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**COMMISSION STAFF WORKING DOCUMENT**

**Accompanying document to the**

**Report from the Commission to the Council, the European Parliament, the European  
Economic and Social Committee and the Committee of the Regions**

**Trans-European transport network  
Report on the implementation of the guidelines 2002-2003  
pursuant to article 18 of Decision 1692/96/EC**

**{COM(2007)94 final}**

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### Report from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions

#### Trans-European transport network Report on the implementation of the guidelines 2002-2003 pursuant to article 18 of Decision 1692/96/EC

### ANNEX 1: IMPLEMENTATION DETAILS

#### INTRODUCTION

Part 1 considers the main developments on the TEN-T modal networks (as outlined in Annex I of the guidelines Decision: road; rail; inland waterways and ports; seaports; combined transport.

Part 2 looks in more detail at the horizontal issues of interoperability, research and development, and environmental protection.

In part 3 there is a general assessment of the development of the TEN-T during the period in question and a more detailed section on the TEN-T priority projects.

The last section - on Community funding, Part 4 - provides an overview of the financing of the TEN-T with particular reference to financial support from the EU during the reference period.

## **PART 1**

### **IMPLEMENTATION IN GENERAL**

With total investment in the TEN-T network in the EU-15, which amounted to EUR 75.3 billion in the 2002 – 2003 period (EUR 34.9 billion in 2002 and 40.4 billion in 2003) the investments increased in comparison with the figures of 2000 and 2001.

In the EU-10 and EU-2 the investments in TEN-T infrastructure also increased from EUR 6.07 billion in 2000 and 2001 to EUR 6.94 billion in 2002 and 2003.

Table 1 shows the investments in TEN-T infrastructure in the years 2002 and 2003 per country and per mode of transport in millions of EUR and in % of the GDP per country.

**Table 1: Investments in the 2002 – 2003 period per country and per mode of transport in millions of EUR and in % of the GDP per country**

Country	ROADS	RAIL	IWW	PORTS	AIRPORTS	TOTAL	in % of GDP
Austria	1,119.3	2,106.5	1.6	17.6	81.0	3,326.0	0.74%
Belgium	1,251.8	1,140.4	388.1	1,583.3	73.0	4,436.5	0.82%
Denmark	177.0	75.7	0.0	75.9	16.8	345.4	0.09%
Finland	1992	415.2	0.5	301.7	42.4	959.1	0.34%
France	2,540.4	1,250.4	15.0	298.6	2,100.5	6,204.8	0.20%
Germany	3,031.4	3,197.7	970.0	100.7	87.3	7,387.1	0.17%
Greece	1,689.8	713.1	0.0	17.6	155.6	2,576.1	0.87%
Ireland	1,247.0	33.8	0.0	71.3	94.5	1,446.7	0.54%
Italy	5,593.9	14,850.7	0.0	569.7	1,552.2	22,566.5	0.88%
Luxembourg	166.7	3.7	0.0	0.0	76.0	246.4	0.53%
Netherlands	954.4	2,175.3	344.7	287.3	714.2	4,475.9	0.48%
Portugal	1,455.7	303.5	13.9	129.8	314.9	2,217.8	0.82%
Spain	2,755.6	5,268.5	0.0	698.5	1,153.7	9,876.4	0.65%
Sweden	327.9	846.0	0.0	186.2	14.8	1,374.9	0.26%
United Kingdom	721.2	3,158.0	0.0	598.6	3,427.4	7,905.2	0.24%
Cyprus	24.7	0.0	0.0	1.0	0.0	25.6	0.11%
Czech Republic	764.6	775.4	90.8	2.0	29.3	1,662.1	1.05%
Estonia	83.3	54.8	0.0	56.4	1.4	195.9	1.25%
Hungary	1,026.5	340.9	0.0	12.3	18.8	1,398.6	0.98%
Latvia	22.7	56.7	0.0	5.5	3.2	88.1	0.45%
Lithuania	50.8	46.4	0.0	19.1	17.8	134.2	0.43%
Malta	1.2	0.0	0.0	12.5	16.0	29.7	0.35%
Poland	510.4	268.6	0.0	16.0	72.1	867.0	0.22%
Slovakia	485.4	122.1	0.0	0.0	9.5	616.9	1.13%
Slovenia	612.1	86.6	0.0	12.3	0.3	711.3	1.46%
Bulgaria	95.0	263.6	2.9	81.2	50.3	493.0	1.44%
Romania	231.8	188.3	8.2	138.5	154.2	720.9	0.73%
Total EU-15	23,231.3	35,538.5	1,733.7	4,936.8	9,904.3	75,344.7	0.40%
Total EU-12	3,908.5	2,203.3	101.9	356.8	372.9	6,943.3	0.68%
Total EU-27	27,139.8	37,741.8	1,835.7	5,293.6	10,277.2	82,288.0	0.43%

## IMPLEMENTATION BY MODE AND SECTOR

This section examines the main developments of the TEN-T modal networks (as outlined in Annex I of the guidelines Decision.)

### TEN-T ROAD NETWORK

The total road network in the EU-27 comprised more than 4.8 million km of motorways, state roads, and provincial and local authority roads<sup>1</sup>.

Road traffic in 2004 accounted for 1,684 billion tonne-km (44%) of intra-EU-25 freight traffic and in 2003 and 4,444 billion passenger -km (85%) of intra-EU-25 passenger traffic<sup>2</sup>.

- **Development of the TEN-T road network in the EU-15**

The length of the TEN-T road network, composed of roads either existing, planned or to be adapted, in the EU-15 is approx. 76,300 km – 60,100 km existing and 16,200 km planned with a time horizon of 2020.

Between 2002 and 2003 approximately 1,000 km of motorway were newly constructed or adapted (upgraded from ordinary or high-quality road). Thus the quality development of the existing TEN-T road network continued. The growth of length of motorways between 1996 and 2020 is forecasted to be about 40% in the EU-15. Further significant developments in the network are improvements in road conditions (capacity, additional lanes, electronic fee collection, emergency and incident management, traveller information service, etc.). However, these developments do not affect the length of the TEN-T road network nor change the category of the link type (motorway, high-quality road) of the section but rather their quality: several investment projects of this type were notified.

- **Investment in the TEN-T road network in the EU-15**

Total investment in the TEN-T road network in the EU-15 amounted to EUR 9.56 billion in 2002 and EUR 13.67 billion in 2003 (a total of EUR 23.23 billion in the 2002 – 2003 period). In comparison with the investment in previous years the average annual roads investment increased in the 2002 – 2003 period.

Most of the investment in the 2002 – 2003 period related to upgrading motorways and high-quality roads (31%), constructing new 4-lane motorways (30%), or upgrading ordinary roads or high-quality roads to 4-lane motorways (13%). Other notified measures included the construction of new links, upgrading of intersections, and expansion of 4-lane motorways to 6-lane motorways, electronic fee collection measures and emergency and incident management.

The countries with the highest notified investments in the 2002 – 2003 period were Italy (EUR 5.59 billion), Germany (EUR 3.03 billion), Spain (EUR 2.76 billion), France (EUR 2.54 billion), Greece (EUR 1.69 billion) and Portugal (EUR 1.46 billion).

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<sup>1</sup> OP cit: 5

<sup>2</sup> OP cit: 5

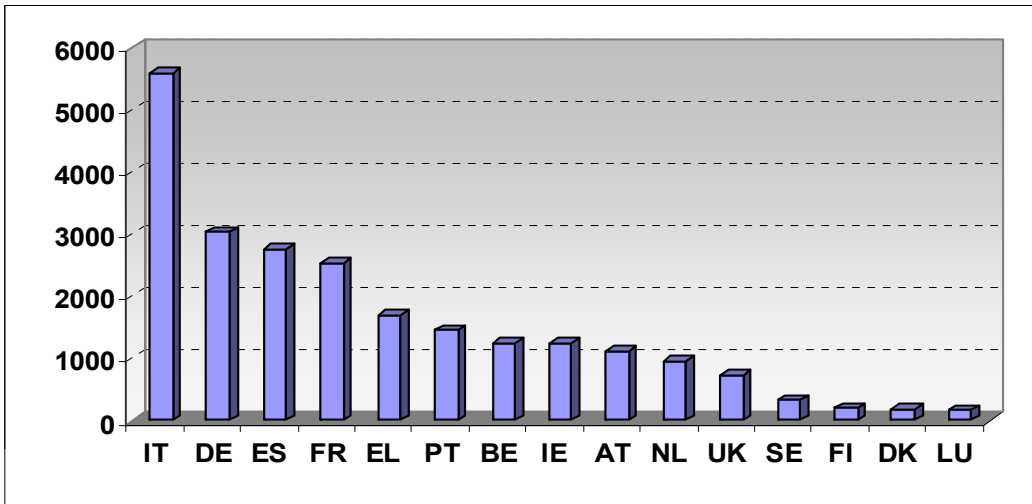


Figure 1 : Investment in the TEN-T road network in the EU-15 per country in 2002 and 2003 in millions of EUR

- **Development of the TEN-T road network in the EU-10 and EU-2**

The total length of the existing network forming part of the TEN-T network in the EU-10 and EU-2 in 2003 was approx. 19,400 km – 14,400 existing and 5,000 planned.

The quality development of the TEN-T road network continued. The share of motorways increased from about 3,400 km in 1996 to 4,500 in 2004 and should reach about 10,000 km in 2020. Thus the length of motorways in the EU-10 and EU-2 will nearly triple in this period.

In 2003, there were about 3,400 km of tolled roads in the EU-10 and EU-2 (27% of total TEN-T roads in these countries). This is an increase of 48% of the length of tolled roads compared to 1996. Tolled roads can particularly be found in the Czech Republic, Hungary, Slovakia, Slovenia, Bulgaria and Romania.

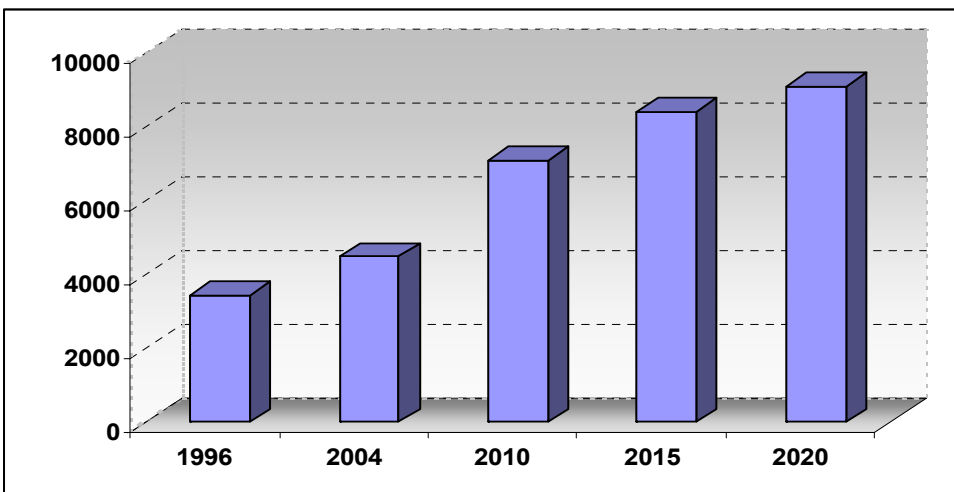


Figure 2 : Development of length of the TEN-T road network - motorways (in km) in the EU-10 and EU-2 in 1996, 2004, 2015 and 2020

- **Investment in the TEN-T road network in the EU-10 and EU-2**

Total investment in the TEN-T road network in the EU-10 and EU-2 amounted to EUR 1.97 billion in 2002 and EUR 1.94 billion in 2003 (a total of EUR 3.91 billion in the 2002 – 2003 period). The notified investment in this period is higher than in previous periods.

Most of the investment in the 2002 – 2003 period in the EU-10 and EU-2 related to constructing new 4-lane motorways (67%), various upgrading measures (10%), upgrading ordinary roads to high quality roads (8%) and new ordinary or high-quality roads (7%).

The countries with the highest notified investment in the 2002 – 2003 period were Hungary (EUR 1.03 billion), the Czech Republic (EUR 0.76 billion), Slovenia (EUR 0.61 billion) and Poland (EUR 0.51 billion).

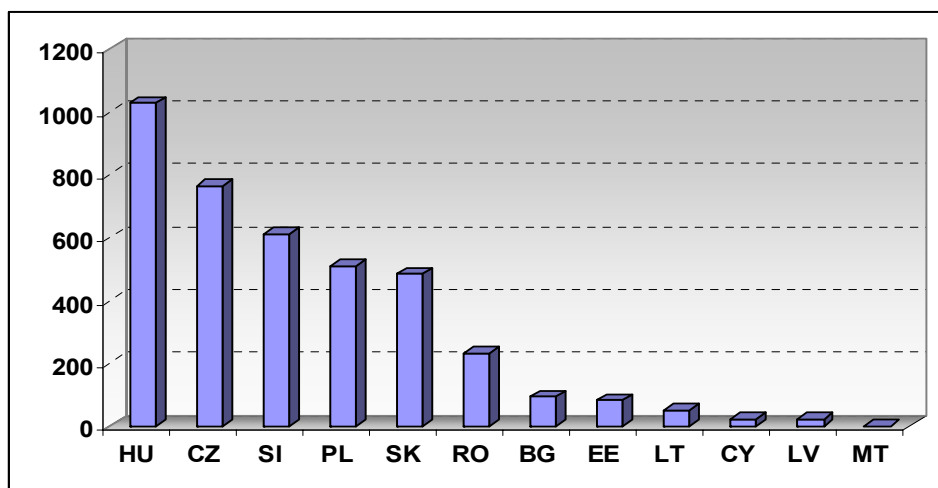


Figure 3 : Investments in the TEN-T road network in the EU-10 and EU-2 per country in 2002 and 2003 in millions of EUR

- **Illustrative examples of the progress in the implementation of the TEN-T road network in EU-27**

The following examples illustrate the progress in the implementation of the TEN-T road network in the 2002 – 2003 period:

- In France, the upgrading to a motorway of the Montauban Brive-la-Gaillarde (J. N86/A20) involving an investment of around EUR 1.49 billion. This project, which was completed in 2003, relates to the upgrade of 139 km of ordinary road to a new 4-lane motorway.
- The implementation of the TEN-T network has almost been completed for roads in Denmark. The length of the entire TEN-T road network in Denmark is 966 km, of which 96% have already been implemented.
- As part of the road infrastructure related to priority project 22 on the territory of the Czech Republic (to be completed in 2007 or 2008), the branch in the direction Prague – Plzeň – Nürnberg, the D5 motorway, was completed on the Czech territory in the 2002 – 2003 period.

## TEN-T RAILWAY NETWORK

In 2003, the total railway network in the EU-25 comprised approx. 198,000 km<sup>3</sup>. Railways accounted for 364 billion tonne-km (10%) of intra-EU freight traffic and 345 billion person-km<sup>4</sup> (6%) of intra-EU passenger traffic in 2003.

### • Development of the TEN-T railway network in the EU-15

The guidelines define the TEN-T railway network of the EU-15 as comprising the high-speed rail network and conventional rail network<sup>5</sup>. The TEN-T railway network had a total length of about 63,300 km in 2003. The high-speed lines, new and upgraded, accounted in 2003 9,600 km and the conventional lines 53,700 km.

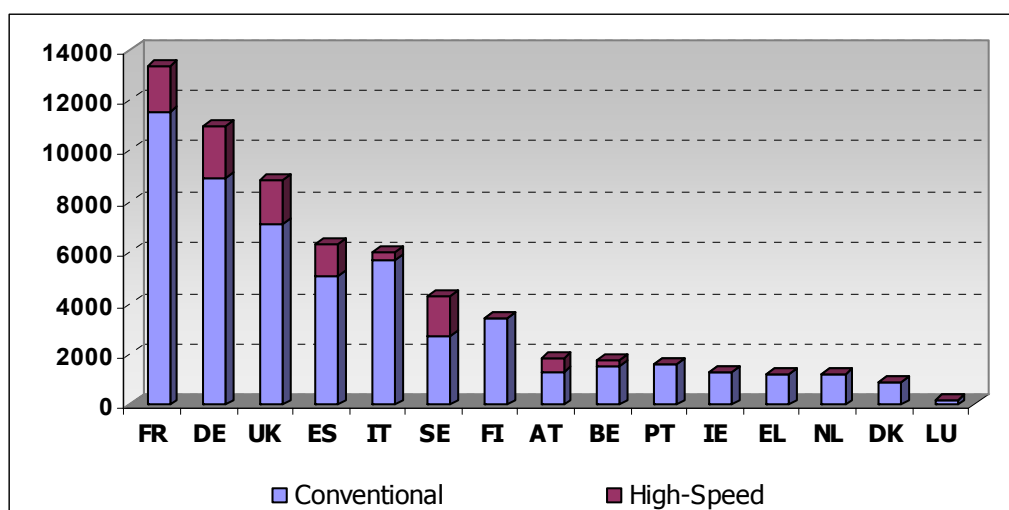


Figure 4 : Length of the existing TEN-T railways network (high-speed and conventional lines in km) in the EU-15 in 2003

The quality development of the TEN-T rail network continued slowly but should in future profit from various upgrading measures. The share of high-speed lines new or upgraded was 15% in 2003 and should increase to 37% by 2020. This means that the total length of high-speed lines, which was about 9,600 km in 2003 will amount about 31,500 km in 2020.

<sup>3</sup> OP cit: 5

<sup>4</sup> OP cit: 5

<sup>5</sup> The rail network is composed:

of the conventional rail network

of the high-speed rail network, which are according to article 10.2c of the decision 884/2004/EC divided into:

- especially built high-speed lines equipped for speeds generally equal to or greater than 250 km/h;
- especially upgraded high-speed lines equipped for speeds of the order of 200 km/h;
- especially upgraded high-speed lines or lines specially built for high speed and connected to the high-speed rail network which have special features as a result of topographical or environmental, relief or town-planning constraints, on which speed must be adapted individually.

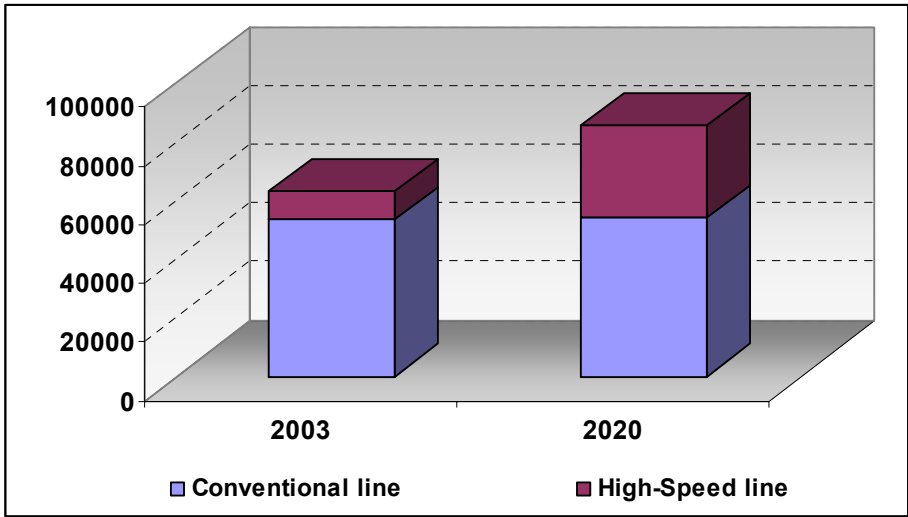


Figure 5 : Development of TEN-T high-speed lines railways in kilometres in the EU-15 from 2003 till 2020

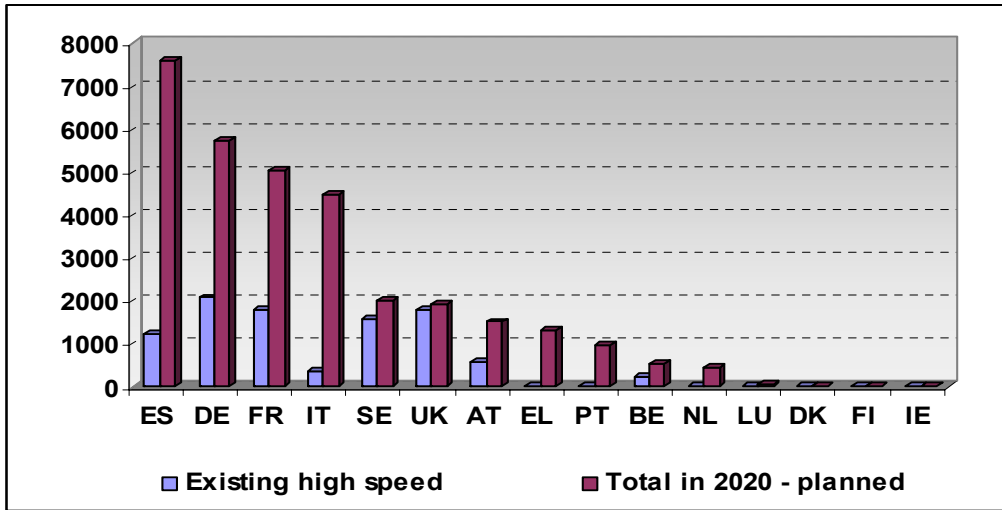


Figure 6 : Development of TEN-T high-speed lines railways in the EU-15 from 2003 till 2020 per country

- **Investment in the TEN-T railways network in the EU-15**

Total investments in the TEN-T railways network in the EU-15 amounted to EUR 17.58 billion in 2002 and EUR 17.96 billion in 2003 (a total of EUR 35.54 billion in the 2002 – 2003 period). Compared to the investment in previous years, it can be seen that annual investment in railway infrastructure has slightly increased.

Most of the investment in the 2002 – 2003 period in the EU-15 related to various upgrading measures (54%), additional tracks (29%) and upgrading of station facilities (4%). Other measures included changes of alignment (4%) and traffic control systems (3%).

The countries with the highest investment in the 2002 – 2003 period were, Italy (EUR 14.85 billion), Spain (EUR 5.27 billion), Germany (EUR 3.20 billion), UK (EUR 3.16 billion) and Netherlands (EUR 2.18 billion).

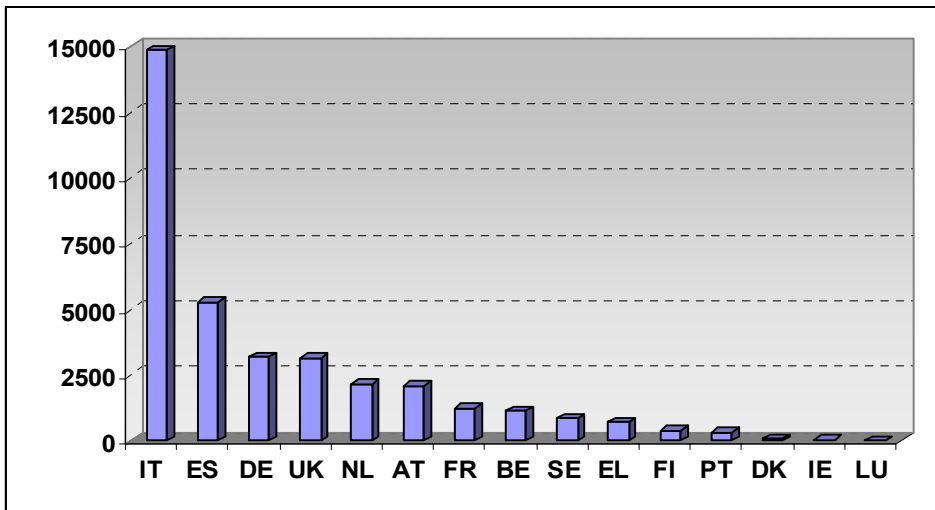


Figure 7 : Investment in the TEN-T railway network in the EU-15 in 2002 and 2003 in millions of EUR

- **Development of the TEN-T railways network in the in the EU-10 and EU-2**

The existing railways network designated as the TEN-T railway network in the EU-10 and EU-2 had a total length of about 20,000 km in 2003. These were nearly 100% conventional lines.

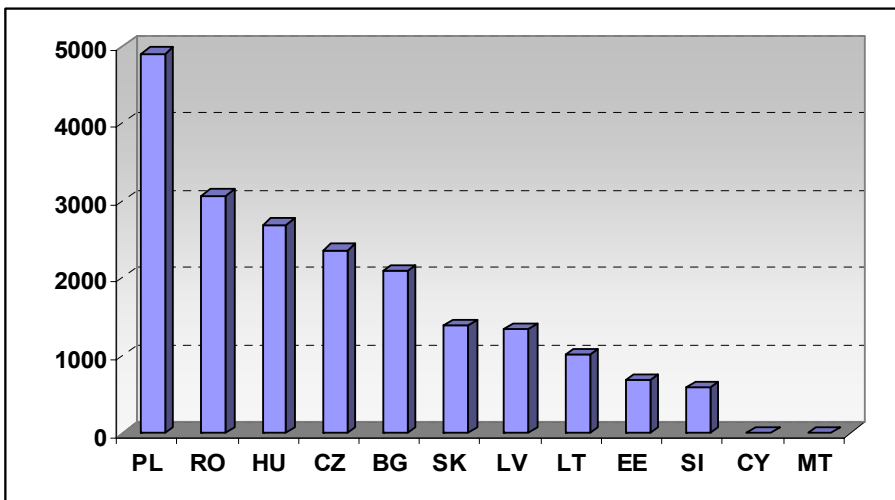


Figure 8 : Length of TEN-T railway lines in the EU-10 and EU-2 per country

- **Investment in the TEN-T railways network in the EU-10 and EU-2**

Total investment in the TEN-T railway network in the EU-10 and EU-2 amounted to EUR 1.24 billion in 2002 and EUR 0.96 billion in 2003 (a total of EUR 2.20 billion in the 2002 – 2003 period). The average annual investments thus slightly increased in 2002-2003, compared to the 1996 – 2001 period.

Most of the investment in the 2002 – 2003 period in the EU-10 and EU-2 related to various upgrading measures (73%), station (facilities) measures (9%), signalling (6%) and traffic control systems (5%).

The countries with the highest investment in the 2002 – 2003 period were the Czech Republic (EUR 0.78 billion), Hungary (EUR 0.34 billion) and Poland (EUR 0.27 billion).

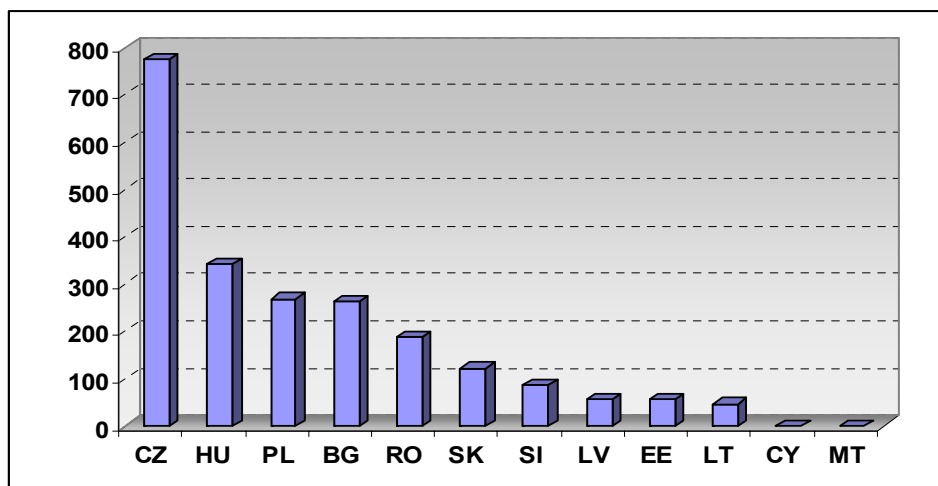


Figure 9 : Investment in the TEN-T railway network in the EU-10 and EU-2 in 2002 and 2003 in millions of EUR

- **Illustrative examples of the progress in the implementation of the TEN-T railway network**

The following examples illustrate the progress in the implementation of the TEN-T railway network:

- New HS line LGV Est Européenne in France – Priority Project No 4: This HS rail section from Paris to Baudrecourt is currently in the construction phase and the total length of this line is 365 km. The overall costs amount to EUR 3.0 billion and the project is scheduled to be in operation in 2007.
- Modernisation of railways in UK continues with the renewal and upgrade of the 850km West Coast Main Line linking London with the West Midlands, the North West, North Wales (and Ireland) and Scotland. This is already operating high speed services with enhanced standards of reliability and the project is due to be finally completed by the end of 2008
- In Italy a significant high-speed project under construction is the new HS line from Melegnano to Bologna central (192 km) - Priority Project No 1 - and the upgrading of the new node of Bologna. The costs of this HS project amount to approx. EUR 7.7 billion, and completion of this project is estimated in 2008.
- In Spain, the section Madrid-Zaragoza-Lleida, which is a part of the HS line Madrid-Barcelona-Perpignan is in operation since end 2003. The section Lleida-Barcelona will be in operation by 2007 and the connection with the French HST network will be completed end 2009. Total cost of the project is about 10 billion Euro, out of which 4.9 billion have been spent up to 2003.
- In Hungary, the rebuilding of the Újszász-Szolnok and Rákos-Sülysáp line sections along PP22 and the rebuilding of passenger stations have been

completed, new platforms have been built and 16 road-railway crossings have been reconstructed.

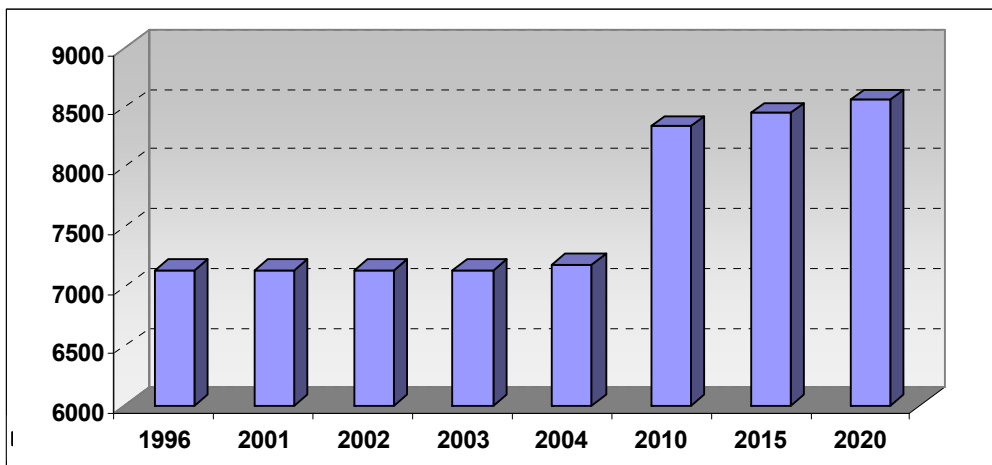
## TEN-T INLAND WATERWAYS NETWORK

- **Developments in the TEN-T inland waterways network in the EU-15**

Europe has around 29,500 navigable canals, rivers and lakes that are regularly used for transport. Only Austria, Belgium, France, Germany, Luxembourg and Netherlands have major interlinked networks. Inland waterways accounted for 120 billion tonnes-km (3.4%) of intra-EU freight traffic in 2003.

The countries that have inland waterways belonging to the TEN-T inland waterway network in the EU-15 are Austria, Belgium, Finland, France, Germany, Italy, Luxembourg, Netherlands and Portugal.

The total length of the existing TEN-T inland waterways network in the EU-15 was about 10,600 km in 2003. The share of waterways at ECMT class V and higher remained about 7,100 km (67% of the total TEN-T network) from 1996 to 2003 but should increase through upgrading to about 8,500 km by 2020. The main axes in the network are the Rhine, Main and the Danube.



**Figure 10 : Development of length of TEN-T inland waterway network (ECMT class V and higher in km) in the EU-15 in 1996 till 2020**

- **Investment in the TEN-T inland waterways network in the EU-15**

Total investment in the TEN-T inland waterways network in the EU-15 amounted to EUR 840 million in 2002 and EUR 893 million in 2003 (a total of EUR 1,733 million in the 2002 – 2003 period).

The countries with the highest investment in the 2002 – 2003 period were, by far, Germany, with EUR 970 million about half of the EU15 total , followed by Belgium (EUR 388 million) and the Netherlands (EUR 345 million).

Most of the investment in the 2002 – 2003 period related to various upgrading measures (79%), water regulation (5%), improvement of locks (9%), transmission and processing of cargo data (3%) and new locks (1%).

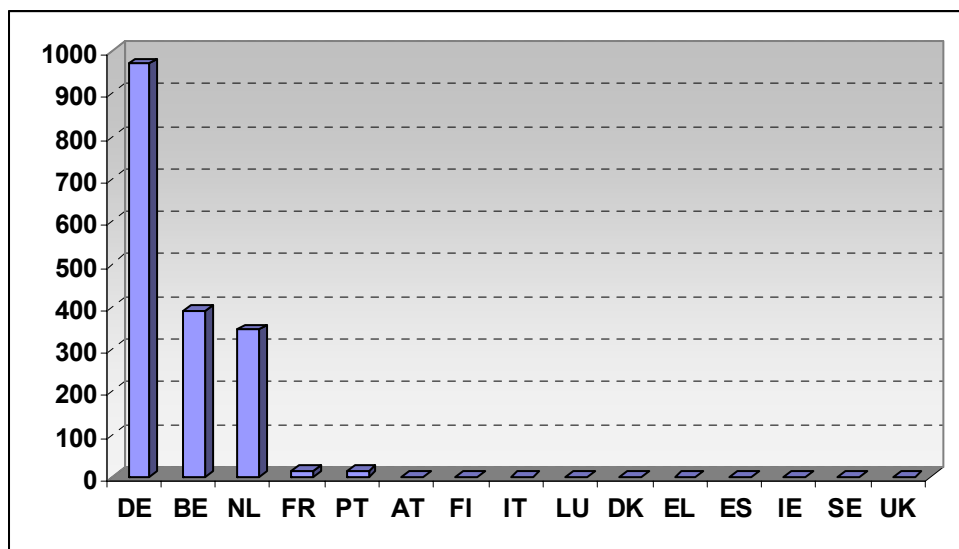


Figure 11 : Investment in the TEN-T inland waterway network in EU-15 per country in 2002 and 2003 in millions of EUR

- **Developments of the TEN-T inland waterways network in the EU-10 and EU-2**

The EU-10 and EU-2 countries that have inland waterways designated as part of the TEN-T inland waterway network are the Czech Republic, Hungary, Lithuania, Poland, Slovakia, Bulgaria and Romania. The Danube River forms one of the most important parts of the network in these countries.

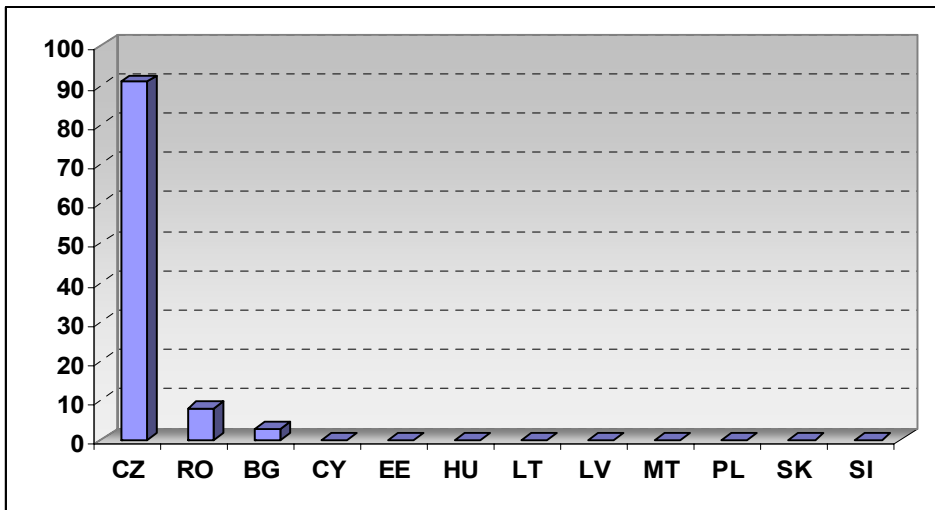
The total length of the existing inland waterways belonging to the TEN-T inland waterways in these countries was approx. 3,500 km in the year 2003.

The TEN-T inland waterways in the EU-10 and EU-2 was in 2003 composed of about 2,400 km of waterways classified as ECMT class V and higher.

- **Investment in the TEN-T inland waterways network in the EU-10 and EU-2**

Total investment in the TEN-T inland waterways network in the EU-10 and EU-2 amounted to EUR 52 million in 2002 and EUR 50 million in 2003 (a total of EUR 102 million in the 2002 – 2003 period). The average annual investments in inland waterways increased in the 2002 – 2003 period.

The countries with the highest notified investments in the 2002 – 2003 period was, by far, Czech Republic, who spent with EUR 91 million about 90% of the EU-10 and EU-2 countries. Most of the investments in the 2002 – 2003 period related to various upgrading measures (78%), water regulation and improvement on locks (20%).



**Figure 12 : Investments in the TEN-T inland waterway network in the new Member States and Bulgaria and Romania per country in 2002 and 2003 in millions of EUR**

- **Illustrative examples of the progress in the implementation of the TEN-T inland waterways network**

The following examples illustrate the progress in the implementation of the TEN-T inland waterways network:

- Karlsruhe - Mulhouse inland waterways section in France: for this section, 4 projects were completed. The projects mainly relate to upgrading measures. The overall costs amounted to EUR 117 million and the projects were completed in 2001.
- Porto - Rio Tua (foz) inland waterways project in Portugal: this project is under construction and mainly relates to upgrading measures, in particular the general improvements of the locks. The overall costs amount to EUR 48.7 million. Completion of this project is expected in 2006.
- In the Netherlands, several inland waterway projects have almost been finalised. Modernisation of the Maasroute (phase 1) were carried out in Maasbracht, Born, Heel, Belfeld and Sambeek. The project was undertaken between 1995 and 2005, and had a budget of EUR 71 million. The renovation of the North Sea locks at IJmuiden was carried out between 1985 and 2002, and had a budget of EUR 228 million. The Twente canal was being upgraded to ECMT class V (2001 - 2005), for a budget of EUR 55 million. The Starckenborgh canal was upgraded to ECMT class V between 1990 and 2004, for a budget of EUR 79 million. The Waal River was upgraded between 1995 and 2003, for a budget of EUR 74 million.

## TEN-T PORTS

- **Development of the TEN-T ports in the EU-15<sup>6</sup>**

For the EU-15, the modal split of maritime transport was almost 40% (1,435 billion tonne-km) in intra-EU freight traffic<sup>7</sup> in 2003.

Inland ports are part of the network, in particular as points of interconnection between the inland waterways referred to above and other modes of transport. The network includes inland ports open to commercial traffic, located on the network of inland waterways, interconnected with other trans-European transport routes and equipped with transshipment facilities for intermodal transport or with an annual freight traffic volume of at least 500,000 tonnes.

Seaports in the TEN-T network are classified into categories A, B and C. These are defined on the basis of quantitative criteria (annual traffic volumes of freight or passengers) or their location on islands, or in peripheral or outermost regions. Only those ports in the highest category (category A) by volume of traffic are shown in the maps of the Decision<sup>8</sup>.

**Table 2: Numbers and types of TEN-T ports (seaports class A, inland ports, inland / maritime ports) in the EU-15 as included in the project database**

Country	Inland ports	Inland/maritime ports	Seaports (class A)	Total
Austria	4			4
Belgium	13	3	1	17
Denmark			21	21
Finland	1		18	19
France	10	4	22	36
Germany	48	3	12	63
Greece			11	11
Ireland			6	6
Italy			38	38
Luxembourg				
Netherlands	9	7	2	18
Portugal		1	6	7

<sup>6</sup> Note: In a majority of ports, the port services are provided by private operators. Therefore, information is rarely available centrally, and the information that is available is often incomplete or lacks homogeneity. Detailed information is only available in a limited number of cases.

<sup>7</sup> OP cit: 5

<sup>8</sup> Category A international seaports: ports with a total annual traffic volume of not less than 1.5 million tonnes of freight or 200,000 passengers which (unless impossible) are connected with the overland elements of the trans-European transport network and therefore play a major role in international maritime transport.

Category B Community seaports: ports with a total annual traffic volume of not less than .0.5 million tonnes of freight or between 100,000 and 199,999 passengers, which are connected (unless impossible), with the overland elements of the trans-European transport network and are equipped with the necessary transshipment facilities for short-distance sea shipping.

Category C regional ports: these ports do not meet the criteria of categories A and B but are situated in island, peripheral or outermost regions, interconnecting such regions by sea and/or connecting them with the central regions of the Community.

Spain			33	33
Sweden			24	24
United Kingdom			47	47
Total EU-15	85	18	241	344

Particular care has been taken to foster the improvement of connections with the TEN-T land networks, including logistic platforms associated with ports and the construction of new port infrastructures, thus advancing along the lines as defined in the guidelines.

Around 57% of the seaports, 100% of the maritime/inland ports and 74% of the inland ports notified to have intermodal transshipment facilities in 2003.

Around 52% of the seaports, 56% of the maritime/inland ports and 52% of the inland ports had a connection to the TEN-T railway network.

The situation is not expected to change significantly in the period to 2020. Ports intend to improve this situation between now and 2020; however, a long-term strategy concerning ports development was rarely available.

- **Investments in TEN-T ports in the EU-15**

Total investments in TEN-T ports in the EU-15 amounted to EUR 2.46 billion in 2002 and EUR 2.48 billion in 2003 (a total of EUR 4.94 billion in the 2002 – 2003 period).

Around 45% of the measures taken in the 2002 – 2003 period related to the construction of new infrastructures, such as a new freight terminal, a new berth and a new port basin. Around 55% of the measures concerned upgrading, such as extending container terminals or freight terminals, extending berths and deepening of port basins.

The countries with the highest investments in the 2002 – 2003 period were Spain (EUR 0.70 billion), UK (EUR 0.60 billion), Italy (EUR 0.57 billion) and Belgium (EUR 0.50 billion).

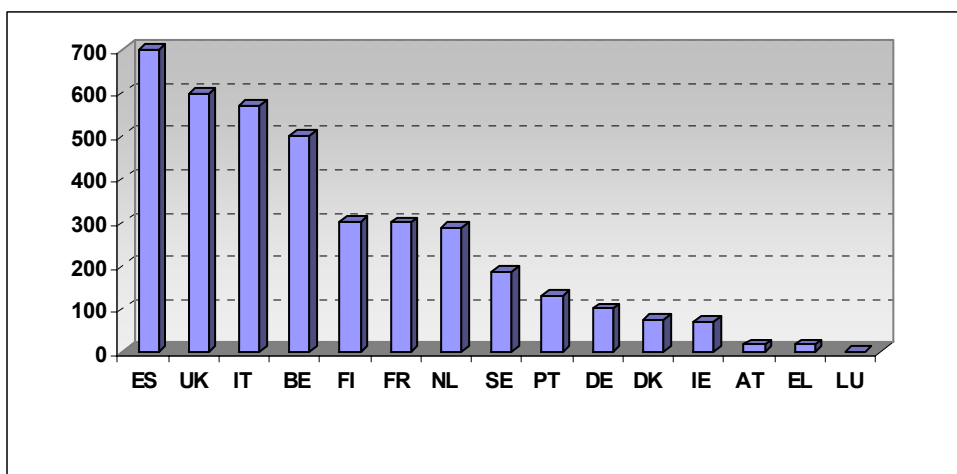


Figure 13 : Investments in the TEN-T ports in the EU-15 per country in 2002 and 2003 in millions of EUR

- **Development of the TEN-T ports in the EU-10 and EU-2**

Most of the ports in these countries are inland ports; seaports can be found in the Baltic States, Poland, Romania and Bulgaria.

**Table 3: Numbers and types of TEN-T ports in the EU-10 and EU-2**

Number of ports	Inland ports	Seaport / inland port	Seaport (class A)	Total
Cyprus			2	2
Czech Republic	11			11
Estonia			5	5
Hungary	7			7
Latvia			3	3
Lithuania			1	1
Malta			2	2
Poland		1	3	4
Slovakia	2			2
Slovenia			1	1
Bulgaria	8		2	10
Romania	8	4	1	13
<b>Total</b>	<b>36</b>	<b>5</b>	<b>20</b>	<b>61</b>

In 2003, around 53% of all ports in the EU-10 and EU-2 had transshipment facilities. Only around 50% of all ports in these countries had a connection to TEN-T rail. This has remained almost the same since 1996.

- **Investments in TEN-T ports in the EU-10 and EU-2**

Detailed investment information or long-term investment strategies were either not available or difficult to obtain. Therefore, the investment figures cannot be entirely relied upon.

Total investments in TEN-T ports in the EU-10 and EU-2 amounted to EUR 192 million in 2002 and EUR 164 million in 2003 (a total of EUR 357 million in the 2002 – 2003 period). In comparison, EUR 381 million was invested in the 1996 – 2001 period. This means that the average annual investments in TEN-T ports increased in the 2002 – 2003 period, compared to 1996 – 2001.

Around 60% of the measures taken in the 2002 – 2003 period related to the construction of new infrastructures, such as a new freight terminal or container terminal. Around 40% of the measures were upgrading measures such as upgrading of terminals, upgrading of berth and deepening of the port basin.

The countries with the highest investments in the 2002 – 2003 period were Romania (EUR 138.5 million), Bulgaria (EUR 81 million) and Estonia (EUR 56 million).

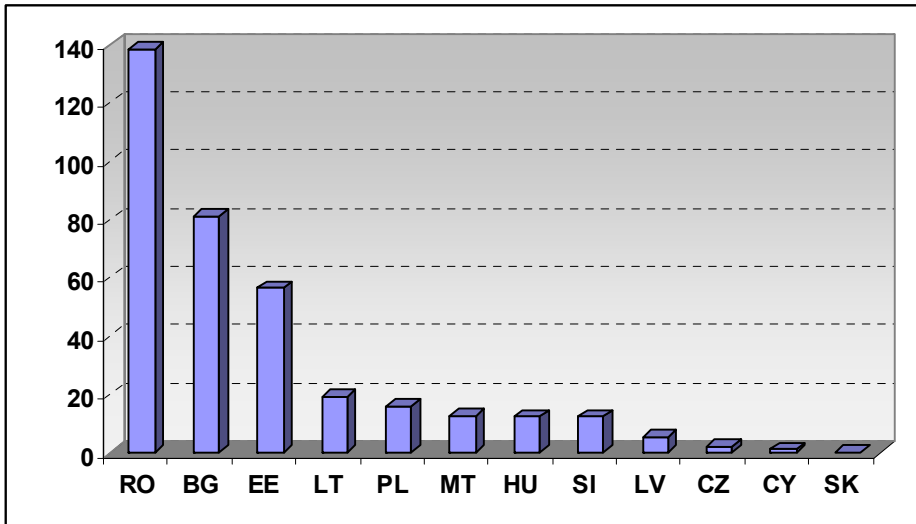


Figure 14 : Investments in the TEN-T ports in the EU-10 and EU-2 in 2002 and 2003 in millions of EUR

- **Illustrative examples of developments in TEN-T ports**

Developments in several ports illustrate the progress made in the 2002 – 2003 period:

- During the period, a limited number of ports (Portuguese ports for a study on harmonisation of procedures, Dutch ports for TEAMS (Trans-European Automated Manifest System), Genoa, Vuosaari, Wilhelmshaven) received support for a total amount of EUR 8 million from the TEN-T budget.
- Cyprus: development of the port of Larnaka mainly as passenger port, by making use of a public/private partnership (PPP). Construction of a new passenger terminal and extension of the container storage capacity in the port of Limassol.
- Hungarian National Public Port Győr-Gönyű: The construction of 140 hectares of new port facilities was continued and is to be completed by 2005 material dredged from the river bed in front of the port is being used. Preparations have been made for the design and construction of an embankment along a new shore section.

## TEN-T AIRPORTS

- **Development of TEN-T airports in the EU-15<sup>9</sup>**

Intra-EU and domestic air transport accounted for 449 billion person-km in 2003. This is 7.5% of total intra-EU passenger transport and an increase of 46% since 1995. In comparison, overall passenger transport in the same period increased by 16%<sup>10</sup>.

The TEN-T airport network consists of airports of common interest that are situated within the territory of the Community and are open to commercial air traffic. Airports are classified

<sup>9</sup> Due to liberalisation and privatisation, most major airports are in private hands and managed accordingly. Therefore, it was often difficult to obtain information, as data are rarely centralised by national authorities.

<sup>10</sup> OP cit: 5

differently according to the volume and type of traffic they handle and according to their function within the network. They should allow for the development of air links and the interconnection of air transport and other modes of transport.

The international connecting points and the Community connecting points constitute the core of the trans-European airport network. Links between the Community and the rest of the world mainly run via the international connecting points. The Community connecting points essentially provide links within the Community, while extra-Community services still account for a small proportion of their business. Regional connecting points and accessibility points facilitate access to the core of the network or help to open up peripheral and isolated regions.

60 out of 350 airports, which handle more than 80% of all passengers and more than 90% of extra-Community international traffic, are therefore regarded as ‘international connecting points’, although they also handle most of the intra-Community traffic.

Around 57% of the international system airports, 28% of the international airports and 15% of the Community and Community system airports had a connection to the TEN-T railway network in 2003. This is a slight increase compared to 1996. Only 3% of the national and regional airports had a connection to the TEN-T railways network.

Country	Community	Community System	International	International System	Regional	Total
Austria	1		1		4	6
Belgium			2		1	3
Denmark	1			1	8	10
Finland	1		1		21	23
France	9		4	5	35	53
Germany	8		6	1	10	25
Greece	7		1		29	37
Ireland	2		1		9	12
Italy	12	2		5	18	37
Luxembourg			1			1
Netherlands			1		4	5
Portugal	2		1		12	15
Spain	11		4	3	25	43
Sweden	3			2	35	40
United Kingdom	10		7	4	18	39
<b>Total EU-15</b>	<b>67</b>	<b>2</b>	<b>30</b>	<b>21</b>	<b>229</b>	<b>349</b>

Table 4: Numbers and types of TEN-T airports in the EU-15 as included in the project database

- **Investments in TEN-T airports in the EU-15<sup>11</sup>**

<sup>11</sup> Due to the fact that many airports now have private managements, there are some uncertainties as to the investment figures, as investment data are rarely centralised by national authorities and are difficult to

The total investments in TEN-T airports in the EU-15 amount to EUR 4.37 billion in 2002 and EUR 5.54 billion in 2003 (a total of EUR 9.91 billion in the 2002 – 2003 period). The annual average investments slightly increased in the 2002 – 2003 period. Compared to the 2000 – 2001 period there has been a light decrease in investments, which is caused by the finalisation of a major investment into the Malpensa airport project (priority project 10).

The countries with the highest notified investments in the 2002 – 2003 period are UK (EUR 3.43 billion), France (EUR 2.10 billion), Italy (EUR 1.55 billion) and Spain (EUR 1.15 billion).

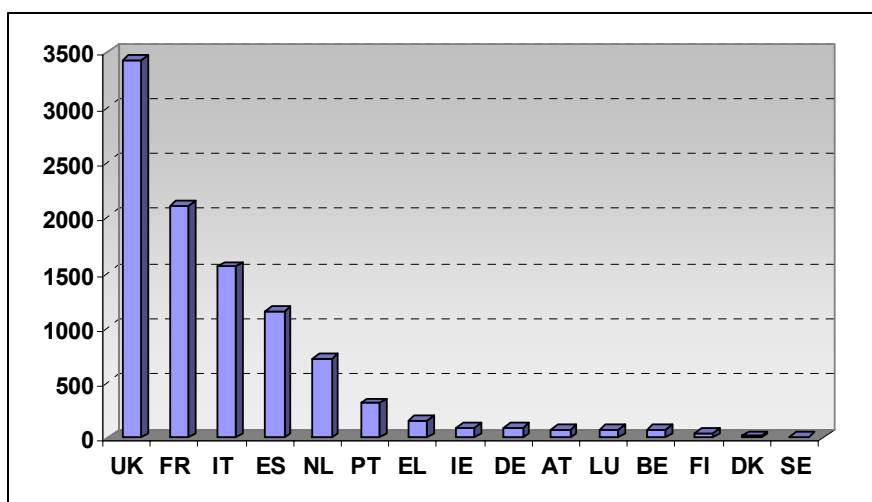


Figure 15 : Investments in TEN-T airports in the EU-15 2002 and 2003 in millions of EUR

Most of the total investment related to International Connecting airports. The largest part of the investments was funded by private sources, as most of the major airports are privately owned.

- **Development of TEN-T airports in the EU-10 and EU-2**

The TEN-T airport network in the EU-10 and EU-2 comprises around 50 airports. Only 6 of these airports are International airports or International Airport Systems.

Table 5: Numbers and types of the TEN-T airports in the EU-10 and EU-2

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obtain from the individual airports. Long-term strategies as to the development of airports were rarely available, as well.

None of the airports has a direct rail connection but a number of them are evaluating such a

Country	Community	Community System	International	International System	Regional	Total
Cyprus	1		1			2
Czech Republic			1		2	3
Estonia			1		4	5
Hungary				1	2	3
Latvia	1				3	4
Lithuania	1				2	3
Malta	1					1
Poland			1		7	8
Slovakia	1				2	3
Slovenia	1				2	3
Bulgaria			1		4	5
Romania		1			9	10
<b>Total</b>	<b>6</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>37</b>	<b>50</b>

possibility (Budapest, Warsaw, Ljubljana...).

- **Investments in TEN-T airports in the EU-10 and EU-2**

The total investments in TEN-T airports in the EU-10 and EU-2 amounted to EUR 185 million in 2002 and EUR 188 million in 2003 (in total EUR 373 million in the 2002-2003 period). In comparison, the total investments made in the 1996 – 2001 period amounted to EUR 524 million. The annual average investments thus increased in the 2002 – 2003 period.

The countries with the highest investments in the 2002 – 2003 period were Romania (EUR 154 million), Poland (EUR 72 million) and Bulgaria (EUR 50 million).

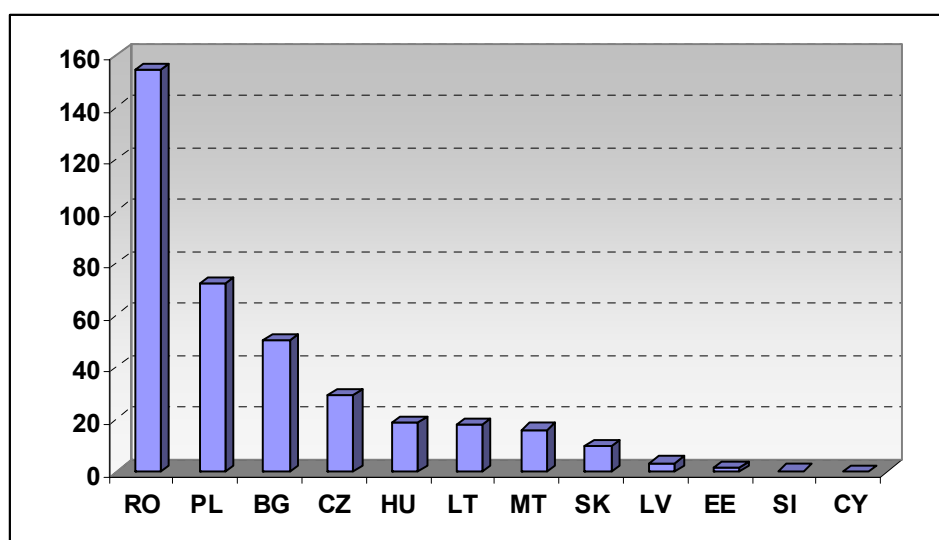


Figure 16 : Investments in TEN-T airports in the EU-10 and EU-2 in 1996-1997, 1998-1999, 2000-2001 and 2002-2003 in billions of EUR

- **Illustrative examples of developments in TEN-T airports**

The following examples illustrate the developments in TEN-T airports in the 2002 – 2003 period.

- During the 2002 – 2003 period, ten airports (Bruxelles National, Frankfurt Main, Köln/Bonn, Stuttgart, Barcelona, Milan Malpensa, Bologna, Lisboa, Manchester and Lyon) received support for a total amount of EUR 18.2 million from the TEN-T budget.
- In Cyprus modernisation and upgrading of the airports in Larnaka is taking place by making use of a public/private partnership (PPP) construction. The construction of a new Air Traffic Control centre in Nicosia has been completed.
- Concerning the Budapest Ferihegy International Airport, project works for a new cargo base have been completed. In addition, the renovation of terminal T1 is under construction and expected to be completed in 2006.

#### **COMBINED TRANSPORT NETWORK**

Progress reported in other modes of transport often includes extension or upgrading works contributing to the development of combined transport. Illustrative examples of developments in of combined transport and terminals:

- In 2003, a study for combined transport by rail for Inzersdorf terminal in Austria received an amount of EUR 1.2 million from the TEN-T budget.
- In Spain, a multimodal study on the link Fuentes de Oñoro -Valladolid -Tuy-Ferrol received EUR 1.15 million and EUR 1.6 million from the TEN-T budget in 2002 and 2003, respectively.

#### **TRAFFIC MANAGEMENT AND NAVIGATION SYSTEMS**

##### **• Intelligent Transport Systems (ITS) in the TEN-T**

In 2001, the European Commission's Multi-Annual Indicative Programme (MIP) (Decision C(2001) 2654 final) was launched. The MIP grants Community financial aid to projects of common interest in the area of the TEN-T network for the 2001 – 2006 period. Six projects of common interest, each with separate works and studies actions, covering four principal technical domains: Road Monitoring Infrastructure, European Network of Traffic Centres, Traffic Management and Control, and Traveller Information Centres, were initiated in 2001. The individual projects have also worked together on issues of common interest, including Evaluation/Impact Assessment, Data exchange techniques, and have considered deployment in corridors as a multi-project task.

The MIP includes a total amount of EUR 2,781 million for the ITS programme. Of this, 47.07% is allocated to the priority projects, 19.78% to the trans-European satellite navigation system Galileo, and 6.9% (EUR 192 million) to the six ITS projects in the road sector: ARTS, CENTRICO, CORVETTE, SERTI, STREETWISE and VIKING.

##### **• European Rail Traffic Management System (ERTMS)**

There are more than twenty different signalling and speed control systems in Europe. This is a major barrier to interoperability. Every frontier is a technical barrier which cannot be crossed without expensive adaptations to every trainset and every locomotive. ERTMS makes it possible to have a standardised European system – a first in the rail sector – and to make substantial savings compared with the existing systems, especially in terms of maintenance costs.

Most of the benefits of the system will not be felt, however, until there is an integrated set of lines and trains equipped with ERTMS. A “critical mass” will have to be reached before the old national systems can be scrapped and full advantage can be taken of the savings offered by ERTMS. For this reason, the Commission proposes to give strong support to ERTMS pioneering undertakings, since they will bear the brunt of the extra cost of maintaining the old systems during the transitional period. This strategy is fully supported by the European Parliament.

In 2005 and 2006, “ERTMS lines” have opened in Spain, Italy, and Germany. In 2007 and 2008, other projects, particularly in Austria, the Netherlands, France, the United Kingdom and Greece, should become operational. To boost the deployment, the European Commission has made mandatory the installation of ERTMS on new sections or lines, in 2002 for the High Speed network and in 2006 for the priority projects of the conventional network. Moreover, the financing of railway infrastructures by Community funds, such as TEN-T and cohesion budget funds, is now bound to the compulsory installation of ERTMS

However, the lines equipped today do not yet constitute a network. That is why there has to be a genuine deployment plan coordinated at the European level. In March 2005 the Commission agreed a Memorandum of Understanding with the main stakeholders within the railway industry to commit to supporting Member States in rapidly deploying ERTMS. A European coordinator, Mr Vinck, has been appointed in July 2005 by the Commission in order to facilitate the smooth deployment of the ERTMS across Europe.

On the top of the fast migration of the High Speed network, under the aegis of the European Coordinator, the deployment of ERTMS on six major freight corridors representing 20% of the freight traffic has been more deeply studied. Now that the benefit of deploying the system along international freight corridors is becoming obvious, permanent organisations are being set up by corridor. These permanent organisations do not only study the deployment of ERTMS but investigate also remaining outstanding issues (such as cross acceptance of locomotives, simplification of administrative procedures etc.) with a view to improving the competitiveness of the corridor.

- **Air Traffic Management (ATM)**

The TEN-T guidelines in the area of ATM are designed to facilitate and accelerate implementing measures to increase the capacity and safety of the European ATM system and to ensure optimum use of available Air Traffic Control resources.

The current system is composed of different national systems. This causes delays and safety issues and higher operational costs. Community support has focused on two main streams of activities: upgrading the current system and facilitating the development of the future European system.

Improved air traffic and aircraft positioning and communication technologies offer opportunities for significant improvements in the efficiency and safety of air travel. It

responds to the need to conceive developments in air traffic management as a building block for the Community transport policy, as set out in the White Paper of 27 November 2001.

The Commission has developed a legislative package called ‘the Single European Sky’. The Single European Sky is an ambitious initiative to reform the architecture of European air traffic control to meet future capacity and safety needs.

The objectives of the legislation are to improve and reinforce safety, to restructure European airspace with air traffic flows in mind rather than national borders, to create additional capacity and to increase the overall efficiency of the air traffic management system (ATM).

This can be achieved by creating a more effective and integrated air traffic management architecture and by ensuring that this architecture is based on demand driven service provision.

The legislation will enhance cross-border co-ordination, remove administrative and organisational bottlenecks in the area of decision-making and enhance enforcement in ATM.

The legislative package was adopted in 2004 and comprises four regulations covering the essential elements for a seamless European Air Traffic Management System.

The TEN-T programme provides an important financial instrument to support the achievement of Single European Sky objectives through the implementation of an efficient trans-European network, encompassing ATM national systems and in particular promoting interoperability, interconnection and technical advances.

- **Global Navigation Satellite System (GNSS)**

Recognising the strategic importance of satellite navigation and its potential applications, Europe has decided to develop its own GNSS capability in a two-step approach.

- **GNSS-1: EGNOS**

The European Geostationary Navigation Overlay Service (EGNOS) is the first step of Europe towards satellite navigation. It is being developed by ESA under a tripartite agreement between the Commission, Eurocontrol and European Space Agency (ESA). Several air traffic service providers are supporting the development programme with their own investments. The agreement was approved by the Council of the European Union on 18 June 1998.

EGNOS is one of the projects selected for the trans-European networks (TENs). It receives an amount of EUR 133 million (1995-2004) from European Community funding. In addition to financial contributions from the European Community and the ESA, public administrations and corporate members from the civil aviation sector have provided some EUR 100 million for the development of EGNOS.

- **GNSS-2: Galileo**

The second step is the Galileo programme and the actual launch of a new constellation of radio navigation satellites.

Galileo provides a highly accurate, guaranteed global positioning service under civilian control. While providing autonomous navigation and positioning services, Galileo will at the

same time be interoperable with GPS and GLONASS, the two other global satellite navigation systems. By offering dual frequencies as standard, however, GALILEO will deliver real-time positioning accuracy down to the metre range, which is unprecedented for a publicly available system.

It will guarantee availability of the service under all but the most extreme circumstances and will inform users within seconds of a failure of any satellite. This will make it suitable for applications where safety is crucial, such as running trains, guiding cars and landing aircraft. The fully deployed Galileo system will consist of 30 satellites and the associated ground infrastructure. Galileo should be operational by 2010.

The GALILEO programme comprises the phases definition of the system, development of the system and deployment and commercial operation.

To ensure a single management and financing structure for the development phase of the programme (2002-2008), the Commission has proposed to set up a Joint Undertaking, which would be composed of the European Commission and the European Space Agency. The European Investment Bank and private businesses would be invited to join in later.

On 26 May 2003 the European Space Agency and the EU reached an agreement over the legal entity and the financing of the Galileo satellite.

The definition phase (2000) of EUR 75 million was funded from the Community budget. For an amount of EUR 1.5 billion the envelopment and validation phase (2002 – 2008) will be funded from public subsidies, 50% from the Community budget and 50% from the European Space Agency. The deployment phase (2007 –2009) will cost around EUR 2.1 billion, of which at most 1/3 will be from the Community budget and at least 2/3 from the private sector.

## **PART 2**

### **HORIZONTAL ISSUES**

- **Interoperability**

In order to achieve the interoperability objectives as described in the main part of this report, the Community has taken measures to ensure the interoperability of the networks, particularly in the field of technical standardisation.

An initial measure in the rail sector was taken by the Council on 23 July 1996 when it adopted Directive 96/48/EC on the interoperability of the trans-European high-speed rail system.

In order to achieve the objectives of that Directive, technical specifications for interoperability (TSIs) were drawn up by the European Association for Railway Interoperability (AEIF) which acts as the joint representative body defined in the Directive, bringing together representatives of the infrastructure managers, railway companies and industry. A number of tools and methodologies had to be developed in order to prepare the TSIs.

Pending the adoption of TSIs and in order to guide the technical choices made in the projects in progress in several Member States, the Commission has adopted two instruments: Decision 2001/260/EC on the characteristics of the European Rail Traffic Management System (ERTMS) and Recommendation 2001/290/EC on the basic parameters of the trans-European high-speed rail system.

A programme to develop the corresponding European standards was launched in 1998 and is regularly updated to reflect the work on TSIs. From 2002 onwards, new high-speed lines and upgraded lines can be built to the new interoperable standard.

Directive 2001/16/EC on the interoperability of the conventional rail system adopted on 19 March 2001, like the one on the high-speed system, introduced Community procedures for the preparation and adoption of TSIs and common rules for assessing conformity to these specifications. Directive 2001/16/EC had to be implemented in the Member States by 20 April 2003 at the latest.

The Directive requires a first group of priority TSIs to be adopted within three years, i.e. in 2004, in the following areas: control/command and signalling; telematics applications for freight services; traffic operation and management (including staff qualifications for cross-border services); freight wagons; and noise pollution deriving from rolling stock and infrastructure.

Six months after the Directive was published, the Commission obtained formal agreement from the Regulatory Committee on the first work programme, on the designation of the AEIF as the joint representative body and on the AEIF's mandate to develop the first group of TSIs.

Both the high-speed Directive and the conventional rail Directive have a three-level structure: the Directive itself, with the essential requirements to be met by the system; the Technical

Specifications for Interoperability (TSI); and all the other European specifications, especially the European standards of the European standardisation bodies CEN, Cenelec and ETSI.

Its predecessor was the PACT programme (Pilot Actions for Combined Transport), active from 1997 to 2001.

- **Research and development**

Research and development is one of the broad lines of measures covered by the TEN-T guidelines.

Under the Fifth Framework Programme (1998 – 2002) and Sixth Framework Programme (2002 – 2006) for research, technological development and demonstration, several key actions of individual, specific programmes, such as sustainable mobility and intermodality, land transport and marine technologies, efficient energy systems, and services for the citizen were initiated.

The theme Sustainable surface transport, which falls under priority Sustainable development, global change and ecosystems of the Sixth Framework Programme, aims at environmentally friendly and competitive transport systems and means of transport, new technologies and concepts for all surface transport modes (road, rail, waterborne), advanced design and production techniques, safer, more effective and competitive rail and maritime transport, rebalancing and integrating different transport modes, and increasing road, rail and waterborne safety and avoiding traffic congestion.

- **Environmental protection**

Transport accounts for 20% of the Union's emissions of greenhouse gases and 29% of CO<sub>2</sub> emissions. The White Paper pointed out that in the EU "some 7,500 km, i.e. 10% of the TEN-T road network, is affected daily by traffic jams". The Paper also foresaw an annual growth rate in the EU of 1.8% for passenger transport and 2.8% for freight transport, leading to an overall increase of 24% in passenger transport and 38% in freight traffic between 1998 and 2010.

The environment and sustainable development should be integrated into transport policy, as outlined in the White Paper on Common Transport Policy already referred to (Com (2001) 370), the Sixth Environment Action Programme (COM (2001) 31), and the Sustainable Development Strategy (SDS), adopted by the European Council in Gothenburg in June 2001. Thus the Transport Council adopted in April 2001 a Resolution on the integration strategy of environmental protection and sustainable development in the transport policy area.

Promoting alternative modes of transport to road is one of the important policy options to be considered. The application form for TEN-T projects has included since 1999 a specific declaration by the authority responsible for monitoring Natura 2000 sites, within the Annex on conformity with environmental legislation. This facilitates internal procedures within Member States, thus ensuring the conformity of TEN-T projects with Natura 2000 and in particular with the site protection requirements of Article 6 of the Habitats Directive. The Annex on conformity with environmental legislation also covers environmental impact assessment (Directive 85/337/EEC as amended by Directive 97/11/EC).

## **PART 3**

### **GENERAL ASSESSMENT OF TEN-T IMPLEMENTATION IN THE 2002 – 2003 PERIOD**

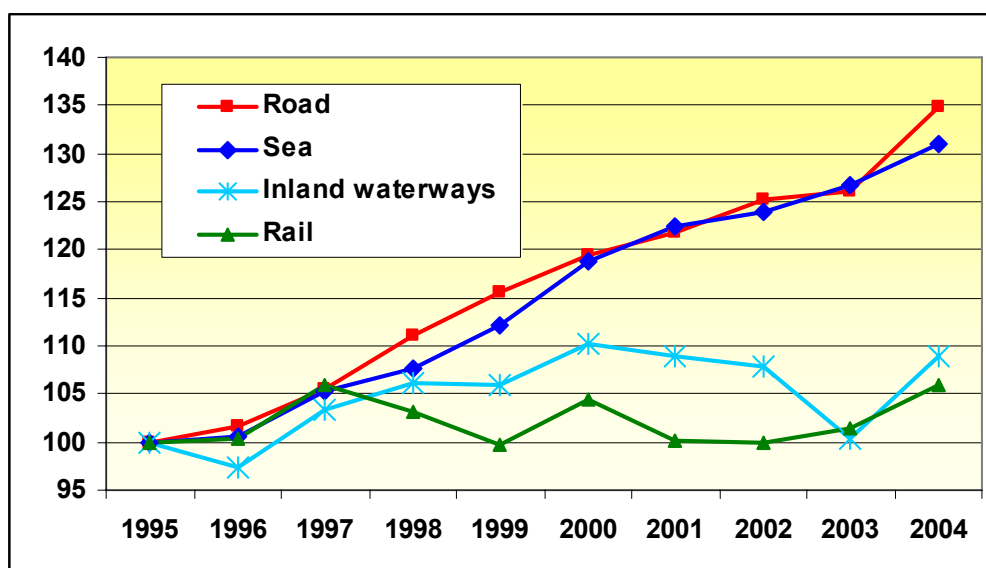
#### **TEN-T POLICY**

With the establishment of the first guidelines, the Decision No. 1692/96/EC the Union has identified projects of common interest, and aimed at integrating national networks and different modes of transport. A further goal was to linking peripheral regions of the European Union to the centre, and improving safety and efficiency of the networks. The time horizon of these guidelines was 2010.

A further step was made in May 2001 when the European Parliament and the Council adopted Decision No. 1346/2001/EC, which amends the TEN-T guidelines as regards seaports, inland ports and intermodal terminals. It also specifies the criteria of projects of common interest in relation to these infrastructures. With this amendment, the multimodal dimension of the network is emphasised, as seaports and inland ports have become a full part of the network.

As a follow-up to the Gothenburg European Council of June 2001, which called for greater priority for rail, inland waterways, short-sea shipping, intermodal transport and the corresponding connections, the Commission proposed a revision of the guidelines for the trans-European network in October 2003, accompanied by an assessment of the impact of the measures proposed.

Freight railways traffic has continued to loose relevance within the modal split. It has being losing traffic in absolute terms since 2000; though the trend seems to be changing since 2003. Short Sea Shipping statistics show after some years of strong growth, two years of lower growth in 2001 and 2002, followed by a new increase of rate in 2003. In the inland navigation transport particular progress can be observed in container transport by inland navigation, where important growth rates over the past decade have at least been equivalent to those of road transport.



**Figure 17 : Freight transport growth by mode 1995-2004 (1995=100) in the EU 25<sup>12</sup>**

In April 2004, the European Parliament and the Council adopted Decision No. 884/2004/EC of the European Parliament and the Council, amending Decision No. 1692/96/EC on Community guidelines for the development of the trans-European transport network with a time horizon of 2020.

In Annex III to Decision No 1692/96/EC a list of priority projects is presented where future funding should be concentrated. For the identification of these projects a methodology was used which was based on criteria which include, in particular, their potential economic viability, the degree of commitment on the part of the Member States concerned to keeping to a timetable agreed in advance in the programming of projects, their impact on the mobility of goods and persons between Member States, and their impact on cohesion and sustainable development.

In order to facilitate the coordinated implementation of certain projects, in particular cross-border projects or sections of cross-border projects included among the projects declared to be of European interest, the Commission designated, in agreement with the Member States concerned, and after having consulted the European Parliament persons called "European Coordinator". The European Coordinator acts in the name of and on behalf of the Commission.

On 21 April 2004 Decision No 807/2004/EC<sup>13</sup> was adopted by the European Parliament and the Council, amending Council Regulation (EC) No 2236/95 laying down general rules for the granting of Community financial aid in the field of trans-European networks. The Commissions' proposed increase of the maximum rate of Community support, in exceptional cases, from 10% to 20 % was accepted.

An exception can be made for projects concerning satellite positioning and navigation systems and sections of the projects of European interest identified in Annex III to Decision No 1692/96/EC, provided that these projects are started before 2010, with the aim of eliminating bottlenecks and/or filling in missing sections, if such sections are cross border or cross natural barrier, and contribute to the integration of the internal market in an enlarged Community, promote safety, ensure the interoperability of the national networks and/or strongly contribute to the reduction of imbalances between modes of transport, in favour of the most environment-friendly modes.

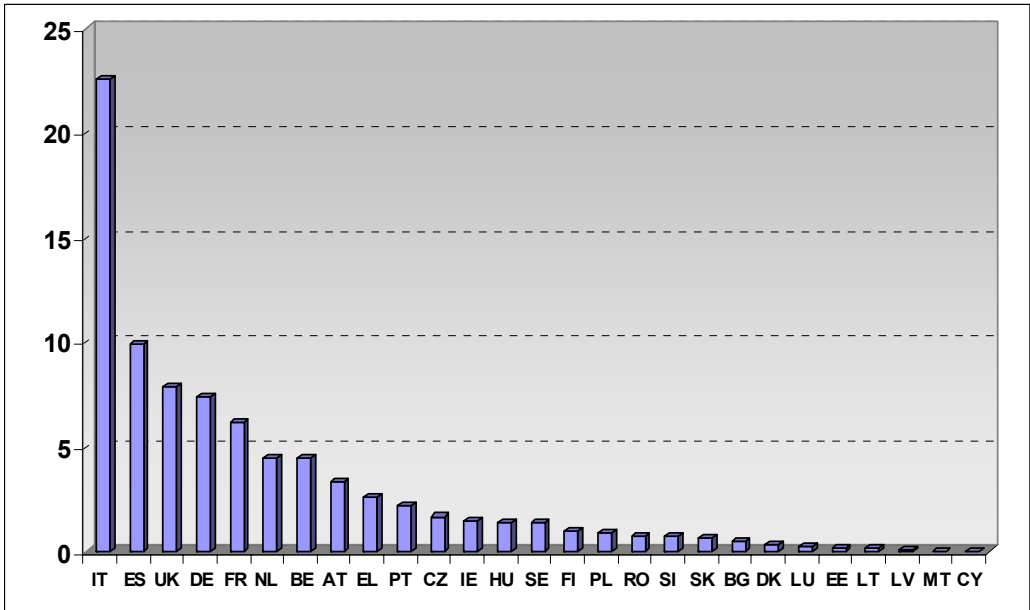
## **GENERAL ASSESSMENT OF THE EU-27**

The total investments in the TEN-T network in the EU-27 amounted, as already mentioned in the main report, EUR 82.3 billion in the 2002 – 2003 period. The countries with the highest investments in the 2002 – 2003 period are Italy (EUR 22.56 billion), Spain (EUR 9.88 billion), UK (EUR 7.91 billion), Germany (EUR 7.39 billion) and France (EUR 6.20 billion).

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<sup>12</sup> OP cit: 5

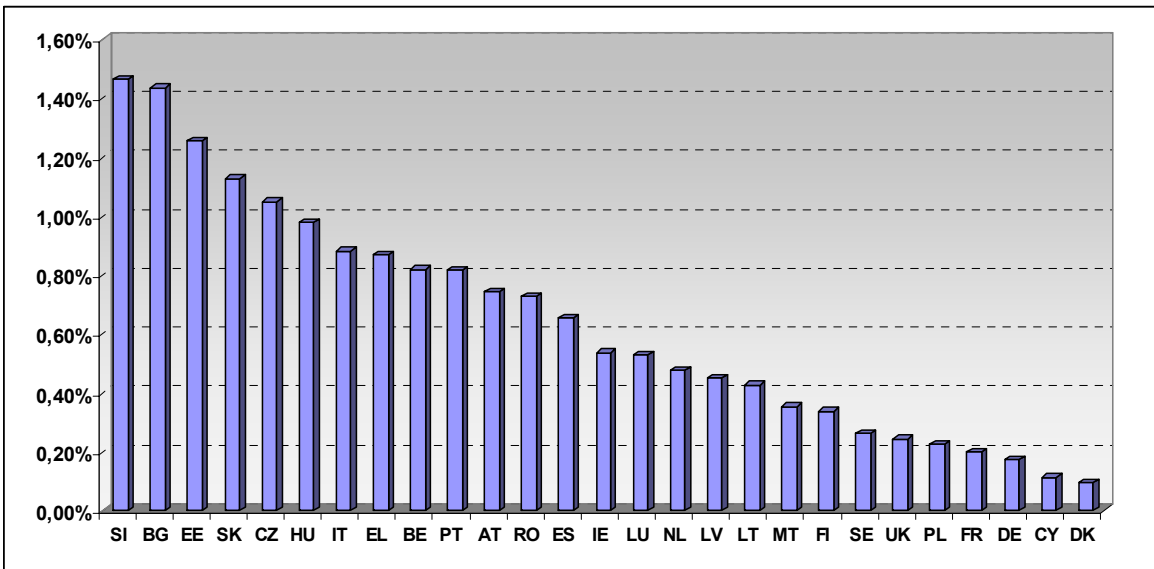
<sup>13</sup> Regulation (EC) No 807/2004 of the European Parliament and of the Council of 21 April 2004 amending Council Regulation (EC) No 2236/95 laying down general rules for the granting of Community financial aid in the field of trans-European networks



**Figure 18 : Investments in the TEN-T network per country in the EU-27 in 2002 and 2003 in billions of EUR**

On average the EU-27 countries devoted 0.43% of GDP on TEN-T infrastructure in the 2002 and 2003 period; in the EU-10 and EU-2 it was an average 0.68% of their GDP for the TEN-T network whereas the EU-15 the figure was 0.41% of their GDP.

The countries with the highest average were Slovenia (about 1.46%) and Bulgaria (1.44%) measured in GDP percentage followed by Estonia (1.25%). At the other end of scale are Germany, Cyprus and Denmark.



**Figure 19 : Investments in the TEN-T network by country (EU-27) in 2002 and 2003 in average investments per year/GDP in %**

## PRIORITY PROJECTS

The Community is making a special effort to support the projects of common interest i; this is necessary to ensure a coherent development of the network and to encourage investment on the main axes by national and regional authorities. These priority projects are selected according to a strict methodology that is included in the guidelines.

The 30 priority projects consist of 14 priority projects – the so-called Essen project, identified under the 1996 guidelines, and included additionally projects identified in the High Level Group exercise, chaired by Karel van Miert and adopted in 2004 by the guidelines. These projects should be completed by 2020.

As the following detailed table shows the investments up to the year 2004 in the priority projects amounted to EUR 88.5 billion while the total investments and investments in the priority projects, as reported by the Member States in 2004, for the whole 1996 – 2020 period are about EUR 340 billion. Thus the remaining investments in the 2005 – 2020 period amount to EUR 251.8 billion (at 2004 prices).

Out of 30 projects 18 railways projects are defined and demonstrate the clear mode preference of the EU transport policy.

Mode of transport	Rail	Road	Inland Waterway	Short Sea Shipping	Multimodal	Airport	Galileo
Number of projects	18	3	2	1	4	1	1

Table 6: Priority projects: estimated total costs and investments until 2004 and notified expected investments 2004-2020 in billion Euro

N°	Project	Mode	Total cost	Investment till 2004	Remaining investment	% of completion	TEN-T support till 31-12-2004
1	Railway axis Berlin-Verona/Milan-Bologna-Naples-Messina-Palermo	Rail	46,2	13,2	33,0	28,6%	0,3007
2	High-speed railway axis Paris-Brussels/Brussels-Cologne-Amsterdam-London	Rail	17,5	14,8	2,7	84,7%	0,7289
3	High-speed railway axis of south-west Europe	Rail	39,7	7,4	32,4	18,5%	0,1533
4	High-speed railway axis east	Rail	4,4	1,5	2,8	35,1%	0,2294
5	Betuwe Line	Rail	4,7	4,1	0,6	88,2%	0,1350
6	Railway axis Lyon-Trieste-Divaca/Koper/Divaca-Ljubljana-Budapest-Ukrainian border	Rail	38,1	1,9	36,2	5,1%	0,2735
7	Motorway axis Igoumenitsa/Patra-Athina-Sofia-Budapest	Road	15,5	7,8	7,8	49,9%	0,1185
8	Multimodal axis Portugal/Spain-rest of Europe	Multimodal	13,8	6,7	7,1	48,5%	0,0433
9	Railway axis Cork-Dublin-Belfast-Stranraer	Rail	0,4	0,4	0,0	100,0%	0,0120
10	Malpensa Airport (Milan)	Air	1,3	1,3	0,0	100,0%	0,0268
11	Öresund fixed link: COMPLETED	Rail/road	4,2	4,2	0,0	100,0%	0,1927
12	Nordic triangle railway-road axis	Rail/road	10,9	3,2	7,7	29,5%	0,1922
13	UK-Ireland/Benelux road axis	Road	4,5	2,3	2,2	50,7%	0,0838
14	West Coast Main Line	Rail	13,0	9,7	3,4	74,2%	0,0786
15	Galileo	General	3,4	0,450	3,0	13,2%	0,4500
16	Freight railway axis Sines-Madrid-Paris	Rail	6,1	0,002	6,1	0,0%	0,0000
17	Railway axis Paris-Strasbourg-Stuttgart-Vienna-Bratislava	Rail	10,1	2,4	7,7	23,8%	0,0861
18	Rhine/Meuse-Main-Danube inland waterway axis	IWW	1,9	0,004	1,9	0,2%	0,0021
19	High-speed rail interoperability on the Iberian peninsula	Rail	35,5	2,5	33,0	7,0%	0,0260
20	Fehmarn Belt railway axis	Rail/road	7,1	0,004	7,0	0,1%	0,0121
21	Motorways of the sea	Sea	0,2	0,0	0,2	0,0%	0,0013
22	Railway axis Athina-Sofia-Budapest-Vienna-Prague-Nürnberg/Dresden	Rail	12,1	0,0	12,1	0,1%	0,0070
23	Railway axis Gdansk-Warsaw-Brno/Bratislava-Vienna	Rail	5,5	0,9	4,6	15,5%	0,0000
24	Railway axis Lyon/Genoa-Basel-Duisburg-Rotterdam/Antwerp	Rail	22,7	1,5	21,2	6,6%	0,0272
25	Motorway axis Gdansk-Brno/Bratislava-Vienna	Road	7,8	0,2	7,6	2,6%	0,0048
26	Railway-road axis Ireland/United Kingdom/continental Europe	Rail/road	4,7	2,1	2,6	44,2%	0,0070
27	Rail Baltica axis Warsaw-Kaunas-Riga-Tallinn-Helsinki	Rail	2,7	0,0	2,7	0,0%	0,0000
28	Eurocaprail on the Brussels-Luxembourg-Strasbourg railway axis	Rail	1,4	0,0	1,4	0,0%	0,0000
29	Railway axis if the Ionian/Adriatic intermodal corridor	Rail	2,5	0,0	2,5	0,0%	0,0000
30	Inland waterway Seine-Scheldt	IWW	2,5	0,023	2,5	0,9%	0,0050
	<b>Grand total</b>		<b>340,3</b>	<b>88,5</b>	<b>251,8</b>	<b>26,0%</b>	<b>3,1971</b>

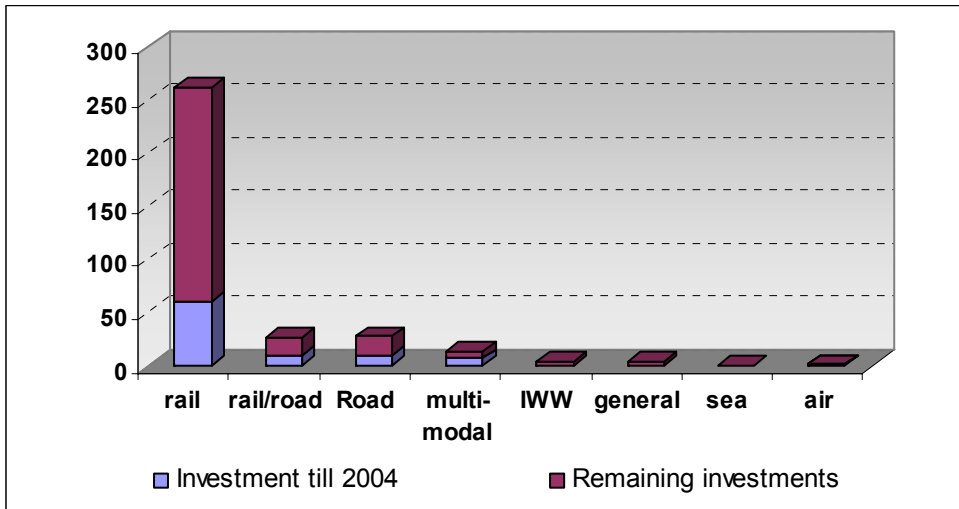


Figure 20 : Investments in priority projects per mode – effected till 2004 and remaining

The highest segment of investments into priority projects relates to railways (77%) followed by road and rail/road investments (16%). Galileo will have a segment of about 1% in the following period.

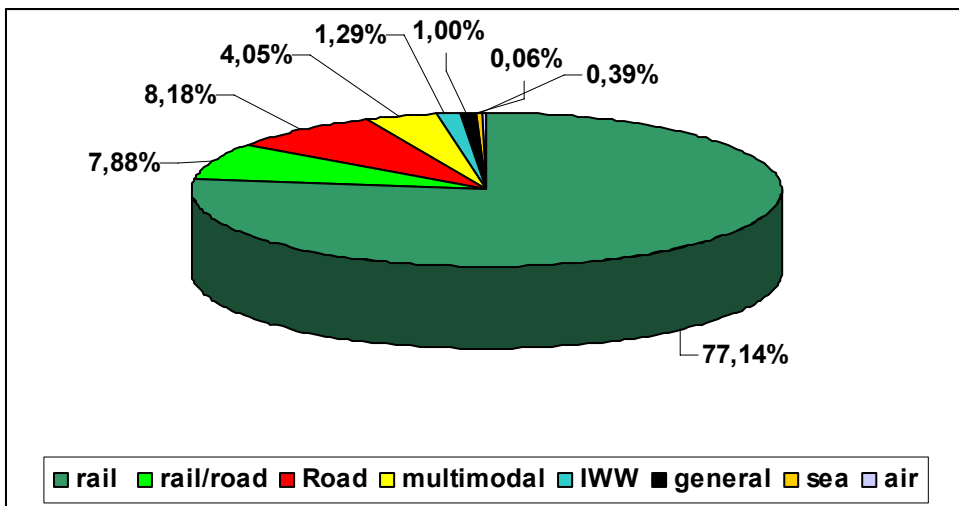


Figure 21 : Modal segment of investments in priority projects in the EU-27 in the period 2004 – 2020

## **PART 4**

### **SOURCES OF FUNDING**

This chapter provides an overview of the financing of TEN-T, other EU financial support as well as EIB loans in the 2002 – 2003 period.

### **TEN-T BUDGET**

TEN-T funding is generally provided by way of grant or interest rebate (effectively the TENs budget line meets interest payments for a certain period, usually until the asset is ready for use). This funding is managed in accordance with Council Regulation no. 2236/95. An important part of the TEN-T budget is assigned to TEN-T priority projects. Key restrictions include:

The total amount of financial support from the TENs budget line should not exceed 10% (in 2004 this percentage was increased to 20% for cross-border projects) of the total investment costs. Aid to feasibility studies is limited, generally to a maximum of 50% of the costs. The maximum duration of interest rate subsidy should generally not exceed 5 years. In addition, the EC financial support should not interfere in the existing competition.

**Table 7: Distribution of TEN-T budget support by mode of transport in EUR in 2002-2003**

<b>Mode</b>	<b>2002</b>	<b>2003</b>	<b>2002-03</b>
<b>Railways</b>	<b>261,893,000</b>	<b>328,695,000</b>	<b>590,588,000</b>
<b>GNSS</b>	<b>195,000,000</b>	<b>107,400,000</b>	<b>302,400,000</b>
<b>ITS</b>	<b>80,157,000</b>	<b>119,546,000</b>	<b>199,703,000</b>
<b>Roads</b>	<b>24,800,000</b>	<b>10,880,000</b>	<b>35,680,000</b>
<b>Multimodal</b>	<b>1,150,000</b>	<b>20,270,000</b>	<b>21,420,000</b>
<b>Airports</b>	<b>-</b>	<b>17,190,000</b>	<b>17,190,000</b>
<b>IWW</b>	<b>400,000</b>	<b>12,610,000</b>	<b>13,010,000</b>
<b>Ports</b>	<b>-</b>	<b>10,045,000</b>	<b>10,045,000</b>
<b>Total</b>	<b>563,400,000</b>	<b>626,636,000</b>	<b>1,190,036,000</b>

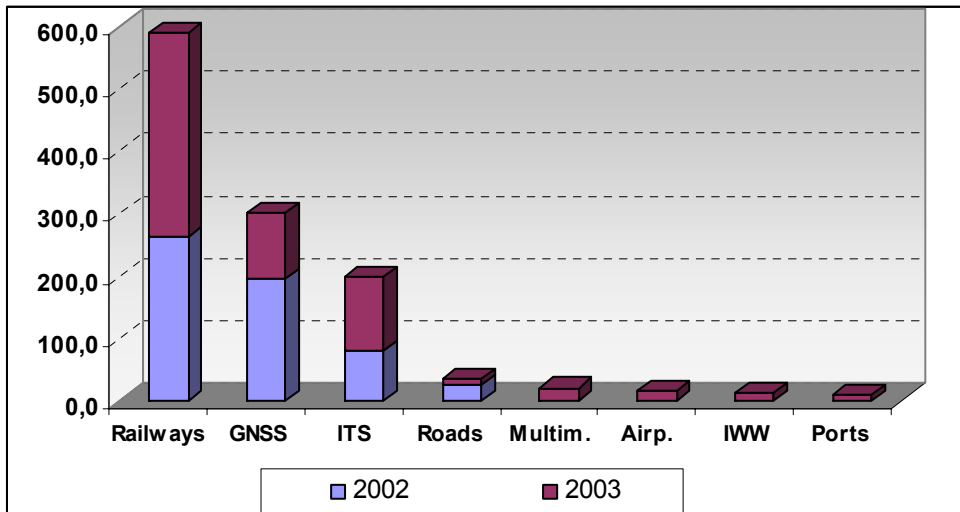


Figure 22 : Distribution of TEN-T budget support by mode of transport in 2002 and 2003

The distribution of the support from the TEN-T budget per country represents the scale and density of the TEN-T network in the various countries. Traditionally, large countries such as Germany and France account for almost one quarter of total TEN-T budget support in this period, while common actions like Galileo, EGNOS and ITS consume more than 40% of the TEN-T budget.

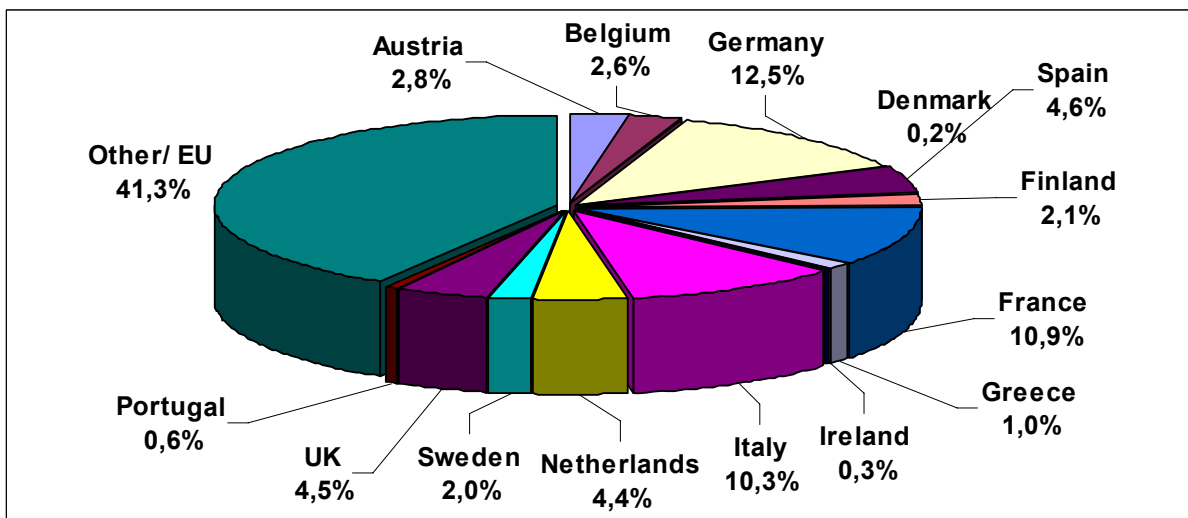


Figure 23 : Distribution of TEN-T budget support by country in 2002 and 2003

## EUROPEAN REGIONAL DEVELOPMENT FUND

ERDF contributes to the financing of TEN-T projects. The annual report on the implementation of the Structural Funds in 2002 shows, that about 30% of ERDF funds were committed to transport projects. For the period between 2000 and 2006, the ERDF is expected to provide approx. EUR 6 billion<sup>14</sup> to transport projects on the TEN-T network.

<sup>14</sup> Source: European Commission. The Trans-European Transport Network; Report of the High-Level Group, June 2003. Estimation of the share of ERDF allocated to TEN-T

## THE COHESION FUND

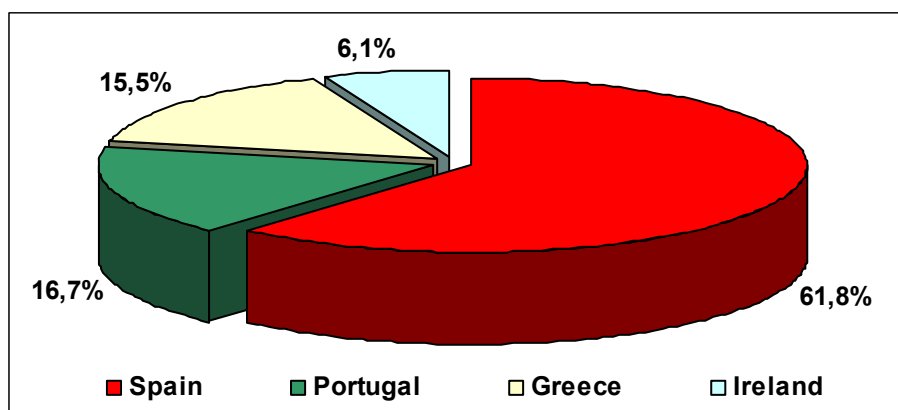
The Cohesion Fund provides assistance for environmental and transport infrastructure (devoted especially to TEN-T projects) in Member states whose GDP is less than 90% of the average of Member States.

In the 2002 – 2003 period, Cohesion Fund support was available to four countries: Greece, Portugal, Spain and Ireland. From 2004 onwards, the EU-10 countries can also apply for the Cohesion Fund.

**Table 8: Distribution of TEN-T budget Cohesion Fund support by country in the 2002-2003 period in EUR**

	2002	2003	2002-03
Greece	114,600,000	353,100,000	468,277,670
Spain	1,046,200,000	825,500,000	1,871,600,000
Ireland	107,300,000	77,400,000	184,740,000
Portugal	236,500,000	270,100,000	505,760,000
<b>Total</b>	<b>1,504,600,000</b>	<b>1,526,100,000</b>	<b>3,030,377,670</b>

By far the major part of the Cohesion Fund support that was allocated to transport infrastructure TEN-T projects in 2002 and 2003 went to Spain, accounting for almost 62% of committed support. Cohesion Fund support to Portugal is with 16.7% of committed support, also relatively high.



**Figure 24 : Distribution of TEN-T transport infrastructure Cohesion Fund support by country in 2002 and 2003**

Cohesion Fund supported projects mainly encompass railways, as this mode of transport accounts for almost 62% of total commitments in 2002 and 2003.

In conclusion, it can be stated that more than 60% of Cohesion Fund support is assigned to (high-speed) railway projects in Spain. Inland waterway, multimodal projects or ITS and GNSS projects were not funded by the Cohesion Fund in the period of the report.

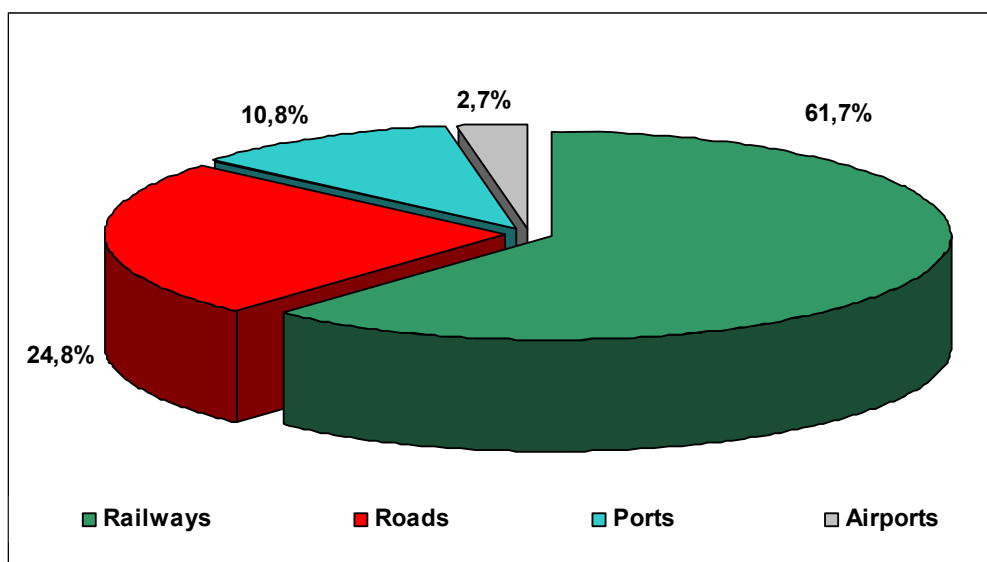


Figure 25 : Distribution of TEN-T transport infrastructure Cohesion Fund support by mode of transport in 2002 and 2003

#### THE INSTRUMENT FOR STRUCTURAL POLICIES FOR PRE-ACCESSION

ISPA assistance in the transport sector was dedicated to the extension and improvement of the TINA network, which was defined within the TINA process and was the basis of the discussion for the extension of the TEN-T network in the framework of the enlargement process. In order to improve the connections between the European Union and the EU-10<sup>15</sup> and the EU-2 countries, ISPA was committed in a manner similar to Cohesion Funding and is allocated by country.

Table 9: Distribution of ISPA support (commitments) by mode in million EUR (source: Annual report 2000 to 2003 on the Instrument for Structural Policy for Pre-Accession)

	2000	2001	2002	2003	Total
Road	224.8	303.7	246.6	302.7	1,077,8
Rail	283.6	210.7	284.0	218.7	996,9
Airports	28.0	12.0	0.0	0.0	40,0
Rail/Road	0.0	4.2	7.4	3.3	14,8
IWW	0.0	0.0	1.2	0.0	1,2
Total	536.4	530.5	539.1	524.7	2,130.7

ISPA funding (commitments) amounted to around EUR 1.06 billion in the 2002 – 2003 period. Almost all ISPA funding is assigned to road and railway projects, leaving a small amount (about 2.5%) to support inland waterway and airports.

15 From 2000-2003 eligible for ISPA grants were: Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, Bulgaria and Romania. Cyprus and Malta were not eligible for ISPA as they participated in other EU programmes.

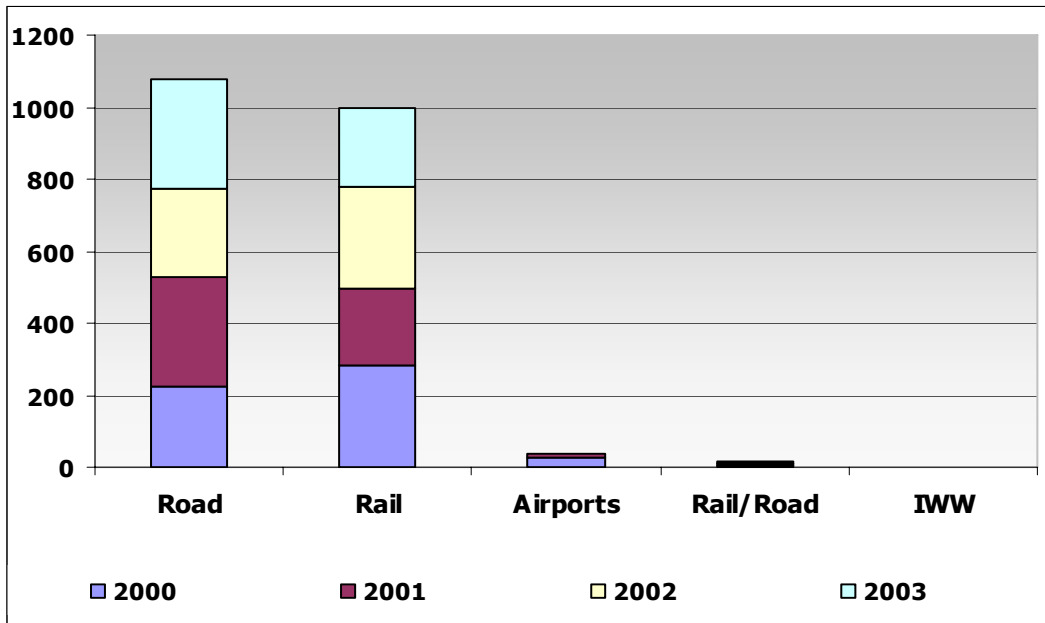


Figure 26 : Distribution of ISPA funding by mode of transport in million Euro in 2000 till 2003

#### EUROPEAN INVESTMENT BANK LOANS AND EUROPEAN INVESTMENT FUND

The main purpose of the European Investment Fund (EIF) is to grant guarantees for loans concerning TEN-T projects. The EIF is funded by the EIB for 40%, by the Commission for 30%, and by banks and other financial institutions for 30%. In the future financing horizon EIB will have about 50 billion EUR available to lend to TEN-T projects for the 2004 – 2010 period.

Table 10: Distribution of EIB loans by mode in million EUR (source: European Investment Bank)

	Roads	Railways	Ports	Airports	Multimodal	Total
2002	2,265	1,231	224	2,136	42	5,898
2003	2,571	1,570	417	1,430	103	6,091
2002-03	4,835	2,801	641	3,566	145	11,989

In the 2002 – 2003 period, EIB loans are mainly focused on roads (33.0%), airports (31.9%), and railways (26.9%). No loans were granted to inland waterway projects.

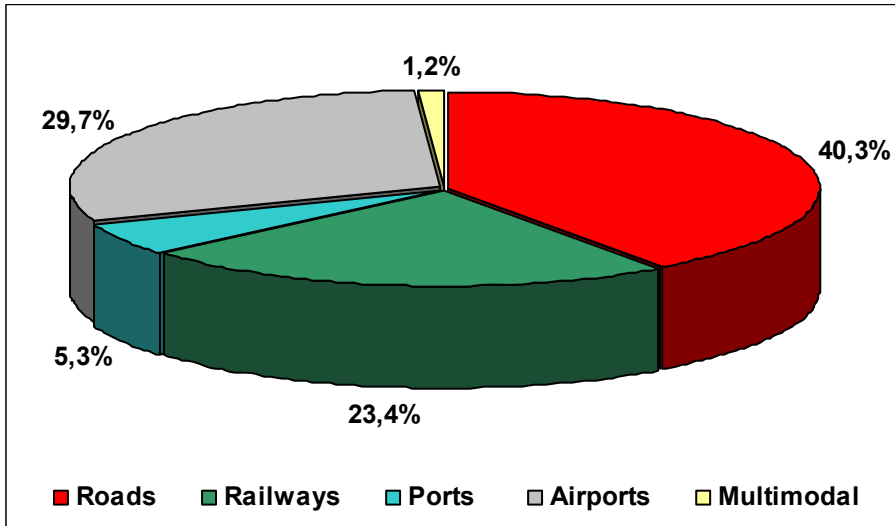


Figure 27 : Distribution of EIB loans by mode of transport in 2000 to 2003

Traditionally, the large Member States (Spain, Germany, Italy, UK and France) account for more than 80% of total EIB loans in 2002 and 2003.

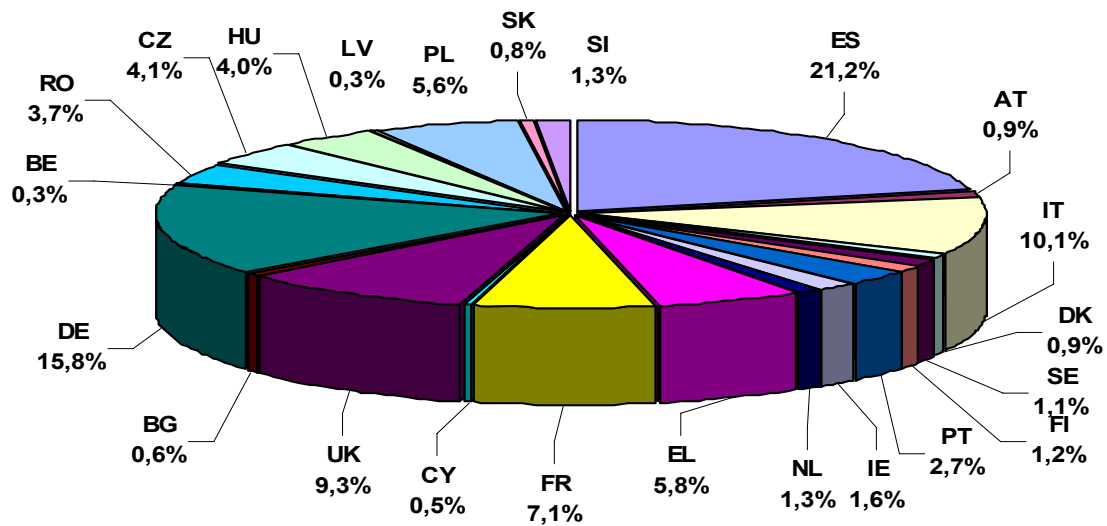


Figure 28 : Distribution of EIB loans by country in 2000 to 2003