

European Commission

Review of the Common Transport Policy

Task 1.2-The planning and financing of the TEN-T- Final Report

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1 The planning and financing of the TEN-T

Executive summary

- 1.1 The 1992 White Paper put substantial emphasis on the development of the trans-European Transport Networks - TEN-T as a solution to the lack of integration and interoperability of national networks and to missing links and bottlenecks across Europe, which were one of the main obstacles to the establishment of the EU internal market.
- 1.2 The TEN-T includes transport infrastructure, traffic management systems and positioning as well as navigation systems. The transport infrastructure element comprises road, rail and inland waterway networks, motorways of the sea, seaports and inland waterway ports, airports and other interconnection points between network modes.
- 1.3 In order to focus the Community's efforts and resources on key interventions, a list of priority projects (PPs) was identified in 1996 subsequently updated in 2004 and now including 30 PPs. This approach was chosen as a result of the large amount of financing necessary to complete the entire TEN-T.
- 1.4 However, a number of issues still hinder the ability of the policy to deliver results efficiently and within the timescale originally scheduled, such as:
 - in some cases, public and political opposition to construction of new transport infrastructure¹, often on environmental grounds;
 - limited transparency in the selection of projects;
 - a lack of financial resources both at Community and Member State level;
 - poor management, monitoring and coordination of interventions; and
 - the technical complexity of some projects (often due to the border crossing).
- 1.5 While the Community's direct involvement in the financing of TEN-T projects has been increasing in recent years, the Community's budget is still unable to entirely cover the necessary investment costs. The majority of the burden falls thus on Member States, which often themselves suffer from funding constraints and have other priorities at the State level.
- 1.6 To date only four of the PPs have been completed from an original list of 14 priority projects (planned to be completed by 2010).
- 1.7 Although key projects have received significant investment, some PPs are still at an early stage of development, and may not be completed by 2020. Experience to date has also showed that there are major problems in keeping to project timescales

¹ For instance in Italy there has been fierce opposition to the construction of the Lyon-Turin Base Tunnel from the public and local authorities. In Germany, environmental concerns about the construction of a lock in Aicha are delaying progress on the Rhine/Meuse-Main-Danube waterway axis.

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and, most of all, in the control of investments costs which in many cases have been significantly higher than the initial allocation.

- 1.8 The Commission is already studying new mechanisms to increase the effectiveness of interventions, improve the management of funds and review the approach guiding the planning and financing of the TEN-T. It published these findings in the Green Paper “TEN-T A policy review”.
- 1.9 One of the proposals included in the Green Paper envisages the creation of a priority network, including key transport corridors of European interest and competence. This proposal also aims at improving the approach adopted in relation to the selection of priority projects. To date, these projects have been the flagship ones for TEN-T, although they have often lacked complete integration with the rest of the network. The results of the consultation on the Green Paper will help the Commission to improve the efficiency of the delivery of TEN-T.

Introduction

- 1.10 The legal basis for establishing Trans-European Networks (henceforth TEN) in the areas of transport, energy and telecommunications infrastructure can be found within articles 154-156 of the Treaty establishing the European Community. TEN are regarded as central to the establishment of a European internal market and guarantee optimal economic and social cohesion, to the benefit of both economic operators and communities.
- 1.11 The contribution of the Common Transport Policy (CTP) to the achievement of TEN-T relies on three pillars:
- The preparation of guidelines covering the objectives, priorities and measures aimed at identifying projects of common European interest;
 - The adoption of measures aimed at favouring the interoperability of networks;
 - Support to specific projects, with feasibility studies, loan guarantees and interest-rate subsidies. For transport infrastructure alone, direct funding is also allowed.
- 1.12 The Commission and the Member States coordinate the interventions. The Commission can also cooperate with third parties to promote projects and ensure the interoperability of the networks.
- 1.13 The TEN-T is composed of 95,700 km of roads, 106,000 km of rail (of which 32,000 km are high-speed links), 13,000 km of inland waterways, 411 airports and 404 sea ports. Furthermore, substantial funds are being invested in the TEN-T to expand this capacity further.

Sources

- 1.14 Besides the 1992 and the 2001 White Papers, and the 2006 Mid-Term Review, the following sources have been consulted for this analysis:
- Green paper: TEN-T A policy review -Towards a better integrated TEN-T at the service of the Common Transport Policy - [COM (2009) 44];

- TEN-T: Implementation of the Priority Projects Progress Report (2008) Directorate-General Energy and Transport;
- Update on the costs of the TEN-T Priority Projects (2008) European Parliament;
- Building bridges: Extension of the major trans-European transport axes to the neighbouring countries (2007), Directorate-General Energy and Transport;
- Report on the Motorways of the Sea - State of play and consultation (2007) European Commission;
- Motorways of the Sea - Shifting freight off Europe's roads (2005) Directorate-General Energy and Transport.

Structure for the remainder of the analysis

1.15 The analysis of the specific policy area is structured according to the following:

- Summary of the policy;
- Legislative framework;
- Qualitative analysis;
- Quantitative analysis;
- Conclusions.

Summary of the policy

The planning

- 1.16 The 1992 White Paper put substantial emphasis on the development of the trans-European Transport Networks - TEN-T as a solution to the lack of integration and interoperability of national networks and to missing links and bottlenecks across Europe, which were one of the main obstacles to the establishment of the EU internal market.
- 1.17 The 1992 White Paper recognised that, in order to maximise the efficiency and effectiveness of the interventions, the Commission had to propose guidelines aimed at defining the objectives, priorities and broad lines of measures to be adopted. The implementation of these measures would rely on national and regional authorities within Member States. The first set of guidelines was developed in 1996, adopted with Decision 1692/96/EC of the European Parliament and of the Council.
- 1.18 Decision 1692/96/EC also provided a full definition of the TEN-T, which comprises transport infrastructure, traffic management systems and positioning and navigation systems. In turn, transport infrastructure includes road, rail and inland waterway networks, motorways of the sea, seaports and inland waterway ports, airports and other interconnection points between modal networks². Finally, the Decision originally included a list of 14 priority projects, to be completed by 2010.

² In particular, Decision 1346/2001/EC amending the TEN-T Guidelines brought seaports, inland ports and intermodal terminals fully into the network.

- 1.19 The 2001 White Paper acknowledged that progress in the development of TEN-T was not uniform and often too slow, as just 20% of the infrastructure planned in 1996 (3 out of 14 projects) was complete by 2001. Such delays were due to:
- local opposition to the building of new infrastructure; and
 - lack of an integrated approach during the planning, evaluation and funding of cross-border infrastructure.
- 1.20 The 2001 White Paper envisaged a revision of the TEN-T Guidelines, based on the review of the list of priority projects, and on the following guiding principles for the development of TEN-T:
- creation of multimodal corridors giving priority to freight, mainly focused on the development of dedicated rail freight corridors;
 - creation of a European high-speed rail passenger network;
 - improvement of traffic conditions on main arteries and transport nodes;
 - new transport infrastructure aimed at creating high quality links, especially in areas suffering from congestion and bottlenecks, mainly due to natural obstacles.
- 1.21 In addition, the White Paper identified waterborne transport (short sea shipping and inland waterways) as a viable solution for relieving congestion in the main transport modes and reducing external costs related to the dominance of road haulage. It introduced the concept of the “motorways of the sea”, corridors dedicated to short sea shipping services, allowing freight to avoid road congestion and the main natural bottlenecks, being thus a real competitive alternative to land transport.
- 1.22 The same concept could be applied to the development of the European network of inland waterways (rivers and canals) linking up the coasts with the main cities and production areas inland. However, in order to promote these services, the Community had to provide financial aid so as to assist the operators during the start-up phase.
- 1.23 The large increase in air traffic was also addressed by the 2001 White Paper in the framework of the TEN-T. The Commission recognised that, although making optimal use of the existing capacity was the key priority, Europe could not avoid building new airport infrastructure.
- 1.24 The TEN-T Guidelines were revised with Decision 884/2004/EC, taking into account the outcome of the enlargement process. They include an updated list of 30 projects declared of European common interest (priority projects)³, mostly related to investment projects in rail, road and the inland waterway networks. The list also includes the motorways of the sea and project Galileo, the latter being dealt with in the separate Task looking at Intelligent Transport Systems. These new projects should be complete by 2020.

³ They include the original 14 projects selected in 1996.

- 1.25 Finally, a Communication from the Commission⁴ envisaged the opportunity to extend the TEN-T to neighbouring countries. Identifying five axes towards Russia, the Middle East, and North-African countries.

The funding

- 1.26 The 1992 White Paper was the first document that raised the critical issue of funding: the Community decided to indirectly bear the financing cost of the required investments, through Cohesion and Structural Funds as well as loans granted by the European Investment Bank.
- 1.27 The 2001 White Paper and the Mid Term Review highlighted that the problem of lack of resources was worsening, as the share of GDP of Member States dedicated to investment in transport infrastructure was generally reduced to less than 1%, due to budget constraints. It also noted that Member States tended to prioritise projects identified within States, to the detriment of cross-border projects, thus preventing an effective integration of national transport networks.
- 1.28 The Commission proposed then to channel the limited resources of the Community's budget to cross-border sections of priority projects, and to increase its maximum rate of contribution to the cost of investment from 10% - limit set by Council Regulation (EC) 2236/95 - to 20%.
- 1.29 The other proposals included in the 2001 White Paper assumed a greater involvement of the private sector in the financing of transport infrastructure, to be achieved by encouraging the development of public private partnership (PPP), and new procedures for the award of public contracts.
- 1.30 Finally, the possibility to cross-finance transport infrastructure with a share of access charges paid by the usage of existing parallel corridors was envisaged. This was mainly aimed at encouraging the transfers of revenue from road tolls to railway infrastructure projects.
- 1.31 With the adoption of Regulation (EC) 680/2007, the maximum amount of Community financial aid granted to priority projects was set at 20% of the eligible costs. This rate can be increased to 30% for cross-border sections of priority projects. For other projects, the threshold remains at 10%. Furthermore, there is now a specific budget line in the EU's budget for TEN-T projects to supplement the €400 billion already invested in the network.
- 1.32 Another important step towards a better coordination of Community funds in TEN-T is the set up of the Trans-European Transport Network Executive Agency (TEN-T EA⁵). This will assume responsibility for implementation of the 2007-2013 TEN-T projects. The mission of the TEN-T EA is to provide an efficient and effective service in realising the technical and financial implementation of the TEN-T programme.

⁴ COM (2007) 32:

⁵ Commission Decision 2007/60/EC establishing the Trans-European Transport Network Executive Agency.

Legislative framework and other relevant documents

- Decision 1692/96/EC of the European Parliament and of the Council on Community guidelines for the development of the trans-European transport network and Decisions 1346/2001/EC and 884/2004/EC amending it;
- Communication from the Commission - Developing the trans-European transport network: Innovative funding solutions COM(2003) 132;
- Communication from the Commission - Extension of the major trans-European transport axes to the neighbouring countries COM (2007) 32;
- Communication from the Commission - Trans-European networks: Towards an integrated approach - COM (2007) 135;
- Council Regulation (EC) 2236/95 laying down general rules for the granting of Community financial aid in the field of trans-European networks and Regulations (EC) 1655/1999 and 807/2004 amending it;
- Commission Decision 2007/60/EC establishing the Trans-European Transport Network Executive Agency;
- Commission Decision C(2007)5282 delegating powers to the TEN-T EA with a view to the performance of tasks linked to implementation of the Community programmes for grants in the field of the TEN-T, comprising in particular implementation of appropriations entered in the Community budget;
- Regulation (EC) 680/2007 laying down general rules for the granting of Community Financial Aid in the field of trans-European networks;
- Draft proposal for a Decision of the European Parliament and of the Council on Community guidelines for the development of the trans-European transport network.

Qualitative analysis

- 1.33 The table below includes a synthesis of the outcome of CTP with regard to the planning and financing of the TEN-T.

TABLE 1.1 ASSESSMENT OF MEASURES - THE PLANNING AND FINANCING OF TEN-T

Measure	Introduction of legislation or other initiatives
Develop transport network and remove bottlenecks for rail and road freight and passenger transport	<p>Some progress. €400 billion has been directed towards the TEN-T networks since their initial identification in Decision 1662/96 and subsequently modified by Decision 884/2004. This funding has led to a large number of priority projects being initiated, but there is still a long way to go for all the initial plans to be implemented fully. This investment is often not visible to the average citizen who does not see the benefits of the work done.</p> <p>In addition, no major crossing of the Alps or the Pyrenees has been completed to date, although delays are common to most cross-border rail infrastructure.</p> <p>Only four projects have been completed out of the 14 initially selected in 1996. No project identified in 2004 has been completed, although some are at an advanced stage of development, with some sections already open to traffic.</p> <p>In addition, as most TEN-T projects are in the rail sector, it can do little to address bottlenecks in the road sector.</p>
Airport capacity expansion	<p>Some progress. Related to the previous point, there has been investment in this area in some strategic locations, as in the case of the Malpensa airport in Italy, which is the only aviation project among the 30 priority projects.</p> <p>Most funds targeted at airports on the TEN-T have been allocated through ERDF and Cohesion Funds.</p> <p>However, the key strategy for expanding airport capacity is the optimal allocation of air slots through regulatory measures (including potentially auctioning slots), rather than the building of new airport infrastructure.</p>
Motorways of the sea	<p>Some progress. Through the TEN-T budget, ERDF and Cohesion Fund, the EU is currently supporting the start-up of short sea shipping services along four corridors⁶, by promoting best practice in ports, and financing intermodal connections between ports and the rest of TEN-T.</p> <p>However, the success of the motorways of the sea heavily depends on the coordination between transport modes and the successful promotion of intermodality and co-modality. As recognized by the Commission itself, “the success of this initiative does not depend on massive investment, but on the various stakeholders making real efforts to work together”⁷</p>

⁶ The Baltic Sea, western Europe (Atlantic Ocean - North Sea/Irish Sea), south-western Europe (western Mediterranean Sea), and south-eastern Europe (Adriatic, Ionian and eastern Mediterranean Seas)

⁷ Source: Motorways of the Sea - Shifting freight off Europe's roads (2005) DGTREN.

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Improve the navigability of key European inland waterways	<p>Some progress. The future on inland waterway transport in Europe largely relies on the completion of the two priority projects related to the removal of bottlenecks on Rhine-Meuse-Main-Danube axis and the construction of the Seine-Scheldt canal.</p> <p>Both projects are extremely complex both from a technical and environmental point of view and they are unlikely to be completed by 2016. However, works on some sections are ongoing and the EU is already supporting the upgrading of key stretches along countries as Hungary and Romania through ISPA funds.</p>
Ensure appropriate funding for TEN-T	<p>Some progress. Despite the efforts made in order to improve the involvement of private sector, the problem of funding still remains.</p> <p>The issue of funding arises for key priority projects, but it's even more evident for non priority projects identified along the TEN-T, for which Community resources are insufficient.</p> <p>Also for this reason, the Commission proposed to identify a priority network on which Community's efforts and resources could be concentrated.</p>
Funding infrastructure in the New Member States	<p>Some progress. In addition to what said above, in New Member States the Community has other financial instruments available, Cohesion Fund and ERDF in particular.</p> <p>In their programming documents, New Member States even now allocate to transport infrastructure a significant share of the granted funds. However, the Commission itself admits the need of a tighter coordination between these instruments (CF, ERDF, EIB loans) and TEN-T budget</p>

SWOT analysis

TABLE 1.2 SWOT ANALYSIS – THE PLANNING AND FINANCING OF TEN-T

Strengths	<p>The substantial amount of money invested in the transport network has lead to the completion of new infrastructure.</p> <p>The planning of TEN-T adopted a long term strategy which includes cross border links.</p> <p>The projects have been targeted at certain areas of the EU network in a partially coordinated manner.</p>
Weaknesses	<p>The management of these projects has not always been appropriate and as a result a number of projects have been delayed (particularly cross border sections) and affected by significant cost overruns.</p> <p>Sometimes the financing is not sufficient to ensure a quick and successful conclusion to the project. As a result, bottlenecks exist across the TEN-T.</p> <p>The methodology used to select priority projects is not sound and robust as it should and as it is strongly influenced by Member States.</p>

Opportunities	<p>Private funding could increase the amount of funds invested in the TEN-T</p> <p>Safety standards and technological innovations adopted in the new TEN-T infrastructure will improve the working conditions of transport workers, guaranteeing higher safety levels and a greater efficiency of transport services.</p> <p>Funding granted through Cohesion Funds and Structural Funds will reduce the disparities between European countries.</p> <p>The incentives provided for the start-up of intermodal and co-modal service should promote the development of freight integrators.</p> <p>The set up of TEN-T EA is an opportunity to improve the procedures for the planning and financing of priority projects.</p> <p>A better coordination of transport interventions, energy and telecommunication TENs may help to reduce costs and impact of the construction phase and make use of existing synergies.</p> <p>The ceiling for investment in TEN-T projects has recently been raised to provide more EU funding for certain projects although the focus tends to be primarily road projects.</p>
Threats	<p>The current approach to the planning of the TEN-T, makes it impossible to guarantee uniform level of services across the TEN-T.</p> <p>The current economic crisis will put pressure on Member State budgets, especially in EU12 countries.</p>

Results

- 1.34 The policy for the development of the TEN-T has aided the integration of the European Union. There has been progress in reducing bottlenecks and completing long distance corridors necessary to ensure full integration of the EU. It is true however that this policy needs to be supported by a solid financial base from which investments can be undertaken. The full, necessary funding base has not been there to date and as such the European Union has had to concentrate its efforts on a selection of projects, which is more achievable, but still a very difficult challenge.
- 1.35 Although the criteria for the selection of priority projects may not be optimal, the completion of the 30 PPs defined by the Commission will change the geographical and modal distribution of transport flows in Europe and in the neighbouring countries, creating de facto a wider European continent.
- 1.36 The introduction of the Executive Agency may improve the manner in which resources are allocated and should help ensure that the decisions made nationally are more effectively coordinated.
- 1.37 The Commission is already studying new mechanisms to increase the effectiveness of interventions, improve the management of funds and review the approach guiding the planning and financing of the TEN-T. It published these findings in the Green Paper "TEN-T A policy review". These procedures have not worked to date, it is essential that these mechanisms are introduced to improve the functionality of impact of the TEN-T.

Quantitative analysis

Analysis

- 1.38 The qualitative analysis set out above can be supplemented by the quantitative analysis included in this section, looking primarily at the projects undertaken on the TEN-T. The table below includes the most significant facts and financial figures on the 30 priority projects identified within Decision 884/2004/EC as per April 2008.

FIGURE 1.1 IMPLEMENTATION OF TEN-T PRIORITY PROJECTS⁸

Priority axis	MSs involved	End of works confirmed by MS	Total cost in M EUR	Total investment before 2007 in M EUR	Total 2007-2013 in M EUR	Remaining investment in M EUR
PP1 Railway axis Berlin-Verona/Milan-Bologna-Napels-Messina-Palermo	AT, IT, DE	2024	47.054,61	22.370,53	14.285,63	10.398,45
PP2 High-speed railway axis Paris-Brussels/Brussels-Cologne-Amsterdam-London	BE, DE, NL, UK	2015	18.848,01	16.954,61	1.857,07	36,33
PP3 High-speed railway axis of south-west Europe	ES, FR, PT	2020	50.656,68	10.556,20	26.782,65	13.317,83
PP4 High-speed railway axis east	FR, DE	2013	5.255,00	4.521,60	590,60	142,80
PP5 Betuwe Line	NL	2008	4.776,40	4.361,00	415,40	0,00
PP6 Railway axis Lyon-Trieste-Divaca/Koper/Divaca-Ljubljana-Budapest-Ukrainian border	FR, HU, IT, SL	2025	60.741,96	7.827,03	10.427,94	42.486,98
PP7 Motorway axis Igoumenitsa/Patra-Athina-Sofia-Budapest	BG, GR, RO	2020	14.928,70	10.051,10	4.727,60	150,00
PP8 Multimodal axis Portugal/Spain-rest of Europe	ES, PT	2017	15.324,54	8.882,71	4.752,97	1.688,86
PP9 Railway axis Cork-Dublin-Belfast-Stranraer (COMPLETED)	IRL, UK	2001	357,00	357,00	0,00	0,00
PP10 Malpensa Airport (Milan) (COMPLETED)	IT	2001	1.344,00	1.344,00	0,00	0,00
PP11 Öresund fixed link (COMPLETED)	DK, S	2001	4.158,00	4.158,00	0,00	0,00
PP12 Nordic triangle railway-road axis	FIN, S	2016	11.746,37	4.364,40	5.705,37	1.676,60
PP13 UK-Ireland/Benelux road axis	IRL, UK	2015	7.526,44	3.285,65	4.057,80	182,99
PP14 West Coast Main Line	UK	2009	12.629,24	10.896,37	1.732,87	0,00
PP16 Freight railway axis Sines/Algeciras-Madrid-Paris	ES, PT	2020	8.899,04	48,80	1.100,34	7.749,90
PP17 Railway axis Paris-Strasbourg-Stuttgart-Vienna-Bratislava	AT, FR, DE, SK	2020	13.563,29	3.528,68	6.779,99	3.254,62
PP18 Rhine/Meuse-Main-Danube inland waterway axis	AT, BE, BG, DE, HU, NL, RO	2016	2.103,28	45,29	1.075,55	982,44
PP19 High-speed rail interoperability on the Iberian peninsula	ES, PT	2020	41.770,45	5.236,30	33.194,37	3.339,78
PP20 Fehmarn Belt railway axis	DE, DK	2018	7.930,70	36,72	2.680,50	5.213,48
PP22 Railway axis Athina-Sofia-Budapest-Vienna-Prague-Nürnberg/Dresden	AT, BG, CZ, DE, GR, HU, RO	2020	12.641,80	465,36	5.618,52	6.557,92
PP23 Railway axis Gdansk-Warsaw-Brno/Bratislava-Vienna	CZ, PL, SK	2017	6.159,17	1.384,42	3.296,22	1.478,53
PP24 Railway axis Lyon/Genoa-Basel-Duisburg-Rotterdam/Antwerp	BE, DE, FR, IT, NL	2020	22.647,29	2.103,69	5.421,19	15.122,41
PP25 Motorway axis Gdansk-Brno/Bratislava-Vienna	AT, CZ, PL, SK	2017	6.845,96	1.063,50	5.782,46	0,00
PP26 Railway-road axis Ireland/United Kingdom/continental Europe	IRL, UK	2020	6.242,82	2.356,39	2.473,43	1.413,01
PP27 Rail Baltica axis Warsaw-Kaunas-Riga-Tallinn-Helsinki	EE, LT, LV, PL	2020	3.198,19	50,00	1.556,19	1.592,00
PP28 Eurocaprail on the Brussels-Luxembourg-Strasbourg railway axis	BE, LUX	2013	1.183,19	18,76	1.083,23	81,20
PP29 Railway axis if the Ionian/Adriatic intermodal corridor	GR	2019	4.308,00	81,00	1.074,00	3.153,00
PP30 Inland waterway Seine-Scheldt	BE, FR	2016	4.422,41	21,31	4.097,70	303,40
Total			397.262,54	126.370,42	150.569,57	120.322,55

Source: TEN-T: Implementation of the Priority Projects Progress Report (2008) DGTREN.

1.39 It can be seen that only four projects, which were part of the original list of PPs identified by Decision 1692/96/EC, have been completed. Investment in other key projects has also been significant, with some sections already open to traffic. On

⁸ The data refers to April 2008; project Galileo is excluded. Details on costs and investments relate exclusively to the priority sections of PPs.

the other hand, some PPs are still at an early stage of development, and will hardly be completed by 2020.

TABLE 1.3 IMPLEMENTATION OF TEN-T PRIORITY PROJECTS

Priority Project	Total length (km)	Works completed (km)	Works ongoing (km)	Works to be started (km)
1. Rail axis Berlin-Verona/Milan-Bologna-Naples-Messina-Palermo	2,520	956	756	808
2. High-speed train Paris-Brussels/Brussels-Cologne-Amsterdam-London	1,124	1,094	30	0
3. High-speed rail axis of south-west Europe	3,753	1,236	431	2,085
4. High-speed rail axis East (including Paris-Strasbourg/Luxembourg)	603	390	137	76
5. Conventional rail/combined transport (or Betuwe line, completed)	160	160	160	160
6. Rail axis Lyon-Trieste-Divaca/Koper-Ljubljana-Budapest-Ukrainian border	1,688	190	158	1,340
7. Motorway axis Igoumenitsa/Patra-Athens-Sofia-Budapest	3,333	1,593	609	1,131
8. Multimodal axis Portugal/Spain-rest of Europe (rail)	1,857	1,397	222	238
8. Multimodal axis Portugal/Spain-rest of Europe (road)	2,372	2,320	30	22
9. Rail axis Cork-Dublin-Belfast-Stanraer (completed).	502	502	502	502
10. Malpensa airport in Milan (completed)	n.a.	n.a.	n.a.	n.a.
11. The Øresund Link (completed), rail section.	52	52	52	52
11. The Øresund Link (completed), road section.	52	52	52	52
12 Nordic triangle rail axis	2,170	1,353	380	437
12 Nordic triangle road axis	1,800	1,476	209	114
13. Road axis Ireland/United Kingdom/Benelux	1,690	315	1,375	0
14. Rail link West Coast Main Line	928	0	928	0
15. Galileo global navigation and positioning satellite system	n.a.	n.a.	n.a.	n.a.
16. Rail freight axis across the Pyrenees Sine/Algeciras-Madrid-Paris	1,497	1,140	49	308
17. Rail axis Paris-Stuttgart-Vienna-Bratislava	1,298	466	266	566
18. Inland waterway axis Rhine/Meuse-Main-Danube	3,255	1,781	292	1,182
19. Interoperability of the Iberian Peninsula high-speed rail network	4,766	1,090	1,448	2,238
20. Rail axis between Germany and Denmark (Fehmarn Belt)	533	0	47	486

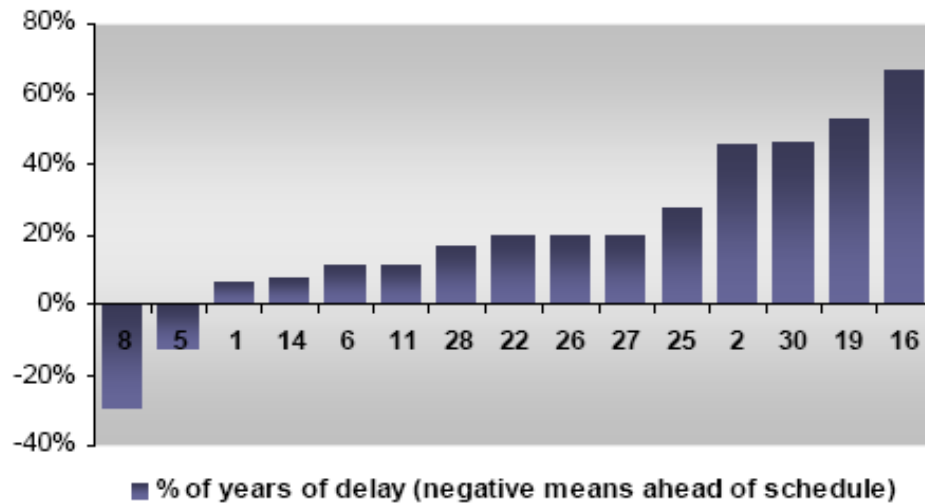
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Priority Project	Total length (km)	Works completed (km)	Works ongoing (km)	Works to be started (km)
20. Road axis between Germany and Denmark (Fehmarn Belt)	19	0	0	19
21. "Motorways of the sea": Baltic Sea, Atlantic Arc, south-east Europe, western Mediterranean	n.a.	n.a.	n.a.	n.a.
22. Rail axis Athens-Sofia-Budapest-Vienna-Prague-Nürnberg/Dresden	3,812	1,032	748	2,032
23. Rail axis Gdansk-Warsaw-Brno/Bratislava-Vienna	1,289	608	341	340
24. Rail axis Lyon/Geneva-Basel-Duisburg-Rotterdam/Antwerp	1,688	395	240	1,053
25. Motorway axis Gdansk-Brno/Bratislava-Vienna	1,185	434	396	355
26. Rail axis Ireland/UK/Continental Europe	1,089	0	932	157
26. Road axis Ireland/UK/Continental Europe	633	0	633	0
27. Rail Baltica axis Warsaw-Kaunas-Riga-Tallinn-Helsinki	1,142	135	374	633
28. Eurocaprail on the Brussels-Luxembourg-Strasbourg railway axis	411	83	188	140
29. Railway axis if the Ionian/Adriatic intermodal corridor	606	0	0	606
30. Inland waterway Seine-Scheldt	408	0	174	234
Total, of which:	48,235	20,250 (42%)	12,159 (25%)	17,366 (36%)
<i>Rail</i>	33,488	12,279 (37%)	8,389 (25%)	14,257 (43%)
<i>Road</i>	11,084	6,190 (56%)	3,304 (30%)	1,693 (15%)
<i>Inland waterways</i>	3,663	1,781 (49%)	466 (13%)	1,416 (39%)

Source: TEN-T: Implementation of the Priority Projects Progress Report (2008) DGTREN.

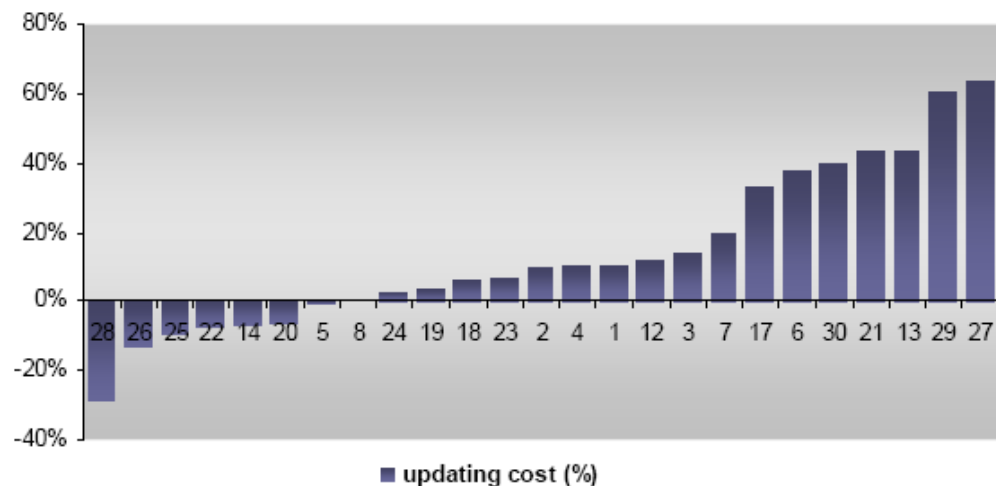
- 1.40 The table above, showing the physical progress on priority projects⁹ supplements the considerations expressed above. It can be seen that only 37% of rail projects, 56% road projects and 49% of inland waterway projects have been completed with a global transport average of 42%.
- 1.41 If completed works was taken as a proxy for the effectiveness of the TEN-T then it is clear that the CTP policy in this area has not achieved sufficient results. Although, it is important to point out that most projects are not scheduled for completion until 2015-2020 and that the new projects identified in 2004 only started recently, there is an undoubted problem in the definition of timescales, as shown in the figure below.

⁹ Excluding projects Galileo and Motorways of the Sea.

FIGURE 1.2 DIFFERENCE BETWEEN END OF WORKS NOTIFIED IN 2004 AND END OF WORKS COMMUNICATED BY MEMBER STATES IN 2005 (%)

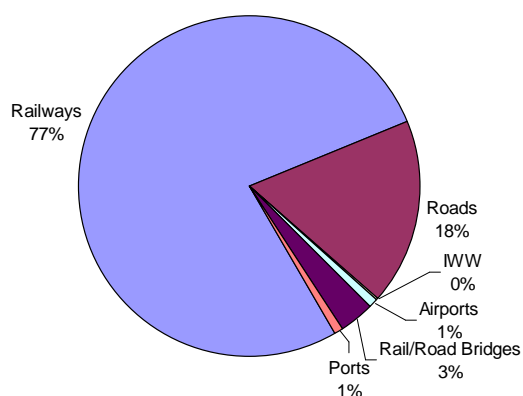
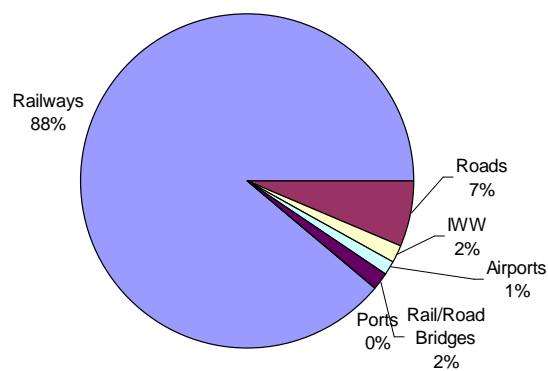
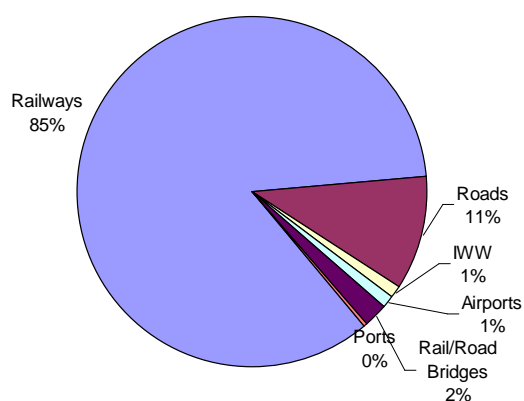
Source: Update on the costs of the TEN-T Priority Projects (2008) European Parliament

- 1.42 These considerations on the physical progress of priority projects must be accompanied by similar concerns in regard to the efficiency of funding and the accuracy of cost estimates. In fact, as shown in the figure below, the updated costs of priority projects greatly exceeded the initial forecasts for most priority projects.

FIGURE 1.3 CHANGE IN INVESTMENT COSTS OF PPS (%)

Source: Update on the costs of the TEN-T Priority Projects (2008) European Parliament

- 1.43 The charts below show the modal distribution of investments in priority projects. These confirm that actual expenditure on rail and inland waterway projects has been lower than expected, whilst the share of investments in road projects to date outperformed their total share of costs.

FIGURE 1.4 EXPENDITURE IN PRIORITY PROJECTS BY MODE**Modal distribution of the PP expenditure up to 2007****Modal distribution of the remaining PP investment after 2007****Modal distribution of the total PP costs**

Source: TEN-T: Implementation of the Priority Projects Progress Report (2008) DGTREN.

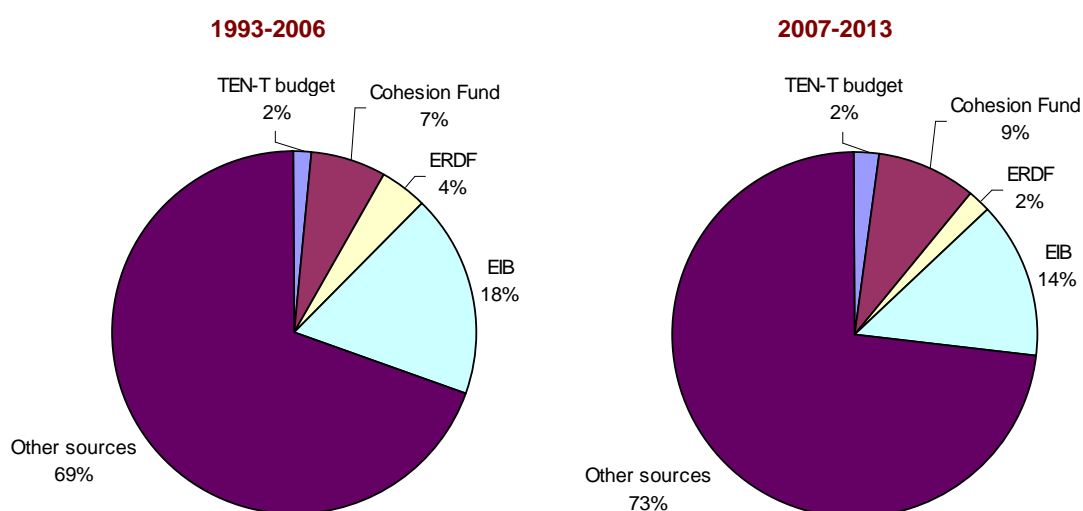
1.44 The table and the chart below show the breakdown of Community financing on comprehensive TEN-T by source of funding. The great majority of funds comes from Member States' public budget and EIB loans, although direct funding amounted to about 12% in the 2000-06 period and it is expected to reach 13% in 2007-13 period.

TABLE 1-4 COMMUNITY FINANCING TO THE TEN-T BY SOURCE OF FUNDING (€ BIL)

	1993-1999	2000-2006	Share 93-06	2007-2013*	Share 07-13
TEN-T budget	2.2	4.4	1.7%	8.0	2.1%
Cohesion Fund**	8.3	17.3	6.6%	34.8	8.9%
ERDF**	7.5	8.6	4.1%	8.3	2.1%
EIB***	26.5	44.9	18.3%	54.0	13.9%
Other sources****	63.4	208.0	69.4%	283.9	73.0%
Total	107.9	283.3		389.0	

Source: TEN-T: Implementation of the Priority Projects Progress Report (2008) DGTREN

Notes: * Indicative figures, ** Including the Pre-Accession Structural Instrument (ISPA), *** Between 1993-1999 loans for EU-15. From 2000 loans in EU-27, **** Public budgets and private financing, ***** Total investment needs from Implementation Report 2004-2005

FIGURE 1.5 COMPOSITION OF COMMUNITY FINANCING TO THE TEN-T

Source: TEN-T: Implementation of the Priority Projects Progress Report (2008) DGTREN.

Results

- 1.45 The quantitative analysis presented above confirms the conclusions already derived from the qualitative assessment. In particular, the following elements emerge:
- Significant discrepancies between initial and updated cost estimates of priority projects;
 - Delays in the implementation of projects;
 - Limited Community budget for interventions on the comprehensive TEN-T.

Conclusions

The overall impact of the policy

- 1.46 While the investment that has been funded through the TEN-T project has delivered significant results, more work needs to be done. This can best be done through a fundamental review of TEN-T policy and management as a whole.
- 1.47 The TEN-T policy has contributed to the achievement of the overall objective of the CTP of completing the internal market for transport by improving national rail and road network interconnections; facilitating interoperability; and stimulating the development of intelligent transport systems such as Galileo (which has however overrun both on costs and timescales). While initially it focused on the development transport infrastructure by facilitating investment in certain transport facilities and supporting international cooperation and globalisation, recent years have seen a switch to include the goals of investment focused on ensuring environmental and socio-economic sustainability as well as investment in safe transport.
- 1.48 A new generation of rail passenger traffic that can compete successfully with air and private cars has been opened up thanks to the contribution of the Community funding.

- 1.49 TEN-T stimulated the development of intelligent transport systems like Galileo, but also innovations in road, rail, air and waterborne transport were implemented through TEN-T-supported projects. The policy is also favouring the development of freight integrators, managing goods loads combining the specific strengths of each mode, providing thus the best service in terms of efficiency, price and environmental impact.
- 1.50 The TEN-T policy is also helping to achieve wider EU policy goals. In some cases, such as for the railway line linking Paris, Brussels, Cologne/Frankfurt, Amsterdam and London, this has allowed citizens and business travellers to experience the benefits of EU integration and of free movement within Europe.
- 1.51 The resources channelled through the Cohesion Fund and ERDF into TEN-T projects located in less developed regions are helping to address the EU's cohesion policy goals of reducing regional disparities.
- 1.52 However, a number of issues still hinder the ability of the policy to deliver results efficiently and within the timescale originally scheduled, such as:
- in some cases, public and political opposition to construction of new transport infrastructure¹⁰, often on environmental grounds;
 - limited transparency in the selection of projects;
 - a lack of financial resources both at Community and Member State level;
 - poor management, monitoring and coordination of interventions; and
 - the technical complexity of some projects (often due to the border crossing).
- 1.53 As a result of this, the problem of bottlenecks still persists, primarily in the road and in the rail sector, that need to be resolved before the full benefits of the TEN-T can be extracted. This can best be done by firstly ensuring that the appropriate level of funding is made available for the construction of these missing links and furthermore that there is further integrated planning at EU level, through the Executive Agency, that ensures a coordinated approach that identifies with the Member States the most appropriate projects to ensure increased Cohesion.
- 1.54 Finally, as the large majority of TEN-T funded projects are in the rail sector, it can do little to address the issue of bottlenecks on the road transport network (although regional aid and cohesion funds will contribute to this).

Contemporary developments

- 1.55 Recent policy initiatives in this area have sought to fund primarily rail and road projects and in particular the implementation of safety critical devices such as ERTMS, it is clear that following the change in requirements and the increased importance of environmental issues, more environmental and economically sustainable projects are now being brought forward.

¹⁰ For instance in Italy there has been fierce opposition to the construction of the Lyon-Turin Base Tunnel from the public and local authorities. In Germany, environmental concerns about the construction of a lock in Aicha are delaying progress on the Rhine/Meuse-Main-Danube waterway axis.

- 1.56 The current economic crisis may have a negative impact on the amount of funds directed at transport to cover the remaining costs not funded by the EU. Although some Member States have stated that investment in transport infrastructure will be the pillar of their future investment plans aimed at driving their economies out of recession, this policy proposal is not widespread and as such some national projects may be put to one side.

Lessons learnt and going forward

- 1.57 Although there has been progress towards the CTP objectives of eliminating infrastructure bottlenecks, this progress has been relatively slow, partly due to the scale, complexity and cost of the projects.
- 1.58 Furthermore, as mentioned above, in some cases, insufficient monitoring and understanding of the project requirements have lead to substantial delays in the realisation of a number of projects so better coordination is needed. It is important that the new Agency coordinates planning as much as possible so as to ensure that its funds are spent in manner which improves cross border links while at the same time ensuring that national spending through the Cohesion and ERDF funds complement this EU spending.
- 1.59 The TEN-T projects have been divided into two broad categories: those looking at the comprehensive network and those that are priority projects. This has ensured that there have been important projects and sections of the TEN-T funded in recent years, but as this funding has focused on national infrastructure rather than cross border links and thus the goal of cohesion and integration has suffered. For the future, the Commission is currently consulting on whether this layer should remain with a view of improving the manner in which TEN-T projects are funded, managed and completed. Given the overall goal of the TEN-T, separation into these categories does not seem to provide enough integration between projects and the Commission should ensure that, even at a national level, there strong cost/benefit analyses are carried out to ensure the appropriateness of the investment.
- 1.60 In a similar manner, the Commission is also consulting on the approach to pursue in relation to priority projects. To date, these projects have been the flagship ones for TEN-T, although they have often lacked complete integration with the rest of the network. Appropriately, the Commission is therefore considering altering its approach in this area in years to come and switching it towards priority networks which would primarily seek to improve an entire network and ensure that it is fully interoperable and allow better planning of future projects with the goals and achievements to date. This proposal may encounter a number of difficulties as it may be seen as the Commission clawing back subsidiarity and thus may be difficult to agree with the regions and the Member States.
- 1.61 In order to ensure that the limited TEN-T funds are used most efficiently to address infrastructure bottlenecks, decision-making about the allocation of funding should be based on cost benefit analysis of different schemes, using consistent criteria and parameters, but should not favour specific modes of transport. The different environmental and other social costs of different modes should be taken into account in this cost benefit analysis.