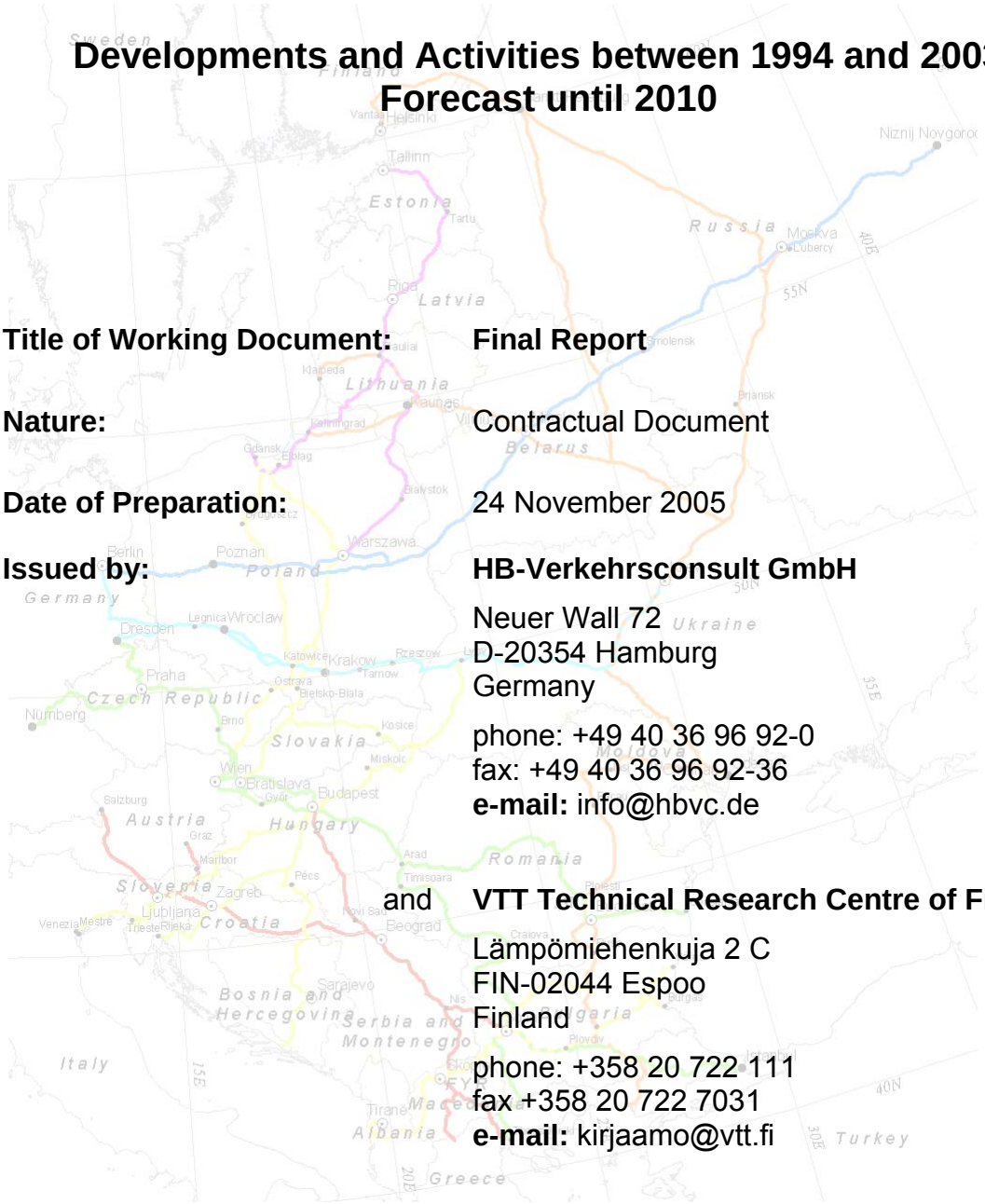
PAN-EUROSTAR

Pan-**Euro**pean Transport Corridors and Areas **Sta**tus **R**eport

Project N° TREN/B2/26/2004

Final Report

Developments and Activities between 1994 and 2003 / Forecast until 2010



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Document History

Version	Date	Nature	Alterations
0.1	Sept. 2005	First draft for internal discussion	
1.0	Sept. 2005	Draft final report for comments from DG TREN	
2.0	Nov. 2005	Final Report	Comments from DG TREN taken into account; individual updates

Table of Contents

1 Introduction

On a regular basis, a status report of the Pan-European Transport Corridors and Areas is tendered by the European Commission in order to monitor the progress, performance and financing of the Transport Corridors and Areas.

A status report provides updated inventories of Pan-European Transport Corridors and Areas for the respective countries and modes of transportation. The objective is to enable comparisons of the achievements between the individual Corridors and Areas, and to keep track of the progress of the transport infrastructure development, investment and financing sources.

Since the previous status report of 2002, many projects and initiatives along the Pan-European Transport Corridors and Areas have been undertaken in order to maintain and improve the quality and capacity of the transport infrastructure. In addition, the European Union experienced the largest extension ever in 2004, encompassing ten new member countries. In this context, the role of the respective Transport Corridors and Areas as important transit and trade routes and for freight and passenger traffic has grown significantly.

This document is the 2005 status report on the Pan-European Tranport Corridors and Areas . It differs from the previous reports in that it covers a much wider period of time. For this report the corridor representatives have been asked to provide data from the beginning of the initiative, i.e. the second Pan-European conference on Crete in 1994, until the envisaged completion of the routes in 2010.

First of all, this report outlines the methodology applied for this study, explaining the approach to cooperation with the Corridor and Area representatives, to data collection and evaluation as well as to the map production.

Then, a general introduction to the Corridor and Area concept and its history is being given and the most common financing instruments are explained. Finally, other sources of information are summarized and commented on.

The main part of this report consists of the compilation of data and information concerning individual Corridors and Areas. For each Corridor and Area, a summary of the general characteristics, developments, project progress, investment and financing sources is provided.

2 Methodology

This status report was prepared by a consortium consisting of Jaakko Pöyry Infra/HB-Verkehrsconsult, Hamburg/Germany; VTT-Technical Research Centre of Finland, Espoo; and ANSERI-Consultants Ltd, Helsinki/Finland.

The time for compiling this report and producing the relevant maps was 8 months.

The role of the consortium partners was to structure the information needs, to collect the information from the Corridor/Area representatives in a harmonised way and to compile the information in the status report. Furthermore, maps were to be produced using a GIS displaying the collected information graphically.

In the tender document the consortium has proposed an approach to the task of data collection for the expected status report on Pan-European Corridors and Areas. After the initial contacts with DG TREN in the first weeks after the beginning of the project, a basic concept for the data collection process, as well as activities for its preparation were presented by the consortium.

As a starting point it was suggested to analyse the previous status report from the years 2000 and 2001, published in 2002. Another source of information for the new status report were the existing web sites of the corridor administrations. However, in terms of content the few sites differ significantly. Lastly, a considerable amount of desk research has been done by the consortium in order to gather the required information. Some reports produced in the context of other projects from the European Commission were a fruitful source of relevant data.

Special attention has been paid to the fact that following the enlargement of the European Community, the corridors originally defined in the Crete Declaration in 1994 (apart from Corridor X which was added at the Helsinki Conference in 1997) are now part of the trans-European transport network (TEN)

Regarding the methodology of the status report, three working fields have to be distinguished:

- Data Collection
- Development of a database
- Mapping

These three activities are not successive steps but rather interconnected with each other. Obviously, data has to be collected before it can be entered into a database or plotted on a map, but in order to be able to define the type of data to be collected and the degree of its precision, it is necessary to be clear about how to structure the database and how to display the information on a map later.

2.1 Data Collection and Desk Research

The data collection was certainly the main share of the project. Data and information needs based on the tender specifications were analysed and structured into questionnaires. These questionnaires contain requests for data concerning Corridor/Area characteristics, project progress and performance and financing parameters for past, present and future periods. The questionnaire design is shown in Annex A.

As a next step, contacts to Corridor/Area representatives have been established. The Corridors and Areas are administered by chairs and secretariats. The project background and the need for cooperation were explained to these institutions. Hereafter, the questionnaires and instructions were sent out to the chairs and secretariats.

Depending on the feedback of the representatives, their readiness to cooperate and their data supply, the quality and quantity of the first outcome of the survey varied significantly. However, complete and thorough information had to be obtained in order to give a comprehensive picture of the Corridor/Area status and a projection into the future. For this reason, the consortium offered active help to the representatives. In addition to the questionnaire input, a considerable amount of desk research has been done by the consortium. Other sources like supplemental studies or websites have been examined in order to deliver the required data.

In the end, information was obtained from the contacted Corridor/Area representatives, and the data, together with the information gathered from the desk research, has been processed (database, maps and written summary).

2.2 Database

So far, no electronic data has been available for any previous reports related to the status and the development of the ten Pan-European Transport Corridors and the four Pan-European Transport Areas. In this project a database for the continuous monitoring process of the corridors has been set up. However, such a collection of information can only be seen as a snapshot at a certain moment in time. In order to keep the database of use there is need of permanent updating of information and incorporation of changes to the plan.

The data obtained from the returned questionnaires and from other sources was compiled into a digital format in order to allow comparisons and conclusions from a greater perspective. As another benefit, the database will allow the European Commission to easily update the database for future reports.

An Oracle database has been developed to hold the data which was directly transferred form the questionnaires. A graphical user interface in MS Access was built to enter the data. A screenshot of this graphical user interface is shown in Figure 1.

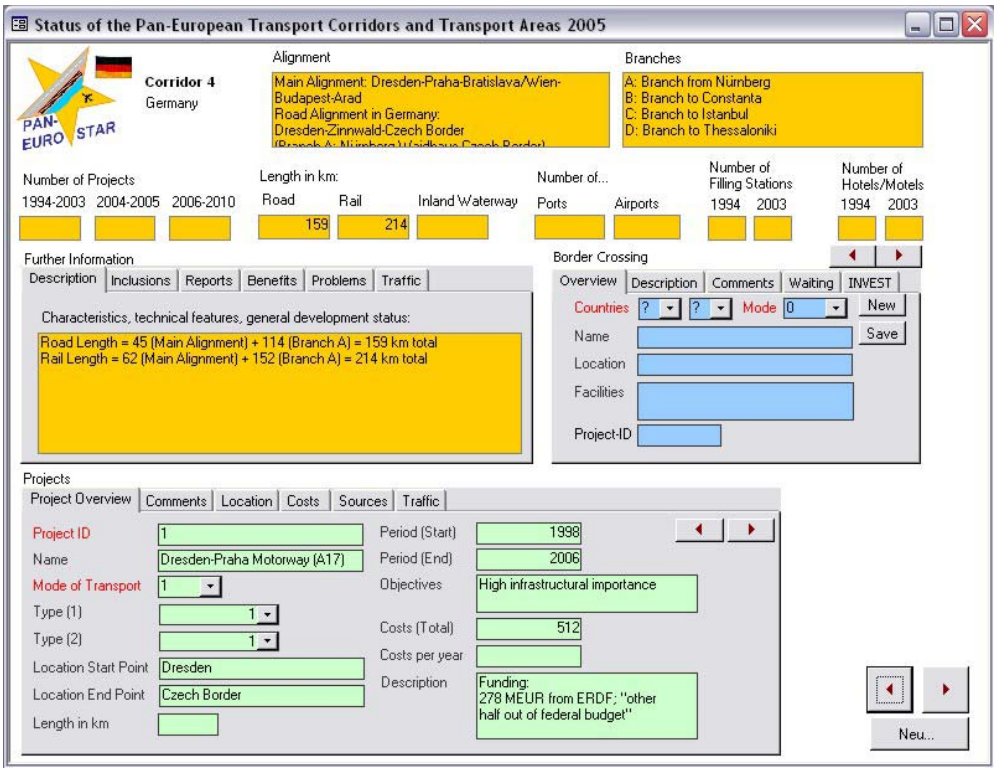


Figure 1: *Screenshot of the Database User Interface*

In order to be able to display the project information such as costs on the map, data was entered together with a code for the spatial location (unique identifier). For the road segments the GISCO road segment code (RDSGCD) has been used, for the railways the object identification (OBJECTID).

The database will be made available to the European Commission for use after the end of this project.

2.3 Mapping

The maps are the spatial representation of information stored in the database. Therefore, maps are a necessary link between verbal descriptions of project locations and the database with its spatial reference (as shown in Figure 2).

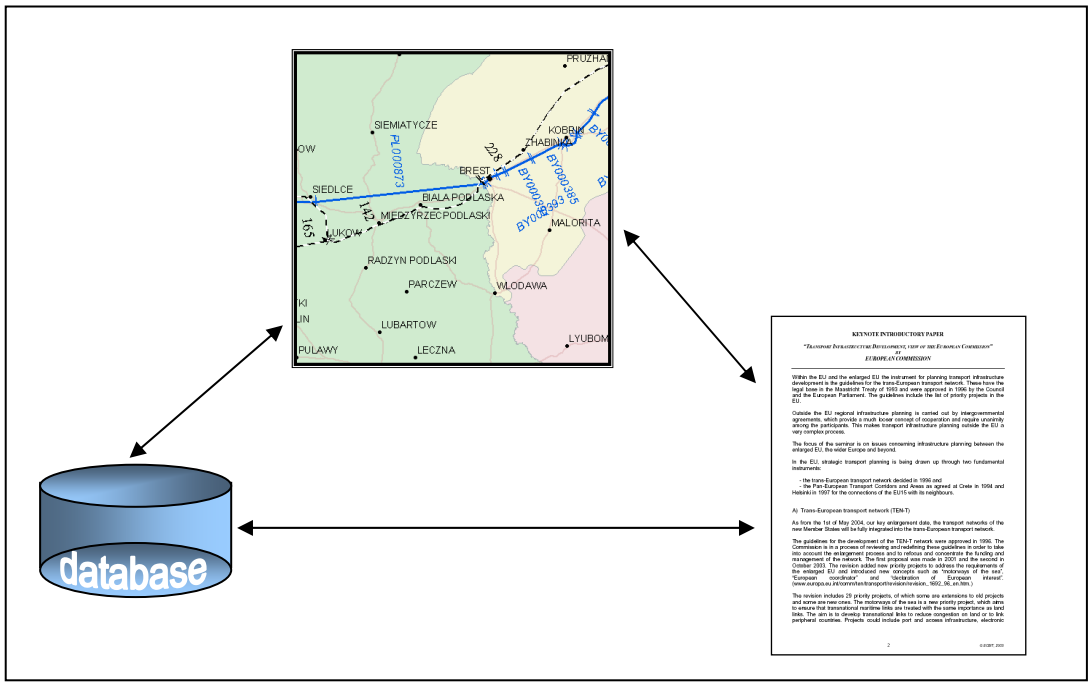


Figure 2: *The map as visual interpretation of spatial reference.*

The ESRI ArcGIS software has been used, as required by the Commission. This will ensure compatibility of the data with the GIS of DG TREN.

The first step was to create the needed spatial data based on the GISCO Transport data and TEN-T data which were deliverd by the Commission. The railway corridors have been delivered by DG TREN in shape-format; apparently, they had been produced on the basis of TEN data as the links had TEN-Ids where they run through EU member states. Outside the EU, there was no unique identifier apart for the object identification (OBJECTID). In some cases it was necessary to complement the railway shape with GISCO data, when the alignment had been changed or extended. For the road corridors the GISCO data has been used. Additions were necessary, e.g. in Corridor II east of Moscow to Nizhny Novgorod, where there was no data available from GISCO either. In this case, the ESRI data was used; if there was not even data from ESRI available, links have been added manually. As a result of this procedure, for a small part of road links there is no unique identifier.

In some places these spatial data sets did not cover all the corridors'/areas' extents; therefore, data had to be added manually. In one case, geographic data was available from the corridor secretariat: BEATA has a web site (BEATA GIS) which provides geographic data in MapInfo format which can be transferred to ArcGIS. There were data sets for roads, railway, ports and airports as well as for border crossings (road and rail).

For the other three Pan-European Transport Areas, there was no appropriate road and railway GIS data (referenced networks) available.

Altogether, maps have been produced for all corridors individually as well as two overview maps, one with all railway corridors and one all road corridors. In addition to that, a map for each area has been produced. Annex B contains these maps.

3 Analysis of External Resources

3.1 Previous Reports

The previous **Status Report on Pan-European Corridors and Transport Areas** was published by TINA Vienna in 2002. The report gave an overview of the relevant financing instruments, the trade and traffic flows and the general status of the Pan-European Transport Corridors and Areas.

TINA Vienna Transport Strategies is an organisation for European transport planning, especially for Central and Eastern Europe. TINA is the acronym of the first project carried out in this context: Transport Infrastructure Needs Assessment, a transport infrastructure analysis for the ongoing extension of the TEN-T to the new Member States with a network density that meets the relevant transport requirements. In October 1999, the Final TINA Report was issued, using data collected from various ministries and other authorities in the eleven acceding countries. In the following years the organisation was commissioned to monitor the Corridors and prepare a status report. TINA Vienna has prepared a report based on their monitoring during the years 2000 to 2001.

The TINA report was the general basis for this status report, since the TINA data were of a similar character; however, they covered only part of the time span required for the 2005 status report.

3.2 Websites of Corridor Administrations

Some of the secretariats maintain individual websites for their corridor/area. For the present data collection these websites have been searched for additional or background information too. However, the sites vary in terms of quality and content. Some secretariats seem to have reserved a domain for future use only. Others maintain complex sites with an abundance of documents for download, even GIS data (in MapInfo format) in one case.

List of Corridor and Area Web Sites

Corridor No.	***URL***	***Status***
C1		
C2		
C3		
C4	www.tinavienna.at/corridor4	Only very basic information on the corridor
C5	www.corridor5.org	Reserved domaine only
C6		
C7	www.tinavienna.at/corridor7	

C8	www.secretariat-corridor8.it	Well kept and informative web site of the permanent secretariat.
C9		
C10	edessa.topo.auth.gr/X/	
Adriatic-Ionian Transport Area		
BEATA	www.barentsinfo.fi/beata/index.asp http://www.beac.st/	BEATA GIS Barents Euro-Arctic Council
Black Sea PETrA	www.bs-petra.org	There used to be a complete and very informative web site which has unfortunately been taken off line.
Mediterranean Transport Area		

3.3 Related reports

There are a great number of reports resulting from other projects assigned by the European Commission, e.g. TEN-Invest, GETIS, TEN-STAC. These were of help in preparing this report.

3.4 Conclusions for the new status report

The previous *Status Report on Pan-European Corridors and Transport Areas* served as a pattern for the structure of the new status report. However, regarding the content, the previous report as well as all other reports was for several reasons of limited use in producing this report:

1) The time horizon for the new report is much wider (1994-2010).

2) A report on the status of the Corridors and Areas can only be a snapshot, for the development is continuous.

3) The Commission required rather tabular representation of data than descriptive text, in order to be able to compare different Corridors or sections of one Corridor, the emphasis was on the production of tables.

4 Introduction to the Pan-European Transport Corridors and Areas

4.1 History and Concept

The Pan-European Transport Corridors and Areas were established during three Pan-European Transport conferences. The overall concept was developed at the first conference in Prague in 1991. Nine long-distance transport corridors as priorities for infrastructure development were defined at the second conference in Crete in 1994. A tenth corridor and the Pan-European Transport Areas for maritime basins were added at the third conference in Helsinki in 1997.

The Transport Corridors include cross-border road and rail traffic routes between the EU15 and the Central and Eastern European countries as well as airport, sea and river ports along the routes serving as intermodal nodes.

On the basis of the results of the Pan-European Transport Conferences of Crete in 1994 and of Helsinki in 1997, the concept of the Pan-European Transport Corridors and Transport Areas has generally been accepted as an emerging priority regarding transport infrastructure development all over Europe. However, following the enlargement of the EU in 2004, most of the Corridors are now part of the TEN network.

The central position of the countries of Central and Eastern Europe, between the Western European countries and the Commonwealth of Independent States and between Nordic and Balkan countries, generates the necessity of creating and exploiting an effective network of transport infrastructure and transport services, adapted to EU standards. The aim of these countries to strengthen the links with the EU also pushes the development of this network, combining infrastructure and services. In this context, the existing incongruity regarding the institutional framework established for the network should be adapted.

For the majority of Corridors and Areas a Memorandum of Understanding has been signed between the Ministers of Transport of the respective governments and the European Commission. In addition, steering committees have been established for each Corridor and Area to monitor and promote the progress and performance and to coordinate required actions. Chairs and secretariats have been selected for each Corridor/Area to care for administrative matters.

4.2 Geographical Alignment

The alignment of the Corridors and Areas is summarized as follows:

- **Corridor I:** Helsinki – Tallinn – Riga – Kaunas – Warsaw with the components

  a) Road Corridor (Via Baltica) from Tallinn – Riga – Warsaw

  b) Rail Corridor (Rail Baltica) from Tallinn – Riga – Warsaw

  c) Branch (road/rail) from Riga – Kaliningrad – Gdansk

- **Corridor II:** Road and rail link connecting Berlin – Warsaw – Minsk – Moscow – Nizhny Novgorod
- **Corridor III:** Road and rail connection beween Dresden – Wroclaw – L'viv – Kiev
- **Corridor IV:** Road and rail connection between Dresden– Prague – Vienna – Bratislava – Budapest

  Branches to Nuremberg, Bucarest – Constanta and Sofia – Thessaloniki / Istanbul
- **Corridor V:** Road and rail connection between Venice – Trieste – Koper – Ljubljana – Budapest – Uzgorod – L'viv

  Branch a: Bratislava – Kosice – (Uzhgorod) – L'viv

  Branch b: (road): Rijeka – Zagreb – Cakovec

  Branch b: (railway): Rijeka – Zagreb – Koprivnica – Dombovar

  Branch c: Ploce – Mostar – Sarajevo – Osijek – Budapest
- **Corridor VI:** Road and rail connection between Gdansk – Grudziadz/Warsaw – Katowice – Zilina

  Branch to Brno
- **Corridor VII:** The Danube waterway with the components

  a) Danube inland waterway

  b) Black Sea-Danube Canal

  c) Danube branches Kilia and Sulina

  d) Danube-Sava canal

  e) Danute-Thissa canal

  f) Relevant port infrastructures situated on these inland waterways
- **Corridor VIII:** Road and rail connection between Bari and Brindisi – Durres and Vlore – Tirana – Skopje – Sofiya – Varna and Burgas

  Branch 1: Cafasan – Kaphstice/Kristallopigi

  Branch 2: Sofia – Pleven – Byala (road)/Gorna Oriahovica (rail)

  Branch 3: Burgas – Svilengrad – Ormenion
- **Corridor IX:** Road and rail connection between Helsinki – St. Petersburg – Pskov/Moscow – Kiev – Ljubasevka – Chisinau – Bucarest – Dimitrovgrad – Alexandroupolis
- **Corridor X:** Road and rail connection between Salzburg – Ljubljana – Zagreb – Beograd – Nis – Skopje – Veles – Thessaloniki

  Branches to Graz, Budapest, Sofija and Florina

- **Barents Euro-Artic Area:** Multimodal transport area covering the northern provinces of Sweden, Finland and Norway as well as the Oblasts Murmansk and Arkhangelsk and the Republics of Karelia and Komi of the Russian Federation.

- **Black Sea Transport Area:** Littoral countries of the Black Sea (Turkey, Georgia, Russia, the Ukraine, Romania, Bulgaria) as well as Greece and Moldova (observer status for Armenia and Azerbaijan)

- **Adriatic-Ioanian Sea Transport Area:** Littoral countries of the Adriatic and Ionian Seas (Albania, Bosnia and Herzegovina, Croatia, Greece, Italy Slovenia, Serbia and Montenegro)

- **Mediterranean Transport Area (MEDA countries):** Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Palestinian Territories, Syria, Tunisia and Turkey

4.3 Financing Instruments

Financing of development activities on the Pan-European Transport Corridors varies. There is a multitude of investment sources, the most common ones are listed here:

- National funds/budgets

- EU funds/grants

  - TEN-T budget for projects within EU member states

  - ERDF (European Regional Development Fund) for projects within EU member states

  - The Cohesion Fund for projects within EU member states

  - INTERREG III

  - ISPA (instrument for structural policies for pre-accession, especially large-scale environment and transport investment support)

  - Phare (instrument for structural policies for pre-accession, especially for institution building measures [with accompanying investment] as well as measures designed to promote economic and social cohesion)

  - CARDS (Community Assistance for Reconstruction, Development and Stabilisation)

  - TACIS

- EIB (European Investment Bank)

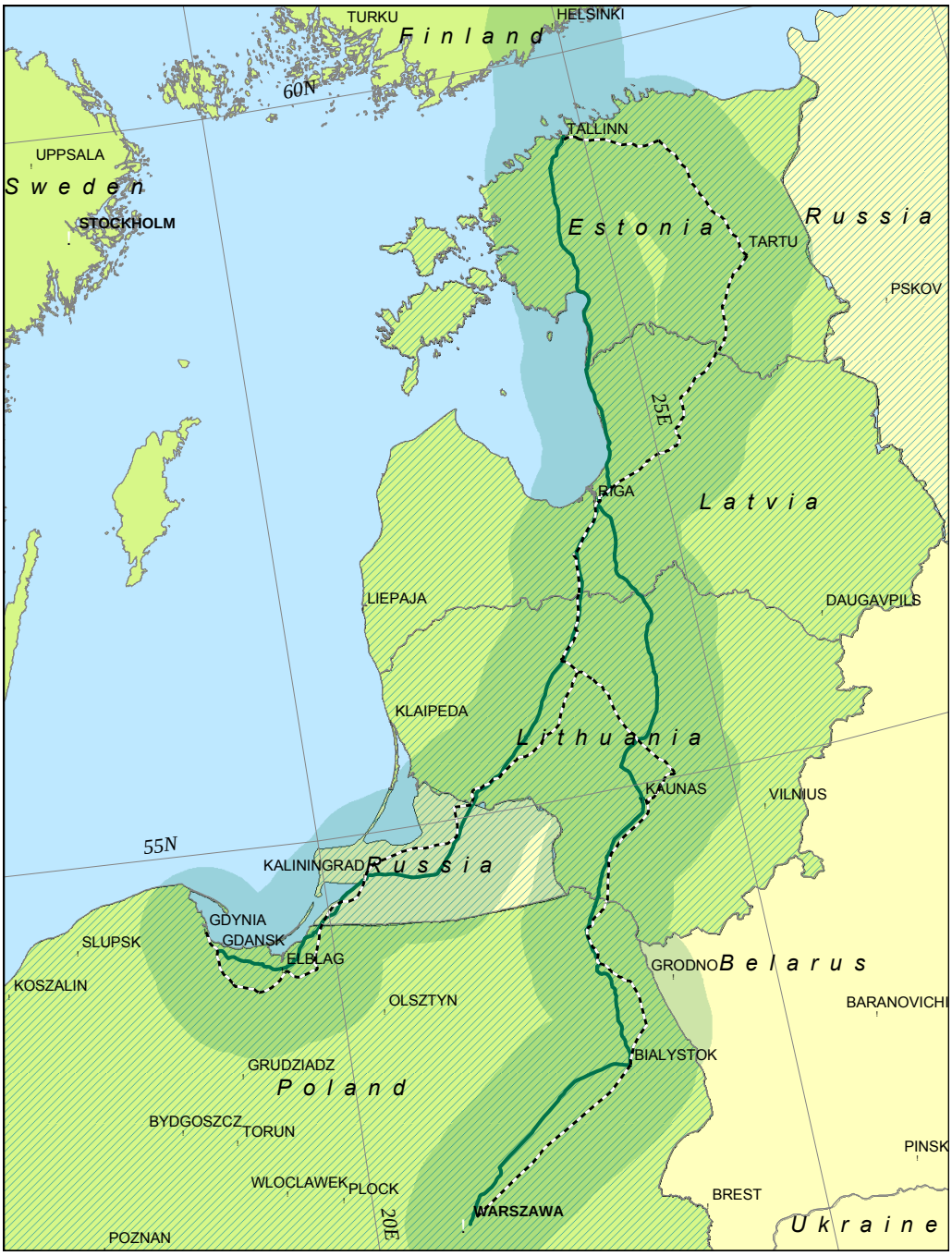
- EBRD (European Bank for Reconstruction and Development)

- World Bank
- IFIs (International Financial Institutions)
- PPP (Public Private Partnership)

5 Status of the Pan-European Transport Corridors

5.1 Corridor I

5.1.1 Map, Alignment and Technical Features



Countries	Finland, Estonia, Latvia, Lithuania, Poland, Russia
Transport modes	Railway, road, aviation, navigation
Infrastructure figures: Roads Railways Number of airports Number of seaports and inner harbours	 1630 km 1655 km 6 11
Alignment	***Helsinki – Tallinn – Riga – Kaunas – Warsaw***
Road (Via Baltica)	*Tallinn – Ikla/Ainazi – Riga – Grenstale/Salociai – Panevezys – Kaunas – Kalvarija/Budzisko – Bialystok – Warsaw*
Rail (Rail Baltica)	*Tallinn – Tapa – Tartu – Valga/Valka – Riga – Jelgava – Meitene/Kalviai – Siauliai – Kaunas – Mockava/Trakiszki – Bialystok – Warsaw*
	Branch A to Kaliningrad - Gdansk
Road	*Riga – Meitene/Kalviai – Siauliai –Panemune/Pagegiai – Kaliningrad –Grzechotki – Elblag – Gdansk*
Rail	*Siauliai – Pagegiai/Sovjetsk – Kaliningrad – Mamonovo/Braniewo – Elblag – Gdansk*

5.1.2 Overview of the General Development

The idea of developing of a north-south corridor was initialised by the Finnish industry and was strongly supported by the road authorities of Estonia, Latvia and Lithuania. After significant political changes at the beginning of the 90s the development accelerated. The corridor became one of the Pan-European Transport Corridors. The steering committee and secretariat were established with strong support of Ministry of Transport and Communications Finland and DG TREN. The Memorandum of Understanding has been signed by the Ministers of Transport of the respective countries and by the European Commission in July 1996.

At present the Corridor is divided into three separate components:

Via Baltica (road component):

Via Baltica (E67) stretches from Tallinn to Warsaw. The objective is to create a European quality road and to facilitate trade and communications between Finland, Estonia, Latvia, Lithuania and Poland and to other eastern and western European countries.

The aim is to eliminate the current bottlenecks and reduce the number of road accidents by increasing the overall capacity of Via Baltica which is being developed on the basis of existing roads by gradually reconstructing and widening its sections, building bypasses, increasing the number of traffic lanes, constructing viaducts and intersections. The overall goal of Via Baltica is to improve traffic conditions, shorten travel time and reduce the accident rate.

An additional Memorandum of Understanding has been signed by representatives of the Ministries of Transport and Communications of Finland, Estonia, Latvia, Lithuania, Poland and a representative of the EC. The Estonian Road Administration maintains the Corridor secretariat until 2006.

In January 1996 the High Level Working Party on Via Baltica, set up on the initiative of the Nordic Investment Bank upon request of the G-24 Transport Working Group under an authorization of the Prime Ministers of the Via Baltica countries, i.e. Estonia, Finland, Latvia, Lithuania and Poland, recommended a five year investment program for upgrading and reconstructing the Via Baltica route. The estimated cost for the program was 147m EUR.

The *First Investment Program* for the years 1996-2000 was estimated to cover the cost of about 214m EUR, about 15 % more than originally estimated. The following is a summary of what has been achieved under the program:

- 110 km of a new roads have been built and 333 km of existing roads have been rehabilitated or resurfaced, corresponding to nearly half the total length of Via Baltica
- 28 bridges and viaducts have been constructed, repaired or strengthened
- All countries have initiated specific traffic safety programs
- Signing of Via Baltica as E67 has been arranged
- Roadside services have been developed along the route with private sector participation.

As a strategic objective of the following *Second Investment Program* for the years 2001-2006 further improvement and upgrading of the Via Baltica route towards international quality standards is justified not only due to increasing traffic or enhanced national and regional development but also in a wider European context. High quality transport routes through Poland and the Baltic countries are vital for trade with Eastern Europe and will enhance competitiveness, economic growth and employment.

Regarding the implementation of the *Second Investment Program* for Via Baltica, Latvia and Estonia pay special attention to the section from the capital city bypasses to the southern state border by strengthening the pavement and reconstructing bridges. New possibilities of links through the Baltic Sea by short sea shipping are being planned.

Lithuania is carrying out the completion of infrastructure projects particularly on the section between the Polish border and Kaunas including the Kaunas bypass. A direct road link from Vilnius to Marijampolė is being considered.

Poland declares completion of construction of the expressway on the total length of the Polish section of the Via Baltica by 2015.

Initially, the Second Investment Program for Via Baltica consisted of projects at an estimated cost of 547m EUR. The distribution of costs per country was as follows:

- Estonia—35m EUR
- Latvia—271m EUR

- Lithuania—28m EUR
- Poland—219m EUR

Today, after having collected all relevant information and analysed the data, we can see that the planned total sum has been reduced and is now 477m EUR. The distribution of costs per country is as follows:

- Estonia—37m EUR (an increase by 6 % compared with the Initial Program)
- Latvia—255.51m EUR (a decrease by 6 %)
- Lithuania—40.55m EUR (an increase by 45 %)
- Poland—144m EUR (a decrease by 34 %)

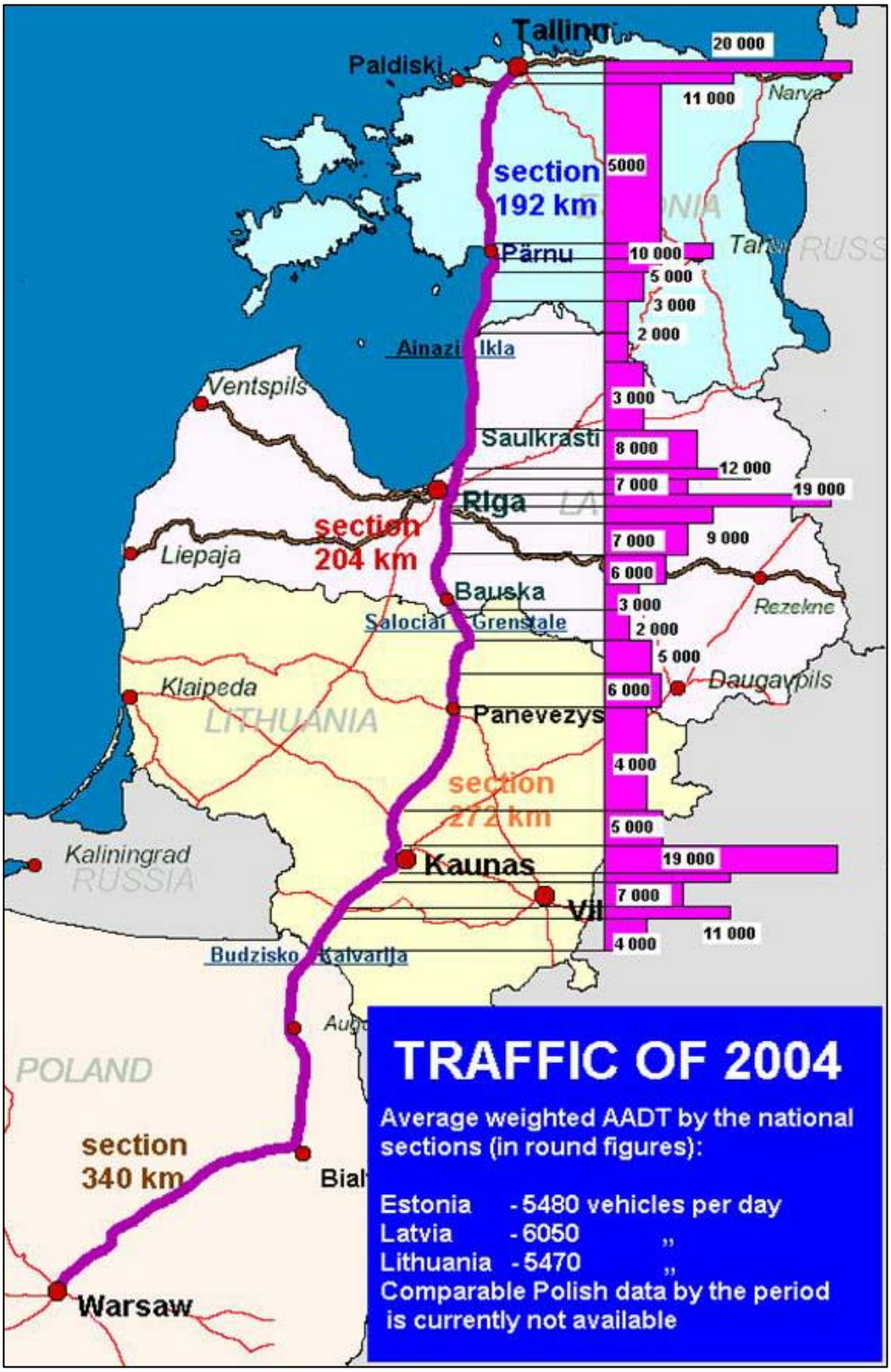
The implementation of some projects has been postponed.

A Monitoring Committee had been set up in 1996 and given the task to follow-up and monitor the program's implementation. The committee consisted of representatives of the Transport Ministries of countries concerned and the European Commission. The post of a chairman to the Monitoring Committee was established, financed by the Swedish government and appointed to Mr Bengt. The Finish government financed a post of a secretary in Helsinki, Mr Martti Miettinen. The work of the Monitoring Committee was rather efficient. However, financial aid from both countries was limited and ended in 2003. In general, chairman and secretary agreed to continue their activities but it is important to find further financing. During the meeting of the Baltic Road Association Council held in Palanga 7-9 May 2003, it was decided that the Baltic Road Association (BRA) would take chairmanship and the functions of the secretariat of the Monitoring Committee. A decision has been made that a letter to the Transport Ministers of Estonia, Latvia and Lithuania should be prepared concerning the involvement of the BRA in the activities of the Via Baltica Monitoring Committee.

During the 26th annual meeting of the Ministers of Transport of the Baltic States held on 6-7 November 2003 in Druskininkai, Lithuania, the Ministers of Transport of the Baltic States nominated with regard to the MoU the board of the Baltic Road Association for the post of co-ordinator of the Monitoring Committee for Via Baltica and its secretariat and appointed the chairman of the board of the Baltic Road Association to chair the committee on a rotation basis.

After Estonia's taking over the leadership of the Baltic Road Association (BRA) in August 2003, the administering chairman of the BRA for the next 3 years is the Director General of Estonian National Road Administration Mr. Riho Sõrmus, who also occupies the post of the interim chairman of Via Baltica.

The annual average daily traffic (AADT) volumes in 2004 along Via Baltica in Estonia, Latvia and Lithuania are shown in the following figure.


Tallinn
Paldiski
Narva
section
192 km
Pärnu
Ainazi
Ikla
Ventspils
Saulkrasti
Riga
section
204 km
Liepaja
Bauska
Salociai
Grenstale
Rezekne
Daugavpils
Klaipeda
LITHUANIA
Panevezys
section
272 km
Kaliningrad
RUSSIA
Kaunas
Budzisko
Kalvarija
POLAND
section
340 km
Warsaw
20 000
11 000
5000
10 000
5 000
3 000
2 000
3 000
8 000
12 000
7 000
19 000
7 000
9 000
6 000
3 000
2 000
5 000
6 000
4 000
5 000
19 000
7 000
11 000
4 000
TRAFFIC OF 2004
Average weighted AADT by the national sections (in round figures):
Estonia - 5480 vehicles per day
Latvia - 6050 ,,
Lithuania - 5470 ,,
Comparable Polish data by the period is currently not available

Rail Baltica (rail component):

The administrative matters of Rail Baltica are cared for by the Lithuanian Ministry of Transport and Communications. Rail Baltica is one of the TEN-T Priority Projects (No. 27).

The main issues of current rail traffic on the Rail Baltica are:

- Interoperability problems at the borders, due to different track gauges: sections in Poland and Germany are 1435 mm; in Lithuania, Latvia and Estonia 1520 mm; this results in time consuming operations;
- Low technical standards and speeds on the line (some sections: 40 – 60 km/h);
- Suboptimal alignment in comparison with road and sea connections;
- Low quality of service for passenger operations;
- Problematic sections:
  - Poland: existing line from the Lithuanian border to Warsaw (needs to be upgraded)
  - Lithuania:
    - section Polish border – Kaunas (need to be investigated)
    - border crossing to Latvia (needs to be investigated)
    - missing connection of Rail Baltica to Vilnius (commuter service Vilnius – Kaunas needs to be upgraded)
  - Latvia: difficulties at Riga passing
  - Latvia/Estonia: alignement options need to be investigated (new line via Pärnu or existing line through Tapa – Tartu and Valka/Valga)

Due to above mentioned difficulties the current flow of passengers and freight on the existing Rail Baltica connection is low. For example, no passenger operations exist between Tallinn and Riga.

The concept of Rail Baltica is mainly based on political willingness of the stakeholder countries at present. Economical, technical, environmental and spatial planning aspects are not investigated yet. However, first serious studies are in the inception phase.

The main conceptual questions in need of clarification are the following:

- Demand and financial feasibility of a new high-speed passenger rail service Tallinn – Riga – Kaunas – Warsaw – Berlin
- Alignment and demand for a mixed (passenger and freight) traffic service
- Gauge (1520 mm or standard 1435 mm)

Branch A to Kaliningrad (Via Hanseatica):

Branch A of Corridor I runs from the coastal area (Gdynia- Gdansk – Elblag) through the Oblast Kaliningrad and Lithuania (Siaulai) to Latvia (Jelgava, Riga). The road component of Branch A is part of the larger Via Hanseatica.

5.1.3 Developments along the Corridor between 1994 and 2010

Moderate reconstruction and improvement works, mostly financed with EU funds, have been continued on all the national sections of the Road Corridor I Baltic part. The summarized length (116 km) of road sections which have been renovated and rehabilitated in 2004 makes up approx. 17 % of the total distance (670 km) between Tallinn and the Lithuanian-Polish border.

After completion of the last 44 km rehabilitation works, there are no more roads in Estonia to improve using the mentioned method. The next step is the full reconstruction of the two shorter road sections close to Tallinn and Pärnu. Preparatory works have been started on the Pärnu section.

Latvia has concentrated its efforts in the surroundings of Riga where the present traffic conditions are most complicated. Improvement of 4 road sections has been completed during 2004, construction works on Saulkrasti bypass are planned to be commenced in 2005, and feasibility studies have been completed for 3 further road sections.

Lithuania has actually finished all the important works on its national section. Just some traffic safety and environmental protection measures in separate places were planned to be implemented and completed partly in 2004 and 2005.

The total budget of the mentioned completed projects in 3 countries makes about 72m EUR

The traffic volume on the entire road section has grown rapidly during 2003-2004, 7,5 % and 12 % respectively on average.

Close to city borders growth has accelerated:

- Tallinn – 21 to 37 %
- Pärnu – almost 30 %

Average traffic composition by the count of 2004 is:

- Cars – 77 %
- Lorries and buses – 8 %
- Trucks – 15 %

The last fixed number of vehicles crossing the Latvian border in Ikla was the total of 456.123 in 2003 (1.250 daily average).

Development history for Rail Baltica:

Early 90´s: Plan to develop a 1435-mm-gauge rail link from Lithuanian Polish border to Kaunas.

2002: An international seminar on further development of the project „Rail Baltica" took place in Riga; an international coordination group was established.

2003: A Letter of Intent on the preparation of a common pre-feasibility study was signed by the Ministers of Transport of the Baltic States during their meeting in Naples. The Minister of Infrastructure of Poland also supported the development of Rail Baltica.

Two studies have been commissioned: A study financed from the Cohesion Fund of EU and a study in the framework of the Interreg IIIB.

2003: During the meeting of the international coordination group in Vilnius it was decided:

- To use the standard gauge (1435 mm) track;
- To define the route as follows: Tallinn– Riga – Kaunas – Warsaw;
- To define the technical parameters according AGC/AGTC agreements and technical specifications for interoperability of the trans-European rail systems.

5.1.4 Infrastructure Development per Country and Mode of Transport

The alignment and development of the traffic infrastructure in specific countries along Corridor I are described as follows. Projects regarding road improvements are summarized in the following table.

Part of Corridor I	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor I Road Projects									
Main Axis	Estonia	Pärnu ring road	Renovation				under design		
Main Axis	Estonia	Crossing of Pärnu Road with Tammsaare Avenue	Construction of a grade-separated junction		1996	1997		13,4	City of Tallin
Main Axis	Estonia	Ikla border station	Construction project including a complex of traffic lanes, parking places buildings, storehouses, equipment, traffic signs and road furniture to enable normal work of the customs and border inspection		1997	1998		5,2	City of Tallin, PHARE co-financing of 2.0m EUR
Main Axis	Estonia	Tallinn-Pärnu-Ikla road	Rehabilitation works	113,4	2002	2004		21,6	ISPA (16.3m EUR), EIB loan (3.6m EUR) and national budget (1.7m EUR).
Main Axis	Latvia	E67 section Kekava – Iecava	Reconstruction		2005	2007	Tender evaluation	28,7	Cohesion Fund and Latvian State Budget
Main Axis	Latvia	E67 Saulkrasti Bypass	Reconstruction		2005	2007	Tender launched	92,4	Cohesion Fund and Latvian State Budget
Main Axis	Latvia	E67 section Skulte – Svetciems	Reconstruction		2005	2007	Tender evaluation	44,5	Cohesion Fund and Latvian State Budget
Main Axis	Latvia	E67 section Bauska – Grenctale	Reconstruction		2005	2007	Tender evaluation	16,0	Cohesion Fund and Latvian State Budget
Main Axis	Latvia	E67 section Adazi – Gauja	Reconstruction		2005	2007	Tender launched	12,0	Cohesion Fund and Latvian State Budget
Main Axis	Latvia	E67 section Riga – Kekava	Reconstruction		2005	2006	Design	0,9	Cohesion Fund and Latvian State Budget

Part of Corridor I	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor I Road Projects									
Main Axis	Latvia	Baltezers section	Reconstruction			2004		15,0	
Main Axis	Latvia	Gauja – Lilaste	Reconstruction	8,2		2004		6,5	ISPA grant (4.7m EUR)
Main Axis	Latvia	Riga Airport	Construction of access road			2004		6,8	
Main Axis	Latvia	Lilaste – Skulte	Improvement		2004	2006		4,0	
Main Axis	Latvia	Riga - Kekava	Feasibility study for road improvements	17,1		2004			
Main Axis	Latvia	North entrance of road E67 into Riga	Feasibility study			2004			
Main Axis	Latvia	East entrance of road E22 into Riga	Application for EC Technical Assistance		2004		Implementation planned for 2005-2007		
Main Axis	Latvia	Saulkrasti bypass	Construction works		2005	2007		53,0	
Main Axis	Lithuania	Panevėžys-Pasvalys-Riga	Strengthening and Widening of Pavement	10,3	2004	2005		5,1	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Panevėžys-Pasvalys-Riga	Reconstruction of Pajstris Crossing		2004	2005		0,1	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Panevėžys-Pasvalys-Riga	Traffic Safety Measures – Construction of Pedestrian and Cycling Paths	2,5	2004	2005		0,2	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Panevėžys-Pasvalys-Riga	Reconstruction of Bridge over the River Istra		2004	2005		0,3	Cohesion Fund (85 %) and national budget (15 %)

Part of Corridor I	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor I Road Projects									
Main Axis	Lithuania	Panevėžys-Pasvalys-Riga	Reconstruction of Bridge over the River Svalia		2004	2005		0,2	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Panevėžys-Pasvalys-Riga	Environmental Protection Measures		2004	2005		0,1	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Panevėžys-Aristava-Sitkūnai	Environmental Protection Measures		2004	2005		0,2	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Panevėžys Bypass	Environmental Protection Measures		2004	2005		0,1	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Kaunas-Marijampolė-Suwalki	Strengthening of Pavement on the Right Side of the Road	7,9	2004	2005		2,5	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Kaunas-Marijampolė-Suwalki	Reconstruction of Scaffold Bridges and Viaducts (5 units)	6,8	2004	2005		1.0	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Kaunas-Marijampolė-Suwalki	Environmental Protection Measures		2004	2005		0.3	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Panevėžys-Pasvalys-Riga	Strengthening and Widening of Pavement	18,9	2005	2006		10,1	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Panevėžys-Pasvalys-Riga	Traffic Safety Measures		2005	2006		0.6	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Panevėžys-Aristava-Sitkūnai	Traffic Safety Measures		2005	2006		0.2	Cohesion Fund (85 %) and national budget (15 %)

Part of Corridor I	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor I Road Projects									
Main Axis	Lithuania	Panevėžys-Pasvalys-Riga	Reconstruction of Bridge over the River Istra		2005	2006		0.2	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Kaunas-Marijampolė-Suwalki	Strengthening of Pavement on the Left Side of Road	16,1	2005	2006		3,1	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Kaunas-Marijampolė-Suwalki	Reconstruction of Bridge, Scaffold Bridge and Viaducts		2005	2006		1,4	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Kaunas-Marijampolė-Suwalki	Environmental Protection Measures		2005	2006		0.9	Cohesion Fund (85 %) and national budget (15 %)
Main Axis	Lithuania	Kaunas Western Bypass	Construction of bypass	9,7	2001	2003		18,5	ISPA (13.9m EUR) cofinancing
Main Axis	Lithuania	Raubonys-Latvian border	Reconstruction	12,0	1997	1998			
Main Axis	Lithuania	Panevezys-Pasvalys	Upgrade and strengthening	29,2	2004	2005		24,4	Cohesion fund (20.7m EUR) and national budget (3.7m EUR).
Main Axis	Lithuania	Panevėžys	Construction of Panevėžys north-western bypass	22,3	1997	1999		9,2	EBRD (6.6m EUR) and national budget (2.6m EUR)
Main Axis	Lithuania	Panevezys-Aristava,	Upgrading	28,1		1998			
Main Axis	Lithuania	Aristava-Sitkūnai	Road construction	33,8	1998	2000		25,2	EBRD (18.1m EUR) and national budget (7.1m EUR)
Main Axis	Lithuania	Garliava-Mauručiai	Upgrading	4,0	1997	1998		4,4	EIB (3.2m EUR) and national budget (1.2m EUR)

Part of Corridor I	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor I Road Projects									
Main Axis	Lithuania	Mauručiai-Puskelniai - Marijampolė	Road construction	34,2	1997	2000		22,3	EIB (16.1m EUR) and national budget (6.2m EUR)
Main Axis	Lithuania	Marijampolė-Kalvarija	Construction of bypass	23,0	2000	2002		14,6	PHARE (6.4m EUR) and national budget (8.1m EUR)
Main Axis	Lithuania		Construction of four new grade-separated intersections		2001	2003		10,9	ISPA (8.2m EUR) and national budget (2.7m EUR)
Main Axis	Lithuania		Construction of five more grade-separated intersections; upgrading of 13.5 km road; construction of the Ramygala bypass (5 km); strengthening of road (42 km); and traffic safety measures		2006	2010		59,2	Cohesion fund (50.3m EUR) and national budget (8.9m EUR)
Branch A	Lithuania	Šiauliai North-Western bypass	Construction of bypass	2,1	1997	1998		1,8	EBRD (1.2m EUR) and national budget (0.6m EUR)
Branch A	Lithuania	Joniškis bypass	Construction of bypass	7,7	2002	2004		3,2	ISPA (2.4m EUR) and national budget (0.8m EUR)
Branch A	Lithuania	Šiauliai South-Western bypass	Construction of bypass	17,0	2001	2003		12,2	ISPA (9.2m EUR) and national budget (3.0m EUR)

Part of Corridor I	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor I Road Projects									
Branch A	Lithuania	Taurage-Kaliningrad	Upgrade and strengthening	4,4	2001	2001		2,3	ISPA (1.7m EUR) and national budget (0.6m EUR)
Branch A	Lithuania	Šiauliai	Widening of roads at the Šiauliai approaches	14,1	2001	2004		11,1	ISPA (8.3m EUR) and national budget (2.8m EUR)
Branch A	Lithuania		Construction of the Panemunės bypass (4 km); strengthening of road (33 km); widening and strengthening of road (65 km); and traffic safety measures		2006	2010		49,7	Cohesion fund (42.2m EUR) and national budget (7.5m EUR)
Branch A	Poland	Ostrow - Wyszomierz	Upgrade	10,0	2004	2005		4,0	EIB + National Budget
Branch A	Poland	Sztabin- Kolnica	Upgrade	9,0	2004	2005		10,0	WB + National Budget
Branch A	Poland	Radzymin –Wyszkow	Upgrade	32,0	2005	2006		120,0	EU-CF+ National Budget
Branch A	Poland	Augustów bypass	Upgrade	17,2	2006	2008		50,0	National Budget
Branch A	Poland	Bialystok- Przewalanka	Upgrade	18,4	2005	2006		30,0	National Budget
Branch A	Poland	Wyszkow – Ostrow	Upgrade	10,0	2006	2008		10,0	National Budget

Estonia

The Estonian part of Via Baltica is running in north-south direction from Tallinn via Pärnu to the Estonian-Latvian border. Its length is 192 km.

The corridor alignment starts at the Tallinn city port with 13 km of urban streets. On the stretch Tallinn-Pärnu, it continues as a 4-lane road (14- km) with 2 junctions and speed limits of 110 km/h (in summer) / 90 km/h (in winter). Then it continues as a 2-lane road (98 km) with a speed limit of 90 km/h. The entire stretch features newly rehabilitated asphalt concrete pavement.

In the city of Pärnu, the corridor consists of 10 km of urban streets.

On the stretch Pärnu-Ikla (Latvian border), the corridor continues as a 2-lane road (57 km) with a speed limit of 90 km/h, featuring newly rehabilitated asphalt concrete pavement.

Along this alignment the following problems have been identified:

- Traffic organization and permeability of all urban sections
- Capacity of the existing road section between the border of Tallinn urban area and the crossing with the ring road

The technical status of the road and the traffic conditions (operations, safety) have been improved in 1994-2004. There are no direct impacts on spatial development to be observed.

At present, Via Baltica is one link of the Estonian transit road network. The Tallinn – Narva road and the access to St. Petersburg are principal roads from an economical perspective. The second national hub is Tartu. The Tallinn-Tartu connection with access to Russia is also considered a principal road.

Latvia

In road transport, the first priority during the next years will remain on the maintenance of the existing road network. Investment will be focused on the completion of undergoing works and start of renovation of links currently in an unsatisfactory condition.

The development of transport corridors is the second priority, including:

- An increase of the share of paved roads and the bridge carrying capacity in accordance with the EU requirements to load carrying capacities,
- Promotion of traffic safety by improving road geometry in accordance with the increasing traffic demands and eliminating "black spots".

The third priority is the renovation of rural roads and increase of the share of the paved rural roads.

Construction of a new alignment of the Via Baltica entrance into Riga city may be seen as a new project, which may potentially obtain EU ISPA or Cohesion Funding in the next years. In 2002, another project was initiated and passed to the European Commission for a funding approval - construction of the Saulkrasti traffic circle, which will be the largest investment project in the independent Latvia so far.

For the railways, the insufficient funding for maintenance, development and renovation of the rail system has led to the obsolescence of the infrastructure and decline in rolling stock.

A new study has been started in order to research possibilities of reopening the railway traffic on the route Rail Baltica (Tallinn - Riga -Kaunas - Warsaw - Berlin). On November 7, 2001 in Parnu, Estonia, three Baltic transport ministers signed an agreement on further cooperation for a solution of this question. Germany actively supports the project called Rail Baltica too. The Ministry of Transport and Communications plans to carry out a detailed research.

It is foreseen that the first phase - the feasibility study - will be financed from the EU Interreg IIIB and PHARE program, but the Cohesion Fund may be used for the implementation.

Financing of transport projects in Latvia:

Certain support is granted by the State Investment Program in ways of budget subsidies and state guaranteed loans. The largest funding for transport development during recent years has been received from the European Union. Until 2000, the main EU instrument for pre-accession support in the infrastructure development for candidate states was the PHARE program. After 2000, the ISPA fund has become the most important in the development of transport infrastructure.

In transport, many key projects under the PHARE program have been implemented for the reconstruction of Via Baltica, purchase of rails and construction of a rail-welding workshop, as well as for solving shipping safety questions in the Latvian ports. In 2001, the PHARE program financed a project on shipping safety.

For the period from 2000 to 2006 the yearly EU ISPA budget is 1,040m EUR (1999 pricing) and it is divided equally between all candidate states for environmental and transport infrastructure projects. Latvia, in accordance with the funding distribution among the states, has about 3.5 % to 5.5 % of ISPA total budget every year. Allotments for the transport field in Latvia are about 23m EUR annually.

In 2000 and 2001, the European Commission granted funding from the ISPA structural pre-accession funds for nine transport infrastructure projects. The total cost of the projects is 178m EUR of which ¾ or 133.5m EUR is the ISPA funding. The projects are aimed mainly at the modernisation of Via Baltica and an East-West railway corridor.

Lithuania

Via Baltica in Lithuania is a single road connecting Lithuania and other Baltic states with Poland, Germany and other Western European countries.

Branch A in Lithuania is a single road connecting Lithuania and other Baltic states with the Oblast Kaliningrad of the Russian Federation.

In August of 2003 the first stage of the Via Baltica development was successfully completed and opened for traffic. The project was co-financed from the ISPA Programme. As a result, there were 2 grade-separated intersections at Marijampolė, a grade-separated intersection at Nausodė constructed, a new road section of 3.1 km on the road Kaunas-Marijampolė-Suwalki completed, pedestrian walkways, cycle tracks and viaducts constructed, drainage systems reconstructed, telephone connections, electricity lines and gas supply system reconstructed. The total cost of works amounts to 9.11m EUR. The works started in February 2002.

In November 2003 the second stage of the Via Baltica road was successfully completed and opened for traffic. It was also co-financed from the ISPA Programme. The works completed include the construction of the third and fourth traffic lane on the second carriage way of the Kaunas western bypass (9.65 km on the road Kaunas-Marijampolė-Suwalki); a grade-separated intersection at Garliava, three viaducts; the reconstruction of telephone connections, electricity lines, gas supply and drainage systems; the construction of crash barriers, noise barriers and road signs. The total cost of works amounts to 8.44m EUR. The works started in September 2002.

An important single project in this context is the Western Bypass of Kaunas. The bypass serves traffic going towards Klaipeda, Jurbarkas, Sakiai, Marijampole and Alytus. On the first section of road (6.8 km) the bypass meets the parameters of road category I, on the other section (9.6 km) it meets the parameters of road category II. The existing traffic flow on the second bypass section is up to 7000 vehicles/day. Therefore, it was planned to upgrade this section according to the parameters of road category I.

The following works have been completed in this project during the years 2001-2003: two intersections in Marijampole, one intersection in Nausode (near Panevezys) were constructed; pedestrian and cycling paths were built; Kaunas Western Bypass (16.4 km length) was upgraded; Garliava Intersection (where Kaunas Western bypass crosses the road Marijampole-Vilnius) at 16.45 km was constructed; traffic safety measures on the road section and intersections (metal crash barriers, pavement marking etc.) were implemented; two viaducts and cattle crossings were constructed. Construction was completed in 2003. The total cost of the project made up 18.5m EUR, out of which ISPA fund provided 13.9m EUR.

Poland

There are plans by the Polish government to up-grade the Via Baltica road corridor to expressway status. The route of this corridor, currently promoted by Polish authorities, is leading from Augusztow via Bialystok to Warsaw. Potential environmental impacts related to the construction works need to be investigated.

Russia

On the territory of the Russian Federation, Corridor I includes the railway section Sovetsk – Kaliningrad – Mamonovo – state boundary. The length of the railway section Sovetsk – Kaliningrad – Mamonovo is 180 km. As a matter of fact, along its entire length it is a single track railway line with diesel traction.

The concerned corridor section provides access to the port of Kaliningrad, the Russian-Polish borderline, access to Lithuanian railways as well as to Latvia and Estonia.

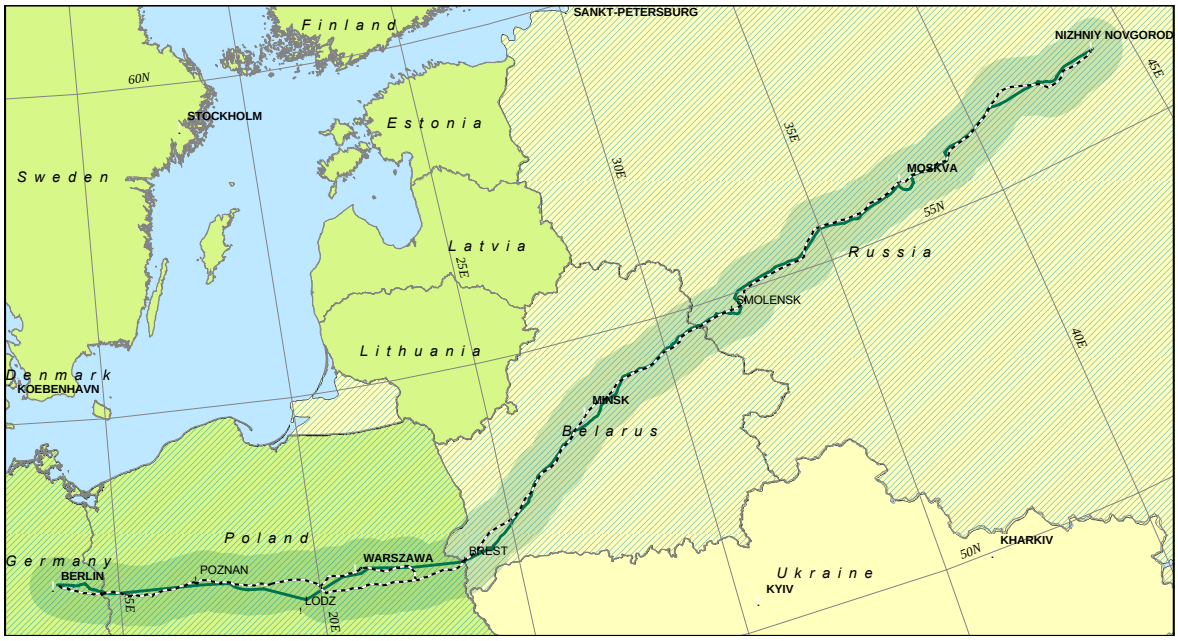
A government decree has been issued envisaging the construction of the combined multi-purpose cargo and passenger motorail ferry complex to Ust – Luga – Baltiysk – German ports.

Border Crossings

The construction project at the Ikla border station (Estonia/Latvia border) in 1997-1998 included a complex of traffic lanes, multi-storey car parks, storehouses, equipment, traffic signs and road furniture to enable smooth customs procedures and border controls. The construction costs of 5.2m EUR were financed by the City of Tallinn (3,2m EUR) and a Phare co-financing of 2m EUR.

5.2 Corridor II

5.2.1 Map, Alignment and Technical Features



Countries	Germany, Poland, Belarus, Russia
Transport modes	Railway, road, aviation
Infrastructure figures:	
Railways	2,313 km Germany – 85 km, Poland – 690 km, Belarus – 610 km, Russia – 928 km
Roads	2,200 km Germany – 100 km, Poland – 868 km, Belarus – 604 km, Russia – 860 km
Number of airports	Berlin, Poznan, Warsaw, Minsk, Moscow
Number of seaports and inner harbours	Berlin, Moscow
Number of border crossings	6
Alignment	***Berlin – Warsaw – Minsk – Moscow – Nizhny Novgorod***
Road	*Berlin – Frankfurt/Oder / Swiecko – Poznan – Warsaw – Terespoll/Brest – Baranavicy – Minsk – Orsa – Krasnoye – Smolensk – Moscow – Nizhny Novgorod*
Rail	*Berlin – Frankfurt/Oder / Kunowice – Poznan – Lowicz – Warsaw – Lukow – Terespol/Brest – Baranavicy – Minsk – Orsa – Krasnoye – Smolensk – Moscow – Nizhny Novgorod*
Border Crossings	Frankfurt/Oder - Kunowice (DE-PL) (railway) Frankfurt/Oder – Swiecko (DE-PL) (road) Małaszewicze – Brest (PL-BY) (railway) Terespol – Brest (PL-BY) (road) Orscha – Krasnoye (BY-RUS) (railway) Redki – Krasnoye (BY-RUS) road

5.2.2 Overview of the General Development

The Memorandum of Understanding (MoU) on the development of the Corridor was signed on 23 January 1995 by the Ministers of Transport of Germany, Poland, Belarus, Russia and the Railway Minister of Russia as well as the European Commission. The steering Committee chairmanship is rotating, for the period 2002-2006 the chair is in Germany.

Corridor II connects the European Union, in particular Germany and Poland, to Belarus and the Russian Federation. The need for closer political cooperation between the EU and Russia has been recognised in a number of agreements.

The economic meaning of Corridor II results from the importance of the trade relations between the EU and the Russian Federation. The EU share in the total Russian foreign trade was 31 % for the year 2003. Although a great part of the exports from the Russian Federation is energy sources which are being transported to the EU in pipelines, there is still the deliveries of the ores, metals and semi finished products as well as solid natural resources and a growing amount of finished products that are being transported via Corridor II just like the exports from the EU to the Russian Federation. Corridor II connects the EU to the most important industrial centres of Central Russia (Moscow, Nizhny Novgorod, Samara, Togliatti, Volgograd and Sverdlovsk) and further, via the Trans-Siberian Railway, to the markets of East Asia. Corridor II provides the most densely populated area of the Russian Federation with imports from the EU for which this is an important market.

5.2.3 Developments along the Corridor between 1994 and 2010

According to the permanent secretariat, Corridor II's infrastructure is not used to full capacity; in fact it could cope with double of its present traffic volume. The infrastructure, continuously being improved by corridor countries, is in an excellent state in some places. This evaluation concerns the roads in Germany, Belarus and partly in Poland. Road construction projects run in Poland and Russia with the objective to construct four lane motorways by 2015. The expansion and the rehabilitation of the railroad tracks are under way in Germany; in Poland they have come as far as Warsaw and in Russia and Belarus the projects have been started.

Regarding aviation, the Moscow airports are being partly modernized; the airport in Minsk is not used at full capacity, the Warsaw airport is being extended in order to double the number of flights until 2010 and the central Berlin airport is in the planning stage.

In March 2003, the railways of Germany, Poland, Belarus and Russia launched a Four Axle Project. The objective is to double, in the short term, the market shares of rail transport in Corridor II. Up to now, the market share has been 4 % in passenger transport and 2 % in freight transport. To this end, multilateral working groups from the railways involved have drawn up packages of measures for the freight, passenger and infrastructure sectors. These packages are designed to enhance performance and quality, thereby significantly improving the competitiveness of rail transport on Corridor II. The measures were adopted by the chairmen of the railways in Warsaw on 20 August 2003. One crucial factor influencing the success of the strategy is a reduction of journey times. In the freight sector, the railways believe there is scope for optimization from 21 to seven days.

The Four Axes Project also includes proposals for action to be taken by the governments to ensure that the railways are provided with support in those fields that they cannot influence.

The "joint final declaration" signed at the first meeting of the "Ministerial Working Group on the Four Axes Project" in Berlin on 18 December 2003 comprises targeted progress, especially in the following fields:

- Simplification of border controls and customs clearance as well as freight legislation on Corridor II.
- Acceleration of licensing procedures, e.g. automatic gauge change technology and multi-current locomotives.
- Coordination of infrastructure work.

5.2.4 Infrastructure Development per Country and Mode of Transport

The tables below represent in short the investment carried out or being planned on the various national sections of Corridor II for the different modes of transport. Additional information which was considered useful has been added. Even though the MoU does not make reference to aviation, information on the status and development of the airports has been given. Unless otherwise stated, the information has been provided by the secretariat and the chair of Corridor III.

Part of Corridor II	Country	Location	Project Description	Length (km)	Start	End	Status	Costs (M EUR)	EU-Source
Road									
Main Axis	Germany	Spreeau junction - Frankfurt/Oder - German/Polish border	Upgrading of Motorway A12	58,2	1994	2010		69	
Main Axis	Poland	Świecko - Nowy Tomyśl	Construction of Motorway	105,0	2005	2009			
Main Axis	Poland	Nowy Tomyśl - Poznań	Construction of Motorway	50,5	2002	2004	completed	260	
Main Axis	Poland	Komorniki - Krzesiny	Construction of Poznań bypass	13,3		2003	completed	174	45m EUR from Phare ZZ 9722 (25,8%)
Main Axis	Poland	Poznań - Września	Construction of Motorway	37,5	2002	2004	completed	260	
Main Axis	Poland	Września - Konin	Construction of a Toll Motorway	49,2		2002	completed		
Main Axis	Poland	Konin - Stryków	Construction of Motorway	107,0	2004	2007			
Main Axis	Poland	Stryków - Warszawa	Construction of Motorway	100,0	2005	2008			
Main Axis	Poland	Warszawa bypass and Warszawa - Siedlce	Construction of Motorway	120,0	2005	2010			
Main Axis	Poland	Siedlce - Kukuryki - BY border	Construction of Motorway		2010	2015			
Main Axis	Poland	Sochaczew - Grojec	Strengthening the road surface	62,0	2002	2004	completed	25	18.6m EUR from ISPA (74,4%)
Main Axis	Poland	Zakret - Minsk Mazowiecki	Construction of a second lane	37,0	2003	2006		85	60m EUR from EU fund (70,6%)
Main Axis	Poland	Grojec - Minsk Mazowiecki	Strengthening the road surface	67,0	2003	2006		27	
Main Axis	Poland	Minsk Mazowiecki - Terespol	Strengthening the road surface	140,0	2003	2006		50	35.7m EUR from EU fund (71,4%)
Main Axis	Belarus	Brest - Bobr	Construction of Motorway	450,0					EBRD
Main Axis	Russia	BY/RUS border - Moscow	Road construction 3 lanes	500,0					Worldbank
	Russia	Moscow - Nizhniy Novgorod	Road construction 3 lanes	360,0					

Part of Corridor II	Country	Location	Project Description	Length (km)	Start	End	Status	Costs (M EUR)	EU-Source
Railway									
Main Axis	Germany	Berlin - Frankfurt/Oder - German-Polish border	Upgrading of railway line	84,0	1997	2006		539	103m EUR from ERDF
Main Axis	Poland	Kunovice - Rzepin	Upgrading of railway line	25,0		2005		30	18m EUR from ISPA (60%)
Main Axis	Poland	E-20 rail interchange of Poznań	Upgrading of railway line		2002	2006		200	
Main Axis	Poland	Warszawa - Mińsk Mazowiecki	Upgrading of railway line	38,0		2002	completed		
Main Axis	Poland	Mińsk Mazowiecki - Siedlce	Upgrading of railway line	52,0	2002	2005	completed	112	84m EUR from ISPA (75%)
Main Axis	Poland	Siedlce - Terespol	Upgrading of railway line	121,0	2005	2008		288	135m EUR from the EU (46,9%)
Main Axis	Poland	Lowicz - Skierniewice - Luków	Modernisation of bypass for freight traffic	182,0	2010				
Main Axis	Poland	Malaszewicze - Terespol	Modernisation of Border Crossing			2002	completed		
Main Axis	Russia	BY/RUS border - Moscow	Rehabilitation	500,0					EBRD

Germany

Road

The length of the road link from the centre of Berlin to the German-Polish border at Frankfurt/Oder is around 100 km. The first 18 km consist of urban roads, most of which are multi-lane. From the southern outskirts of the city, the next 24 km of the link have been widened to six lanes and the works were completed in 2002.

The A12 motorway which starts at Spreeau junction marks the start of Pan-European Corridor II. All sections have been upgraded with new pavement. This rehabilitation including the complete reconstruction in some sections of the A12 motorway was finished in 1999. The complete reconstruction will be continued until 2010/2012. The widening of the A12 motorway to 6 lanes has been included in the Federal Transport Infrastructure Plan 2003 as a “project of second priority”.

The annual average daily traffic (AADT) for 2000 was 26,000 vehicles/24h (with heavy goods vehicles accounting for one fifth). The secretariat expects the AADT to rise to 35,000-53,000 by the year 2015.

Railway

Upgrading works to enable a speed of 160 km/h on the German section from Berlin to Frankfurt/Oder (85 km) have started in 1997. The project is contained in the First Act Amending the Federal Railway Infrastructure Upgrading Act of 15 September 2004 as ongoing and definitely planned project. An agreement on line improvement concluded with Poland was signed in April 2003. The line sections Pillgram-Fürstenwalde (26 km) and Erkner-Hangelsberg (13 km) and the electronic signal box Fürstenwalde are completed. On the line section Pillgram-Frankfurt/Oder construction is currently under way and completion is planned until 2006. A section of 55 km in total will be completed then. The total costs for upgrading the German section amount to 539m EUR, the EU supports the project with 103m EUR from the European Fund for Regional Development (EFRD).

Airports

The project of the Berlin-Brandenburg International Airport (BBI) is now in progress; meanwhile, flights on Corridor II are operated from Berlin-Tegel and Berlin-Schoenefeld.

Poland

Road

The road section from the German-Polish border (Świecko) through Warsaw to the Polish-Belarusian border (Terespol) has a length of 687 km.

The motorway A2 is being built mostly by concession agreements.

The construction of the section from Świecko to Nowy Tomyśl (length 105 km) will be constructed from 2005 to 2009.

The section from Nowy Tomyśl to Poznań (length 50,5 km) was completed in 2004 for 260m EUR and is in operation on concessionary basis.

The section of Poznań bypass (Komorniki - Krzesiny, length 13,3 km) is in operation since 2003. It was co-financed by PHARE with 45m EUR, the total cost of construction amounted to 174m EUR.

The section from Poznań to Września (length 37,5 km) was completed in 2004. The total costs for construction were 260m EUR.

The section from Września to Konin with a length of 49,2 km has been in operation as a toll motorway since 2002.

The section from Konin to Stryków (107 km) is undergoing a tender procedure, construction will be completed by 2007.

The section Stryków - Warsaw (100 km) will be completed by 2008.

The time horizon of construction of the Warsaw bypass and the section Warsaw - Siedlce (120 km) is 2010.

The section Siedlce - Kukuryki to the Belarusian border will be constructed from 2010 until 2015.

The A2 project is financed mainly by private investment. The underlying concept was that of a minimal involvement of the state budget which was confined to the government guarantee for the loan granted by the European Investment Bank and the purchase of the site, a common procedure in infrastructure projects of that kind.

During their concession period Autostrada Wielkopolska S.A. will pay for the operation and maintenance of the motorway.The benefits for the State Treasury from the A2 project include the following:

- the State Treasury remains at all times the owner of the land and throughout the concession period bears no costs for operation and maintenance of the motorway,
- throughout the concession period the State Treasury will receive significant revenues in form of rent for the land leased by the concessionaire for building the motorway,
- the State Treasury will receive significant revenues from taxes,
- the State Treasury will receive revenues under the profit sharing scheme,
- the grounds adjacent to the motorway will become more attractive. This will be a big incentive to prospective investors and will enhance economic development in the regions neighboring the motorway,
- the cost of transportation of people and goods will be reduced,
- the A2 Motorway will provide a convenient transportation link in the strategic road network of Poland.

The project funds include, among others, equity provided by the shareholders of Autostrada Wielkopolska S.A. amounting to 238m EUR, the long term loan from the European Investment Bank of 275m EUR and the long term commercial loans from Credit Lyonnais SA and Commerzbank AG totalling 235m EUR. It is noteworthy that the

commercial banks' loans belong to the so called Senior Loan ranking ahead of any other sources of finance in terms of repayment. The financing is based on the financial model prepared by reputable financial advisers, accepted by AWSA and approved by the financial institutions and the government.

Railway

In the majority of the section of the E 20 rail line from the German-Polish border (Kunowice) to Siedlce, with a length of 563 km, the works for upgrading the line to allow a speed of 160 km/h have been finished in March 2005. The following measures for improving the railway Corridor II are under consideration:

Modernisation of the section from Kunowice to Rzepin with a length of 25 km is under way for the total cost of 30m EUR (incl. ISPA fund - 18m EUR).

Modernisation of E20 rail interchange at Poznań will be completed by 2006 for the total cost of 200m EUR (incl. expected EU fund - 143m EUR).

Between Warsaw and Mińsk Mazowiecki (38 km) modernisation works have been completed in 2002.

East of Warsaw the modernisation of the section from Mińsk Mazowiecki to Siedlce (length: 52 km), which started in 2002, was completed in March 2005 for the total cost of 112m EUR (incl. ISPA - 84m EUR).

The section from Siedlce to Terespol (121 km) is planned to be modernised from 2005 until 2008 for the total cost of 288m EUR (incl. expected EU fund - 135m EUR).

A modernisation of the bypass for freight traffic south of Warsaw (Łowicz - Skierniewice – Łuków, 182 km) is in the planning stage. The construction works will not begin before 2010.

Airports

Warsaw airport is running a project to double its 2002 capacity until 2010. Thus, the airport is aiming at becoming a European air hub.

Belarus

Road

One of the important constituents of the national transport policy of the Republic of Belarus is the integration of major national roads into the European transport system and into the the network of the CIS' international roads. Attention has been paid to maintenance and development of the sections of international transport corridors crossing the territory of the Republic and bearing annual traffic exceeding 50 % of the total transit flow.

Regarding its geographic position, Belarus is at the crossroads of major routes connecting the states and peoples of Western Europe to Russia and other CIS countries, as well as the Black Sea coast to the Baltic Region. One of such routes is Corridor II, including the Belarusian section M1/E30. The road link in Belarus is 604 km long and extends from the Belarusian-Polish border (Brest) through Minsk to the Belarusian-Russian border (Krasnoye). The M1/E30 has four lanes and 158 bridges. Recognising the importance of this section, the European Commission, guided by the European Road Network Development Program and supporting the proposal of the Belarusian government, initiated the feasibility studies for the M1/E30 improvement project in 1992. The scope of the project prepared under the TACIS program included the rehabilitation of the pavement, technical and operational characteristics and arrangements like

- substantiation of the need for motorway rehabilitation and upgrading to international standards,
- consideration of optimum technical decisions and arrangements and their financial assessment,
- institutional re-arrangement of the road maintenance management system with regard to international experience,
- implementation of a toll system (since 1996 the M1/E30 has been a toll highway),
- improvement of the border crossing infrastructure.

All of this has been implemented from 1994 to 1998. A total of 234 km of the motorway from Minsk to Ivatsevichi have been improved for about 100m EUR, with 60 % coming from the state budget and 40 % from an EBRD loan. At the same time rehabilitation of the Borisov-Orsha section of 123.8 km total length has been completed at the expense of the state budget. Implementation of improvement measures allowed setting a 100 km/h speed limit on the entire length of the motorway and even 120 km/h on some sections. Nine service areas were constructed and put into operation on the M1/E30 motorway including 23 fuel stations, four vehicle service stations, 21 guarded parking lots and 36 restaurants. Further 25 facilities are in the stage of construction now, including three areas providing complete set of motorist services. Taking into account the portfolio of 23 approved projects, it can be considered that the formation of the motorist services structure should be fully completed in the near future. A range of objectives requiring implementation in the near future include the following:

- completion of construction of the new bridge across the Zapadny Bug river at Kozlovichi-Kukuryki border crossing under the agreement between the governments of Belarus and Poland.

- improvement of the motorway on sections from Ivatsevichi to Brest and from Tolochin to the Russian border.

- Increase of traffic safety by means of installation of guard rails, intelligent and variable message signs, elimination of at-grade crossings.

The implementation of these objectives shall require considerable funds and material resources.

The government of Belarus invested more than 295m EUR during the period of 1994 to 2003 and about 33m EUR in 2004[1].

Railway

The railway section Brest-Minsk-Osinovka has a length of 603km. It is planned to upgrade this section for speeds of up to 160km/h for passenger trains.

The following works had been planned for 2004:

- Reconstruction of stations, open line tracks, infrastructure, SCB and catenary line devices

- Calculation of future volumes of freight and passenger traffic, number of freight and passenger trains.

After the civil engineering works are finished the start of the implementation of primary measures on the section Krasnoye-Minsk-Brest will be defined. Upgrading of the Belarusian section of rail Corridor II is not expected to be finished before 2005.

Airports

The international airport of Minsk is not being operated at full capacity. The national airline “Belavia” operates three flights per week to/from Berlin and to/from Frankfurt and three daily flights to/from Moscow (Domodedovo or Sheremetyevo). In addition, one flight daily to/from Warsaw is operated. German and Polish airlines serve Minsk airport on a daily basis.

[1] Exchange rate of EUR/USD: 1,22 (18 September 2005)

Russia

Road

The road link in Russia is 860 km long and extends from the Belarusian/Russian border (Krasnoye) through Moscow to Nizhny Novgorod. The number of lanes varies from 2-6.

The roads in the Russian Federation require permanent rehabilitation of surfaces. New priorities for road construction and road rehabilitation within the agreed “Road Infrastructure Investment Programme of the RF until 2015” have been given to Corridor II.

The widening of the section Vladimir-Nizhny Novgorod to four lanes will be completed in 2005. In 2004 only 30 km have been widened so far.

The number of filling stations: 79 (1998)

The number of hotels/motels: 21 (1998).

Railway

The railway line from the Belarusian-Russian border to Moscow (489 km) is electrified high-capacity double-track and allows a maximum speed of 120 km/h for passenger trains and 80 km/h for freight trains. The project of railway modernisation will provide for a maximum speed of 160 km/h and an average of 110 km/h. The railway line from Moscow to Nizhny Novgorod (439 km) is electrified and double-track and allows a maximum speed of 140 km/h for passenger trains and 80 km/h for freight trains. A feasibility study has been undertaken with regard to the opening of the Moscow-Nizhny Novgorod route for high-speed passenger traffic with a maximum speed of 160 km/h.

Airports

Operation of Moscow Sheremetyevo (SVO) has been transferred for three years from the Russian Federation to a Financial Consortium that intends to improve and modernise the airport for international operations.

Moscow Vnukovo airport is financially supported by the City of Moscow and under rehabilitation and reconstruction. It will continue to serve as the government airport separated from the commercially used area and as a charter and national airport. There are only road links to the city and to other Moscow airports.

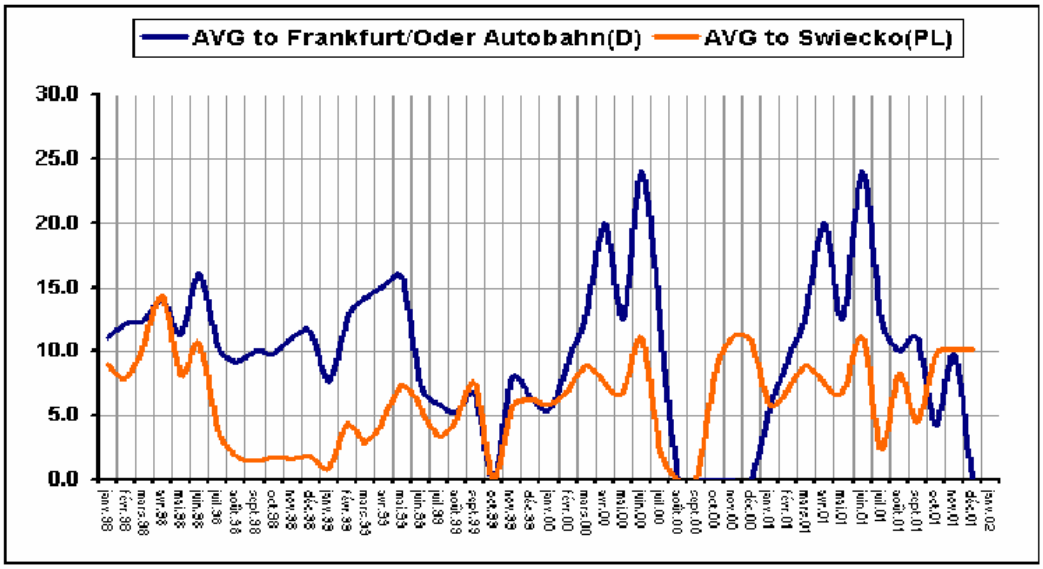
Moscow Bykovo airport connects Moscow to Nizhny Novgorod. Only road transport links the airport with the city.

Moscow Domodedovo airport is privately owned and operated and is developing rapidly with regard to passenger transport and cargo. Its modern facilities have been attracting additional operators and with its connections to CIS member states and the eastern Russian Federation it has developed into a hub with short transit times for passengers and cargo.

Border Crossings

The border crossing between Poland and Belarus with waiting times from 12 up to 48 hours is hampered by technical (physical) and administrative (non-physical) barriers in its smooth function. Both issues are being addressed. So far there are single controls (one stop border) with insufficient waiting areas on both sides and with no sanitary or other facilities for passengers. Lorries are double controlled (two stop borders) and parking areas are considered insufficient on the Polish side. There is no fast lane procedure (green channel) for empty vehicles and trucks under TIR carnet in transit. A transit visum for Belarus is not available at the border crossing, insurances for third party liability (vehicle) and health (person) are necessary.

The Polish-Belarusian rail border crossing Małaszewicze – Brest was modernised in 2002.



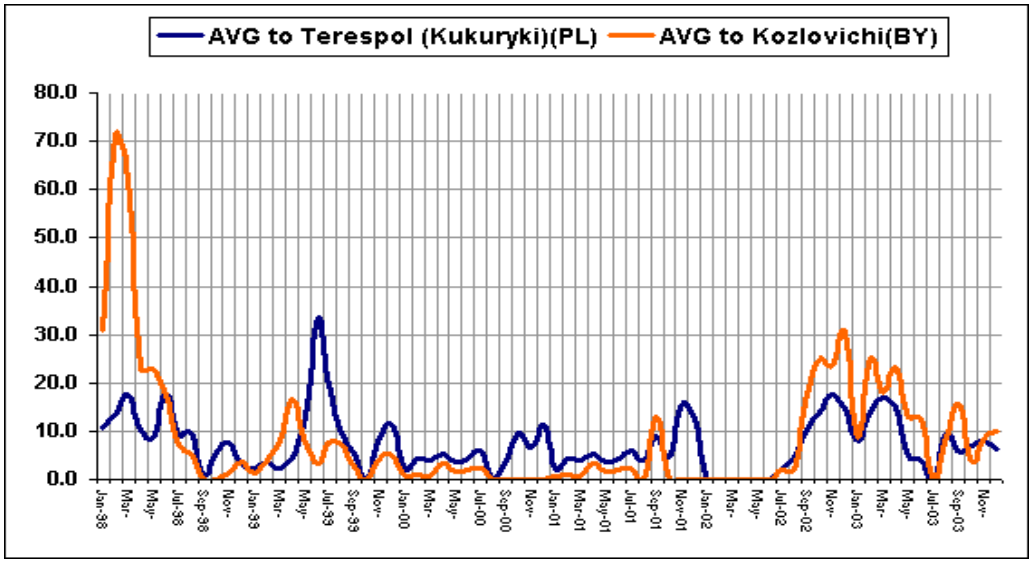
Waiting times at the Swiecko (PL) – Frankfurt/Oder border crossing point: historical graph, 1998-2001. Source: http://www.iru.org/Services/WaitWel.E.html

The only source of financing was the state budget. Passenger rail cars have to change bogies due to different gauges. Border controls take place during the waiting time. For freight trains the complete change of documentation (waybill and customs documentation) is time consuming and can take up to three days (possibilities for simplifications are presently being negotiated).

Reloading, to match rolling stock for gauge, is necessary for cargo trains. The hassle with varying gauges could partly be solved by the new automatic gauge change feature from Poland and the procurement of appropriate rail cars for the fleet. Thus, waiting times for freight trains at the border crossing could be cut down to one hour which is needed for the administrative dispatch. The automatic gauge change system has been installed; however, there are very few changing boogies for the rolling stock.

The cooperation of the Polish and Belarusian authorities will eliminate a lot of the administrative problems and barriers at the border crossing, leading to a smooth control procedure.

The continued construction of border facilities in Koslovichi 2 and the second bridge across the Bug River will facilitate control procedures.



Waiting times at the Kukuryki (PL) – Kozlovichi (BY) border crossing point: historical graph, 1998-2003. Source: http://www.iru.org/Services/WaitWel.E.html

Long waiting times have been reported from the Belarusian-Russian border crossing.

5.3 Corridor III

5.3.1 Map, Alignment and Technical Features

The Pan-European Transport Corridor III is a multimodal east-west transport link running from Berlin and Dresden via Wroclaw, Katowice, Krakow and L'viv to Kiev; thus linking important industrial areas in Germany, Poland and the Ukraine.

Countries	Germany, Poland, Ukraine
Transport modes	Road, rail
Infrastructure figures:	
Roads	1700 km
Railways	1650 km
Inland waterways	n.a.
Number of airports	4
Number of seaport and inner harbours	9
Number of border crossings	6
Alignment	**Berlin and Dresden - Wroclaw - Katowice - Krakow -**

	L'viv – Kiev
Road	*Dresden – Zgorzelec – Legnica – Wroclaw – Opole – Gliwice – Katowice – Krakow – Tarnow – Rzeszow – Medyka/Sheghini – L'viv – Pidlisky - Brody - Radyvyliv - Dubno - Rivne - Gostshcha - Korec – Zhytomyr – Kiev* **Branch from Berlin** *Berlin – Cottbus - Forst/Olszyna – Legnica*
Railway	*Dresden – Görlitz/Zgorzelec – Legnica – Wroclaw – Opole – Katowice – Krakow – Tarnow – Rzeszow – Medyka/Mostiska – L'viv – Ternopol – Grecany – Vinnitsa – Kiev* **Branch from Berlin** *Berlin – Hoyerswerda – Knappenrode – Horka – Wegliniec*

5.3.2 Overview of the General Development

On 3 October 1996 the Ministers of Transport signed the Memorandum of Understanding (MoU) for the development of Corridor III. The first steering committee meeting took place on 2 December 1996 in Brussels.

The second steering committee meeting was held on 9 September 1999 in L'viv.

The third steering committee meeting was held on 8/9 April 2002 in Wroclaw.

Germany has established a permanent secretariat (financed by the Federal Ministry of Transport, Building and Housing and the Free State of Saxony).

The fourth meeting of the steering committee took place in Dresden on 27/28 March 2003. One of the decisions was that a seminar should be organised with customs officials and border police representatives of the Ukraine, Poland and Germany to try to lay down clearance procedures for the external border of the European Union in mutual cooperation. Thanks to the support of the Ukrainian Ministry of Transport, this seminar actually took place from 18-20 November 2003 in L'viv. The seminar provided the participants with detailed information on the crossing of the Polish-Ukrainian border. The road border crossing at Krakovets and the railway border stations at Medyka and Mostyska 2 were visited. The secretariat drew conclusions and made recommendations on how border controls should be carried out, these have been adopted by the fifth steering committee meeting that took place on 23/24 June 2004 in Kiev.

The sixth meeting was held on 29/30 September 2005 in Pokrzywna Poland.

The secretariat has collected data on the state of roads and railways along the Pan-European Transport Corridor III and has established a road and rail cadastre.

5.3.3 Developments along the Corridor between 1994 and 2010

Within the framework of a defined route with an institutionalized body the Corridor III countries commonly worked for measures to enhance transportation resulting for example in

- total investment in 2003: 140.6m EUR
- the gauge changing system SUW 2000 installed at the Polish-Ukrainian border crossing
- concession agreements for the western Ukrainian road corridor
- the A4 motorway in Poland being developed as a toll road
- the road corridor in Germany being completed in 2006

Besides, the countries are reducing administrative regulations and obstacles hampering the flow of traffic by adopting recommendations for border crossing procedures.

5.3.4 Infrastructure Development per Country and Mode of Transport

The tables below represent in short the investment carried out or being planned on the various national sections of Corridor III for the different modes of transport. Additional information which was considered useful has been added. Unless otherwise stated, the information has been provided by the secretariat of Corridor III.

Part of Corridor III	Country	Location	Project Description	Length (km)	Start	End	Status	Costs (M EUR)	EU-Source
Road									
Northern Branch	Germany	Schönefeld Interchange - Spreewald junction	Upgrading of Motorway A13	59,1		2005	ongoing		EU TEN subsidy of 9m EUR
Northern Branch	Germany	Spreewald junction - German/Polish border (Forst/Olszyna)	Upgrading of Motorway A15	64,1		2004	completed	3.145	
Main Axis	Poland	Olszyna - Golnice	Construction and Upgrading of Motorway A18	70,8	2004	2005		122	ISPA
Main Axis	Poland	Zgorzelec - Krzyzowa	Construction of Motorway A4	50,1	2005	2006		242	Financing not yet secured
Main Axis	Poland	Krzyzowa - Wroclaw	Upgrading of Motorway A4	91,1	2002	2005		230	ISPA
Main Axis	Poland	Nogowczyce - Kleszczow	Construction of Motorway A4	18,1	2000	2003	completed	86	PHARE
Main Axis	Poland	Kleszczow - Sosnica	Construction of Motorway A4	19,1	2003	2004	completed	83	ISPA
Main Axis	Poland	Sosnica - Batorego	Construction of Motorway A4	15,7	1999	2004	completed	221	
Main Axis	Poland	Wicliczka - Tarnow	Construction of Motorway A4	78,8	2005	2007		426	ISPA
Main Axis	Poland	Tarnow - Rzeszow	Construction of Motorway A4	73,5	2007	2009		366	Financing not yet secured
Main Axis	Poland	Rzeszow - Jaroslaw	Construction of Motorway A4	47,7	2007	2011		245	Financing not yet secured
Main Axis	Poland	Jaroslaw - Korczowa	Construction of Motorway A4	47,9	2011	2013		235	Financing not yet secured
Main Axis	Ukraine	Krakovetz - L'viv	Construction of Motorway	84,4	2003	2009		252	Concession
Main Axis	Ukraine	L'viv - Brody	Construction of Motorway	78,8	2005	2009		136	Concession

Part of Corridor III	Country	Location	Project Description	Length (km)	Start	End	Status	Costs (M EUR)	EU-Source
Railway									
Northern Branch	Germany	Hoyerswerda - Knappenrode (used by freight trains)	Upgrading of railway line	8,0				53,1	Financing not yet secured TEN MIP (10 %)
Northern Branch	Germany	Knappenrode - German/Polish border (used by freight trains)	Upgrading of railway line	53,0	2013	2016		315	Financing not yet secured TEN MIP (10 %)
Southern Branch	Germany	Dresden - Görlitz (used by passenger trains)	Upgrading of railway line	102,0	2003	2005	planning and design	3	Financing not yet secured
Main Axis	Poland	Wegliniec - Zgorzelec (used by passenger trains)	Upgrading of railway line	39,8	2003	2006		90,5	90.5m EUR total cost; 83.5m EUR eligible; 75 % from ISPA (62.6m EUR)
Main Axis	Poland	Wegliniec - Bielawa Dolna (used by freight trains)							
Main Axis	Poland	Legnica - Wegliniec	Upgrading of railway line	71		2006		160,40	160.4m EUR total cost; 123.8m EUR eligible; 75 % from ISPA (92.8m EUR)
Main Axis	Poland	Legnica - Wroclaw - Opole	Upgrading of railway line, reparing flood damages	127,8	2003	2006		355,50	Financing not yet secured: 38m EUR from PHARE (10,7 %) 161.4m EUR from EIB (45,4 %)
Main Axis	Poland	Opole - Katowice - Kraków	Upgrading of railway line	345,9	2006	2013		>691	Financing not yet secured

Germany

Rail

The originally defined route of the northern branch (Berlin – Cottbus – D/PL border) was not in line with the strategic ideas of Deutsche Bahn AG or those of PKP S.A. The two railway companies have thus agreed to route passenger services via Frankfurt/Oder – Poznan and freight services via Horka – Wegliniec.

Deutsche Bahn AG and PKP S.A. have agreed to upgrade the Dresden/Berlin – Wroclaw rail corridor to international standards. On 12 October 2001 the chairmen of the boards of the two railways signed the “Memorandum on the Modernization of the Dresden – Berlin – Wroclaw rail corridor”. At the same time, the decision was taken to link the electric networks of the two railways by electrifying the section of the line from Knappenrode via Horka and the German/Polish border to Wegliniec, especially for freight transport. Preparations for the electrification work are under way, and the aim is to commence electric operations in 2006 or earlier if possible. Financing of planning and investment are not yet secured. The financial contributions are about 283.5m EUR from national budget and 31.5m EUR from TEN MIP.

The German southern branch section of Corridor III from Dresden to the German-Polish border (Görlitz) has a length of 102 km and is a double-track non-electrified line with a maximum speed of 120 km/h. In the Upgrading of Federal Railway Infrastructure Act, which passed the German Bundestag on 30 June 1993, the Dresden - Görlitz - D/PL border line is identified as a “transnational project”. An agreement between Germany and Poland has been signed on 30 April 2003 and includes upgrading to speeds of 120-160 km/h as well as electrification in the long run. Feasibility and geological studies for the electrification of the German section started in 2003 and will be completed in 2006; the costs for these measures amount to 3m EUR.

Road

The northern branch of the road corridor runs from Berlin via Cottbus to the German/Polish border (Forst) and has a length of 127 km. The first section (A13) starts at Schönefeld motorway interchange and stretches to the Spreeau motorway junction (62.5 km). Since 1994, widening to four lanes with 29.5m cross-section and resurfacing of the carriageways have been promoted and works will be completed in 2005. The costs of the remaining works amount to 20.2m EUR. Funding is being supported by the EU, which has granted a TEN subsidy of 9m EUR.

In 2000 approximately 40,000 vehicles per 24 hours used this road section with heavy goods vehicles accounting for 15 %. The traffic census of 2002 showed that 18,400 vehicles per 24 hours used the A15-section at Boblitz and 6,500 at Forst and for 2010 higher figures are forecasted (25,000-35,000 vehicles/24h).

The southern branch of Corridor III stretches from Dresden via Bautzen to the German/Polish border (Görlitz) and has a length of 94 km. With the opening of the Königshainer Berge Tunnel on 11 March 1999 the four-lane motorway with hard shoulders was completed and opened for traffic.

In 2002 some 25,000 vehicles/24 h had been counted on this section including 4,000 trucks.

Poland

Rail

The railway line E30 in Poland is 832 km long. It is covered by AGC and AGTC agreements. The line crosses the German border in Zgorzelec (passenger traffic) and in Bielawa (freight traffic). It runs via Węgliniec to Wrocław where passenger traffic runs on the left bank of the Oder River through Opole, Kedzierzyn Koźle, Gliwice and Katowice to Mysłowice. There it joins freight traffic running from Wrocław Brochów through Jelcz Miloszyce, Opole (right bank of the Oder River), Gliwice and Katowice Muchowiec. The course of the line from Mysłowice is as follows: Jaworzno Szczakowa – Krakow – Tarnów – Rzeszów – Przeworsk – Przemyśl – Medyka to the state border with the Ukraine. There are two lines with track gauges of 1435 and 1520 mm on the section Przemyśl / Medyka – state border – Mostiska II.

In general, the objective of the modernization of the E30/CE30 is to adjust it to the requirements specified in above mentioned agreements, i.e. maximum speed of 160 km/h for passenger trains and 120 km/h for freight trains, add admissible axle load – 225 kN.

For the gauge change at the Polish/Ukrainian border, PKP S.A. and UZ are talking about introducing the Polish system SUW 2000 for automatic wheel-set changing gauge.

E30 is a double track line. It is electrified with 3 kV DC on the route Węgliniec -Medyka. Other sections of the line, i.e. Węgliniec – Zgorzelec (Görlitz) and Węgliniec – Bielawa Dolna (Horka) are not electrified. The track speed varies between 120 km/h and 60 km/h. The line in its actual technical condition does neither meet the requirements of AGC and AGTC Agreements nor does it fulfil the target standards.

The sector operating programme “Transport and Maritime Economy” being an integral part of the Polish National Development Plan anticipates a gradual modernisation of roads and railroads on the Pan-European Transport Corridor III by 2006. As a consequence, projects will until then be financed basically from ISPA, Cohesion Funds and loans provided by International Financial Institutions as well as the State Budget. The investment programme concerning infrastructure modernization of the Polish part of the rail corridor III is the following:

The section from Krakow to Medyka is predicted to be modernized after 2010.

In 2002, track and drainage works were done; engineering objects and parts of the catenary system were modernized. The railway border crossings Wgliniec-Horka and Zgorzelec-Görlitz have been modernised for the total costs of 14m EUR including 10m EUR from PHARE CBC programme in 2004.

The Ukraine

The government of the Ukraine set up a programme in 1998 for the development of the Pan-European Transport Corridors. It provides, inter alia, for infrastructure investment projects and improvements of the border crossing system. The realization of the programme is based on annual plans.

Rail

The rail corridor in the Ukraine (Mostyska II – L'viv – Krasne – Kozyatyn – Kiev) is 690 km long. The line is electrified and has two tracks, 648 km of it are equipped with an automatic blocking system. Between 1999 and 2001 rails with a length of 863.7 km were repaired for 33 m $ (27m EUR). In general, the existing railway infrastructure of the Pan-European Transport Corridor III in the Ukraine meets European requirements or even exceeds them except for the trains' speed. The State Administration of Railway Transport of the Ukraine plans to launch diurnal passenger trains between Kiev and L'viv. The administration received a credit of 51.88 m $ (42m EUR) from the EBRD which was used to buy heavy equipment for maintenance.

Road

The motorways along Corridor III in the Ukraine (Krakovets - L'viv – Rivne – Zytomir – Kiev) are 617 km long. 308 km are "category 1b" roads with four lanes, and 304 km are "category 2" roads with two lanes. The present condition does not meet European standards on the entire length of the road. In 2002, 4.2 km of road have been constructed.

Since construction cannot be paid from the state budget alone, the Ukraine searches for potential investors and other financial sources.

Border Crossings

The bilateral agreement that is needed to upgrade the cross-border railway lines between Poland and Germany was signed by the transport ministers of both countries on 30 April 2003.

Cross-border traffic in 2003

Road	***Forst / Olszyna*** *PL-D*	***Ludwigsdorf / Jędrzychowice*** *PL-D*	***Korczowa / Krakovets*** *PL-UA*
Buses			
leaving Poland	12 803	33 137	3 417
coming to Poland	11 930	28 511	4 517
Lorries			
leaving Poland	238 520	470 017	20 060
coming to Poland	210 280	532 037	32 144
Private cars			
leaving Poland	668 086	4 344 344	203 294
coming to Poland	659 734	4 166 247	295 258
Total			
leaving Poland	919 409	4 847 498	226 771
coming to Poland	881 944	4 726 795	331 919

Rail	German/Polish border	Polish/Ukrainian border
Freight Trains	8 760	3 285
Passenger Trains	7 300	1 825
TOTAL	16 060	5 110

Waiting times

Passenger trains

D/PL:
25-minute stop in Görlitz and 20 minutes in Wegliniec

PL/UA:
the time needed for crossing the border (arrival Przemysl - departure Mostiska) is four (schedule) to five hours. Border crossing of the new train from Krakow to Kiev that uses SUW 2000 takes only 30 minutes.

Freight trains

PL/UA:
two-hour stop in Medyka; no information was available on the waiting times on the Ukrainian side.

UA/PL:
four-hour stop in Mostiska, 19-hour stop in Medyka (customs clearance takes 70 min).

Gauge change is necessary on the rail corridor at the Polish/Ukrainian border. An automatic gauge change system is installed but rolling stock with gauge-change bogies is still insufficient in number. Furthermore, there is a lack in technical harmonisations (e.g. different axle load) as well as in legal harmonization; there are different consignment notes and customs procedures.

Trucks

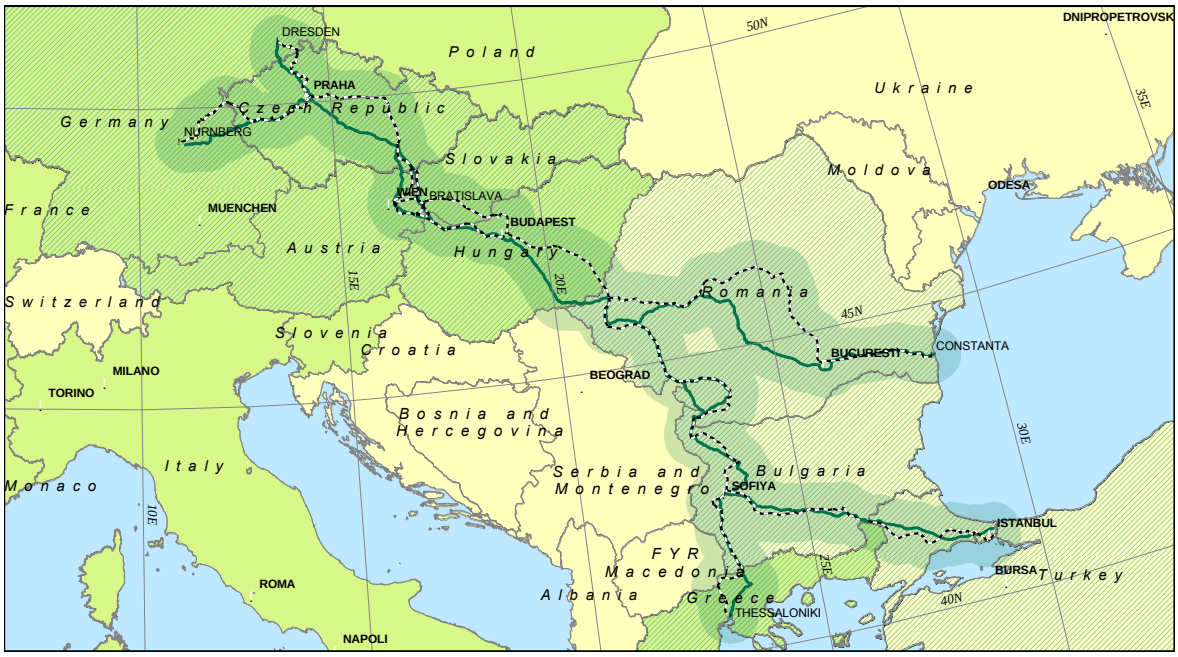
PL/UA (at Korczowa-Krakovets):

Border crossing takes 3-4 hours in both directions when leaving and 5 hours when entering either Poland or the Ukraine (minimum according to DHL; in certain circumstances the waiting time can be much longer).

National admittance regulations for vehicles make cross-border transport complicated.

5.4 Corridor IV

5.4.1 Map, Alignment and Technical Features



Countries	Germany, Czech Republic, Austria, Slovakia, Hungary, Romania, Bulgaria, Greece, Turkey
Transport modes	Railway, road
Infrastructure figures: Roads Railways Number of airports Number of seaports and inner harbours Number of border crossings	 **3.640 km** Germany – 159 km Czech Republic – 583 km Austria – 209 km Slovakia – 83 km Hungary – 398 km Romania – 1162 km Bulgaria – 714 km Greece – 104 km Turkey – 228 km **4.379 km** Germany – 214 km Czech Republic – 704 km Austria – 206 km Slovakia – 252 km Hungary – 480 km Romania – 1280 km Bulgaria – 794 km Greece – 144 km Turkey – 305 km 12 (without Germany) 10 14 (road), 13 (rail)
Alignment	***Dresden – Prague – Bratislava/Vienna – Budapest – Arad***
Road	*Dresden – Zinnwald/Cinovec – Prague – Brno –* *(**Subalignment A:** Brno – Lanzhot/Brodske – Bratislava – Cunovo/Rajka – Hegyeshalom – Győr)* *(**Subalignment B**: Brno – Mikulov/Drasenhofen – Vienna – Nickelsdorf/Hegyeshalom – Győr)* *(**Subalignment C**: Bratislava – Vienna)* *– Győr - Budapest – Kecskemet - Szeged – Nagylak/Nadlac – Timisoara*

Rail	*Dresden – Bad Schandau/Decin – Prague – Ceska Trebova – Brno – Breclav –* *(**Subalignment A**: Breclav/Kuty –Bratislava – Rajka/Hegyeshalom - Györ - Budapest)* *(**Subalignment B:** Breclav/Hohenau – Vienna – Nickelsdorf/Hegyeshalom – Györ – Budapest)* *(**Subalignment C**: Bratislava – Vienna)* *(**Subalignment D:** Breclav/Kuty –Bratislava – Sturovo/Szob – Budapest)* *– Budapest - Szolnok – Lökösháza/Curtici – Arad*
	Branch A from Nuremberg
Road	*Nuremberg – Waidhaus/Rozvadov – Plzen –Prague*
Rail	*Nuremberg – Schirnding/Cheb – Plzen – Prague*
	Branch B to Constanta
Road	*Timisoara – Sibiu – Pitesti – Bucarest – Constanta*
Rail	*Arad – Alba Iulia – Brasov – Ploiesti –Bucarest – Constanta*
	Branch C to Istanbul
Road	*Timisoara – Craiova – Calafat/Vidin – Sofija – Plovdiv – Svilengrad/Kap. Andreevo – Edirne – Istanbul*
Rail	*Arad – Timisoara – Craiova – Calafat/Vidin – Sofija – Plovdiv – Svilengrad/Kap. Andreevo – Edirne – Istanbul*
	Branch D to Thessaloniki
Road	*Sofija – Kulata/Promahonas – Thessaloniki*
Rail	*Sofija – Kulata/Promahonas – Thessaloniki*

5.4.2 Overview of the General Development

From its starting point in Germany, Corridor IV runs south-eastwards through Prague, and Győr in Hungary, to Budapest and then over the Romanian border to Arad. Here the corridor splits, with an eastern branch running to Constanța at the Black Sea, and a southern branch running towards Thessaloniki and Istanbul. Major parts of this corridor run through countries which are new EU members or candidates to join the EU. The corridor can thus be seen as the backbone of the Trans-European Transport Network (TEN-T) extended eastwards and southwards.

The corridor encompasses most of the TEN-T priority railway axis no. 22, running from Dresden to Athens. The following TEN-T railway priority sections have been established on Corridor IV:

- Nuremberg-Prague-Brno-Breclav
- Vienna-Budapest
- Curtici-Arad-Brasov
- Vidin-Sofia-Kulata

It also encompasses parts of TEN-T priority motorway axis no. 7 (Igoumenitsa/Patra-Athina-Sofia-Budapest).

Corridor IV was defined on the Pan-European Transport Conference on Crete in 1994.

The Memorandum of Understanding was signed by the Ministers of Transport of the respective countries and by the European Commission in May 1999 in Warsaw.

The task of the technical secretariat was assigned to DiaLog Gesellschaft für Service und Kommunikation mbH, Germany.

5.4.3 Infrastructure Development per Country and Mode of Transport

The following information is based on the report “Status of the Pan-European Transport Corridor IV – Developments and Activities in 2004 and future years”, released by TINA Vienna in March 2005.

The status and the developments along Corridor IV are described as follows. The individual projects are also summarized in the following table.

Part of Corridor IV	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (m EUR)	Source
Corridor IV Road Projects									
Main Axis	Germany	Dresden-Czech Border	Motorway A17 construction	44,8	1998	2006		512,0	ERDF (278m EUR), National budget (rest)
Branch A	Germany	Amberg/Ost-Pfreimd-Pleystein-Weidhaus	Motorway A6 completion	54,0	1995	2009		390,0	
Main Axis	Czech Rep.	Cinovec (German border)-Prague	Motorway D8 construction	93,0		2008			
Branch A	Czech Rep.	Plzen	Plzen bypass	3,5		2006			
Main Axis	Czech Rep.	Prague	Prague bypass	82,5				1260,0	
Main Axis	Austria	Drasenhofen-Vienna	Motorway A5 construction	60,0		2010		555,0	
Main Axis	Austria	Junction Bruckneudorf (A4) - Jarovce/Kittsee border	Motorway A6 construction	22,0	2004	2007		185,0	
Main Axis	Slovakia	Lamacska Cesta - Stare Grunty	Motorway D2 completion	3,0				32,0	National budget (14.2m EUR) and JBIC loans (17.8m EUR).
Main Axis	Hungary	Junction Motorway M1 - Slovakia border	Motorway M15 preparatory works	14,0	2004				
Main Axis	Hungary	Budapest ring road M0: southern section between M1 and M5	Budapest ring road M0 widening	29,0			in preparation		
Main Axis	Hungary	Kiskunfelegyhaza-Röszke	Motorway M5 extension	44,0			negotiation of concession contract		
Main Axis	Hungary	M5/Szeged junction-Nagylak/Romanian border	Motorway M43 preparatory works	58,0					
Branch B	Romania	Nadlac-Timisoara-Lugoj-Deva	Motorway construction	210,0	2003	2008			
Branch B	Romania	Deva-Sibiu	Motorway construction				Feasibility study		
Branch B	Romania	Brasov-Bucarest	Motorway construction			2002	Feasibility study		PPP financing
Branch B	Romania	Pitesti	Pitesti bypass		2004	2007			
Branch B	Romania	Bucarest	Bucarest motorway ring			2002	Feasibility study		
Branch B	Romania	Bucarest-Drajna-Fetesti	Motorway construction	134,0		2004			National Budget, EIB
Branch B	Romania	Drajna-Fetesti-Cernavoda	Motorway construction		2003	2006		71,7	
Branch C	Romania	Timisoara-Bulgarian border	Rehabilitation works	379,0	2003	2007			

Part of Corridor IV	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (m EUR)	Source
Corridor IV Road Projects									
Branch C	Bulgaria		Transit Roads I and II rehabilitation programmes	260,0					
Branch C	Bulgaria		Transit Roads III rehabilitation programme	150,0				30,0	ISPA
Branch C	Bulgaria	Dupnitza - Kulata	Rehabilitation of road 1-1 (E79)	87,0					
Branch C	Bulgaria	Sofija - Kulata	Ljulin motorway	15,0					ISPA
Branch C	Bulgaria	Sofija - Kulata	Struma motorway	85,0					ISPA
Branch C	Bulgaria		Mritza and Trakia motorway construction	28,0					IA Roads own funds
Branch D	Greece	Petritsiou - Promahonas	Construction of four-lane road	12,0			partially finished	50,0	
Branch D	Greece	Sidirokastro - Petritsiou	Construction of four-lane road	9,0			to be tendered	50,0	
Branch D	Greece	Lefkonas-Sidirokastro	Construction of four-lane road	11,0			constructed.		
Branch D	Greece	Riziana – Lefkonas	Construction of four-lane road	29,0			partially finished	85,0	
Branch D	Greece	Darveni-Riziana	Construction of four-lane road	35,0			under design	120,0	

Part of Corridor IV	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (m EUR)	Source
Corridor IV Railway Projects									
Main Axis	Germany	Dresden-Czech Border	Extension for higher speeds and tilting technology			2007		180,0	
Branch A	Germany	Nuremberg-Marktredwitz-Schirnding-Czech Border	Electrification and extension for higher speeds and tilting technology					290,0	
Main Axis	Czech Rep.	Railway Main Axis	Modernisation works		1994	2004		1200,0	National budget (440m EUR), credits guaranteed by the State (600m EUR), credits without state guarantee (60m EUR) and EU Sources (PHARE, ISPA) (100m EUR)
Main Axis	Czech Rep.	Decin	Modernisation of railway node Decin			2003		50,0	
Main Axis	Czech Rep.	Chocen	Modernisation of station Chocen			2005		33,0	
Main Axis	Czech Rep.	Prague	"New Link" Prague junction			2011		275,0	
Branch A	Czech Rep.	Railway Branch A	Modernisation works in 10 sections		2005	2014		1300,0	National budget (375m EUR), credits (375m EUR) and EU sources (545m EUR).
Main Axis	Austria	Hohenau-Vienna	Upgrade for higher speeds						
Main Axis	Austria	Vienna-Nickelsdorf	Upgrade for higher speeds			1998			
Main Axis	Austria	Parndorf - Kittsee - Bratislava-Petrzalka	Railway construction	21,0		1999			
Main Axis	Slovakia	Railway Main Axis	Smaller reconstruction works		2003	2004		2,7	ZSR (loans with state guarantee)
Main Axis	Hungary	Budapest-Hegyeshalom rail link	Reconstruction works						ISPA funds.
Main Axis	Hungary	Budapest-Szob rail link	Rehabilitation of railway; rebulding of stations, platforms and road-railway crossings						
Main Axis	Hungary	Szolnok-Lökösházа rail link	Reconstruction works				Under preparation		

Part of Corridor IV	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (m EUR)	Source
Corridor IV Railway Projects									
Branch B	Romania	Campina-Brasov	Modernisation		2003	2008	Not assured yet	400,0	
Branch B	Romania	Brasov-Sighisoara	Modernisation		2003	2008	Not assured yet	356,0	
Branch B	Romania	Sighisoara-Alba Iulia-Simeria	Modernisation		2003	2008	Not assured yet	507,5	
Branch C	Romania	Simeria-Arad-Curtici	Modernisation		2004	2008	Not assured yet	595,0	
Branch C	Romania	Craiova-Calafat	Doubling and upgrading		2004	2008	Not assured yet	465,0	
Branch C	Bulgaria	Plovdiv-Turkish border	Upgrade and electrification	142,0				340,0	National funds (37m EUR), ISPA grant (153m EUR) and EIB loan (150m EUR).
Branch C	Bulgaria	Dupnitza-Kulata	Upgrade	131,0					PHARE-CBC (Cross-border Cooperation) programme between Bulgaria and Greece
Branch D	Greece		Upgrade			2008		52,8	
Branch C	Turkey	Halkali-Ispartakule	Construction of second track	11,0					
Branch C	Turkey	Bosphorus-Halkali and Gebze	Bosphorus Rail Tube Tunnel and the Gebze Halkalz Surface Metro System	76,0	2004			1344,0	

Germany

Road

The German parts of Corridor IV are distinguished in sections of the Main Axis and sections of Branch A with a total length of 159 km.

The section of the Main Axis is Dresden - Zinnwald (German/Czech border), 45 km long. Today, the stretch is a two-lane road, but will be replaced by the new motorway A17 from Dresden to Prague.

The section of Branch A is Nuremberg-Waidhaus (German/Czech border), 114 km long. It consists of the motorway A6 which has been partly completed.

A motorway project of high importance is the Dresden-Prague link. The works on the German side are ongoing since 1998 and are foreseen to be finished by 2006. The project is partly financed by ERDF (278m EUR). The remaining costs are covered by the federal budget.

On Branch A of the Corridor the works for the Nuremberg-Prague link (motorway A6, 114 km) are ongoing. The Nuremberg-Amberg section (60 km) was completed in 1991. The remaining sections (Amberg-Waidhaus, 54 km) are constructed in several steps in the period 1995-2009 for 390 Million EUR. The completion dates are:

- Waidhaus bypass: 1997
- Pleystein-Waidhaus section: 1999
- Wernberg/Köblitz bypass and Kaltenbaum-Lohinar section: 2004
- Amberg/Ost - Pfreimd (20 km) (works started in 2004): 2009

Railway

The German rail Corridor IV runs from Dresden to Bad Schandau (German/Czech Border) on the Main Axis with a length of 62 km. This section is double-track and electrified and allows speeds of 120 km/h. The section from Nuremberg to Schirnding (German/Czech Border) on Branch A has a length of 152 km.

On the Main Axis, investment of 180m EUR for strengthening of the superstructure for the use of trains with tilting technology is foreseen. This investment is based on a "Trans-Country Project" agreement with the Czech Republic. This agreement foresees the expansion of the Dresden-border stretch for speeds of 160 km/h and the installation of equipment for tilting technology. The objective is to reduce the journey time between Berlin-Prague from 4.75 to 3 hours. The expansion is to be completed in 2007.

Regarding the Branch A link (Nuremberg-Marktredwitz-Schirnding-Czech Border), investment of 290m EUR for the electrification of the Nuremberg-Border stretch and the extension of the Marktredwitz-Border stretch for tilting technology is envisioned within a "Trans-Country Project". The objective is to reduce travel time from Nuremberg to Prague by 2 hours to 3h20min.

Czech Republic

Road

The Czech part of the corridor runs from the German border at Cinovec to Prague and Brno. It then splits at Brno towards Breslav/Lanzhot (Slovak border) and to Mikulov (Austrian border).

Branch A links the German Border at Rozwadow with Plzen and Prague.

The link between Cinovec and Prague (93 km) is being constructed as a motorway (D8), completing the motorway connection to Dresden. The link between Prague and Breclav (317 km) is a four-lane motorway (D1 and D2). The link between Rozwadow and Prague (173 km) is a motorway (D 5), completing the motorway connection to Nuremberg.

Total investment costs are 1.27 billion EUR, financed by the state fund for transport infrastructure (0.77 billion EUR) and state granted credits (EIB) (0.49 billion EUR).

The motorway D8 construction from Cinovec (German border) to Prague is envisioned to be completed by 2008. 53 km are in operation, 39.7 km are yet to be built.

The Plzen bypass (3.5 km) on Branch A will be put in operation in 2006.

The works for the Prague bypass are in progress. 16.5 km of the 82.5 km total length are in operation. Investment costs are 1.26 billion EUR.

Railway

The Czech railway corridor runs from the German border at Decin via Prague, Ceska Trebova and Brno to Breclav: It then splits to Kuty (Slovak border) and the Austrian border, respectively.

Branch A links the German border at Czeb with Plzen and Prague.

The modernisation works for the Main Axis were occurring in the period 1994-2004. The intention was to increase the maximum speed up to 160 km/h; to harmonise the loading gauge with UIC GC requirements; and to fulfil the D4-classification. 385 km were hereby modernised.

Investment costs were 1.2 billion EUR, financed by the state budget and state fund for transport infrastructure (440m EUR), credits guaranteed by the State (600m EUR), credits without state guarantee (60m EUR) and EU Sources (PHARE, ISPA) (100m EUR).

Besides the efforts to modernise the tracks, railway nodes and stations are modernised subsequently. The node Decin was completed in 2003 for 50m EUR. The station Chocen is planned to be completed by 2005 for 33m EUR. The “New Link” Prague junction is planned to be completed by 2011 for 275m EUR.

Modernisation works for railway Branch A, divided in 10 sections, were launched in 2005 and are envisioned to be completed by 2014. The objective is the upgrade of the line for 120 km/h speeds in line with AGC and AGTC parameters; the enabling of tilting technology; and the installation of signalling system with GSM-R and ETCS. Eventually, the travel time from Nuremberg to Prague shall be reduced to 3:20 hours.

Investment costs are 1.3m EUR, financed by the state fund for transport infrastructure (375m EUR), credits (375m EUR) and EU sources (545m EUR).

Complicated technical problems were identified at the Plzen node as well as at the Prague-Beroun passage.

Austria

Road

The road alignment of Corridor IV in Austria runs from the Czech border at Drasenhofen via Vienna to the Hungarian border at Nickelsdorf. There is a subalignment between Vienna, Kittsee and the Slovak border/Bratislava.

The section Drasenhofen-Vienna (71 km) is currently a two-lane state road. The section Vienna-Nickelsdorf is built as a motorway (A4, 70 km). The section Vienna-Bratislava (68 km) is being constructed as a motorway.

The section Drasenhofen-Vienna is planned to be upgraded as motorway (A5, 60 km). Completion is envisioned for 2010. Costs are estimated to 555m EUR.

Regarding the connection Vienna-Bratislava, constructions of a new motorway link (A6, 22 km) from the motorway A4 junction Bruckneudorf to the new Jarovce/Kittsee border crossing are ongoing since 2004. Completion is planned for 2007. Costs are estimated to 185m EUR.

Rail

The rail alignment in Austria runs from the Czech border at Hohenau via Vienna to the Hungarian Border at Nickelsdorf. There is a subalignment between Vienna, Marchegg and the Slovak border/Bratislava.

The section Hohenau-Vienna (88 km) is electrified, double-track and allows maximum speeds of 120 km/h. The section Vienna-Nickelsdorf (70 km) is electrified, double-track and allows maximum speeds of 140 km/h. The section Vienna-Bratislava (48 km) is not electrified and mostly single-track.

The link Hohenau-Vienna will be upgraded for speeds of 160 km/h.

The link Vienna-Nickelsdorf has been upgraded for speeds of up to 140 km/h in 1998.

Regarding the connection Vienna-Bratislava, a new 21 km link from Parndorf via Kittsee to Bratislava-Petrzalka was opened in 1999.

Slovakia

Road

The road alignment in Slovakia runs from the Czech border at Brodske via Bratislava to the Hungarian Border at Cunovo. Total length is 83 km. 80 km of this link are built as

Motorway D2 which secures the west – south connection in Slovakia as well as the connection with the Czech Republic, Austria and Hungary.

The missing section of Motorway D2 (Lamacska Cesta - Stare Grunty, 3 km) is under construction. Investment costs are 90m EUR, financed from the state budget (16.2m EUR) and JBIC loans (73.8m EUR).

Railway

The rail alignment in Slovakia runs from the Czech border at Kuty to Bratislava. It then splits towards the Hungarian Border at Rusovce and towards the Hungarian Border at Sturovo, respectively. Total length is 252 km. The section is electrified, double-track and allows maximum speeds of 120 km/h, only the section between Cunovo and the border is single-track.

Rail Corridor IV is in relatively good condition. A general modernisation is not being considered.

Smaller reconstruction works were undertaken in 2003 and 2004. Total investment costs were 2.7m EUR in 2003 and 1.25m EUR in 2004, financed by ZSR (loans with state guarantee).

Hungary

Road

The road alignment in Hungary runs from the Slovak/Austrian border via Hegyeshalom, Györ, Budapest, Kecskemet and Szeged to the Romanian border at Nagylak. Total length is 398 km. 296 km are built as motorways

The efforts to upgrade the entire section to motorway standards are ongoing:

Motorway M1 (between motorway M0 and the Austrian border) is in operation (156 km).

Motorway M15 (between motorway M1 and the Slovak border): preparatory works for development into a 2x2 motorway have been started in 2004 (14 km).

Budapest ring road M0: southern section between M1 and M5 in operation, widening to 2x3 lanes in preparation (29 km).

Motorway M5 (M0- Kiskunfelegyhaza junction) is in operation (97 km).

The motorway M5 extension (Kiskunfelegyhaza-Röszke) is under construction in concession. The negotiation of the concession contract for the section Szeged - border is under way (44 km).

Motorway M43 (from M5/Szeged junction to Nagylak/Romanian border): preparatory works (58 km).

Railway

The rail alignment in Hungary runs from the Slovak/Austrian Border via Hegyeshalom and Györ to Budapest (191 km). There is an alternative link from the Slovak border at Szob to Budapest (64 km). From Budapest, the corridor continues via Szolnok to the Romanian border at Lökösháza (225 km).

The reconstruction of the Budapest-Hegyeshalom rail link aims to preserve service standards; to replace rails and switches; to allow speeds of 140 km/h by reconstructing the Budörs-Biatorbagy section; to replace the superstructure at the Komaron-Acs section; to renovate the Komaron and Gyor stations; and to install new safety systems and an ETCS system in order to achieve interoperability. The project uses ISPA funds.

Within the rehabilitation of the Budapest-Szob rail link, the original construction parameters were restored and speed restrictions have been lifted.

Within the rehabilitation of the Budapest-Szolnok rail link, stations, platforms and 16 road-railway crossings have been rebuilt.

Under preparation is the reconstruction of the Szolnok-Lökösháza rail link. The aim is to lift speed restrictions.

Aviation

The aggregate capacity of terminals 2A and 2B of Budapest airport is 5.5 m passengers per year. The handling of transit passengers should be managed in a way different from the existing practice without changing levels. The terminal should meet the Schengen requirements and be capable to handle external and internal Schengen passengers separately.

The plans of Budapest Airport Rt. include the following development objectives:

- Terminal T1 renovation (ongoing);
- New cargo base (preparatory works);
- Multi-storey car park and multifunctional building (feasibility study);
- Office building (design by 2006); and
- New urban road network (to be built).

Port

At the National Public Port Györ-Gönyü (OKK), the landfill in the port area of 140 hectares was continued and the construction of the emban kment along a new shore section was prepared.

The first stage of the grain terminal was handled over in the port, financed by private funds. Preparations were also made for design and licence works for the implementation of the central KIOP programme to develop communication links for the Györ-Gönyü OKK intermodal centre.

The project Györ-Gönyü Combined Terminal planned for implementation from the Cohesian Fund is in the preparatory stage.

At the Csepeli Szabadkikötö (Freeport of Csepel) the renovation of the transit warehouse emban kments was carried out 2004. For the development of the road links to the port, the reconstruction of the main road along Csepel was launched.

Romania

Road

The road alignment in Romania runs from the Hungarian border at Nadlac via Arad and Timisoara to Lugoj. In Lugoj, the Main Axis splits into two braches. Branch B continues from Lugoj via Sibiu, Pitesti and Bucarest to Constanta. Branch C continues from Lugoj via Craiova to the Bulgarian border at Calafat.

A Nadlac-Timisoara-Lugoj-Deva motorway (210 km) is considered as a priority project to be developed until 2008. The works for the Timisoara bypass started in 2003 with JBIC Japanese financing and are planned to be completed by 2005.

A feasibility study is under way for the Deva-Sibiu motorway.

Regarding the Brasov-Bucarest motorway, a feasibility study was finished in 2002. A PPP financing model is considered.

Works for the Pitesti bypass are ongoing since 2004 and are planned to be finished by 2007.

Regarding the Bucarest motorway ring, a feasibility study was finished in 1997 (for the south ring) and 2002 (for the north ring).

On Branch B to Constanta several plans for motorway construction are considered.

Regarding a motorway on the section Bucarest-Drajna-Fetesti (134 km), a financing agreement by the Romanian government with EIB was concluded. Civil works for Bucarest-Drajna section were completed in 2004.

The construction of a motorway on the section Drajna-Fetesti-Cernavoda with a total budget of 71.71m EUR was approved by the EU/ISPA. The project period for works on the Drajna-Fetesti section is 2003-2006. The project period for works on the Fetesti-Cernavoda section is 2004-2005.

The section Cernavoda-Constanta (65 km), including a Constanta bypass, is planned to be extended to four lanes after 2004.

The Constanta-Agigea section (26 km) was rehabilitated with EBRD financing in 1996.

On Branch C, rehabilitation works on the section Timisoara-Bulgarian border (379 km) are ongoing. The project period is 2003 – 2007.

Works on Timisoara-Craiova section will be completed by 2006.

Works on Craiova-Calafat section will be completed by 2007.

A motorway construction will be taken into account after 2015.

Railway

The rail alignment in Romania runs from the Hungarian border at Curtici to Arad. In Arad, the Main Axis splits into two branches. Branch B continues from Arad via Alba Iulia, Brasov, Ploiesti and Bucarest to Constanta. Branch C continues from Arad via Timisoara and Craiova to the Bulgarian border at Calafat.

Branch B of the corridor (Arad-Constanta, 880 km) will be upgraded to AGC and AGTC standards for a design speed of 160 km/h for passenger trains and 120 km/h for freight trains. Construction works will be completed between 2008 and 2010.

A Memorandum between the governments of Romania and Japan was signed in 2001 for the financing of the rehabilitation of the sections Bucarest North – Bucarest Baneasa and Fetesti - Constanta (297.85m EUR).

For the section Bucarest Baneasa – Fetesti, an ISPA application form for the total costs of 231.73m EUR was approved by the ISAP Management Committee in 2000. Works have commenced in 2001.

Branch C of the corridor (Arad - Bulgarian border, 400 km) is planned to be upgraded for speeds of 160 km/h for passenger trains and 120 km/h for freight trains.

Bulgaria

The project of building a second Danube bridge between Bulgaria and Romania at Vidin-Calafat is the most important transport infrastructure project for Bulgaria. In 2000 an agreement between the Romanian und Bulgarian governments was signed. An expert group then agreed on the location of the bridge, and on technical, financial and organisational aspects.

Road

The road alignment of Branch C in Bulgaria runs from the Romanian border at Vidin via Sofija, Plovdiv and Svilengrad to the Turkish border at Kapitan Andreevo. In addition, Branch D runs from Sofija to the Greek Border at Kulata.

The section Romanian border-Sofija (235 km) is a two-lane road. The section Sofija-Turkish Border (278 km) is partially a freeway (A1). The section Sofija-Greek border (201 km) is a two-lane road.

260 km motorways and first-class roads were rehabilated under the Transit Roads I and II rehabilitation programmes. Another 150 km are rehabilitated under the Transit Roads III rehabilitation programme, with 30m EUR financing from ISPA.

The rehabilitation of road 1-1 (E79) between Dupnitza and Kulata (87 km) and the design of the Ljulin and Struma motorways between Sofija and Kulata in cooperation with Greece are in progress. The rehabilitation of another 95 km is envisioned under the same programme. ISPA financing has been applied for for the Ljulin motorway (15 km) and sections (85 km) of the Struma motorway.

Construction of 28 km of the Mritza and Trakia motorways financed by IA Roads funds is under way. The completion of the Maritza motorway is envisaged through concession under an agreement between the Bulgarian and Turkish governments.

Railway

The rail alignment of Branch C in Bulgaria runs from the Romanian border at Vidin via Sofija, Plovdiv and Svilengrad to the Turkish border at Kapitan Andreevo (584 km). In addition, Branch D runs from Sofija to the Greek Border at Kulata.

The stretch Romanian border-Sofija (264 km) has line speeds of 60-80 km/h. The section Sofija-Plovdiv (178 km) is double-track and electrified. The section Plovdiv-Turkish border (142 km) is single-track and not electrified, further in a poor condition with high maintenance costs. The line of Branch D to the Greek border (210 km) has been upgraded and electrified.

A project is under way in order to upgrade and electrify the Plovdiv-Turkish border section (142 km) for speeds of 160 km/h and for a 22.5 tons axle load. The project involves upgrading, renewing and double-tracking of sections of the route, electrification, new signalling equipment, new bridges and grade-separated crossings, and upgrading of stations and border facilities.

The estimated costs are 340m EUR, to be financed by national funds (37m EUR), an ISPA grant (153m EUR) and an EIB loan (150m EUR).

The project to upgrade the section Dupnitza-Kulata (131 km) was in the PHARE-CBC (Cross-border Cooperation) programme between Bulgaria and Greece.

Aviation

Within the project for a new passenger terminal and related facilities at the Sofija airport, passenger capacity will be increased, new access roads and parking will be provided, and the existing runways will be extended and resurfaced. The total costs are 210m EUR.

Greece

Road

The road alignment of Branch D in Greece runs from the Bulgarian border at Promahonas to Thessaloniki.

This route (104 km) is part of the PATHE (Patra-Athens-Thessaloniki-Promalion) axis.

The section Derveni-Thessaloniki (8 km) is a six-lane road. The remaining sections are being constructed as four-lane roads, as follows:

The section Promahonas - Lefkonas (32 km) is being constructed as a four-lane road:

The Petritsiou - Promahonas subsection (12 km) is partially finished. The remaining 7.5 km are ready to be tendered. The construction budget is 50m EUR.

The Sidirokastro - Petritsiou subsection (9 km) is ready to be tendered. The construction budget is 50m EUR.

The Lefkonas-Sidirokastro subsection (11 km) was already constructed.

The section Lefkonas-Derveni (64 km) is being constructed as a four-lane road:

The Riziana – Lefkonas subsection (29 km) is partially finished. Designs are being prepared for the remaining 22 km with a construction budget of 85m EUR.

The Darveni-Riziana (35 km) is in the design phase with a construction budget of 120m EUR.

Railway

The rail alignment of Branch D in Greece runs from the Bulgarian border at Promahonas to Thessaloniki. The 144 km-long line is single-track, electrified and complies with AGC/AGTC and UIC standards. Maximum speed is 120 km/h. Part of the line has restricted traction capacities due to high gradients.

Projects are in progress for the improvement of the alignment and superstructures, in order to allow speeds of 160 km/h, and eliminate gauge restrictions by constructing new bridges. Also, new signalling systems, remote control and electrification are installed. The project completion is foreseen for 2008. The project costs are 52.81m EUR.

Port

The port traffic at the Port of Thessaloniki has steadily increased, reaching 15.5 m tons of freight cargo in 2000.The container terminal handled 230,000 TEUs, while the passenger terminal served 250,000 passengers.

A big investment programme is scheduled for the modernisation and expansion of the port, providing the port with a new direct access to the national and international road and rail network.

A feasibility study and a master plan for a logistics and distribution centre development are completed.

The investment programme has a volume of 3.2m EUR in 2000 and 50.7m EUR in 2001-2005. It is supported by the EU with 24.6m EUR in 2001-2005.

Turkey

Road

The road alignment in Turkey runs from the Bulgarian border at Edirne to Istanbul. This link is a 228 km-long motorway.

Railway

The rail alignment in Turkey runs from the Bulgarian border at Edirne to Istanbul. This 305 km-long link is electrified and mostly (227 km) single-track.

Most sections of the rail link have been reconstructed and a second track was constructed at the section Halkali-Ispartakule (11 km).

Most important for the connection of rail Corridor IV to the Asian network is the project of the Bosphorus Rail Tube Tunnel and the Gebze Halkalz Surface Metro System. This project aims to reduce travel times, to reduce environmental impacts and to increase security, reliability and accessibility.

The project includes a 76 km-long electrified triple-track surface metro line between Bosphorus-Halkali and Gebze. The costs are estimated to 1344m EUR. The project was initiated in 2004.

Port

Haydarpasa Port in Istanbul handles 2651 ships per year and 354000 TEUs per year. Modernisation and rehabilitation works are ongoing. An EIB loan of 36m EUR was obtained for capacity expansions of container ports. A major portion of this loan is used for Haydarpasa Port.

Border Crossings

The border crossing locations, specific waiting times and the reasons for delays are summarized in the following table.

Location	Total Waiting Time	Of the total time, time required for customs	Reasons for waiting							
			High traffic volumes	Inadequate capacity of clearance facility/inadequate clearance times	Counters/customs officials are understaffed	Over-meticulous bureaucratic custome clearance procedures	Payment of "additional fees"	"Man-made difficulties"	Opening times of counters are inadequate	Constant changes made to customs clearance formalities
Corridor IV Road Border Crossings										
Germany-Czech Republic 1.Altenberg/Cinovec 2.Waidhaus/Rozwadow	30	4,25	X	X	X		X			
Czech Republic-Slowakia Lanzhot/Kuty	31	7,75	X	X	X	X	X	X	X	
Slovakia-Austria Petrzalka/Berg	11	5,5		X	X		X			
Austria-Hungary Nickelsdorf/Hegyeshalom	28,75	8,25	X	X	X	X		X		
Slovakia-Hungary 1.Rusovce/Rajka 2.Komarno/Komarom	27,75	9,5	X	X	X	X	X	X	X	
Hungary-Romania Nadlac/Nagylak	50	14,75	X	X	X	X	X	X		
Romania-Bulgaria 1.Vidin/Calafat 2.Giurgiu/Ruse	26,75	8	X	X		X	X	X		
Bulgaria-Greece 1.Kulata/Promachonas 2.Svilengrad/Ormenio	40	5,75	X	X	X	X	X	X	X	
Bulgaria-Turkey Kaptan Andreevo/Kapikule	14,5	4	X	X	X		X	X	X	
Greece-Turkey Kastanis/Karaagac	14,5	4,25			X	X	X	X	X	X
Corridor IV Railway Border Crossings										
Germany-Czech Republic 1.Bad Schandau/Decin 2.Schirnding/Czeb	11	8,75		X	X			X		X
Czech Republic-Slovakia Lanzhot/Kuty	8,5	6,75	X					X		X
Austria-Czech Republic Hohenau/Breclav	8,25	6,25	X		X			X		X
Austria-Slovakia Kittsee/Bratislava	7	6						X		X
Austria-Hungary Hegyeshalom	3	2		X	X			X		X
Slowakia-Hungary 1.Sturovo/Esztergom 2.Rusovce/Rajka 3.Komarno/Komarom	6,75	6,25		X	X	X		X		X
Hungary-Romania Lökösházа/Curtici	7	6	X	X	X	X		X		X
Romania-Bulgaria Giurgiu/Ruse	8	6,5	X	X	X	X		X		X

Location	Total Waiting Time	Of the total time, time required for customs	Reasons for waiting							
			High traffic volumes	Inadequate capacity of clearance facility/inadequate clearance times	Counters/customs officials are understaffed	Over-meticulous bureaucratic custome clearance procedures	Payment of "additional fees"	"Man-made difficulties"	Opening times of counters are inadequate	Constant changes made to customs clearance formalities
Corridor IV Road Border Crossings										
Bulgaria-Greece Kulata/Promachonas	7,5	6,25	X	X	X	X		X		X
Bulgaria-Turkey Svilengrad/Edirne	8	6,5		X	X	X				X

In addition, the following loading numbers have been provided.

The border crossing of Motorway D2 between Slovakia and Hungary at Bratislava, Čuňovo – Rajka, had the following loading numbers in 2003:

- Total vehicles = 1 076 848 vehicles/year
- Passenger vehicles and motorbikes = 753 700 vehicles/year
- Buses = 15 984 vehicles/year
- Trucks = 307 164 vehicles/year

The border crossing of Motorway D4 between Slovakia and Austria at Bratislava, Jarovce – Kittsee, had the following loading numbers in 2003:

- Total vehicles = 834 034 vehicles/year
- Passenger vehicles and motorbikes = 731 576 vehicles/year
- Buses = 4539 vehicles/year
- Trucks = 97 919 vehicles/year

The border crossing of Motorway D2 between Slovakia and the Czech Republic at Brodské – Breclav had the following loading numbers in 2003:

- Total vehicles = 4 703 904 vehicles/year
- Passenger vehicles and motorbikes = 3 810 949 vehicles/year
- Buses = 41 198 vehicles/year
- Trucks = 851 757 vehicles/year

No information regarding investment was available.

5.5 Corridor V

5.5.1 Map, Alignment and Technical Features

Countries	Italy, Slovenia, Croatia, Hungary, Slovakia, the Ukraine and Bosnia and Herzegovina
Transport modes	Road, rail, aviation, navigation
Infrastructure figures:	
Railways	approx. 3000 km
Roads	approx. 2850 km
Inland waterways	Intersection with CVII (Danube) in Bratislava and Budapest, running parallel from there southwards for approx. 180 km to Mohacs
Number of airports	5 airports
Number of seaports and inner harbours	5 seaports 2 inner harbours (Danube)
Number of border crossings	16
Alignment	
Road	Venice – Trieste – Ljubljana – Maribor – Cakovec – Budapest – Miskolc – Uzhgorod – L'viv
Railway	Venice – Trieste/Koper – Ljubljana – Ptuj – Zalaegerszeg – Budapest – Miskolc – L'viv
Branch a	Bratislava – Kosice – (Uzhgorod) – L'viv
Branch b (road)	Rijeka – Zagreb – Cakovec
Branch b (railway)	Rijeka – Zagreb – Koprivnica – Dombovar -
Branch c	Ploce – Mostar – Sarajevo – Osijek – Budapest
Border Crossings	Villa Opicina – Sezana (IT – SI) railway Fernetti – Sezana (IT-SI) road Hodos - Bajansenye(SI – HU) railway Tornyiszentmiklos – Lendava (HU-SI) road (SI – HR) road Letenye-Goričan (HR – HU) road - planned two border crossings by 2007 Gyekenyes – Gola (HU-HR) rail Vysné Nemecké – Uzhgorod (SK – UA) road Zahor - Uzhorod (SK – UA) railway Zahony (Eperjeske) - Chop (HU – UA) (HR – BA) Slovenski Samac – Bosanski Samac (BA – HR) Beli Manastir – Udvar (HR – HU) road (5c) Beremend – Baransko Petrovo rail (5c)

5.5.2 Overview of the General Development

The Pan-European Transport Corridor V connects Central Europe to the Mediterranean, following trade routes from the times of the Roman Empire.

The Memorandum of Understanding (MoU) was signed in Trieste on 16 December 1996 by the Ministers of Transport of Corridor V Member States and by a representative of the European Commission. An addendum has been signed on 27 November 2001, in the framework of the Quadrilateral Initiative, for the integration of new a branch in the territory of Croatia.

There is a permanent secretariat which is located in Trieste, at the premises of the Central European Initiative (CEI). It took up work in October 2004.

The secretariat consists of a team of professionals. Its objective is to quickly become the main point of reference for all institutional stakeholders interested in the implementation of the Corridor. Its task is to support the steering committee (the institution where the representatives of all member states decide the actions for the works on the Corridor) and ensure its maximum efficiency in terms of coordination, sharing of information and external communication.

The first meeting of the steering committee took place in Rome, on 19 January 1998, with the participation of Hungary, Slovenia, Croatia, the Ukraine, CEI, EU Commission, TINA secretariat and ECE-UNO. This meeting was dedicated to the formal setting up of the group by acknowledgement of the appointed representatives.

A second meeting, held on 13 July 1999, allowed a preliminary recognition of the status of implementation of infrastructural investments along the alignment of Corridor V. On the initiative of the Italian delegation, a draft addendum to the MoU was also discussed, in which was taken into consideration the extension of Corridor V through the territory of Bosnia and Herzegovina and Croatia, on the basis of the alignment approved at the Pan-European conference held in Helsinki in 1997.

In order to promote the adhesion of these countries, a joint working group was set up on the occasion of the meeting in July 1999, which led to the signature of the addendum by the government of Croatia, in which a new branch of Corridor V is included (Vc) connecting the port of Ploce to Sarajevo, Osiek and Budapest.

Since 1997, four different directors from the Italian Ministry of Transport alternated in the position of chairman of the steering committee: 1997-1999, Mr. Achille Vinci Giacchi; 2000-2001, Mr. Vincenzo de Luca; and 2002-2003, Mr. Renato Li Bassi. Presently, since 18 March 2004, this role is being taken by Mr. Gaetano Fontana, head of the department of spatial planning in the Ministry of Infrastructure and Transport (gaetano.fontana@infrastrutturetrasporti.it).

Under the latter chairmanship two meetings have been held in Trieste, on 10 December 2004 and 27 June 2005, with the participation of technical and institutional representatives of all countries that constitute the Corridor, i.e. Croatia, Slovenia, Hungary, Slovakia, the Ukraine and Bosnia and Herzegovina, besides Italy, chairing the steering committee, and CEI directors. Each party described the actual status of works in its own country, and the final picture helped building a joint presentation that was addressed to the European Union at the beginning of 2005.

The tasks of the secretariat include that of ensuring the continuity in the relationships with all the interested countries, promoting feasibility studies, setting up the procedures for accessing international funds and coordinating other work groups assisting the Committee.

From Trieste via Divaca/Koper/Divaca to Ljubljana Corridor V is part of the TEN-T priority axis no. 6 (railway axis Lyon-Trieste-Divaca/Koper/Divaca-Ljubljana-Budapest-Ukainian border).

5.5.3 Developments along the Corridor between 1994 and 2010

According to the chair and the steering committee the objectives set out in the Crete Declaration (CD, 1994) and Helsinki Declaration (HD, 1997) have partially been reached. The overall project for the promotion of sustainable, efficient transport systems which meet the economic, social, environmental and safety needs of European citizens has partially been completed. A lot of work still needs to be done, especially at cross-border level. Undoubtedly, the enlargement of the European Union with the accession of 10 new Member States, as well as the strengthening of the cohesion policy using dedicated EU financial resources are a demonstration that the regional disparities within Europe have been reduced. Therefore, the improvement of the transport systems has been one of the key factors for the growth of the GDPs of the new EU Member States. With regard to the specific objectives of the above mentioned conferences, the following issues have to be taken into considerations:

- The concept of the Pan-European Corridor is also a basic element in the process of progressive liberalisation and integration of transport markets not only between the countries directly interested in a specific Corridor but also in the countries involved in other transport corridors/areas.

- Greater efficiency has been reached in transport development throughout Europe, taking into account technical and interoperability aspects in order to facilitate movements at border crossings. Of course, a lot of works must be done close to the external borders of the European Union and within the next accession countries (i.e. South-East European Countries).

- A better integration of all transport modes with special emphasis on intermodality and promotion of more environmentally friendly modes such as rail, inland waterways and short sea shipping has to be taken further still;

- Although serious efforts with significant results have been made, there are still great efforts to be made to reach the objective of ensuring socially and environmentally acceptable and safe conditions for transport users, for workers and for the public at large.

- At the same time, the objective of facilitation of the adoption and implementation at all levels of transport laws and policies based on common principles and standards, multilateral legal instruments and conventions is close to be fully achieved, while the identification of common criteria for the priority selections and for the project evaluations is still missing. Nevertheless, the existing discrepancies in the regulatory environment in Europe have been undoubtedly reduced.

- Besides, a lot of work still needs to be done for the promotion of improvements in civil engineering and operation of the transport system (infrastructure, vehicles and

equipment, services and procedures), giving priority to measures handling increasing capacity problems; in the future, more activities must be dedicated to research activities about new transport systems.

- The objective of a possible update and revision of the existing institutional and regulatory framework in order to cope better with changing political and commercial circumstances in the field of international transports still needs to be achieved as well as the strengthening of the role and responsibilities of the joint managing structures like the steering committee and the secretariat.

- For guaranteeing coherent information on transport flows and appropriate access to this information the Corridor secretariat could play a vital role in the coordination and exchange of information between the Members States managing the preparation of the statistical data and the finalisation of the operative strategies.

It is important to mention that the core network has been partially established meanwhile there are still objectives to be fulfilled regarding multimodality. It is quite clear that the objectives both in the case of the Crete and the Helsinki Declarations were drawn up in quite general terms and no indicators were included in the following implementation agreements/
/regulations/strategies, thus their monitoring is rather relative and dependent on the point of view of the implementing state as it is defined in the section V of the HD.

Recently, important decisions were made regarding the further extension of Corridor V and its connection to other transport corridors.

The established cooperation between Italian and Slovene rail agencies is having a positive impact in terms of interoperability of rail transport.

A logistic centre for the joint management of rail transport has been established in Opicina (Italy), with the task of monitoring and harmonising transport on both sides of the border that contributes significantly to the facilitation of movements at the given border crossing.

A new line between Murska Sobota and the Slovenian/Hungarian border, with Hodos as a common border station, has been completed and is operating since 2001.

Additional arrangements to remove obstacles at border crossings could further contribute to reach previously defined objectives. Permanent and stable institutional relationship among Member States has been established. The Quadrilateral Initiative is an additional forum in which Ministers of Transport of Italy, Slovenia, Croatia and Hungary exchange information and reach agreements. The last meeting took place in December 2004 in Budapest, and it has been an occasion for a very fruitful confrontation and constructive dialogue. Strong commitment on behalf of each Member State is still necessary to finalize the design work of cross-border sections.

The inclusion of Corridor V projects in the revision of the list of TEN-T priority project is also to be considered a significant achievement. Although moderate success was achieved in the Ukrainian territory: enlargement of volume of rail transportation, recovery of motorway L'viv-Ughorod financed by EBRD and new credit agreements with the mentioned institution were reached.

On the most critical track of the Corridor – in Bosnia and Herzegovina – the technical documentation is being prepared and some shorter tracks around the capital have been built; meanwhile, serious efforts should be made to complete the whole track.

In general the traffic volumes have increased on the Corridor, while the desired level is not yet achieved in the case of certain transport modes.

As a request from the Ukraine, the alignment of Corridor V should be prolonged beyond the Ukrainian border, as extension of the Pan-European Corridor V within the framework of the Wider Europe concept towards Moscow and the Caucasus (branch 5d: Kiev – Volgograd – Almaty). Furthermore, the concept of Motorways of the Sea should be incorporated, connecting Trieste to Adriatic-Ionian and Eastern Mediterranean ports (branch 5e). The new second track of the railway line Divača – Koper can be seen as inland railway connection to the motorways of the sea, since it connects the Port of Koper with the hinterland.

Some of the TEN-T priority projects are located, at least partly, on Corridor V. Some priority projects connect Corridor V to other Pan-European corridors, e.g.:

Priority 6: Railway axis Lyon-Trieste-Divača-Ljubljana-Budapest-Ukrainian border

The main part of this priority corresponds to the Pan-European Corridor V. Waiting for the strengthening of the role of the steering committee presidency from the EU Commission, an improvement could be the appointment of a European Coordinator to solve the problems of a rapid realisation of the Trieste (Italy) -Divača (Slovenia) cross-border section, due to the different approach of the Italian and Slovenian authorities to this project (Italy considers this project as a priority but not Slovenia).

> *(November 2000)* As set down in the National Programme for Adoption of the Acquis, Slovenia will allocate around 152.2 billion Slovene tolars for transport per year until 1 January 2003, the date by which the country will be fully ready for EU membership. In line with EU transport regulations the majority of the sum will be used to establish links with the Pan-European road network. In this same period, Slovenia expects to receive around sixm EUR in aid from the Phare programme and 10m EUR of ISPA funds annually.
>
> (**http://www.uvi.si/eng/slovenia/background-information/transport/index.text.html** - latest access: 22 June 2005)

5.5.4 Infrastructure Development per Country and Mode of Transport

The tables below represent in short the investment carried out or being planned on the various national sections of Corridor V for the different modes of transport.

Part of Corridor V	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Road									
branch 5c	Bosnia and Herzegovina	Bosanski Samac	reconstruction of bridge						100 % EU funds
branch 5c	Bosnia and Herzegovina	Bradina - Konjic	reconstruction of road						EIB, EBRD funds
branch 5c	Bosnia and Herzegovina	entire branch 5c	reconstruction of 11 rail-road crossings and 3 service workshops						EIB, EBRD funds
branch 5c	Bosnia and Herzegovina	entire branch 5c	reconstruction overhead line						100 % EU funds
branch 5c	Bosnia and Herzegovina	Jablanica	detour, construction of new 2nd lane	3,5				9,00	
branch 5c	Bosnia and Herzegovina	Maglaj	reconstruction of bridge						100 % EU funds
branch 5c	Bosnia and Herzegovina	Mostar	bypass, construction of new 2nd lane	20				72,00	
branch 5c	Bosnia and Herzegovina	Podlugovi - Sarajevo		11,5					80 % state budget, 20 % bank credits
branch 5c	Bosnia and Herzegovina	Sarajevo	bypass, construction of new 4th lane	14				150,00	
branch 5c	Croatia	Beli Monastir - state border with Bosnia and Herzegovina	motorway investment	89	2001	2004	completed	4	No EU grants
branch 5c	Croatia	Beli Monastir - state border with Bosnia and Herzegovina	motorway investment				planned	9,3	
branch 5b	Croatia	Bosiljevo 2 - Stara Susica	construction	10,5	2005	2007	planned	50,00	
branch 5b	Croatia	Karlovac - Kupjak	motorway and arterial highway	60				420	No EU grants
branch 5b	Croatia	Stara Susica - Kikovica	construction	40	2005	2008	planned	195,00	
branch 5b	Croatia	Zagreb - Gorican	motorway construction	97				193	No EU grants
branch 5b	Croatia	Zagreb - Rijeka	extension of road profile to a full motorway profile	55,5	2005	2008	planned		

Part of Corridor V	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Road									
main axis	Hungary	Balaton aliga - M0 motorway	M7 motorway reconstruction	73				190,00	No EU grants
main axis	Hungary	Balatonszarszo - Ordacsehi	M7 motorway construction	20		2005	completed	263	
main axis	Hungary	Balatonszentgyörgy - Nagykanizsa	M7 motorway construction	35	2004	2009	ongoing		state budget
branch 5c	Hungary	Boly - Ivandarda	M6 expressway construction	23	2004	2010	planned	n/a	state budget and private investors
main axis	Hungary	Budapest	M0 ring road from M7-M5	30		2007		600,00	
main axis	Hungary	Croatian border - Becsehely	M7 motorway construction	9				72,00	No EU grants
branch 5c	Hungary	Dunaujvaros - Szekszard	M6 expressway construction	67	2004	2010	planned	n/a	state budget
main axis	Hungary	Emod - Miskolc		20		2004	completed	212	state budget
branch 5c	Hungary	Erdi-teto - Dunaujvaros	M6/M56 construction	52	2004	2006	ongoing	n/a	state budget
main axis	Hungary	Füzesabony - Görbehaza	M3 motorway construction	73				491,00	No EU grants
main axis	Hungary	Görbehaza - Nyiregyhaza	M3 motorway construction	39	2004	2006	ongoing	320	state budget
main axis	Hungary	Letenye - Tornyiszentmiklos	M70 national road completion	20		2004	completed	n/a	
main axis	Hungary	M0 ring road - M3 motorway	M3 motorway construction	12	2004	2007	ongoing	424	state budget, 67 % Cohesion Fund
main axis	Hungary	M5 motorway - Main Road No. 4	M0 ring road	12	2004	2009	ongoing	135	state budget
branch 5c	Hungary	M6 motorway - M0 Erdi-teto	M6/M0 construction	12	2004	2006	planned	n/a	state budget
main axis	Hungary	Mainr road No. 4 - M3 motorway	M0 ring road	26	2004	2007	ongoing	410	state budget
main axis	Hungary	Nagykanizsa - Becsehely	M7 motorway construction	17	2004	2006	ongoing	144	state budget
main axis	Hungary	Nyiregyhaza - Ukrainian border	M3 motorway construction	64		2010	planned	n/a	
main axis	Hungary	Ordacsehi - Balatonkeresztur	M7 motorway construction	26	2004	2006	ongoing	250	state budget
main axis	Hungary	Polgar - Gorbehaza	M3 motorway construction	12		2004	completed	87,00	state budget
branch 5c	Hungary	Szekszard - Boly	M6/M56 construction	47	2004	2007		n/a	state budget

Part of Corridor V	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Road									
main axis	Hungary	Zamardi - Balaton aliga	M7 motorway upgrading	21				100,00	No EU grants
main axis	Hungary	Zamardi - Balatonszarszo	M7 motorway construction	14	2004	2006	ongoing	300	state budget
main axis	Italy	Cattinara - Padriciano	motorway construction	4		2009	under way	122,00	
main axis	Italy	Lacotisce - Rabuiese	motorway construction	3		2009	under way	72,00	
main axis	Italy	Mestre east - Mestre west	construction of motorway bypass	32		2007	under way	750	
main axis	Italy	Venice - Trieste-Udine	third lane of existing carriageway	130					
main axis	Slovenia	Beltinci - Pince	motorway	32,7		2013	planned	294,00	
main axis	Slovenia	Blagovica - Trojane	motorway	8,2		2005	completed	199,00	
main axis	Slovenia	Cogetinci - Vucja vas	motorway	11,6		2008	planned	120	
main axis	Slovenia	Klanec - Ankaran	motorway	14,9		2005		269,00	
main axis	Slovenia	Kompolje - Blagovica	motorway			2003		60	
main axis	Slovenia	Krtina - Lukovica		6,1				75,00	
main axis	Slovenia	Lenart - Cogetinci	motorway	17,2		2010	planned	138,00	
main axis	Slovenia	Lukovica - Blagovica		5,9				60,00	
main axis	Slovenia	Maribor - Lenart	motorway	7,8		2010	planned	79,00	
main axis	Slovenia	Razrto - Vipava	motorway			2007	planned	201	
main axis	Slovenia	Slivnica - Pesnica	motorway	10,5		2011	planned	224,00	
main axis	Slovenia	Vransko - Tojane		8,6				206,00	
main axis	Slovenia	Vucja vas - Beltinci	motorway	4,2		2005	ongoing	120,00	
main axis	Ukraine	Stryi - L'viv	rehabilitation of road	96				75	
main axis	Ukraine	Stryi - L'viv	rehabilitation of road	180	2005	2008	planned	137,3	EBRD and 27 % state budget
main axis	Ukraine	Uzghorod - Stryi	rehabilitation of road	228				61	2,5 % TACIS (EBRD)

Part of Corridor V	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Road									
branch 5a	Slovakia	Presow Juh - Budimir	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	19,4	1982	1998	completed		
branch 5a	Slovakia	Beharovce - Branisko	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	7,77	1997	2004	completed		
branch 5a	Slovakia	Studenec - Beharovce	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	3,45	2006	2007	planned		
branch 5a	Slovakia	Branisko - Fricovce	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	6,23	1997	2004	completed		
branch 5a	Slovakia	Mengusovce - Janovce	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	25,85	2005	2008	ongoing		
branch 5a	Slovakia	Hubova - Ivachnova	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	15,25	2007	2010	in preparation		
branch 5a	Slovakia	Jablonov - Studenec	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	5,2	2007	2011	planned		

Part of Corridor V	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Road									
branch 5a	Slovakia	Janovce - Jablonov	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	18,54	2007	2012	planned		
branch 5a	Slovakia	Presow Zapad - Presow Juh	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	7,463	2009	2013	planned		
branch 5a	Slovakia	Bidovce - Dragov	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	12,75	2010	2013	planned		
branch 5a	Slovakia	Dragov - Pozdisovce		18,67			after 2013		
branch 5a	Slovakia	Budimir - Bidovce	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	13,7	2008	2013			
branch 5a	Slovakia	Fricovce - Sivina	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	10,932	2012	2014			
branch 5a	Slovakia	Pozdisovce - state border	radical improvement of transport conditions on the motorway network in the SR as well as on the multimodal corridor.	42,51			after 2013		

Part of Corridor V	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Railway									
branch 5c	Bosnia and Herzegovina	Samac – Capljina	modernisation of signalling system	404				63,25	
branch 5c	Bosnia and Herzegovina	Samac – Capljina	modernisation of telecommunication systems	404				13,75	
branch 5c	Bosnia and Herzegovina	Samac – Sarajevo	track overhaul and reconstruction	123		2009	planned	83	
branch 5c	Bosnia and Herzegovina	Sarajevo – Capljina	track overhaul and reconstruction	145		2009	planned	72	
branch 5c	Croatia	Beli Manastir – Osijek	major overhaul	32			planned	19,03	
branch 5c	Croatia	Dakovo – Samac	major overhaul	28	2005	2006	planned	18,67	
branch 5b	Croatia	Dugo Selo – Botovo	building second track	73	2009		planned	n/a	
branch 5b	Croatia	Dugo Selo – Krizevci	major overhaul	35,7	2003	2004	completed	21,48	
branch 5b	Croatia	Koprivnica – Botovo (state border)	major overhaul	14,4		2007	planned	7,68	
branch 5b	Croatia	Krizevci – Dugo Selo	building second track	35,8	2009		planned	n/a	
branch 5b	Croatia	Krizevci – Koprivnica	major overhaul	28,4		2006	planned	15,15	
branch 5b	Croatia	Lokve – Drivenik	major overhaul	15,9		2007	planned	8,06	
branch 5c	Croatia	Metkovic – Ploce	major overhaul	22,8	2003	2004	completed		
branch 5c	Croatia	Metkovic – Ploce	station reconstruction, telecommunications	24	2005	2006	planned	2,67	
branch 5b	Croatia	Mrzlo Polje – Duga Resa	major overhaul	4,6		2009	planned	3,37	
branch 5c	Croatia	Osijek – Dakovo	curve reconstruction	37			planned	9,33	
branch 5b	Croatia	Ostarije – Ogulin	major overhaul	6,2		2006	planned	4,8	
branch 5b	Croatia	Skrad – Lokve	major overhaul	21,3		2006	planned	10,79	
branch 5b	Croatia	Skrljevo – Rijeka	major overhaul	11,4		2005	planned	8	
branch 5b	Croatia	Zagreb – Karlovac	building second track	52,6	2007	2010	planned	91,87	
branch 5b	Croatia	Zagreb – Zdencina	major overhaul	24	2003	2004	completed	15,2	
branch 5b	Croatia	Zdencina – Jastrebarsko	major overhaul	8,3		2008	planned	5,53	

Part of Corridor V	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Railway									
main axis	Hungary	Bajansenye - Zalalövö	build up of new track	20				104	10 % EU grants
main axis	Hungary	Boba - Szekesfehervar	construction design	113	2004	2013	planned	180	state budget, Cohesion Fund
main axis	Hungary	Budapest - Gyekenyes		260				480	Cohesion Fund
main axis	Hungary	Budapest - Miskolc	This section means the main line of Pan-European Corridor V. from Budapest towards the Ukraine. Normal gauge, max. speed limit: 80-120 km/h, double track on the section of Budapest-Mezőzombor. Mostly electrified, max. axle load: 21 tonnes.	270	2010	2014	planned	640	Cohesion Fund
main axis	Hungary	Budapest - Szolnok		16			recent	36	18 % EU grants, ISPA
main axis	Hungary	Budapest - Szolnok	Providing higher speed; changing of the stations' safety appliances; reconstruction of the whole section including the change of tracks.	84	2001	2007	planned	147,6	ISPA, EIB
main axis	Hungary	Dombovar-Budapest - Gyekenyes	Reconstruction also including a partial speed-increase in 3 Phases: 1. Reconstruction of the most crucial line section of Dombóvár-Kaposvár-Gyékényes2. Reconstruction of Budapest-Pusztaszabolcs line section (technical repair, change of station's safety appliances)3. Reconstruction of the section between Pusztaszabolcs - Dombóvár (by the end of 2005, study on the possibilities of higher speed and installing a second track)	260	2008	2013	planned	180	state budget, Cohesion Fund

Part of Corridor V	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Railway									
main axis	Hungary	Erd	Complex reconstruction of station, installing wide platforms with underpassages, changing of obsolete safety appliances, reconstruction of section between Érd Station and Érd Junction, upgrading the three groups of scissor crossings with a new safety appliance at station.	2	2006	2007		20	EIB
main axis	Hungary	Szekesfehervar	Complex reconstruction of the station, incl. modernisation of safety appliances and change of tracks	2	2006	2008		53,6	EIB
main axis	Hungary	Szekesfehervar - Budapest		60				172	Cohesion Fund
main axis	Hungary	Szolnok - Zahongy	Reconstruction of the entire section; providing a higher speed of 140-160 km/h; installing wide platforms and modern safety appliances at stations and ETCS.	234	2007	2012		400	Cohesion Fund
main axis	Hungary	Zalavövö - Boba	As a part of the main line of Pan-European Corridor V. on the Transdanube, it provides rail connection towards Slovenia. The electrification of this section is in process. Normal gauge, single track, max. axle load is 21 tonnes, max. speed limit is 80 km/h.	81	2002	2008	planned	196	state budget, ISPA, EIB
main axis	Hungary	Zalavövö - Boba		2			recent	8	4 % EU grants, ISPA

Part of Corridor V	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Railway									
main axis	Italy	Trieste - Fernetti	development of railway line, border crossing, incl. underground shunt of Trieste	10	2002	2015	planned	1400	INTERREG III, EU PP
main axis	Italy	Venice - Trieste	technological and infrastructural upgrading	150	2002	2006	partly completed	6129	EC and others
main axis	Slovenia	Koper - Divaca	modernisation of signalling and safety devices	31	2005	2006	planned	30,29	
main axis	Slovenia	Koper - Divaca	modernisation of existing railway line (contruction)	31	2005	2009	planned	71,17	
main axis	Slovenia	Koper - Divaca	construction of new 2nd track	31	2005	2012	planned	700	
main axis	Slovenia	Ljubljana - Hodos (Hungarian border)	upgrading railway line, modernisation of signalling and safety devices, electrification, elimination of level crossings	246	2004	2010	partly under way, planned	269,39	
main axis	Slovenia	Ljubljana - Maribor	speed increase	156			recent	60,2	No EU grants
main axis	Slovenia	Ljubljana - Maribor	construction of new 2nd track	156	2005	2012	planned	33,2	
main axis	Slovenia	Ljubljana - Sezana	modernisation of signalling and safety facilities	113				39	No EU grants
main axis	Slovenia	Murska Sobota - Hodos	electrification			2007	planned		

Part of Corridor V	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Railway									
main axis	Slovenia	Murska Sobota - Hodos (Hungarian border)	new line, Hodos border crossing	30		2001	completed	97	No EU grants
main axis	Slovenia	Ormoz - Murska Sobota	modernisation of signalling and safety system, construction works	31				29	34,5 % EU grants
main axis	Slovenia	Pragersko - Hodos (Hungarian border)	electrification	101	2006	2008	planned	95	
main axis	Slovenia	Pragersko - Ormoz	modernisation of signalling and safety devices	40	2005	2007	planned	22,04	
main axis	Slovenia	Pragersko - Ormoz	modernisation of railway line (construction)	40	2005	2007	planned	36,14	
main axis	Slovenia	Villa Opicina - Divaca - Ljubljana - Zidani Most - Murska Sobota	installation or renewal of signalling facilities, modernisation of level crossing		2000	2012	partly completed	275	
main axis	Slovenia	Zidani Most - Maribor	modernisation	92	2004	2005		9,23	
main axis	Ukraine	entire network	buying technical equipment and carriages, building Beskyd Tunnel					246	37,4 % EBRD loan

Part of Corridor V	Country	Location	Description	Terminal type	Project Start	Project End	Status	Costs (M EUR)	Source
Terminal (port, airport, inner harbour etc.)									
branch 5c	Bosnia and Herzegovina	BRCKO Inland Port	reconstruction	IWW					
branch 5c	Bosnia and Herzegovina	Samac Inland Port	reconstruction	IWW					
branch 5c	Croatia	Port of Ploce		sea	1997	2005	recent	22	
branch 5b	Croatia	Port of Rijeka		sea	1997	2004	completed	60,5	
branch 5b	Croatia	Zagreb Airport		air	2000	2005		20	
main axis	Hungary	Budapest	BILK - Budapest Intermodal Logistical Centre	rail-road	2002	2010	under way	29,082	65,3 % EU, 34,38 % EBRD, 0,14 %national funds, 0,14 % private investment
main axis	Hungary	Budapest	Csepel Freeport connection with M0	IWW-road			planned		
main axis	Hungary	Zahony Railway Port	modernisation of infrastructure	rail			completed	5	PHARE and EU TEN budget
main axis	Hungary	Zahony Railway Port	Strengthening of external border control for the use of the "Schengen Facility".	rail	2005	2007	planned		
main axis	Italy	Port of Trieste	construction of motorway connection	sea		2009	planned	72	
main axis	Slovenia	Ljubljana	two gantry cranes	combi			planned	6	

Part of Corridor V	Country	Location	Description	Terminal type	Project Start	Project End	Status	Costs (M EUR)	Source
Terminal (port, airport, inner harbour etc.)									
main axis	Slovenia	Ljubljana	feasibility study, project design, construction of buildings and rail infrastructure, ITC infrastructure, development of marketing services and management of logistics centre	combi			planned	35,5	24,8 % EU grants
main axis	Slovenia	Maribor	reconstruction of the terminal	combi			planned	6	
main axis	Slovenia	Maribor Airport	modernisation of infrastructure	air			planned	1,66	75 % EU grants
main axis	Slovenia	Maribor Airport	modernisation of infrastructure	air			recent	4,1	75 % EU grants
main axis	Slovenia	Port of Koper	new multimodal terminal	sea				100	
main axis	Slovenia	Port of Koper	port infrastructure	sea	2002	2002	completed	2	no EU grants
main axis	Slovenia	Port of Koper	port infrastructure	sea	2003	2003	completed	2,5	no EU grants
main axis	Slovenia	Port of Koper	port infrastructure	sea	2004	2004	completed	3	no EU grants
main axis	Slovenia	Port of Koper	port infrastructure	sea			planned	3,2	
branch 5c	Croatia	Port of Ploce		sea	2005	2010	planned	110	
branch 5b	Croatia	Zagreb Airport		air	2005	2010	planned	125	
branch 5b	Croatia	Port of Rijeka		sea	2005	2010	planned	95	

Part of Corridor V	**Country**	**Location**	**Project Name**	**Length (km)**	**Project Start**	**Project End**	**Status**	**Costs (M EUR)**	**Source**
Inland Waterways									
branch 5c	Bosnia and Herzegovina	Sisak - Beograd	rehabilitation of navigation and flood protection	581,0					

Italy

Railway

The feasibility study for the sub-section Ronchi dei Legionari-Trieste was completed in November 2002 and in December of the same year the preliminary design has been completed, with a contribution of the European Commission (Decision C200-2511, of 2000). Significant interventions in the field of technological and infrastructural upgrading have been planned and partially carried out on the following sections of the Venice-Trieste-Villa Opicina: (i) electrification of the section Portogruaro-Bivio d'Aurisina-Trieste; (ii) construction of the Latisana bridge; (iii) upgrading of the steel structure of 5 bridges between Mestre and Latisana (completion 2006) to increase the axle weight; (iv) implementation of the Gabarit P80 (already completed on one of the two tracks), of the Gabarit C; (v) other minor interventions, aimed to increase the flexibility of traffic circulation and to improve managing conditions, have been completed in 2003, whereas more extensive interventions are planned for 2005/2006.

In November/December 2002 contacts have been started between Rete Ferroviaria Italiana (RFI) and the Friuli-Venice Giulia Region, aimed to develop the preliminary project of the railway line between Trieste and Koper, using the structural funds provided under the INTERREG III Programme. The cross-border link to Slovenia, Venice-South Ronchi-Trieste-Divaca (2015) is included in the list of EU priority projects, as part of the priority Project 6, Railway axis Lion-Trieste-Divaca/Koper-Divaca-Ljubljana-Budapest-Ukrainian border (2015).

Slovenia

Railway

Also as part of Pan-European transport corridor no. V Slovenia is speedily renovating its railway infrastructure in addition to building a 25-kilometre direct railway line with neighbouring Hungary. The remaining 20 kilometres was constructed by Hungary. The single track, 20 km long, non electrified route was completed by the end of 2000, while the regular train service was introduced in Spring 2001, after which Slovenia and Hungary ceased to be the only two European countries without a direct railway link. The route on the Slovene side runs from Puconci via Hodos to the state border. The first stage involved the construction of a non-electrified single-track route for goods and passenger transport which enables trains to drive at a speed of up to 160 kilometres per hour. The Slovene section of the link costed around 750 M Slovene tolars. Depending on the volume of traffic on the new line, a second track might be constructed, with construction works being launched between 2010 and 2015. The new route is the shortest link between North-Adriatic ports and countries in Central and Eastern Europe. A second railway track on the Divaca - Koper route, southwest, will have been built by the year 2006 in line with the national programme of railway infrastructure development.

(**http://www.uvi.si/eng/slovenia/background-information/transport/index.text.html** - latest access: 22 June 2005)

Roads

Slovenia has recently finished the construction of the most difficult motorway sections needed: tunnelling and viaduct building is being carried out at the pass of Trojane – an 8.2 km long section, some 30 kilometres from the capital of Ljubljana towards the second largest city, Maribor, in the northeast. The largest viaduct in Slovenia was built, running from the edge of the Karst, in the southwest, to the coast. The new section of the A1 motorway between Trojane and Blagovica was officially opened on Friday, 12 August 2005, at 18.00, while the section was opened for traffic on Saturday – the 13th - morning. The completion of construction works on the Trojane tunnel, which is Slovenia's longest double-tube tunnel, also represents the completion of demanding construction in this section of the Slovenian motorway cross.

Slovenia is building motorways as part of the national programme of motorway construction, a document adopted by the National Assembly. A total of 198 kilometres of motorways were built in Slovenia from 1970 to 1994, which is prior to the current programme's implementation. Further 554 kilometres of motorways, highways and roads leading to the motorway network in the directions from east to west (corridor no. V) and north to south (corridor no. X) are to be built under the national programme by the end of 2004. Two thirds or slightly more than 400 kilometres of these roads will overlap with Pan-European transport corridor no. V.

Since the national programme began to be implemented in January 1994 slightly less than 200 kilometres of motorways have been constructed and opened to traffic. The greatest share of the rest of the roads in the national programme will have been opened to traffic by the end of 2004, while the completion of some sections will be delayed until 2007, or 2008. While the entire investment is estimated at US$ 4.5 billion (3.69 billion EUR), (excluding the cost of funding) the final sum is expected to be somewhat higher. The most important source of funds for the implementation of the national programme is what has been termed a petrol tax, which accounts for 20 percent of the retail price of a litre of petrol, with motorway tolls the second most vital source. Motorway tolls in Slovenia have already reached the European level.

(**http://www.uvi.si/eng/slovenia/background-information/transport/index.text.html**
latest access: 22 June 2005)

Terminals

On the basis of bilateral agreements Slovenia has signed, it is realistic to expect that the yearly limit of 10 M tonnes of cargo transhipped at the Port of Koper will be exceeded as early as 2005 (the limit is currently 8.5 M tonnes), a volume of freight necessitating a second track.

The Port of Koper will undertake the construction of a third pier, a project which will increase the port's loading capacity. The company is striving for a status of an entry/exit port for the European internal market, which would enable it to make a good use of modern terminals for cars, as well as those for fruit, vegetables and livestock. Furthermore, the port would avoid double tax control on the border between Slovenia and the EU. The main reason for aiming at a status of a European port is undoubtedly the EU's protective maritime transport policy, which invalidates all the advantages the port of Koper has in relation to EU ports, namely the shorter maritime route, cheaper land transport and good-quality services. By obtaining a status of a European port, customs and veterinary services as well as fitopathological and other inspectors would have a licence and the status to work on behalf of and for EU member states.

Furthermore, the Port of Koper wishes to be granted the status because it would enable the company to tranship groups of goods which are regulated in preferential agreements between the EU and developing countries. The company would also become an entry port for agricultural products. Preferential agreements are another protective instrument of the EU's maritime transport policy which prevents EU member states importing products made by the food-processing industry from developing countries via the Port of Koper; the use of EU ports for this purpose is specified in the agreements. Approval of the European Commission customs committee is a prerequisite for being granted the status of a European port. Prior to full EU membership, Slovenia could only expect to be granted the status if that is in the interest of EU member states.

Adria Airways carries around 800,000 passengers annually, flying regularly to 17 European cities (Amsterdam, Brussels, Copenhagen, Frankfurt, London, Moscow, Munich, Ohrid, Paris, Pristina, Sarajevo, Skopje, Split, Tel Aviv, Tirana, Vienna and Zurich) either on a daily basis or several times a week. Adria Airways airplanes also carry over 4,000 tonnes of cargo per year. The central Slovene airport, which is situated 20 kilometres north of the capital of Ljubljana, is managed by Aerodrom Ljubljana plc. Its services are used by nearly 100,000 passengers a year and over 11,000 tonnes of goods are annually handled by the company.

(**http://www.uvi.si/eng/slovenia/background-information/transport/index.text.html** - latest access: 22 June 2005)

Hungary

Roads

Traffic volumes as stated in February 2005

M0 ring road	39 517 vehicle/day
M3 motorway	19 412 vehicle/day
M7 motorway	26 061 vehicle/day
Main road no 4	10 000 vehicle/day
Main road no 7	8 730 vehicle/day

Border Crossings

Facilities

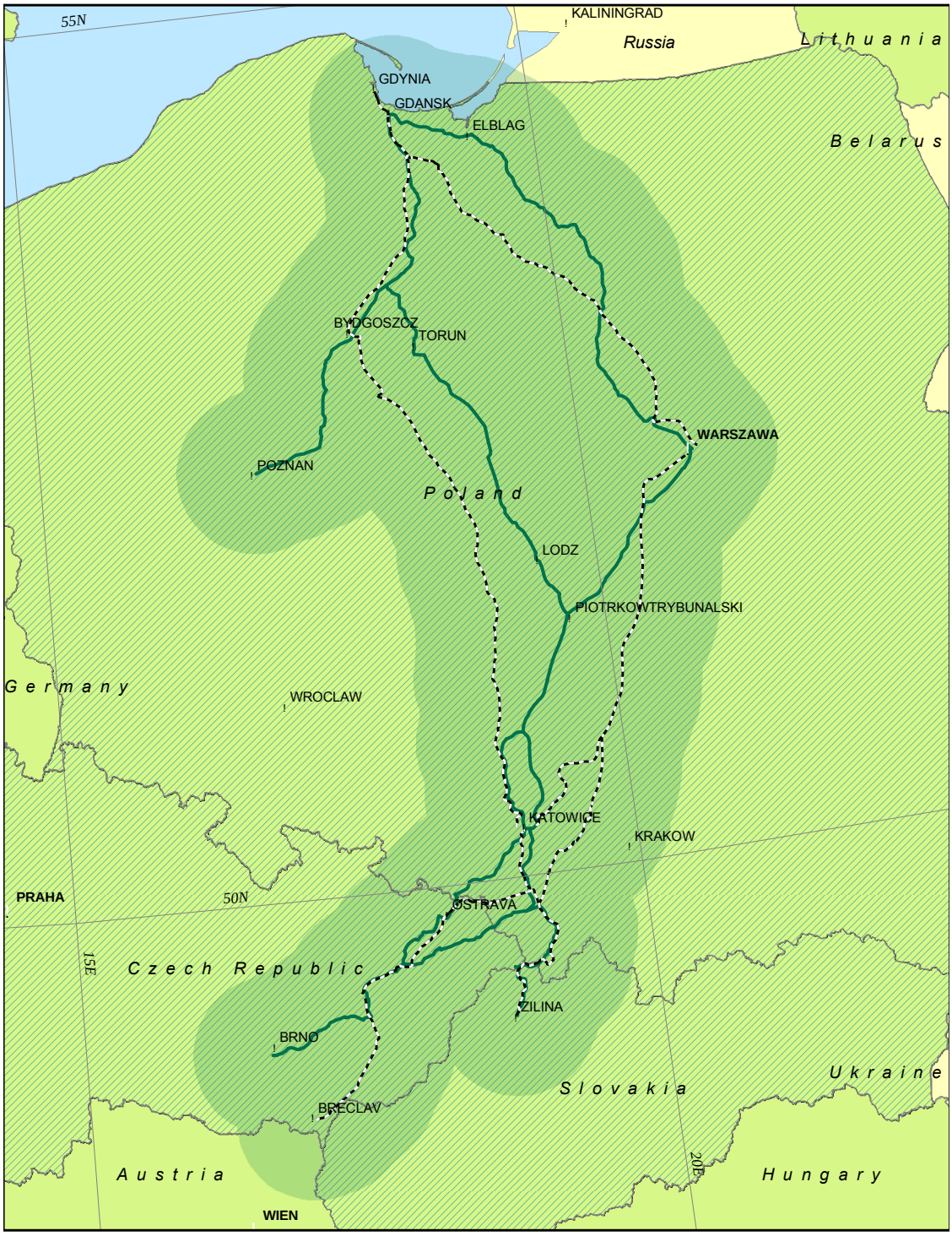
Technical obstacles/inefficiencies at border crossings
Due to different gauge of railways (1435mm and 1520 mm) it is necessary to adjust carriage on another gauge or reloading the cargoes. Gauge changing between Hungary and the Ukraine is necessary. Non harmonisation of maximum weight capacities of trucks between different countries also represent technical obstacle. On Bosnian territory there are several border crossing points to be constructed and to several others access is unsatisfactory. In the Case of Slovakia the available traffic data for the year 2003 regarding the Zahor-Uzhorod border crossing is the following: st. border loading on the road I/50 – Vyšné Nemecké in 2003 was: -total vehicles = 427 858 vehicles/year -passenger vehicles and motorbike = 357 346 vehicles/year -busses = 7429 vehicles/year -trucks = 63 083 vehicles/year others data apply from Customs directorate SR.

Customs Procedures

Administrative obstacles/inefficiencies at border crossings
Lack of single technology and norms at border crossing and customs procedures represent considerable obstacles. An example of this is the fact that each train has to stop for the execution of authorial examinations. The biggest part of goods coming from/to third countries for which EU regulations have to be taken under consideration. Elimination of Schengen borders between EU member countries would significantly improve current situation.

5.6 Corridor VI

5.6.1 Map, Alignment and Technical Features



Countries	Poland, Czech Republic, Slovakia
Transport modes	Railway, road
Infrastructure figures:	
Roads	1,880 km Poland –1445 km Czech Republic –375 km Slovakia – 60 km
Railways	1,800 km Poland – 1350 km Czech Republic – 400 km Slovakia – 50 km
Number of airports	6
Number of seaports and inner harbours	5
Number of border crossings	3 (road), 2 (rail)
Alignment	***Gdansk – Grudziadz/Warsaw – Katowice – Zilina***
Road	*Gdansk – Grudziadz – Torun – Wloclawek – Lodz – Piotrkow Tryb. – Czetsochowa – Katowice – Bielsko Biala – Zwardon/Skalite – Zilina* *Sub-alignment: Gdansk - Elblag – Warsaw – Piotrkow Tryb.*
Rail	*Gdynia – Gdansk – Tczew – Warsaw – Psary – Katowice – Bielsko Biala – Zwardon/Cadca – Zilina* *Sub-alignment for freight traffic: Tzew – Torun – Gliwice – Katowice*
	Branch A to Poznan
Road	*Grudziadz – Bydgoszcz – Poznan*
Rail	*n.a.*
	Branch B to Brno
Road	*Czestochowa – Katowice – Gorzyczki – Ostrava – Brno*
Rail	*Bielsko Biala – Zebrzydowice/Petrovice - Karvine – Ostrava – Breclav*

5.6.2 Overview of the General Development

Corridor VI begins in the Baltic port of Gdansk, and continues through Poland towards the industrial area surrounding Katowice. It then crosses the Slovak Republic border, finishing nearly 70 km further on, in the Slovakian town of Žilina. Because of its cross-connections with Corridor V, this route establishes important links from the Baltic, via Poland, towards both eastern and western Europe. A western branch of Corridor VI links Katowice to Brno.

Corridor IV was defined on the Pan-European Transport Conferences in Crete in 1994 and in Helsinki in 1997.

The Memorandum of Understanding was signed by the Ministers of Transport of the respective countries in October 1999 in Bratislava. It was signed by the European Commission in June 2000.

The task of the technical secretariat was assigned to the TEM Project Manager in Warsaw.

The corridor encompasses most of the TEN-T priority railway axis no. 23, running from Gdansk via Warsaw and Katowice to Vienna/Bratislava. It also encompasses most of the TENT-T priority motorway axis no. 25, running from Gdansk via Katowice to Vienna/Bratislava.

5.6.3 Infrastructure Development per Country and Mode of Transport

The status and the developments along Corridor VI are described as follows. The individual projects are also summarized in the following table.

Part of Corridor VI	Country	Location	Project Name	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor VI Road Projects									
Main Axis	Slovakia	Skalité - state border SR/Poland	Motorway D3 construction	3,2	1997	2008	Under construction		
Main Axis	Slovakia	Svrčinovec - Skalité	Motorway D3 construction	11,4	2007	2010	in preparation	172,2	Cohesion Fund (85 %), National Budget (15 %)
Main Axis	Slovakia	Čadca, Bukov-Svrčinovec	Motorway D3 construction	5,6	2008	2010	in preparation		
Main Axis	Slovakia	Čadca juh - Čadca, Bukov	Motorway D3 construction	5,0	1996	2004	existing	80,0	
Main Axis	Slovakia	Kysucké Nové Mesto - Čadca	Motorway D3 construction	11,6	2008	2012	in preparation	450,0	
Main Axis	Slovakia	Žilina, Brodno-Kysucké Nové Mesto	Motorway D3 construction	9,7	2008	2012	in preparation		
Main Axis	Slovakia	Žilina, Strážov - Žilina, Brodno	Motorway D3 construction	4,7	2007	2011	in preparation	7,7	National budget

Part of Corridor VI	Country	Location	Project Name	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor VI Railway Projects									
Main Axis	Poland	Warsaw - Gdynia	Project preparation of Modernisation of railway line E 65	348,0	2003	2006	Feasibility Study and technical documentation	14,9	ISPA, National Budget
Main Axis	Poland	Stage 1: Warsaw - Gdynia	Modernisation of railway line E 65,	348,0	2005	2007	Feasibility Study and technical documentation	42,8	FS, National Budget
Main Axis	Poland	Stage 2: Gdynia Station, LCS Nasielsk (66 km), Dzialdowo (53.7 km), Tczew (28 km)	Modernisation of railway line E 65, for speeds 160/200 km/h	148,0	2005	2007		480,3	FS, National Budget
Main Axis	Poland	Grodzisk Mazowiecki - Zawiercie	Modernisation of railway line E 65	224,0	2006	2010		228,3	National Budget
Main Axis	Poland	Grodzisk Mazowiecki - Katowice - Zebrzydowice/Zwardoń	Modernisation of railway line E 65	406,0	2006	2009	Feasibility study and technical documentation	55,0	FS, National Budget
Branch A	Poland	(Gdynia) – Tczew – Bydgoszcz – Inowrocław - Zduńska Wola Karsznice –Tarnowskie Góry – Pszczyna	Modernisation of railway line C-E 65	578,0	2006	2007	Feasibility study	4,6	TEN-T, National Budget
Main Axis	Slovakia	Žilina - Čadca	Modernisation	30,0	2007	2010		122,5	Cohesion Fund (70m EUR), National budget (45m EUR), Own sources (7,5m EUR)
Main Axis	Slovakia	Cadca- Skalité /Zwardoň -Border	Modernisation (Increasing speed limit, elektrification and new signaling systems)	21,0	1996	2005		47,3	PHARE (3,3m EUR), Bank loans (25m EUR), National budget (19m EUR)

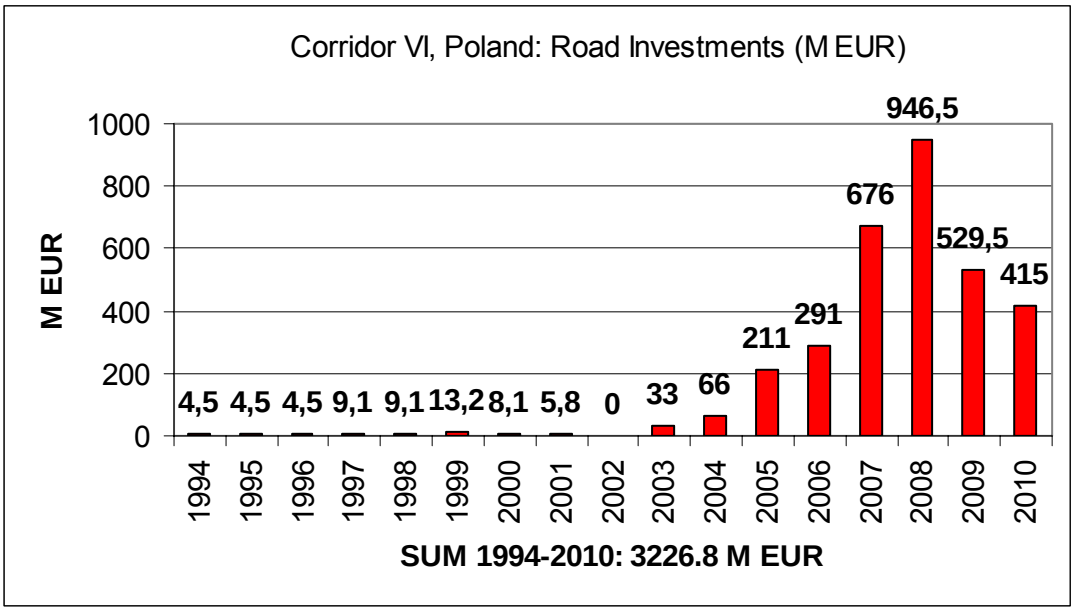
Poland

Road

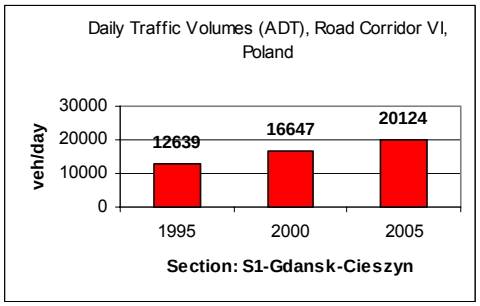
The Polish part of road Corridor VI has the following alignment:

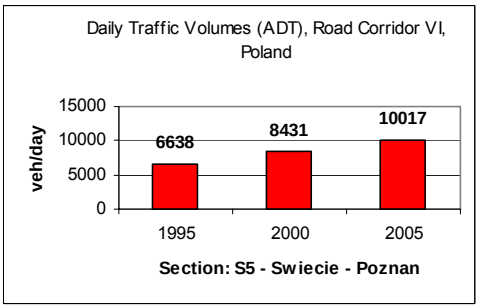
- Main Axis; Gdynia / Gdansk-Grudziadz-Torun-Łodz-Piotrkow Tryb.-Kosztowy - Bielsko Biala-Żywiec-Zwardon.
- Branch A: Grudziadz-Swiecie-Bydgoszcz-Gniezno-Poznan
- Branch B: Bielsko Biala-Cieszyn and Czestochowa-Gliwice-Gorzyczki

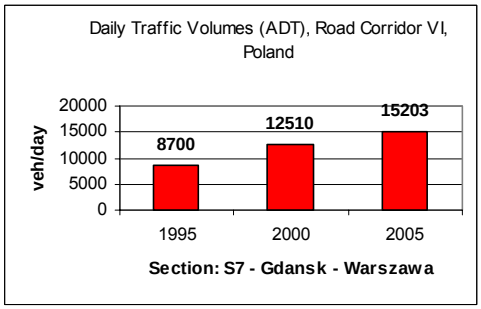
The annual investmensts in the road infrastructure at Corridor VI in Poland are summarized as follows:

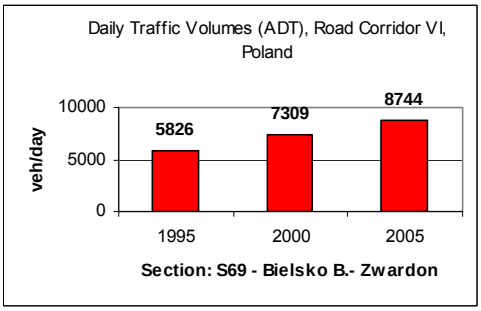


Daliy traffic volumes in 1995, 2000 and 2005 are summarized as follows:









In 1994, there were 20 filling stations along Corridor VI in Poland. In 2003, the number increased to 50 filling stations.

In 1994, there were 15 hotels or motels along Corridor VI in Poland. In 2003, the number increased to 26 hotels or motels.

Railway

The rail corridor has two alignments in Poland, with a total length of 1349 km:

- Line E 65: Gdynia - Tczew - Warsaw - Grodzisk Mazowiecki - Zawiercie - Katowice - Pszczyna - Zebrzydowice / Zwardoń
- Line C-E 65: Tczew - Bydgoszcz - Inowrocław - Zduńska Wola Karsznice - Tarnowskie Góry – Pszczyna

Railway Projects

The modernisation of railway line E 65, section Warsaw – Gdynia (348 km) is being prepared.

For a feasibility study, 14.9m EUR are spent in 2003-2006, financed out of the national budget and with ISPA funds.

In the first stage of this project, a technical documentation for the Warsaw – Gdynia line is being concluded in 2005-2007. The costs of 42.8m EUR are financed out of FS and the national budget

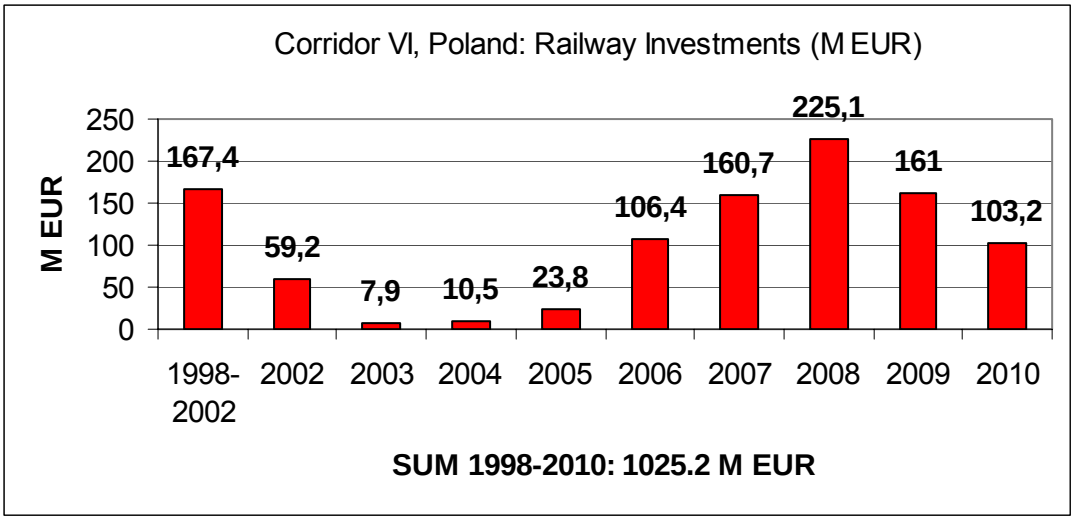
In the second stage of this project, the Gdynia station and the sections Nasielsk (66 km), Dzialdowo (53.7 km) and Tczew (28 km) are modernised in 2006-2010. The objective is to allow speeds of 160/200 km/h along 148 km of the line. The costs of 480.3m EUR are financed out of FS and the national budget

Railway line E 65, section Grodzisk Mazowiecki – Zawiercie (224 km), will be modernised in 2006-2010 for 228.3m EUR financed out of the national budget.

The modernisation of railway line E 65, section Grodzisk Mazowiecki - Katowice - Zebrzydowice/Zwardoń (406 km), is being prepared. In a first stage, a feasibility study is conducted in 2006-2009. Costs are 55m EUR, financed out of FS and the national budget.

The modernisation of railway line C-E 65, section (Gdynia) – Tczew – Bydgoszcz – Inowrocław - Zduńska Wola Karsznice –Tarnowskie Góry – Pszczyna (578 km), is being prepared. A feasibility study is conducted in 2006-2007. Costs are 4.58m EUR, financed out of TEN-T and the national budget.

The annual investmensts in the railway infrastructure at Corridor VI in Poland are summarized as follows:



Aviation

Currently, four airports are part of the Corridor in Poland. According to a statement of the technical secretariat, the following airports could be included in the existing corridor concept: Gdansk (Rebiechowo), Warsaw, Pyrzowice, Bydgoszcz, Poznań, and Katowice.

Slovakia

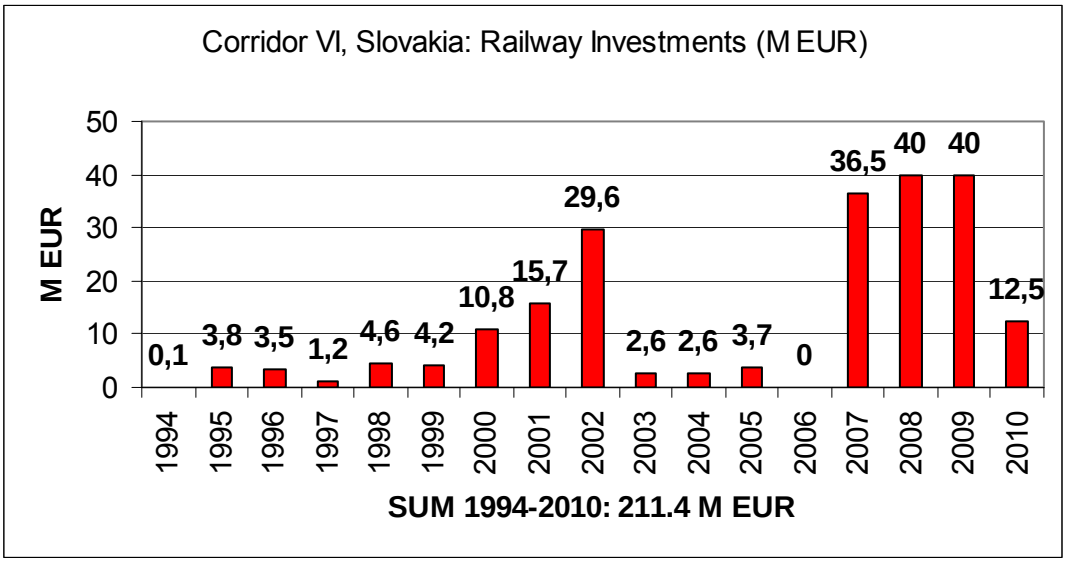
Road

The Slovak part of Corridor XI includes Motorway D3 which secures the north – south connection of Slovakia, as well as connections with Poland, Hungary and Austria.

Railway

The rail corridor has two alignments in Slovakia, with a total length of 51 km: The double-track section Žilina - Čadca and the one-track section Čadca - Zwardon (PL). Both sections are electrified.

The annual investmensts in the railway infrastructure at Corridor VI in Slovakia shown are summarized as follows:



Aviation

According to the country's representatives, the airport of Žilina should be included in the corridor concept.

Border Crossings

There are two border crossings: Cieszyn (PL) - Cesky Tesin (CZ) and Zwardoń (PL) - Skalite (SK)

There are no customs controls since May 1, 2004; however, Polen is not a Schengen state yet.

Facilities

Brodské -BreclavSkalité – Zwardoň Motorway D3 Border Crossing:

The border loading on Skalité - Zwardoň in 2003 was:

- Total vehicles = 236 871 vehicles/year
- Passenger vehicles and motorbikes = 217 704 vehicles/year
- Buses = 4 667 vehicles/year
- Trucks = 14 500 vehicles/year

No information regarding investments or waiting times was given.

Skalité/Zwardoň Rail Border Crossing:

Train inspection at passenger trains is taken in Zwardoň (PL) and freight trains one in Skalité. Documents are checked on-board.

There is no electronic connecton at this border. Thus, no train announcements can be sent out. Further, the technical inspection of carriages and wagons is considered a non-technical barrier having impacts on waiting times.

Slovakia invested 0.6m EUR in 1997 for this border crossing.

Waiting times for freight traffic in 1994-2003 was 250 (average) / 370-430 minutes (maximum). In 2004-2010, the waiting times are planned to be reduced to 117 minutes in average. No information regarding passenger traffic waiting times was given.

5.7 Corridor VII

5.7.1 Map, Alignment and Technical Features

Countries	Austria, Bulgaria, Croatia, Germany, Hungary, Moldavia, Romania, Serbia and Montenegro, Slovakia, the Ukraine
Transport modes	Inland waterway
Infrastructure figures:	
Inland waterway	2,415 km
Number of sea ports and inner harbours	44

5.7.2 Overview of the General Development

Corridor VII is the Danube waterway, a unimodal Corridor, established during the second Pan-European Transport Conference of Crete, in March 1994. The corridor is part of the TEN-T priority axis no. 18 – Rhine/Meuse-Main-Danube inland waterway.

Corridor VII consists of the Danube and its connecting canals. The Danube is the second largest river in Europe and is navigable over nearly 2,300 km of the 2,500 km of its total length, which makes it a prime prospect for a major, environmentally-friendly transport corridor, on a Northwest-Southeast axis. Numerous hydroelectric dams harness the power of this river, and at the same time ensure there is sufficient depth for inland water transport.

The Danube crosses Germany, Austria, Slovakia, Hungary, Croatia, Serbia and Montenegro, Romania, Bulgaria, Moldova and the Ukraine; however, its influence as inland waterway extends to various other countries like the Netherlands, the Czech Republic and Slovenia. The importance of the Danube is based not only on the fact that this is a main inland waterway route, but also on the function of its inland ports, which is not limited to inland shipping. Apart from the seaport Costanta, lying at the mouth of the Danube-Black Sea Canal, there are 44 main inner harbours situated along the Danube. The interlinkage of the major water axis with other rail/road corridors is very important to ensure the intermodal connectivity of the total network. Most of the ports along the Danube have rail connections as well as road connections, thus attracting combined transport.

Despite the opening of the new Main-Danube Canal, only 8 % of the Danube's capacity is actually used for transport. Use for transport is hindered at several points by bottlenecks caused by either insufficient width or depth; work to eliminate these bottlenecks is vigorously opposed by environmentalists, who fear the destruction of wildlife habitat. Possibilities to improve the situation were being investigated by the EU in the framework of the Fourth Framework Programme. The Danube has access to North Sea ports through the Rhine-Main-Danube inland waterway system, the backbone of Europe's inland waterway network.

On the upper and middle Danube four sections with frequently unfavourable water depths can be identified:

- Straubing - Vilshofen 69 km (km 2,318 - 2,249)
- Melk - Dürnstein 30 km (km 2,038 - 2,008) ("Wachau")
- Vienna - Bratislava 45 km (km 1,920 - 1,875)
- Palkovicovo - Budapest 165 km (km 1,811 - 1,646) ("Gabčikovo - Nagymaros")In summary, it has to be noted that the Danube upstream of Budapest does not satisfy the requirements and standards of European inland navigation due to several navigational bottlenecks.

The conditions downstream of Budapest are substantially better. Unfavourable water levels (less than 180 cm allowed draught) accur only on 8-10 days per year on the Hungarian section near Dunaújvàros (km 1,580), downstream from Dunaföldvár (km 1,547) and where the Danube divides Serbia and Croatia near Vukovar at km 1,307. Improvement could be achieved by small-scale local interventions of hydraulic engineering.

There are also numerous spots on the lower Danube downstream from the Iron Gates II hydro power station with periodical, but relatively short-lasting shallow water constraints.

The Danube traffic is strongly imbalanced from a geographical point of view. It is concentrated towards the West and near the mouth in the East, the central part being characterised by very low traffic volumes: in the western part, traffic is concentrated in Germany, Austria, the Slovak Republic and northern and central Hungary. In 1995,

Austrian traffic (loading and discharge) amounted to 6.4m tonnes, Slovakian traffic to 1.77m tonnes, Hungarian traffic to 2.3m tonnes; in the eastern part, the Ukraine traffic amounted in 1995 to 7.77m tonnes, Romanian traffic to 17.77m tonnes and Bulgarian traffic to 2.7m tonnes. The high traffic volume of the eastern part is mainly due to the maritime functions of some Danube ports like Galați, Brăila, Izmaïl and Reni.

The weak traffic figures in the central part of the Danube course (2.8m tonnes in the FR Yugoslavia in 1995) result mainly from the Yugoslav wars and from the related embargo.

The Kosovo war completely interrupted Danube traffic as the destroyed bridges in Novi Sad and Smederevo blocked navigation altogether.

The geographical pattern of the Danube traffic is therefore one of westbound traffic in its western part (trade flows to Western Europe) and of eastbound traffic in its eastern part (trade flows to the Black Sea region).

All 10 countries along the course of the Danube on the unimodal corridor are members of the steering committee of Corridor VII: Germany, Austria, Slovakia, Hungary, Croatia, Serbia and Montenegro, Romania, Bulgaria, Moldova and the Ukraine.

The Memorandum of Understanding, which has been signed on 6 September 2001 in Rotterdam, provides a description of the Corridor, the objectives of its developments and the areas of activities. Three working parties have taken up work:

- Infrastructure (chair Romania)
  - (Port)-Infrastructure
  - Navigational requirements
  - Intermodality on the corridor
- Logistics and legislation (chair Austria)
  - Future traffic scenarios
  - Transport and logistics costs
  - Efficiency and quality of service and products
- Fleet (chair Hungary)
  - Development of a typical fleet for the Danube
  - Interoperability with the rivers Rhine and Dnieper
  - Status analysis of the existing fleet in operation on the Danube

It has been decided to establish a common secretariat in Vienna, located at the TINA office, to work together on the development of multimodal transport in Central and South-Eastern Europe.

The Danube is also identified as a TEN-T priority axis (number 18: Rhine/Meuse-Main-Danube inland waterway axis).

5.7.3 Infrastructure Development per Country and Mode of Transport

Germany

The German Federal Ministry of Transport and Housing conducted an alternative analysis regarding a river development project between Straubing and Vilshofen. Investigations were undertaken for the evaluation of various alternatives for the project (before the political decision, extended hydrotechnical, ecological and economic investigations were undertaken). The three development alternatives were a solution with no locks (only river regulation measures), an alternative with one lock at Aicha and an alternative with three locks. It is considered important that the State and Regional Authorities (Bavaria) prefer the alternative with the least environmental pollution, i.e.without the construction of locks.

The next steps will be:

- Submission of the complete documents to the government of Niederbayern for the project approval procedure;
- 6 months period for carrying out the project approval process;
- Start of the planning permission procedures in different areas (2 years);
- Planning and construction phase (6-8 years).

Austria

For Austria, the RIS (River Information Service) and IT for inland navigation, as well as a river engineering project on the Danube downstream of Vienna are the most important developments regarding the Danube.

The RIS directive and the necessary legal framework for harmonised implementation of RIS, can be summarised in:

- Standardisation of ship equipment
- Standardisation of data exchange
- Minimum requirements for RIS

Slovakia

The Slovak section of the Danube is 172 km long; 22 km of it passes through the country and the rest forms a common border with Austria and Hungary. On this section the Gabčíkovo dam is in operation round the year; it ensures proper navigation conditions on about 60 km. However, there are still some parts of the river which have rather difficult navigation conditions. Limited navigation depth still remains the main problem for the waterway transport.

There are three ports on the Slovak part of the river: Bratislava, Komárno and Štúrovo, which were granted the status of “public ports”. The loading capacity of these ports is approximately 3.5m tons per year. The ports are operated and partly owned by a successor shipping company.

During the accession process, the Act on Inland Waterway Navigation of the Slovak Republic was harmonised with the Union’s Acquis. The harmonisation of the legal status of the Slovak Public Port Administration with the Union’s Acquis was another step.

Slovakia, like many other Danubian countries, faces problems from conflicts between the different viewpoints for development (financial and ecological), also reflected in the strategic plans of different authorities (like Ministry of Agriculture, Ministry of Environment, etc.).

Hungary

The Hungarian Ministry of Economy and Transport aims to improve functionality and navigability of the Danube. Moreover, problems are reported regarding the lack of intermodality between inland waterways and other modes.

Specifically, problems exist at the Ports of Györ-Gönyü and Budapest-Csepel. The first does not have a rail connection and this reduces its functionality. The Budapest-Csepel port (north of the city of Budapest) is also a main logistic centre with a great potential, serving about 2m transhipments annually. There are four ongoing or scheduled projects for this port:

- Construction of a link to the ring road of Budapest (M0)
- Upgrading the road connection to the city

- Reconstruction of the port itself
- Rebuilding of the Ro-Ro terminal (at the moment it operates with a provisional ramp)

Finally, projects for improving the rail and road facilities are planned at the port of Dunaújváros.

Croatia

In Croatia an Inland Navigation Development Centre (CRUP) has been established with the purpose of:

- Development and modernization of inland navigation through high-end technology solutions;
- Integration of inland navigation in modern high quality supply chains;
- Revitalization of Croatian rivers and ports;
- Improving the public image of inland navigation.

Serbia and Montenegro

Serbia is one of a few European countries without properly developed terminals of integrated transportation. However, some potential locations for building terminals for intermodal transport have been identified.

The State, together with the Stability Pact of South-Eastern Europe, has scheduled a detailed programme for priorities, which will be implemented within the coming years.

The problem with the destroyed bridge and navigability at Novi Sad will be completely solved by June 2005, according to the country's representatives and the European Agency for Reconstruction.

As conclusions, Serbia and Montenegro's representatives mentioned that on international waterways in Serbia the realization of following projects supported by foreign investors is necessary:

- the project for improving Danube waterway;
- the project of RIS;
- reconstruction of existing port infrastructure and equipment;
- the realization of project of combined traffic;
- the project of reconstruction and building a new fleet;
- the project for building objects for collecting waste materials from ships.

Bulgaria

According to the national plan of the country, the current and planned transport investment priorities in Bulgaria refer to:

- Successful completion of the main infrastructure projects
  - New bridge across the Danube at Vidin – Calafat
  - Reconstruction, development and extension of Sofia Airport
  - Reconstruction and electrification of the Plovdiv – Svilengrad railway line
  - New breakwater and bulk cargo terminal at the Port of Bourgas
  - Reconstruction and modernisation of the Port of Lom
  - Construction of a winter camp for Danube river vessels
- Liberalisation of transport services and establishing conditions for competitiveness through:
  - Concessions for ports, port terminals and airports
  - Privatisation of the state-owned companies
  - Licensing of private operators
- Modernisation of the fleet
- Infrastructure and shipping development along Corridor VII – an integral part of the Pan-European Transport Network
- Increase the inland waterway transport haulages – positive environmental impact
- Enhance safety, security and efficiency of the inland waterways transport
- Improvement of the navigable waterway and elimination of bottlenecks
- Involvement in the River Information System
- Fulfillment of the EU requirements for inland waterway transport

The liberalisation of transport and the promotion of concessions for ports are among the main concerns of Bulgaria. 23 ports and port terminals are under investigation for possible concession agreements. Procedures may include the involvement of stock exchanges if this can ensure satisfying solutions for all sides. BOT (build-operate-transfer), BOOT (build-own-operate-transfer), LDO (lease-develop-operate) are the most usual types of concessions to be followed.

Institutional changes are necessary to satisfactorily carry out this task. Liberalisation is promoted always in cooperation with other Ministries, like the Ministry of Regional Development, responsible for concession schemes for roads.

An essential infrastructure project along the Danube River is the construction of a new bridge across the Danube near Vidin. This project is included in the priority list of the Stability Pact for South East Europe and is also essential for the Pan-European Transport Corridor IV as well for the economic development of the region of Vidin. This project is being realised until 2007. The project costs of 230m EUR are covered by the State budget

(65m EUR), an EIB Loan (70m EUR), a KfW (Germany) loan (18m EUR), an ISPA grant (70m EUR), an AFD (France) grant (5m EUR), and a KfW (Germany) grant (2m EUR).

Another project included in the priority list of the Stability Pact for South East Europe is the reconstruction and modernisation of the Port of Lom. This project is essential for the Pan-European Transport Corridor VII as well for the economic development of the region of North-West Bulgaria and the development of the transport connections with Central European, Mediterranean and Black Sea countries. This project is being realised until 2006. The project costs of 29.7m EUR are covered by the State budget (8.2 m EUR), an EIB Loan (17m EUR) and a HiPERB (Greece) grant (4.5m EUR).

The construction of a winter camp for Danube River vessels near Rousse aims to enhance efficiency and navigation safety along the river Danube to improve water quality and the microclimate in the region and to increased employment in the Rousse region. This project is being realised until 2006 too. The project costs of 13.7m EUR are covered by the State budget (8.5m EUR) and a PHARE grant (5.2m EUR).

The following projects are in an application phase:

- Construction of a border crossing check point at Nikopol (Bulgaria) – Turnu Magurele (Romania)
- Improvement of the navigation on the Danube River in joint Bulgarian – Romanian parts
- Ecological monitoring system for protection of the Danube River waters
- Integrated cross-border monitoring system of the Danube River
- River Information System of the Danube River

Romania

In Romania the investment priorities for inland waterways are:

- the improvement of the Vraila straights,
- the improvement of the Batin Avia navigability and
- the establishment of an intermodal centre at Calafat.

The establishment of modern signalling and traffic management systems is among the main concerns of the Romanian government for inland waterways transport.

Moldova

The project for the construction of an oil terminal at Giourgiulesti is in process. The project has a total budget of 31m EUR. It is estimated that 60 % of the project have been completed. The aim of this project is the attraction of a strategic investor for the

completion of the construction and the exploitation of an oil terminal on river Danube near the village of Giurgiulesti.

The construction scheme of the passenger and freight port near the village of Giurgiulesti is being planned.

The Ukraine

The main Danubian ports are Izmail, Reni and Ust-Dunaisk.

The country's representatives describe the latest development of the inland waterway transport as follows:

Since 1998, the Ukraine has practically lost all transit freight flows in the direction "sea-river". The stop of navigation on the Ukrainian part of Corridor VII in the delta of the Danube has caused significant losses for Ukrainian shippers, seaports and shipping companies, mainly because of the necessity to undertake non-profitable transport operations on other routes (mostly Sulinskiy channel). The same problem exists for the operations of the shipyards and dockyards of Izmail and Kilia, which have lost their traditional clients. High prices for the passage through Sulinskiy channel make these shipyards non competitive. The decrease of traffic has negative impacts on the region's development and the employment records too.

The extension of Corridor VII through Black and Azov Sea, Volgo-Don shipping channel to the Caspian Sea is considered an advantage. This can create an efficient waterway link between Eastern-Asian regions and Western Europe. This issue is currently under consideration by the Ministries of Transport of the Ukraine and the Russian Federation.

5.8 Corridor VIII

5.8.1 Map, Alignment and Technical Features

Countries	Greece, FYR Macedonia, Bulgaria, Turkey, Albania, Italy
Transport modes	Road, rail, maritime navigation, aviation
Infrastructure figures:	
Railways	1.270 km
Roads	960 km
Number of airports	5
Number of seaport and inner harbours	6 (sea)
Number of border crossings	4
Border Crossings	1) Cafasan (Qaf e Thanes) – Kapshtice/Kristallopigi (AL – GR) 2) Cafasan (Qaf e Thane) – Struga (AL – MK) 3) Kriva Palanka – Kyustendil (MK – BG) 4) Svilengrad – Ormenion (BG – GR)

5.8.2 Overview of the General Development

Pan-European Corridor VIII was appointed together with the other eight corridors at the second Pan-European Transport Conference on Crete in 1994. This corridor links the Adriatic-Ionian region with the Balkan region and the Black Sea. Transport infrastructure in South-East Europe is traditionally weak. Politically, the area has suffered from the collapse of the Federal Republic of Yugoslavia and the wars during the last two decades as a consequence thereof. After the international intervention in this area, Corridor VIII will bring further stabilisation by supporting industrial and commercial co-operation.

The Memorandum of Understanding (MoU) for the Pan-European Transport Corridor VIII has been signed in Bari on September 9, 2002 by Albania, Bulgaria, FYR Macedonia, Greece, Italy and Turkey. It gave new impulse to the accomplishment of the Corridor.

The task of coordinating and promoting the initiatives for the realization of Corridor VIII are carried out by the steering committee (SC), comprised of Member States' representatives and chaired by Italy. Since the signing of the MoU, there have been annual steering committee meetings.

The first meeting of the steering committee was held in Rome in June 2003 together with representatives of DG TREN and CEI. A standing technical secretariat, funded by the Italian government, was established on this occasion. The secretariat, after the official inauguration in the presence of Member States' Transport Ministers, has been located in Bari at the Fiera del Levante headquarters.

A second steering committee meeting was held in Bari at the Fiera del Levante headquarters on December 6, 2004 in the presence of the representatives of Albania, Bulgaria, FYR Macedonia, Greece and Turkey.

The third steering committee was held at the Tirana Palace of Congress on May 27, 2005.

Support activities to the steering committee are handled by the technical secretariat, assisting member countries in defining projects geared towards completing the major axis of Corridor VIII, as well as running required activities for raising relevant funds. The secretariat provides operational support to the steering committee, the latter being in charge of establishing procedures and issues, be it technical, administrative or financial activities. Following is a list of Corridor VIII secretariat tasks:

- Support of the steering committee;
- Organise steering committee meetings (set-up and follow-up) as well as coordinate the activities of units working on road, railway and waterway transportation;
- Liaise with member countries to identify and develop corridor-oriented infrastructure projects, hence defining relevant financial expenditures;
- Promote the establishment and introduction of projects to the European Commission and international financial institutions, so as to secure necessary funds;
- Supervise projects and research by developing promotional activities for programmes and projects concerning the corridor within the European Union, aiming at mutual coordination with other Pan-European transport corridors;
- Define terms and specifications for carrying out tenders and research required by Article IX of the Memorandum of Understanding;
- Execute procedures for the selection and supervision of research, and settle relevant expenses;

- Maintain contacts with the private sector, identifying project-oriented public-private cooperation activities;
- Furnish public relation services and information on opportunities regarding tenders (also through a web site).

5.8.3 Developments along the Corridor between 1994 and 2010

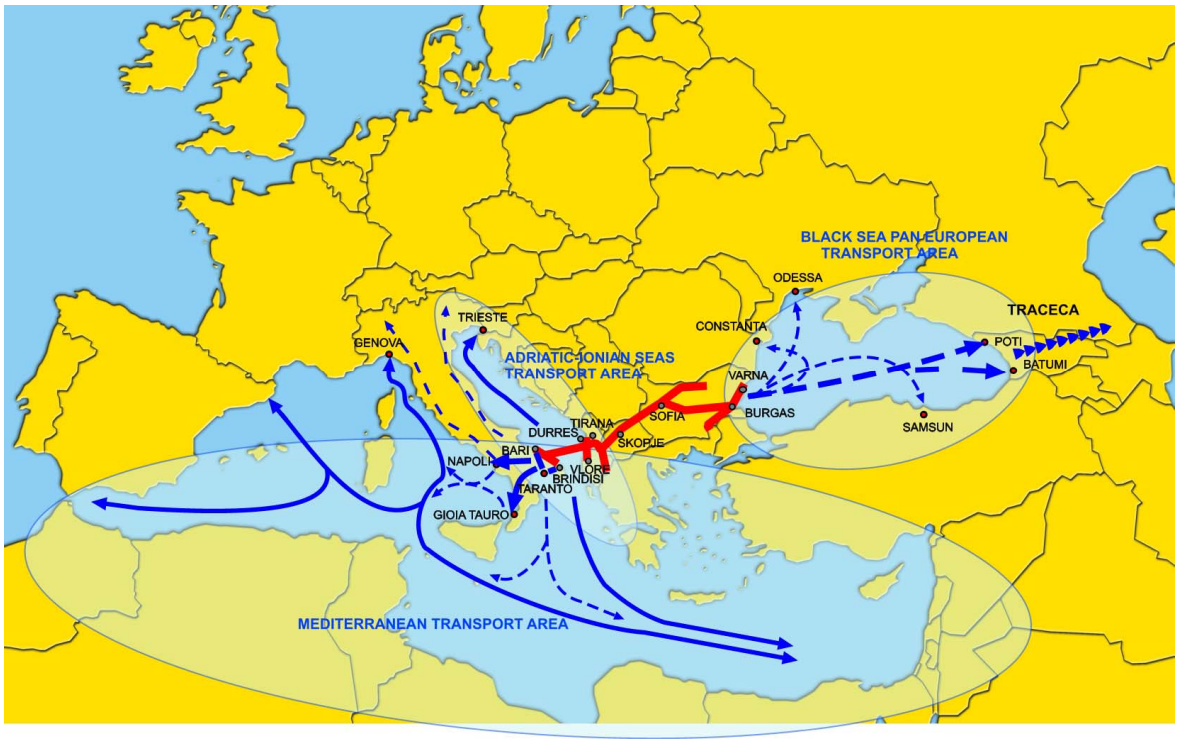
At the second steering committee meeting, the technical secretariat introduced the 2005-2006 Plan of Action:

Among the main future activities, RFI (Italian National Railway Agency) submitted a tender for a feasibility study relevant to the entire Corridor VIII railway system. ANAS (Italian National Road Agency) confirmed its availability to participate in Corridor VIII projects. Representatives of member countries submitted a status report reporting on civil engineering activities within each country's borders, with particular emphasis to cross-border areas.

The steering committee finally approved the 2005-2006 Plan of Action as submitted by chairman Fontana. Immediate activities include the "Railways Cross Borders pre-feasibility Study for Corridor VIII", granted to RFI and co-financed by CEI-Central European Initiative (www.ceinet.org). The study, funded by Italian law 84/2001 for the stabilisation, reconstruction and development process in the Balkans, will focus on cross-border rail connections along the main Corridor VIII axis (Albania-FYR Macedonia-Bulgaria), which is currently the most critical issue regarding Corridor VIII main route.

According to the Member States of Corridor VIII there is a wish to extend the alignment from Burgas and Varna across the Black Sea to Poti and Batumi as well as to the Motorways of the Sea (Southern and Western Mediterranean) and the main Italian ports, Tanranto, Gioia, Tauro and Naples. The connection with TRACECA towards the Caspian Sea and the Caucasus region is to be supported by adequate and compatible intermodal infrastructures and logistic systems on both sides of the Black Sea.

The revision of the TEN-T guidelines has identified 30 priority projects and axes like Motorways of the Sea. The connection of Corridor VIII to the MoS could be improved from the ports of Bari and Brindisi to Taranto as well as to the ports of Gioia, Tauro and Naples via railway, road and intermodal infrastructure.


BLACK SEA PAN-EUROPEAN
TRANSPORT AREA
ODESSA
TRACECA
CONSTANTA
POTI
BATUMI
TRIESTE
GENOVA
ADRIATIC-IONIAN SEAS
TRANSPORT AREA
VARNA
SOFIA
BURGAS
SAMSUN
TIRANA
DURRES
SKOPJE
BARI
NAPOLI
VLORE
BRINDISI
TARANTO
GIOIA TAURO
MEDITERRANEAN TRANSPORT AREA

Part of Corridor VIII	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Road									
main axis	Albania	Durres - Rrogozhine		28		2001	completed	21,7	94 % EU grants
main axis	Albania	Durres - Rrogozhine	study on possible extension (widening)	28			planned	30	
main axis	Albania	Durres bypass		4			planned	5	design financed by the EU
main axis	Albania	Elbasan - Librazhd		31		2005	ongoing	24,5	EBRD 17m EUR, Italy Gov. 3.8m EUR, CEI 1,7m EUR, GoA 2m EUR
main axis	Albania	Elbasan bypass		13			planned	48	pre-feasibility study financed by the Albanian government
main axis	Albania	Fier - Vlore		43			planned	94	design financed by Italian government, implementation by EIB (21m EUR)
branch 1	Albania	Korce - Kapshtice		33		2002	completed	21,7	94 % EU grants
main axis	Albania	Librazhd - Qukes		20		2002	completed	15,8	World Bank 12,6 M USD GoA 3,2 M USD
main axis	Albania	Lushnje - Fier		23	2005		planned	24,5	Italian government
main axis	Albania	Paper - Elbasan	construction	6,5	2004	2005	ongoing	9	state budget
branch 1	Albania	Pogradec - Korce		38,7			planned	44	design financed by the EU
branch 1	Albania	Pogradec - Korce		39				44	
branch 1	Albania	Qafe Thane - Pogradec		24,6			planned	44,5	feasibility study (0,2m EUR) and design (1,7m EUR) financed by the EU
main axis	Albania	Rrogozhine - Elbasan		36		2005	ongoing	37	24m EUR EIB loan, GoA
main axis	Albania	Rrogozhine - Lushnja		19		2002	completed	21,4	

Part of Corridor VIII	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Road									
main axis	Albania	Rrogozhine bypass		4			planned	3	design financed by the EU
main axis	Albania	Sukth - Durres		10		2003	completed	23	EIB
main axis	Albania	Vore - Sukth		14,3		2001	completed	14,20	94,4 % EU grants
main axis	Albania	Vore - Sukth - Durres	supervision of construction works			2003	completed	2,14	100 % EU grants
main axis	Albania	Vore secondary roads		5			planned	5	design financed by the EU
main axis	FYROM	Gostivar - Kicevo		40		+5 years	planned	200	
main axis	FYROM	Hipodrom - Saraj	construction of Skopje bypass, two lane dual carriageway	26,5				120	
main axis	FYROM	Kriva Palanka - Rankovci		22		+3 years	planned	100	
branch 3	Greece	Bulgarian border - Ormenion	road from 1994 will be upgraded	6		2007			

Part of Corridor VIII	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Railway									
main axis	Albania	Durres - Qafe Thane	complete rehabilitation	145			planned	90	
main axis	Albania	Durres - Tirana	restoration	35			planned	65	financing commitment by General Electric
branch 1	Albania	Pogradec - Kaphstice (Greek border)	construction of missing link	35			upgrade needed		
main axis	Albania	Qafe Thane - Lin (Macedonian border)	construction of missing link	3			planned	7	
main axis	Albania	Rrogozhine - Vlora	complete rehabilitation	80			planned	60	
main axis	Bulgaria	Border - Gueshevo	design, construction, upgrading 1,5 km tunnel	2,5	2008	2010	upgrade needed	10	
main axis	Bulgaria	Gueshevo - Radomir	design, construction	88	2006	2009	upgrade needed	250	
main axis	FYROM	Albanian border - Struga	construction of new line and terminal	12		2010	planned	70	
main axis	FYROM	Beljakovci - Kriva Palanca (Bulgarian border)	construction	37		2010	planned	78	
main axis	FYROM	Beljakovci - Kriva Palanca (Bulgarian border)	construction	37			recent	46	

Part of Corridor VIII	Country	Location	Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Railway									
main axis	FYROM	Kicevo - Gorce Petrov	reconstruction, electrification, signalisation	102		+10 years	upgrade needed	62	
main axis	FYROM	Kriva Palanka - Bulgarian border	construction of new line	23		2015	planned	113	
main axis	FYROM	Kumanovo - Beljakovci	construction	30		2010	planned	24	
main axis	FYROM	Kumanovo - Beljakovci	reconstruction	30			recent	4	
main axis	FYROM	Lin - Kicevo	construction of missing link	66			upgrade needed	186	
main axis	FYROM	Struga - Kicevo	construction of new line	54		2015	planned	130	
branch 1	Greece	Border - Kristallopigi	construction of missing link	12			upgrade needed		
branch 3	Turkey	Bulgarian border - Istanbul (Halkali)	construction	253	2007	2010	upgrade needed	450	
branch 3	Turkey	European side of Istanbul - Asian side of Istanbul	construction	63		2009	upgrade needed	650	
branch 3	Turkey	Tekirdag - Büyükkaristiran	construction	48	2006	2008	planned	90	

Part of Corridor VIII	Country	Location	Description	Terminal type	Project Start	Project End	Status	Costs (M EUR)	Source
Terminal (port, airport, inner harbour etc.)									
main axis	Albania	Port of Durres	design, supervision and construction	ferry		2002	completed	5,4	100 % EU grants
main axis	Albania	Port of Durres	general development	sea				23	
main axis	Albania	Port of Durres	sea ferry terminal	sea	2006		planned	23,7	7,2 % EU grants, financial commitment by EIB and EBRD
main axis	Albania	Port of Durres	container terminal and storage area	sea			planned	30	feasibility study financed by USTDA, design and tender documents financed by the World Bank
main axis	Albania	Port of Vlora	development, implementation of Master Plan	sea	2005		planned	15,3	design, construction and supervision of the works will be financed by the Italian government
main axis	Albania	Rinas Airport	concession contract	air	2005		planned	82	
main axis	FYROM	Skopje Airport	reconstruction and extension of the platform for 15 parking places for different types of aircrafts; construction of new petrol station, parking, access road	air			completed	4	
main axis	FYROM	Skopje Airport	construction of station for separation of fluids; construction of technical building, VIP and CIP salons, water supply, electricity, access road	air			completed	5	
main axis	FYROM	Skopje Airport	reconstruction of the terminal building, access road, visitors' parking, administrative and technical facilities	air		2010	planned	60	
main axis	FYROM	Skopje Airport	construction of administration building for the police, customs and technical services						

Border Crossings

Facilities

Technical obstacles/inefficiencies at border crossings
(Albania): 1. Lack of containers' terminal in the Port of Durres; 2. Lack of containers' terminal in Quafe thane, border crossing point with FYROM; 3. Lack of modern equipments for passengers' controls and customs in general.
(Greece): 1. lack of proper infrastructure; 2. Safety problems
(FYROM): Unsatisfactory infrastructures.
(Turkey): 1. Insufficiency of existing laws and legal regulations (agreements concerning the stations at border crossing, legislation etc.); 2. Lack and insufficiency of information flow between border crossing points and stations; 3. Train control procedures applied at border stations during train reception and their dispatching do not meet requirements of contemporary international railway transport (railways, customs, police, etc.); 3. Border stations are lacking technical standards and are insufficient from an infrastructural point of view.

Customs Procedures

Project in 2005: the "Railways Cross Borders pre-feasibility Study for Corridor VIII", granted to RFI and co-financed by CEI-Central European Initiative (www.ceinet.org). The study, funded by Italian law 84/2001 for the stabilisation, reconstruction and development process in the Balkans, will focus on cross-border rail connections along the main Corridor VIII axis (Albania-FYR Macedonia-Bulgaria), which is currently the most critical issue regarding Corridor VIII main route.

Administrative obstacles/inefficiencies at border crossings
(Albania): 1. Difficulties in the issuance of visas to citizens; 2. Tardiness in carrying out customs procedures between Countries; 3. Unification of procedures between Countries.
(Greece): 1. Insufficient cooperation between the responsible Authorities; 2. Responsible Authorities are not properly staffed and equipped; 3. Legislative barriers.
(FYROM): Legal regulations.
(Turkey): 1. Lack of modern technology and equipment. 2. Lack of personnel. 3. Problems relating to rolling stock.

5.9 Corridor IX

5.9.1 Map, Alignment and Technical Features

Countries	Finland, Russia, Belarus, the Ukraine, Moldova,

	Romania, Bulgaria, Greece, Lithuania
Transport modes	Railway, road, aviation, navigation
Infrastructure figures: Roads Railways	 5820 km 6500 km
Alignment	*Helsinki – St. Petersburg – Pskov/Moscow – Kiev – Ljubasevka – Chisinau – Bucarest – Dimitrovgrad – Alexandroupolis*
Road	*Helsinki – Vaalimaa/Torfyanovka – St. Petersburg – Tver – Moscow – Tula – Orel – Sopyc - Kiev* *(**Sub-alignment:** St. Petersburg – Pskov – Lobok/Ezjarysca - Vicebsk – Orsa – Mahileu - Homel – Novaja Huta - Cernihiv – Kiev)* *– Bila Cerkva – Ljubasevka – Huljanka/Dubau - Chisinau – Albita – Buzau – Focsani - Bucarest – Giurgiu/Ruse – Stara Zagora – Haskovo – Svilengrad/Ormenio –Alexandroupolis* *(**Sub-alignment** Haskovo – Makaza – Alexandroupolis)*
Rail	*Helsinki – Vainikkala/Buslovskaya – St. Petersburg – Tver – Moscow – Obninsk – Kaluga – Brjansk – Seredyna-Buda – Konotop – Kiev* *(**Sub-alignment:** St. Petersburg – Lobok/Ezjarysca – Vicebsk – Orsa – Mahileu – Zlobin – Homel – Kraucouka/Dobrjanka – Cernihiv – Kiev)* *– Vinnyjca – Rozdilna – Kucurham/Pervomaise – Tiraspol – Chisinau – Ungheni – Iasi – Bacau – Focsani – Buzau – Ploiesti – Bucarest – Giurgiu/Ruse – Stara Zagora – Svilengrad/Ormenio – Alexandroupolis*
	Branch A from Klaipeda
Road	*Klaipeda – Kaunas – Vilinius – Medininkai – Minsk – Babrujsk - Homel*
Rail	*Klaipeda – Siauliai – Vilnius – Kena – Minsk – Babrujsk – Zlobin*
	Branch B from Kaliningrad
Road	*Kaliningrad – Mamonovo/Kybartai – Kaunas*
Rail	*Kaliningrad – Mamonovo/Kybartai – Kaunas – Vilnius*
	Branch C to Odessa
Road	*Ljubasevka – Odessa*
Rail	*Rozdilna – Odessa*

5.9.2 Overview of the General Development

Corridor IX was defined on the Pan-European Transport Conferences in 1994 and 1997.

The Memorandum of Understanding was signed by the Ministers of Transport of the respective countries and by the European Union in 1995.

The corridor is divided into three sections:

- The **Northern Section** consists of the road/rail transport route between Helsinki-St.Petersburg-Moscow.
- The **Middle Section** consists of the road/rail transport route running from Moscow and from St. Petersburg to Odessa including the branches from Kaliningrad and Klaipeda.
- The **Southern Section** consists of the road/rail transport route between Odessa and Alexandroupolis.

5.9.3 Developments along the Corridor between 1994 and 2010

Northern Section

Over the last decade there has been continuous development work on both sides of the border indicating the long-term commitment of the governments to the project. Economic activity both in Russia and Finland is largely situated in the vicinity of Corridor IX, and it is therefore evident that transport investment ensuring smooth freight movements has promoted economic development of the area. Corridor IX is also an important transit route between mainland EU and Russia.

Corridor IX Northern section projects include the creation of a fast rail link between Helsinki and St. Petersburg and the construction of a ring road around St. Petersburg. The most distant extensions of Corridor IX Northern section include the Siberian railway line, links to Kazakhstan and a new north-south corridor to Iran and India, which is under intensive development work.

Ongoing projects include:

- The RailCom (Railway Communications) project aiming at exchanging all waybill information electronically between the Finnish and Russian Railways by using the EDIFACT standard. The first phase of the project is finished and the message transmission is in full use.
- The RailTrack (Railway Tracking and Tracing) project aiming at developing a consignment tracking system to be used in Russia and Finland as well as in other parts of the EU. The system has been used in Finland, and service covering Russian traffic was ready by the end of 2004.
- The RailCust (Railway and Customs Cooperation) project aiming at speeding up the railway border crossing from Finland to Russia by using electronic data exchange. The agreement on electronic data exchange has been signed and the action plan is under consideration.
- The EuroRussia project aiming at creating better production, investment and cooperation preconditions for EU companies in Russia. The EuroRussia company investments are proceeding well and the results achieved so far are positive.

- The Elog-EU–RUS project identifying the major problems in logistics information exchange in EU–Russia trade. Recommendations for short-term and long-term actions for improving logistics information exchange are given.

5.9.4 Infrastructure Development per Country and Mode of Transport

The characteristics and the developments regarding the infrastructure are described as follows. The single projects along Corridor IX are summarized in the following table.

Part of Corridor IX	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor IX Road Projects									
Northern	Finland	Lentoasemantie - Tikkurila	Ring Road III upgrade	5,0		2005		60,0	
Northern	Finland	Porvoo- Koskenkylä	Upgrade to motorway	25,0		2001		61,0	
Northern	Finland	Vanhakartano-Lentoasemantie	Ring Road III upgrade	12,0		2015		145,0	
Northern	Finland	Koskenkylä- Kotka	Upgrade to motorway	54,0		2015		150,0	
Northern	Finland	Hamina bypass road	Bypass road construction	15,0		2015		60,0	
Northern	Finland	Hamina- Vaalimaa	Upgrade to motorway	30,0		2015		73,0	
Northern	Finland	Helsinki-Vaalimaa	Motorway construction	181,0		2015		410,0	
Northern	Russia	Vyborg bypass	Bypass road construction, second stage	15,0		2003		19,0	
Northern	Russia	Vyborg bypass	Bypass road construction, third stage	7,0		2005		18,0	
Northern	Russia	Vyborg- St. Petersburg	Road upgrade	80,0		2010		250,0	
Northern	Russia	St. Petersburg	Eastern bypass road of St. Petersburg	26,0		2007		950,0	
Northern	Russia	St. Petersburg- Moscow	Upgrade to toll motorway	650,0				4000-5000	
Southern	Romania	Daia-Giurgiu (DN 5)	Road upgrade	10,5	1995	1999		2,4	IBRD and national budget
Southern	Romania	Bucharest-Giurgiu (DN 5)	Road upgrade	13,6	2004	2006		12,8	ISPA and national budget
Southern	Romania	Bucharest-Giurgiu (DN 5)	Road upgrade	22,3	2004	2005		21,0	ISPA and national budget
Southern	Romania	Bucharest-Urziceni (DN 2)	Road upgrade	64,5	1994	1997		22,6	IBRD and national budget
Southern	Romania	Buzau-Ramnicu Sarat (DN 2)	Road upgrade	47,5	1998	2000		28,6	IBRD and national budget
Southern	Romania	Crasna-Tecuc	Road upgrade	81,6	2006	2007		41,0	EIB and national budget
Southern	Romania	Ramnicu Sarat-Tisita (DN 2)	Road upgrade	48,1	2000	2002		18,5	EIB and national budget
Southern	Romania	Tecuci bypass (DN 24)	Bypass road construction	5,5	2003	2004		3,2	PHARE
Southern	Romania	Tecuci-Tisita (DN 24)	Road upgrade	23,4	2000	2002		13,8	EIB and national budget
Southern	Romania	Urziceni-Buzau (DN 2)	Road upgrade	49,1	1998	2000		21,9	IBRD and national budget
Southern	Romania	Crasna- Albita (DN 24 B)	Road upgrade	49,0	2006	2008		26,1	ISPA and national budget

Part of Corridor IX	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor IX Road Projects									
Southern	Bulgaria		Road rehabilitation	285,0					Transit Roads Rehabilitation Programmes 1, 2, and 3
Southern	Bulgaria	Rousse - Gyurgevo Bridge (over the Danube)	Bridge rehabilitation			1997			PHARE
Southern	Bulgaria	Podkova – Makaza	Road construction	18,0			under construction		PHARE CBC Bulgaria/Greece
Southern	Bulgaria	Kardzhali – Podkova	Construction of Road I-5 (second phase)						
Branch A	Lithuania	Kaunas-Klaipėda	Road upgrade	47,5	1997	1998		4,2	EBRD/EIB (3.0m EUR) and national budget (1.2m EUR)
Branch A	Lithuania	Vilnius-Kaunas	Road upgrade	12,4		1998		1,9	PHARE
Branch A	Lithuania	Various sections	Road upgrade	12,1		1999		2,4	World Bank (1.8m EUR) and national budget (0.6m EUR)
Branch A	Lithuania	Various sections	Road upgrade	118,7	2001	2002		25,5	ISPA (19.1m EUR) and national budget (6.4m EUR)
Branch A	Lithuania	Various sections	Road upgrade	70,9	2003	2004		19,7	ISPA (14.8m EUR) and national budget (4.9m EUR)
Branch A	Lithuania	Various sections	Road upgrade	104,3	2004	2006		54,1	Cohesion Fund (46.0m EUR) and national budget (8.1m EUR)
Branch A	Lithuania	Various sections	Road upgrade	104,3	2007	2009		38,2	Cohesion Fund (32.5m EUR) and national budget (5.7m EUR)
Branch A	Lithuania	Various sections	Road upgrade including construction of Vilnius Southern bypass	88,0	2010	2012		75,6	Cohesion Fund (64.3m EUR) and national budget (11.3m EUR)
Branch A	Lithuania	Kybartai-Klaipeda	Road upgrade	423,0			completed	82,0	EU grants (59m EUR)
Branch A	Lithuania	Kybartai-Klaipeda	Road upgrade	423,0			foreseen	137,0	
Branch B	Lithuania	Vilkaviškis bypass	Bypass road construction	6,3	1998	1999		1,9	EIB (1.4m EUR) and national budget (0.5m EUR)
Branch B	Lithuania	Marijampole-Vilkaviskis	Road upgrade	14,9	2004	2005		6,5	Cohesion Fund (5.5m EUR) and national budget (1.0m EUR)
Branch B	Lithuania	Vilkaviskis-Kybartai	Road upgrade	9,1	2005	2006		5,6	Cohesion Fund (4.8m EUR) and national budget (0.8m EUR.)

Part of Corridor IX	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor IX Railway Projects									
Northern	Finland	Kerava- Lahti	High-speed passenger rail project Helsinki- St.Petersburg	63,0	2002	2006		336,0	
Northern	Finland	Lahti - Luumäki	Upgrade for high-speed traffic	120,0	2007	2010		150,0	
Northern	Finland	Luumäki- Vainikkala	Additional track	32,0		2015		85,0	
Northern	Russia	St.Petersburg-Moscow	Railway construction	661,0		2006			
Northern	Russia	Buslovskaja -St.Petersburg	Upgrade for high-speed traffic	173,0				200,0	
Branch A	Lithuania	Kena border crossing (LT/Belarus)	Upgrade	1,0	2004	2006		15,0	
Branch A	Lithuania	Kena-Kybartei	Upgrade	240,0		2010		500,0	
Branch A	Lithuania	Kybartai-Klaipeda	Upgrade	537,0			completed	111,0	EU grants (50m EUR)
Branch A	Lithuania	Klaipeda	Upgrade of railway and port interface		2004	2010		50,0	
Branch A	Lithuania	Vilnius-Kybartai	Upgrade	227,0		2010		554,0	
Branch A	Lithuania	Kaisiadorys-Siauliai	Upgrade	145,0		2015		322,0	
Branch A	Lithuania	Siauliai-Klaipeda	Reconstruction	165,0		2015		380,0	
Branch B	Lithuania	Kaliningrad/LT border crossing	Upgrade	1,0		2007		40,0	
Southern	Romania	Bucharest-Ploiesti	Rehabilitation	58,0	2001	2003		190,0	EIB (135m EUR) and national budget (55m EUR)

Northern Section

The basic financing for transport infrastructure will come from the national (transport) budgets of Russia and Finland. Projects on the Finnish side are eligible for EU financing (TEN financial aid). The Finnish section of Corridor IX north is part of the Priority Project "Nordic Triangle".

Use of PPP is being considered for some projects (rail section Lahti - Luumäki in Finland). In Russia, the implementation of the Moscow – St. Petersburg connection is considered as a toll road.

Finland

Road

The Finnish Road Corridor IX comprises the road E18 between Helsinki and the Vaalimaa border crossing (181 km). A share of 67 % (122 km) of the E18 has already been constructed as a motorway or semi-motorway.

The average annual road traffic volume in Corridor IX in Finland (between Helsinki and Vaalimaa, border crossing) is 14.100 vehicles (varying between 6.500 and 23.000 vehicles). The average truck traffic volume was about 1.700 trucks (an average share of 14 % of the total daily traffic volume). It is estimated that the traffic volume will grow by 50 % on the Finnish road section by the year 2020. Railway traffic volume on the Finnish section varies between 1-2m passengers and 6-12m tonnes of freight.

Railway

The direction Buslovskaya – St. Petersburg – Moscow – Suzemka is a part of Transport Corridor IX Helsinki – Buslovskaya – St. Petersburg – Moscow – Suzemka.

The container train Chardash is plying along Corridor IX now, starting from Budapest towards Moscow en route along Ukrainian railways.

The railway connection St. Petersburg – Moscow is specialised in passenger traffic. The high-speed passenger traffic was organised along the trunk-railway in 2001. The high-speed container traffic with import cargoes was organised from St.Petersburg port to Moscow in 2002.

Now the issue of organizing the high-speed container train from Helsinki to Moscow is being discussed. In the future this trunk-railway can be developed for passenger traffic using high-speed container train technology.

Significant works are being accomplished on the railways included in Transport Corridor IX, providing the access to Finland railways and St. Petersburg port. JSCo RZD performed the general reconstruction of 650 km Moscow – St. Petersburg railway. It aimed at increasing the train traffic speed to 200 km/h. Conjointly with Finland the decision has been made to increase the speed on the railway section St. Petersburg - Buslovskaya - Helsinki. JSCo RZD has estimated the cost effectiveness of such a measure.

The International Transport Corridor IX includes the railway section Nesterov - Chernyakhovsk - Kaliningrad of Kaliningrad railways, which is a part of the branch Kiev - Minsk - Nesterov - Chernyakhovsk - Kaliningrad/Klaipeda.

Due to the insufficient development of the stations Nesterov and Chernyakhovsk the construction of a new border station integrating technical examination, customs procedure and border control is being considered. Now the institute "Yugovoszheldorproyekt" has developed a project of constructing the station Chernyshevskoye. The total cost of construction works is 1.4 billion rubles (as estimated in 2003).

Romania

The railway component in the Romanian territory is the European Line E95, which is traversing Romania from North to South, following the route: Ungheni Prut – Iasi – Pascani – Bacau – Focsani – Buzau – Ploiesti Sud – Bucarest – Giurgiu Nord / Videle – Giurgiu Nord. This route is also a component of the AGC, AGTC and TER Project.

The section Bucharest – Ploiesti (58 km) has been rehibilitated in 2001-2003, including rehabilitation of earthworks, bridges and retaining walls as well as earthworks reinforcements and replacement of more than 160 smaller bridges. In order to meet the AGC parameters for the railway route and to ensure the technical conditions for a speed of 160 km/h on limited sectors, local rectification of curves and new route variants have to be carried out. The investment costs of 190m EUR are covered by EIB (135m EUR) and the national budget (55m EUR).

Seaports

At Giurgiu Port, works are ongoing in 2004-2007 to upgrade and re-build the stone brick reinforcement wall to facilitate access for Romanian-Bulgarian cross-border traffic. The investment costs of 0.8m EUR are covered by PHARE (0.3m EUR) and the national budget (0.5m EUR).

Aviation

At Iaşi Airport 43.9m EUR will be spent from 2006-2008 for the development of the airside, the extension of the passenger terminal and a cargo terminal building, financed by a public-private partnership.

At “Henri Coanda” Bucharest-Otopeni International Airport 240m EUR have been spent in 1994-2004 for terminals, platforms, taxiways, runways and technical installations.

At the International Airport Bucharest Baneasa - Aurel Vlaicu 72.5m EUR are spent from 2005-2010 to increase the transport and operating aircrafts capacity, to increase traffic safety in the airport and in the responsibility areas and to diversify the facilities offered to the passengers and to the airlines.

At Suceava Airport 14m EUR are spent from 2005-2008 to upgrade the existing infrastructure, to invest in the airport area as well as in the responsibility area, diversifying the facilities offered to the passenger and to the airlines; to create an integrated security system for the airport, to upgrade the terminal and to extend the tarmac.

Bulgaria

Road

Corridor IX connects the North Eastern European countries through Romania and Bulgaria with the harbour of Alexandroupolis at the Aegean Sea. The total length of the Corridor through the territory of the country is 389 km, the alignment is Rousse – Veliko Tarnovo – Gabrovo – Stara Zagora – Dimitrovgrad – Kardzhali – the Greek border.

Lithuania

Road

Branch A of Corridor IX is the main east-west transport corridor in Lithuania. The largest part of the corridor runs on the main Lithuanian highway A1 Vilnius – Kaunas – Klaipėda (296.3 km). The remaining part is the A3 Vilnius – Minsk (27.34 km) and the A13 Klaipėda – Liepaja section from 0.0 km to 4.0 km. The remaining sections belong to the Vilnius and Klaipėda municipalities. The corridor connects Moscow, Minsk, Vilnius and Kaunas with Klaipėda sea port. The road sections constituting Branch B of Corridor IX have different categories and technical parameters. From the very beginning, the road bed, longitudinal section, alignment plan of the road section Vilnius-Kaunas were designed to correspond to the requirements of technical category AM (of motorway). The cross section of the Kaunas – Klaipeda road corresponds to the motorway technical category. But the following parameters do not meet the requirements of technical category AM: turnings on the median, at–grade three- and four-leg intersections, absence of deceleration and acceleration lanes, at–grade crossings for bicycles and pedestrians, absence of animal crossings and animal migration tracks. The A3 Vilnius – Minsk section from 6.65 km to 12.36 km corresponds to the requirements of technical category AI (expressway). The A13 Klaipėda – Liepoja section from 0.00 km to 4.00 km has 2 lanes and corresponds to the technical category AII.

Branch B of Corridor IX connects to Branch C and is an important link between the Oblast Kaliningrad and the main part of Russian Federation.

Seaports

The rehabilitation of Klaipeda State Seaport Entrance is ongoing in 2000-2006. The objective is the enhancement of safety and throughput of the Seaport by accommodating larger vessels (draft of up to 14m) and avoiding delays due to bad weather conditions. Total costs are 54.6m EUR, financed by a loan from the International Bank for Reconstruction and Development.

Border Crossings

Facilities

Vaalimaa (road), Vainikkala (rail): New border crossing facilities have been built in recent years and there are no more significant infrastructure problems at the main crossings. There are, however, development plans for the coming years (e.g. Nuijamaa border crossing).

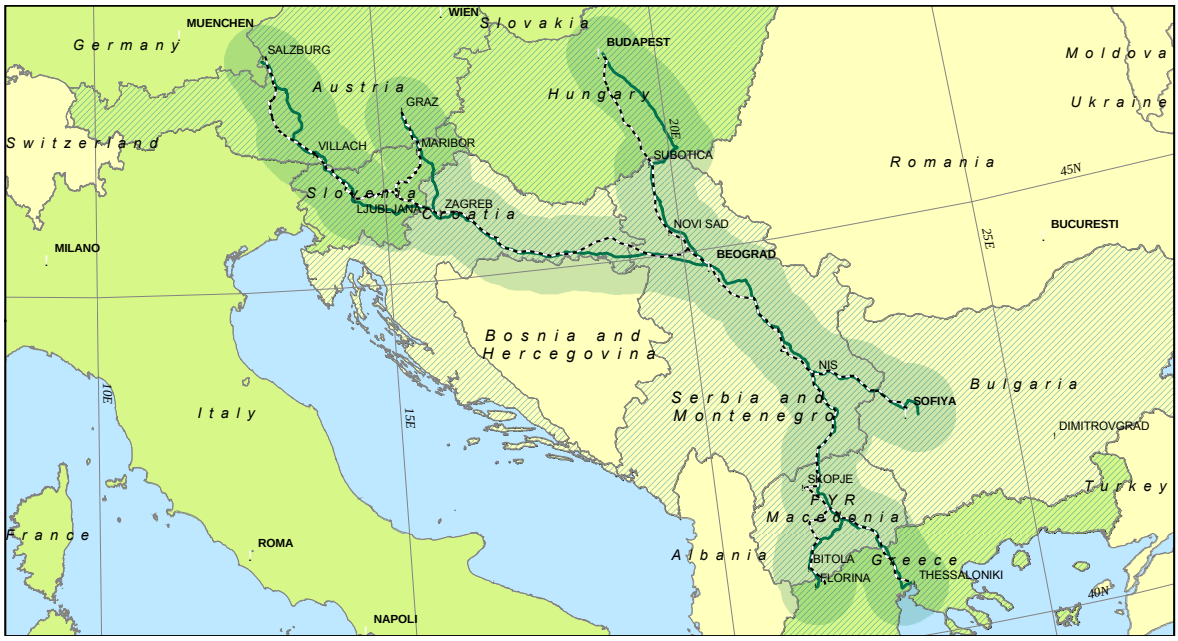
Customs Procedures

In recent years, much attention has been paid to the simplification of customs procedures, but border crossings are still constraining the flow of goods and people between Finland and Russia. Administrative problems at border crossings are the most obvious obstacles of Corridor IXa's road and rail traffic.

Completed projects include the CustCom (Customs Cooperation) project which aimed at speeding up the border crossing formalities in goods traffic on the EU/Russian border with the help of IT systems and EDI technology.

5.10 Corridor X

5.10.1 Map, Alignment and Technical Features



Countries	Austria, Slovenia, Croatia, Hungary, Serbia and Montenegro, Bulgaria, FYR Macedonia, Greece
Transport modes	Railway, road
Infrastructure figures:	
Roads	2,300 km Austria – 232 km Slovenia – 239 km Croatia – 365 km Hungary – 167 km Serbia and Montenegro – 789.5 km Bulgaria – 83 km FYR Macedonia – 332.3 km Greece – 92 km
Railways	2,529 km Austria – 263 km Slovenia – 294 km Croatia – 434 km Hungary – 156 km Serbia and Montenegro – 867 km Bulgaria – 57 km FYR Macedonia – 362 km Greece – 96 km
Number of airports	12 (within TINA countries)
Number of seaports and inner harbours	4 (within TINA counties)
Number of border crossings	20 (road), 18 (rail)
Alignment	***Salzburg – Ljubljana – Zagreb – Beograd – Nis – Skopje – Veles – Thessaloniki***
Road	*Salzburg – Villach – Karavanke – Jesenice – Kranj - Ljubljana – Visna Gora/Obrezje – Zagreb – Novska - Lipovac/Tovarnik - Beograd – Nis – Sopot/Tabanovce - Skopje – Gradsko – Bogorodica/Idomeni - Thessaloniki*
Rail	*Salzburg – Villach – Rosenbach/Jesenice – Ljubljana – Zidani Most – Dobova/Savski Marof – Zagreb – Novska – Vinkovci - Tovarnik – Sid - Beograd – Nis – Presevo/Tabanovce - Skopje – Veles – Gevgelija/Idomeni - Thessaloniki*
	Branch A from Graz
Road	*Graz – Spielfeld/Sentilj – Maribor - Gruskovje – Zagreb*
Rail	*Graz – Spielfeld/Sentilj – Maribor – Pragersko - Zidani Most*
	Branch B from Budapest
Road	*Budapest – Kecskemet – Kiskunfelegyhaza - Szeged – Röszke – Subotica – Novi Sad – Beograd*
Rail	*Budapest – Kunszkenmiklos – Kiskunhalas - Kelebia – Subotica - Novi Sad – Beograd*

	Branch C to Sofija
Road	*Nis – Dimtrovgrad/Kalotina – Dragoman - Sofija*
Rail	*Nis – Dimitrovgrad/Kalotina – Dragoman - Sofija*
	Branch D to Florina (Via Egnatia)
Road	*Gradsko – Bitola - Medzitlija/Mesonision - Florina*
Rail	*Veles – Bitola - Kremenica/Mesonision – Florina*

5.10.2 Overview of the General Development

In the light of the consolidation of the peace process in the successor states of the Socialist Federal Republic of Yugoslavia, it seemed appropriate to the members of the Pan-European Transport Conference in Helsinki (June 1997) to propose the establishment of a new corridor (Corridor X) which broadly follows the traditional transport route to South Eastern Europe from the times before the wars.

As this corridor had been a major transport corridor before the Yugoslav wars, especially for transit between Western Europe, Greece and Turkey, infrastructure is rather well developed, but needs modernisation and reconstruction where damage has been done during the war.

Corridor X is the most recent of the ten Pan-European Transport Corridors and links, with a length of about 2.500 km, Central Europe with Southern Eastern Europe.

The Memorandum of Understanding was signed by the Ministers of Transport during the Ministerial Meeting on March 15, 2001 in Thessaloniki.

The task of the technical secretariat was assigned to the Department of Transportation and Hydraulic Engineering, Faculty of Rural and Surveying Engineering, Aristotle University of Thessaloniki.

Regarding the cooperation of rail companies, Corridor X has its own separate legal status under EU law in the form of a “Corridor X Working Community (ARGE)” since March 2001 with a Coordination Agency in Vienna.

5.10.3 Infrastructure Development per Country and Mode of Transport

The status and the developments along Corridor X are described as follows. The single projects are also summarized in the following table.

Part of Corridor X	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor X Road Projects									
Main Axis	Austria	Salzburg-Villach	Construction of 2nd Tunnel	11,30	2004	2009		228,0	
Main Axis	Slovenia	Bic – Obrezje	Construction of Motorway	75,50		2007		579,4	National sources, EIB and EBRD
Main Axis	Slovenia	Vrba – Naklo	Construction of Motorway	20,90		2008		252,6	National sources, EIB and EBRD
Branch A	Slovenia	Maribor – Gruskovje	Construction of Motorway	38,80		2012		486,5	National sources, EIB and EBRD
Main Axis	Croatia	Velika Kopanica – Zupanja	Construction of Motorway	24,13		2002			completed
Main Axis	Croatia	Zupanja-Lipovac	Construction of Motorway	29,40		2006		150,0	National sources, EIB
Branch A	Croatia	Macelj-Krapina	Construction of Motorway	19,40		2007		44,0	
Main Axis	Croatia	Zagreb – Bregana	Construction of Motorway	13,00					
Branch B	Hungary	Kiskunfelegyhaza-Szeged-Rozske	Construction of M-5 motorway	60,00		2008		365,0	
Main Axis	Serbia	Belgrade bypass	Construction of Motorway	45,50		2010		350,0	
Main Axis	Serbia	Leskovac-Presevo	Construction of Motorway	122,00			after 2010	313,0	
Branch B	Serbia	Batajnica-Novi Sad-Horgos	Rehabilitation of Motorway	176,00		2009		300,0	
Branch C	Serbia	Nis-Dimitrovgrad-Kalotina(Bulgaria)	Construction of Motorway	104,00		2008		450,0	
Branch C	Bulgaria	Sofia-Kalotina	Construction/Rehabilitation of Motorway	49,00		2005		43,0	

Part of Corridor X	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor X Road Projects									
Main Axis	F.Y.R.O.M.	Tabanovce-Kumanovo	Construction of Motorway	8,40			Under negotiation for EIB finance	10,7	
Main Axis	F.Y.R.O.M.	Gradsko – Demir Kapija	Construction of Motorway	31,50					
Main Axis	F.Y.R.O.M.	Demir Kapija-Bogorodica/Gevgelija	Rehabilitation of Motorway	44,50			not decided yet	54,0	
Branch D	F.Y.R.O.M.	Veles-Bitola	Rehabilitation of Motorway	104,60			after 2010	177,0	
Branch D	F.Y.R.O.M.	Bitola-Medzitlija	Rehabilitation of Motorway	20,45		2008		21,5	
Main Axis	Greece	Polykastro-Chalastra (Axios Delta)	Construction of Motorway	45,00		2007			
Branch D	Greece	Niki-Florina	Construction of Highway	14,60		2007		32,2	

Part of Corridor X	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor X Railway Projects									
Main Axis	Austria	Salzburg-Villach	Doubling of railway			2006		95,0	
Main Axis	Austria	Goedersdorf – Rosenbach	Railway construction		2007	2011		80,0	
Branch A	Austria	Graz – Puntigam – Werndorf	Doubling of railway	46,0		2006		350,0	
Branch A	Austria	Werndorf – Spielfeld	Doubling of railway		2007	2015		180,0	
Main Axis	Austria		Construction of the second “Tauern” tunnel		2012			225,0	
Main Axis	Austria	Kralbach – Boeckstein	Doubling of railway		2012			283,0	
Main Axis	Slovenia	Dobova	Upgrading of cross border station			2005			
Main Axis	Slovenia	Stations of Kresnice, Sava, Trbovlje, Hoče and Tezno; Sections Hoče - Tezno and Tezno – Maribor	Reconstructions	156,0	2004	2006		35,3	
Main Axis	Slovenia		Implementation of GSM-R systems		2009	2013		44,0	
Main Axis	Slovenia		Implementation of ETCS/ ERTMS systems		2009	2013		110,0	
Main Axis	Slovenia		Electric traction installations/ tele-management		2007	2008		16,5	
Branch A	Slovenia	Maribor – Sentilj	Doubling of railway	16,5	2011			176,0	National Budget
Main Axis	Slovenia	Ljubljana – Zidani Most	Major overhaul	64,0					National Budget and domestic banks loans
Branch A	Slovenia	Zidani Most – Maribor	Major overhaul	92,0					National Budget and domestic banks loans
Main Axis	Slovenia	Ljubljana – Maribor	Construction of 19 multilevel intersections and diversion of line Litija-Kresnice	156,0					
Branch A	Slovenia	Ljubljana – Jesenice	Doubling of railway	71,0	2011	2013		582,0	National Budget
Main Axis	Croatia	Sisak - Kutina	Construction of double railway track	32,0		2020	Preliminary/ technical study		National Budget, EBRD/World Bank
Main Axis	Croatia	Zagreb-Sisak and Kutina-Novska	Doubling of railway	76,4		2020	Preliminary/ technical study		National Budget, EBRD/World Bank

Part of Corridor X	Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Corridor X Railway Projects									
Branch B	Hungary	Budapest – Ferencvaros – Kelebia – Border	Modernisation / Doubling	156,0		2010	Feasibility and technical studies		Private, PHARE
Main Axis	Serbia	Tovarnik – Beograd	Doubling of railway	120,0		2010			National Budget, EIB, World Bank
Branch B	Serbia	Subotica – Stara Pazova	Doubling of railway	150,0		2010			National Budget, EBRD, World Bank
Branch C	Serbia	Dimitrovgrad – Kalotina	Electrification						EIB
Main Axis	Serbia	Zezelj	Bridge construction					30,0	EIB
Main Axis	Serbia	Ostruznica	Bridge construction					4,1	EIB
Main Axis	Serbia	Belgrade – Presevo	Major overhaul				ongoing		
Branch B	Serbia	Belgrade – Horgos	Major overhaul				ongoing		
Branch C	Bulgaria	Whole stretch	Upgrade for higher speeds		2008	2010		58,0	
Branch C	Bulgaria	Dragoman – Dimitrovgrad	Electrification		2004	2005		22,0	
Branch C	Bulgaria	Kazichene, in the area of Sofia	Construction of an intermodal station					58,0	
Main Axis	F.Y.R.O.M.	Smokvica – Gevgelija	Reconstruction	10,0			in final stage		
Main Axis	F.Y.R.O.M.	Gevgelijja – Skopje – Blace	Major overhaul	200,0			planned	20,0	Stability Act, EIB
Main Axis	F.Y.R.O.M.	Zgropolci – Demir Kapija – Miravci	Reconstruction	72,0			planned		Stability Act
Main Axis	Greece	Thessaloniki-Eidomeni	Modernisation / Doubling	76,6		2004	ongoing		
Branch D	Greece	Niki-Mesonission	Reconstruction						

Austria

Road

The Austrian parts of Corridor X are distinguished in a section of the Main Axis and a section of Branch A with a total length of 232 km.

The section of the Main Axis is Salzburg – Villach – Karavanke (Austrian/Slovenian border), a 187 km long motorway.

The section of Branch A is Graz – Spielfeld (Austrian/Slovenian border) which is also a motorway and 45 km long.

Railway

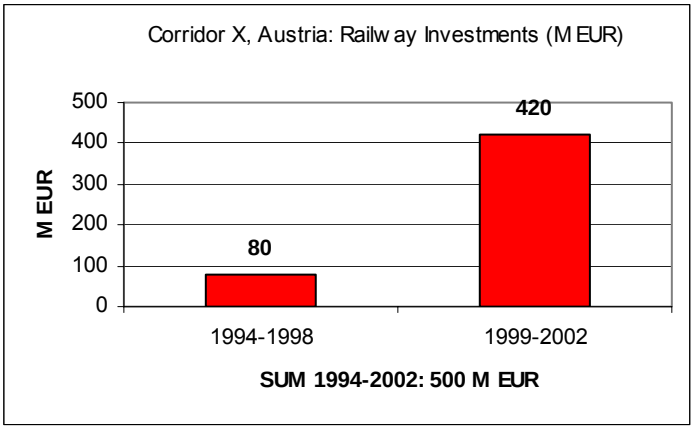
The Austrian rail Corridor X is similar to the road with a total length of 263 km. The existing railway is 100 % electrified and double track on a length of 200 km.

The Austrian section of the main Corridor X is Salzburg – Villach – Rosenbach (Austrian/Slovenian border), with a length of 217 km, 84.3 % of it double track.

The Austrian section of Branch A is Graz – Spielfeld (Austrian/Slovenian border), 46 km in length, 36 % of which are double track.

Generally, the situation of the rail infrastructure in Austria is considered satisfactory with high levels of maintenance.

The annual investments in railway infrastructure in Austria are summarized as follows:



Slovenia

Road

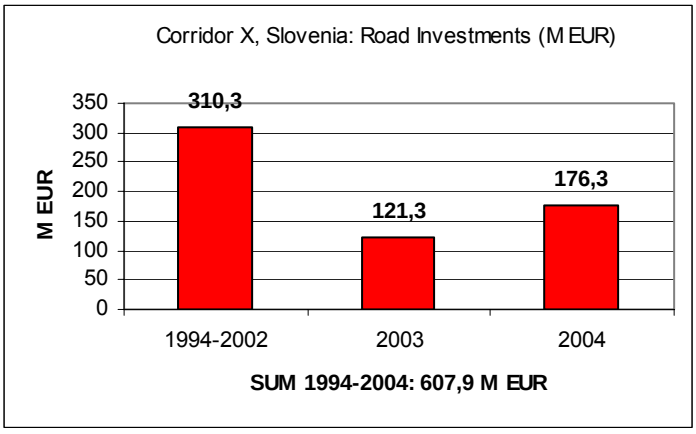
The Slovenian parts of road Corridor X are also distinguished in a section of the Main Axis and a section of Branch A. They have a total length of 239 km consisting of motorways (107 km) and highways.

The Slovenian section of the Main Axis is Jesenice (Austrian/Slovenian border) – Kranj – Lubljana – Obrezje (Slovenian/Croatian border), 182.1 km in length, with motorways accounting for 52.6 % of its' total length.

The Slovenian section of Branch A is (Austrian/Slovenian border) – Sentilj – Maribor – Gruskovje (Slovenian/Croatian border), 57 km in length of which 19.6 % are motorways.

Bottlenecks: The road sections Bic – Obrezje on the Main Axis and Maribor – Gruskovje on Branch A are considered problematic. The sections are being reconstructed as motorways with envisaged completion by 2007 and 2012 respectively.

The annual investments in road infrastructure in Slovenia are summarized as follows:



A major project is the extension of the freeway A2 on the Ljubljana-Zagreb link. The construction of Visnja Gora-Bic section (11.2 km) was completed by 2000.

The remaining part (from Bic to Obrezje/Croatian Border, 75.5 km) is under construction financed by national sources, EIB and EBRD. The total costs are estimated at 579.36m EUR, and the completion is planned for 2007.

- The construction of Bic-Korenitka (4.8 km) section has been completed by 2003.
- The Korenitka – Pluska (2.8 km), Kronovo – Smednik (9.2 km), Krska vas – Obrezje (12.3 km) and Smednik – Krska vas (17.6 km) sections are under construction. Completion is foreseen for 2004.
- The Hrastje – Lesnica section (7.7 km) is under construction. Completion is foreseen for 2006.
- The Pluska – Ponikve – Hrastje (14 km) and Lesnica – Kronovo (5.5 km) sections will be constructed in the period 2005-2007.

Another major project is the completion of the missing section of the freeway A2 on the Salzburg-Ljubljana link. The construction of Naklo-Kranj (8.7 km) section was completed by 2000.

The remaining part (from Vrba to Naklo, 20.9 km) is under construction, financed by national sources, EIB and EBRD. The total costs are estimated at 252.64m EUR, and the completion is planned for 2008.

- The construction of Podtabor-Naklo section (4.3 km) has been completed in 2003.
- The Sentvid – Kosece section (3.7 km) is under construction. Completion is foreseen for 2006.
- The Peracica – Podtabor section (2.4 km) will be constructed in the period 2004-2007.
- The Vrba – Peracica section (10 km) will be constructed in the period 2006-2008.

On Branch A of Corridor X, a motorway is under construction on the section Maribor – Gruskovje (38.8 km), financed by national sources, EIB and EBRD. The total costs are estimated at 486.5m EUR, and the completion is planned for 2012.

- The section Pesnica - Slivnica - highway in Maribor (2.4 km) was completed by 2001.
- The section Pesnica - Zrkovska Cesta intersection (6.3 km) is under construction. Completion is foreseen for 2011.
- The Slivnica – Dracenci section (18.9 km) will be constructed in the period 2007-2012.
- The section Zrkovska Cesta - Ptujska Cesta intersection (4.2 km) will be constructed in the period 2009-2011.
- The Dracenci - Gruskovje section (13.9 km) will be constructed in the period 2010-2012.

Railway

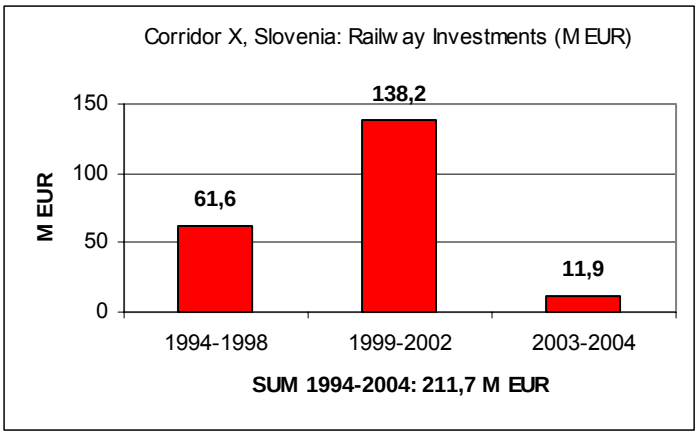
The Slovenian parts of rail Corridor X are also distinguished in a section of the Main Axis and a section of Branch A. They have a total length of 294 km. The existing railway is 100 % electrified and double track on a length of 214 km.

The Slovenian section of the main Corridor X is Jesenice (Austrian/Slovenian border) – Lubljana – Zidani Most – Dobova (Slovenian/Croatian border), 186 km in length of which 65.6 % are double tracks.

The Slovenian section of Branch A is (Austrian/Slovenian border) – Sentilji – Maribor – Pragersko – Zidani Most, 108 km in length of which 84.8 % are double tracks.

Generally, the situation of the rail infrastructure in Slovenia is considered satisfactory with high levels of maintenance.

The annual investments in railway infrastructure in Slovenia are summarized as follows:



Croatia

Road

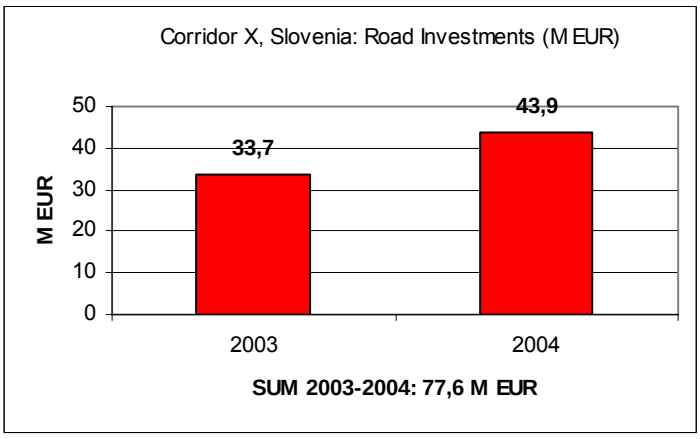
The Croatian parts of Road Corridor X are sections of the Main Axis, and of Branch A. Together, they have a total length of 365 km of which 307 km are motorways.

The section of the Main Axis links the following cities: Obrezje (Slovenian/Croatian border) – Zagreb – Novska – Lipovac (Croatian/Serbian border). It is 304 km long of which 274 km are motorways, the rest are highways.

The section of Branch A links Gruskovje (Slovenian/Croatian border) with Zagreb. It is 61 km long and consists of motorways (33 km) and highways.

Bottlenecks: The only road section of the Main Axis in Croatia which is not constructed as motorway is Zupanja – Lipovac (Serbian border). On Branch A, the Macelj (Slovenian borders) – Krapina section`s infrastructure is poor. Both sections are to be constructed as motorways by 2007.

The annual investment in road infrastructure in Croatia is summarized as follows:



Railway

The Croatian part of rail Corridor X is a section of the Main Axis with a total length of 434 km. The existing railway is fully electrified and double track on a length of 233 km.

Corridor X links the following cities: Savski Marof (Slovenian/Croatian border) – Zagreb – Novska – Vinkovci – Tovarnik (Croatian/Serbian border).

Generally, the situation of the rail infrastructure in Croatia is considered as good with high levels of maintenance and with maximum train speed of 120 to 160 km/h.

Bottlenecks: The Zagreb – Tovarnik (Serbian borders) railway line needs upgrading/ rehabilitation.

In 2003 and 2004, 11.95m EUR have been invested in rail infrastructure.

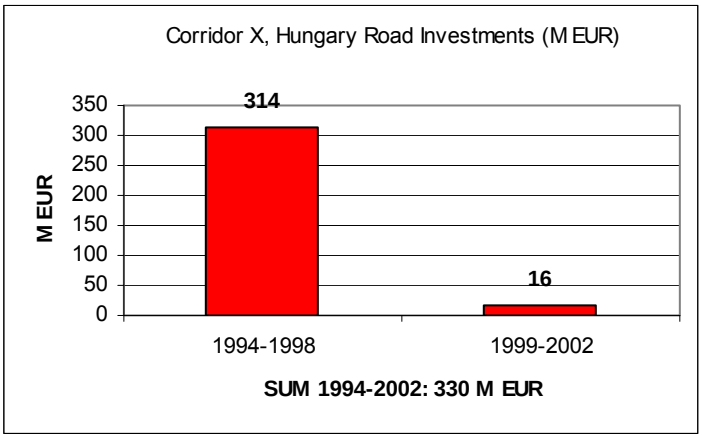
Hungary

Road

The Hungarian section of road Corridor X has a total length of 167 km of which 58.1 % are motorways. It links the following cities: Budapest – Kecskemet – Kiskunfelegyhaza – Szeged – Roszke (Hungarian/Serbian border).

Bottlenecks: 60 km of the Hungarian part of road Corridor X (Branch B), the section Kiskunfelegyhaza – Rozske (Serbian borders) are considered problematic.

The annual investment in road infrastructure in Hungary is summarized as follows:



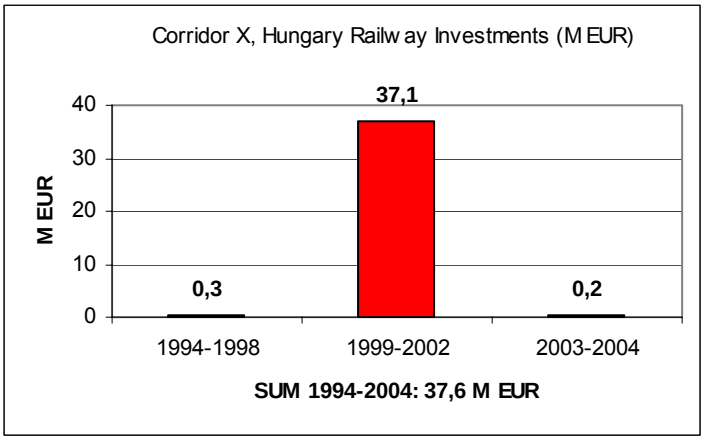
Railway

The Hungarian parts of rail Corridor X are sections of Branch B with a total length of 156 km. The existing railway is 100 % electrified and single track at a percentage of 95 % of the total length. The following cities are linked: Budapest – Kunszkenmiklos – Kiskunhalas – Kelebia (Hungarian/Serbian border).

Generally, the condition of the rail infrastructure in Hungary is considered as poor with low levels of maintenance.

Bottlenecks: The entire Hungarian rail part needs to be rehabilitated/ upgraded. Delays at the railway border crossing are longer than at the road crossing.

The annual investment in railway infrastructure in Hungary is summarized as follows:



Serbia and Montenegro

Road

The Serbian parts of Corridor X are distinguished in a section of the Main Axis, a section of Branch B and a section of Branch C with a total length of 789.5 km.

The Serbian section of the main Corridor X is Tovarnik (Croatian/Serbian border) – Beograd – Nis – Sopot (Serbian/F.Y.R.O.M. border), 494.5 km in length of which 80 % are motorways.

The section of Branch B runs from Subotica (Hungarian/Serbian border) via Novi Sad to Beograd (186 km of motorway).

The section of Branch C runs from Dimitrovgrad (Bulgarian/Serbian border) to Nis; it is 109 km long of which 108.8 km are highways.

Bottlenecks: In Serbia, the Belgrade bypass is yet to be constructed. Furthermore, the Leskovac – Presevo border crossing (with F.Y.R.O.M.) is problematic, where there is need for new wearing course and at some sub-sections new overlay. The Belgrade – Horgos section (border with Hungary – Branch B) needs new wearing course and the Nis – Dimitrovgrad section (border with Bulgaria – Branch C), which is a less than 7m asphalt road, needs pavement rehabilitation. On both branches rehabilitation works are ongoing. There are bottlenecks at all the border crossings, mainly due to the poor infrastructure and to a lesser extent due to the procedures followed.

Rehabilitation works are completed for the section Bubanj Potok-Pozarevac (Main Axis, 46.1 km) whereas on section Pozarevac – Batocina – Doljevac (Main Axis, 201 km) they are ongoing but should have been completed by 2004.

The construction of Nis – Dimitrovgrad motorway (Branch C, 98 km) is planned. Construction works are ongoing on the Komren – Prosek subsection (13.6 km), whilst the works of constructing the Prosek – Dimitrovgrad section will commence immediately afterwards and will be completed by 2008.

The construction of a motorway section Leskovac – Grdelica – Vladicin Han – Presevo (122 km) is planned for after 2010:

- On the Pecenjevce – Grabovnica (24.195 km) and Levosoje – Presevo (22.759 km) subsections the construction has been completed by the end of 2004.
- On the Grabovnica – Bujanovac/ Levosoje subsection 73.195 km remain to be constructed, with estimated cost of 550m EUR.

The construction of Belgrade – Novi Sad – Horgos (Branch B) motorway is planned for 2009. Rehabilitation works are ongoing on 62.5 km (Cantavir – Novi Sad) and have been completed by the end of 2004. Investment costs are 200m EUR.

The construction of the Belgrade bypass (section Batanjica – Dobanovci – Bubanj Potok, Main Axis, 45.5 km) is planned. The works of the first phase (construction of 16.8 km of motorway and a bridge over Sava river) are ongoing, and have been completed in 2004. The remaining construction works will be completed by the end of 2010. Investment costs are 350m EUR.

Information on annual investments in road infrastructure in Serbia and Montenegro was not available.

Railway

In accordance with the road Corridor, the Serbian parts of rail Corridor X are sections of the Main Axis and branches B and C with a total length of 867 km. The existing railway is 88 % electrified and double track on a length of 251 km.

The Serbian section of the main Corridor X is Tovarnik (Croatian/Serbian border) – Sid – Beograd – Nis – Presevo (Serbian/ F.Y.R.O.M. border), 613 km in length, 100 % electrified and 40.3 % double tracks.

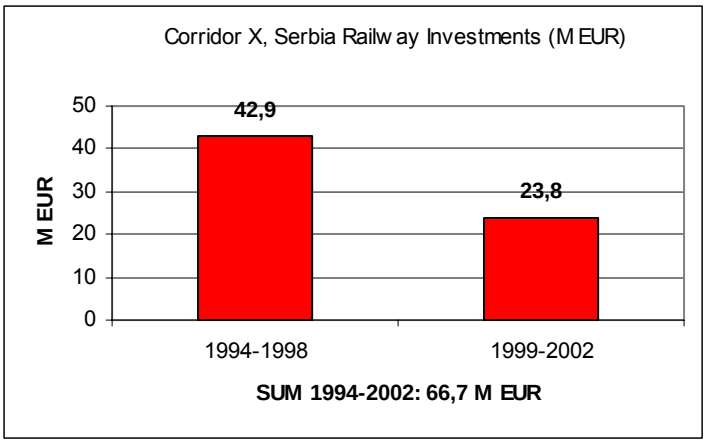
The section of Branch B is Subotica (Hungarian/Serbian border) – Novi Sad – Beograd, 150 km long, 100 % electrified and 97.6 % single tracks.

The section of Branch C is Dimitrovgrad (Bulgarian/Serbian border) – Nis, 104 km in length, with diesel single tracks on its entire length.

Generally, the situation of the rail infrastructure in Serbia is considered satisfactory with medium levels of maintenance.

Bottlenecks: The Sid (Croatian borders) – Belgrade line on the Main Axis and Subotica (Hungarian borders) – Belgrade line on Branch B need improvements.

The annual investment in railway infrastructure in Serbia and Montenegro is summarized as follows:



Bulgaria

Road

The Bulgarian parts of road Corridor X are a section of Branch C with a total length of 83 km. The existing infrastructure consists of highways (39,6 %) and main roads (60,4 %). The following cities are connected: Sofija – Dragoman – Kalotina (Bulgarian/Serbian border).

Bottlenecks: The road section from the Serbian borders (Kalotina) to the beginning of Sofia ring road is considered as problematic.

For the upgrade of the road network in Bulgaria (sections of Pan-European Corridors) 40m EUR EU financial aid is foreseen. The EIB has ranked the motorway construction between Sofia – Kalotina (Branch C, 49 km) in the priority projects (based on TIRS study). Details about he progress of studies and works are as follows:

The technical upgrade of the section Kalotina – Sofia ring road is in the final stage with planned completion in 2005.

On Sofia ring road to Trakia motorway intersection construction works are ongoing and will be completed by 2005.

It is reported that a study for the construction of a highway has been completed in January 2002 by the American company “Booz, Alan & Hamilton” with estimated costs of 312.1m EUR (EU financing). For the first stage of completion the estimated cost is 60.2m EUR:

- Section Dragoman – Slivnica (Branch C, 12.5 km): upgrade 15.3m EUR – new construction 6.8m EUR
- Section Slivnica – Sofia Ring Road (Branch C, 23 km): upgrade and widening 18.7m EUR
- Sofia Ring Road: upgrade 5m EUR – new construction 14.4m EUR

There is a study regarding the reconstruction of the Kalotina border crossing according to the European standards.

Information on annual investments in road infrastructure in Bulgaria was not available.

Railway

The Bulgarian parts of rail Corridor X are a section of Branch C with a total length of 57 km. The existing railway is 74.1 % electrified and 86 % single track. The following cities are linked: Sofija – Dragoman – Kalotina (Bulgarian/Serbian border).

Generally, the condition of the rail infrastructure in Bulgaria is considered poor with medium levels of maintenance.

Bottlenecks: The railway line from Kalotina to Sofia needs improvements. Finally, substantial delays are observed at the rail border station of Kalotina.

For the period 2008-2010 the upgrading of the entire Bulgarian part of Branch C for speeds of up to 120-160 km/h is foreseen, with total costs of 58m EUR.

At present the railway line of Corridor X in Bulgaria (Branch C) is electrified up to Dragoman; the electrification of the rest of the line (Dragoman – Dimitrovgrad section) is yet to be done. The study was completed in 2004 and the Bulgarian government is willing to allocate 22m EUR for the project implementation until June 2005.

The construction of an intermodal station in Kazichene, in the area of Sofia, is planned. Investment costs are 58m EUR.

Information on annual investment in railway infrastructure in Bulgaria was not available.

FYR Macedonia

Road

The F.Y.R.O.M. sections of road Corridor X are on the Main Axis and on Branch D. They have a total length of 332.3 km.

The F.Y.R.O.M. section of the Main Axis is Tabanovce (Serbian/F.Y.R.O.M. border) – Skopje – Veles – Bogorodica (F.Y.R.O.M./Greek border), 207.2 km in length, with 152.7 km motorways and highways.

The section of Branch D is the highway Veles – Bitola – Medzitlija (F.Y.R.O.M./Greek border), with a length of 125 km.

Bottlenecks: Concerning road infrastructure on the Main Axis of Corridor X the Tabanovce – Kumanovo (border with Serbia) and the Axios Canyon (45 km to the Greek borders) are considered problematic. Both sections need new wearing course and overlay. Poor infrastructure is also an issue on Branch D, at Veles – Bitola section, a less than 7m-wide gravel road. Bottlenecks can be observed at the road border crossing on the Main Axis.

In the period 1994-1998, 3.11m EUR have been invested in road and rail infrastructure (in total). In the period 1999-2002, 2.15m EUR have been invested in road and rail infrastructure (in total). In 2003, 6.28m EUR have been invested in road infrastructure. In 2004, 14.03m EUR have been invested in road infrastructure.

Railway

The F.Y.R.O.M. parts of rail Corridor X are on the Main Axis and on Branch D. They have total length of 362 km. The existing railway is 59.7 % electrified and 100 % single track.

The F.Y.R.O.M. section of the main Corridor X is Tabanovce (Serbian/ F.Y.R.O.M. border) – Skopje – Veles – Gevgelija (F.Y.R.O.M. /Greek border), 216 km in length, with electrified single tracks.

The F.Y.R.O.M. section of Branch D is Veles – Bitola – Kremenica (F.Y.R.O.M./ Greek border), 146 km in length with diesel single tracks.

Generally, the situation of the rail infrastructure in F.Y.R.O.M. is considered satisfactory with medium levels of maintenance on the Main Axis and poor with low levels of maintenance on Branch D.

Bottlenecks: As for the railways, all the railway lines need major overhaul. The rail border crossing on the Main Axis is being considered as bottleneck.

In the period 1994-1998, 3.11m EUR have been invested in road and rail infrastructure (in total). In the period 1999-2002, 2.15m EUR have been invested in road and rail infrastructure (in total). In 2003/2004, 0.22m EUR has been invested in rail infrastructure.

Greece

Road

The Greek sections of road Corridor X are on the main axis and on Branch D with a total length of 92 km. They consist of motorways, highways and main roads.

The Greek section of the main Corridor X is Idomeni (F.Y.R.O.M./Greek border) – Thessaloniki, 77 km in length with motorways (45 km) and highways (32 km).

The Greek section of Branch D is the main road Mesonision (F.Y.R.O.M./ Greek border) – Florina, 15 km in length.

From Thessaloniki to Athens and Patra the main national road axis “P.A.TH.E.” has been included in the Essen list of priority projects. The total length of “P.A.TH.E.” is 730 km and it is planned to be constructed as a motorway by 2008.

Information on annual investment in road infrastructure in Greece was not available.

Railway

The Greek sections of rail Corridor X are on the main axis and on Branch D. They have a total length of 96 km.

The Greek section of the main Corridor X is Idomeni (F.Y.R.O.M./ Greek border) – Thessaloniki, 77 km in length with electrified single tracks.

The Greek section of Branch D is Mesonision (F.Y.R.O.M./ Greek border) – Florina, 19 km in length with diesel single tracks.

The extension of Rail Corridor X to Athens and Patra is the “P.A.TH.E.” axis, with double track alignment form Thessaloniki to Dhomokos and from Tithorea to Athens. The rest of the axis is single track. The entire axis is foreseen to have double track alignment and be fully electrified by 2010.

According to the 884/2004/EC revision of the Guidelines for Trans-European Networks, the construction of the railway axis of the Adriatic-Ionian intermodal Corridor is prioritized for 2014. The project (No. 29 of the list) foresees the construction of the Kozani – Kalambaka – Igoumenitsa line by 2012 and the Ioannina – Antirrio – Rio – Kalamata line by 2014.

Information on annual investments in railway infrastructure in Greece was not available.

Border Crossings

Long delays appear at all the border crossings in Croatia, mainly at road stations (Macelj, Lipovac).

The reconstruction of Horgos border crossing (Serbia and Montenegro, Branch B) is ongoing. Reconstruction studies are ongoing for Batrovci (Main Axis), Tabanovce (Main Axis) and Gradina (Branch C) border crossings.

The characteristics of border crossings along Corridor X are summarized in the following table.

Location	Border Crossing Facilities: Total number of gates per cross border	Entrance gates for private vehicles	Exit gates for private vehicles	Gates for private vehicles (total)	Entrance gates for heavy vehicles	Exit gates for heavy vehicles	Gates for heavy vehicles (total)	Non-technical barriers having an impact on waiting times	Investments	Average Waiting Time in Minutes (Passenger Traffic, 2002)	Average Waiting Time in Minutes (Freight Traffic, 2002)
Corridor X Road Border Crossings											
Austria-Slovenia (Rozenbach, Main Axis)	28	7	8	15	7	6	13	None	No further investments	20	20
Austria-Slovenia (Spielfeld, Branch A)	18	6	6	12	3	3	6	Long queues on peak days	No, after the EU enlargement the station will be relieved	15	15
Slovenia-Austria (Karavanke, Main Axis)	29	8	8	16	8	5	13	None	50 % of capacity in use	5	30
Slovenia-Croatia (Obrezje, Main Axis)	13	4	2	6	4	3	7	None	Traffic will be tripled in 20 years; New station in early stage of construction	3	10
Slovenia-Austria (Sentilj, Branch A)	25	10	8	18	2	5	7	None	None	3	10
Slovenia-Croatia (Gruskovje, Branch A)	11							None	New station in final stage of construction	5	15
Croatia-Slovenia (Bregana, Main Axis)	12	5	1	6	4	2	6	Bottlenecks during summer; Lack of buildings	Doubling of lanes and 250 parking places/CARDS (2.5m EUR)	Information not available	60-120
Croatia-Serbia (Lipovac, Main Axis)	16	4	4	8	4	4	8	Bottlenecks during summer; Lack of buildings	6 new lanes, 300 parking places/CARDS (2.5m EUR)	Information not available	10-15
Croatia-Slovenia (Macelj, Branch A)	7							Bottlenecks; Difficult terrain	TTFSE project, Infrastructure improvement (depending on the result of TTFSE evaluation)	5	75
Hungary-Serbia (Roszke, Branch B)	18							None	No, new station in 2003	30	60
Serbia-Croatia (Batrovci, Main Axis)	6	1	1	2	2	2	4	Bottlenecks during summer; lack of buildings	TTFSE project; CARDS - 3.5m EUR	10	60

Location	Border Crossing Facilities: Total number of gates per cross border	Entrance gates for private vehicles	Exit gates for private vehicles	Gates for private vehicles (total)	Entrance gates for heavy vehicles	Exit gates for heavy vehicles	Gates for heavy vehicles (total)	Non-technical barriers having an impact on waiting times	Investments	Average Waiting Time in Minutes (Passenger Traffic, 2002)	Average Waiting Time in Minutes (Freight Traffic, 2002)
Corridor X Road Border Crossings											
Serbia-Bulgaria (Gradina, Branch C)	16	6	6	12	2	2	4	Lack of infrastructure equipment; infrastructure improvement for increased capacity to reduce waiting time	TTFSE project	15	80
Serbia-Hungary (Horgos, Branch B)	18	2	2	4	2	2	4	Possible bottlenecks	TTFSE project	15	60
Serbia-F.Y.R.O.M. (Presevo, Main Axis)	11	1	1	2	4	5	9	Bottlenecks during summer; lack of infrastructure equipment	TTFSE project	15	60-80
Bulgaria-Serbia (Kalotina, Branch C)	16							None	None	2	2
F.Y.R.O.M.-Greece (Bogorodica, Main Axis)	21	6	6	12	4	5	9	Water & power supply; signaling	Rehabilitation of facilities (PHARE)	3-5	15-60
F.Y.R.O.M.-Greece (Medzitlija, Branch D)	14	5	5	8	3	4	7	Water & power supply; signaling	Rehabilitation of facilities (PHARE)	3-5	15-60
F.Y.R.O.M.-Serbia (Tabanovce, Main Axis)	7	2	2	4	1	2	3	Water supply; low capacity; poor infrastructure and equipment	Reconstruction by 2004, Not financially secured	3-5	15-60
Greece-F.Y.R.O.M. (Evzoni, Main Axis)	16	4	3	7	7	2	9	None	Reconstruction before the Athens Olympic Games	10	30
Greece-F.Y.R.O.M. (Niki, Branch D)	6	2			2			None	Rehabilitation	25-30	40

Location	Border Crossing Facilities	Non-technical barriers having an impact on waiting times	Investments	Average Waiting Time in Minutes (Passenger Traffic, 2002)	Average Waiting Time in Minutes (Freight Traffic, 2002)
Corridor X Railway Border Crossings					
Austria-Slovenia (Rozenbach, Main Axis)	4 lines for control	Change of locomotive	Same voltage locomotives	15	60
Austria-Slovenia (Spielfeld, Branch A)		Change of locomotive	Same voltage locomotives	10-12	60
Slovenia-Croatia (Dobova, Main Axis)	8 main tracks for passenger traffic and freight trains, 14 side tracks, 3 platforms	Change of locomotive	New station by 2005, E-connection with Savski Marof	15-20	120
Slovenia-Austria (Jesenice, Main Axis)	4 tracks for passenger traffic, 13 tracks for freight trains, 80 side tracks, 3 platforms	Change of locomotive	None	15	20
Slovenia-Austria (Maribor, Branch A)		None	None	20	45
Croatia-Slovenia (Savski Marof, Main Axis)	7 tracks: 2 Main passings, 2 Main sidings, 1 Loading-enloading, 2 industrial	Lack of lines and buildings; Change of locomotive	Planned joint border station – E-connection with Dobova	3	5 + 120 at Zagreb RK
Croatia-Serbia (Tovarnik, Main Axis)	5 tracks: 2 Main passings and Main freight, 1 Loading-enloading, 1 Main passings, 1 Main freight	Lack of personnel – Phyto-sanitary inspections until 14:00 only	Negotiation for joint border station in Vinkovci or Sid (Serbia)	22	76
Hungary-Serbia (Kelebia, Branch B)	2 main lines and 10 lines for train composition	Delays	None	30	90
Serbia-Bulgaria (Dimitrovgrad, Branch C)	11 lines	Old equipment – small station	None	20	90

Location	Border Crossing Facilities	Non-technical barriers having an impact on waiting times	Investments	Average Waiting Time in Minutes (Passenger Traffic, 2002)	Average Waiting Time in Minutes (Freight Traffic, 2002)
Corridor X Railway Border Crossings					
Serbia-F.Y.R.O.M. (Presevo, Main Axis)	6 lines	Delays	None	20	90
Serbia-Croatia (Sid, Main Axis)	14 lines	Delays	None	15	110
Serbia-Hungary (Subotica, Branch B)	9 lines	None	None	15	60
Bulgaria-Serbia (Kalotina, Branch C)	Small border station equipped for the needs of border and custom controls	Change of locomotive	Electrification of the line	40-60	240
F.Y.R.O.M.-Greece (Gevgelija, Main Axis)	27 tracks, 2 for passenger traffic, 2 for freight trains and 23 help tracks. The station is secured with modern signalling - interlocking equipment	Change of locomotive	Rehabilitation of facilities	30	80
F.Y.R.O.M.-Greece (Medzitlija, Branch D)	Not in use				
F.Y.R.O.M.-Serbia (Tabanovce, Main Axis)	Small station only for passengers (Trubarevo station is used for freight); 4 tracks, 2 for passenger traffic, 2 for freight trains. The station is secured with modern signalling - interlocking equipment.		Austrian company working on border crossing issues	30	80
Greece-F.Y.R.O.M. (Idomeni, Main Axis)	14 lines, 4 for passenger trains	Change of locomotive	None	30	60
Greece-F.Y.R.O.M. (Mesonission, Branch D)	Not in use				

6 Status of the Pan-European Transport Areas

6.1 Barents-Euro-Arctic Transport Area

6.1.1 Map, Extent and Technical Features

Countries	Norway, Sweden, Finland, Russia
Transport modes	Road, rail, aviation, navigation
Infrastructure figures:	
Railways	6575 km
BEATA-roads	11279 km
	Finland: 2321 km, Norway: 2238 km, Russia: 4623 km and Sweden: 2097 km
Inland waterways	n.a.
Number of airports	27
Number of seaport and inner harbours	22
Number of border crossings	12

Extent (Provinces)	**Norway** Finnmark, Troms, Nordland **Sweden** Norrbotten, Västerbotten **Finland** Lapland, Oulu **Russia** Arkhangelsk Oblast, Murmansk Oblast, Republic of Karelia
Important Seaports	**Norway** Sandnessjöen, Mo i Rana, Narvik, Kirkenes **Sweden** Umeå, Luleå **Finland** Kemi, Oulu, Raahe **Russia** Murmansk, Archangel, Petrozavodsk
Border Crossings	**Sweden - Finland** Haparanda (road & rail), Karesuando **Sweden - Norway** Junkerdal, Björnfjell (road & rail) **Russia - Finland** Vartius (road & rail), Kortesalmi, Alakurtti, Lotta, Salla **Norway - Finland** Näätämö, Utsjoki **Norway - Russia** Kirkenes

6.1.2 Overview of the General Development

In May 1998, the Ministers of Transport of Finland, Norway, Russia and Sweden as well as the Transport Commissioner of the European Commission signed the Memorandum of Understanding of BEATA, agreeing to study and develop transport and transport infrastructure jointly in the Barents area.

The creation of the Barents-Euro-Arctic Transport Area (BEATA) follows the process started on Crete in 1994, when the European Ministers of Transport identified the first priority corridors between the EU and the Central and Eastern European countries. In June 1997, the Ministers supplemented the corridors in the third Pan-European Transport Conference in Helsinki by creating four Pan-European Transport Areas (PETrAs) for further forums of regional co-operation. BEATA was selected as one of the four PETrAs.

In the Memorandum of Understanding the Ministers established a multinational steering committee to co-ordinate the BEATA work. The steering committee comprises one representative from each party listed below.

- European Commission, Directorate General for Energy and Transport
- Russian Ministry of Transport and Ministry of Railways
- Finnish Ministry of Transport and Communications

- Swedish Ministry of Industry, Employment and Communications
- Norwegian Ministry of Transport and Communications

The Finnish Ministry of Transport and Communications provides a secretariat for the steering committee. The chairmanship of the steering committee rotates annually between the member countries.

The objectives and activities of the steering committee are described in the Action Programmes, annual work programmes and reports. The Action Programme covers all modes of transport: roads, railways, sea routes, aviation, and combined transport systems. It also includes all the ancillary installations such as ports, border crossings, terminals and telematic systems which are necessary for the uninterrupted flow of traffic. The steering committee submits its Annual Reports to the Barents-Euro-Arctic Council and the European Commission.

6.1.3 Developments within the area between 1994 and 2010

Individual projects and studies are organised and financed by the countries involved since the beginning of BEATA in **1998-99**. In addition, BEATA has developed an information system containing both documents and geographic information about the area (BEATA GIS). This data is accessible through internet and the system has been operable since **2000-01**.

2000

Railway gauge changing system tests, Tornio-Haparanda

Salla-Alakurtti border station, TACIS assistance

Railway line Ledmozero-Kotchkoma under construction

Co-operation between customs enhanced

2001

BEATA GIS database

Railway gauge changing system tests, Tornio-Haparanda

Road Nickel-Prirechnyi (Norwegian co-operation)

Salla-Alakurtti border station ready, TACIS assistance

Alakurtti road being upgraded

Borisoglebsk-Storskog (Kirkenes) border station modernisation, feasibility study

Railway line Ledmozero-Kotchkoma construction finalised

Co-operation between customs enhanced

2002

Electrification of Kontiomäki-Vartius railway will be completed in 2004, and Oulu-Rovaniemi in 2006

Borisoglebsk-Storskog (Kirkenes) border station being finalised

Electrification of St. Petersburg-Murmansk railway has reached Louhi

Electrification of Belomorsk-Arghangelsk railway underway

Swedish Coastal railway Boden-Haparanda will be upgraded and electrified

2003

Starting of Sustainable transport in the Barents region (STBR) -study with Interreg IIIB

Railway gauge changing system tested, Tornio-Haparanda

Railway line Ledmozero-Kotchkoma, electrification, stations, control systems being installed

Ore railway line (Norway/Sweden), axle load upgrade started

Borisoglebsk-Storskog (Kirkenes) border station operating

2004

Several STBR studies completed (transport flows, aviation, logistics) or under way (road corridors, cross border project evaluation guidelines, railroad corridors).

Railway gauge changing system full scale tests being prepared, Tornio-Haparanda

Railway line Ledmozero-Kotchkoma, electrification, stations, control systems being installed

Ore railway line (Norway/Sweden), axle load upgrade started

Borisoglebsk road administrative change

Future

Maritime transport enhancement

Road traffic safety projects

The North East-West Freight Corridor demonstrations

Barents Seaport Forum

Regional aviation marketing

Road corridors development, including heavy vehicle safety

Road data and information database over the internet

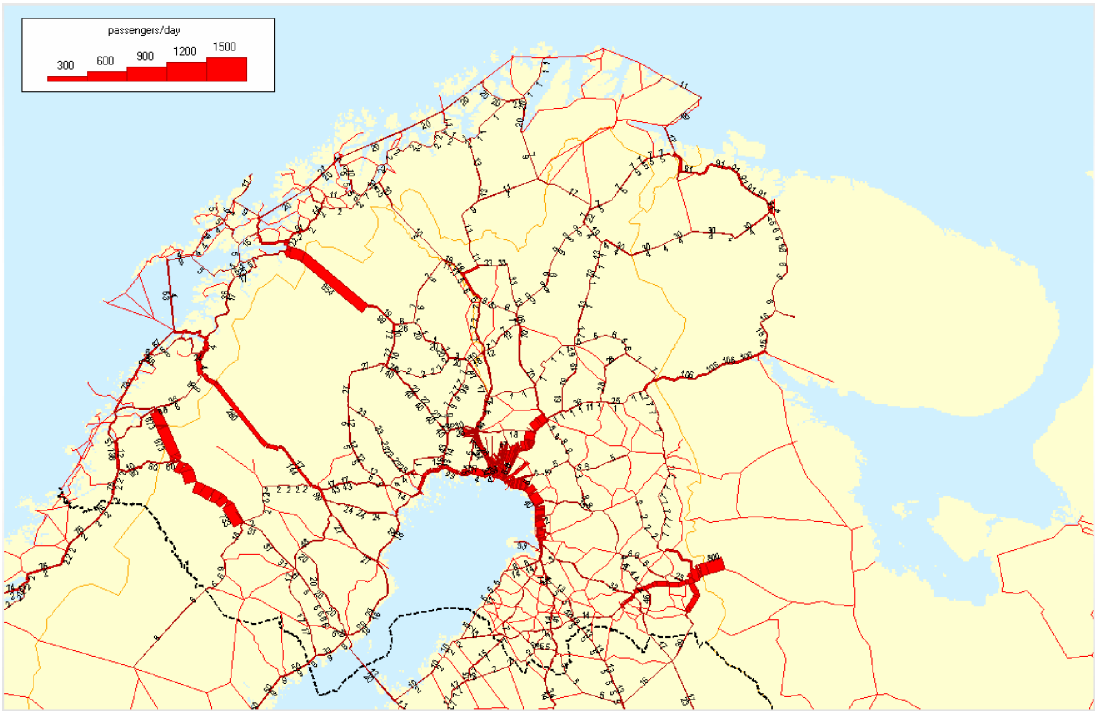
Development plan for the Barents heavy transport system comprising railways, terminals, ports, and border crossings

Operation model for east-west railway transport

6.1.4 Infrastructure Development per Country and Mode of Transport

Border Crossings

Daliy cross-border volumes in the Barents-Euro-Arctic Transport Area are shown in the following figure.



The border characteristics for passenger traffic can be summarized as follows:

- All borders above the Arctic Circle: Occasional travelling that partly follow the overall tendency at the southern part of the border and partly both the local peculiarities and general tourism trends;
- Sweden-Finland: Daily short-distance interaction (shopping, personal business, some work. Frequent all forms of long distance travel;
- Russia-Finland: Infrequent tourism-type interaction (shopping, personal business), very little business traffic;
- Sweden-Norway: Occasional free-time and holiday travel (visiting natural sites cabins, holiday resorts).
- Norway-Russia: Occasional business

The border characteristics for freight traffic can be summarized as follows:

- Differences between borders exist also for freight
- Trips crossing the Russian border are mostly timber products
- The traffic over Russian border is more frequent and shorter than over the other borders
- Between Finland and Sweden the share of daily transports is high with a wide mix of commodities
- Traffic between Sweden and Norway is infrequent
- The variations between different cross-border stations along the same borderline are also quite high
- Only less than 20 % of the freight traffic between Sweden and Norway is taking place on daily basis
- Between Finland and Sweden the share of daily transports is as high 40-70 %.
- Most of the traffic at border crossings is internal within Barents region. The share of internal traffic is higher at eastwest direction as in the north south direction
- The share of empty vehicles is quite high, especially atthose locations which have mostly local meaning

Policy conclusions are:

- Main question is the adequacy of the infrastructure to provide the social and economic prerequisites for regional development in terms of connections and services (Cohesion)
- Need for cross border cooperation as there might be “leaps in accessibility” due investments
- The result of the non-cooperative environment is an unbalanced supply structure as the market based operations concentrate within the national domains

Operational issues that may require attention in the near future are:

- Improved information on existing cross-border services;
- Cross-border information on domestic transportation services;
- Cross-border co-ordination between domestic transportation services, ticket sales and pricing;
- More efficient customs services.

Possibilities for developing public transport services at borders are:

- It is better to concentrate effort on such locations where frequent commuting, personal business and shopping trips exist
- On such locations where the trip frequencies are low and trip purposes are more widely distributed it is very difficult to develop frequent public transport services.
- It is possible distinguish between local and long distance traffic and provide specially designed services for these.

6.2 Black Sea Transport Area

6.2.1 Map, Extent and Technical Features

Countries	Turkey, Georgia, Russia, the Ukraine, Romania, Bulgaria, Greece, Moldova *(observer status for Armenia and Azerbaijan)*
Transport modes	Road, rail, aviation, navigation
Transport infrastructure: Number of seaport and inner harbours	44 **Bulgaria**: (6) Burgas, Lom, Nesebur, Ruse, Varna, Vidin **Georgia**: (3) Bat'umi, P'ot'i, Sokhumi **Romania**: (6) Braila, Constanta, Galati, Mangalia, Sulina, Tulcea **Turkey**: (8) Antalya, Gemlik, Hopa, Istanbul, Izmir, Kocaeli (Izmit), Samsun, Trabzon **Russia**: (3) Novorossiysk, Rostov, Tuapse **Ukraine**: (15) Berdyans'k, Feodosiya, Illichivs'k, Izmayil, Kerch, Kherson, Kiev (Kyyiv), Kiliya, Mariupol', Mykolayiv, Odesa, Reni, Sevastopol', Yalta, Yuzhnyy **Greece**: (3) Alexandroupolis, Kavala, Thessaloniki **Moldova**: (0)

6.2.2 Overview of the General Development

Unless otherwise stated, the following information is taken from the TINA Report: Status of the Pan-European Transport Corridors and Areas (2000).

The **B**lack **S**ea **P**an-**E**uropean **Tr**ansport **A**rea (BS PETrA) covers a number of countries; not all of them border the Black Sea: Turkey, Georgia, Russia, the Ukraine, Romania, Bulgaria as well as Greece and Moldova. Representatives from the Caucasus countries Armenia and Azerbaijan that are part of TRACECA (Transport Corridor Europe-Caucasus-Asia) and from the secretariat of the Black Sea Economic Co-operation (BSEC) have been invited to assist in the steering committee meetings as observers.

A first meeting of Senior Officials took place on 23/24 November 1998 in Tbilisi (Georgia) where all the participating countries initialled and signed the Memorandum of Understanding, except the European Commission. Moldova was not present at the meeting. The objective expressed in the Memorandum of Understanding is to further strengthen the existing international co-operation in the development of environmentally friendly transport infrastructure and services on the Black Sea PETrA.

The Turkish Chairmanship (1999-2001)

The first steering committee meeting on 1 July 1999, in Tbilisi, was devoted to future actions. The objectives and immediate steps were to be laid down in an action programme, which was worked out by TINA VIENNA in close co-operation with the European Commission. The chairmanship of the steering committee was entrusted to Turkey. The Turkish Ministry of Transport and Communications held the chairmanship of the steering committee of BS PETrA between July 1999 and June 2000. Under the Turkish chairmanship two steering committee meetings were held in Istanbul; the first on 25 November 25 1999 and the second on 15/16 June 2000.

At the second steering committee meeting on 25 November 1999 in Istanbul, the action programme was adopted. In order to achieve the accepted goals two working groups were set up:

- Working group on harmonisation of administrative and customs procedures, chaired by the Hellenic Republic for the start-up phase, while Romania will take up the chair afterwards
- Working group on infrastructure related to ports and their hinterland connection to corridors, chaired by Turkey.

The working group on harmonisation of administrative and customs procedures set up a work programme consisting of issues related to road, rail, maritime and combined transport, as well as facilitation at border crossings. The first meeting took place in Alexandroupolis on 25/26 May 2000 and the second one in Thessaloniki on 7 November 2001.

Three meetings of the Working Group on Infrastructure Related to Ports and their Hinterland Connection to Corridors of the BS PETrA were held on 3 February 2000, 28 March 2000 and 16 March 2001 in Ankara and in Istanbul.

The Romanian Chairmanship (2001-2003)

The BS PETrA chairmanship handed over to Romania in April 2001. Under the Romanian chairmanship two steering committee meetings were held in Bucharest; the first on 2/3 April 2001 and the second on 27/28 February 2002. At the fourth meeting, the steering committee discussed the modifications to the draft agenda on the basis of the proposals made by the representative of the European Commission ("Proposal on an enhanced coordination of co-operation between Corridor IX Southern Section, the Black Sea PETrA and TRACECA and the role of a support office", and “Updating of the Action Programme for the Black Sea PETrA”) and by the Greek delegation (draft Protocol on “Harmonization of Institutional Aspects of Transport and Customs Procedures”).

The Turkish delegation presented the Report of the Working Group on “Infrastructure related to Ports and their hinterland connections to Corridors”, mentioning the area infrastructure (current situation, determination of the main bottlenecks, financing of bankable infrastructure projects), the inventory of the area infrastructures (road, rail, ports), the decision adopted by the Working Group on Infrastructure to create a web-site for BS PETrA (http://ubak.gov.tr/~petras) and the completion of maps for each country and a regional map of BS PETrA. Comments on the country maps should be send to Turkey.

The Romanian delegation invited the European Commission to provide the countries with software compatible with the GIS software utilized by the TINA secretariat to ensure the same layout of the maps.

The representative of the European Commission presented the Commission’s “Proposal on an enhanced coordination of co-operation between Corridor IX-Southern Section, the Black Sea PETrA and TRACECA”, emphasizing the necessity of a support office in Odessa, having, inter alia, a coordination role of the regional project development. The representative of the European Commission presented also the alignment of land connection encircling the Black Sea, including river and maritime ports, for each Party of the Memorandum of Understanding on the development of the Black Sea PETrA, including country maps, as well as the Action Programme for the Black Sea Pan-European Transport Area which, according the MoU, should be revised annually by the steering committee. The Protocol on Harmonization of Institutional Aspects of Transport and Custom Procedures presented by the Greek delegation was approved by the steering committee and the procedure of signing was started by use of exchange of letters.

The fifth steering committee meeting on the development of the Black Sea Pan-European Transport Area took place in Bucharest on 27/28 February 2002. There were held discussions on the proposal on an enhanced coordination of co-operation between the Southern Branch of Corridor IX and the Black Sea PETrA with TRACECA and the role of the TRACECA secretariat in Odessa, as well as discussion on the topic of signing The Protocol on Harmonization of Institutional Aspects of Transport and Custom Procedures.

The Ukrainian Chairmanship (2003-2005)

The Ukraine has taken over the chairmanship from Romania. The chair is located in the Ministry of Transportation of the Republic of the Ukraine. Chairman is Vice Minister Mr. Pavel B. Rjabikin (Phone in office +380 44 461 6505, Fax 380 44 486 7206). The secretariat has provided no data for the new status report.

(source: Turkish Daily News, 27 March 2001)

To force the cooperation and development in the framework of BS PETrA the Turkish Ministry of Transportation has supported the development of a task force. Together with Russia, the Ukraine, Romania, Bulgaria and Georgia they are going to sign the Black Sea Naval Cooperation Task Group (Blackseafor) agreement on April 2, 2001 in Istanbul. The project has been proposed by a former Turkish Navy Forces Commander in 1998. The countries have signed the letter of intent in Ankara on June 28, 2000.

The aims of establishing Blackseafor are:

- search and rescue operations for humanitarian needs,
- cleaning sea mines,
- joint action for protecting the Black Sea environment and
- organising good will visits amongst Black Sea countries.

Decisions will be taken by consensus of the members, and the presidency will be rotated following the countries' names in alphabetical order. However, Turkey is to be the first president country. At least one manoeuvre in the Black Sea will be carried out every year.

Only in the last decade of the twentieth century, when the atmosphere of the cold war had receded, were the countries of the Black Sea area able to undertake bold steps towards co-operation. They came together in order to decide how, in times of globalising economies, valuable assets in their possession, such as geographical proximity, common history, cultural bonds and the interdependence of their national economies could be efficiently employed for mutual benefit and prosperity.

The real breakthrough occurred when in June 1992 the heads of state and government of eleven countries met upon the invitation of the government of Turkey in Istanbul (Albania, Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, Russia, Turkey and the Ukraine). This Summit was successfully crowned with the signing of a historic document:

"Summit Declaration on Black Sea Economic Cooperation"

What is known to the world today as the Black Sea Economic Cooperation (BSEC) has become a new regional cooperation model.

The Black Sea Economic Cooperation is based on the principles laid down in the Helsinki Final Act, the follow-up Conference on Security and Cooperation in Europe (CSCE) documents and, particularly, in the Paris Charter for a New Europe and on shared values such as democracy, human rights and fundamental freedoms, prosperity through economic liberty and social justice and equal security for all the Participating States. The goals and principles embodied in the Summit Declaration of the Black Sea Economic Cooperation are in full conformity with the provisions of the United Nations Charter. As a unique and promising model aimed at fostering interaction and harmony among the Participating States, the BSEC will undoubtedly contribute to the creation of a future Europe-wide economic zone and promote mutual understanding, peace and security in the region. One of the basic objectives of the BSEC, proclaimed in the "Summit Declaration", is to ensure that the Black Sea becomes a sea of peace, stability and prosperity, encouraging friendly and good-neighbourly relations.

Not less important is the decision of the heads of state and government from June 1992 that their economic cooperation be developed in a manner not contravening their obligations and not preventing the promotion of relations of the Participating States with third parties, including international organisations as well as the European Union and cooperation within regional initiatives.

6.2.3 Developments within the area between 1994 and 2010

The project development in BS PETrA is summarized in the following table.

Country	Location	Project Description	Length (km)	Project Start	Project End	Status	Costs (M EUR)	Source
Black Sea PETrA Projects								
Ukraine	Rail accesses from the Southern Branch to the main ports of the Ukraine - Odessa and Ilyichevsk	Development of the rail accesses				realized		
Ukraine	Port of Illichivsk	Reconstruction and extension						
Moldova	Leuseni – Chisinau – Dubasari – Border with the Ukraine	Improvement of Road and Roadside Services					15,0	
Moldova	(Cristeşti-Jijia) – Ungheni – Chişinău – Bender – (Kuciurgan)	Route infrastructure rehabilitation, upgrading and electrification				foreseen	105,5	
Moldova	Bender – Cimislia – (Carabuteni) – Basarabeasca – Taraclia (Bolgrad) – Greceni – Etulia – (Reni) – Giurgiulesti – (Galat)	Reconstruction and technical re-equipment of railway stations and track facilities				foreseen	4,8	
Romania	Port of Poti	Rail ferry service			1999			
Romania	Constanta South Port	Construction of the Container Terminal				ongoing		
Romania	Bucarest-Cernavoda-Constanta	Motorway construction			2005	executed by sectors		
Romania	Bucharest-Constanta					Negotiations for financing in progress		JBIC
Romania	Bucharest North - Bucharest Baneasa and Fetesti-Constanta	Rail Rehabilitation					231,7	ISPA
Romania	Port of Constantza	Construction of new barge terminal					16,0	
Greece	Port of Thessaloniki	Construction of new pier			2005			
Greece	Alexandroupoli	Construction of new port			2006			
Greece	Kavala	Expansion of port				Possibility of financing is being explored		
Turkey	Kumport	New reach stackers , additional custom bonded area						
Bulgaria	Port of Bourgas	Master Plan including 4 new terminals		2001	2015		105.8	JBIC
Bulgaria	Port of Varna	General Plan including 3 new terminals for grain, containers and ro-ro terminals						

6.3 Adriatic-Ionian Transport Area

6.3.1 Map, Extent and Technical Features

Countries	Albania, Bosnia and Herzegovina, Croatia, Greece, Italy Slovenia, Serbia and Montenegro
Transport modes	Maritime Transport, Road, Rail, Inland Waterways, Inter-modal Transport
Extent	The area covers the littoral countries around the Adriatic and Ionian Seas.
Railway	Priorities on intermodal links
Sea and inland waterways	Adriatic and Ionian Sea, Danube, Sava
Infrastructure figures:	
Number of seaports and inner harbours	57

6.3.2 Overview of the General Development

The development of the Adriatic-Ionian Transport Area is one of several activities of the Adriatic- Ionian Initiative (AII).

The Adriatic Ionian Initiative was established in at the Conference “Security of the Adriatic-Ionian Region” held on 19-20 May 2000 in Ancona, Italy. The seven countries around the Adriatic and Ionian Seas support the initiative: Albania, Bosnia and Herzegovina, Croatia, Greece, Italy, Slovenia, Serbia and Montenegro. The basic document for this co-operation is the Ancona Declaration which has been signed by the Ministers of Foreign Affairs of the member states. The highest body of the initiative is the Council of the AII which consists of the Foreign Ministers of the member states and a representative of the European Union.

The main objective of the AII activities is the achievement of political and economic stability in the region through co-operation in solving specific problems, promoting sustainable economic development, environment protection and cultural heritage exchange.

The presidency of the AII is rotating in one-year periods (each period starting in May, partners chosen in alphabetical order:

2000-2001	Croatia
2001-2002	Greece
2002-2003	Italy
2003-2004	Slovenia
2004-2005	Serbia and Montenegro.

The general directions of further development of the AII have been laid down in the Split Declaration of 25 May 2001, the Athens Declaration of 22 May 2002, the Bari Declaration of 13 May 2003 and the Portoroz Declaration of 25 May 2004.

Within the AII, six Round Tables are working on certain priority topics:

- fight against organised crime,
- economy-tourism co-operation amongst and between SMEs,
- environmental protection and sustainable development,
- **transport and maritime co-operation,**
- culture,
- inter-university co-operation.

The Round Table on Transport and Maritime Co-operation is dealing with the aspects of the Adriatic-Ionian Region. According to a Joint Statement made in Milocer (15-16 November 2004), the work is concentrated on three themes:

Theme I: Co-operation in the maritime sector,

- Environmental Aspect (Elaboration of an Sub-regional Contingency Plan for the Prevention of, Preparedness for and Response to Marine (Accidents) in the Adriatic and the Ionian Seas),
- Search and Rescue,
- Seafarers Certificates and Education.

The area encompasses one of the motorways of the sea (TEN-T priority project no. 21).

Theme II: Linking up the modes of transport – sea, rail and inland waterways,

Theme III: Adriatic-Ionian Highway.

Themes II and III are described in more detail in the next chapter because of their relevance for transport infrastructure development.

Under the Montenegro presidency, a restructuring of the AII administration has been proposed. This was mainly due to the fact that more permanent structures can definitely better support projects, programmes and plans under the initiative. It was stated that changing the institutional structure of the initiative could lead to more efficient and effective results in the cooperation of the seven member states of the Adriatic-Ionian Initiative. The President, therefore, strongly encouraged the exchange of opinions, as well as further discussions and contributions on a possibility to create a liaison office/small secretariat and to nominate permanent chairmen of the six Round Tables.

6.3.3 Developments within the area between 1994 and 2010

The AII is a relatively new initiative which was formally established only in 2000. Transport-related issues have been discussed so far at the Round Table on Transport and Maritime Co-operation.

The Memorandum of Understanding (MoU) on the Development of the **South East Europe Core Regional Transport Network** was signed on June 11, 2004 by Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Serbia and Montenegro (including Kosovo), and the European Commission crowned the efforts of the countries of the region

and the international community to develop a strategy for regional transport in South East Europe.

The aim of this Memorandum of Understanding is to co-operate on the development of the main and ancillary infrastructure on the multimodal South East Europe Core Regional Transport Network (hereafter the Network) and to enhance policies in this area which facilitate such development, to envisage close co-operation among participants on the harmonisation and standardisation, wherever feasible, of technical standards and regulatory or administrative provisions affecting the flow of transport in and across the region, in accordance with EU standards and directives and to develop and implement an annual and multi-annual rolling action plan (covering a period of 4-5 years) agreed by all participants in order to provide a platform for most efficient use of funds and know-how provided by public and private sources. Furthermore, it seeks to promote and enhance local capacity for the implementation of investment programmes, management and data collection and analysis in the countries of the region.

A steering committee composed of high-level representatives of the participants will co-ordinate the joint work under this Memorandum of Understanding. Each participant should appoint one representative and one deputy representative to the steering committee and notify all other participants. Steering committee members should normally be senior civil servants, with the authority to represent their administrations and at the same time able to provide the continuity of commitment which may not be available from a political minister.

The steering committee will meet as necessary, but at least twice a year. It should decide on its rules of procedure by unanimity, and should elect a chairman to guide its activities and represent it in international forums.

Representatives from the private sector, the social partners, the relevant corridors, the IFIs and other institutions, as well as experts, could be invited to its meetings as observers, as appropriate. The steering committee may consider creating standing sub-committees or ad hoc Working Groups for specific tasks in order to increase the potential for achieving the goals of this Memorandum of Understanding.

Linking up the Transport Modes

Considering that the Motorways of the Seas and Short Sea Shipping, combined transport and inter-modality are prioritized concepts of transport organisation which have priority within the European transport policy, all AII Member States expressed their readiness for joint activities in accessing to EU funds for financial support for projects related to linking up different transport modes (sea, rail and inland waterways in AII region.

It is recognised in the realisation of these projects, the key role and co-ordination should lay on Greece, Italy and Slovenia as EU Member States.

The Round Table on Transport and Maritime Co-operation at Milocer on November 15/16, 2004 has put an emphasis on the following directions of future co-operation in the following field:

“Opening of new ship lines within the concept of Motorways of the Seas/Short Sea Shipping, combined transport and inter-modality”

The AII Member States have agreed on the following:

1. The revision of the Trans-European Network Transport Guidelines (TEN-T) and their complementary Marco Polo II programme give a legal basis for the development of Motorways of the Sea.

2. The Motorways of the Sea are the only alternative to road traffic that can reach measurable results in the reasonably short time. Water motorways require less investment, and a faster activation time than land motorways or railways. They offer a unique opportunity, which can lead to significant modal shifts even before the EC deadline 2010.

3. Community funds, as well as state funds, should be made available in shorter times, and with fewer limitations, with respect to other types of projects different from Motorways of the Sea. The effort should be concentrated in three or more years, and state-aid should be permitted within such a time-span as a start-up aid.

4. A need for mutual co-ordinated performance of the AII Member States was identified in a sense of:

- Participation in the projects with significant regional importance which will be financed by EU funds;
- Conclusion of bilateral and regional agreements in the area of tax policy, administrative procedures and institutional support for the co-operation between ports in terms of promotion, elimination of the business barriers and urgent measures as promoting the transport by Short Sea Shipping, combined transport and inter-modality.

5. The further exchange of experience and support to the organisations responsible for implementation of the promoted measures on government level is necessary.

The Adriatic-Ionian Highway (also called Dalmatian Corridor or Ionian-Dalmatian Highway) is a corridor concept which is supposed to complement the existing Pan-European Corridors in the region at the east coast of the Adriatic and Ionian Seas.

The following alignment is planned: *Trieste-Koper-Rijeka-Zadar-Split-Ploce-Dubrovnik-Bar-Durresi-Igoumenitsa-Patras-Kalamata*.

The Corridor will cross all seven countries Work is already well under way on the highway in Croatia (586 km pass through Croatia), which should reach the Montenegrin border by 2007.

The other countries are still in the process of identifying possible funding sources.

At the Round Table on Transport and Maritime Co-operation on April 14/15, 2004 at Milocer, all participants of AII Member States have agreed to continue the initiative to establish the Adriatic Ionian Highway which will be conducted by the competent Ministries of AII Member States. They have proposed the following activities:

- Joint presentation at the European Conference of Ministers of Transport (ECMT) and proposal for inclusion of Adriatic-Ionian Transport Corridor into the Pan-European Traffic Corridor Network,
- Acceptance of Adriatic-Ionian highway as a project of wider regional and European significance for stabilisation and development,
- Establishing an Expert Co-ordination Committee for Adriatic-Ionian Transport, at the level of Ministries of Transport of the seven Adriatic-Ionian countries,

- Establishing a Joint Expert Team for preparation of concepts, studies and designs and for harmonisation of the Adriatic-Ionian route and the supporting road network from Trieste-Italy to Kalamata-Greece,
- Bilateral harmonisation of border sections and contact points,
- Harmonised planning of state-by-stage construction process,
- Joint approach to international programs and financing institutions.

The representatives of the Member States of the Adriatic-Ionian Initiative will forward the Joint Statement to its competent Ministries in order to prepare a document for signature.

6.3.4 Infrastructure Development per Country and Mode of Transport

Due to the fact that the Adriatic-Ionian Transport Area is the youngest of all PETrAs, there are no detailed information on investment and projects per country available yet.

6.4 Mediterranean Transport Area

6.4.1 Map, Extent and Technical Features

Countries	Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, Lebanon, Libya, Malta, Morocco, Portugal, Serbia and Montenegro, Slovenia, Spain, Syria, Tunisia, Turkey, West Bank and Gaza
Transport modes	Road, rail, aviation, navigation
Extent	*the countries around the Mediterranean Sea*

6.4.2 Overview of the General Development

The Mediterranean Transport Area was defined at the Helsinki Conference in 1997 to develop and improve the Mediterranean Transport Infrastructure Network.

For this purpose, a Euro-Mediterranean Transport Forum was established, consisting of the European Union, the Commission, the 12 respective countries and further EU members. The role of the Forum is to develop action programmes, and to monitor and evaluate initiatives. The initiatives are RETRAMED, INFRAMED, CORRIMED and Community-funded or MEDA-funded programmes. The objectives are free and fair competition between ports and transport services; liberalisation of shipping and logistical services; and the development of the external and interregional trade and cooperation.

The political mandate given in Barcelona

Transport is a major priority under the economic and financial dimension of the Euro-Mediterranean partnership, as is clearly stated in the Barcelona Declaration and the accompanying work programme.

Under the terms of the Barcelona Declaration, the participants: “stress the importance of developing and improving infrastructures, including through the establishment of an efficient transport system ...” and “undertake to respect the principles of international maritime law, in particular freedom to provide services in international transport and free access to international cargoes.”

The work programme in the annex to the Declaration provides for cooperation in the transport sector focusing on:

> "development of an efficient trans-Mediterranean multimodal combined sea and air transport system, through the improvement and modernisation of ports and airports, the suppression of unwarranted restrictions, the simplification of procedures, the improvement of maritime and air safety, the harmonisation of environmental standards at a high level including more efficient monitoring of maritime pollution, and the development of harmonised traffic management systems;
>
> development of east-west land links on the southern and eastern shores of the Mediterranean; and
>
> connection of Mediterranean transport networks to the trans-European network in order to ensure their interoperability.”

Thus the key points of the Barcelona mandate for the transport sector are: infrastructures; organisation of transport operations and freedom to provide international transport services; safety and environmental protection.

The development of the Euro-Mediterranean cooperation in the transport sector

The actions taken at the regional level and the results obtained to date fall far short of the Barcelona mandate, even though a framework for fresh momentum has been put in place with the Euro-Mediterranean Transport Forum.

Sea transport

Following a meeting of the Euro-Mediterranean Partners in Cyprus in October 1996, a package of regional projects on sea transport was submitted in June 1997 to the MED Management Committee, which approved funding by MEDA (8.4m EUR). These projects - some ten in all - concern mainly technical and safety aspects, in particular port information systems, hydrographical studies, research and training, statistics, port management, dangerous goods and waste collection, maritime administration and flag state policy. While some projects have already been completed or are being implemented, the launch of some other scheduled activities (projects relating to maritime safety, strengthening of maritime administrations and flag state policy) has been delayed for administrative reasons that will be resolved shortly. Overall, the mid-term balance of these actions is modest, given their size (microprojects) and scope (ad hoc measures lacking overall coherence).

Statistics

MEDSTAT (regional cooperation project between Euro-Mediterranean statistical institutes, coordinated by Eurostat and financed by MEDA to the tune of 20m EUR over the period 1996-2000) has launched a sub-project, “Med-Trans”, designed to establish cooperation on transport statistics in the Mediterranean area in order to meet the demand for information on this subject. Three years down the line, Med-Trans has created a network of Euro-Mediterranean statisticians who have learned to work together with the various institutions involved in the statistics production process (statistical offices, ministries of transport, port and airport administrations, etc). This has led, following work to harmonise data, to the establishment of an initial database of transport statistics in the Mediterranean.

Creation of the Euro-Mediterranean Transport Forum

The Euro-Mediterranean Transport Forum10, which was set up at the end of 1998, is the reference forum for developing regional cooperation in the transport sector. Its mandate is to draw up an action plan for transport in the Mediterranean area -covering proposals for measures, the resources to carry them out and a timetable – to monitor its implementation, promote exchanges of information and experience and to ensure that the results of the action taken are disseminated. This Forum, which meets annually, has had two technical meetings since it was set up (Malta, March 1999; Brussels, November 2000). The Brussels Forum approved the setting up, from 2001, of working parties on certain priority cooperation issues.

Sub-regional cooperation

On the margins of the Barcelona Process, an institutional framework for sub-regional cooperation in the western Mediterranean also evolved after 1995: the GTMO (Group of Transport Ministers for the Western Mediterranean11) which has enabled progress to be made on the sub-regional level.

There is no equivalent framework at present for the eastern Mediterranean.

Bilateral cooperation has also remained limited, Lebanon being the only Mediterranean Partners to have included a transport component in its bilateral cooperation with the EU12.

Very few specific measures have therefore been initiated so far under the transport dimension of the Euro-Mediterranean partnership. Every effort should be made to use the new institutional framework provided by the Euro-Mediterranean Transport Forum and the fresh impetus given to the partnership by the communication “Reinvigorating the Barcelona Process” in order to relaunch Euro-Mediterranean cooperation in the transport sector.

Areas in which specific measures could be taken

Support to the reform of the transport sector in the Mediterranean Partners

This is a crucial area to the extent that many bottlenecks in the Mediterranean transport system are due to inappropriate sectoral policies (influence of the State, insufficient

competition, inadequate institutional and regulatory frameworks). In addition, a favourable climate for private investment should be promoted by encouraging reform of transport in the southern Mediterranean. Three points are fundamental in this context: adaptation of the institutional, legislative and regulatory framework (notably in order to remove barriers to the freedom to provide transport services and to modernise management of traffic flows); approximation of social, technical, environmental and safety standards and monitoring of their application by the national authorities (in order to avoid distortions of competition); and improvement of the interface between transport services and the customs and immigration authorities, banking and insurance sectors.

Definition and promotion of a multimodal trans-Mediterranean transport network

Another basic objective of the transport dimension of the Barcelona Declaration concerns the definition, initially, of a multimodal air-sea transport plan, given that air and sea transport are the key elements of a transport system organised around an enclosed sea. In a second phase, this plan would be supplemented by overland links, crucial to the development of South-South trade. Attention should focus in particular on the importance of rail-sea connections (linking ports with their hinterland). This network will have a trans-Mediterranean dimension (interconnection with the Trans-European Networks or TENs) and a South-South dimension. For the purposes of devising this network, account should also be taken of the review already carried out in the framework of sub-regional cooperation (cf. 2.2) and the Third Pan-European Transport Conference held in Helsinki in June 1997.

Infrastructure, whether the improvement of existing links or the construction of new infrastructure (missing links), holds the key not only to investment in this particular sector, but also to decisions to invest in the Mediterranean Partners in general. MEDA funding, which can undoubtedly play a catalytic role in this area, is not normally used directly to finance physical infrastructure (hardware). Thus an in-depth study on how to finance infrastructure is necessary, in particular on ways of encouraging public-private partnership.

In this context, a new approach should be taken to infrastructure financing in future, combining the available sources of funding in optimum fashion.

It is also important to stress that any development of infrastructures must always be accompanied by a comprehensive environmental impact assessment of a standard approaching that required in the EU.

Maritime and aviation safety

The disasters at sea (Erika, Ievoli Sun) highlighted the need to improve the safety of shipping, and of the transport of oil and chemicals in particular. This concern is all the more acute in the Mediterranean, an enclosed sea with a fragile ecological balance. There is a great deal of oil tanker traffic in the Mediterranean, and a disaster of the Erika type would have irreparable consequences on this fragile environment. The current situation (oil tanker traffic, application of the safety measures adopted by the International Maritime Organisation) must be examined at the Euro-Mediterranean level, together with the possibility of implementing the measures from the Erika I and II packages in the Mediterranean (Erika I: double-hull tankers, more stringent port control, stricter control of classification societies; Erika II: establishment in particular of a vessel monitoring, control and information system - VTMIS).

A similar review must be carried out in the field of sea passenger transport, taking account of the volume of traffic at certain strategic points such as straits (Gibraltar, Bosporus and Dardanelles).

Experience developed in the European Union in the aviation sector could also be usefully shared with the Mediterranean Partners in order to strengthen the national authorities' control over aviation safety. The Commission is already engaging in such cooperation with the countries of central and Eastern Europe under the PHARE programme, notably as regards standards issued by the Joint Aviation Authorities. This experience could constitute a useful basis for developing Euro-Mediterranean cooperation in this area. Progress towards European levels of safety and performance in air transport in the southern Mediterranean might also require support from the Union in the field of air traffic management, particularly as regards the acquisition and mastery by the Mediterranean Partners of the new techniques being put in placein Europe.

Short-sea shipping

Short-sea shipping is of strategic importance in the Mediterranean, in view of the distances involved and the fact that there are no practicable overland routes in many cases. Short-sea services are also a key part of the multimodal transport chain (road/sea or rail/sea). It is clear that any increase in trade - and hence transport - flows in the region will result in increased use of this transport mode. Last but not least, short-sea shipping is an environment-friendly transport mode, which provides cheaper services than other modes.

Action can be taken at three levels to make this transport mode more attractive: at a technical level (optimisation of loading units and the speed of ships in particular); at an administrative level (administrative and customs documents, use of electronic data interchange, international documentation, creation of administrative assistance offices in ports); and at a regulatory level, particularly in ports. Reference is made in this connection to the measures contained in the Commission's communication on short-sea shipping and the examination in progress at Community level of non-discriminatory and transparent access to the port services market.

Approximating air transport policies at Euro-Mediterranean level

This is a crucial area given the tourism potential of the Euro-Mediterranean region and the importance of facilitating relations between the economic actors concerned. The Euro-Mediterranean framework should enable discussions to begin at the regional level on progressive liberalisation of air transport, in the light of the EU's positive experience with the multilateral negotiations with the countries of Central and Eastern Europe and Cyprus.

Global navigation satellite system (Galileo)

Extending the global navigation satellite system to the Mediterranean area has, from the outset, been seen as an important instrument in the creation of a trans-Mediterranean transport network and coherent multimodal transport systems. With the development of the Galileo programme, Euro-Mediterranean cooperation in this area is even more crucial. Galileo will have a major impact on managing capacity and traffic flows, safety, the environment and efficiency of transport systems. Priority needs to be given in this context to studying ways of associating the Mediterranean Partners with Galileo, and of analysing the effects of their involvement on national and regional transport systems.

RETRAMED

RETRAMED is the definition of a research programme for Mediterranean region, elaborated for the European Commission in relation with the countries.

INFRAMED

The third Pan-European Conference on Transport in Helsinki provided the occasion to put forward a programme of work centred around the concept of priority transport corridors, taking up the work already done within the Euro-Mediterranean framework and in particular the work done by the Transport Group of the Western Mediterranean (GTMO).

At the GTMO meetings, it was decided to uphold as priority corridors:

- the Maghreb Union Motorway;
- trans-Maghreb train;
- the Latin arc;
- the network of port and airport multimodal platforms and their connections with land infrastructure;
- the networks required for the harmonisation and effectiveness of air control;
- the fixed link across the Strait of Gibraltar.

A certain number of priority issues apart from infrastructure were also established in order to facilitate exchanges:

- improvement to the quality of service;
- modernisation and adaptation of port infrastructure;
- new air control system up to European standards;
- administrative and customs procedures;
- improvements to intermodality;
- training and technology transfers.

In this context, the GTMO launched a study (financed by DG VII/EC) on transport infrastructure needs in the six countries of the Western Mediterranean (INFRAMED), which enabled a number of priority projects of common interest to be proposed. The study focuses on transport infrastructure in the southern countries of the Western Mediterranean and their coherence with trans-European networks. The study gives specific consideration to the infrastructure involved in developing international exchanges between the countries of the Western Mediterranean (north-south; south-north and south-south exchanges). This

infrastructure falls within the framework for the functioning of the corridors defined for the area and is one of the priorities of the Partnership.

The study made it possible to evaluate growth in traffic flows in the Western Mediterranean. It also highlighted the importance for the Euro-Mediterranean Partnership of establishing rapid, reliable transport links for high added value goods and certain food products. In addition, the study identified a number of other specific needs. Lastly, it called attention to the fact that international flows along the main land routes remain modest in comparison with internal movement.

The principal infrastructure needs were defined on the basis of these projections. The next stage was to analyse the projects presented to the ad hoc group and certain other proposals using the criteria of the GTMO (seven of these nine criteria were demonstrated to be useful). The projects were then classified into several groups.

The first group covers projects that meet a rapid infrastructure need and whose main objectives are to facilitate Euro-Mediterranean exchanges and to contribute to strengthening relations between the two shores of the sea:

- container terminal and development of EDI/VTS at the port of Radès;
- container terminal in Algiers (plus EDI);
- VTS and EDI projects in Algiers and Casablanca;
- linking the port of Radès to the rail network;
- modernisation and bringing up to European standards of air navigation systems;
- Tangiers - Sidi El Yamani motorway;
- TIR platform near Tangiers;
- Algiers freight air terminal.

This group includes a project whose main objectives are to facilitate Euro-Mediterranean exchanges and to contribute to strengthening relations between the two shores of the sea. This project does, however, require supplementary information (involvement of private partners) in order to choose between two options:

- extension of the port of Tangiers or construction of a new Tangiers port.

The second group consists of projects that will serve as a support for facilitating integration of the Maghreb (the Trans-Maghreb Corridor) and which meet a rapid infrastructure need (with national traffic in the majority):

- a first phase of motorway projects of the Maghreb Union Motorway (the busiest stretches, often around major towns or between large towns near in each other) in the three countries;
- a first phase of railway projects for the Trans-Maghreb Train from Marrakech to Tunis (the busiest stretches, often near major towns) in the three countries.

The third group comprises land development projects that play a role in economic growth and which may have an impact on transport in the region:

- Mediterranean coastal bypass to Morocco (which also falls within the framework of reinforcing links between Algeria, Morocco and Spain);
- Taourirt - Nador railway line;
- Jen Jen port for shipping cereals;
- Casablanca - El Jedida motorway;
- Tunis - Bizerte motorway;
- doubling of the Tunis - Sousse railway line.

Particularly important within this group are projects of an urban nature that contribute to economic growth:

- Casablanca motorway bypass (which will also help to ease flows on the Maghreb Union Motorway);
- Algiers underground system;
- railway line for the southern suburb of Tunis.

A project whose main objectives are to facilitate Euro-Mediterranean exchanges and to contribute to strengthening relations between the two shores of the sea has been distinguished:

- the fixed link across the Strait of Gibraltar.

This project does, however, require supplementary information and a concertedapproach that takes into account other projects (incorporating the fixed link in Spanishand Moroccan railway infrastructure programmes and the link with the port of Tangiers).

Other projects have been presented but are of a lower priority. Consequently, they must be programmed in for later phases (2005 or beyond 2010) and will require further studies.

A global evaluation of financing possibilities was presented. However, it will be necessary to do a case by case analysis in greater detail of the advantages for each type of user and of the means to make users contribute so that the best arrangements can be made.

Over and above this investment in infrastructure, the Maghrebi transport system would gain greatly in effectiveness if a certain number of functional or organisational measures were implemented, notably those concerning the links between modes, port passages, customs points and border crossings and the management of information and the documentation required for goods transit in general.

CORRIMED

CORRIMED is an application of the concept of a ”corridor” to the Mediterranean This zone requires a specific approach because of the importance of the maritime transport.

The CORRIMED project consisted in identifying corridors through direct co-operation with the representatives of the Mediterranean countries concerned as part of the preparations for the third Pan-European Conference. As in the case of the Crete corridors, a multimodal approach was adopted and was to be accompanied by sufficiently precise route planning (in the form of maps) to persuade the partners of its practicality, which would then lead relatively swiftly to project development and co-financing schemes.

The multimodal approach adopted at this stage meant paying particularly close attention to the ports and airports located within corridors in the knowledge that there are relatively few rail-road combined transport facilities in the Mediterranean region due to the limited coverage of railway networks which do not have proper interconnections between countries in the Southern Mediterranean region.

The CORRIMED project therefore resulted in the publication of a number of maps in which several major areas can be distinguished:

- An Eastern Mediterranean area, including Turkey in particular, where two major corridors have been identified, although uncertainties remain on the inland continuity of these corridors through Syria, Iraq and Lebanon

- A Near East Zone comprising Israel, Jordan, the territory administered by the Palestinian Authority and Egypt; a more detailed and in-depth study was made of this area as part of the REDWEG peace process programme, which deserves special mention.

- The Maghreb area where the major corridors have already been studies and discussed within the framework of UMA (Arab Maghreb Union) and which had been extended in co-operation with the countries of Southern Europe (France, Italy, Spain and Portugal) within what the GTMO (Group of Ministers of Transport of the Western Mediterranean), with which the European Union is associated.

The planning of these corridors obviously took account of the Maghreb Motorway whose sections located in Morocco, Algeria and Tunisia, as well as the extension to Mauritania, have in large part been completed; the cross-border links, however, are not yet finished. These links reflecting the interdependence of the Maghreb countries are at present harder to justify in terms of traffic volumes, particularly in view of the extremely low levels of goods traffic; the international community could surely find appropriate areas here for aid and intervention. In addition, there is the Maghreb railway corridor, which is currently being put in place at a far slower pace in view of the weaker share of rail in the modal split and the handicap in those countries of having railway networks that are more geared towards providing links between industrial centres and ports than towards rail freight services between individual countries, which in fact are practically non-existent.

This work of reflection also includes studies on the Gibraltar fixed link connecting Europe to North Africa and also to regions further South on the African continent, as well as those relating to the role played in these corridors by port and airport complexes.

In conclusion, the CORRIMED project made it possible to secure, given the political context at that time, the co-operation of a large number of Mediterranean countries which were able to set out detailed objectives for the development of infrastructure in the Mediterranean region, although differences still persisted according to the area concerned and particularly those between the Western and Eastern Mediterranean as a result of the existence, or conversely absence, of co-operation in this area. The outcome was unlikely to be seamless, even though the approach and stated objectives were as a general rule properly understood and appreciated, given that the continuity of these corridors would not be fully ensured either in an overall approach to the Mediterranean perimeter due to

political conflicts or tensions in certain area, particularly the Balkans and a large area in the Eastern Mediterranean.

Euro-Mediterranean Transport Project

In the framework of the MEDA programme the European Commission approved, in November 2001, the Euro-Mediterranean Transport Project with a financial allocation of 20m EUR. The Euromed Transport Project is based on the 1995 Barcelona Declaration, which identified the need to improve transport linkages with the southern Mediterranean partner countries (MEDA region). The project aims to promote increased and more sustainable transport flows, more competitive trade and better balanced exchanges; to improve the functioning of the transport sector (quality, safety and efficiency goods and passenger transport); and to develop integrated multimodal transport networks and infrastructure.

The Euromed Transport Project is implemented through two service contracts:

The **Main Contract**, funded by the European Union with a budget of 10m EUR, operating in 2003-2007. The beneficiaries of the contract services are the 12 MEDA partner countries: Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Palestinian Territories, Syria, Tunisia and Turkey.

The **Infrastructure Network Contract**

The contract aims to improve transport links between the EC and the MEDA region; to improve transport links between MEDA partners; and to support the creation of a MEDA Free Trade Area by 2010. Components of project include the identification of a regional transport strategy; the development of a Transport Network to support the strategy; feasibility studies of transport network improvements; and training and technology transfer. Deliverables for this contract include a database, a traffic model, technical notes, maps, training, feasibility studies and regional transportation plans.

Planning the network and identifying the priority infrastructure projects

The main importance of such action, conducted within the framework of the Euro-Mediterranean Transport Forum would be to promote a comprehensive and coherent approach to the network and to facilitate the mobilisation of capital from public and private donors for projects identified as priorities.

The process of planning the network and identifying priority projects was recentlylaunched in the framework of the MEDA programme. An initial outline of the network was presented in 2004. Network identification is due to be completed in 2006. To give the network the necessary political legitimacy, the list of priority projects must be approved in due course by the Transport Ministers of all the Euro-Mediterranean Partners. A Euro-Mediterranean Conference of Transport Ministers, like that recently held under the Greek presidency in the energy sector (Athens, 21 May 2003), must therefore be envisaged in the framework of one of the forthcoming Presidencies of the Union. The Commission will apply the conclusions drawn from this exercise to its review of the guidelines for the trans-European transport network which is aimed at improving links with the networks of the Mediterranean Partners, and of the financial instruments at its disposal, in particular the MEDA programme and the INTERREG interregional cooperation programmes involving the Mediterranean partners.

Given the budgetary constraints, the Euro-Mediterranean transport network must be focused on the financial resources which are available for genuine priority infrastructure projects. It is therefore essential to adopt a coherent approach to the planning of the network based on corridors to enable priorities to be set in the right order.

The European Union has proven experience in this respect in the framework of the trans-European network. Whilst bearing the specific political, economic and budgetary situation of the Mediterranean Partners in mind, this methodology could be applied to the Mediterranean region. Like the exercise recently carried out for the Balkans and before that for the candidate countries (TINA study, on which the Van Miert Group will base its proposals for the trans-European transport network in the enlarged Union), the aim should be to carry out a survey of the state of the transport infrastructure network in the Mediterranean and, after identifying a number of corridors, to select certain transport infrastructure projects which the Euro-Mediterranean partners agree are of major regional importance.

As in existing general studies and feasibility studies concerned with particular projects, projects would therefore be identified and put in order of importance after an analysis based on corridors. This method proved its value in the central and eastern European countries following the Crete and Helsinki Conferences. This analysis would add to work already planned in the framework of the Pan-European transport areas (PETRA), which were designed at those Conferences.

Development of the following multimodal corridors18 is likely to promote regional integration and coherence between the networks of the Mediterranean Partners and the trans-European network:

- The trans-Mahgreb multimodal corridor, which has a railway component (the trans-Mahgreb train) and a motorway component (the AMU motorway). This links the main towns in Morocco, Algeria and Tunisia, and has potential for maritime and air links to the main economic centres on the northern shore of the Mediterranean basin (the Latin Arc);

- The double corridor of the eastern Mediterranean, which lies on the natural trade route between the European Union, the Balkans and the countries of the eastern Mediterranean. It is made up of the road and rail routes which serve the region's main ports and airports. The corridor starts in Bulgaria, crosses Turkey and then divides into two branches, one along the coast to Syria, Libya, Israel and Egypt, and the other through the Syrian and Jordanian plateaux.

In view of the importance of the environmental aspects, the Commission will keep a close watch to ensure that the Community legislation in force on environmental protection is duly applied in this context.

Most of the foreign trade between the EU and the Mediterranean partners is by sea and air. When planning the network, importance will therefore be attached to shipping and air transport services, given their key role in a transport system which will encompass an enclosed sea, and to the inland links which are essential for the development of south-south trade. Multimodal platforms (links between ports and airports and the hinterland) will therefore be very important.

Short-sea shipping is particularly important in the Mediterranean given the distances involved and that, in some cases, practicable inland links are non-existent. The Mediterranean Partners have some 58 major ports, which handle more than a million tonnes of goods a year.

Short-sea shipping was recently the subject of a specific informal EU Transport Council meeting held in Gijón on 31 May and 1 June 2002. At the meeting, Ministers noted that there was a political desire to cooperate on the creation of Motorways of the Sea in the framework of the trans-European transport network, as well as at regional and cross-border level, by connecting the corridors and shorelines of the Member States and their immediate neighbours. To this end, the Ministers stressed the need for the intermodality of short-sea shipping, in particular the interconnection and interoperability of the maritime and inland transport networks (inland including roads, railways and inland waterways).

The Mediterranean basin is clearly a priority area for the development of such Motorways of the Sea, which would be a key part of the Euro-Mediterranean transport network. In the framework of the review of the Community guidelines for the trans-European network launched by the Van Miert Group, priority could conceivably be given to several Motorways of the Sea in the Mediterranean linking Malta and Cyprus to the rest of the European Union and to the southern and eastern shores of the Mediterranean. A motorway of the sea linking northern Greece to south-eastern Turkey and the Middle East and serving the Balkans region and Cyprus could also be considered.

Along with the need for national action by the Mediterranean Partners to promote short-sea shipping, the EU has a role to play, in particular through the MEDA programme, in boosting its development in the Mediterranean Partner countries. It should also be stressed that companies in the Mediterranean Partner countries will be able to participate in pilot projects under the future Marco Polo programme.

To promote the establishment of Motorways of the Sea in the Mediterranean basin, consideration could also be given to organising joint calls for tenders between the Member States and the Mediterranean Partners, funded by the Community, for the development of new maritime links between the Union and its neighbours in the southern and eastern Mediterranean. In this context, it seems necessary to promote the use of ships which are specially adapted for short-sea shipping and are equipped to provide connections with landbased networks. The expertise of European and other shipbuilders would be useful in achieving this objective.

In the air transport sector, one important aim should be to increase airport capacity, in particular at secondary airports, to develop the point-to-point air travel which is essential for tourism, and to integrate air traffic management systems in the light of the progress made in creating a single European sky. Some Mediterranean Partners are already members of Eurocontrol or have a bilateral cooperation agreement, which could boost cooperation on interoperability. These coordination efforts could also be strengthened by means of a strategy for the liberalisation of air transport services at regional level, possibly based on a request from these countries for the conclusion of an open sky agreement with the Union.

With regard to rail transport, even though links between the Mediterranean Partners are virtually non-existent, particular attention should be paid to developing these links within the region to facilitate south-south trade and intermodality, and to reduce CO2 emissions. Such projects could be introduced in the Maghreb and, possibly, if peace is achieved in the Middle East, in the Mashrek region.

List of MEDA activities and projects

In the framework of the Euro-Mediterranean Forum, working parties have been set up which met throughout 2001 and the first half of 2002. The three working parties correspond to the priorities adopted by the second Forum (Brussels, November 2000): "Network and infrastructure", "Maritime transport", and "Satellite navigation".

The working party on network and infrastructure is concerned with matters which form part of the Euromed Transport project (see below), which includes a major infrastructure component. It is co-chaired by the European Commission and the EIB and discusses issues related to the development of the Euro-Mediterranean transport network and infrastructure funding.

The working parties on maritime transport and satellite navigation contribute to the process of identifying two new regional projects in the framework of the MEDA programme, one on maritime safety (SAFEMED) and the other on the applications of Egnos and Galileo in the Mediterranean region (Euromed GNSS project). The broad lines of these future projects were approved by the third Euromed Transport Forum (Brussels, July 2002).

The third Euro-Mediterranean Transport Forum agreed to extend the activity of these three working parties and approved the creation of a new working party on air transport.

- Package of four regional MEDA projects on training in maritime safety which were launched during the second of the 2001. These projects were introduced by the International Maritime Organisation and consist of training activities on various aspects of maritime safety (ISM code, STCW Convention, flag State policy, port reception facilities).

- The Euromed Transport Project which was launched in January 2003 and has been awarded MEDA funding of 20m EUR over four years. Its aim is to improve the operation and effectiveness of the Mediterranean transport system by focusing on two essential and complementary features: support for reform of the transport sector in the Mediterranean Partner countries, and the promotion of a regional transport infrastructure network.

The 'Infrastructures' part of the project, which is directly related to the development of the Euro -Mediterranean transport network, mainly comprises:

1) the definition of an operational concept for the Mediterranean transport infrastructure network;

2) an exercise in planning this network, similar to what has been done for the EU candidate countries (TINA) and the Balkans (strategy document "Transport and energy infrastructures in south-eastern Europe");

3) the funding of pre-feasibility studies for a number of projects which have been identified as priorities;

4) institutional support for the preparation and implementation of infrastructure projects, and for the management of the infrastructures concerned.

- MED-Trans project: the MED-Trans project is part of the MEDSTAT programme, the first MEDA programme of regional cooperation on statistics. During the period 1997-2003, this project has led to the setting up of a network of national statistics institutes and transport authorities, which have worked together to provide relevant statistical data for the development of transport in the Euro-Mediterranean region, in particular maritime and air transport. The data collected during this period have been

disseminated by Eurostat. The project will continue after 2003 in the context of the MEDSTAT II programme in order to continue the process of building up statistics institutes and to extend the field of activity to include road transport and performance and service quality indicators.

- Three research projects on transport in the Mediterranean (INCO-MED) were also launched in 2003, in the framework of the 5th RDFP. The aim of these three projects is to help establish a method and criteria for the definition of a regional transport infrastructure network in the Mediterranean. They will supplement the abovementioned Euromed project.

- Lastly, several bilateral MEDA projects in the transport sector are being planned, in particular in Morocco (structural adjustment programme in the transport sector) and Tunisia (port reform project). In the case of Morocco, there is also the Mediterranean Ring project, a section of which is being funded under the MEDA programme (about 90m EUR, tendering in progress).

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