Laurens Berger
- § DB Netz (IQ-C action items #6, #10): Thomas Schneider
- § SBB Infrastruktur (IQ-C action items #6, #10): Heinz Pulfer until 30<sup>th</sup> September 2009; Hansruedi Kaeser since 1<sup>st</sup> October 2009
- § BLS Netz (IQ-C action items #6, #10): Daniel Gerhard
- § RFI (IQ-C action items #6, #10): Silvia Carloni

The projects primarily refer to the IQ-C action items #6 (integrated elimination of infrastructure bottlenecks) and #10 (ETCS) as the major outcome will be additional capacity and ETCS trackside installations. This will also have a positive effect on punctuality and reliability of the traffic.

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

##### 3.1.1 Key Performance Indicators

<b>Due Date of Reporting</b>	31.12.09	<b>IM Result [%] Plan</b>	32	<b>IM Result [%] Actual</b>	23
<b>Projects Total</b>	9	<b>Projects Finished</b>	1	<b>Projects Pending</b>	8
<b>Start</b>	03.01.00 (earliest project)				
<b>End</b>	31.12.15 (last project)				

PSP	Project	Results and Milestones achieved
1.1.1.1.1	Zevenaar to border electrification 15 kV	Initial plan study has been started Strategic technical study completed Revision of technical study has been started
1.1.1.1.2	3 <sup>rd</sup> track (Zevenaar - border)	Assignment for plan study not yet received
1.1.1.2	Betuwe line	Go live (2007)
1.1.2.1	Maasvlakte 2: Extension harbour	Initial plan study (construction) completed (2007) Tendering process (construction) completed (2009) Construction work has been started
1.1.3.1	Electrification of Marshalling yard of Kijfhoek	Initial plan study has been started Strategic technical study completed Revision of technical study has been started
1.2.1.1	ETCS Barendrecht - Kijfhoek	Initial plan study has been started Strategic technical study completed Revision of technical study has been started
1.2.1.2	ETCS Zevenaar to border	Initial plan study has been started Strategic technical study completed Revision of technical study has been started
1.3	TAF TSI	Awaiting fundamental work from WG TAF TSI
1.4	Harbour line	Go-live (2009)

### 3.1.2 Work Progress

#### 3.1.2.1 Achievements

By the end of 2009, the overall actual work progress sums up to 23% versus 32% planned work progress. This delay is mainly caused by the technical complexity regarding the major infrastructure projects.

#### **ETCS/ traction power in Kijfhoek and Zevenaar – border (PSP 1.1.1.1.1; 1.1.3.1; 1.2.1.1; 1.2.1.2)**

In (and around) Kijfhoek as well as the short corridor line section between Zevenaar (end of Betuwe line) and the Dutch-German border are equipped with the Dutch ATB system and 1.5 kV DC traction power. For all four projects the initial plan study has been started. While conducting the plan study, the complexity and the reciprocity of the various technical systems appeared. A strategic technical study (Variantenstudie) became necessary to analyse and to clarify all questions related to:

- § ATP system: ETCS Level, RBC and GSM-R coverage
- § Traction power: 25 kV AC (future European standard) or 15 kV 16 <sup>2</sup>/<sub>3</sub> Hz AC (German standard)
- § Electromagnetic compatibility between AC traction power system and ETCS, especially with regard to traction return current
- § Interfaces and transition between new systems (ETCS, AC traction power) and legacy systems on the rest of the Dutch network (ATB, 1.5 kV DC)

In July 2009 the results of this integrated plan study have been made available: for both technical (=EMC risks) and financial reasons it was proposed to install only ERTMS Level 2 and to postpone installation of 15/ 25 kV to an - indefinite - point in time. Upon this outcome Germany (the Ministry and DB) claimed that this is not compliant with the Letter of Intent between the German and Dutch ministers from 2006, asked to revise the study and offered technical assistance by DB Bahnbaue. The cooperation which followed this discussion has resulted in a common solution for Zevenaar – Emmerich with:

- § Layout of the various traction powers systems and location of the voltage change over
- § Layout of the ERTMS system and location of the connecting point between the German ETCS 3.0.0 and the version used in the Netherlands, a 2.3.0d SRS
- § Connection of the 3<sup>rd</sup> track in the Netherlands (to be built on the Northern side of the existing tracks) with the 3<sup>rd</sup> track in Germany (to be built on the Southern side): the location of the so called *axle shift*.

Decisions will be taken during the first half of 2010. The decisions regarding ERTMS and 25 kV for Kijfhoek are expected as well in this period.

#### **3<sup>rd</sup> track Zevenaar – border – Emmerich (PSP 1.1.1.1.2)**

As stated in the previous paragraph, the necessary choices have been made in connection with the 15/25 kV project study. As this project is of a cross-border nature, ProRail and DB Netz work closely together for the planning and the layout. DB Netz will build the 3<sup>rd</sup> track in phases from Oberhausen in the direction of Emmerich border. The ProRail part will fit in this planning in a seamless way.

#### **Betuwe line (PSP 1.1.1.2)**

Despite the economical crisis, the number of trains using the Betuwe line in 2009 is, especially because of an increase during the 4<sup>th</sup> quarter, only a few percent below the figure of 2008. No major problems regarding the ERTMS operation have been reported. Thus, the Betuwe line reveals itself more and more as an integrated branch of the European railway network.

For the existing ERTMS installations a project has been started to upgrade these to SRS 2.3.0d. A request for TEN-funding was submitted. The EU has granted € 1 million for this project.

#### **Extension of port line (PSP 1.1.2.1)**

The formal start of the construction works for Maasvlakte 2 has been given in October 2009. As part of these works, whereby 2000 ha of land will be reclaimed out of the sea, to be used for harbours, terminals and industrial activities, the Corridor will be extended with a 12 km rail line. The construction of the extension of the port line equipped with ERTMS is integrated in the tender of Maasvlakte 2.

### **3.1.2.2 Risk management and chances**

Several risks, mainly of technical character, are connected to the ETCS projects respectively the traction power systems. These risks are rated C1 and remained throughout the entire year 2009, as the technical problems could not yet be solved or mitigated. They should be eliminated as the technical analysis comes to an end and a decision for the best technical solution can be made, including the funding. A budget risk rated C2 must also be taken into account as the installation of 25 kV will much more expensive than originally estimated.

### **3.1.2.3 Change request management**

No changes to report.

### **3.1.3 Outlook**

As can be derived from the recent developments, 2010 will be an important year for the Dutch projects: major decisions will be taken and the important interoperability projects will be prepared for tendering. Most important, but of a different kind, hopefully the recovery of the transport volume which was already visible during the second half of 2009 will continue during 2010 and further.

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

### **3.2.1 Key Performance Indicators**

<b>Due Date of Reporting</b>	31.12.09	<b>IM Result [%] Plan</b>	34	<b>IM Result [%] Actual</b>	30
<b>Projects Total</b>	83	<b>Projects Finished</b>	13	<b>Projects Pending</b>	70

Appendix VI  
Annual Progress Report Corridor A 2009 (Infrastructure Manager)

Corridor A Rotterdam - Genoa  
Annual Progress Report 2009

<b>Start</b>	02.01.84 (earliest project)	
<b>End</b>	15.12.2021 (last project)	
<b>PSP</b>	<b>Project</b>	<b>Results and Milestones achieved</b>
2.1.1.1.1	Emmerich - Oberhausen/ 1. stage: Node Oberhausen	Go-live (2004)
2.1.1.1.2	Emmerich - Oberhausen/ 2. stage: Electr. Interlocking	Initial plan study completed (2003) Budget approved (2003) Building license granted (2008) Start of construction (2008)
2.1.1.1.3	Emmerich - Oberhausen/ 3. stage: 3 <sup>rd</sup> track	Initial plan study completed (2008) Preparation for the planning approval procedure finalised, except Zevenaar - Emmerich (2009)
2.1.1.2.1	Karlsruhe - Basel/ 2. stage ABS/ NBS Karlsruhe - Rastatt Süd (StA 1)	Initial plan study completed (1994) Budget approved (1994) Building license granted (1998)
2.1.1.2.2	Karlsruhe - Basel/ 1. stage: Rastatt Süd - Offenburg (StA 2-6)	Go-live (2004)
2.1.1.2.3	Karlsruhe - Basel/ 2. stage: ABS/ NBS Offenburg - Kenzingen (StA 7)	Initial plan study completed (1998) Budget approved (1999)
2.1.1.2.4	Karlsruhe - Basel/ 2. stage: ABS/ NBS Kenzingen - Buggingen (StA 8 NBS)	Initial plan study completed (1998) Budget approved (1999)
2.1.1.2.5	Karlsruhe - Basel ABS/ NBS Kenzingen - Freiburg - Buggingen (StA 8 ABS)	Initial plan study completed
2.1.1.2.6	Karlsruhe - Basel ABS/ NBS Buggingen - Basel (PfA 9.0, 9.2, 9.3)	Initial plan study completed Budget approved
2.1.1.2.7	Katzenberg tunnel (PfA 9.1)	Initial plan study completed (2002) Budget approved (2002) Building license granted (2002) Construction works ongoing
2.1.2.1	Terminal KV Drehscheibe Westliche Ruhr (Duisburg)	Initial plan study completed Budget approved Building license granted
2.1.2.2	Terminal Köln Eifelort	Initial plan study completed Budget approved Building license granted Start of construction (2009)
2.1.2.3	Terminal Basel	Go-live (1999) Continuously extended afterwards



PSP	Project	Results and Milestones achieved
2.1.2.4	Terminal Basel (Southern access)	Initial plan study completed Budget approved Building license granted
2.1.3.1.1	Marshalling yard Oberhausen Osterfeld 1. stage	Go live (2008)
2.1.1.3.2	Marshalling yard Oberhausen Osterfeld 2. stage	Initial plan study completed
2.1.3.2	Marshalling yard Duisburg-Ruhrort Hafen	See 2.1.2.1
2.1.3.3	Marshalling Yard Köln Gremberg (North-South system)	Go-live (2009)
2.1.3.4	Marshalling Yard Köln Gremberg (South-Nord system)	Initial plan study (2007) Approval of budget (2007) Building licence (2007) Start of construction (2008)
2.1.3.5	Marshalling Yard Mannheim (West-East system)	Go live (2004)
2.2.1.1 - 2.2.1.16	ETCS projects (16 projects)	Emmerich - Oberhausen: plan study started (2008) Opladen (Solingen 1. BS): plan study completed (2009) Sections between Darmstadt (2.2.1.8) and Basel (2.2.1.16): plan studies completed (2009)
2.2.2.1 - 2.2.2.35	Electronic interlocking projects (35 projects)	Troisdorf: go-live (2001) Osterspai: go-live (2007) Duisburg Wedau: go-live (2006) Opladen (Solingen 1. BS): initial plan study completed (2009) Rechter Rhein (2. BS): construction works ongoing Karlsruhe: Initial plan study completed (2009) Rastatt: Initial plan study completed (2009) Achern: go-live (1996) Appenweiler: Initial plan study completed (2009) Offenburg: go-live (1997) Orschweiler: go-live (1999) Denzlingen: Initial plan study completed (2009) Buggingen: go-live (2009)
2.2.3.1 - 2.2.3.11	GSM-R projects (11 projects)	Technical installations completed, adaptation on ETCS Level 2 areas are expected
2.3	TAF TSI	Awaiting fundamental work from WG TAF TSI

### 3.2.2 Work Progress

#### 3.2.2.1 Achievements

By end of 2009, the actual work progress of the German projects (infrastructure, ETCS) is 30% which is slightly behind the planned progress of 34%. Out of 83 national projects along the corridor, 13 could be completed so far. 70 remain open or pending. In 2009 the project structure for ETCS and electronic interlockings was updated. The strategy to implement

ETCS L1 LS or L2 in Germany leads to a reduced need to renew electronic interlockings along the corridor.

Except for the section from Emmerich to Oberhausen, the projects related to ETCS and electronic interlockings still have to be defined as soon as the German MoT has come to a decision about the funding and the financing agreements with DB Netz have been finalised. For the time being neither a final deployment strategy nor the German implementation plan including the information about ETCS L1 LS and L2 sections can be prepared and published due to these circumstances.

**Emmerich – Oberhausen (PSP 2.1.1.1.1 - 2.1.1.1.3)**

All works related to the 2<sup>nd</sup> construction stage (electronic interlocking, block consolidation) of the line section between Emmerich and Oberhausen (PSP 2.1.1.1.2), are progressing. The 2008 initiated planning approval for the block consolidation is still ongoing. For all line sections of the project 3<sup>rd</sup> track Emmerich-Oberhausen the preparation to start the planning approval procedure has been done and for first sections the procedure has been started.

Concerning the cross-border activities, DB Netz was informed by ProRail in 01/ 2009 that the location of the 3<sup>rd</sup> track will be changed from the South to the North side, requiring an axle shift. This led to a preliminary stop of the planning activities in the section Emmerich-Border until the technical solution is identified and confirmed by the ministries. In 04/2009 a proposal for the location of the axle shift was developed by the technical working group. It was proposed to have the axle shift on German territory. In 05/2009 ProRail decided to implement the border section with ETCS with Level 2, SRS 2.3.0d. Thus, a major precondition to start the planning activities for interfaces, location of transitions etc. was given. The bilateral subgroup ERTMS for solving all the technical details concerning the cross-border activities picked up its work in 06/ 2009. All technical aspects were finally evaluated in 10/ 2009. In 12/2009 the impact analysis was finalised, integrating the modifications to the existing Lol between NL and DE concerning:

1. Headway time reduction
2. ERTMS Zevenaar Oost - Emmerich
3. 25/ 15 kV Zevenaar Oost - Emmerich
4. 3<sup>rd</sup> track Zevenaar - Emmerich

**Karlsruhe – Basel (PSP 2.1.1.2.1 – 2.1.1.2.2.6)**

The ABS/ NBS Karlsruhe - Basel as known is divided into 9 line sections (StA), which are in various planning and execution phases. The specific corridor section can be seen in figure 30.

Corridor A Rotterdam - Genoa  
Annual Progress Report 2009

Die Planrechtsverfahren

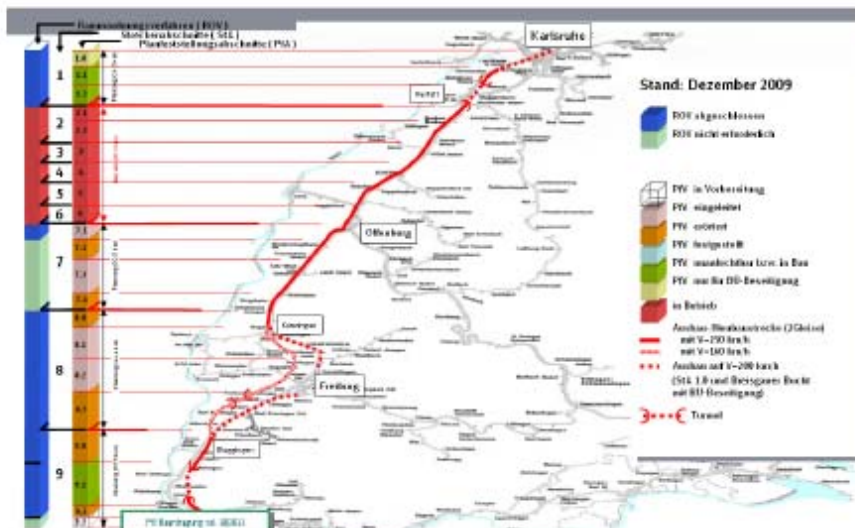


Figure 30: Karlsruhe - Basel planning

The planning for StA 1, 7 - 9 were continued with federal planning funds. Furthermore activities correspond beside the mentioned political influence in the development of the federal funds in total. The preparation for the financial agreement of the line sections 9.2 and 9.3 were done.

The procedures to obtain the necessary construction approvals became more complex due to studies of new alternatives taking into account specific requirements recently raised by citizens of the region, as well as because of legislative and policy changes. Therefore the approval process will need more time as originally scheduled. As most of these reasons are beyond the control of DB Netz and can only be influenced by regional political interaction, the MoT and the state of Baden-Wuerttemberg have currently established a project advisory board. The goal of the project advisory board is to facilitate consensus about most of the requirements demanded by the regions as fast as possible. Furthermore, the implementation is also depending on the availability of funds, which are currently granted step by step by the federal government.

**Katzenbergtunnel (PSP 2.1.1.2.3)**

The works on the largest railway tunnel project in Germany are still ongoing. The go-live is planned for 2012. The tunnel is completely drilled. The completion of the form and the South-North connections are in process, see figure 31.



**Figure 31: Katzenberg tunnel form**

**Terminal Duisburg (PSP 2.1.2.1)**

To meet the expected traffic volumes from the Western sea ports (Rotterdam, Amsterdam, Antwerp) DB Netz is building a terminal with a main function of handling rail/ rail. An initial start-up stage with two high cranes could start in 2012. Such plans are already very far advanced and final funding arrangements have to be clarified. Depending on market demand, the facility may operate with 7 tracks catering for the full train length.

**Terminal Köln Eifeltor (PSP 2.1.2.2)**

The terminal currently offers six cranes, two terminal modules and a transshipment area for mobile devices. However, it has reached its capacity limit of approximately 265,000 units/year. By building a third terminal module, the capacity will be increased up to 430,000 units/year. The existing transshipment area for mobile devices will be upgraded with two cranes with spans of 47 meters each. Moreover a new terminal module will be created with four tracks of 700 meters each. Using a catenary system the North bound trains can exit the terminal without shunting movements or loco changes. The commissioning of this expansion project is scheduled for early 2012. Optionally it is possible to retrofit the new module with a third crane.

**ETCS projects – 16 projects (PSP 2.2.1.1 – 2.2.1.16)**

In the business plan for Corridor A from 2006/ 2007 the German part of the corridor was split into 42 ETCS sections respectively partial projects. Due to a lack of funding for the electronic interlockings as well as missing functionalities in SRS 2.3.0d the strategy of DB Netz AG for ETCS implementation was revised. Following the baseline 3 concept (see chapter 2.2) it was

planned to equip the corridor lines in Germany with ETCS L2 or L1 LS on the basis of baseline 3 of the corridor.

- § The section Emmerich - Oberhausen will be equipped with baseline 3 and Level 2 as planned
- § From the German recovery programme it was planned to renew interlockings in the German corridor sections with total investments of approximately 130 Mio. €. Unfortunately, the financing agreement had not been signed in 2009
- § The financing for the remaining corridor section in Germany from Oberhausen to Basel is still pending (excluding the last section between Weil and Basel). Subsequently the German ETCS implementation plan could not be finalized
- § Baseline 3 remains the version which will be deployed on the corridors in Germany by DB Netz to assure the required functionalities without the necessity for upgrades on medium to long term
- § Despite the lack of funds, DB Netz supports further the activities for speeding up baseline 3 on national and international level

As soon as the funds are available in Germany, the final implementation strategy can be completed. The final decision which parts will be equipped with Level 2 or Level 1 LS will be made in accordance with the expected traffic demand.

#### **Electronic interlocking projects – 35 projects (PSP 2.2.3.1 – 2.2.3.35)**

In 2008 the financing of interlockings for three sections (Heppenheim, Rheinweiler-Effringen, Müllheim) could be clarified. The realisation of the important electronic interlocking as a precondition for the ETCS trackside implementation between Emmerich and Oberhausen is foreseen for 2010. However this will also depend whether a financing from the German Recovery Programme can be agreed upon.

Nevertheless in 2009 first steps were made to create the initial plans studies along the line sections from Darmstadt to Basel for the electronic interlockings. The deployment of Level 1 LS would result in considerable cost savings for the renewal of interlockings. However, the EBA (German NSA) and MoT did not see any possibility to finance a prototype project which is required to achieve the system maturity and preconditions for certification.

#### **GSM-R – 11 projects (PSP 2.2.3.1 – 2.2.3.11)**

The activities concerning GSM-R are related to the activities of the trackside implementation of ETCS Level 2. In parallel to the planning of the ETCS projects it has to be clarified if the existing GSM-R network has to be adapted.

### **3.2.2.2 Risk management and chances**

With regard to the implementation of ETCS on the German corridor sections two severe risks have been reported continuously:

- § Financing of the electronic interlockings (which is the precondition for specific line sections where ETCS L2 is required) is lacking to great extent
- § Financing of the ETCS trackside equipment is lacking for about 85% of the German corridor section.

Both risks are rated A1 and could not be resolved in the course of 2009. This situation was escalated to the Executive Board and the EC.

### 3.2.2.3 Change request management

The baseline containing all corridor projects of DB Netz was significantly reduced in the beginning of 2009 - without changing the overall scope. In 2008 (and earlier) the Germany corridor part was divided in 42 (virtual) sections. The baseline contained for each of these sections one ETCS project, one GSM-R project and one electronic interlocking. In 2009, this part of the baseline was simplified and adjusted to the operational framework conditions and requirements:

- § The amount of ETCS projects was reduced down to 16 sections, which results in a reasonable size/ length of each project.
- § The amount of electronic interlockings (ESTW) was reduced down to 35. Due to the B3 strategy it is now more secure in which section ETCS L2 is planned and where ETCS L1 LS will be sufficient. The current baseline only contains a project for an electronic interlocking where ETCS L2 is foreseen or where it has already been commissioned (due to other operational requirements).
- § The number of GSM-R projects was reduced down to 11 GSM-R for voice services is already installed all along the corridor. In sections where ETCS L2 is planned, a GSM-R project is foreseen as some additional installations may become necessary to cope with the additional data services.

Due to the uncertainty about the German funding, the baseline has not been adjusted further yet. This will only become possible once the implementation plan can be finalised thus defining the final scope and time line for realisation.

### 3.2.3 Outlook

The main emphasis in 2010 will still be to clarify the financing of new electronic interlockings and the ETCS trackside equipment. For the section of Emmerich - Oberhausen the final confirmation of the technical solutions on management level by IM's is expected. Next step will be to inform the ministries about the situation and to obtain a confirmation as a basis to start the planning activities. For the section of Karlsruhe - Basel the conclusion of the financial agreement for PfA 9.2 (Eimeldingen - Basel) and 9.3 (Basel - Rheinbrücke) are expected. To clarify the cross-border activities of the infrastructure projects and the ERTMS-implementation a working group between SBB and DB Netz AG will be set up. The connecting line sections to the terminals along the corridor will be added to the corridor A and have to be part of the development.

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

### 3.3.1 Key Performance Indicators

Due Date of Reporting	30.12.09	IM Result [%] Plan	33	IM Result [%] Actual	28
Projects Total	9	Projects Finished	0	Projects Pending	9

Corridor A Rotterdam - Genoa  
Annual Progress Report 2009

<b>Start</b>	01.01.90 (earliest project)
<b>End</b>	31.12.25 (last project)

PSP	Project	Results and Milestones achieved
3.1.1.1.1	Gotthard base tunnel	Initial plan study completed (1997) Budget approved (1996) Building license granted (1996) Drilling works ongoing (90% completed)
3.1.1.1.2	Ceneri base tunnel	Initial plan study completed (1997) Budget approved (1996) Building license granted (2006) Drilling works ongoing (20% completed)
3.1.1.1.3	Basel - Chiasso headway reduction	Initial plan studies started or to be started Construction ongoing (1 <sup>st</sup> project Axentunnel) Construction (2 <sup>nd</sup> project Castione) started in 2009
3.1.1.2.1	Cadenazzo - Pino (Capacity)	Initial plan study started (2009)
3.1.1.3.1	Bern - Thun headway reduction	Initial plan study for final project started in 2009
3.2.1.1	ETCS Basel - Gotthard - Chiasso	Initial plan study completed (2006) Budget approved (2006)
3.2.1.2	ETCS Basel - Gotthard - Belinzona - Pino	Initial plan study completed (2006) Budget approved (2006)
3.2.1.3	ETCS Basel - Lötschberg - Simplon - Domo	Initial plan study completed (2006) Budget approved (2006)
3.3	TAF TSI	Awaiting fundamental work from WG TAF TSI

### 3.3.2 Work Progress

#### 3.3.2.1 Achievements

By the end of 2009, the overall actual work progress sums up to 28% versus 33% of planned work progress.

#### Gotthard and Ceneri base tunnels (PSP 3.1.1.1.1 and 3.1.1.1.2)

The two Swiss NEAT projects are progressing well. Over 90 % of the drilling works has been completed at the GBT, almost 20% of the drilling work at the CBT is completed. Figures 32 and 33 show the actual progress of the drilling work (red) and the tunnel finishing (green).





**ETCS Basel – Gotthard – Chiasso/ ETCS Basel – Gotthard – Belinzona – Pino/  
ETCS Basel – Lötschberg – Simplon – Domo (PSP 3.2.1.1 – PSP 3.2.1.3)**

The initial plan studies are completed and the funding is approved for all Swiss ETCS projects on the corridor. Both steps could be achieved already in 2006. Meanwhile, the tests for the rollout of ETCS components were performed and could also be completed. The tests of the vital ETCS Level 1 LS functionality could be almost completed, both on-track and in labs. The tender for the first ETCS lots and sections is currently in preparation. SBB started to define the engineering & operational rules for the Gotthard base line in work. Furthermore, a conceptual paper for border transitions in ETCS modes is currently being drafted.

**3.3.2.2 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. For more details, please see clause 0.

**3.3.2.3 Change request management**

No changes to report.

**3.3.3 Outlook**

In 2010, a bilateral WG between SBB and DB will pick up its work regarding the complex technical aspects for the node of Basel, including ETCS and GSM-R aspects. As already mentioned above, SBB will tender its first ETCS lots/ line sections in 2010. Political discussion in Switzerland about "Bahn 2030" will start in 2010, whereas the discussion focuses on two options. The North-South transit lines (Swiss part of Corridor A) would benefit from investments foreseen in the second - more expensive - option.

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

**3.4.1 Key Performance Indicators**

<b>Due Date of Reporting</b>	31.12.09	<b>IM Result [%] Plan</b>	80	<b>IM Result [%] Actual</b>	80
<b>Projects Total</b>	3	<b>Projects Finished</b>	1	<b>Projects Pending</b>	2
<b>Start</b>	01.01.90 (earliest project)				
<b>End</b>	31.12.25 (last project)				

PSP	Project	Results and Milestones achieved
3.1.1.3.2	1 <sup>st</sup> stage of Lötschberg	Go-live (2007)
3.1.1.3.3	Completion of Lötschberg	Project start scheduled for 2017 Variants and conditions for further expansion of LBT are identified
3.3	TAF TSI	Awaiting fundamental work from WG TAF TSI

### **3.4.2 Work Progress**

#### **3.4.2.1 Achievements**

##### **Lötschberg Base Tunnel (PSP 3.1.1.3.2)**

###### **The new BLS Netz AG**

With the successful opening of the Lötschberg base tunnel decided the Swiss Government that the infrastructure concession on the line Thun - Brig will be prolonged to BLS AG to the year 2020. This confirmation was linked to the precondition that BLS AG would transfer the whole infrastructure into a new subsidy in which the government can influence and secure their large investments. The responsibility of BLS Netz AG is to take care of operations, maintenance and development of the railway infrastructure. The business management is observed by BLS AG and the collaboration is fixed with service level agreements.

###### **Organisational matters in international business**

BLS worked out a project to strengthen their international contribution by focussing on the most relevant topics like the Corridor A organisation. This project includes also an optimised information flow with the in-house RU company BLS Cargo.

###### **Performance Management and Data Quality**

One of the main topics in 2009 was the data quality in the cross-border section of Domodossola and the support for the development of the performance management for the Lötschberg axis. BLS started the CCL project together with our colleagues from RFI and SBB for the line section between Domodossola and Iselle. With the realisation of the project BLS will gain automatic real time data for the dispatching and can share data by using Europtirails with SBB and RFI for the analyses in the performance management.

###### **Interoperability**

With the timetable change in December 2009 BLS Cargo operated for the first time with multisystem locos (Re486) between Basel and Gallarate/ Busto via Lötschberg and Gotthard. The great benefit is that in the border stations neither loco changes nor shuntings are anymore necessary. On the Italian network drivers from their cooperating partners DB Schenker Italia and Nordcargo are on duty.

###### **Traffic volume on the Lötschberg Axis**

After a continuous growth of the transport volume on the Lötschberg Axis over the last decade BLS will see a small decrease in 2009 because of the global economic crisis (see figure 34). This is only a small decrease comparing it to other corridor sections and it is still a proof of the attractiveness for RU's to operate there. Another highlight is the fact that even in this difficult situation BLS could achieve a new record in transport volume on the integral Lötschberg system (with base tunnel and the mountain line) on December 10<sup>th</sup> with 82 freight trains and 105.847 gross tons.



Güterlasten Lötschberg

Güterverkehr Thun-Brig, Vergleich 2008 - 2009

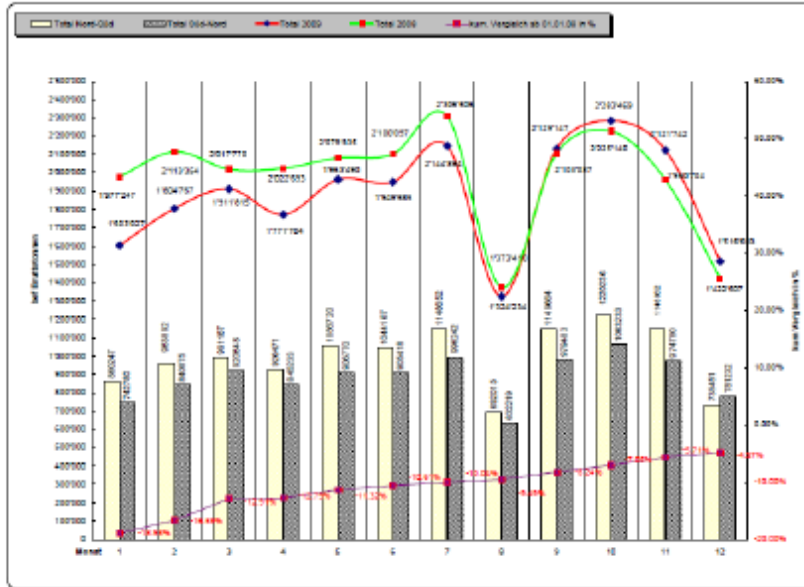


Figure 34: Freight traffic Thun - Brig (2008 - 2009)

### 3.4.2.2 Risk management and chances

No risks to report.

### 3.4.2.3 Change request management

No changes to report.

### 3.4.3 Outlook

#### Completion of Lötschberg (PSP 3.1.1.3.3)

BLS Netz will campaign to hold its competitiveness and its performance on the Lötschberg axis like in 2009 also in future. In this context the success of the passenger services through the Lötschberg base tunnel is challenging. The growing passenger traffic has displaced many freight train paths. This means that infrastructure planning on the network of BLS and particularly on the feeder lines should be considered in due course. To ensure the long term benefit of the Lötschberg base line for the freight traffic, BLS Netz AG seeks for the double track enlargement of the Lötschberg base tunnel. Moreover, capacity bottlenecks on the feeder lines should be eliminated in the long term. This includes the expansion of the node of Bern and in the Aare valley between Gümlingen and Münsingen. Further on we will focus on the new established performance management on the cross-border traffic to let the RUs participate in the improved business conditions.

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

#### 3.5.1 Key Performance Indicators

<b>Due Date of Reporting</b>	31.12.09	<b>IM Result [%] Plan</b>	27	<b>IM Result [%] Actual</b>	27
<b>Projects Total</b>	19	<b>Projects Finished</b>	2	<b>Projects Pending</b>	17
<b>Start</b>	02.07.01 (earliest project)				
<b>End</b>	30.04.26 (last project)				

PSP	Project	Results and Milestones achieved
4.1.1.1.1	Upgr. Southern access Simplon/ Doubling Vignale - Arona (0264.PO)	Initial plan study completed (2004) Project start scheduled for 2012
4.1.1.1.2	Simplon platform (several small projects)	Project start scheduled for 2012
4.1.1.1.3	Novara Node (0223.PO)	Initial plan study started (2008)
4.1.1.1.4	Linking of Novara-Domodossola track near Gozzano (0239.AM)	Initial plan study completed (2001) Budget approved (2005) Building license granted (2007) Construction started (2007)
4.1.1.1.5	Upgrading of Novara-Alessandria line (1178.PO)	Go live (2007)
4.1.1.2.1	Luino platform (1282)	Construction works completed (2009)
4.1.1.2.2	Doubling of Laveno-Luino (0265.PO)	Project start scheduled for 2013
4.1.1.3.1	Chiasso-Monza section (0266.PO)	Initial plan study completed (2003) Project start scheduled for 2012
4.1.1.3.2	Bergamo-Seregno section upgrading (0277.PO)	Initial plan study completed (2005) Project start scheduled for 2012
4.1.1.3.3	3 <sup>rd</sup> track Gallarate-Rho (0294.PO)	Initial plan study completed (?) Budget approved (?) Building license granted (?)
4.1.1.3.4	Giovi pass and double track Genoa - Milan (AV 20)	Project start scheduled for 2010
4.1.1.3.5	Doubling of Bergamo - Treviglio (0222.PO)	Go-live (2007)
4.1.1.3.6	Doubling of Bergamo - Treviglio (0222.PO)	Extra measures for noise mitigation ongoing (until 2014)
4.1.1.3.7	Quadrupling of Tortona-Voghera section (0286.PO)	Initial plan study completed (2006) Project start scheduled for 2012
4.2.1.1	ETCS Domodossola-Genoa	Initial plan study completed (2008) Approval of budget (2008)

PSP	Project	Results and Milestones achieved
4.2.1.2	ETCS Luino-Genoa	Initial plan study completed (2008) Approval of budget (2008)
4.2.1.3	ETCS Chiasso-Milano	Initial plan study completed (2008) Approval of budget (2008)
4.2.1.4	ETCS Milan-Genoa	Initial plan study completed (2008) Approval of budget (2008)
4.3	TAF TSI	Awaiting fundamental work from WG TAF TSI

### 3.5.2 Work Progress

#### 3.5.2.1 Achievements

By end of 2009, the actual work progress of the Italian projects (infrastructure, ETCS) is 27% which is fully in line with the planning. To mitigate the effect of the postponed infrastructure projects a study has been started in order to evaluate the benefits of smaller investments. These measures aim at increasing module length along the corridor close to the Swiss-Italian border. The study will be finalised in 2010.

#### Upgrading of southern access Simplon pass/ Doubling Vignale - Arona (PSP 4.1.1.1.1/ PSP 4.1.1.2.1)

The project start is scheduled for 2012, due to a re-prioritisation of budgets.

#### Simplon platform (PSP 4.1.1.1.2)

The project is currently scheduled to start in 2012. This project comprises several smaller infrastructure measures, which will nevertheless lead to significant improvements in future:

- § Bypass at Cuzzano, Mergezzo e Belgirate
- § Train length adaption to 650m at Premesello, Gravellona Toce, Orta Massino, Cressa e Caltignana
- § Clearance gauge adaption to PC 50 at Arona - Premesello
- § Adaption to P 80 at Arona - Premesello
- § Harmonisation of block system Gallarate - Arona - Premesello
- § Bypass at Iselle, Varzo
- § Doubling of line Domo - Domoli
- § Train length adaption to 750m at Premesello station
- § Train length adaption to 750m at Verbania - Baveno
- § Realisation of P.M. at km 24 + 500
- § Train length adaption to 750m at Arona station
- § Realisation of P.M at Cameri
- § Realisation of new ACEI at Premesello, Stresa, Belgirate

#### Novara node (PSP 4.1.1.1.3)

The scope of this project was merged out of the former projects Novara node overpass and upgrade of Novara node. The initial plan study, started in 2008, is still ongoing.

#### Linking of Novara-Domodossola track near Gozzano (PSP 4.1.1.1.4)

The works are ongoing, but delayed. The final works are expected in the first half of 2011. The scope of the project includes the track link itself, a new station near Gozzano and the removal of six level crossings.

**Novara – Alessandria line (PSP 4.1.1.1.5)**

The project could be completed in 2007. In addition, the project faces a scope review due to additional measures for noise mitigation and noise protection. These works are ongoing, but do not affect the readiness of the line itself.

**Luino platform (PSP 4.1.1.2.1)**

Main scope of the works are shorter block sections and modernized ATC/ ATP trackside devices. These works are almost completed with the exception of the ATC/ ATP in Sesto Calende that will come to an end in 2010.

**Doubling of Laveno – Luino section (PSP 4.1.1.2.2)**

The project start is scheduled for 2013, due to a re-prioritisation of budgets.

**Chiasso – Monza (PSP 4.1.1.3.1) / (PSP 4.1.1.3.6)**

The project start is scheduled for 2012, due to a re-prioritisation of budgets.

**Bergamo – Seregno (PSP 4.1.1.3.2)**

The project start is scheduled for 2012, due to a re-prioritisation of budgets.

**3<sup>rd</sup> track Gallarate – Rho (PSP 4.1.1.3.3)**

The project is ongoing. The project phases initial plan study, approval of budget and building license could already be completed. The go-live is currently scheduled for 2016.

**Giovi pass and double track line Genoa – Milan/ Alessandria (PSP 4.1.1.3.4)**

The project start is scheduled for 2010.

**Doubling of the Bergamo – Treviglio line (PSP 4.1.1.3.5)**

The project could be completed in 2007. During the completion of the project, some additional scope arose regarding noise mitigation (see below).

**Doubling of the Bergamo – Treviglio line – noise mitigation (PSP 4.1.1.3.6)**

The doubling of the capacity of this section lead 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 ongoing and will be finished approximately 2014.

**Quadrupling of Tortona – Voghera section (PSP 4.1.1.3.7)**

The project start is scheduled for 2012.

**ETCS projects (PSP 4.2.1.1 to 4.2.1.4)**

In 2009 RFI completed the preparation of the documentation supporting the tendering for ETCS installation on about 37.5 km of line (trial sites). The involved line segments are:

- § Chiasso - Bivio Rosales, including the tunnels Monte Olimpino 1 and 2
- § Bivio/ PC Scavalcamento

The objectives of this first ETCS sub-project comprise the definition of missing or specific national technical specifications as well as installation, testing and operation for both releases 2.3.0d and 3.0.0 draft. Since it is possible that RFI has to manage on its ERTMS corridors more than one SRS version, very useful conclusions shall be drawn from the trial sites. The outcome of the project is meant to be used as standard technical support documentation for the next tenders along the corridor. The start of the tendering process is planned for the beginning of 2012. The end of the project is planned mid 2012.

**3.5.2.2 Risk management and chances**

RFI reports 4 actual risks as per end of 2009, rated C2 - B2. All refer to insufficient national funding of the infrastructure projects.

**3.5.2.3 Change request management**

A general review of the baseline has been performed at the beginning of 2009 with the main aim to harmonise the Italian investments monitored at corridor level and in other European working groups. By doing so it was possible to harmonise the infrastructure investments monitored in the Italian-Swiss bilateral WG.

The following investments were added to the baseline:

- § 3<sup>rd</sup> track between Gallarate and Rho
- § Quadrupling the track between Rho and Parabiago

The rest of the baseline remains unchanged.

**3.5.3 Outlook**

The results of the above mentioned infrastructure study shall be available in 2010 and are expected with great interest. The first ETCS projects in Italy will be tendered in the mid of 2010.

#### 4 Other IQ-C Action Items

Out of the activities from the temporary railway noise group under the lead of the Dutch MoT the ExB decided to launch a noise study in 2009. Financed by the Ministries of transport, a corridor related study on noise, noise mitigation and underlying economic models was prepared and tendered in 2009. The corridor organisation, namely the MC, reviewed and commented this approach of the ministries, as the added value of a new noise study is seen as rather limited. Moreover, the MC made clear that noise is not a corridor related problem. Therefore, it must be treated jointly by the IMs, RUs and wagon keepers, but not with a corridor focus. Furthermore, the MC pointed out that the planned study focuses on NRTAC, which require complex and costly administrative systems. The members of the RU advisory board<sup>14</sup> fully shared the concerns of the MC. Some of the comments had been reflected in the final terms of reference for the study. The Ministries are evaluating the offers received and the study will be contracted in December 2009. The study shall be completed in spring 2010. The IMs were invited to participate in the noise study of the Ministries.

Other IQ-C action items are solely under the responsibility of the MoT, the regulatory bodies or the national safety authorities, such as:

- § Mutual recognition of engine drivers (IQ-C action item #7)
- § Mutual recognition of locomotives (IQ-C action item #8)
- § Monitoring of market regulations (IQ-C action item #9)
- § Customs directive 1875/ 2006/ EC (IQ-C action item #14)

They will not be highlighted any further in the underlying annual report 2009 of the IMs. It will be part of the ministries activity report of 2009.

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<sup>14</sup> Meeting 3, 18<sup>th</sup> November 2009.



## 5 Conclusions

Summarising the results of 2009 the following results can be highlighted:

- § Important performance and quality figures maintained their satisfying level, despite the loss of traffic and business volumes
- § Official approval of baseline 3 deployment strategy for Corridor A
- § Analysis on possible infrastructure parameter enlargements on Corridor A, including rough cost estimations and proposals for quick wins
- § Implementation a range of quality measures (performance managers, COBRA tool)
- § Drafting of a Corridor A ETCS masterplan together with UNIFE and the NSAs

The basis for the steady continuation of the corridor programme by the EEIG in 2010 has been prepared and assured by solid financial conditions.

The year 2010 will be decisive for the ETCS implementation as the specifications and basic procedures have to be finalised in order to call for the first tenders and to place contracts with the suppliers. On these topics the EEIG will focus with high priority as well as the resolving of financial constraint for ETCS in Germany. ETCS baseline 3 is urgently needed by Corridor A and by the entire sector as it provides enhanced functionalities, additional functionalities, a high cost saving potential and the stability for the RUs to equip their locos with OBU at reasonable costs. Solving the funding situation for ETCS now is paramount and will be a strong commitment to both Corridor A and ETCS baseline 3.

Until now ETCS had been implemented within individual national projects, which sometimes are not even interoperable within one country. The corridor implementation will be one joint international project and the present processes will neither cope with this new challenge nor are the IMs or NSAs familiar with such a situation. In particular testing and authorisation respectively cross-acceptance and approval procedures need to be adapted as well as some contractual issues. However, this also requires basic mental changes within the railways to become open for European wide cooperation. Corridor A as the pilot feels responsible to widely support this process. The EEIG actively takes part in the working group of the NSAs and will propose coordinated terms and conditions for the national tenders in order to facilitate a smooth implementation.

Following the overall tight budget situation and being in line with the revised vision of the MC, the corridor organisation will continue to enhance the assessment of quality and punctuality of the corridor respectively focuses even more on soft measures. These activities are less costly and stimulate the corridor development at the same time in order to precise the basement for the more costly infrastructure measures as and the corridor success in future.

In many aspects the organisation and the work scope of Corridor A is already anticipating the planned EU regulation for a "rail network competitive for freight" which shall become effective in the course of 2010. The ExB, respectively mainly the MoT of the Netherlands, Belgium and Poland have strong interests in linking the corridors A, C & F together to become a network with clear governance structures. With regard to this, the EEIG prepared for the ExB a first analysis containing basic information and alternative possibilities for the connection of

Corridor A and F with Antwerp and Zeebrugge. This topic will become a key issue in 2010 and be subject of a Ministers meeting in June 2010 in Rotterdam.

## List of Figures

Figure 1: Management Dashboard 2009 (part 1) .....	5
Figure 2: Management Dashboard 2009 (part 2) .....	6
Figure 3: KPI work progress WGs .....	8
Figure 4: KPI Work progress IMs.....	9
Figure 5: KPI ETCS deployment.....	10
Figure 6: KPI funding .....	11
Figure 7: KPI international traffic volume.....	12
Figure 8: KPI punctuality .....	13
Figure 9: KPI Modal split.....	14
Figure 10: KPI train speed .....	15
Figure 11: Development of the KPIs.....	16
Figure 12: Vision 2020 for Corridor A .....	17
Figure 13: Code 24 INTERREG participants .....	20
Figure 14: Corridor Organisation .....	22
Figure 15: Corridor A masterplan major milestones.....	28
Figure 16: Test concept Corridor A.....	30
Figure 17: Average punctuality for rolling highway in North - South direction .....	34
Figure 18: Average punctuality for rolling highway in South - North direction .....	34
Figure 19: Results of analysis of operational subjects .....	37
Figure 20: Corridor investment plan .....	40
Figure 21: Scenarios S, P and D+R for 2020 .....	41
Figure 22: Indicative costs for infrastructure modifications .....	42
Figure 23: Terminals Corridor A.....	44
Figure 24: Terminals to be connected to ERTMS Corridor A according to TSI CCS.....	45
Figure 25: Quality measures for trains.....	46
Figure 26: Quality measures for shuntings.....	46
Figure 27: Quality measures for administrative management .....	47
Figure 28: Quality measures for working processes .....	47
Figure 29: Parameters for the equipment of connecting lines with ETCS .....	48
Figure 30: Karlsruhe - Basel planning.....	56
Figure 31: Katzenberg tunnel form .....	57
Figure 32: Drilling works at Gotthard base tunnel (01.02.10).....	61
Figure 33: Drilling works at Ceneri base tunnel (01.02.10) .....	61
Figure 34: Freight traffic Thun - Brig (2008 - 2009) .....	64
Figure 35: Terminology of Milestones and Planning Phases.....	76
Figure 36: Risk scoring matrix .....	77
Figure 37: Roles of WGs and PIMs .....	78
Figure 38: Reporting of the PMO .....	80
Figure 39: Example Header and KPIs of a WG/ an IM .....	81
Figure 40: IQ-C cross reference .....	82

## List of Abbreviations

ABS	Ausbaustrecke (enhancing and upgrading an existing track)
AC	Alternating Current
ACEI	interlockings (Italy)
AG	Aktiengesellschaft (German public limited company)
arr.	Arrival
art.	Article (21)
ATC	Automatic Train Control (System)
ATB	Automatische treinbeïnvloeding (Dutch ATP System)
ATP	Automatic Train Protection (System)
BAV	Bundesamt für Verkehr (Switzerland)
BLS	Bern Lötschberg Simplon (Swiss railway)
bn	billion
BP	Bauprojekt (construction project)
BS	Baustufe (construction stage)
B.V.	Besloten Vennootschap (Dutch private limited company)
B3	ETCS baseline 3 (SRS version 3.x.x)
CBT	Ceneri base tunnel
CCG	Common components group (TAF TSI, at UIC)
CCS	Command and control systems (TSI)
CEO	Chief Executive Officer
CER	Community of European Railways
CHF	Swiss Franks
COBRA	Corridor border adjustments (workflow system)
CR	Change Request
cw	calendar week
DB	Deutsche Bahn (German railway)
DC	Direct Current
Dep	departure
DIOMIS	Developing Infrastructure Use and Operating Models for Intermodal shift (UIC study)
DMI	Driver-machine-interface
EBA	Eisenbahnbundesamt (Germany)
EC	European Commission
EEIG	European Economic Interest Group
EIM	(association of) European Infrastructure Managers
EOPT	Europtirails
EPR	European Performance Regime
ERA	European Railway Agency
ERFA	European Rail Freight Association
ERIM	European Rail Infrastructure Master Plan (UIC study)
ERTMS	European Rail Transport Management System
ESTW	Elektronisches Stellwerk (electronic interlocking)
ETCS	European Train Control System
ETIP	ETCS testing and implementation platform

EU	European Union
EWIV	Europäische wirtschaftliche Interessenvereinigung (EEIG)
ExB	Executive Board
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
h	hora (hour)
ha	hectares
Hz	Hertz ( $\frac{1}{s}$ )
IBN	Inbetriebnahme (putting into operation)
IM	Infrastructure Manager
IT	Information Technology
IQ-C	International Group for improving the quality of rail freight traffic on the North - South corridor
IWW	inland waterways
K	plastic material (Kunststoff) brake blocks
Km/h	kilometres per hour
KMC	Key management centre
KMS	Key management system
KPI	Key Performance Indicators
kV	kilo Volts
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
m	million (€)
MAP	Multi Annual Programme
MIS	Management Information Systems
MoT	Ministry of Transport
MoU	Memorandum of Understanding
NBS	Neubaustrecke (new track - high speed line)
NEAT	Neue Eisenbahn Alpen Transversale (new railway Alp transversals)
NETS	Netzweites Trassensystem (Swiss IT system)
NMG	Network Management Group (UIC)
NRTAC	Noise related track access charges
NSA	National Safety Authorities
OPE	(TSI) Operations
OSS	One Stop Shop
p.	page
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
RFI	Rete Ferroviaria Italia
RI	Radio Infill (ETCS)
RNE	Rail Net Europe
RU	Railway Undertaking
SBB	Schweizerische Bundesbahn (Swiss railway)
SEDP	Strategic European Deployment Plan (TAF TSI)
SNCF	Société nationale de chemin de fer (French railway)
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 Application (for) Freight
TEMA	Terminal Management (UIC study)
TEN-T	Trans European Network (for) Transport
TEN-T EA	TEN-T Executive Agency
TEU	Twenty foot equivalent unit (standard container)
TSI	Technical Specification (for) Interoperability
UG	Users Group (ERTMS)
UIC	Union Internationale Chemin de Fer
URL	Uniform Resource Locator (internet address)
V	velocity (speed)
VP	Vorprojekt (pre-project)
vs	versus
v.v.	vice versa
WG	Working Group(s)
WGM	Working Group Manager
WP	Work Packages
ZEB	Zukünftige Entwicklung der Bahninfrastruktur (Switzerland) Future development of rail infrastructure

## Annex

### Annex A: Terminology of Milestones and Planning Phases

Implementation Plan	Netherlands ProRail	Germany DB Netz	Switzerland SBB/ BLS Netz	Italy RFI
Initial Plan Study	Variantenstudie (Fase 2A)	Grundlagen-ermittlung und Vorplanung	Studie	Progettazione preliminare
Approval of Budget	Projectuitwerking (Fase 2B)	Vorplanung bis Entwurfsplanung Freigabe	Vorprojekt (VP)	Progettazione
Building Licence	Tracébesluit	Baugenehmigung	Plan-genehmigung (PGV)	Definitiva
Financing, Approval for Realisation and Start of Construction	Projectrealisatie (Fase 3)	Freigabe Ausführung	Bauprojekt (BP) Ausführung	Progettazione esecutivo
Acceptance of Construction	Testfase	Herstellen der Funktionsfähigkeit (HDF) und Abnahme	Abnahme	Collaudo
Go-Live	Indienststellung	Inbetriebnahme (IBN)	Inbetriebnahme (IBN)	Messa in esercizio

**Figure 35: Terminology of Milestones and Planning Phases**

**Annex B:** Risk scoring matrix

Probability Impact	High [1] Equal/ Above 80%	Medium [2] Equal/ above 30%, below 80%	Low [3] Below 30%
<b>High [A]</b> Consequences for the total corridor programme	A1	A2	A3
<b>Medium [B]</b> Consequences for more than one working group/ project	B1	B2	B3
<b>Low [C]</b> Consequences for only one working group/ project	C1	C2	C3

**Figure 36: Risk scoring matrix**

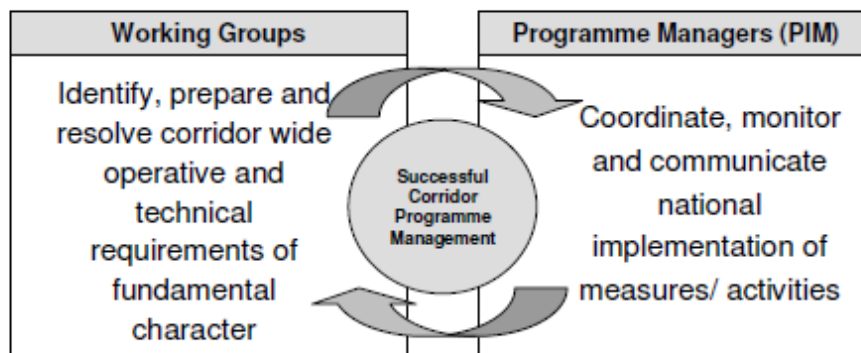


**Annex C: Work methodology and organisation (text from annual report 2007)**

The programme for the corridor from Rotterdam to Genoa consists of a number of domains which should all lead to significant enhancements in reliability, capacity, transportation/ travel time and costs<sup>15</sup>. These domains must be worked and followed up systematically. In addition to that it must be assured that the range of projects, tasks and measures among each IM fit together from the perspective of a pan-European corridor, because only a sound integrated programme of all improvement measures will result in the aimed corridor success.

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

Under the roof of the PMO, the above considerations have now led to the establishment of six WGs to which the former activities of the IQ-C action plan are still related, and which are now chaired by Working Group Managers.



**Figure 37: Roles of WGs and PIMs**

The task of each WG is to develop answers and solutions for fundamental issues which are of great importance to the corridor programme as well as to support the general development of interoperability and European standards. The WGMs provide their results to the PIM of each IM. The PIMs are responsible to coordinate all their national implementation projects (see figure 37). Structuring the work this way leads to a synchronised step-by-step implementation of the entire corridor and avoids national solutions which do not meet the integrated improvement of the freight transport on the Corridor.

<sup>15</sup> See Business Plan documents for more details.

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

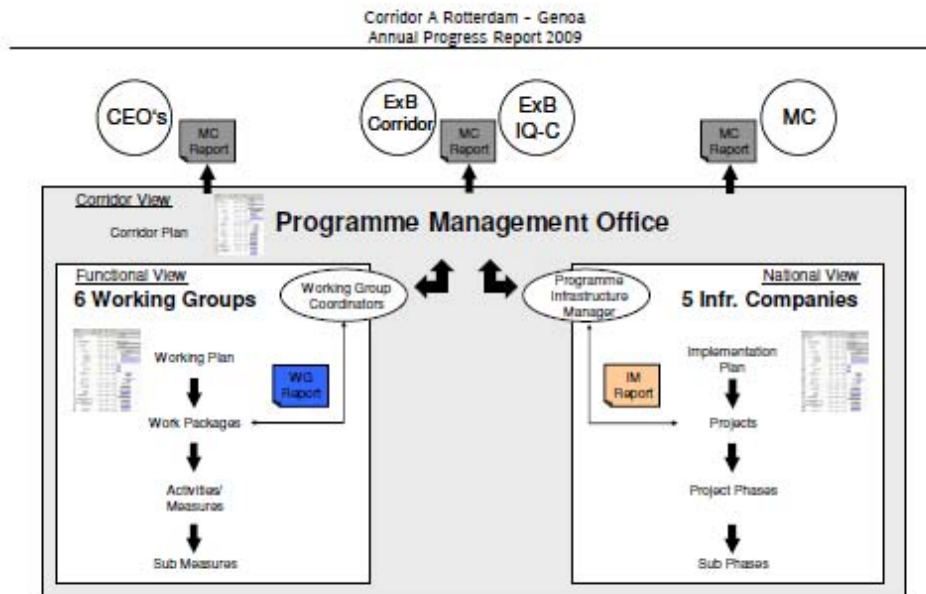
The term "*baseline*" refers to a structured schedule of measures and activities which are necessary to progress in the corridor programme and comprises the time span from the planned start to the planned end. Each WGM and each PIM was asked to set up such a structured schedule containing all relevant actions with start and end dates according to the currently known scope in the forthcoming years. These plans of the WGs, containing work packages and activities had been prepared and linked with the implementation plans of each IM<sup>16</sup>, which contain key milestones of projects and project phases of all measures relevant to materialise the corridor. All the baselines are finally consolidated in one overall corridor implementation plan.

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

Thus, the baseline is the list of planned actions whereas the quarterly reports inform about the work progress really made. In addition to that the reports contain elements of risk management (for the rating of risks please see annex B of this document) and change control management. All information from the reports of the WGs and the PIMs are used to control and steer the corridor implementation as one integrated undertaking. Derived from this information, the PMO as the corridor management board generates quarterly reports to be submitted to the MC, ExB, IQ-C ExB and to the CEOs (see figure 38).

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<sup>16</sup> SBB and BLS subsumed.



The monitoring process is completed by a yearly report, presented in the underlying document, summarizing the results and the work progress of the year elapsed. The annual report 2007 was published in January 2008 and had been finally approved by the ExB of Corridor A in April 2008.

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 made since the beginning of the programme in January 2007. 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 following information given in this report is based on the above mentioned principles. In total the current corridor implementation plan is comprised of about 160 infrastructure measures with 960 milestones plus 24 work packages performed by the WGs. It is our objective to report the most realistic and tangible facts about the corridor improvement development and progress of measures and traffic quality. However, the work progress, measured in [%], is partly still subject to an individual estimation by each PIM respectively 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.

At the beginning of each chapter, some key performance indicators display the status of the WG or the projects of the IMs. Figure 39 displays such a header as an example.

<b>Due Date of Reporting</b>	07.12.07	<b>WG Result [%] Plan</b>	10	<b>WG Result [%] Actual</b>	10
<b>Work Packages Total</b>	4	<b>Work Packages Finished</b>	1	<b>Work Packages Pending</b>	3
<b>Start</b>	01.11.07				
<b>End</b>	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 39: Example Header and KPIs of a WG/ an IM**

The *due date of reporting* is the day, up to which all progress, risk, changes and events are reflected in the underlying report. Usually, the due date 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.

**Annex D:** Cross reference IQ-C action items

This table is to identify the IQ-C action items and to enable a quick and convenient reference.

IQ-C #	Action	Chapter	Page
1	Digital coordination	2.1	24
2	One stop shop optimisation: shortening response times	2.3	32
3	Monitoring traffic performance	2.3	32
4	Improving punctuality	2.3	32
5	Improvement international capacity allocation process	2.3	32
6	Integrated elimination of bottlenecks	2.5; 3.1-3.5	38; 50f.
7	Mutual recognition of engine drivers	4	69
8	Mutual recognition of locomotives	4	69
9	Monitoring of market regulations	4	69
10	ETCS	2.2; 3.1-3.5	27; 50f.
11	Terminals	2.6	43
12	Operational Rules	2.4	36
13	Railway noise	4	69
14	Customs	4	69

**Figure 40: IQ-C cross reference**

**Annex E:** Development and history of document

Delivery and Approval of the Working Groups chapters

Chapter	Working Group	Responsible WGM	Delivery	Approval
2.1	TAF TSI	Laurens Berger	17.02.10	02.03.10
2.2	ERTMS	Stefan Wendel	01.12.09	11.03.10
2.3	Operations	Rainer Meffert/ Herman Tijmsma	07.12.09	04.01.10
2.4	Capacity	Heinz Pulfer/ Daniel Gerhard	23.12.09	28.01.10
2.5	Traffic Quality	Hansruedi Kaeser	06.01.10	07.01.10
2.6	Terminal Studies	Thomas Schneider	24.02.10	17.03.10

Delivery and Approval of the Infrastructure Managers chapters

Chapter	Infrastructure Manager	Responsible PIM	Delivery	Approval
3.1	ProRail	Laurens Berger	17.02.10	02.03.10
3.2	DB Netz	Thomas Schneider	06.04.10	08.04.10
3.3	SBB Infrastruktur	Hansruedi Kaeser	22.02.10	24.02.10
3.4	BLS Netz	Daniel Gerhard	18.12.09	09.04.10
3.5	RFI	Silvia Carloni	18.01.10	10.03.10

The remaining chapters 0, 1, 4 and 5 have been created and written by the PMO.

## Progress report of the IQ-C Working Group Regulatory Bodies 2009.

### General

The Working Group consists of experts from the rail regulatory authorities of the Netherlands, Italy, Switzerland and Germany. In respect of special aspects such as Rail Net Europe (RNE) the IQ-C Group's work is also supported by the Austrian regulatory authority. Monitoring cross-border traffic on the main rail freight corridor between Rotterdam and Milan, the Group is trying to identify any competitive barriers that may exist.

### Progress achieved in 2009

In 2009, the IQ-C Working Group collected and evaluated facts of cases relevant to regulation, and worked on solutions to legal questions on the common basis of the European provisions concerning rail regulation. It serves as a platform for exchanging experiences in the field of regulation the corridor market.

Regulatory Bodies have exchanged information on the possible implications of future rail freight corridors (draft of EU regulation), especially with regard to joint competences and exchange of information on individual cases.”

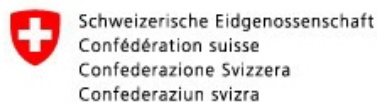
In December 2009 a MOU was signed between RNE and RBs about access to pathfinder in case applications are rejected. This Vienna agreement is important regarding the transparency of the allocation process. It is up to the infrastructure managers now to promote pathfinder.

In January 2010 a meeting has taken place in Bonn between Infrastructure managers ProRail, DB Netz and SBB infra and the Regulatory bodies on the corridor. Attention was paid to the indefinite term "discrimination" and to some actual developments regarding the draft Regulation for freight corridors. RBs were pleased that the IMs were present to intensify the dialogue on possible fields and on the range of discrimination on the corridor. Continuation of this dialogue would be appreciated by the RBs.

### Future actions

Regarding 2010, RBs are preparing an ex-officio investigation that should start spring 2010. Next meeting will be on 9 and 10 June 2010.

The Hague, 28 April 2010



*Ministero delle Infrastrutture e dei Trasporti* 

## ***Annual report 2009 of the Activities of the NSA Corridor Group of Corridor A***

### **I. Members**

The members of the group are the representatives of the National Safety Authorities of the four bordering states of corridor A and Austria:

- Netherlands: IVW (Dutch Transport and Water Management Inspectorate)
- Germany: EBA (Federal Railway Authority)
- Switzerland: BAV (Swiss Federal Office of Transport)
- Italy: ANSF (Italian Railway Safety Authority)
- Austria: BMVIT (Federal Ministry of Transport, Innovation and Technology)
- Guests: Representatives from ERA, Corridor A Programme Management Office, ERTMS Users Group and Infrastructure managers.

### **II. Aim of the Group**

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 putting into service of ERTMS equipment on the corridor infrastructure and rolling stock.

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

In order to achieve the target, a common and sound understanding about the technical, operational and safety related aspects of ERTMS had to be gained. Further, as a precondition, the different national requirements for authorising the putting into service have to be understood before a common approach can be agreed on in order 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 prerequisites. Therefore, the group has decided to take a multitude of measures to cover the identified two mayor work fields including the existing interfaces to other groups and to the European Railway Agency.

### **III. Organisation**

The project is coordinated by a steering committee consisting of representatives of the participating national safety authorities. Two working groups have been established. The working group "Technical Issues" is focused on the technical issues of the authorisation of putting into service of ERTMS equipment whereas the working group "Approval Process" has the aim to develop a harmonised process for the authorisation of putting into service of



ERTMS equipment. The results of both working groups are the crucial preconditions for a streamlined, effective and transparent authorisation process for putting into service of ERTMS.

## **IV. Working Groups**

### **(1) Technical Issues**

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 corridor A. As the focus of the ministries is set on the development of a harmonised authorisation process for putting into service as stated in the Common Declaration of 26 May 2009, it was decided to give special attention to the process-related tasks. The work of the working group for technical issues will be resumed as soon as the practical matters regarding interpretation of the system requirement specification (SRS) and the testing procedures arise.

### **(2) Approval Process**

In 2009 the focus of the work has been set on the comprehensive evaluation on the differences in roles and responsibilities between the National Safety Authorities. The intensive dialogue was necessary in order to get a common and deeper understanding of each others approach of authorising the putting into service of ERTMS components. Apparently the way the NSAs apply the CENELEC process in order to achieve the overall safety approval differs. The discussions had been fundamental in order to build a solid basis for the requested overall objectives. Also a common understanding of the European requirements and processes both for vehicles and infrastructure has been reached. This does imply e.g. the role of the integrated safety case and the TSI to demonstrate the track train integration.

## **V. Further work done in 2009**

### **(1) Contribution to ERA Control Group**

Since 2008 the NSA Corridor Group does participate in the ERA Control Group, which is in charge in steering the development and improvement of the SRS (system requirement specification) of ERTMS. The involvement was initiated by the NSA Corridor Group as the NSAs were so far not represented in the Control Group. However the NSA Corridor Group was convinced that an effective contribution of the NSAs to the development of the ERTMS specification could help to consider safety related aspects adequately in order to prevent that a not fully interoperable system might require national solutions to ensure safety. The contribution of the NSAs also reflects the responsibilities borne by the safety authorities. Furthermore, the early participation of the NSAs does progress the overall implementation of ERTMS on the corridor A and will accelerate the authorisation process.

The participation rotates annually between the members of the NSA Corridor Group. After starting with Germany in 2008, the Swiss NSA has represented the NSA position in 2009. The information gained is transferred and discussed thoroughly in the NSA Corridor Group.

## **(2) MoU between ERA, EEIG, UNIFE and NSA Corridor Group**

On initiative of the Program Management Office (PMO) a Memorandum of Understanding (MoU) between the Corridor A EEIG, UNIFE, ERA and NSAs has been developed in order to support the deployment of ERTMS on the corridor. All relevant actors needed for a successful ERTMS implementation shall be signing parties of the MoU.

The overall focus of the draft MoU was on the economical aspects of the ERTMS deployment on Corridor A while neglecting the safety aspects. The NSA Corridor Group has improved the proposed wording in order to enhance the crucial safety aspects. The MoU shall be signed by Spring 2010.

## **(3) Work on the national requirements for ERTMS**

In 2009 the NSA Corridor Group has considerably contributed to the work of the ERA Cross Acceptance Unit. The working group has collected the national requirements for ERTMS from the infrastructure managers of the Corridor A and the Austrian part of Corridor B. The national requirements are mostly derived from the first ERTMS projects within the respective countries. The information collected is being discussed within the NSA Corridor Group together with ERA.

## **VI. Outlook 2010**

The focus of the work programme for 2010 is put on the development of the authorisation guideline which shall be available by the end of 2010. In order to achieve the target the following topics have to be discussed further and agreed on:

- Comparison of the existing national authorisation procedures in order to find the similarities for a harmonised approval process based on a European approach (fulfilling the essential requirements) and to apply CENELEC to demonstrate the safety targets are met.
- Identifying the highest safety target on corridor A. This will lead to a set of requirements for a vehicle, which then will be able to run in all countries of the corridor A and Austrian tracks of Corridor B.
- Comparison of the safety cases (risk analysis): Finding the clues which lead to different requirements (e.g. infrastructure engineering rules).
- Comparison of the additional national requirements (either to the national infrastructure related, due to open points or errors in the TSI CCS or in order to improve the TSI)

Additional tasks in 2010 are the identification of relevant testing procedures in order to complement the work of ETIP respectively the KOM/ERA.

## **MISSION STATEMENT**

### **MANAGEMENT COMMITTEE ERTMS CORRIDOR ROTTERDAM – GENOA**

#### **1. Introduction**

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

#### **2. Objectives and principles of the Management Committee**

The Management Committee

- will create the organizational, technical and operational conditions to that extend, that ERTMS will be operational with the exception of the sections Oberhausen-Mannheim, the Gotthard/Ceneri, the Milan South-East Belt and the Giovi new line in the Italian part of the corridor by 2012, respectively the entire corridor by end of 2015 the latest, which is in accordance with the findings of the corridor study Rotterdam-Genoa corridor [Encl.]
- will interface IQ-C team in order to define the conditions for harmonizing the other improvement options necessary for the corridor, taking into account the IQ-C action plan
- is responsible for the elaboration of the necessary documents ensuring the interoperability, the adequate performances of the operation and the related best cost effective corridor solution
- is responsible in coordination with the RUs and rolling stock requirements for the development of a corridor implementation plan on corridor Rotterdam - Genoa considering the interoperability as the highest priority and, taking also into account, the expectations as stated in the Ministers´ signed Letter of Intent (LoI)
- will evaluate the necessary resources for the activities to develop the interoperable corridor, proposing to the Infrastructure Managers the organizations for the timely development and implementation of ERTMS and indicating the other improving options to be defined and agreed upon, taking also into consideration the national rules for the budget allocation
- ensures the integral project implementation by all participating Infrastructure Undertakings and progress reporting to the Executive Board accordingly
- will in general support the Executive Board in fulfilling their obligations as stated in the Executive Board Mission Statement.

### **3. Time-period and competences of the Management Committee**

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

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

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

### **4. Organization of the Management Committee!**

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

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

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

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

### **5. Main Tasks of the Management Committee**

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

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

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

There are tasks which shall not be subjected to the Management Committee's responsibility e.g.:

- the realization of specific performance mandates established to assist railway undertakings, infrastructure operators or third parties (for instance planning work for vehicle updates)
- the proofs of implemented safety and RAM (trustworthiness, availability, maintenance possibilities)
- the responsibility and management of commercial negotiations regarding the acquisition of line and vehicle equipment of third parties
- roll out management of the corresponding national projects belonging to implementation and operation of the corridor programme

## **6. Rights of the Management Committee**

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

## **7. Duties of the Management Committee**

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

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

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

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

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

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

## **8. Decision Making Process of the Management Committee**

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

The Management Committee will decide on the basis of consensus.

In case of not resolvable conflicts, it is not the competence of the Management Committee to decide and instruct on behalf of the Infrastructure Managers upon their implementation actions. The conflict then has to be solved via the Executive Board on Ministry and head of Infrastructure Undertaking level.

## **EEIG Corridor Rotterdam-Genoa**

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

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

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

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

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

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

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