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## **Helsinki Corridors: Ways of European Expansion and Development**

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**Abstract:**

*Efficient distribution of human and goods transport has always been an important element in maintaining the economic systems cohesion. Together with the economic and technological development, the purposes to attain this goal have considerably evolved. The integration of the Centre, Eastern and South-Eastern European countries' infrastructure in the European transport networks has as a main goal the promotion of networks' interconnection and interoperability. This is done through concentrating upon some specific infrastructure routes located on the trajectory of 10 pan-European transport corridors, which pass through geographical zones in many countries, some of them EU members, and others undergoing a process of negotiation (Turkey). Pan-European Corridors will have immediate effects like: the growth of investments in infrastructure thanks to European funds – for developing countries, this will represent an important part as it welcomes a development of the economy, especially in crises; the favouring of conditions for the functioning and administration of globalization; the growth of cooperation both among Eastern countries and between such countries and Western countries; conditions for the recovery of economic differences between West and East; conditions for the recovery of the development in accordance with the policy of European countries and other candidate countries.*

**Key Words:**

*Corridor, Transport, Connections, Efficiency, Sector*

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## **1. Introduction**

A new geopolitical situation — and a new situation for the transport sector — was created when the European Union enlarged with 10 countries of central and eastern Europe and the Mediterranean in May 2004. This historic enlargement eastwards and southwards was continued as Bulgaria and Romania joined the EU in January 2007. The newly enlarged EU-27 not only has more Member States, but also a new set of external frontiers and a new set of neighbours on its borders. Some of the surrounding countries — Croatia, the Former Yugoslav Republic of Macedonia, and Turkey — have been formally named candidates for EU membership. The other countries from the western Balkans — Albania, Bosnia and Herzegovina, Montenegro, and Serbia/Kosovo are seen as potential candidates.

Meanwhile, the European Neighbourhood Policy (ENP) was developed with the objective of avoiding the emergence of new dividing lines between the EU and its neighbours: its aim is to promote peace, stability, security, growth, development and prosperity in the neighbouring countries as well as modernisation of the economy and society (Thalassinos and Pociovalisteanu, 2007; 2009). Twelve bilateral ENP action plans have thus far been agreed with Ukraine, Moldova, Armenia, Azerbaijan, Georgia, Morocco, Tunisia, Jordan, the Palestinian Authority, Israel, Lebanon and Egypt. The action plans support the implementation of national plans and reform programmes in the political, economic, social and institutional fields.

The EU and Russia have decided to strengthen ties in a different framework by building cooperation in four so-called 'common spaces': a common economic space; a common space of freedom, security and justice; a space of cooperation in the field of external security; and a space of research and education, including cultural aspects. Transport is a key element in the EU's cooperation with neighbouring countries and its efforts to promote the conditions for sustainable economic growth, trade and cultural exchange. Transport is also one of the areas where the EU works to facilitate the spread of its own internal market principles and rules abroad. Under enlargement policy, candidate countries have to align themselves with EU legislation on transport in the interests of a well-functioning internal market, while ENP aims to ensure that legislation, standards and technical specifications of main trade partners are compatible with those of the EU. In the transport sector the action plans concentrate on measures designed to improve the safety, security and efficiency of transport operations as well as the development of an efficient transport network.

Closer cooperation in transport fosters economic development and trade. This in turn can contribute to wider aims: transport can have an important enabling role in strengthening regional cooperation and integration across borders.

## **2. Helsinki Corridors**

### **2.1 Brief history**

Several Conferences on Pan-European Transportation were organized at beginnings of 1990's as a consequence of the openness of Eastern block. Their objective was the identification of the needs for transportation infrastructure development within Eastern Europe. The concept of Pan-European transport policy and corridors was born during the preparatory work for the First Pan-European Transport Conference organized by the European Union (Commission, Parliament) and the European Conference of the Ministries of Transport (ECMT) in 1991 in Prague. The purpose was to speed up the development of transport routes throughout Europe and to further contribute to smoother economic exchanges. With the enlargement process becoming a priority in Europe, the corridor concept started gaining ground. The Corridors were defined in their actual form by the 3rd Pan-European Transport Conference in Helsinki, 1997.

Nine Pan-European transport corridors were defined at the second Pan-European transport Conference in Crete, March 1994, as routes in Central and Eastern Europe that required major investment over the next ten to fifteen years. Nevertheless, during the third Conference, hosted by Helsinki in 1997, a tenth corridor was added, as a result of the lobby done by Baltic countries for a better connection between Western Europe and Balkans. This corridor was proposed after the end of hostilities between the states of the former Yugoslavia. Therefore, these corridors are sometimes referred to as the "Crete corridors" or "Helsinki corridors", regardless of their geographical locations.

### **2.2. Description of Pan-European Corridors and areas**

Each corridor has a road and railroad component, except for Corridor VII, which is represented by the Danube segment downstream from Vienna. The corridors create a network which extends from West (Nuremberg) to East (Nizhny Novgorod) and from North (Helsinki) to South (Thessaloniki).

#### **CORRIDOR I**

Corridor I is the VIA BALTICA road and the RAIL BALTICA railroad plus the ferry line Helsinki-Tallin.

Countries: Finland, Estonia, Latvia, Lithuania, Poland, Russia.

Length: approximate 1710 km of rail and 1630 km of road.

Transport modes: multimodal: rail, road, ferry.

Links with other corridors: Corridor IX: Kaunas (Lithuania); There is also an additional appendix Riga - Kaliningrad.

**CORRIDOR II**

Connects Berlin (Germany), via Warszawa (Poland), Minsk (Belarus) and Moscow (Russia) with Nizhny Novgorod (Russia). The extension of Corridor II from Moscow to Nizhny Novgorod was decided at the Helsinki Conference, in 1997. The extension gives the Corridor access to the Trans-Siberian rail trunk line and to the inland waterways in the Russian Federation.

Countries: Germany, Poland, Belarus, Russia.

Length: approximate 2300 km of rail and 2200 km of road.

Transport modes: multimodal: rail, road

**CORRIDOR III**

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

Countries: Germany, Poland, Ukraine

Length: 1650 km of rail and 1700 km of road.

Transport modes: multimodal: rail, road

**CORRIDOR IV**

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.

Corridor IV provides the link running from Dresden/Nuremberg (Germany), via Praga (Czech Republic) Vienna (Austria)/Bratislava (Slovakia), Budapest (Hungary) and to Romania.

Countries: Germany, Czech Republic, Austria, Slovakia, Hungary, Romania, Bulgaria, Greece, Turkey.

Length: 4379 km of rail and 3640 km of road.

Transport modes: multimodal: rail, road, ports.

Branches: In Romania the Corridor splits into two branches: The Northern branch, running from Arad (Romania) via Bucuresti (Romania) to Constanta (Black Sea) and The Southern branch running from Arad (Romania) via Craiova (Romania) to Sofia (Bulgaria)

Two more branches go from Sofia (Bulgaria) to Thessaloniki (Greece) and to Istanbul (Turkey).

**CORRIDOR V**

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

Corridor V provides the link running from Venice and Trieste (Italy) via Ljubljana (Slovenia) and Budapest (Hungary) with Lviv (Ukraine).

Countries: Italy, Slovenia, Croatia, Hungary, Slovakia, the Ukraine and Bosnia and Herzegovina

Length: approximate 3270 km of rail and 2850 km of road

Transport modes: multimodal: rail, road, ports.

Branches: Branch A: from the Bratislava (Slovakia) to Uzgorod (Ukraine); Branch B: from Budapest (Hungary) to Rijeka (Croatia); Branch C: from Budapest (Hungary) via Sarajevo (Bosnia-Herzegovina) to the port of Ploce (Croatia)

### **CORRIDOR VI**

It 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.

Countries: Poland, Czech Republic, Slovakia.

Length: 1800 km of rail and 1880 km of road

Transport modes: multimodal: rail, road, ports.

Branches: Branch A: from the Grudziadz (Poland) to Poznan (Poland), only by road; Branch B: from Czestochowa (Poland) to Brno (Czech Republic), by road and from Bielsko Biala (Poland) to Breлак (Czech Republic), by rail

### **CORRIDOR VII (The Danube)**

Corridor VII is the Danube. The Danube is the second largest river in Europe.

Countries: Austria, Bulgaria, Croatia, Germany, Hungary, Moldavia, Romania, Serbia, Montenegro, Slovakia, the Ukraine.

Direction: from Western to Eastern Europe through the Rhine, the Main and the Rhine-Main- Danube canal. Danube provides part of the link between the North Sea and the Black Sea.

Length: 2415 km; Transport mode: inland waterway and crosses: Germany, Austria, Slovakia, Hungary, Croatia, FR Yugoslavia, Romania, Bulgaria, Moldova and the Ukraine. Corridor VII also refers to the relevant port infrastructures (44 sea and river ports) and to the Black Sea-Danube Canal.

Links with other corridors (major inland ports):

Corridor IV: Budapest (Hungary); Medgidia (Romania);

Corridor V: Bratislava (Slovak Republic); Budapest; Dunaujvaros, Mohacs (Hungary);

Corridor IX: Oltenita, Giurgiu (Romania); Russe (Bulgaria);

Corridor X: Budapest; Belgrade, Novi Sad (FR Yugoslavia).

In addition, there is the seaport of Constanta, lying at the mouth of the Danube - Black Sea Canal.

### **CORRIDOR VIII**

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.

Countries: Greece, FYR Macedonia, Bulgaria, Turkey, Albania, Italy

Length: 1270 km of rail and 960 km of road

Transport modes: multimodal: rail, road, ports

### **CORRIDOR IX**

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.

Countries: Finland, Russia, Belarus, the Ukraine, Moldova, Romania, Bulgaria, Greece, Lithuania

Length: 6500 km of rail and 5820 km of road.

Transport modes: multimodal: rail, road, ports.

### **CORRIDOR X**

Corridor X is the newest amongst the pan-European transport corridors. It was the Helsinki Conference deciding to include this corridor in the Balkan area into the network. 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.

Countries: Austria, Slovenia, Croatia, Hungary, Serbia, Montenegro, Bulgaria, FYR Macedonia, Greece

Length: 2529 km of rail and 2300 km of road

Transport modes: multimodal: rail, road

Links with other corridors: Corridor IV, in Sofia; the two go in parallel till Istanbul

Branches: Four, to Graz, Budapest, Sofia and Florina

In certain areas, particularly those adjacent or linked to marine basins, it has been revealed that the corridor concept does not adequately meet needs. The more extensive approach of pan-European transport areas (PETras), which reflects the complex structure of the transport requirements in these regions, was therefore defined.

The areas concerned are:

- *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-Ionian 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.

### **Evolution towards Trans-National Axes**

These development corridors and areas are distinct from the Trans-European transport networks (TEN-T), which include all major established routes in the European Union. In order to establish a single, multimodal network that integrates land, sea and air transport networks throughout the Community, the European policymakers decided to establish the Trans-European transport network, allowing goods and people to circulate quickly and easily between Member States and assuring international connections.

However, the Union's enlargement had significantly altered the situation by accelerating traffic flows and increasing the need for better cross-border network coordination. These fundamental changes make it necessary to combine together the Trans-European Networks of the 15 EU countries with the Pan-European corridors and set up a unitary pan-European transport network of the 27 EU countries coordinated on at European level and based on the establishment of well chartered European axes that rise above purely national interests.

In a report published in June 2003, the High Level Group on Trans-European Networks (van Miert Group) gave a useful insight into the criteria which could be used to define these European axes:

- land and maritime links expected to have great significance in terms of inter-country trade,
- links which address the accessibility needs of peripheral regions,
- links with proportionally high volumes of long distance traffic.

In addition to these criteria, ERF believed European axes must be evaluated according to their capacity to offer *anchorage with neighbouring countries*, particularly in the Balkan Region and Mediterranean Basin which share clear socio-

economic interests with the Europe Islands, Azores and Madeira), Mediterranean, Black and the Caspian Sea areas as well as the littoral countries within the sea areas and with an extension through the Suez Canal towards the Red Sea;

- *Northern axis*: to connect the northern EU with Norway to the north and with Belarus and Russia to the east. A connection to the Barents region linking Norway through Sweden and Finland with Russia is also foreseen;
- *Central axis*: to link the centre of the EU to Ukraine and the Black Sea and through an inland waterway connection to the Caspian Sea. A direct connection from Ukraine to the Trans-Siberian railway and a link from the Don/Volga inland waterway to the Baltic Sea are also included;
- *South Eastern axis*: to link the EU with the Balkans and Turkey and further with the Southern Caucasus and the Caspian Sea as well as with the Middle East up to Egypt and the Red Sea;
- *South Western axis*: to connect the south-western EU with Switzerland and Morocco, including the trans-Maghrebin link connecting Morocco, Algeria and Tunisia and its extension to Egypt.

Whilst most of the Pan-European Corridors I, IV, V, VI and VII are now in the territory of the EU and thus part of a priority project of the trans-European transport networks, the remaining Corridors are covered by the proposed five axes as follows:

- The four Pan-European Areas (Barents, Black, Ionian and Mediterranean Seas) are incorporated into the Motorways of the Seas as far as maritime connections are concerned.
- Northern axis incorporates the PEC II and the northern part of PEC IX. It also includes a land connection to the Pan-European Area of Barents linking Norway through Sweden and Finland with Russia.
- Central axis includes the PEC III and a branch of PECs V and IX.
- South Eastern axis merges and extends the PECs IV and X, incorporates PECs VII and VIII as well as a branch of PEC V. The axis is further extended to the Middle East and it joins with TRACECA in Turkey, Armenia, Azerbaijan and Georgia.
- South Western axis includes a land connection in the Pan-European Area of the Mediterranean.

Therefore, the Pan-European Corridors and Areas were designed to prepare on a step by step basis, the newest and future European Union member states transportation infrastructure to correspond to the organization, quality and development level of western EU member states transportation infrastructure and policies in order to achieve a common standard within the European Union countries and neighbouring countries across continent.



These proposals have materialized into the 5 new Trans-national Axes:

- *Motorways of the Seas*: to link the Baltic, Barents, Atlantic (including Outermost Regions of Canary Islands, Azores and Madeira), Mediterranean, Black and the Caspian Sea areas as well as the littoral countries within the sea areas and with an extension through the Suez Canal towards the Red Sea;
- *Northern axis*: to connect the northern EU with Norway to the north and with Belarus and Russia to the east. A connection to the Barents region linking Norway through Sweden and Finland with Russia is also foreseen;
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### **3. Funding and Progress on Pan-European Corridors and Areas**

#### **3.1. EU policies on transportation**

The objective of an EU sustainable transport policy is that EU transport systems meet society's economic, social and environmental needs. Effective transportation systems are essential to Europe's prosperity, having significant impacts on economic growth, social development and the environment.

Transport infrastructure is fundamental for the mobility of the persons and goods and for the territorial cohesion of the European Union. The EU 27 dispose of 5.000.000 km of paved roads, out of which 61.600 km are motorways, 215.400 km of rail lines, out of which 107.400 km electrified, and 41.000 km of navigable inland waterways. Total investment on Transport infrastructure on the period 2000-2006 was € 738 billion.

The transport industry accounts for about 7% of European GDP and for around 5% of employment in the EU. It is an important industry in its own right and makes a major contribution to the functioning of the European economy as a whole. Mobility of goods and persons is an essential component of the competitiveness of European industry and services. Finally, mobility is also an essential citizen right. From a slow start, the European Union's transport policy has developed rapidly over the past 15 years.

The objectives of EU transport policy, from the transport White Paper of 1992 via the White Paper of 2001 to today's Communication, remain valid: to help provide Europeans with efficient, effective transportation systems that:

- Offer a high level of mobility to people and businesses throughout the Union. The availability of affordable and high-quality transport solutions contributes vitally to achieving the free flow of people, goods and services, to improving social and economic cohesion, and to ensuring the competitiveness of European industry.
- Protect the environment, ensure energy security, promote minimum labour standards for the sector and protect the passenger and the citizen. Environmental pressures have increased substantially and significant health and environmental problems will persist in the future, for example, in the field of air pollution. The promotion of a high level of protection and improvement of the quality of the environment is therefore necessary. Equally, as one of the major energy consumers, transport must contribute to ensuring energy security. In the social area, the EU policy promotes

employment quality improvement and better qualifications for European transport workers. EU policy also protects European citizens as users and providers of transport services, both as consumers and in terms of their safety and, more recently, their security.

- Innovate in support of the first two aims of mobility and protection by increasing the efficiency and sustainability of the growing transport sector. EU policies develop and bring to market tomorrow's innovative solutions that energy efficient or use alternative energy sources or support mature, large intelligent transport projects, such as Galileo;
- Connect internationally, projecting the Union's policies to reinforce sustainable mobility, protection and innovation, by participating in the international organisations. The role of the EU as a world leader in sustainable transport solutions, industries, equipment and services must even be better recognised.

These objectives put the Union's transport policy at the heart of the Lisbon agenda for growth and jobs. As this Communication shows, they are also longer-term in nature, balancing the imperatives of economic growth, social welfare and environmental protection in all policy choices. Establishing an efficient trans-European transport network (TEN-T) is a key element in the re-launched Lisbon strategy for competitiveness and employment in Europe. If Europe is to fulfil its economic and social potential, it is essential to build the missing links and remove the bottlenecks in EU transport infrastructure, as well as to ensure the sustainability of EU transport networks into the future. Furthermore, it integrates environmental protection requirements with a view to promoting sustainable development.

In view of the growth in traffic between Member States, expected to double by 2020, the investment required to complete and modernize a true trans-European network in the enlarged EU amounts to some € 500 billion from 2007 to 2020, out of which € 270 billion for the priority axis and projects. Given the scale of the investment required, it is necessary to prioritize projects, in close collaboration with national governments, and to ensure effective European coordination.

### **3.2. Financing instruments for Pan-European Corridors**

The European Union provides same types of financing instruments as for trans-European transport network (TEN-T) to finance development projects on the Pan-European Transport Corridors, in order to achieve such European coordination on transportation and to increase commercial transactions within European Union, its newest member states and their surrounding countries. The aim is to achieve one of the main objectives expressed during the European Councils in Lisbon and Feira in the first half of 2000, which states that Stabilisation and Association Process is the centrepiece of the Union's policy towards the region and that the countries concerned are potential candidates for membership in the European Union.

Beside EU funds, there are a multitude of other sources for financing investments in implementing and developing the Pan-European Corridors and Areas. So, all financial sources for pan-European corridors funding are:

- 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)

For example, the European Investment Bank (EIB) is complementary to other funding sources. The EIB does not finance beyond 50% of the project investment cost. Even so, it often provides a critical support for structuring the finance of major projects.

One key area of EIB activity is the improvement of communications between EU member countries and between the EU and third countries. In the past few years the reference for such activity has been the development of trans-European networks (TENs). The EIB has contributed in particular to the realisation of transport networks, although telecommunications and energy networks have also been supported considerably.

More than 40% of all individual EIB loans are represented by transport infrastructure investment. The EIB plays an essential role in the financing of most major transport projects in Europe.

In conclusion, important amounts of money were available to finance such investments in Pan-European Corridors and Areas infrastructure. Each source of

financing had its own particular conditions or requirements which had to be respected in order to allocate these funds, element which involved a good understanding from countries authorities to design and implement adequate projects.

### **3.3. Progress on Pan-European Corridors investments**

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, plus Romania and Bulgaria in January 2007. In this context, the role of the respective Transport Corridors and Areas as important transit and trade routes for freight and passenger traffic has grown significantly.

These multimodal corridors, the so-called Helsinki corridors, have an overall length of about 48,000 km, 25,000 km of which belong to the rail network and 23,000 km are part of the road network. Airports, sea and inland ports, and main terminals serve as nodes for the transport modes along these long-distance connections between the Central and Eastern European countries.

The development of the corridors and regions also had to comply with the Community guidelines for the establishment of a Trans-European Transport Network. For most of the corridors and regions, a **Memorandum of Understanding (MoU)** was signed by the transport ministers of the participating countries and the European Commission. Although it is only a voluntary commitment on the part of the participants and has no legal character, it demonstrates the intention of the partners to engage in joint efforts to develop the Pan-European Transport Network. These Memoranda of Understanding recommend, among other things, the setting-up of a Steering Committee which promotes the necessary activities and monitors their progress. During the last ten years, reforms and investments projects in infrastructure were developed in all countries of the corridors region. While the starting points and present situation differs considerably from country to country, it is obvious that major gains were achieved through increased regional co-operation.

The progress registered alongside Pan-European corridors refers to various sectors and components of transportation system and describes especially developments made until 2004. There are many other projects on progress in various statuses (planning, feasibility study, expropriation, funds allocation etc) and for this reason we mention only some of the completed projects, in order to emphasize the targeted areas and improvements made to transportation infrastructure, within all corridors and for all means of transportations, as follows:

- Rehabilitation of road transport conditions: in Slovakia for Beharovce – Branisko (7.77 km) and Branisko – Fricovce (6.23 km) sections (completed in 2004, for Corridor V, branch 5a); road upgrade in Kybartai-Klaipeda section (423 km) from Lithuania for Corridor IX, branch A (59 million Euro from EU grants).
- Upgrading of the motorway network: motorway A15 (Spreewald junction - German/Polish border (Forst/Olszyna, 64.1 km, completed in 2004, 3145 million euros) by Germany for Corridor III.
- Construction of new motorways: Nowy Tomyśl – Poznań (50.5 km length) and Poznań – Września (37.5 km) in Poland (both completed in 2004, for Corridor II) ; motorway A4 in Poland from Nogowczyce to Batorego (52.9 km, completed in 2004 with ISPA and PHARE funds, totally 390 million Euro) for Corridor III; construction in Czech Republic of motorway D8 in Cinovec (German border)-Prague (93km, completed in 2008) for Corridor IV; Germany invested for Corridor IV on construction of motorways A17 Dresden-Czech Border (completed in 2006) and A6 Amberg/Ost-Pfreimd-Pleystein-Weidhaus (target date in 2009) in total length of 98,8 km, with totalizing costs of 902 millions Euro, supported by ERDF and national budget; construction of motorway M7 in Hungary between Balatonszarszo and Ordacsehi (20 km, completed in 2005, costs: 263 million Euro) for Corridor V main axis; motorway M3 in Hungary for section Polgar – Gorbehaza (12 km, completed in 2004, costs: 87 million Euro from state budget) for Corridor V; in Slovenia for Blagovica – Trojane section (8.2 km, completed in 2005, 199 million Euro) for Corridor V, main axis; in Albania for Durres – Lushnja (47km) and Korce – Kapshtice (33km) sections were completed in 2002, and Sukth – Durres (10 km) in 2003, for Corridor VIII;
- construction of cities bypass ways: Poznań bypass in Poland (13.3 lkm, completed in 2003, for Corridor II, 1.74 million Euro); Czech Republic concentrated on Prague (82.5 km length) and Plzen bypass (completed in 2006) for Corridor IV;
- construction of toll motorways: Września – Konin in Poland (49.2 km, completed in 2002, Corridor II);
- strengthening of road surface: Sochaczew – Grojec in Poland (62 km, 2004, Corridor II, costs: 25 million Euro with 74.4% from ISPA)
- upgrading of railway lines: Warszawa - Mińsk Mazowiecki (38 km, 2002) and Mińsk Mazowiecki – Siedlce (52 km, 2005, 112 million Euro) in Poland for Main axis of Corridor II; upgrade in Kybartai-Klaipeda section (537 km) in Lithuania for Corridor IX, branch A (total cost: 111 million Euro from which 55 million Euro from EU grants);
- refurbishment and modernization of existing railroad infrastructure: in Croatia major overhauls were completed in 2004 for Dugo Selo – Krizevci (35, 7 km), Metkovic – Ploce (22.8 km) and Zagreb – Zdencina (24 km)

sections of Corridor V, branches 5.b and 5.c; modernization of Zahony Railway Port in Hungary with PHARE and EU TEN budget (costs: 5 million Euro) for Corridor V, main axis;

- construction of new railway lines: in Slovenia was completed in 2001 a new line at Hodos border crossing (Murska Sobota -Hodos, 30 km, costs: 97 million euro with non-EU funds) for Corridor V, main axis;
- modernisation of border crossing: Malaszewicze – Terespol in Poland (completed in 2002, Corridor II); in Croatia at Beli Monastir (state border with Bosnia and Herzegovina, 89 km of motorway investment, completed in 2004, for Corridor V, branch 5c); construction of the access road to the Bulgarian/Greek border at Makaza (in progress, commissioning is planned for 2010), Nikopol-Turnu Magurele and Silistra-Calarasi border with Romania, Ilinden-Exochi on the border with Greece and Lesovo-Hamzabeyli on the border with Turkey (all completed) for Corridor IV;
- extension and modernization of ports: Port of Rijeka in Croatia (completed in 2004, 60.5 million Euro) and Port of Koper in Slovenia (with non EU grants), both for Corridor V, main axis; Port of Durres in Albania, ferry and general development; development of rail accesses from the Southern Branch of Black Sea Area to the main ports of the Ukraine - Odessa and Ilyichevsk, in Ukraine;
- reconstruction, development and extension of airports: e.g. Skopje Airport in FYR Macedonia (reconstruction and extension of the platform for 15 parking places for different types of aircrafts; construction of new petrol station, parking, access road; construction of station for separation of fluids; construction of technical building, VIP and CIP salons, water supply, electricity, access road (all completed) and reconstruction of the terminal building, access road, visitors' parking, administrative and technical facilities (in progress, completion target date is in 2010) for Corridor VIII.

In conclusion, all transportation sectors (road, railway, maritime and aerial) were developed by major investments which were made alongside Pan-European Corridors and Areas, while still many other projects exist in progress. Implementing these projects will provide more benefits to transportation network as well as to entire economical and social life.

#### **4. The Impact of Pan-European Corridors Development**

##### **4.1. Positive effects or advantages of implementing Pan-European Corridors**

To analyze the effects of the Pan-European Corridors we must approach this subject starting from the objectives or goals which we consider that lead to the creation of such corridors. The objectives are time sensitive as it follows:

- Long-term objective was the creation of integrated and fully operational Europe-wide networks constructed on the backbone of existing western transportation networks.
- Middle-term objective referred to efficient connection and coordination between Trans-European Networks of the European Union, together with Pan-European corridors or priority Axis of the new member countries of Central-Eastern Europe and neighbouring countries; so, a multilateral approach was required.
- Short-term objective regarding first 5 years, referred to the initiation of intense national investment projects on transportation and development of existing infrastructure, in partnership with neighbouring countries, sometimes on European Union financing instruments and according to European Union proximate needs, especially the achievement of a competitive European economy.

This last goal was also highlighted in 2008, within Lisbon Strategy as European Union main target is to become „the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion, and respect for the environment by 2010”.

Since the creation of Pan-European Corridors concept, in 1997, until present day, we could feel especially the effects on short-term, even important steps were also made to achieve the middle term objectives, some of them were mentioned above.

The Pan-European Corridors must be considered especially as an initiative to create a community spirit between European countries (member states or candidates) and neighbouring countries. A spirit focused on increasing economic transactions and growth, but also on supporting social exchange and cultural links, like free movement of people and trans-national cooperation on cultural, social and political matters.

This initiative provided the basis for infrastructure policy in Central-Eastern Europe, giving rise to a series of more detailed studies "by corridor", from both a technical and a political standpoint, as well as the signature of a MoU (Memorandum of Understanding) between countries. It also had an impact on national and international funding decisions and in most cases provided a framework or guidelines for national transport plans in the countries of Central-Eastern Europe.

In time, the Pan-European corridors have acquired connotations of a technical, methodological and political nature:

- technical because the aim was now not only to think in practical terms about infrastructure projects but also, and above all, to consider a series of



accompanying measures designed to facilitate trade, border crossings, standardization and the harmonization of operating systems;

- methodological through the development of a multimodal approach and the promotion of inter-modal transport chains that included maritime links;
- political because any project aimed at creating corridors in many cases called for agreements between actors and governments.

We are gradually starting to feel the effects, directly or indirectly, which the conceptualization and good implementation of pan-European corridors have provided.

Firstly, we can notice the benefits of multimodal transportation, a key element of Pan-European corridors. For example, large freight volumes can be transported by rail over long distances, while roads are used for local distribution. Another example is of passengers flying over long distances and entering a high speed train which travels from the airport directly to the town centre. In this way combined transport uses flexibility and speed of roads and airplanes plus the environmental advantages of railways and waterways.

Also through this multimodal transportation aspect of Pan-European corridors, funds are re-directed also to develop some means of transportation which were neglected by investments over past years, like railroads, in particular. For many years, the rail network has suffered the effects of insufficient maintenance and lack of necessary repair. As a result, traffic is often delayed, the quality of service is inadequate and the conditions of travel are poor. For the past 20 years, financing has been inadequate for the maintenance of rail infrastructure and rolling stock. Estimates show that only one-fourth of necessary maintenance is actually carried out. Rail networks in the region are generally quite dense, as rail constituted the principal means of freight and passenger transport under the previous regime, but since 1990 rail traffic was reduced to about one third.

The assessment component represents another benefit, since each investment project for infrastructure development is designed to be subject to an environmental assessment, otherwise can not be implemented. This means that on the existing infrastructure in Western countries, which is very developed, important adjusting processes are required in order to reduce pollution levels because its current high status of development is providing also important negative effects on environment and social areas. So, the so called qualitative adjustments are required. But on the same time, on Central Eastern countries with poor and non-functional infrastructure exists a higher potential and opportunity to build ecological-friendly, fresh infrastructure, because each project is submitted to approval in accordance with the latest environmental standards. For example, each decision with respect to funding

infrastructure projects, from the Union budget or from European Investment Bank, depends on the project's environmental assessments.

In a KPMG outlook report on European transportation, countries like Bulgaria, Estonia, Latvia, Lithuania and Romania are classified as “Tigers” because they are countries that have the highest forecast average growth rates. Therefore, such countries together with other Pan-European countries can harmonize standards through European Union assessment transportation, so a common and efficient road transport system can be achieved. The sustainability vision is also enabling the states involved in Pan-European corridors, to analyze, select and development their infrastructure components, system and policies, in complete harmonization with European Union vision of expansion, because their future trade and future economic development will be carried within this routes. So, Pan-European corridors represent a sustainable vision carrier.

Another benefit is represented by the connection component, especially considered on West to East and North to South links. Such corridors are connecting the peripheral and less approachable regions to the central parts of the Union. In fact, the Pan-European corridors are connecting Trans-European network, highly developed, to neighbouring infrastructures, in poor conditions. These connections are allowing products and people to arrive faster and better to broader destinations, and international trade to increase.

A better connection and a developed infrastructure between states corresponding to Pan-European corridors are providing the reduction of necessary time for transport through the construction of high speed motorways in these corridors and through the rehabilitation of infrastructure in the rail transport. This will contribute also to the harmonization of competing conditions among transport operators.

The Pan-European corridors are offering a high level of mobility to people and **businesses** throughout the continent. The availability of affordable and high-quality transport solutions contributes vitally to achieving the free flow of people, goods and services, to improving social and economic cohesion, and to ensuring the competitiveness of European industry.

As we can notice, each benefit is related to another, like a chain. A more fluid flow of products increases companies business level, turnover, market share and oblige them to travel alongside. This means that adequate infrastructure and adequate connections, can allow companies to expand their activities easier, by direct investments in other locations for manufacturing plants, distribution or sales and service agencies, for example. Western companies have opened many businesses in Central-Eastern Europe, in locations which correspond to such corridors, the most eloquent example for our case, being the establishment of Ford factory in Craiova,

Romania. So, direct investments are increasing on locations which are on or nearby Pan-European corridors.

#### **4.3. Weaknesses of Pan-European Corridors and areas implementation**

By analyzing the status of progress of all the projects started within Pan-European Corridors and Areas, we noticed that in the majority of countries many delays or disturbances in execution exist. Also, there are important differences of progress in various countries and corridors, and even between countries within same corridor. The cause of these discrepancies we consider that underlie in the weaknesses which implementation of Pan-European corridors is providing. Some of these weaknesses are mentioned bellow, as follows:

- The no legal character of the Memoranda of Understanding; the cooperation along the PECs is organised through non-binding Memoranda of Understanding (MoU), which also establish a Chair and Secretariat for most of them. The financing of the Secretariats, being the responsibility of one country along the Corridor, has been uneven and much depends on the particular circumstances of the PEC.
- The MoU structure has been considered to be quite weak and dependent on the particular circumstances of each Corridor. The MoU structure was originally set up to develop main transport corridors and the emphasis is more often placed on the development of physical infrastructure and other measures are somewhat neglected. Therefore, the incentives for effective implementation of infrastructure and other measures are limited;
- The MoUs are also limited in their effect and extending the MoUs to cover even longer stretches or more countries would make these limitations even more apparent. The impacts across economic, environmental and social dimensions as well as on the new EU Member States and the neighbouring countries are estimated to be similar to the impacts under the do-nothing scenario.
- Planning and prioritisation of investments is in most cases done in a piecemeal fashion that follows national logic neglecting the needs of international movements along the whole axis. This means that strategic planning and analysis of bottlenecks at the Corridor level is weak and that no serious strategic environmental analysis can be carried out. This often leads to implementing small projects and thus neglecting the environmental impacts ("salami slicing") of the overall programme at strategic and cross-border levels. An example is the PEC VII and the development of the Danube delta in Ukraine. Also, the development of Romania's section of corridor No. 4, from Arad through Bucharest and Constanta, was seen by Bulgaria as a threat to their strategic interests. After five years of wrangling, Romania finally agreed to the construction of a second bridge over the Danube at Calafat, which facilitates traffic to Bulgaria.

- Unfortunately, instead of proceeding with caution, there is an atmosphere of competition among the countries of the region, all of whom are eager to get the biggest economic benefits out of the new corridors. There is also competition among railways and road builders as to which mode of transport is preferable; the focus is on infrastructure and insufficient attention is paid to removing non-infrastructure related to bottlenecks, which are often the primary cause for delays. Therefore, despite improvements of the infrastructure, delays persist, particularly at border crossings and for the rail mode, which suffers from the additional problem of non-interoperable national systems. For example, the average journey duration of a freight train between Berlin and Moscow on PEC II takes today some 12 days, mainly because of lengthy border-crossing procedures. The journey time could be reduced considerably, to maximum 3-5 days, by making border crossing procedures more effective and interoperable without costly infrastructure investments.
- There are no commonly agreed methodologies to assess the economic, social and environmental impacts of plans and projects along the Corridors that would meet the standards of best international practice. The appraisals are done according to national practices, which differ considerably between the countries concerned and which are not always in line with the EU legislation and best practice. This is in particular the case when projects are funded through national sources.
- No priority network or axes have been defined for the Pan-European Areas especially in the Barents region and in the Mediterranean. Whilst for the Mediterranean the definition of a regional core network is progressing under the MEDA programme, it needs to be better coordinated with the Pan-European Corridor/Area concept to ensure synergies. Cooperation in the Barents region focuses on the development and integration of the regional economies, whilst the integration of the region with the Pan-European Corridors further in the south has not been completed.

The above described weaknesses in the development of the Pan-European Corridors and Areas are already apparent today. Despite the existing structures, coordination remains weak and the development plans of the Corridors address mainly national bottlenecks, leading to the persistence of unnecessarily lengthy delays particularly at borders. Rail being more affected by these delays, shift from rail to road can also be expected with increasingly detrimental impacts on the environment and traffic safety.

#### **4.4. Environmental effects of Pan-European Corridors and areas implementation**

Construction of the corridors will have positive impacts on CEE's economies in transition. But without vigilance from the countries of the region, this development

can occur in a way that is harmful to the environment and, according to one study, harmful to the economies of certain areas. For example, in order to intensify navigation on the Danube, the EU is seeking to remove 'bottlenecks' on the river and ensure a minimum depth of 2.5m at all times of the year. Deepening of the river, regulation of water flows, cutting off side-arms and reinforcement of riverbanks would have a permanent negative impact on the rich biodiversity along the Danube. The 'bottlenecks' destined for elimination are the river's last free-flowing sections and most precious stretches. This project on the joint Romanian-Bulgarian section would seriously affect valuable ecosystems on islands and natural river banks, designated as protected areas under the Natura 2000 network in both countries.

Furthermore, the unique 17 km long Kresna Gorge Valley is threatened by the Struma motorway, part of the trans-European corridor between Sofia and Athens. If constructed directly through the gorge, the motorway will irreversibly damage the gorge's stunning ecosystem, home to an extraordinarily high number of protected species such as otter, tortoise, leopard snake and 17 bat species. The motorway will also cause excessive noise and air pollution in the town of Kresna and put an end to rafting and kayaking in the gorge. There are feasible alternative routes outside the gorge which are now supported by the European Commission and some Bulgarian authorities, offering some hope for saving the gorge after many years of disputes.

The 20 km long motorway between Sofia and Pernik will negatively affect the Bankja Spa Resort, renowned for having some of the best conditions in Europe for the treatment of cardio-vascular diseases and visited by 200,000 people a year. The project will not fulfil its stated aim of reducing traffic jams and air pollution on the outskirts of Sofia as the traffic on the existing old road will continue to grow anyway, according to the government's own projection.

Another example is the eastern section of the Budapest ring road, financed by both the EU and the EIB, which will cause excessive noise and air pollution levels in surrounding urban areas and a drop in real estate prices. Citizens living along the route are not being compensated properly and have objected to a number of legal breaches during the project's preparation. Overpasses are being constructed without space for pedestrians and bicycles, which mean that people can get to the other side only by car. Moreover, the need for this section is questionable as another nearby planned motorway, the M31, is going to fulfil the same function.

While the Sixth Environmental Action Programme of the European Commission warns of possible negative impacts from the corridors, other officials may see protection of the environment as an issue of secondary importance. A press release from a May 29-30 meeting of the European Conference of the Ministers of Transport (ECMT) lists the need to protect the environment as being related to one of the "hurdles" that must be overcome in the implementation of transport policies in

CEE. This attitude seems to be mirrored by many national transport officials, who are eager for new road construction.

#### **4.5. Pan-European Corridors and areas – An opportunity for economic growth**

The before mentioned weaknesses and bad effects are the results of a poor implementation and defective planning strategies. Political interest of each member state to attract more funds for investments project in infrastructure, in mixture with an insufficient know-how to manage implementation of such projects (contracting, expropriation, supervision etc) has caused disturbances, losses and delays in some countries. The best example is represented by Romania.

One recent loss, due to the poor implementation of investments in infrastructure in Romania, was the decision of Mercedes to invest in Hungary, instead of Romania, because Romania didn't have the required infrastructure for such important investment. Constantin Stroe, the deputy chief of Renault's Dacia plant in Pitesti and also Daimler's advisor in Romania, declared that one of the arguments that had finally persuaded the car maker to opt for Hungary was: "the quality of infrastructure. An investment of this scale has to be close to at least two means of transport, road and rail. And the Hungarian site, Kecskemet, 80 kilometres (50 miles) southeast of Budapest, had access to both", while Romanian authorities could only just promise that by 2010 the area of Oradea would be linked to the border with a highway.

All in all, the Pan-European corridors have provided many benefits only to those countries which were able to manage large amounts of funds and simultaneous projects in infrastructure, taking into consideration both national and European interests and priorities. It is highly important not to focus on attracting too much direct money but to attract indirect money like direct investments, which increase trade flows and provide a solid economic growth.

Therefore, it depends on each country's capability to obtain as many positive results from this opportunity, which Pan-European corridors represent, to develop internal infrastructure to European standards and to obtain many economic benefits. Pan-European corridors represent a Win-Win situation, where each party which respects the mutual interest has to win. European Union expands on efficient infrastructures and can achieve a balanced and stabilized economy status, as well economic, social and political development. While corridors countries can synchronize their policies and economies to European Union standards, can consolidate economical and political relations with neighbouring countries and can increase their efficiency in all transportation sectors, as main benefits.

## **5. Future Measures for Development and Transportation within the EU and Neighbouring Countries**

### **5.1. Connecting the EU to neighbouring countries**

To make sure that the EU and its neighbours establish the modernised transport connections they need, the EU's major axes of the trans-European networks have to be linked up with the transport networks of neighbouring countries. Physical and technical connections between and along major transport axes must be improved.

The European Commission's January 2007 communication to the Council identifies five major trans-national transport axes. It is important to focus on a limited number of such key trans-national connections to ensure that the inevitably scarce resources available stimulate trade and economic growth both in the EU and in the neighbouring countries. Development of these key pathways will contribute to efficient and smooth traffic flows across the European continent and beyond.

This work should build on existing efforts to develop regional transport networks. Several regions neighbouring the EU have defined a core network or are launching exercises to do so. Such exercises, supported under the EU accession framework and ENP action plans, aim at improving the policy implementation and infrastructure of the regional transport systems.

### **5.2. Need for modernisation**

Neighbouring countries will only be able to take full advantage of closer relations with the EU and improved access to its market if their transport sectors can handle today's complex transport flows. Trade between EU and non-EU countries can only reach its full potential if the transport links over road, rail, air and water are of good quality and systems are interoperable, safe and secure.

Recent studies forecast continued rapid growth in trade flows and freight transport. Strong growth is predicted in trade between the enlarged EU and the neighbouring countries, in particular with Turkey and Russia. Overall, traffic volumes between the EU and the neighbouring countries are expected to grow by more than 100% between 2000 and 2020.

However, the existing coordination structures for transport connections between the enlarged EU and its neighbours do not take into account the EU's enlargement process, nor do they reflect today's transport demands. Therefore, they need to be modernised. This means looking at key transport axes - core cross-continental routes - to ensure efficient flows of traffic and goods.

### **5.3. Harmonisation of policies and investments in non-infrastructure**

In order for the axes to work effectively, it will not be just a question of building up the physical infrastructure but also in particular of taking complementary steps to reduce delays. In many cases, obstacles and bottlenecks occur, especially at borders, due to a lack of policy and administrative interoperability and harmonisation. Common market rules that reflect the best international practice are important for the development of international trade and the effective implementation of the priority axes and projects. Technical interoperability is a key element facilitating cross-border traffic and a major factor in the reduction of equipment costs. At the same time, transport infrastructure should also be supported by efficient, integrated traffic management systems.

Some of the transport barriers are related to administrative and border control procedures, such as slow customs clearance, visa procedures, language barriers and safety and security deficits. They result in lost time and reduced profits, which increases prices for transported goods, and restricts business travel and tourism. Such delays may also encourage the use of alternative, longer routes. Ultimately, this will affect economic development.

### **5.4. Horizontal measures for a rapid and effective transport**

In order to remove or reduce such obstacles and bottlenecks, the European Commission proposes a series of horizontal measures to make transport along the axes more rapid and effective. These measures aim at gradually harmonising the neighbouring countries' legislation and policies with the relevant *acquis communautaire*, or body of EU law. They concern all modes of transport, and include:

- ensuring technical, legal and administrative interoperability with systems in the EU as regards, for example, railway networks, signalling systems and infrastructure charging schemes;
- speeding up border-crossing procedures by implementing the relevant international conventions, and by introducing 'one-stop' offices through shared facilities and simplification and harmonisation of documentation in line with EU practice;
- implementing new technologies like traffic management and information systems in all modes of transport - notably the European Rail Traffic Management System (ERTMS), the European air traffic control infrastructure modernisation programme (SESAR) and the Galileo satellite navigation system - that are effective and compatible with those implemented in EU territory;
- taking measures to improve safety, security and working conditions in all transport modes, for example through harmonisation of standards and procedures at the highest level of performance;



- applying international conventions, social and environmental assessment, and public procurement rules in accordance with EU standards, donors' funding rules and best international practice.

### **5.5. Cooperation for coordination**

In addition to infrastructure and horizontal measures, efficient coordination of actions and investments along the five major axes will be essential for their good functioning. Coordination makes it easier to synchronise investments, plan cross-border projects, and eliminate barriers to transport flows. Regional and bilateral cooperation is already strong part of the EU transport policy. For candidate and potential candidate countries, the aim is gradual alignment with the *acquis communautaire*. Under the ENP, the EU has bilateral action plans with many partner countries, working together to increase transport efficiency, safety and security. The aim is to ensure that partners' legislation, standards and technical specifications are compatible with those of the EU.

Cooperation with Russia in transport is pursued under the EU-Russia dialogue launched in 2005. In December 2006, the western Balkan countries and the European Commission signed a resolution underscoring their political commitment to developing the main south-east European regional core transport network. In the Mediterranean region, a regular and intensive policy dialogue was established through the Europe-Mediterranean transport forum. In December 2005, the first Euro-Mediterranean transport ministerial conference adopted the transport priorities for the region and mandated the forum to adopt a regional transport action plan as the basis for implementing these priorities in the next five years.

The implementation of the TRACECA (transport corridor Europe-Caucasus-Asia) strategy and the 'Baku process' - the Caspian and Black Sea cooperation that brings together the TRACECA countries, Russia and Belarus - and plans for a Mediterranean regional transport action plan complement the bilateral action plans that the EU has with partner countries. The development of the five trans-national axes should build on these existing regional cooperation initiatives on transport. It should also be closely coordinated with organisations developing international transport corridors - like TRACECA, trans-African networks, and networks linking Europe with Asia developed by the United Nations and the European conference of ministers of transport.

Whilst these regional cooperation frameworks already address many of the horizontal measures, there is a need to look at them in conjunction with infrastructure development along the major trans-national axes. This is to ensure that the most important bottlenecks along an axis are addressed in a synchronised

and timely manner and that the different procedures and standards are compatible along the whole axis used by international transport to and from the EU.

## **6. Results**

The 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, generated the necessity of creating and exploiting an effective network of transport infrastructure and transport services, adapted to the 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 had to be adapted, and the result was the Pan-European Corridors and Areas.

The integration of the Centre, Eastern and South-Eastern European countries' infrastructure in the European transport networks has as a main goal the promotion of networks' interconnection and interoperability. This is done through concentrating upon some specific infrastructure routes located on the trajectory of 10 pan-European transport corridors, which pass through geographical zones in many countries, some of them EU members, and others undergoing a process of negotiation (Turkey).

The European Union has acquired a continental dimension due to last years' enlargements and its transportation network needs have increased substantially. Therefore, coordinated transportation policies and investments in infrastructure within the European Union are becoming a key aspect for efficient integration of new member states in the existing transportation network, policies and system. For this reason, the Pan-European corridors and Areas have represented preliminary guidelines to be followed by new member states, candidate states and neighbouring countries, in order to achieve the appropriate development and support for all kind of activities which this greater European Union will involve.

The advantages of the Pan-European corridors mainly refer to the creation of optimal conditions for providing transport services; the promotion of a common and efficient road transport system; the contribution to the harmonization of competing conditions among transport operators; the encouragement of the rules observance regarding work conditions in this sector; the reduction of necessary time for transport through motorways in these corridors and through the rehabilitation of the infrastructure in the rail transport; a higher travelling safety.

Besides the above mentioned - especially through Pan-European Corridor IV, which has an important part along Romanian land (more than 800 km) and which

represents a concretization of the Trans European Motorway (TEM) started by countries in Central and South-Eastern Europe in 1977 - connections with Greece, in Thessaloniki, and Turkey, in Istanbul, are created.

All these will immediately have the following effects: the growth of investments in infrastructure thanks to European funds - for developing countries, this will represent an important part as it welcomes a development of the economy, especially in crises; the favouring of conditions for the functioning and administration of globalization; the growth of cooperation both among Eastern countries and between such countries and Western countries; conditions for the recovery of economic differences between West and East; conditions for the recovery of the development in accordance with the policy of European countries and other candidate countries.

Improving transport infrastructure in the region and integrating the countries of Central Eastern Europe to the rest of Europe is important in order to support better quality of life through economic growth, regional integration, social cohesion and adequate environmental conditions.

The five trans-national transport axes proposed by the European Commission are the result of a major strategic reflection on the future transport priorities for the EU and its neighbourhood. The axes will be crucial to ensuring that the EU and neighbouring countries enjoy smooth transport links and therefore develop their economies and trade, acting as an overarching framework for developing obstacle-free movement for all modes of transport. They also include some branches in regions where traffic volumes are relatively low due to political problems, aiming therefore to strengthen regional cooperation and integration in the longer term.

The axes cover a vast range of territory in all directions of the compass – across European continent from Morocco in North Africa to Russia in the east, from warm shores of Mediterranean in the south to chilly waters of the Barents in the north, and stretching also to some of the EU's most remote area like Canary Islands and the Azores.

## **7. Discussion**

Commercial and informational exchanges within European Union are nowadays very intense. Enlargements perspectives of this area support the idea of an expansion beyond the borders of the old continent. The future Europe will have strong relations with the former soviet and Asiatic area, in which large networks and corridors for transportation will decide the economic and social future of such zones. There is an aerial transportation at the global level, almost fully interoperable, a unique road transportation system for the entire planet is being under configuration and there are

ideas and discussions about a railroad where trains should travel on continents from a side to the other. A new system starts to take shape, a system in which the concept of interoperability is essential. The actual transportation systems are re-designed according to such a concept.

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