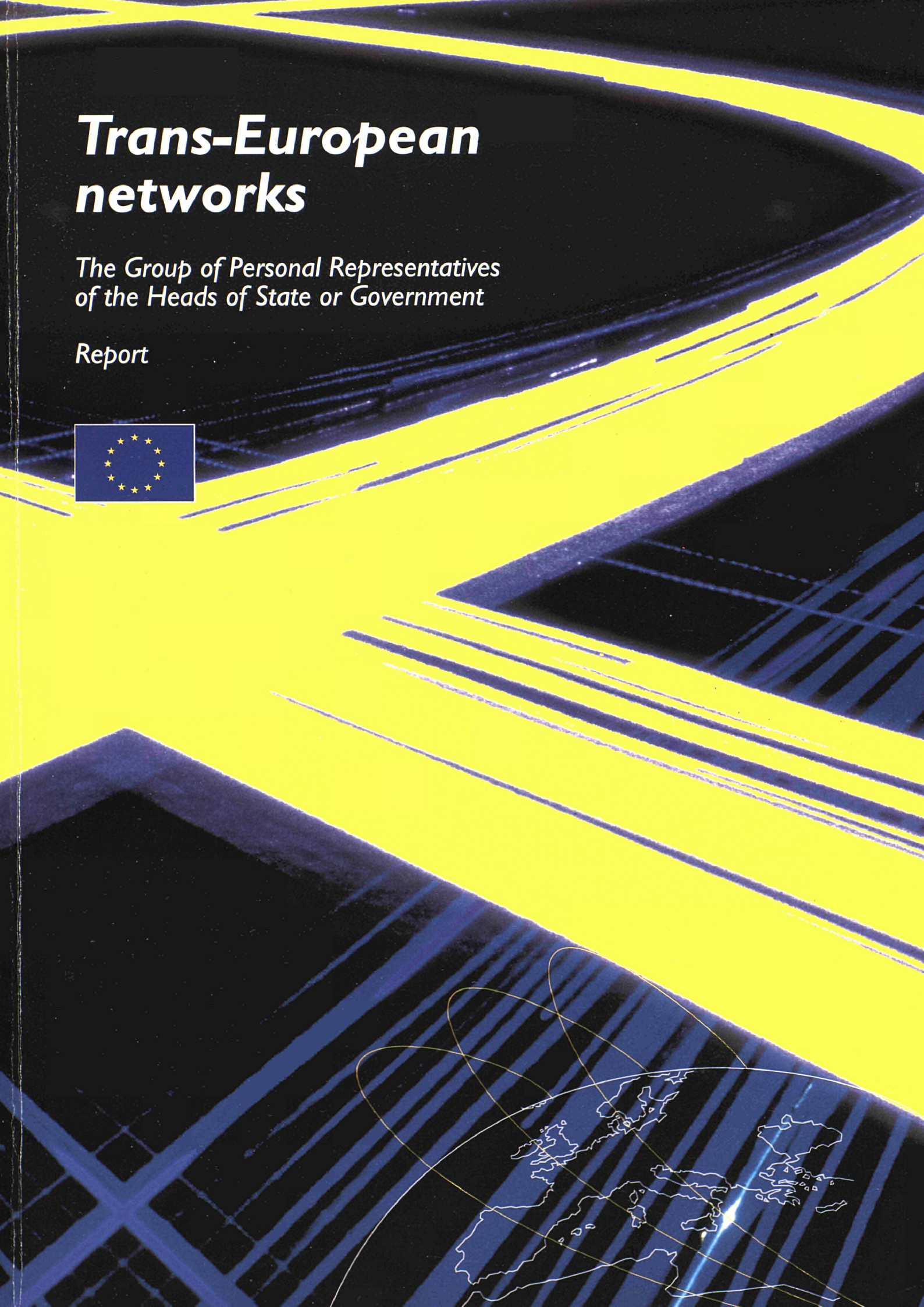
Trans-European networks

The Group of Personal Representatives of the Heads of State or Government

Report



Trans-European networks

The Group of Personal Representatives of the Heads of State or Government

Report

Cataloguing data can be found at the end of this publication.

Luxembourg: Office for Official Publications of the European Communities, 1995

ISBN 92-826-8995-6

Printed in Belgium

Contents

REPORT TO THE ESSEN EUROPEAN COUNCIL

TECHNICAL PAPERS

1. Main recommendations

The Group of Personal Representatives of the Heads of State or Government invites the European Council to endorse the recommendations contained in the Group's report. These can be summarized as follows:

The European Council is asked to:

(a) endorse the priority nature of the projects in Annex 1, Part I, and Annex 2, List A and invite:

  (i) the Council and the European Parliament, in setting up the guidelines identifying the projects of common interest, to include these priority projects;

  (ii) the Member States and the Community to give all appropriate support to these projects and to implement them as soon as possible;

(b) urge the European Parliament and the Council to adopt as soon as possible the guidelines and the accompanying financial Regulation;

(c) take note of the potential relevance of a network approach in selected sectors of environmental protection, and invite the Commission, the Council and Member States to examine the possibility of establishing guidelines for environmental network infrastructure and the obstacles to environmental infrastructure, stressing the use of existing financial instruments in support of possible future guidelines and priority projects;

(d) acknowledge that obstacles of an administrative, legal and regulatory nature are a major brake on the implementation of priority projects, and invite Member States and the Commission to take all appropriate initiatives needed to eliminate such obstacles;

(e) confirm the objective of strengthening cooperation with neighbouring countries to connect the trans-European networks with networks outside the Union, in particular in Central and Eastern Europe and the Mediterranean area;

(f) confirm the objective of facilitating public/private partnerships, and invite Member States, the Commission, the European Investment Bank (EIB) and the European Investment Fund (EIF) to take appropriate measures to this effect;

(g) confirm that measures will be taken — if it should prove necessary — in order that priority projects do not run into financial or other obstacles which would jeopardize their implementation;

(h) acknowledge that the particular approach of the Christophersen Group, consisting in identifying and accelerating selected priority projects, gives added value to the implementation of trans-European networks, and that this effort should be continued in the future, and consequently to endorse the follow-up procedure recommended by the Group, namely that:

  (i) The European Council should provide, on a continuing basis, the necessary impetus to the implementation of priority projects by means of an annual report to be submitted by the Commission to the European Council in accordance with the White Paper action plan adopted by the European Council in December 1993.

  (ii) If the achievement of individual priority projects is threatened, the Commission should report to the Council, which shall immediately consider appropriate responses together with, as appropriate, the Commission and the EIB.

  (iii) Member States and the Union should be asked to consider the creation of suitable vehicles ('project authorities'), open to public and private operators as appropriate, to ensure the promotion of priority projects; the Commission, the EIB and the EIF should support actively the coordination between parties potentially interested in priority projects, *inter alia* by project seminars arranged by the Commission; the Commission will examine how the abovementioned vehicles can be facilitated through Community legislation.

  (iv) The Commission and the EIB should, in consultation with Member States, monitor progress in the financing of individual priority projects, and if financial obstacles of a general nature and common to several priority projects occur, they will consider appropriate action.

2. Introduction

The emergence of new political entities has led historically to corresponding adaptations of the infrastructures of trade and communication, which in turn helped consolidate the new entities. One may think of the network of *viae Romanae* leading to Rome, of the way road and rail networks consolidated the European nation-States in the 19th and 20th centuries, or of the role of the railways in the development and cohesion of the United States in the last century. The ever-increasing unity among the countries of western Europe since the Second World War has led in recent years to demands for efficient trans-European networks.

These demands correspond to very real economic and social needs. The justification of trans-European networks was spelt out in the Commission's White Paper on growth, competitiveness and employment:

(i) higher economic growth;

(ii) better functioning of the internal market;

(iii) improved competitiveness;

(iv) more economic and social cohesion;

(v) improved quality of life;

(vi) reduced pollution;

(vii) easier integration into the Union of new members;

(viii) better links between the Union and its neighbours.

The call for efficient trans-European networks (TENs) comes from the citizens, as individuals and as economic agents. They wish to live and work in a sustainable economic environment which allows them to trade, communicate and travel throughout the Union, and into its neighbouring countries, as easily, as quickly and as cheaply as possible.

It is with the hope of contributing to this that the Group of Personal Representatives of the Heads of State or Government submits to the European Council this report.

The Christophersen Group exercise constitutes an exceptional political effort, aimed at accelerating the development of trans-European networks. The objective has been to give added value to the development of networks, while respecting the competences of the Union institutions and Member States provided for in the Treaty, and without duplicating work already in progress elsewhere. The specific approach has been to identify and accelerate priority projects of common interest for the implementation of trans-European networks where the Group considered its contribution to be of specific value.

The Group believes that it has succeeded in providing for synergy effects and momentum in the development of TENs. For some priority projects, acceleration is already evident. In view of the long planning and implementation time inherent in large infrastructure projects, the Group expects that for the other projects the benefits of this momentum will become evident in the near future.

The Christophersen Group can report that identification and initiation of further work has been undertaken in areas where this appears necessary. The development of trans-European networks is a continuous process, and the Group considers it essential that a follow-up procedure be established, for which it proposes specific measures.

(a) The mandates and objectives

Following the decision of the European Council in December 1993, a group of personal representatives of the Heads of State or Government was established to assist in implementing efficiently, consistently and speedily the trans-European networks in transport and energy. The European Council in Corfu also asked the Group to examine the question of relevant networks in environment, as well as the financing of TENs in general. The EIB participated in the Group's work. The chairman of the Group, Vice-President of the Commission Mr Henning Christophersen, submitted an interim report to the Corfu European Council. The present report is the Group's final report with recommendations to the European Council. The Group's report is accompanied by a set of technical annexes which do not commit the Group. These provide background information, including, as indicated, results of work complementary to the Group's own work, notably in the project seminars and in the Commission.

The Group set itself the following detailed objectives:

(i) to identify projects of priority importance and obstacles to their speedy implementation;

(ii) to eliminate obstacles on a project-by-project basis;

(iii) to address horizontal obstacles to the implementation of TENs in general, notably in the regulatory framework.

(b) Priority projects

On the basis of agreed selection criteria, the Group proceeded to identify projects of priority importance in the TENs, where added-value effects were likely. The selection criteria applied are not identical for the sectors considered: transport and energy. However, the following selection criteria are common to the two sectors:

(i) common interest for the trans-European networks, such as cross-border sections;

(ii) large scale, bearing in mind the type of project and the relative size of the Member States directly concerned;

(iii) economic viability and scope for private involvement;

(iv) contribution to Union objectives such as economic and social cohesion;

(v) respect of other Union policies, notably on environmental protection;

(vi) maturity.

On the basis of the selection criteria, the Group adopted by consensus a set of transport and energy projects considered to be of priority importance for the trans-European networks, and for which the Group believed that the designation of priority status would facilitate their implementation.

(c) The lists and their status

The labelling and listing of projects should only take place when this benefits the projects and networks. Projects which can go ahead without any particular effort and projects which are unrealistic (white elephants) have been avoided.

The exact implication of the priority status for projects depends on what the project needs. In increasing order of effort, the labelling can entail:

(i) a message of political priority and commitment from the Union as well as the Member States involved, leading to focused attention by the actors at Union level as well as in Member States and the private sector;

(ii) organizational measures such as *inter alia* project seminars to facilitate the project development;

(iii) a focused effort to eliminate the obstacles encountered, including the use of Union measures and initiative. In so far as this might consist of financial support, this would respect the guidelines and criteria outlined in Section 7.

The Group considers that the lists should be reviewed regularly. In particular, the lists of very mature priority projects should be reviewed annually by the European Council in the context of the White Paper action plan follow-up procedure, thus allowing for the exit of projects that are either well under way or indefinitely postponed, and for the entry of new projects as they reach the necessary state of maturity. In this sense, the lists should not be considered as closed.

(d) Lists and guidelines

The selected priority projects in the areas of transport and energy are all projects included in the Commission's proposals for guidelines currently under discussion. The Group considers that the labelling of a limited number of projects as being of priority importance constitutes a political impetus for the benefit of key projects in the trans-European networks, thus supporting the much wider work on the guidelines for trans-European networks according to the Treaty provisions.

It should be noted that with the selection criteria applied in the Christophersen Group, notably the requirement of maturity and scope for added value, the set of identified mature priority projects cannot be expected to reflect the overall objectives and balances embodied in the guidelines.

The lists represent the set of important projects which could be initiated in the immediate future if a focused effort is made. The drawing-up of such a 'rolling plan', with a horizon of two to three years, helps all interested parties at the Union level, in Member States and in the private sector to focus attention and efforts, and to coordinate the timing of project realization, thus providing for synergy effects.

In order to facilitate this process, the Christophersen Group's own work has been complemented with work focusing on the individual priority projects in the so-called 'project seminars' or 'round tables', convened by the Commission and gathering the appropriate interested parties, including the private sector. The objective is to accelerate project planning and implementation by identifying and eliminating obstacles.

(e) Obstacles to project implementation

Each project has its own characteristics. However, on the basis of experience so far, it is clear that the difficulties facing the priority projects can be traced back to one or a combination of the following features of the projects:

transfrontier nature;

large scale;

moderate financial viability and high risk.

The obstacles facing priority projects can be classified into three types:

(i) political obstacles, such as difficulties in reaching clear political agreement and commitment from all authorities involved on the timing, technical features, construction and operation of networks and projects;

(ii) regulatory framework obstacles, related to administrative, regulatory and legal procedures that provide the operating environment for project planning, construction and operation;

(iii) financial obstacles, related to drawing together the financial plan for the entire project in all its phases, and the timing and conditions of financing commitments.

Every project is faced with hurdles in these areas, without this necessarily amounting to obstacles of a blocking nature. The Group considers that there is scope for reducing the degree of difficulty that each project has to overcome and provides recommendations to this effect.

The Group notes that, concerning the financing situation for the mature transport priority projects, several projects do not have financing problems. Other projects appear to be facing financing problems, but it is still too early to conclude whether these are of a blocking nature. The rest of the projects are not advanced enough in their preparation to conclude whether financial problems exist. However, the Group cannot exclude that this may become the case in the future, and it therefore recommends that this issue remains under review.

Action to eliminate obstacles depends on the nature of the obstacles and on the competence of the actors involved.

The Treaty provides the Union with competences in the area of trans-European networks which corresponds to the transfrontier characteristics of networks. In examining the obstacles to the realization of the networks, the Group has identified difficulties arising from the transfrontier element to be of major importance. In accordance with the subsidiarity principle, such problems should be addressed at the level where they can be effectively solved, which has led the Group to consider possible measures and initiatives at the Union level.

Although the project-by-project approach has been the guiding principle, it is only logical and rational that consideration is given to whether measures that could benefit specific projects could also more generally benefit other projects. This has led the Group to consider possibilities for 'horizontal' measures that could be taken both at Member State level and at Union level. This is especially the case for regulatory obstacles (streamlining of national approval procedures, technical interoperability, etc.), but also in providing for increased flexibility in the form of public financial support extended to TEN projects for the purpose of facilitating private involvement. The Group considers that further

work is necessary, and it invites the Union as well as Member States to continue examining such possibilities.

In accordance with the public/private partnership objective, the Group has made efforts to associate the private sector as much as possible with the Group's reflection process, and to assist in identifying measures to facilitate private financing of TEN projects.

3. Transport networks

The proposal on the guidelines for the development of a trans-European transport network, as tabled in April 1994 by the Commission to the Council and the European Parliament for co-decision, initiates an ambitious plan to integrate the present mode-oriented national transport networks into a single trans-European transport network by the year 2010. For this purpose, the proposed guidelines identify projects in the order of ECU 400 000 million, of which about ECU 230 000 million is foreseen to be invested up to the year 2000.

While the Council and the European Parliament are actively examining the guidelines with a view to their adoption in the coming months, the Christophersen Group presented to the Corfu European Council a preliminary set of 34 infrastructure and five traffic management projects as being of a priority nature. These constitute about a quarter of the total investments required for the trans-European transport networks up to the year 2010. The European Council in Corfu endorsed the priority nature of 11 mature projects, addressing mainly the high-speed rail network in Europe and the missing road links in the peripheral countries.

The work of the Group has been an important interim measure on the way to achieving the goals of the proposed guidelines. More than 40 project seminars and round tables have been held to accelerate the projects and help in setting up the financing plans of projects.

Transport is the sector where most difficulties arise in achieving the objectives. This is due to the scale of investments, the often modest financial profitability of projects, although for most of them the economic profitability can be significantly higher, and the very considerable variations in the Member States' regulatory framework and traditional approaches to infrastructure development. Consequently, the Group considers that the approach of identification of priority projects and efforts to accelerate them will prove particularly helpful in the transport sector.

The detailed analysis of the priority projects provides some general lessons to be learned on the obstacles facing projects. Although the projects show different degrees of maturity, most are hindered by one or a combination of the following factors (in addition to the usual uncertainties about construction costs and traffic potential):

(i) too narrow a scope for the projects, leading to less than optimal profitability;

(ii) different priority settings by the Member States concerned;

(iii) problems regarding administrative and technical procedures;

(iv) difficulties of designing the appropriate legal concept and finding the appropriate legal vehicle at the European level;

(v) long traditions of public financing of transport infrastructure, combined with reluctance in tackling public/private partnership schemes, and insufficient availability or dynamic use of public funds.

The non-financial obstacles have generally been found to be of fundamental importance by causing delays in planning and execution of projects. For some projects, solutions on these issues are a prerequisite for an optimal financing scheme.

About half of the envisaged total investments of approximately ECU 91 000 million in the priority projects should take place by 1999. As regards the financing situation, the Group notes that, for a few of the priority projects, the financing has been settled. For the rest, in particular in the rail sector, the financing schemes have not been settled, and the Group considers that efforts should be deployed to engineer more imaginative and efficient financing schemes, notably in terms of combining public, including Union, and private resources.

As regards the priority projects which will be subject to endorsement by the Essen European Council, the financing profiles can be divided into five categories:

Mature public/private partnerships:	PBKAL–NL, Betuwe, PBKAL–UK, Malpensa, IRL–UK–Benelux road corridor
Mature projects which are financed on the basis of user charges with government guarantees:	Øresund
Conventionally financed railway projects:	PBKAL–B, high-speed train East, German high-speed train (Berlin–Nuremberg and links with the high-speed train East), high-speed train South (Barcelona–French border), Brenner (access routes)
Projects with substantial EU grants for cohesion motives:	Greek motorways (PATHE, Via Egnatia), motorway Lisbon–Valladolid, conventional rail Belfast–Cork
Projects with open financial plans:	Brenner (base tunnel), high-speed train/combined transport France–Italy, high-speed train South (Madrid–Barcelona, Spanish/French border–Montpellier, Madrid–Vitoria–Dax), PBKAL–D (Cologne–Rhine/Main), Nordic triangle, west coast main line

All these projects are eligible for part-funding under the TEN budget line as appropriate. There are already early indications that possible claims from a limited number of projects for Union support — notably from the TEN budget line — will be substantial and, in all probability, may exceed the amount which will be made available.

The state of maturity of the projects can be summarized as follows:

(i) Malpensa, Øresund and Cork–Belfast CR appear ready for full implementation.

(ii) The Greek and Lisbon–Valladolid motorways require some further design work, but the financial problems appear soluble once this is complete.

(iii) For other projects, the seminars confirmed the interest of public/private partnerships: Betuwe line, PBKAL–UK, PBKAL–NL, Brenner base tunnel, HST/CT France–Italy, Nordic triangle, west coast main line and IRL–UK–Benelux road corridor.

This was not the case for certain HST projects: PBKAL–B, PBKAL–D, HST East, German HST, Brenner–IT. However, as regards finalizing the financial set-up, further decisions will be made in the near future.

(iv) Major progress has been obtained recently on the Brenner link, with the imminent signing of a memorandum of understanding on the construction of the base tunnel (although its financing is still unclear).

(v) A new approach is being adopted for the further development of the PBKAL system as a whole: it was agreed in principle to set up a working group bringing together all the countries concerned, including Luxembourg, and aiming at accelerating the realization of the project.

The Group discussed and assessed proposals for priority projects, including projects proposed by the acceding countries and projects concerning the connections to third countries. The Group considers that, in all, 14 transport projects are of priority and very high maturity, and it proposes amending the list endorsed by the European Council in Corfu accordingly.

In addition to the priority projects concerning physical infrastructure, the Group stresses the important role of traffic management systems, as networks without management will fail to serve their purpose. In addition, the mutual beneficial influence of the information

society and other economic sectors such as transport can help to consolidate the strategic position of European industry and transport telematics in particular.

Particular emphasis is placed on the realization of a European air traffic management system to ensure parallelism between liberalization measures and improvements in safety and efficiency. The Group recommends that the European Council initiate work on the basis of a proposal from the Commission taking into account the global aspects of air traffic management and the ongoing work in the framework of the European Civil Aviation Conference.

The Group recognizes the specific importance of those physical infrastructure projects which incorporate telematics architecture via pilot projects and invites the Commission to proceed with an action plan.

The European Council is invited, subject to the Treaty provisions concerning the guidelines, to:

(a) invite the Council and the European Parliament to decide as soon as possible on the proposal on the guidelines for the development of the trans-European transport network[1] using the provisions of the Treaty, laid down in Articles 129d and 189b, in the most efficient way;

(b) endorse the priority nature of the projects in Annex 1, Part I, and invite:

(i) the Council and the European Parliament, in setting up the guidelines identifying the projects of common interest to include these priority projects;

(ii) the Member States and the Community to give all appropriate support to these projects and to implement them as soon as possible;

(c) take notice of the projects in Annex 1, Part II, which the Group considers to be important but not yet mature;

(d) acknowledge the importance of traffic-management systems in general and the pilot actions in Annex 1, Part III, and in particular the fundamental trans-European nature and safety importance of air-traffic control systems, and invite the Council to examine this question as a priority matter on the basis of a proposal from the Commission while taking into account work already under way in the European Civil Aviation Conference and the International Civil Aviation Organization.

[1] COM(94) 106, OJ C 220, 8.8.1994.

4. Energy networks

The Group considers the development of the physical trans-European energy networks to be an important contribution to the creation of the internal energy market — which is currently under discussion in the Council and the European Parliament and the main feature of which will be enhanced competition resulting from an increase in the number of players — and to the reinforcement of the economic and social cohesion.

Further, the Group noted that the obstacles to the development of energy networks were generally less important than in the transport sector. To the extent that obstacles occur, they relate more often to the regulatory framework and less frequently to financing.

The Group nevertheless considers that its approach to the implementation of the transport projects is also useful in accelerating the development of energy networks, and that the Group's recommendations for a future follow-up procedure (Section 9 below) should apply equally to energy networks, taking into account the specificity of the energy network projects.

The Group considers that the financing of the priority projects does not require the use of new mechanisms, and that the existing instruments (Structural Funds and EIB) are adequate for the purpose.

The European Council is invited, subject to the Treaty provisions concerning the guidelines, and taking into account the specificity of energy network projects, including economic and financial viability, to:

(a) take note of progress achieved on the priority projects identified at the Corfu meeting;

(b) endorse the priority status of the projects in List A in Annex 2, and invite:

(i) the Council and the European Parliament, in setting up the guidelines identifying the projects of common interest, to include these priority projects;

(ii) the Member States to give all appropriate support to these projects and to ask the involved enterprises to implement them as soon as possible;

(c) take note of the projects in List B in Annex 2 which the Group considers to be of priority status, although they require no special Community action at this stage;

(d) invite the Council and the European Parliament to finalize as soon as possible the examination of the proposals on guidelines for energy networks; [1]

(e) invite the Member States, the Commission and the EIB to make use, where appropriate, of the Structural Funds and Community loans, respectively, to contribute to the financing of those energy priority projects for which finance has not yet been agreed, while avoiding any distortion of competition;

(f) reiterate the importance of the rapid creation of an Internal Energy Market in the light of its synergy effect with the physical energy networks.

5. Environment networks

Pollution does not stop at borders. The physical environment (nature, air, water and land) needs a global approach which often cannot be confined to a regional, national or even Union context.

At its meeting in Corfu, the European Council explicitly asked the Christophersen Group to examine the question of relevant networks in the field of environment.

Environment is not covered by Title XII of the Treaty on trans-European networks, and the Union approach to environmental protection does not operate with guidelines as in the transport and energy fields. The lack of guidelines for the long-term development of environment infrastructure in the Union complicates the task of identifying priority projects.

The Group acknowledged the potential relevance of a network approach in certain environmental sectors (water/waste). Setting up guidelines similar to those of TENs would enable a more coordinated planning with a better priority setting between projects, thereby reducing the risk of failures and delays, as well as the overall costs, by achieving sufficient economies of scale. Accelerating the implementation of a sound water and waste infrastructure will help to improve the productive infrastructure and thus strengthen the economic position of the Union.

The European Council is invited to:

(a) take note of the potential relevance of a network approach in selected sectors of environmental protection, notably water and waste management, including waste disposal from contaminated sites, and of the work initiated by the Commission and the Member States to improve coordination between Member States and with third countries, and possibly to establish guidelines for the development of a network infrastructure in these sectors;

(b) take note of the possible usefulness of identifying priority projects and to invite the Commission and the Environmental Council to examine the matter;

(c) request the Commission and the Council, in cooperation with the Member States, the EIB, the EIF and the European Environmental Agency, to examine possible financial and administrative obstacles to the development of environmental infrastructures, and, within the framework of existing Community financial instruments, ways of facilitating the financing of environmental infrastructures, notably by a greater involvement of private investors;

(d) stress that the Community and the Member States in the use of existing financial instruments and incentives should take account of possible future guidelines and priority projects in the environmental area.

[1] COM(93) 685.

6. Connecting the networks to third countries

The Group fully recognizes the importance of cooperating with neighbouring countries to connect the trans-European networks with networks outside the Union, in particular to Central and Eastern Europe and the Mediterranean basin, including Malta, Cyprus and Turkey. In this respect, infrastructure for road, rail, inland waterways, ports and airports should be considered appropriately.

The Group believes that certain elements of the Christophersen Group approach also apply to connecting networks with neighbouring countries, although the context is different with respect to decision procedures as well as scope for action. In addition to the guidelines which cover only Union territory, consideration has to be taken of the priorities of neighbouring countries. The Group recommends that a strengthening of procedures for coordination and consultation with neighbouring countries in these matters should be continued. It welcomes the cooperation on project development between the Community instruments (notably the EIB and the PHARE (Poland and Hungary: aid for economic restructuring) programme) and the European Bank for Reconstruction and Development (EBRD) and the Nordic Investment Bank, etc.

The Group took note of the results of the Crete conference of March 1994 on transport, and takes note of the ongoing studies for the interconnection, on the one hand, of the electricity networks of the Central European countries, of the Balkan countries and of the Mediterranean basin, and, on the other hand, of the natural gas networks of the Central and East European countries.

In the transport area, the Group has identified the following projects:

(i) with a view to an expected start-up before the end of 1996:

Berlin–Warsaw–Minsk–Moscow (rail and road).

(ii) in a second phase (up to the year 2000):

Dresden–Prague (road and rail);

Nuremberg–Prague (road);

Fixed link across the Danube (road and rail) between Bulgaria and Romania;

Helsinki–St. Petersburg–Moscow (road and rail);

Trieste–Ljubljana–Budapest–Lvov–Kiev (road and rail);

Baltic Sea telematic platform.

The Group also recognized the importance of connecting Union networks to Switzerland, which undertook in the Transit Agreement[1] to construct a number of railway infrastructures connected to the Union network.

In the energy area, the Group has identified the following projects:

Algeria–Morocco–EU (natural-gas pipeline);

Russia–Belarus–Poland–EU (natural-gas pipeline);

Baltic ring: electricity network interconnections between Germany, Poland, the Baltic States and Finland.

In the light of the decisions taken by the European Councils in Copenhagen and Corfu, extending the TENs in particular to the associated Central and East European countries represents a key element in reinforcing the structural and economic links to the European Union.

In the Mediterranean basin, information regarding traffic flows and the state of the physical infrastructure in ports should be gathered with a view to assessing the possibilities for developing specific port projects. The Group welcomes the intention of the Commission to continue and intensify work on drawing up a comprehensive plan with the objective of coordinating the development of transport infrastructure in the Mediterranean basin, including the allocation of human and financial resources, taking into account the particular geographical features of the region, with special regard to the need to exploit fully maritime transport integrated with other modes of transport. The Commission will report on the progress of work to the European Council at the end of 1995.

The Group takes note of the intention of the Commission, together with EIB, the EIF and the EBRD, to explore new guarantee mechanisms including guarantees for non-

[1] Agreement between the EC and the Swiss Confederation on the carriage of goods by road and rail, OJ L 373 of 21 December 1992.

commercial risks, such as risks of governmental performance related to investments in networks. The Group also notes that the Commission will examine, with Eurofirma and the appropriate financial institutions, the possible development of a specific mechanism to support railway financing in the Central and East European countries.

The European Council is invited to:

(a) confirm the importance of cooperating with neighbouring countries to connect the trans-European networks with networks outside the Union, in particular in Central and Eastern Europe and the Mediterranean area;

(b) welcome the considerable progress made in this field recently, and in particular take note of the transport and energy projects involving neighbouring countries identified by the Group in Annexes 1 and 2;

(c) invite the Commission and the Member States to intensify cooperation with neighbouring countries to identify priority corridors and projects, and to examine ways of facilitating their implementation.

7. Financing and public/private partnerships

The European Council in Corfu gave the Group a mandate to study the financing aspects of TENs, alongside the mandate given in Brussels for the Ecofin Council, together with the Commission and the EIB.

The Group notes the cost estimates given in the Commission's White Paper for investment in infrastructure in transport, energy, telecommunications and environment. Although cost estimates for large infrastructure projects are inherently uncertain, the Group notes the following estimates of the Commission, based on information provided by the Member States the 11 most mature transport projects as adopted by the Corfu Council represent an estimated total cost of ECU 76 000 million; the extended list of 14 projects (see Annex 1, Part I) currently proposed by the Group to the Essen European Council represents an aggregate amount of ECU 91 000 million; as for the other projects selected by the Group, the total amount, taking into account the changes made in preparation for the Essen European Council, is estimated to be ECU 45 000 million for a further 19 projects (see Annex 1, Parts II and III); the 10 energy projects in Annex 2, List A represent an estimated total cost of ECU 5 000 million.

The Group further recalls the objective, confirmed both in the Brussels and in the Corfu conclusions, of facilitating private involvement in the development of TENs and suggesting ways of using public resources to enhance private involvement.

The Group welcomes that the Christophersen Group exercise has led the EIB to undertake to introduce a special window for the financing of infrastructure of Community interest, and in particular the list of priority projects, the purpose of which is to increase the momentum of EIB lending which was achieved under the Edinburgh facility. The financing involved will probably amount to a third of the Bank's lending in the European Union. The window will cover transport, telecommunications and energy investment in the public sector, the private sector, and partnerships between the two, as well as environmental lending for projects of a trans-European nature. The window will be available for lending not only within the Union but also in Central and Eastern Europe as well as Scandinavia, the Mediterranean area and the transalpine crossings. The main features of this window are — in appropriate circumstances, where there is a sound financial case:

(i) provision of longer maturities and longer capital grace periods so as better to match the debt repayment required to the cash-flow characteristics of the projects;

(ii) provision of refinancing facilities to the banks at the outset of a project so that they can be assured that their loans can be refinanced in accordance with their normal maturities;

(iii) provision of financing of interest during construction, fixing of loan rates in advance of drawdown and establishment of framework credit line agreements in which the Bank undertakes at an early stage to provide a substantial part of the finance required, provided that the project promotor meets certain commitments;

(iv) involvement of the EIB in the earliest possible stages of the financial and contractual structuring of a project in cooperation with the Member States and the Commission so that the Bank's involvement and

that of the EIF can facilitate the identification of suitable financial arrangements;

(v) an extension of the Bank's normal eligibility rules to provide for the systematic inclusion of transport, energy and telecommunications network infrastructure irrespective of whether it is located inside or outside the assisted areas.

Concerning the Community financing of TENs, the Group notes that:

(i) the designation as a priority project does not automatically imply eligibility for Community finance, and that the lack of priority status does not preclude projects from financing; the priority status should be considered jointly with the rules governing existing Community financing sources;

(ii) the Commission and the EIB have undertaken to continue the monitoring of individual priority projects and to give further thought to more general actions and measures which could improve and facilitate their financing.

The newly created EIF could, in due course, play a significant role in supporting and promoting public/private partnerships for TEN projects. In the initial stages of a project's life, the Fund could assist in the setting-up and design of appropriate financial and organizational structures, while at a subsequent stage it will help to reduce project risks through its direct financial involvement (extension of loan guarantees; participation in the equity capital). The Fund's capital structure, in which the Community, the EIB and financial institutions are all represented, constitutes a partnership in itself, already bringing together several of the parties concerned.

The European Council is invited to:

(a) confirm the objective of facilitating public/private partnerships and optimizing private financial involvement in the priority projects and invite Member States, the Commission, the EIB and the EIF to take appropriate measures to this effect;

(b) welcome the progress made in coordinating and adjusting existing Community instruments to facilitate the financing of TENs, and to attract private involvement;

(c) confirm that the Council should be informed if the achievement of certain projects is threatened for financial reasons linked to insufficient profitability — for example, because of the length of investments or environmental constraints — and that the Council, together with the Commission and the EIB, will immediately consider appropriate responses, within the limits set by the financial perspectives;

(d) confirm that measures will be taken — if proven necessary — in order that priority projects do not run into financial obstacles which would jeopardize their implementation;

(e) take note of the fact that the Group presents no new financing instruments, but — in the event that an appropriate response could mean possible future Community action in favour of priority projects — endorse that it should respect the following guidelines and constraints as regards the use of Community recources:

(i) the level of Community budgetary support should remain within the own-resources ceiling set by the Edinburgh European Council;

(ii) a project-by-project approach (as opposed to general measures with target amounts);

(iii) any new forms of Community support should only become available to the extent that the existing instruments cannot meet specific needs, and it should be closely tied in with the instruments already existing at the Community level including the EIB and the EIF; [1]

(iv) any grant support extended by the Community in a non-conventional manner (for example, in the form of equity or reimbursable advances) should be managed by and extended through the traditional channels for such support (i.e. generally the Member States concerned); [1]

(v) Community action should be concentrated on vital links which are essential for the networks, but normally less attractive from a purely national perspective;

[1] The UK personal representative did not agree to the principle of any new or 'non-conventional' forms of Community support.

(vi) **the volume of Community support for a priority project should be set with due regard to the trans-European network importance of the project as well as commitment and support from the Member States directly concerned by the project;**

(vii) **in the event that a new legal base should prove necessary for such Community action, the Commission will present appropriate proposals, and individual decisions — within such new legal bases — on projects should involve the Commission, the EIB, and possibly the EIF and the Council;** [1]

(f) welcome that the Commission and the EIB will jointly monitor the progress of financing of individual priority projects and, if need be, consider appropriate ways and means to address possible horizontal financial obstacles affecting several projects; the European Council notes that if the Commission concludes that existing Community mechanisms need to be adapted or new ones created, the Commission will make appropriate proposals to the Council;

(g) invite the Council of the Union and the European Parliament urgently to finalize examination of the Commission's proposal for a financial regulation for TENs, while taking into account the need for flexibility, value for money and the above guidelines for possible future Community action.

8. The regulatory framework

The experience gained from implementing the priority projects and from dialogue with the relevant authorities in the Member States and with the private sector indicates that obstacles of a regulatory, legal and procedural nature generally account for the long implementation time of projects.

This is particularly the case for transfrontier projects, which often suffer from assessment from a purely national point of view (projects are seen as extensions of national networks), thus underestimating the benefits of global approaches and complicating the synchronization of the involved Member States' project decisions and implementation procedures. The transfrontier nature thus aggravates the regulatory delays already present in each individual Member State.

The Group considers that the problems caused by the regulatory issues constitute a major delaying factor for implementation of the trans-European networks and that action to reduce these obstacles should focus both on reducing delays due to national procedures and Union legislation (where appropriate), and on a project-specific effort.

The Group considers that a specific effort to help the priority projects individually could be the establishment of suitable vehicles ('project authorities') to promote project start-up, implementation and operation. By the transfrontier nature of projects, the vehicles would consist of representatives of (operators in) the Member States directly involved. In view of the overall objective of facilitating private involvement, such vehicles should, in principle, be open to private and public operators.

The concept of vehicles is flexible, and their main purpose is to accelerate project implementation. Depending on the specific situation, the vehicles could take on varying forms and competence. In their weakest form they could consist in a closer administrative cooperation between involved parties, whereas in most cases a separate legal entity would be preferable. A vehicle could, for instance, be project-specific or cover several projects, grouped geographically or sectorally. In some instances, a vehicle will primarily be useful in the early phases of project conception and implementation; in others the vehicles would also be in charge of project construction and even operation. Some vehicles would only serve the purpose of overcoming regulatory obstacles; others, normally in cooperation with the EIB and the EIF, could take on the financing responsibility by raising private capital directly for the projects under their authority.

The Commission will examine whether and how establishment and operation of vehicles can be facilitated by the adaptation of existing legislation or new legislation, and Member States as well as the Union institutions are invited to facilitate the creation and operation of such vehicles.

[1] The UK personal representative reserved his Government's position on any such proposals, since he did not agree to the principle of any new or 'non-conventional' forms of Community support.

The Group notes that the creation of such vehicles should be optional and thus not a precondition for eligibility for Community assistance according to existing rules.

The European Council is invited to:

(a) ask the Member States to examine possibilities for reducing regulatory obstacles in general, and for priority projects in particular; invite the Commission to study the need for Union action aimed at reducing regulatory obstacles, and invite the Council and the European Parliament to accelerate the examination of relevant proposals currently under discussion;

(b) invite the Member States to consider the creation of suitable vehicles to be responsible for the promotion of priority projects, notably by identifying obstacles to project implementation and by establishing the necessary contacts between all parties concerned; the Commission, the EIB and the EIF are invited to support actively the coordination between parties potentially interested in priority projects.

9. Follow-up procedure

The Treaty provisions already provide for Community procedures for the work on trans-European networks, and the Group considers that these will be the major avenue for the future work on networks, notably as concerns the sectoral Councils and the European Parliament.

However, in view of:

(i) the political priority and economic importance of TENs in general and of the identified priority projects in particular;

(ii) the commitments undertaken by the European Council in Brussels and in Corfu;

(iii) the demonstrated and potential added-value effect for TENs of the distinctive approach embodied in the Christophersen Group exercise, notably the identification and promotion of selected priority projects;

(iv) the fact that more work is needed, both on the individual priority projects and on horizontal issues such as regulatory obstacles, financing and ways of facilitating public/private partnerships;

(v) the fact that the Group believes that it has been able to set in motion important developments for the benefit of TENs, but that its own role has come to an end with the termination of its current mandate;

the Group considers that there is a need for a follow-up procedure to the Christophersen Group exercise. This should be complementary to and fully respect existing procedures, and aim specifically at continuing the special effort to identify and accelerate the priority projects. The complementary measures should respect the following principles:

(i) The follow-up procedure should provide for the regular monitoring of priority projects at the highest political level, as well as a focused effort to advance the projects at the practical level.

(ii) The concept of lists of priority projects should be retained as a means of identifying, on a regular basis, TEN projects of trans-European importance which deserve special attention.

(iii) A project-specific 'bottom-up' approach should be pursued.

(iv) Efficient, flexible and non-bureaucratic organizational structures for priority project start-up and implementation should be encouraged.

(v) Private involvement in the development of trans-European networks should be enhanced wherever possible.

In the light of these principles, the European Council is invited to endorse the following recommendations for specific follow-up measures to the Christophersen Group exercise:

(a) In the context of the White Paper action plan follow-up, adopted by the European Council in Brussels in December 1993:

(i) the Commission will each year in December submit, after consultation with the Member States, a report to the European Council on progress on TENs, and the priority projects in particular; it will forward this report also to the European Parliament;

(ii) in the light of this report, the European Council will ensure the provision, on a continuing basis, of the necessary impetus to the implementation of priority projects.

(b) Following the mandate given by the European Council in Corfu, the Commission will report to the Council if the implementation of any of the priority projects is jeopardized by financial or other obstacles, and the Council will immediately consider, with the Commission and the EIB, appropriate responses. The Commission and, where appropriate, the EIB will monitor jointly the progress of the financing of individual priority projects; wherever financial obstacles of a general nature and common to several projects occur, they will consider ways and means to facilitate the financing. If the Commission concludes that existing Community mechanisms need to be adapted or new ones created, the Commission will make appropriate proposals to the Council;

(c) The Economic and Social Committee and the Committee of the Regions will be informed regularly by the Commission about progress on TENs.

(d) Member States are invited to consider the creation of suitable vehicles to ensure the promotion, construction and operation of the priority projects. The Commission will examine whether and how establishment and operation of vehicles can be facilitated by the adaptation of existing legislation or new legislation.

(e) The Commission should continue to arrange project seminars for priority projects where appropriate.

Annex I

List of transport priority projects

I — Priority projects

Work begun or to begin by the end of 1996

High-speed train/combined transport North–South	I/A/D
Nuremberg–Erfurt–Halle/Leipzig–Berlin	
Brenner axis Verona–Munich	
High-speed train (Paris–)Brussels–Cologne–Amsterdam–London	
Belgium: French/Belgian border–Brussels–Liège–Belgian/German border;	B
Brussels–Belgian/Dutch border	B
United Kingdom: London–Channel Tunnel access	UK
Netherlands: Belgian/Dutch border–Rotterdam–Amsterdam	NL
Germany: (Aachen–)[1] Cologne–Rhine/Main	D
High-speed train South	E/F
Madrid–Barcelona–Perpignan–Montpellier	
Madrid–Vitoria–Dax	
High-speed train East	
Paris–Metz–Strasbourg–Appenweier(–Karlsruhe)	F/D
with junctions to Metz–Saarbrücken–Mannheim	F/D
and Metz–Luxembourg	F/L
Conventional rail/combined transport: Betuwe line	NL/D
Rotterdam–Dutch/German border(–Rhine/Ruhr)[1]	
High-speed train/combined transport France–Italy	F/I
Lyons–Turin	
Turin–Milan–Venice–Trieste	
Greek motorways: PATHE:	GR
Rion–Antirion, Patras–Athens–Thessaloniki–Promahon (Greek/Bulgarian border) and	
Via Egnatia:	
Igoumenitsa–Thessaloniki–Alexandroupolis–Ormenio (Greek/Bulgarian border–)Kipi (Greek/Turkish border)	
Motorway Lisbon–Valladolid	P/E
Conventional rail link Cork–Dublin–Belfast–Larne–Stranraer	IRL/UK
Malpensa airport (Milan)	I

[1] Ongoing construction support already provided at Community level.

Fixed rail/road link between Denmark and Sweden (Øresund fixed link) including access routes for road, rail and air	DK/S
Nordic triangle[1]	FIN/N/S
Ireland/United Kingdom/Benelux road link	UK/(IRL)
West coast main line	UK

II — Further projects of importance

Acceleration possible so that work can begin in about two years

Combined transport projects identified up to now in France, Germany, Italy, Belgium, Portugal and Spain	EU-wide
Spata airport (Athens)	GR
Berlin airport	D
Maurienne motorway	F
Marateca–Elvas motorway	P
High-speed train in Denmark	DK
Transapennine highway Bologna–Florence	I
High-speed train/combined transport Danube axis Munich/Nuremberg–Vienna(–Budapest–Bratislava)	A/D
Nice–Cuneo motorway	I/F

Projects which need to be further examined

Fehmarn Belt fixed link	DK/D
Bari–Brindisi–Otranto motorway	I
Rhine–Rhône link	F
Seine–Scheldt link	F
Elbe–Oder link	D
Danube upgrading between Straubing and Vilshofen	D
High-speed train Randstad–Rhine/Ruhr Amsterdam–Arnhem(–Cologne)	NL

[1] Subject to adhesion.

Road corridor Valencia–Saragossa–Somport	E
High-speed train (Brenner–)Milan–Rome–Naples	I
Magnetic levitation train: Transrapid	D
High-speed train connection Luxembourg–Brussels	B/L
Road corridor Naples–Reggio di Calabria	I

III — Europe-wide projects

With regard to the projects which deal with the implementation of new technologies and relate to traffic management and which will improve the use of infrastructure for all modes of transport (land, sea, air) benefiting several Member States, the following projects were identified as pilot actions:

Air-traffic management system: an integrated aircraft monitoring system with Eurocontrol

Road-traffic management services: pilot actions using traffic control centres and radio data system-traffic message channel (RDS-TMC)

Vessel-traffic management and information services: a European ship reporting system

Multimodal positioning system by satellites: pilot installation using Inmarsat

Pilot projects for a railway management system: control command systems for selected high-speed rail links

IV — Projects connecting to third countries

Priority project: work begun or to begin within two years

Berlin–Warsaw–Minsk–Moscow (rail and road)

Further projects of importance

Dresden–Prague (road and rail)

Nuremberg–Prague (road)

Fixed link across the Danube (road and rail) between Bulgaria and Romania

Helsinki–St Petersburg–Moscow (rail/road)

Trieste–Ljubljana–Budapest–Lvov–Kiev (rail/road)

Baltic Sea telematic platform

Annex 2

List of priority energy network projects

List A: Priority energy network projects

(Projects on which work has already begun or may begin in the short term — up to 1997 — and which are to be completed in the medium term, up to 1999.)

Projects in the European Union

(a4)	Italy–Greece	electrical interconnection (submarine cable)
(b6)	France–Italy	electrical interconnection
(b7)	France–Spain	electrical interconnection
(b10)	Spain–Portugal	electrical interconnections
(c2)	Denmark	east-west electrical interconnection (submarine cable)
(e6)	Greece	natural gas network
(e5)	Portugal	natural gas network
(f6)	Portugal–Spain	gas interconnections

Projects with neighbouring countries

(h4)	Algeria–Morocco–European Union	gas delivery pipeline
(h7)	Russia–Belarus–Poland–European Union	gas delivery pipeline

List B: Other priority energy network projects which have not reached the same state of maturity

(Projects on which construction work should be begun in the medium term, at least as regards the initial stages.)

Projects in the European Union

(d6)	Italy–Austria	electrical interconnection
(d3) (d11)	Norway–Continent	electrical interconnections between Norway and Germany, between Norway and the Netherlands, and electrical connections within Norway to link up with these interconnections.

Projects with neighbouring countries

(n2)	Baltic ring	electrical interconnections between Germany, Poland, the Baltic States and Finland.

NB: The project codes are the same as in the proposed guidelines (COM(93) 685).

Annex 3

List of the personal representatives of the Heads of State or Government

Chairman: H. Christophersen, Vice-President, European Commission

A U. Stacher
Director-General for European Integration and Economic Coordination

B J. Smets
Kabinetschef van de Eerste Minister voor de Economische en Sociale Cel
Chef de Cabinet du Premier Ministre pour la Cellule économique et sociale

D G. Haller
Staatssekretär im Bundesministerium für Finanzen

DK J. Thomsen
Departementchef i Økonomiministeriet

GR L. Nikolaou
Permanent Adviser to the Prime Minister

E J. A. Zaragoza
Secretario de Estado de Política Territorial y Obras Públicas

F P. de Boissieu
Représentant Permanent de la France auprès de l'Union Européenne

IRL J. Loughrey
Secretary, Department of Transport, Energy and Communications

I A. Minuto Rizzo
Consigliere diplomatico del Ministro del bilancio e della programmazione economica

L G. Reinesch
Commissaire du Gouvernement

N T. Moe
General Director, Finansministerens Kontor

NL T. Van de Graaf
Raadadviseur voor Financiële economische aangelegenheden en voor infrastructuur
Secretaris-Generaal van het Ministerie van Algemene Zaken

P J. Peneda
Deputato da Assembleia da República

Annex 3

S M. Persson (July-September: P. E. Johansson)
Under-Secretary of State, Ministry of Transport and Communications

FIN J. Korpela
Secretary-General, Ministry of Transport and Communications

UK G. Fitchew (as from late October: B. Bender)
Head of European Secretariat of the Cabinet Office

Sir Brian Unwin, President of the European Investment Bank, also took part in the work of the Group.

TECHNICAL PAPERS

I — The background

1. The Maastricht Treaty

The Maastricht Treaty, in giving a specific section (Title XII) to trans-European networks (TENs), gave formal recognition to their importance for the Union and its Member States. The Treaty sees the establishment of TENs not only as a legitimate and laudable end in itself, but also as a valuable tool towards implementing other primary Union policies.

Article 129b of the Treaty lays down that the TENs should contribute to economic and social cohesion and to the creation of the internal market. To this end the Union is to aim at promoting the interconnection and interoperability of national networks, as well as access to such networks. It has also to take account in particular of the need to link island, landlocked and peripheral regions with the central regions of the Union.

In order to achieve these objectives the Treaty entrusts three main tasks to the Union:

(i) to establish specific guidelines for transport, energy and telecommunications covering the objectives, priorities and broad lines of measures envisaged in the sphere of trans-European networks; these guidelines shall identify projects of common interest;

(ii) to take any measures that may prove necessary, in particular in the field of technical standardization, to ensure the interoperability of the networks;

(iii) to support the financial efforts made by the Member States for projects of common interest financed by Member States and identified in the framework of the guidelines, particularly through feasibility studies, loan guarantees or interest-rate subsidies.

As regards the Member States, the Treaty calls on them, in liaison with the Commission, to coordinate among themselves the policies pursued at national level which may have a significant impact on the achievement of the objectives referred to above. The Commission can, in close cooperation with the Member States, take any useful initiative to promote such coordination.

Finally, the Treaty foresees the possibility of the Union cooperating with third countries to promote projects of mutual interest and to ensure the interoperability of networks.

2. The Commission's White Paper on growth, competitiveness and employment

In its White Paper on growth, competitiveness and employment, the Commission proposed that the implementation of TENs be accelerated as one of the main ways to stimulate growth, increase competitiveness and create employment over the period 1994-2000. Achieving this aim requires the rapid implementation of the TENs and since the Commission was not in a position to shorten the lengthy administrative procedures in the Member States which this acceleration would require, it proposed instead to concentrate on a small number of priority projects and to adopt an *ad hoc* approach to facilitate and speed up their implementation.

Action by the Union in the field of TENs is necessary because the absence of open and competitive markets is hampering, to differing degrees, the optimal use of existing networks and their completion in the interest both of consumers and operators. Furthermore, the inherent sluggishness of the preparation, planning, authorization and evaluation procedures and regulatory obstacles hamper the implementation of large projects. In addition, experience shows that transnational projects frequently run into difficulties because of conflicting priorities between the countries involved.

It is well worth underlining the principles underlying the Commission's approach to the TENs as expressed in the White Paper:

Subsidiarity. Creating the TENs is primarily a task for the Member States. The Union's role is important but limited: to act as a catalyst, bringing out the common interest of projects, convening project seminars (see 'bottom-up approach' below) and facilitating the implementation of

the projects by helping to find solutions to financial and regulatory obstacles.

Public/private partnership, especially in financing. The long-term investment required in some sectors, particularly in transport infrastructures, necessitates new types of partnerships between private and public financing. In addition, the constraints on the Community's and the Member States' public budgets limit the scope for investment by the public sector. The Commission has calculated that some ECU 400 000 million needs to be invested in the TENs between 1994 and 2010 and, for the reasons just mentioned, a considerable part must come from the private sector.

Bottom-up approach. In the bottom-up approach the seminars or workshops on individual projects play a central role. Depending on the specifics of each individual project, they involve, in principle, all interested partners: national and regional authorities, promoters, financial institutions, industrialists, users, etc. Their task is to identify the specific problems of each individual project — financing in general, private-sector investment in particular, non-financial obstacles, especially of a planning and administrative nature, etc. — and propose concrete solutions. The Commission's role is that of catalyst, convening and facilitating the work of the seminars. The EIB participates in these seminars as a matter of course. The findings of the project seminars have an important role to play in enabling the Group to address horizontal issues and to study further the financing issues.

3. The European Council, Brussels, December 1993

The European Council, at its meeting in Brussels in December 1993, on the basis of the Commission proposals in the White Paper, took a series of important decisions aimed at accelerating the implementation of the TENs. One of these decisions was to create the special Group of Personal Representatives of the Heads of State or Government chaired by Vice-President Christophersen — the 'Christophersen Group' — to assist the Commission in its task as regards transport and energy (and later environment) network infrastructures. It also set up a parallel group chaired by Mr Bangemann to report to it on the measures to be taken as regards infrastructures in the field of telecommunications/information.

The European Council urged the Council of the Union to make full and rapid use of the possibilities offered by Article 129b of the Treaty to accelerate the implementation of the TENs. The European Council further invited the Council of the Union and the Parliament jointly to speed up the legislative procedures in order to allow the adoption of the guidelines which were still outstanding. It also addressed recommendations to the Member States.

The Heads of State or Government asked the Commission to report to it annually in December on the progress being made.

4. The European Council, Corfu, June 1994

The European Council held in Corfu in June 1994 took note of the Group's interim report and welcomed the work achieved so far by the Group. On the basis of the Group's report, the European Council agreed on a first priority list of 11 major transport projects and reaffirmed the importance it attached to the other important transport projects in the report. As far as the energy sector was concerned, the European Council took note of the projects listed by the Group and requested that the Group continue its work, examining in particular their economic viability. The Member States involved were asked to make every effort to ensure that all the transport projects whose preparation is sufficiently advanced will be started up immediately and that the others are started up as far as possible during 1996 at the latest by accelerating administrative, regulatory and legal procedures. The European Council invited the Commission to take all useful initiatives in this respect including the convening, where appropriate, of project seminars aimed at coordinating the activities of all parties involved.

The European Council called on the Group, together with the representatives of the acceding States, to continue their work on the basis of the mandate proposed in the Group's report:

(i) studying further the extension of the trans-European networks to neighbouring countries (in particular to

Central and East European countries and to the Mediterranean Basin);

(ii) examining the question of relevant networks in the field of environment.

As regards the financing of networks, the European Council confirmed that measures would be taken — if it proved necessary — in order that priority projects do not run into financial obstacles which would jeopardize their implementation. It noted the conclusions of the Ecofin Council and the studies carried out by the Commission and asked the Group and the Ecofin Council to continue to examine the question until the Essen European Council, taking account of the specific characteristics of each project, the leading role of private funding and the judicious use of existing Community resources.

The European Council asked to be informed if it appeared that the achievement of certain projects was threatened for financial reasons linked to insufficient profitability — for example because of the length of investments or environmental constraints. The European Council committed itself to consider immediately with the Commission and the EIB the appropriate responses, within the limits set by the financial perspectives. In the minutes of the meeting, however, it was noted that this did not constitute a guarantee of financing from the Community.

5. Recent developments, January to November 1994

Pursuant to Article 129c of the Treaty and to the conclusions of the Brussels European Council, the Commission, in the course of the first months of 1994, tabled proposals for:

guidelines in the fields of energy and transport;[1]

interoperability of high-speed trains;[2]

a financial regulation for TENs.[3]

[1] COM(93) 685 and COM(94) 106, respectively.
[2] COM(94) 107.
[3] COM(94) 62.

These proposals are currently being examined by the Council, European Parliament, the Committee of the Regions and the Economic and Social Committee. Their adoption should take place in the course of 1995.

6. The Christophersen Group exercise

(a) Aims and working methods

The Group has seen its task as primarily one of speeding up and facilitating the work already under way in the Union and Member States, so that clear decisions on priorities could be taken and projects implemented. It has been careful not to duplicate the work being done elsewhere, especially in the Council of the Union, but to aim at adding value to the work on implementing TENs. Specifically the Group set itself the aims of:

(i) identifying priority projects and facilitating the subsequent work in specific project seminars;

(ii) accelerating the priority projects, notably by organizing project seminars;

(iii) addressing the project-specific and horizontal obstacles to implementation of TENs in terms of the regulatory framework;

(iv) helping to clarify the financing issues and ways of encouraging private investment in the projects;

(v) facilitating rapid political agreement on the transport and energy guidelines.

It was agreed that the decisions should be taken on the basis of the broadest consensus possible, so as to give the Group's proposals maximum impact.

The Group's work has followed a bottom-up approach. On the one hand, this is due to the — in some cases — very incomplete information available about proposed priority projects, which in turn is related to their lack of maturity. On the other hand, the bottom-up approach was chosen to provide concrete information about specific obstacles in project implementation, on the basis of which lessons about horizontal difficulties and remedies could be learned.

As far as the identification of transport and energy priority projects is concerned, the Group adopted selection criteria (see below) and concentrated its discussions on the more mature projects.

The list of the personal representatives of the Heads of State or Government is to be found in Annex 3 on p. 27. As from July 1994, the personal representatives of the Heads of State or Government of the four acceding countries also took part in the work of the Group. In view of the long experience of the European Investment Bank in financing major infrastructure works, Vice-President Christophersen invited the President of the Bank, Sir Brian Unwin, to participate in the Group. The Commission also invited the Bank to take part in the various project seminars and other preparatory meetings.

Between January and November 1994, the Group met 11 times and had discussions with a wide range of representatives of international and private financial organizations and leading industrial figures. Almost 70 working papers were submitted.

The Group has taken into account the report of the group of prominent people from the telecommunications sector, under the chairmanship of Commissioner Bangemann, in its examination of traffic-management systems.

(b) Overall assessment

The Christophersen Group exercise constitutes an exceptional and primarily political effort, and it should be evaluated accordingly.

The exercise should thus be seen in the larger context of Community action in each of the sectors of transport, energy and environment, where much progress has taken place in 1994.

The primary objective has been to identify and accelerate priority projects. The main results are contained in the Group's report to the Essen European Council and elsewhere in these Technical Papers.

The Corfu European Council asked the Group to examine the question of relevant networks in the field of environment. The late inclusion in the mandate of the Group, and the less-pronounced network characteristics as well as the absence of guidelines for environment networks, have made it impossible for the Group to reach the point of identifying individual priority projects within the short time available. The Group's work has, however, set in motion an effort to establish guidelines in relevant sectors of environmental protection.

The Group has obtained concrete acceleration of the priority projects by focusing the attention of all the involved parties, including the private sector, and thus creating the conditions for synergy effects. In this respect, the personal representatives have played a key role.

The Group's work on individual priority projects also led it to consider obstacles of a more general nature that affect several priority projects or infrastructure development in general. Thus, a number of areas for potential horizontal measures were identified and work on these initiated.

The Group considers that, in addition to the immediately visible results of the Group's effort, a momentum has been created which should facilitate infrastructure development in the future. Much political and media attention is being devoted to the issue, and the private sector has warmly welcomed the exercise.

Throughout the Christophersen Group's work, the objective of facilitating public/private partnerships has been pursued. The Group and the Commission services have solicited and received comments from the private sector, and representatives from the private sector have submitted written contributions and met with the Group. Private operators have participated in a number of project seminars, and the Commission has arranged seminars on public/private financing. In the work on the individual projects, emphasis has constantly been focused on expanding the scope for private participation. Unquestionably, national authorities are today generally much more open to involvement by the private sector. The Group considers that these developments should be further advanced in the follow-up procedure.

The objective of public/private partnerships will necessarily take some time to emerge as a reality, but a process of modernization of national authorities' approaches in this field has been initiated, and the currently weak market mechanisms for direct private involvement in these activities should grow stronger with time.

At the practical level, the Group's work has been supported by so-called 'project seminars', convened by the

Commission, and gathering, as appropriate, all interested parties, including the private sector. These project seminars or round tables have been complemented with other project-specific efforts.

The importance of these measures should not be underestimated; the exchange of information on projects and indications of intent on the part of public and private parties is time-consuming and much less straightforward than normally assumed. The project-seminar approach lends itself well to certain projects and to certain stages of project planning.

The project-seminar approach has, however, its limits. The Group considers that the facilitation of contacts on, and promotion of, specific projects should be strengthened in the future, and it therefore recommends specific additional measures, notably on the creation of administrative vehicles.

In assessing the Christophersen Group exercise, it should finally be borne in mind that infrastructure projects of exceptional scale necessarily take time to conceive, plan and implement, and that the specific planning and implementation is outside Union competence.

II — Transport networks

1. Introduction

The Treaty on European Union gives new responsibility to the Union in the matter of transport infrastructure. Transport infrastructure policy becomes part of the wider context of infrastructure network developments for the Union. Title XII requests the Union to establish trans-European networks for energy, transport and telecommunications. For this purpose, the Union shall establish guidelines that will describe the objectives of the network, broad lines of measures, and priorities for action; furthermore the guidelines shall identify projects of common interest.

The proposal on the guidelines for the development of a trans-European transport network (COM(94) 106), as tabled in April 1994 by the Commission to the Council and European Parliament for co-decision, initiates an ambitious plan: to integrate the present mode-oriented national transport networks into a single trans-European transport network by the year 2010. For this purpose, the Union has identified projects of an order of magnitude of about ECU 400 000 million, of which about ECU 230 000 million should be invested in projects up to the year 2000.

While the Council and Parliament undertake to arrive at a decision during the coming months, the work done by the Christophersen Group has been an important interim measure in achieving the described goals of the guidelines, in particular by accelerating the completion of projects which can be seen as crucial for the establishment of the trans-European transport network. The Group has provided the necessary political backing permitting, amongst others:

the likely removal of regulatory obstacles;

the examination and implementation of unconventional financing schemes;

the involved Member States to reach faster the necessary joint decisions;

the public-private partnership to be promoted.

2. The background: The network approach

Transport infrastructure has always been high on the European agenda: transport policy was already considered a common policy in the Rome Treaty; it was further developed with the introduction of the trans-European network title in the Treaty on European Union, which came into force in November 1993. One of the first steps taken by the Union was to introduce coordination procedures between the Member States and the Union. In 1978 the Committee on Infrastructure was established; it followed several Council regulations giving support to a limited number of projects, the last of which is to expire in December 1994. However, the limited scope of these regulations did not allow the development of an integrated European infrastructure policy.

The network approach taken by the Union Treaty aims at providing the necessary infrastructure for sustainable mobility as outlined in the White Paper on the future common transport policy: safe, efficient and environmentally friendly forms of transport for the benefit of the Union citizens. The establishment of the trans-European transport network must be seen as an important instrument for the social and economic cohesion of the Union and, in particular, the local and regional communities will benefit from it. It will prove to be of specific importance for the peripheral regions: not only will the regional networks be greatly enhanced through better access to the main transport corridors, but also access to main European centres will be significantly improved.

Further to this, economic bodies will benefit from the synergies realized through an intelligent interlinking of the individual transport modes into a single network and through corresponding services provided. Therefore important actions when establishing the network are targeted towards its proper management.

3. Projects of common interest

Projects of common interest are considered to be the constitutive elements of trans-European network policy. They help to develop the network and are defined according to a list of criteria which include the following:

(i) the completion of the connections, key links and interconnections needed to eliminate bottlenecks, fill in missing links and complete major routes;

(ii) the development of access to the network, taking particular account of the need to link island, peripheral and landlocked regions to the centre of the Union;

(iii) the design, development and implementation of systems for the management and control of transport and network traffic with a view to their optimization.

Furthermore, projects of common interest, as identified in the guidelines, should be potentially economically viable and comply with all Union policy. The multimodal character of the guidelines incorporates environmental policy as an integral part of overall transport policy. This is the contribution made by the trans-European transport network to the implementation of the common transport policy and its objective of sustainable development.

4. The Christophersen Group list: Priority projects forming key links missing in the network

The Christophersen Group established a list of projects which it considers to be of a priority nature for the development of the Union's transport infrastructure.

When establishing this list, the Group used, in the first place, the criteria for the identification of projects of common interest but added a further criterion on the basis of proposals set out by the Commission and in close cooperation with the EIB. Priority projects should comply with all the following criteria, that is, they must:

(i) be projects of common interest fulfilling the criteria set out in the Community guidelines for the development of a trans-European transport network and identified there;

(ii) be of exceptional scale, bearing in mind the type of project and the relative size of the Member States directly concerned;

(iii) pass the test of economic viability, including improvements in the Union's competitiveness and technological performance;

(iv) allow scope for private investment;

(v) be mature, so that the projects can be implemented quickly;

(vi) avoid public financing of infrastructure where it would lead to distortion of competition contrary to the common interest;

(vii) comply with the Union's legislation in particular regarding the protection of the environment.

As to maturity, the priority projects were classified into three groups. For the first group of projects, work is either under way or should begin within two years. With the second group, acceleration appears possible so that work can begin in two years' time. The third group consists of projects of great importance for the network, which appear likely to take more time before work can begin or which require further study.

5. Priority projects identified by the Group

The European Council in Corfu has already acknowleged a preliminary set of 34 priority projects and five traffic-management projects. In subsequent actions, special attention was given to a smaller number (approximately 10 to 15) of the above projects which are highly advanced as regards maturity and are likely to have a favourable impact on growth, competitiveness and employment.

The final list proposed for the Essen Summit shows a set of priority projects selected to meet a twofold goal: firstly, they must possess a strategic character with a view to improving the attractiveness, competitiveness and cohesion of Union territory and its economy; secondly, they must contribute to the short/medium-term perspective of growth and employment impulses. At the same time, most of the projects could benefit from the involvement of private capital as regards project realization.

In addition to the hardware infrastructure projects identified by the Group, the particular role of traffic management systems has to be stressed, as networks without management will fail to serve their purpose. In addition, the mutually beneficial influence of the information society and other economic sectors such as transport can help to consolidate the worldwide strategic position of European industry; in the realm of transport telematics,

European industry has a leading position to lose. Of specific interest are those projects which incorporate telematics architecture into the transport sector via pilot projects and in some cases full-scale developments. Therefore, priority consideration must be given to harmonized command control systems for the railways on a European scale, a single air traffic management system and road traffic management services. Vessel-traffic management and information services for European waters will help to improve safety at sea, particularly in connection with the transport by sea of dangerous goods, which is obviously of strategic priority.

6. Effects on growth, employment and competitiveness

Total investment in 34 of the projects under consideration — in the order of ECU 100 000 million over 15 years — will have a rather small, direct impact on economic factors within the Union: 100 000 to 200 000 jobs are expected to be created for the implementation of these projects, and economic growth may be directly affected by 0.1%. Indirect effects on activities surrounding the construction sector could be significant. However, the maximum total result is unlikely to exceed 0.3% of GDP (gross domestic product) and about 400 000 additional jobs.

However, the indirect impact on regional development where such large projects are implemented should on no account be underestimated: better access to central areas of activity within the Union will lead to improved regional competitiveness and business activities. In all, 58 000 km of motorway and more than 70 000 km of railway lines (23 000 km of which allow speeds of more than 200 km/hr) will help to improve accessibility to many of the Union's regions substantially, paving the way for new opportunities for the citizens in the peripheral regions.

The following examples may serve to illustrate the above points: as far as a single project is concerned, the Malpensa airport, for instance, will generate 6 000 permanent jobs at the airport itself while between 12 000 and 18 000 additional jobs will be created throughout the region. The construction as such will provide about 20 000 man-years of employment. An example on a different scale is the completion of the entire trans-European high-speed railway network. Immediately, i.e. only during construction (period 1990-2010), jobs equivalent to about 5.6 million man-years will be created, this is to say 280 000 per year. Further to these, about 710 000 permanent jobs will be either maintained or newly created so that out of 1 000 employees in Europe, 4.5 will work in the high-speed railway sector.

Particular impact is expected to come from the realization of the traffic management projects, as Europe is at present playing the leading role: less congestion in the air and on the roads will save costs in the order of ECU 10 to 20 000 million per year; additional value-added services will offer new business opportunities which could well reach an annual volume of ECU 50 to 100 000 million, providing enormous opportunities for small and medium-sized companies specializing in information and telecommunications services.

As regards the impact of transport infrastructure on the environment, any project applying for either Community funding or EIB loans has to pass the environmental impact assessment as set out in the Community Directive 85/335; in other words, before a decision with respect to funding can be made the successful completion of the environmental impact assessment has to be proven.

Environment, looked at in an appropriate manner, should not be considered as being an obstacle to sustainable mobility; the Commission favours assessing the possible impact infrastructure might already have at the early stages of a project, thereby also contributing to streamlining and optimizing relevant administrative procedures without lowering standards. With a view to the overall impact of the trans-European transport network on the environment, the Commission is at present preparing a comprehensive study.

7. Working methods and main lessons to be drawn

The priority projects have been subject to screening, the intensity of which has, however, varied according to the different parts. The projects in the second part have mainly been subject to information collection in order to allow a preliminary assessment of the situation. Seminars and/or

working round tables have been conducted for the projects in the first part aimed at appraising their situation, potential limits, alternative future developments, financing issues, etc. This exercise has clearly demonstrated the valuable role that the Commission can play in the development of the trans-European transport networks, as set out in the Treaty and in which the EIB has actively participated in allowing different voices to be heard. In this respect, the participation of national administrations and transport operators — notably railway companies, regions, banks, interested sectors of industry, etc. — around one table can be considered as having been crucial for the progress in several projects. The following first set of conclusions may be drawn:

(i) The projects show different degrees of maturity in various respects; however, common to most of the priority projects is that they were hindered mainly due to one or a combination of the following points:

a too-narrow scope of the projects in terms of enhancing profitability and also as regards geographical divisions where several Member States were involved;

different priority settings by the Member States concerned;

environmental problems still to be solved;

an absence of appropriate legal formulas at European level;

a lack of a single cross-border agent endorsed with a clear mission to push forward the project as a whole;

a long tradition in public financing of transport infrastructure, combined with reluctance in tackling public/private partnership schemes;

insufficient availability or dynamic use of public funds.

(ii) The usefulness of the coordinated actions and the role of the Commission in terms of providing assistance as regards unblocking certain approaches; sometimes it was the first time in many years that actors have sat around a table recognizing that they have an interest in the same projects. In this case, the association of the industry and private banking sector seems a very important one. However, it needs to be noted that not all Member States show a clear willingness to cooperate with the private sector and the Union or with other potentially interested partners, such as regional communities.

(iii) Examination of the financial difficulties proved to be very helpful: limitations of certain approaches towards the priority projects emerged, as well as new formulas envisaged in some cases, particularly in response to the new Union financial instruments (i.e. high speed in France and Spain in the first case and in the United Kingdom and the Netherlands in the second). In addition, it became quite clear that the Member States could benefit from the experiences of others, especially as regards risk-sharing schemes which are the key in terms of public/private partnerships.

(iv) The analysis of the different administrative and legal set-ups in respect of the different Member States provided some new ideas on how to remove hindrances in view of transborder project developments (i.e. Lyons-Turin rail connection).

(v) The need for an integrated approach to these large-scale projects, not only with regard to their consideration as single entities, but also to their intermodal aspects (for instance the Brenner rail link together with the road corridor, or Malpensa airport and its rail access).

The work done so far on the first 11 priority projects shows that these activities must be considered as a first but imperative step for the implementation of every such important priority project. It seems clear that the guidelines for network developments, in which common interest projects are defined, and the possibility of new financial set-ups for several of those projects require working round tables or specific seminars (as a missing link in the decision-process chain?) prior to a decision being taken on whether to go ahead with the project; in some cases such meetings were fundamental in producing a breakthrough towards implementation for projects which had been under discussion for over 20 years.

The Commission is ready to continue this process with a selection of projects every year and, for this purpose, the Commission will come up with a rolling plan on these priority projects based on the experience gained during the work for the Christophersen Group. Close cooperation with the EIB and in particular the EIF is envisaged. However, private sector actors from the banking and industrial communities, in particular those experienced in project design, should participate in these future activities.

8. Traffic management services and their development in Europe

Traffic management services have an important contribution to make in the realization of the goals of the common transport policy, namely sustainable mobility. The absence of a common European approach has led many of the different actors (both public and private) in the transport field to develop, implement, and operate differing information and command systems. The recognition of this state of affairs is the premise for the positive role the Community should play towards the development of traffic management services at a European level.

The research and development carried out within the context of the Community framework programmes, particularly EURET and DRIVE, has led to the development of more advanced and standardized traffic management services concepts. This new potential encouraged the Commission, in its proposal for guidelines for the development of a trans-European transport network,[1] to incorporate traffic and transport management as an integral part of the approach. The proposal is based upon the principles of interconnection, interoperability and access. It will be essential to ensure that these principles are maintained in traffic management services.

As a follow-up to the White Paper on growth, competitiveness and employment,[2] the Commission adopted, in July 1994, a communication to Parliament and the Council on Europe's way to the information society.[3] This communication promotes an action plan for a regulatory and legal framework, for networks, basic services and applications in the context of the information society. The priority applications considered include, among other things, traffic management services.

The rapid implementation of traffic management services based upon these principles will act as a catalyst to the services and products industry. This will have clear benefits and important implications for the development of high-technology industry and employment in Europe. Traffic management services also form an important component of the information society. Their successful implementation will bring progress in the flow and management of information. They will also make an important contribution to increasing efficiency (such as reliability of journey times) and improving safety in the transport sector.

Beyond the single interest of the transport sector, modern and performant traffic management services, making efficient use of the most recent information and communication technologies, will contribute in a significant manner to the achievement of the objectives emphasized in the White Paper on growth, competitiveness and employment: creating more employment and restoring economic prosperity in Europe in a safer environment.

For example, in road transport alone, such investments would boost a service market which could reach an annual volume of 10 to 15 times the telematics infrastructure investment mentioned in the table below.

The use of a positioning system by satellites could open another market (worth ECU 50 000 million) for equipment and services within the next 10 years.

A communication from the Commission to European Parliament and the Council on telematics applications for transport in Europe, which covers the whole action area for transport management and value-added services, was adopted by the Commission on 4 November 1994.

(a) Main areas of activity

The five principal traffic management services explained in greater detail in the Annexes cover the areas of road, rail, sea-vessel traffic management information services (VTMIS), air traffic management (ATM) and a positioning system by satellites.

Investments envisaged for the successful implementation of traffic management services are estimated to be about ECU 11 500 million until 1999 and about ECU 34 000

[1] COM(94) 106, OJ C 220 of 8 August 1994.
[2] ISBN 92-826-7423-1 (Parts A+B), ISBN 92-826-7071-6 (Part C).
[3] Communication of the European Commission, COM(94) 347.

million until 2010. For each mode, the figures are approximately:

(million ECU)

	until 1999	until 2010
Road traffic management services [1]	2 600 [2]	31 000
Air traffic management	6 500	not known
Sea-vessel traffic management information services	800	1 100-1 500
Rail traffic management services	350	710
Positioning system by satellites	200	850

[1] System infrastructure and on-board equipment.
[2] System infrastructure: up to 1999: ECU 2 000 million.
up to 2010: ECU 13 000 million.

(b) Priority areas (1994-96)

The degree to which traffic management services have been developed varies greatly within the Community, both according to the mode of transport (air, road, rail or sea) and whether it has a local, national or international dimension.

In certain sectors, traffic management services operating on a European or international basis (e.g. air traffic management) have already been functioning for a number of years. However, there are other sectors where these systems have not yet been developed to the same degree, where they have still not made full use of the technological opportunities and where they have been designed essentially to meet local or national needs (e.g. sea-vessel and road traffic management). The European Union could provide the vital impetus for the establishment of such services by giving them a European dimension from the outset or encouraging the integration of existing systems, where these have been developed on an exclusively national basis and are therefore characterized by fragmentation.

In particular:

In the rail sector, the European rail traffic management system (ERTMS) has developed to a point where certain components of the system can enter into the predevelopment phase. This phase must be based on full-scale tests on the European high-speed train network. The full-scale tests, in which both railway constructors and operators must be involved, should begin as soon as possible. The costs of carrying out these tests represent an additional burden for railway operators who agree to carry out such tests on their own network. As the tests will benefit all Community operators, funding will have to be found that allows those who agree to these tests to be able to carry them out without economic problems. However, full implementation must be financed from the resources of the railway network.

In the road sector, in the short term, the immediate priority is the implementation, on a European scale, of the basic infrastructure consisting of monitoring equipment, traffic control and management centres using a basic telematics system architecture that will safeguard their interoperability and interconnectivity. Particular attention should be given to the collection, validation and dissemination of traffic information to individual road users. For this purpose the implementation of a pan-European automatic traffic information and management service based on the radio data system-traffic message channel (RDS-TMC) appears to be the most appropriate first step.

In the medium term, emphasis should be given to the establishment of an appropriate telematics infrastructure, to foster a better traffic management by the application and use of innovative control strategies, tools for automatic incident detection, travel and traffic information services (whether broadcast via RDS-TMC or transmitted via cellular radio or beacons), multi-purpose electronic debiting systems for automatic fee collection or access control purposes, and satellite positioning systems, e.g. for monitoring of hazardous goods transport.

Investment in basic road traffic management infrastructure may have a very powerful leverage effect if it complies with and supports the functional requirements of value-added services. These have the potential to promote significant investment and job creation in the private sector particularly for on-board equipment and the services market. This affects also the export chances of the Union. The introduction of automatic debiting systems on the TERN will contribute to improving its traffic management but at the same time stimulate the introduction of other services.

With regard to air traffic management, work is already under way. The Commission has adopted a two-stage approach: the first is to integrate air traffic control equipment so that the control is homogeneous for air space users.[1] The second stage involves exploitation of the possibilities offered by the new technologies such as digital data links (monitoring) and positioning systems (navigation). This technological progress is the only possible response to the traffic volume forecast for the next decade.

With regard to sea-vessel traffic management information services (VTMIS), the degree of development varies. For example, there are numerous traffic management services already in existence in Northern Europe, some of which merely require modernization, whereas the Mediterranean and outlying regions have practically none. The implementation of existing or forthcoming (Eurorep) directives will require the setting-up of a complete European ship reporting system based on the electronic interchange of data (EDI) and using VTS infrastructures, which, in certain cases, will therefore have to be set up specially to meet this objective.

With regard to the positioning system by satellites, the first phase of the project could begin in 1995 and, provided solutions to the various 'administrative obstacles' are found, operational systems could be available from 1996/7 onwards. A special communication to the Council and Parliament[2] provides more information on the prospects.

With regard to the extension of traffic management services to third countries, the declaration adopted by the second pan-European transport conference[3] underlines that common standards should be applied and that maximal compatibility should be sought when introducing or developing technical systems so as to ensure their interoperability. It will be also essential to develop European systems that can compete.

The Commission is currently working towards the definition of guidelines for a network of air traffic management for the Union. This network will be integrated into a pan-European network, in cooperation with the European Civil Aviation Conference in the context of the Eatchip (European air traffic control harmonization and integration) programme.

For all modes of transport the Commission will ensure that the external dimension of transport management services is duly taken into account when developing Union priority projects.

(c) Definition of priority projects

Priority is due, first of all, to those projects to be initiated in the period 1994-96 resulting from a political undertaking already made at European level, for instance through legislation or action programmes adopted under the common transport policy. In this connection the following proposals have been identified:

- **Rail**

The (German, French and Italian) operators, in cooperation with IUR/CCFE, could evaluate the ERTMS system on the routes put forward in the following projects:

The high-speed train East project (Paris–eastern France–Germany)

This project will extend from Paris to Munich and Vienna via Strasbourg. For the German section, only the line from Saarbrücken to Mannheim is included in the project.

Lyons–Turin combined transport/high-speed train link

These two major projects of the European high-speed train network are ideally suited to such tests and these two projects are included in the list of priority projects adopted already by the Heads of State or Government at the Corfu Summit.

- **Road**

On the basis of the Council resolution of 26 September 1994 on telematics in the transport sector, an initial implementation of major trans-European corridors (7 000-10 000 km) of a road traffic management system covering interconnection of traffic information and traffic control centres, and the application of RDS-TMC should be

[1] Today the fragmented organization of air traffic services has resulted in technical incompatibilities that disrupt traffic. Standardization of the interfaces between control centres and means of monitoring will guarantee compatibility.

[2] COM(94) 248.

[3] Crete conference March 1994.

launched in a concerted European way. The Committee on Transport Infrastructure is invited to grant a study on such an immediate application on 27 October 1994.

- **Air**

The setting-up, with Eurocontrol, in the area with the densest air traffic, of an integrated aircraft monitoring network that will increase the capacity of the European air space (ECU 100 million): this network will be backed up by a communications network for the exchange of data between control centres (ECU 40 million). This project will have to be carried out on the basis of the standardization rules set out in Directive 93/65/EEC.

- **Satellites**

The setting up of a pre-operational satellite navigation system taking account of the requirements of all transport users (air, sea, land): the EC contribution (ECU 60 million) will enable the aerospace industry, coordinated by the European Space Agency, to demonstrate the technical feasibility of this concept (see Commission communication on satellite navigation services (COM(94) 248)). This should be followed by a full installation (ECU 790 million) financed from user fees.

- **Maritime**

The project identified for immediate action is that connected with the implementation of the European ship-reporting system (Directive 93/75/EEC and proposal for a Eurorep Directive of 12 December 1993), backed up by the priority land-based VTS and radio-navigation infrastructures, costing around ECU 350 million, and a system for the analysis of traffic flows (EPTO).

(d) Financing

The financing of the traffic management services varies from service to service.

Recognition of the 'user pays' principle should be a common objective in the financing of traffic management services. However, as situations vary greatly in practice, it will be applied in different ways and with different degrees of sensitivity according to the sectors; it is, for example, clearly easier to recover costs from the user of a physical infrastructure than from the user of a maritime area where everyone has the right of free movement under international law. However, whatever the technical, institutional or legal obstacles to the application of this principle, solutions are currently being sought and should make it possible in future to place stringent limits on the need for public funding.

In the rail sector the integration of the European rail traffic management system into the high-speed infrastructure projects means that the financing should be an integral part of the normal project financing.

In the sea-VTMIS, financing is expected to continue to be closely linked to the public financing of the construction and the operation of infrastructure. This does not, however, exclude the possibility of private involvement. The mechanism of recovery of cost of aid to navigation is also being analysed.

The types of financing in the road sector will vary from case to case, but there are clear opportunities for public/private partnerships and the realization of the 'user pays' principle through fees.

In the ATM field, where in the past the costs were covered entirely by the tariffs, an important question to resolve is whether public funds should be used to reduce the tariffs.

The development of the positioning system by satellites will initially be financed by contributions from the European Community, Eurocontrol and from the European Space Agency. Later on, the operational system could be subject to private financing. However, one must consider that the American GPS and the Russian Glonass system can be used free of charge for the next 10 to 15 years since they have already been paid for from defence budgets.

(e) Administrative and regulatory framework

In some areas such as rail and air traffic management, the long-term regulatory framework is already quite clear as a consequence of the proposed Directive on high-speed rail and the Directive on ATM standards. In other transport modes (e.g. maritime) the regulatory framework commonly developed in the Union by the public authorities for safety objectives could be the catalyst towards telematics

applications for commercial purposes. In the case of road traffic management services and both ATM and the positioning system by satellites, it is clear that steps will have to be taken by the European Union to ensure that the appropriate framework can be put in place. In all cases however, the European Union has an important role to play, since many problems are common to all Member States, although to different degrees, and indeed have cross-border dimensions and effects. Support has also to be given to the European standardization bodies and Eurocontrol for the development of a coherent industrial approach.

The development of traffic management systems is set in a global context and, consequently, Union policy must be to ensure, in the appropriate agencies, that the European systems are recognized, integrated or compatible with systems used at world level. The regional dimension of traffic management services, moreover, implies greater cooperation with the countries bordering the Union.

(f) Conclusions

The above information confirms:

(i) the importance of traffic management services based on telematics for the establishment of the trans-European transport network and for the entire transport sector;

(ii) the priority to be given to the development of the areas highlighted for the next few years and in particular to the specific projects listed above ;

(iii) the necessity of stimulating public/private partnerships for the traffic management services;

(iv) the importance of a regulatory framework, in particular for technical standards, at a European level in order to stimulate European-scale markets.

III — Energy networks

1. Introduction

Energy networks — and the energy which they supply — are of strategic importance for economic development, industrial competitiveness and the European Union's security of supply. Although the primary economic reason for developing them is to satisfy the demand for energy, they also contribute to enabling consumers to benefit from the single market and to linking island, landlocked and peripheral regions, i.e. to the Union's objectives of integration and cohesion. The strategic importance of energy networks was recognized with the inclusion of energy networks in the common approach to trans-European networks (Title XII of the Treaty) and confirmed by the White Paper.

The networks are a fundamental component of the Union's energy infrastructure. The electricity networks contribute to more efficient electricity generation and to fuller utilization of the existing generating capacity. Consequently, development of the networks reduces the need to build new power stations, for which it is becoming increasingly difficult to find sites because of environmental protection constraints. The gas networks in turn are essential to supply the market, often from distant sources. The development of the gas networks will also enhance the flexibility and security of the Union's energy supplies.

The current situation on the Union's energy networks confirms the extremely high utilization, on the brink of saturation, of the existing interconnections between electricity grids. If the marked upward trend in transfers of electricity in the Union (which have doubled since the mid-1980s) is to continue, new electricity lines will have to be brought into service between the Member States. Nor will it be possible to meet the new demand for gas unless the existing gas pipelines are fully exploited and new transmission pipelines are brought into service.

The Commission's proposals on the guidelines for trans-European electricity and natural gas networks[1] are being examined by the Council and the European Parliament. The Council could reach agreement on all these proposals, including the list of projects of common interest, during Germany's Presidency. The European Parliament's opinion — which is needed for formal adoption of the proposals — is expected by the start of 1995.

At its meeting in Corfu in June 1994, the European Council took note of the projects listed in Annex II to the Interim Report from the Christophersen Group and requested the Group to continue its work, examining the economic viability of the projects in particular. The European Council also called on the Group, together with the representatives of the acceding States, to continue studying, on the basis of its mandate, the extension of the trans-European networks to neighbouring countries.

The Christophersen Group's work in the second half of 1994 has made it possible to complete the assessment and selection of the priority projects in the light of the objectives of the White Paper.

2. Selection criteria for the energy projects

To assess the importance of the projects submitted to it, the Group agreed to consider three categories of criteria:

(i) Eligibility criteria for action on trans-European networks, i.e.:

- correspond to the definitions, objectives and priorities already agreed for trans-European networks by the Council[2] when it examined the Commission's proposed guidelines;[1]
- display potential economic viability.

(ii) Economic impact criteria

- be of significant size in relation to the energy market of the country or countries concerned;

[1] COM(93) 685 final, 19.1.1994.

[2] Points agreed at the Council meeting on energy on 25 May 1994.

- be mature enough for work to start within the next two or three years;
- be open to private funding.

(iii) Criteria reflecting Community policies

- cause no distortion of competition;
- contribute to completion of the internal market in accordance with the Treaty and the principles laid down in Section 3 below.

The Group agreed to submit to the European Council only the energy network projects which were the most important from the point of view of the objectives of the White Paper but which have been having difficulties that have delayed the start or hampered the progress of the work.

Usually, the difficulties facing energy network projects are procedural or regulatory: the length of the feasibility studies leading to detailed definition of the projects, slowness and delays in the building permission procedures or the lack of a regulatory framework in the case of schemes to introduce new energy sources.

In the case of projects in the peripheral regions of the Union, where the financial returns on projects of this type are generally lower than in the central regions, financing can be an added problem.

3. Synergy between the development of the energy networks and completion of the internal market

The Group examined the synergy between development of energy networks and completion of the internal energy market. In this connection, the advisability of establishing a strict link between the two was raised.

There are clear synergies between development of the networks and completion of the internal market. For one thing, the availability of adequate interconnections is a *sine qua non* for interoperability, transfers and a more flexible supply. For another, the new links which it proves necessary to build must not be for the benefit of transfers between electricity or gas companies alone. They must fit into the context of a more open, competitive market, to the benefit of industrial and private consumers.

However, the Group considers that this synergy must not be turned into an argument for establishing strict parallelism with the internal energy market dossier since this could slow down the progress possible on the networks dossier in the event of protraction of the Council's discussions on the Commission's proposals on the internal energy market.

In this connection, the Commission recalled that the objective of calling into question the existing import/export monopolies, of implementing the directives on the transit of electricity and natural gas and, finally, of the proposals under discussion is to establish a legal framework compatible with integration of the markets.

4. The different financing problems raised by energy networks

The financing problem is not the same as with transport networks. In the case of energy projects, use of non-budgetary resources to finance investment in the energy sector is already the general rule. As for projects which will not produce financial returns until the longer term, particularly projects in the peripheral regions, the Union's current financial instruments — ERDF aid and EIB loans — must be drawn on as far as possible. This will generally provide a means of solving the financing problems.

Consequently, giving priority to the energy projects does not imply calling for extra public funds. The objective where financing is concerned is, clearly, to raise funds from energy undertakings, banks and other sources for projects confirmed at the highest level as being of common interest and priority.

5. Examination of the energy projects by the Group

The Group has completed its appraisal of the energy projects submitted to it and drawn the following conclusions:

(a) Each of the nine priority projects drawn to the attention of the European Council in Corfu fits in well with all the criteria applied by the Group; in particular, each of these projects displays potential economic viability.

(b) A 10th project also satisfies all the criteria applied by the Group, namely the trans-Pyrenees electricity link between France and Spain.

(c) The Group has shortlisted three large-scale projects proposed by the acceding countries, i.e.:

(i) the electricity link between Austria and Italy;

(ii) the electricity interconnections between Norway and the Continent;

(iii) the Baltic ring electricity project.

These projects fit in with all the selection criteria but are less advanced.

6. Recommendation by the Group on the energy projects

The Group recommends that the European Council adopt the list of priority energy projects in Annex 2 of the Group's report (see p. 26).

This list is divided into two parts:

(i) An A list of 10 priority energy network projects.

These projects are ready. Work can start in the near future (by 1997) and the schemes can be brought into operation in the medium term (by 1999). The political support to be given to them should help to overcome the persisting administrative, regulatory or financial obstacles to these projects (see Annex B for details) and make it possible to start the work rapidly and reap the direct and indirect benefits expected from construction and entry into service, both for the energy sector and for the European economy as a whole.

(ii) A B list of three other priority energy network projects.

These projects are of direct interest to the acceding countries. They are not as advanced as the projects on the A List. The political support to be given to them will be the starting point for in-depth study and/or finalization of these projects with a view to speeding them up. The early phases of work on these projects could start in the medium term (by 1999).

IV — Environment

1. Mandate

In the follow-up debate on the White Paper, the European Council in Corfu (24 and 25 June 1994) asked the Christophersen Group to examine the question of relevant networks in the field of environment (point 1.3 of the Presidency conclusions 'Trans-European networks and environmental projects').

2. White Paper/environment

Environment and economy have become more and more interlocked into a seamless web of causes and effects. The White Paper on growth, competitiveness and employment underlined this interdependency and suggested a sustainable model in which the economic-ecological relationship should be considered as a stimulant for growth and employment and a basis for innovation and technological development.

More specifically, the White Paper deals with environmental concerns in three major areas:

(a) in the short term, the promotion of investment in environmental infrastructure on a Union level;

(b) recommendations for medium-term actions which can strengthen competitiveness and maintain and boost employment (new technology, clean technology and biotechnology);

(c) contribution towards the implementation of a new 'sustainable development' model based on principles of integration into the other Union policies, precaution and prevention in order to avoid the overexploitation of environmental and natural resources and to decouple future economic prosperity from environmental degradation.

The Christophersen Group has addressed the first concern: environmental infrastructure networks within which the selection of priority projects of common interest can take place; these projects should focus on helping to renew the economic base of degraded areas and to improve the productive infrastructure and on protecting the environment. The Group also looked into the question of current bottlenecks in environmental investment, if any.

However, this approach should only be seen in the context of a transition towards an approach characterized by prevention of (further) environmental damage through the creation of a 'sound environmental infrastructure'. This involves the application of the principles on which the sustainable economic development model and the Union policy on the environment, including the fifth action programme, are based.

3. The network 'environment': A common responsibility

The physical environment (nature, air, water and land) is in itself a (natural) network extending across national borders. This natural network has been overexploited and damaged by industrial production over the past century, urbanization, tourism and agriculture (erosion). Although some success has been achieved, there is still a lot of work to be done both by governments and other bodies (enterprises and public) in restoring and rehabilitating the degraded environment and preserving remaining high-quality natural areas. There is a shared responsibility in building up a sound and cost-effective environmental infrastructure of facilities and installations in order not to hamper economic development, industrial competitiveness and quality of life over time.

4. Towards a coordinated/network approach

Implementing this sound environmental infrastructure of facilities and installations needs in some sectors a coordinated and/or network approach at Union level similar to that of the TENs. Depending on the mechanism and incentives involved, this coordination could assist and accelerate the arrangements involving different Member States, thereby reducing the overall costs by achieving sufficient economies of scale, whilst respecting the principles of subsidiarity. In this context two groups can be distinguished: networks of physically interconnected

and/or interdependent infrastructure (i.e. water and waste) and other networks deriving from a specific environmental state of affairs (e.g. nature, contaminated sites). In particular for the first group, water management (WM) and waste stream management (WSM), the planning of the necessary facilities and installations should take place on a common level so as to facilitate appropriate management in an open internal market which will result in more effectively reducing pollution and promoting quality. Relevant environmental EC directives (waste), international conventions (protection of water resources and marine environment) and policy initiatives of international and regional cooperation often imply a coordinated or network approach for environmental assessments, investments and monitoring.

5. Network for water management and waste stream management

(a) Protection of water resources and the marine environment

The network of watercourses in Europe is a vital resource for most economic activities. For example, in the Mediterranean countries, where tensions are increasing between different users, water management will play a fundamental role in economic development and competitiveness. More and more Member States linked to catchment areas of rivers or to common coastal zones are cooperating to act collectively against freshwater and marine pollution, caused by insufficient treatment of urban or industrial waste water. Various conventions and ministerial conferences (Barcelona, Helcom, North Sea, etc.) call upon authorities to tackle jointly the myriad of water problems encompassing surface water, drinking-water and groundwater in river catchment areas. Some of these joint activities have led to comprehensive action programmes costing thousands of millions of ecus (Rhine, Baltic Sea, Elbe, METAP (technical assistance for the Mediterranean) and the Danube (under preparation)). Although the physical interdependence in catchment areas is basically one-way (downstream depends on upstream activities), effective prevention or reduction of pollution in the marine environment requires measures everywhere in the catchment areas. Failure to act by one Member State can reduce the effectiveness of investment by another in cleaning and safeguarding the 'global commons' (North Sea, Baltic Sea, Mediterranean, Irish Sea and the Atlantic Ocean).

Direct economic revenues from these investments could include: maintaining the base of coastal tourism; savings in the drinking-water production process; improved feedstock of aquatic species for human consumption and thus maintaining the base for fisheries; savings in the disposal of dredged spoil in major waterways and coastal waters. Although difficult to quantify, the indirect revenues in terms of preservation of species and well-balanced ecosystems are important.

(b) Waste

The volume of waste strains treatment and disposal capacity in most EU countries. It leads in some cases to unsustainable forms of waste disposal and to heavy clean-up cost in the future. These strains are aggravated due, in some instances, to uncontrolled cross-border movements of waste. Appropriate investments in waste installations (recycling and treatment aiming, where possible, at energy saving) throughout the EU are needed.

Under the waste framework Directive, Member States are required to establish an integrated and adequate network of disposal installations. Other directives — some still under preparation — provide for further harmonization of conditions for an environmentally sound disposal of (dangerous) waste. Disparity between the provision of waste disposal in the various Member States may create inadequate conditions of competition and thus directly affect the functioning of the internal market.

This integrated/adequate network of disposal facilities is based on the principles of proximity, most appropriate technologies safeguarding a high level of environmental protection and public health, and self-sufficiency per Member State, taking into account the geographical conditions and the need for specialized installations for certain types of waste. In particular, disposal of certain dangerous waste due to its volume and diversity calls for planning on a European scale of a network of certain special facilities and installations. The advantages of such an approach are: (1) improvement of economic viability by adjusting supply and demand, thereby reducing costs for European industries and municipalities; (2) a better guarantee of continuity in sufficient capacity; (3) cooper-

ation which will have a positive impact on the development of new technologies.

6. Institutional/economic features of environmental infrastructure

The administration level responsible for promotion or implementation of water and waste projects is complex and strikingly different from that in the transport and energy sectors. A lot of individual projects are prepared by the regional or local authorities and (semi-) private companies. In a way, this reflects the importance of local factors and the limited scope for standardized solutions. On the other hand, it has important drawbacks as the planning and implementation capacities of many of the operators are quite limited. This weakness often results in unnecessary delays and operational problems which increase the risks and reduce the potential profitability. In many instances, the environmental and economic pressures already work in the direction of closer cooperation and concentration in the water sector. A network approach would support this existing tendency.

Despite the fact that a lot of new waste-water treatment facilities are still needed in the next decade the water sector, and to some degree the waste sector, are rather mature markets. Water consumption and household waste are hardly increasing due to increased environmental awareness. Together with uncertain future developments in environmental standards, this development creates problems for the operators as regards repayment capacity. Consequently, the financial rates of return of projects are often much lower than the economic rates of return which take external costs and benefits as well as the resource base of the economy into account.

The financial viability of measures in the area of environmental infrastructure depends mainly on the level of charges set either directly by the authorities or at least under strict supervision by the regulatory authorities. In some Member States, prices reflect approximately the full cost of investment and operation; in others, political considerations prevented an adaptation of the charges in line with cost. In this case many of the utilities have become an increasing burden to the budget, resulting in severe backlogs in reinvestments and creation of new capacities.

If a proper resource pricing in conformity with the 'polluter/user pays' principle were to be practised within a reliable and predictable regulatory framework the financial viability of many projects could be reached (although profitability will often remain modest) and the latter becomes at least to a larger degree bankable. Direct and permanent subsidies should be restricted to cases where they are objectively necessary, mainly for social reasons (small islands/remote rural areas).

7. Financing

Traditionally in Europe a major part of the environmental infrastructure has been operated as a public utility financed from the public budget. However, due to deteriorating public budgets no longer able to cope with requirements in this area, there is a marked trend to reach a wider involvement of the private sector. A straightforward privatization of services does not always provide a solution given the interest of private investors to concentrate in the commercially most-attractive locations, normally the big cities. There is, none the less, a considerable scope for mixed solutions in the form of a cooperation or joint venture between communes and the private sector as is widely practised in Germany and France, for example.

The acceptance of mixed or private sector operations implies that the financial instruments will have to be adapted away from the current refinancing of public deficits in the form of general loans towards project-related financing. The latter could involve the blending of commercial funds with public loans or grants so as to reduce financing cost. Depending on its construction it can consist of an interest rebate only or of a reduction of the repayment obligations for the principal as well.

The amount of money needed for financing environmental infrastructure is less draconic than for the other TENs. As the individual projects are comparatively small, the banking system can cope with the necessary volume of financing without major difficulties. However, the real financial issue is cost and to a minor extent the maturity of the loans needed. Small projects with a long planning and implementation period and consequently a long

pay-back period produce relatively high administrative costs for the financial institutions. The situation becomes further exacerbated if the projects are delayed due to imperfect management and if there is a regulatory risk. All these possible factors contribute to relatively high costs of financing for projects which, due to their nature (for example flood protection) or for socioeconomic reasons (for example remote areas), have a very limited financial profitability.

The European financial infrastructure is well developed to provide the necessary financial services. The role of the commercial sector can be complemented by the EIB and the specialized national banks for long-term infrastructure finance. However, local financial institutions with an intimate knowledge of the local situation have normally a very limited experience in project financing, which often entails technical and legal assistance in project preparation and implementation in addition to handling of the loans as such.

8. Advantages of a Community coordination/network

The interlinkage of environmental, institutional and financing aspects in parts of water and waste infrastructure calls for wider Union coordination. The objectives and advantages of the network approach are the following:

(i) A more coordinated planning of the water-related infrastructure in transnational catchment areas or of waste management in a zone defined by topography and by supply and demand rather than political criteria would allow a better priority setting between the projects according to environmental policy criteria. An intelligent phasing of the investment can substantially improve the environmental and economic return of the investment.

(ii) A coordinated and better planned investment reduces the risks of failures and delays. Thus, the overall economic cost will be reduced and the financial cost will be lower. A network approach could reduce the cost of the investments and increase the environmental benefits and thus the overall economic viability of the investment.

(iii) A coordinated approach would allow a meaningful packaging of small projects into programmes. This reduces the administration cost and hence the spread required from the financial institutions; in addition, it facilitates the (co-)financing from Community and national resources (see Annex IV. A on Union assistance for environmental infrastructure).

(iv) A network approach avoids duplication of work and allows a more efficient use of the scarce and costly sectoral planning resources.

(v) Setting up these networks will also create the necessary cooperation, a solid home base and an incentive for new technologies and interesting 'eco-business' in the Community, which is encountering stiff competition from the USA and Japan.

(vi) Synergy effects can be created with other 'networks', for example, with transport as regards waterways and port facilities.

(vii) Cooperation with third countries, in particular with those with which the Community shares common seas and rivers, can also be a cost-effective way to solve pollution problems in the Community.

Hence, the prime objective of a coordinated/network approach is to achieve more cost-effectiveness in the implementation of the necessary environmental infrastructure. Finally, setting up these networks and accelerating the implementation of a sound water and waste infrastructure corresponds best with the objective(s) of the White Paper: Helping to improve the productive infrastructure and thus to strengthen the economic position of the Community.

9. Conclusions

A — A coordinated network approach in the field of environment is considered relevant by the Christophersen Group, in particular in the following fields:

(a) Protection of water resources and the marine environment;

(b) waste.

B — As a follow-up procedure, necessary guidelines describing principles, objectives and specific cri-

teria should be established for these sectors within the framework of the Environmental Council in order to enable more effectively:

(a) optimal consultation and coordination between decision-making levels while respecting the principle of subsidiarity;

(b) optimal selection of priority projects/groups of projects of common interest taking into account the specifics of environmental infrastructure projects (e.g. scale);

(c) optimal use of the available Union financial resources.

C — Further examination is necessary of the bottlenecks in environmental investment and of the way(s) the use of the existing Union financial instruments, in particular the EIB and LIFE (financial instrument for the environment), could be improved and where appropriate adjusted in the light of (a) these bottlenecks, (b) the necessary financial incentives for the implementation of the guidelines, and (c) the extent to which the 'polluter-pays' principle can be applied. In particular, the examination on the financing of environmental infrastructure should look into the improvement of:

(a) the coordination between the financial institutions and the various levels of authorities concerned, as well as the promoters;

(b) the terms and conditions of the financial instruments such as duration of loans, interest rate and guarantees.

Annex IV.A

Community assistance for environmental infrastructure

Grants (1994 in million ECU)		1989-93 Total SF/CSF	1989-93 Environment and water[1]	1989-93 % total	1994-99 Total SF/CSF	1994-99 Environment and water[1]	1994-99 % total
Structural Funds (SF)	Objective 1	48 665	4 294	8.8	96 346	8 332	8.6
	Objective 2	7 619[2]	1 143	14	6 977	n.a.[3]	
	Objective 5b	3 461[2]	415	12	6 134	n.a.	
	Community initiatives	5 494[2]	908[4]	16.5	13 450[5]	n.a.	
Cohesion Fund	1993	1 564	613	39.2	14 455	7 227	50[6]
LIFE	1991-93	195	195	100	197 (1994-95)	197	100
PHARE	1990-93	3 294	267	8	990 (1994)	n.a.	
TACIS	1991-93	1 360	256[7]	18	510 (1994)	n.a.	

Cohesion Fund by sector

(million ECU)

Approved	1993	1994[8]
Water supply	274.68	78.036
Water quality	78.51	1.748
Waste	13.66	5.12
Sewage	109.84	34.481
Erosion	98.14	—
Nature	22.69	7.184
Other	16.3	22.07

LIFE by priority (1991-93)

(million ECU)

Promotion sustainable development	79.081
Nature/habitats	92.684
Improvement services	8.229
Measures outside Community	13.708
Other	1.298
	195.000

CSF: Community support framework.
1 Water projects have often more than one objective (water supply, electricity, agriculture, etc.).
2 Estimates 1994 prices.
3 n.a.: not yet available; negotiations are ongoing.
4 Envireg, Interreg, Rechar.
5 No separate environment Community initiative is envisaged.
6 50% is taken as an indicative 'appropriate balance' with transport.
7 Mainly nuclear safety.
8 Provisional.

Annex IV.A

Loans EIB (million ECU)[1]	1989-93 Total	1989-93 of which: environment	1989-93 %	1993 Total	1993 of which: environment	1993 %
1. Loans within Community	70 484.1	7 829.7	11	16 779.4	2 214.3	13.1
(a) individual	55 517.7	6 025.7		14 126.0	1 674.8	
(b) global[2]	14 966.4	1 804.0		2 653.4	539.5	
Edinburgh[3]	2 363.3	404.6	17	2 363.3	404.6	17
2. CEEC[4]	1 702.0	—		882.0	—	
3. Mediterranean	1 903.1	335	18	680.5	152.0	22.3

Loans EIB	1989-93	1993
Environmental sectors		
Drinking-water supply	570.7	171.6
Waste water treatment	2 323.4	479.2
Supply/sewerage	3 141.8	797.3
Waste (solid and liquid)	990.4	400.9
Multi-purpose	803.3	365.3
	7 829.7	2 214.3

Edinburgh facility (until July 1994) approved ECU 6 593 million

	Facility	Total EIB loans	Sectoral	
Environment	1 353	4 595	Water management	585
Transport	3 237	10 340	Waste	83
Energy	1 406	3 491	Industrial	206
Telecom	597	1 850	Mixed (global loans)[5]	479

[1] ACPs excluded.
[2] Allocations on global loans signed.
[3] 1993 global/individual loans signed under the Edinburgh facility; total approved (July 1994): ECU 6 593 million, of which, environment ECU 1 353 million.
[4] Period 1990-93 signed contracts.
[5] Water, waste, small infrastructure.

V — Connecting the networks to third countries, in particular to Central and Eastern Europe and to the Mediterranean basin

1. Introduction

The Maastricht Treaty stipulates that, in the field of trans-European networks 'the Community may decide to cooperate with third countries to promote projects of mutual interest and to ensure the interoperability of networks'. The Europe Agreements of the Community with Poland, the Czech Republic, Slovakia, Hungary, Romania and Bulgaria foresee that a priority area for cooperation shall be 'the construction and modernization, on major routes of common interest and trans-European links,' of transport infrastructure, while the Transport Agreement with Slovenia sets out specific infrastructures to be developed.

While the Community is the main trading partner for the associated countries in Central and Eastern Europe and other neighbouring countries, trade with these countries has also increased in importance for the Community. The share of associated countries' exports in EU imports grew from 2.7% (1989) to 4.2% (1993) and the share of associated countries' imports in EU exports grew from 2.8% (1989) to 5.3% (1993).

Extending trans-European networks to these countries not only serves a short- and medium-term objective of stimulating economic growth and employment, but also helps to integrate their economies with that of the Community, to which these countries will seek to accede in the future.

Taking this background into account, on the basis of the mandate of the Christophersen Group, the development of the priority corridors for trans-European transport networks in Central and Eastern Europe, identified as a starting point for the future work by all transport ministers at the second Pan-European Transport Conference in Crete in March 1994, was discussed with the countries concerned, the international financial institutions (IFI, i.e. World Bank, EBRD, EIB), leading European and international private banks and enterprises active in this field, in a number of meetings of the G24 transport group and, where private investors showed an interest, in workshops confined to specific corridors. Such specific workshops were held for the corridors Berlin–Warsaw–Minsk–Moscow; Dresden–Kiev; Dresden–Prague–Budapest; Trieste–Ljubljana–Budapest–Lvov–Kiev; Turku–Helsinki–St Petersburg–Moscow.

A number of conclusions, requiring action by the Union as well as by the countries concerned, can be drawn from these discussions, both in relation to the specific projects proposed for priority implementation, and in general as regards the development of trans-European transport networks in Central and Eastern Europe with the participation of the private sector.

2. Specific projects

(a) Criteria

The criteria determined by the Group for the selection of projects within the European Union were taken as a starting point for the determination of criteria for projects outside the Union.

Against this background, emphasis was placed on projects that ensure the interlinking of EU regions and regions of third countries, taking into account the intensity of cooperation and partnership and the long-term objective of promotion of a wider economically integrated space in a geographically balanced manner.

Two additional sets of criteria were devised and applied to various candidate projects. These criteria stem from those applied within the Union as regards trans-European networks and from the criteria identified by the second Pan-European Transport Conference. They can be summarized as follows:

Transport policy criteria

Selected projects should serve the interconnection of networks of third countries with the Union network; they should facilitate in a sustainable manner international transport flows (10% of international traffic on average) within the defined corridors and contribute to establishing mutually compatible, interoperational and modally balanced TENs.

Viability criteria

The maturity and administrative and financial viability of the projects should be well established, taking into account the size of the project, the priorities set and the efforts

made by third-country governments, and the possibility of public and private external financing.

(b) Selected projects

Taking into account the Group's discussions so far and on the basis of these criteria, bearing in mind that projects for which the implementation has begun or is about to begin have not been retained, the following projects should be further promoted:

(i) with a view to their expected start-up between now and 1996:
- Berlin–Warsaw–Minsk–Moscow (rail and road);

(ii) in a second phase (up to 2000):
- Dresden–Prague (road and rail);
- Nuremberg–Prague (road);
- fixed link across the Danube (road and rail) between Bulgaria and Romania;
- Helsinki–St Petersburg–Moscow (rail/road);
- Trieste–Ljubljana–Budapest–Lvov–Kiev (rail/road);
- Baltic Sea telematic platform.

The Berlin–Warsaw–Minsk–Moscow project will improve the connection of major Polish, Belarus, Ukrainian and Russian industrial centres to the Union. Initially, the Berlin–Moscow project will put the emphasis on the railways, in accordance with the priorities of the authorities concerned. The EIB and PHARE already co-finance a major railway project in Poland.

The Dresden–Prague project and the fixed link across the Danube are on a corridor which provides an essential link between Greece and the rest of the Union. The two projects cover critical bottlenecks on the priority corridor No IV, which was identified as a starting point for future work on coherent infrastructure development at pan-European level. This corridor is interconnected with project No 7 (Patras–Bulgarian border), retained by the European Council in Corfu, on the border between Bulgaria and Greece.

The construction of a fixed link across the Danube between Romania and Bulgaria could improve appreciably traffic flows between the Balkan region and the Union. Furthermore, this type of project is particularly adapted to mixed financing since the direct revenues generated, in the form of tolls, by this new infrastructure might be significant.

The Helsinki–St Petersburg–Moscow corridor is of strategic importance, as is the Berlin–Moscow project, for access to the Russian market via Finnish ports, both in terms of imports and exports. With Finland joining the Community in 1995, the Community interest in this project is increased.

The Trieste–Ljubljana–Budapest–Lvov–Kiev corridor is — as far as the Slovenian territory is concerned — already under development with support of the Community under the Transport Agreement with Slovenia. Construction of a missing link between Slovenia and Hungary will improve access of south-east European countries to the Adriatic ports and the Community, thus facilitating the development of trade in this region.

A Finnish proposal on a Finnish/German/Russian pilot project 'Telematics in foreign trade delivery management in the Baltic Sea area' that would comprise the development of a telematic platform in the area, will improve the competitiveness of companies operating in the area and allow for a more effective use of multimodal transport chains between riparian Baltic States and between these States and the European Community, in particular after the accession of Finland to the European Union.

The Group also recognized the importance of connecting Union networks to Switzerland, which undertook in the Transit Agreement[1] to construct a number of railway infrastructures connected to the Union network.

Mediterranean basin

The Commission services have been examining a Spanish proposal for an 'intermodal trans-European network' that entails the development of logistic platforms centred around six major ports that are connected to the Community network.

In this context, it should be noted that a Member State Group on Ports and Maritime Transport was set up to

[1] Agreement between the EC and the Swiss Confederation on the carriage of goods by road and rail, OJ L 373, 21.12.1992.

assist the Commission in developing the port element of the trans-European network. Regional groups were set up, *inter alia* for the Mediterranean basin with Spain acting as a coordinator and Italy as a rapporteur. Information regarding traffic flows and the state of the physical infrastructure in ports will be gathered with a view to assessing specific port projects at a later stage.

The Commission intends to continue and intensify work on drawing up a comprehensive plan with the objective of coordinating the allocation of human and financial resources to the development of transport infrastructure in the Mediterranean basin, taking into account the particular geographical features of the region and, in particular, the need to exploit fully maritime transport integrated with other modes of transport. The Commission will report on the progress of work to the European Council at the end of 1995.

Traffic management systems

Traffic management systems also offer a vast potential for private investment due to their profitability in Central and Eastern Europe. In particular, air traffic management systems in this region might even today be of interest to private investors due to the possibility of collecting substantial overflight and landing fees. With regard to the extension of traffic management systems to third countries, the declaration adopted by the second Pan-European Transport Conference emphasizes that common standards should be applied and that maximal compatibility should be sought when introducing or developing technical systems so as to ensure their interoperability. It is essential to develop European systems that are also competitive on a worldwide scale from an industrial policy perspective.

The Commission is currently working on the definition of guidelines for an air-traffic management network for the Union. This network will be integrated into a pan-European network, in cooperation with the European Civil Aviation Conference in the context of the Eatchip (European air-traffic control harmonization and integration) programme.

As regards other modes of transport, the Commission will ensure that the external dimension of transport management systems is duly taken into account when developing Union priority projects.

3. General conclusions from the workshops

(a) A Community priority for trans-European network financing

Public sector contributions to the financing of transport infrastructure in Central and Eastern Europe come from the government budgets of the countries concerned, the World Bank group institutions (World Bank, MIGA, IFC), the EBRD, the EIB, the budgets of the Union and certain other bilateral donors. As a contribution to a reasonable division of labour, the Commission concluded that the Union, as a motor for European integration, should, in the context both of its pre-accession strategy for the European Agreement countries and its interest in the integration of the countries linked to the Union by a cooperation agreement, target its support to the development of trans-European transport networks as an essential contribution to the economic and social integration of Europe. A clear priority should be given by the Union to supporting projects located on the corridors identified by the second Pan-European Transport Conference in Crete in March 1994 as a starting point for future work on coherent infrastructure development at pan-European level. However, further considerations should be given to remarks made at the Crete conference with regard to parallel corridors and their economic viabilities.

Participants from the private sector stressed that a coherent development of TENs cannot rely on the improvement of fixed infrastructure alone. It will be necessary to coordinate support for actions on infrastructure and support for other measures, such as the speeding-up of border-crossing controls and customs procedures and the development of an appropriate overall policy and legal framework in the country concerned, in order to ensure the necessary coherence to form a basis for private investments. Examples of this are the Commission's strategy towards railways and the encouragement of short-sea shipping, where infrastructure improvement suggestions (covering ports and navigation systems) go hand in hand with planned policy promotion measures. The regulatory framework for road and rail transports, and especially the degree of allocation of the respective costs of these transport modes to users, needs to be addressed since it influences to a very high degree the profitability of investments in the respective infrastructures.

Participants from the IFIs suggested that the Union might further intensify the approach already practised — especially by the World Bank and the EBRD — of imposing reasonable conditions regarding progress in policy and organizational reform on support for infrastructure investments. This would ensure that projects financed with EU support can be used and operated effectively and therefore produce the maximum benefit for the transport system and the economy as a whole.

(b) A framework for early and continuous private involvement

Private parties stressed that they were willing to take up risks associated with TEN projects in Central and East European countries (CEECs) only within a certain economic and legal framework. In most CEECs there has until now been a particular problem due *inter alia* to the absence of a legal framework providing for the possibility of concessions and the collection of fees from users of infrastructures.[1] In the railway sector, the possibility for private parties to operate railway services or at least to participate in operating companies was an essential condition for the increased involvement of private investors. Provision should also be made for private parties to develop and operate services on and along infrastructure, such as hotels, petrol stations or shopping facilities (for example, in train stations), as well as ports or airports, thus capturing some of the benefits of the improved infrastructures and opening up additional possibilities for private financial contributions to infrastructure development in terms of capital and know-how.

Discussions in the workshops also revealed that private investors prefer to be involved as early as possible in the planning process for specific projects. For example, terms of reference and the selection of consultants for feasibility studies should be agreed with potential investors and creditors in order to make sure that the findings are acceptable to them. In some cases it might be useful, within certain limits, to leave alignment and technical design to the private investors in order to achieve an approach rigorously guided by economic considerations and geared towards satisfying a specific service demand. For specific projects, development and promotion companies could be set up jointly by interested private parties and the public sector. Participation in such a company would prove the seriousness of the commitment of partners and ensure continuity in the project-related work.

EU technical assistance should strengthen its responsiveness to these concerns both in its own procedures and by focusing on helping the countries concerned to make progress towards meeting these essential concerns.

(c) Keeping the corridors in view

Workshop participants from the private and public sectors stressed the need for a comprehensive vision on the development of corridors, for two reasons. Firstly, the profitability of individual projects can be very heavily dependent on how a corridor as a whole develops. Secondly, it is important to avoid 'cherry picking', whereby either private investors concentrate only on the most profitable parts,[2] such as ports[3] or airports,[4] leaving the public sector to pay for the less attractive sections, or — in the reverse situation — where the public authorities offer only the less profitable parts to private investors, leading to the effective failure of attempts at public/private partnership.

These points were in particular emphasized in the discussions on the Berlin–Moscow corridor. In response to a German request, the Ministers for Transport of the countries on this corridor and the Commission have concluded a multilateral memorandum of understanding on coordinated work on planning and development of this corridor (including legislative, organizational and training aspects) as an umbrella for specific projects involving both the private and the public sector. This memorandum

[1] For example, for road projects, Hungary is a forerunner both in terms of the legal situation and in terms of the number of projects under way with private participation; Poland intends to pass a law on concessions for motorways and the possibility of collecting tolls before the end of 1994. In Belarus and Russia, developments in this directions are also under way.

[2] For example, the first motorway project in Hungary financed with private capital is the route Vienna–Budapest, where the share of international traffic is higher than average; however, other projects are already under way where this is not necessarily the case.

[3] Traffic flows concentrate in ports, being natural monopolies. Investments can thus often be secured by long-term supply contracts, for example, for oil or other valuable natural resources.

[4] A terminal at Warsaw airport was financed without a government guarantee or contribution for the price of ceding all income from user fees to investors.

also covers specific governmental measures to increase return on investments, such as border-crossing facilitation. The private sector welcomed this initiative and proposed that this model might be used on other projects as a means of increasing investor confidence in the coordinated development of a corridor.

Participating countries stressed that the possibilities for support of TEN priority projects should be the same along the whole corridor in order to keep a certain coherence in development, especially as regards cross-border projects. Thus, within the existing financial perspectives, the Union should be able to support TEN projects such as the Berlin–Moscow corridor on the Russian and Belarus territory in the form of co-financing and special cross-border measures, such as grants for improving border crossings, as it can already do on Polish territory. In this context it was also important to note that the accession of Finland will lead to a joint border between Russia and the Union. It might also be useful to consider extending the geographic scope of activity of the EIB in TEN financing further east in the direction of Russia, as has been requested by the Russian Government.

(d) Using existing financial instruments to attract private investments

Due to the specific characteristics of transport infrastructure projects, such as the long payback period and the fact that not all benefits of an investment necessarily accrue to the investor, participants in the workshops concluded that a private/public partnership would often be the best constellation for approaching priority projects. Private participation in public projects should be sought also from within the countries concerned, in order to increase the leverage effects of public funds, including those given as aid by the Union, thus reinforcing the potential contribution in compensation for the very limited government budgets available for infrastructure investments in Central and Eastern Europe.

A number of options for the use of EU instruments were discussed which warrant further exploration.

Private participants suggested that existing financial instruments could in the first place be specifically employed so as to attract additional private capital for the financing of projects. Aid could be made available in the forms appropriate for the specific project needs, for example as a loan guarantee or interest-rate subsidy as foreseen in Article 129c (1) last indent of the Maastricht Treaty, minimizing at the same time Community overhead costs. Co-financing might be targeted at TEN projects in which private parties participate. Full financing, together with other public contributions, such as a loan from the EIB or another IFI and the State budget, should only proceed where it can be demonstrated that no private parties have an interest in participating. Mixed financing should be preferred wherever possible.

A number of countries, IFIs and private participants said that consideration might be given to extending the group of institutions qualifying as a partner for EU co-financing. This should be possible not only with the international financial institutions in the narrow sense (World Bank, EIB, EBRD) but also with the IFC, MIGA, Eurofima, and Member States as well as third country long-term credit institutions, investment guarantee agencies and export credit insurers. Furthermore, an EU contribution to the capital costs of the project or in some other form should be possible not only if one of these institutions is involved as lender, but also if it is involved as insurer, guarantor or equity stake holder. In all these cases, the participation of the qualified partner guarantees a certain review of the economic and financial viability of the project financed.

EU aid might also be granted in the form of minority equity risk capital participation in purely private investments with the major share of risk being carried by the private sector.

The ceiling for EU co-financing, presently at 15% of the budget available for PHARE, should be lifted and replaced by a more flexible regime which can take appropriate account of the different economic situations in the countries concerned and the specific project needs. Furthermore, the geographic scope of EU co-financing should be expanded in line with TEN developments, as already referred to above.

EIB loans should be combined, where possible, with private participation in a project. To reach this goal, the possibility of private involvement in a project might be systematically evaluated; and potentially interested private parties should be actively approached in order to promote their participation in the given project.

Rules for the EU instruments and the technical assistance to the countries concerned should be developed to achieve

these objectives. National administrations should receive general training in the expertise necessary to achieve private/public partnerships which are beneficial to all stakeholders, and assistance in accompanying concrete projects in terms of support to marketing, financial engineering, contracting and implementation.

(e) Improved guarantees for TEN projects

Existing EU financial instruments in a start-up phase help to overcome incremental obstacles of project development or indeed, through a loan, take up the full project risks. However, under present rules the latter must be secured by a full budgetary guarantee of the Union and a State guarantee, which in particular reduces the possibility for the beneficiary State to provide guarantees to private investors. On the other hand, long-term guarantees would help to attract additional private capital to TEN projects without necessarily burdening the Union with the full project risks.

A number of options for improving guarantee possibilities have been discussed in the workshops; they warrant further exploration.

The extension of the EIF activities to financing TENs in Central and Eastern Europe would be helpful, but only partly cover the needs expressed by the private sector. In fact, in many cases the commercial risks of a credit or investment could be carried to a certain extent by the private sector. However, guarantees need to cover those aspects of investments which cannot be controlled by the investor, such as political risks and the risk of government non-performance relating to the conditions agreed for the investment, for example, the terms agreed in the concession agreement. While the principle of subsidiarity requires further in-depth evaluation as to how far such risks could be covered by Member States' instruments, some deficiencies in existing instruments are already apparent. The private sector expressed the view that therefore certain EU initiatives would be welcome.

Given that investments in the transport sector require long-term capital — with concession periods lasting from 15 to 50 years — the Commission was asked to explore whether it could aim at promoting credit insurance schemes with this kind of duration, thus clearly going beyond existing export credit insurance maximum maturity coverage of 10 years. Since under present OECD rules longer coverage is not possible, a review of these rules, in order to allow for longer coverage when TEN, or, more generally, transport infrastructure, projects are concerned, was suggested by private banks and industry. It should, however, be noted that agreement on such an extension, on a general basis, would be far from easy to achieve within the OECD.

It was also suggested that the Union could also increase investor confidence in investments in TEN projects in those countries with which it has an Association or Cooperation Agreement by setting up a guarantee mechanism covering political risks as well as risks of governmental or regulatory performance as contractually agreed within the framework of a private/public partnership. Private sector participants during the Berlin–Moscow workshop stressed that such guarantees would greatly enhance their ability to invest in or lend to TEN projects in these countries. The Union was particularly well placed to provide such guarantees, given its political as well as economic relations with the countries concerned, especially with those which have entered the pre-accession stage. Such guarantees would be an appropriate means to demonstrate the confidence of the EU in the political stability of the new democracies and the reliability of the respective governments, forming an essential element of a broader strategy to attract private investments, especially during the pre-accession stage. Following the World Bank approach, as security for the guarantee to the private investor, a counter-guarantee from the country profiting from the loan or investment guaranteed could be required. The budgetary implications of such a guarantee mechanism could be kept to a minimum.[1] It would also have the advantage of not counting against the limit of sovereign lending of the countries concerned.

(f) A special effort for railway financing

With a network denser than in the EU, the railways are still the backbone for the transport of goods and people in Central and Eastern Europe. Securing sustainable mobility on the long distances of certain corridors, such as Berlin–

[1] This proposal is based on a presentation of the World Bank during the Moscow–Berlin corridor workshop, outlining the possibility of using guarantees to attract private capital; the proposal was approved by the board of the World Bank on 8 September 1994.

Moscow, will require full exploitation of the potential competitive advantage of the railways.

Participants from industry and railways therefore stressed that the Union should increase efforts to support railway projects. Investments should be supported in different areas, since confining support only to fixed infrastructure investments would ignore that a higher service level can often be reached in a less costly way by other technical or managerial improvements, such as upgrading of the rolling stock or of train management systems. Furthermore, new forms of financing, such as leasing of railway equipment, both from presently State-owned railways to new private operators and from existing railway wagon-leasing companies should be supported. With new and innovative approaches, the railways would be able to attract private capital, provided also that the regulatory framework defining competition with road transport, and especially the question of internalization of external costs, were adequately addressed.

One example of a possible combination of measures regarding rolling stock and infrastructure is the route Dresden–Prague, which presently runs with numerous curves through the Elbe valley. The use of tilting trains (type 'Pendolino', 'Talgo') can improve speeds on this section, thus avoiding a totally new alignment of infrastructure at high costs. The Czech Government envisages a mixed financing for the total cost of infrastructure investments of at least ECU 100 million, with contributions of up to one third from the government budget, one third from international public sources, such as the EIB, EBRD and PHARE, and one third from private investors, which could receive a guarantee for up to 25% of their investment. The Deutsche Bundesbahn AG has shown an interest in participating in this project in the framework of an arrangement allowing it to recover investment costs through the charging of user fees.

For the Berlin–Moscow corridor concepts for private participation in investments and operations are also being developed. According to the EBRD, a combination of investments in terminals at the Brest border crossing, to facilitate movements across the change of gauge between Russia and the rest of Europe, and investments in pools for freight and passenger wagons which can be used both on broad and narrow gauge could attract private and public funds, since a reduction of delays at this bottleneck would significantly increase the profitability of operations on this corridor. A necessary element for this project to go ahead is the willingness of the railways of the countries concerned to participate in the investments and to cooperate better in the operation of services.

Ministries of Transport might also encourage railway companies to consider better use of their creditworthiness to attract private capital in order to expand the geographical and substantial scope of the activities of Eurofima, a joint financing organization of European railways. If this is not possible, the Commission might explore the setting-up of an organization similar to Eurofima and including all CEEC railway companies, specifically for railway financing in Central and Eastern Europe. In both cases, the extension of the range of activities to infrastructure financing might be considered.

VI — Financing and public/private partnerships

As regards the financing of TENs, the conclusions of the European Council held in Brussels (December 1993) emphasized that the principal mission of the Community consisted in 'mobilizing private investors in favour of projects of European interest, through a reduction of financial risks.' The Corfu conclusions invited the Christophersen Group and the Ecofin Council to examine the issue further, 'taking account of the specific characteristics of each project, the leading role of private funding and the judicious use of existing Community resources.'

The Group agreed that the financing question should, in principle, be analysed on the basis of concrete financing issues for individual projects, following the bottom-up approach. Given the state of progress in the preparation of the financial plans for the 11 priority transport projects endorsed by the Corfu European Council, a complete mapping of financing issues for the selected priority projects cannot be presented at the time of the expiration of the mandate of the Group.

The Group's conclusions concerning the financing issue, as presented in the Group's report, were drawn on the basis of, *inter alia*, several working papers presented notably by the Commission and the EIB.

This chapter summarizes the information available to the Group in the following five sections:

(1) An update of the figures on the aggregate cost of the priority projects, based on the latest information available, as well as a summary of the financing profiles of the priority projects.

(2) Financial characteristics of infrastructure projects.

(3) Private sector involvement.

(4) Existing Community financial instruments.

(5) Suggestions and recommendations on how existing financial means at Community level, and in certain instances also at national level, could be used in a more cost-efficient manner, more specifically in the framework of public/private partnerships.

The Group is in agreement about the content of Sections 1 to 4, whereas Section 5 on options for adjustment of existing instruments, elaborated by the Commission services, did not obtain unanimous support in the Group.

The following sections explore ways of organizing successful public/private partnerships in the transport sector. However, many of the conclusions can be easily extrapolated to the other TENs in energy, telecommunications and the environment. Energy transport projects tend to be commercially profitable. Some of the energy projects identified by the Christophersen Group will receive Community grant support on the grounds of cohesion considerations, the latter enhanced by the need to create a single market for energy. Environment projects rely to a large extent on the 'polluter/user pays' principle, which should make them self-sustainable in the appropriate regulatory framework, though implementation problems may make some grant support inevitable (for more detail see Section IV.7 on financing of environment projects). Competition in the energy and telecommunications markets will tend to ensure an increasingly correct allocation of resources, where almost no grant support will be needed. However, the Community still has an interest in improving the overall competitiveness of its economy by making the channelling of financial resources to these easier.

1. The priority projects and their financing situation

The current estimates on the aggregate financial needs of the 11 most mature priority projects in the transport sector are in the same order of magnitude as the initial figures presented in SEC(94) 860 (June 1994). The initial priority list of transport projects has been slightly amended, following the decision of the European Council in Corfu to include the Øresund fixed link. Total estimated investment cost has risen from ECU 68 000 million to ECU 76 000 million, while the amount corresponding to the period to the end of 1999 has moved from ECU 32 000 million to ECU 38 000 million (see Annex VI.A).

The above figures have an indicative character as the financial plans and detailed cost schedules for some of the projects (in particular a few large ones) have not yet been completed, or are currently under review. For these projects, assumptions had to be made about the identity of the promoter (public or private), the size and nature (loans, grants, equity, etc.) of public contributions (including the Community one), etc. Finally, it needs to be emphasized

that considerable uncertainties surround all cost estimates of such large infrastructure projects.

Private involvement, ranging between 20 and 50% of project cost, is currently available in about half of the projects for which a complete financial plan exists; the EIB is expected to be involved in a majority of the projects.

The aggregate figures on investment costs conceal the heterogeneity of the various priority projects, even if all of them meet the six criteria set out by the Christophersen Group (exceptional scale, common interest, economic impact, cohesion and other Union objectives, private investment, maturity). The round-table meetings and complementary contacts, notably with the project promoters and the financial sector, have highlighted the differing characteristics in financial terms of each project and the difficulty of applying a common yardstick to measure the financing needs. Priority projects can be classified as follows in terms of the nature of their financial plans and progress made towards meeting the financing needs:

(i) Mature public/private partnership projects: this category covers projects relying on private sector involvement. The project promoters (or otherwise the procedure for assigning the promoter) have already been identified and the financial packages are almost structured. The projects are likely candidates for support from the TEN budget line for transport, and will presumably also have recourse to the EIB and the EIF. Projects belonging to this category could act as role models for other less-advanced projects involving public/private partnerships.

(ii) Mature projects that are publicly financed on the basis of user charges with government guarantees: a single project is in a very advanced stage of development, has a well-defined public promoter and a positive outlook in terms of profitability. No specific financial problems exist.

(iii) Conventionally financed national railway projects: private sector involvement in the ownership or the management of the infrastructure is not envisaged; private investors will only be involved as loan providers or through bond issues. Compared to other projects, the size of the financial gaps (i.e. the level of public support being requested) can usually be assessed in a relatively straightforward manner as the financing structure is relatively simple compared to other projects; the amount of Community support requested is also generally known.

(iv) Projects for which Member States have requested substantial EU grant support for cohesion motives: most of the projects being implemented in the beneficiary countries of the Cohesion Fund belong to this category. The detailed negotiations on the financing needs will be carried out in the framework of the existing procedures applying to the Structural and Cohesion Funds, both of which are expected to be involved heavily in the implementation of these projects. With a single exception (involving a public/private set-up), the projects belonging to this category will have to be executed in a purely public budget setting if further attempts at involving the private sector remain unsuccessful.

(v) Projects with open financial plans: most of the largest projects of the priority list (representing 48% of total investment cost for the whole list of priority projects, and 27% of investment outlay up to the end of 1999) belong to this heading; their implementation will for the most part extend into the next century. The projects appear economically viable and financially feasible in the form of public/private partnerships. Few doubts exist that the projects will be carried out. The overall financing needs, including possible contributions from the Union budget, are not yet clear. Similarly, the likely degree (and form) of private involvement remains to be defined.

Annex VI.B classifies the priority projects according to the abovementioned typology and includes the estimated investment outlays during the periods up to 1999 and 2010.

2. Financial characteristics of infrastructure projects

Compared to projects in the industrial sector, financing issues play a more prominent role in the design and realization of major infrastructure works, particularly in the transport sector, for several reasons:

(i) Infrastructure projects are highly capital-intensive as fixed-asset costs far outweigh variable and operating

costs; the length of the construction period constitutes an added burden (in the form of capitalized interest charges and delays in revenue collection). The debt service and related financing costs thus typically represent the dominant part of the overall cost structure, certainly in the first decades of the project's life. The financing structure of the project, together with the cost of funds (notably the level of long-term rates, both nominal and real ones) has a crucial impact on its financial viability.

(ii) The long economic life of the projects ensures an extended utility-type revenue stream, i.e. relatively stable, and increasing over time. At the planning stage, however, the size of these revenues is largely uncertain. As many projects produce large economic benefits — and costs — going beyond the scope of the project (externalities), these revenue streams do generally only reflect a fraction of the total benefits to society as a whole. In certain circumstances, however, revenue collection is virtually impossible in practice because of legal or regulatory constraints, for example, or otherwise because the project enters into competition with infrastructures provided at no direct cost to the user.

(iii) Because of the long payback periods, the finance providers will necessarily keep a large exposure to the project for prolonged periods, which are often largely in excess of the usual repayment terms for bank loans or bond issues (need for refinancing). The large size of many projects, and the many uncertainties surrounding their realization, requires the involvement of many financing partners (for example, lending consortia) in order to spread the total financing needs and the risks.

(iv) Outside the sphere of financing, the interplay of the many actors involved (promoters, contractors, construction companies, operators, public administrations, etc.) requires strong coordination and detailed legal arrangements. In many instances, the absence of a 'natural' promoter, representing the interests of the project as such, constitutes a supplementary difficulty.

(v) Public authorities are almost systematically involved to a significant extent, particularly in the early stages. The inherent complexity of many projects, combined with the political will to realize some of them quickly, has pushed the public sector into becoming the main builder and provider of transport infrastructures. Public financing is also generally believed to be 'simpler' as all the major risks are effectively absorbed by public budgets. On the other hand, the *ex post* financial performance of public investments is less easily measurable in comparison with private ones.

(vi) Before a fully fledged financial package can be put together, a project has to be properly structured and phased according to economic needs. This is one of the most crucial and time-consuming phases of a project's life in terms of possible cost savings and profitability enhancements. Partnership arrangements between the public and private sectors can only be arrived at after lengthy examination of the project's financial components, and a proper sharing of risks between the partners.

The TEN framework adds a particular dimension to this process as a significant part of the economic viability of individual TEN projects stems from their integration into the overall network. Individual links need to be appraised from a network perspective, extending far beyond national borderlines (and for some projects even beyond Community territory). The network approach introduces considerable opportunities as the profitability of Union-wide networks exceeds the profitability of the individual links composing the network.

This also introduces some specific difficulties as different legal and regulatory frameworks have to co-exist and as a supplementary level of coordination (between the Member States concerned) arises, particularly for cross-border projects. These transnational links often suffer from differing national preferences and priorities at each side of the border.

Because of the interrelations between projects belonging to the same network, delays in the realization of certain key links have a significant impact on the revenues of the already existing links (through revenue shortfalls). A concerted, coordinated and accelerated build-up of the network, minimizing leads and lags in the realization of key links, is therefore bound to improve significantly the economic benefits for all parties involved.

3. Private sector involvement

Before developing some of the implications which private financing might have in relation to TENs, a more precise definition of this particular notion is required; an attempt in this direction is made in Annex VI.C. It appears that private financing becomes particularly relevant when the private investors bear a meaningful part of the risks associated with their financial contribution. For the sake of simplicity, most of the discussion presented in Annex VI.C deals with pure forms of private financing, which are unlikely to materialize in the transport sector; public/-private partnerships are covered in Section C of that annex.

The increased involvement of the private sector in the financing of infrastructures has created a need for appropriate and innovative legal and financial constructions. The 'project financing' approach, whereby the project is financed on a 'stand-alone' basis, is a typical example. In contrast to industrial projects, none of the private partners involved is generally willing or able to take on all the liabilities associated with a given project.

Project financing has introduced a high degree of sophistication in infrastructure financing, compared to the traditional public schemes. It has also enlarged the range of relevant financial instruments to all those being used in private corporate finance, and notably to equity and quasi-equity (subordinated loans). In the lending field, project financing calls for a different approach, which is predominantly based on the assessment of the cash flow generated by the project, as opposed to the credit quality of the promoter and/or the different partners involved in the project. Similarly, loan security is linked to the assets of the project as opposed to those of the promoter(s).

These developments open up new opportunities for the public sector as a project partner; they also require a more precise definition of the aims to be achieved through public support in each individual case. As financial packages are tailor-made for each project, the form of public intervention will have to be adjusted to the specificity of the projects. For projects which are not financially viable, grant support will remain indispensable to pull the project beyond the profitability threshold. The distribution and sharing of risks is one of the core elements, and several types of public involvement can be imagined (equity risk, guarantees for specific risks, guarantees for part of the loans, etc.). The possible impact of these new forms of public support on the use of Community funds is further discussed in Section 4.

While the private sector concentrates exclusively on the financial profitability of a project, the public sector is taking a wider view on a project's economic viability because of the many external impacts of any sizeable infrastructure project. Even when confined to financial return calculations, public and private appraisals will almost systematically be carried out on different terms and hence lead to different results. The risk profile of the project constitutes one of the main concerns of the private sector; this will inevitably be reflected in the discount rates applied and in the thresholds as regards minimum levels for the internal rate of return.

The private sector will thus generally favour short-term revenues, which are perceived as less uncertain than delayed income. Public promoters are typically less inclined to quantify the risk factors and tend to use lower discount rates (for example, based on the yields of government bonds) when discounting revenues and costs over time.

As a result of this, the same project might be considered financially profitable by the public sector, while being judged financially unviable by the private one. This introduces a bias towards public financing solutions, while the public sector's objectives might in some cases have been better served by a private (or mixed) financing approach.

Private investors are only interested in taking part in the financing of TENs to the extent that the profitability outlook of the projects is in line with the level of risk taken on. Private involvement is thus only feasible for projects generating sufficient revenues and, to the largest extent possible, caring for themselves by charging appropriate fees to the users of the infrastructure. These conditions are generally satisfied in the energy and telecommunications sector; most projects are self-supporting in financial terms and can often be implemented without the need for extra public support. In the transport sector, however, users have come to think of certain infrastructures as free and as public goods. Some of the transport charges applied (for example, fuel tax, vehicle tax) bear no direct connection with the actual use

of a given infrastructure link, while others are lowered through operating subsidies paid to the operator. In those cases where charges do not reflect true costs, economic efficiency is likely to suffer, either in the form of a misallocation of economic resources or as an overconsumption of scarce resources (for example, in the form of congestion).

Because of the complexity of the issue, and the interrelations between different transport modes, structural improvements can only be achieved gradually. Users also need to be convinced that certain increases in direct charges (or a shift from indirect to direct ones) constitute a welcome development in their best interest, notably through an increased supply of infrastructures.

For projects that are unable to generate revenues of their own, the payment of shadow tolls (i.e. tolls paid by public budgets on behalf of the users) constitutes a possible (although less desirable) alternative means of public support towards private financing approaches. For projects with significant uncertainties regarding revenues, minimum traffic levels could be guaranteed, i.e. revenue shortfalls would be covered up to a certain level. In conjunction with this, the public sector should also contribute to improve the quality of traffic forecasts, particularly in relation to TENs.

The round-table meetings have illustrated the diversity of ways in which the private sector can be usefully associated to the financing of the networks. This variety stems from the varying legal and administrative traditions in the Member States as well as from the characteristics of the individual projects. Private financing appears to be most beneficial when it takes over a genuine proportion of the risk. It appears that a number of conditions are necessary to achieve this aim:

(i) The type of involvement expected from the private sector must be clear from the outset (for example main promoter or minority participant, operator only, etc.) as well as the amount of control which the public sector wants to exercise once the project is in place.

(ii) Financing schemes must be geared towards private participation, the public sector becoming a partner among others.

(iii) Early private involvement is necessary so as to ensure that the technical and financial set-up of the project allows for an adequate level of private participation.

(iv) The competition between private groups needs to be organized.

Extending private involvement in infrastructure financing calls for a more comprehensive assessment on the specific role that the public sector will have to take on in the future, i.e. should it only be confined to those projects without financial profitability and, if not, which are the criteria justifying public promotership, etc. In any event, the role of the public sector will remain pre-eminent, even in relation with privately funded projects (feasibility studies, organization of bidding procedures, regulatory issues, competition aspects, etc.).

4. Community financial instruments

The Union has a role to support (by financial and other means) the emergence of projects which produce benefits at the European level; a range of financial instruments are available to contribute to this aim. In accordance with subsidiarity principles, the Union's financial support for TENs is used as a complement to the resources provided by Member States, the latter having a pre-eminent role in the definition and implementation of the individual projects. Recent progress made in the use and involvement of these financial support mechanisms is briefly described below, with a special reference to their application in respect of the priority projects selected by the Christophersen Group.

The Structural Funds follow a logic for intervention which is based on requests made by the Member States and focused on the specific objectives of the structural policies. The Structural Funds participate in the financing of development or reconversion policies under the initiative of Member States or their regions.

While preparing the Community support frameworks (CSFs) for the period 1994-99, the Commission has very much taken into account the guidelines laid down in the White Paper, notably those regarding the trans-European networks.

According to the CSFs for the period 1994-99, and in relation to Objective 1 regions, the Funds will make a very large financial effort to fund projects in the fields of

transport, energy and telecommunications. On the basis of the estimates currently available, their annual contribution could amount to ECU 3 800 million.

As a result of the analysis of the first operational programmes available, it is foreseen that the Funds could reserve around ECU 1 000 million to ECU 1 600 million per annum to finance priority projects in the TENs.

As to the Christophersen Group's first list of projects, the Patras–Thessaloniki motorway and the Lisbon–Valladolid motorway could obtain financing from the ERDF.

Community initiatives: The Commission approved on 15 June 1994 its guidelines for the next Community initiatives. There are 13 such initiatives endowed with a total amount of ECU 11 850 million plus a reserve of ECU 1 600 million. Of particular interest is the Interreg II initiative (1994-99), which is the continuation of Interreg I and REGEN; as such, it is divided into two different chapters, one for cross-border cooperation which obtained an indicative budget of ECU 2 400 million, and another of ECU 500 million to conclude the TEN projects for interconnection of gas and electricity networks undertaken under REGEN.

Those projects which can be financed under the energy chapter of Interreg II have also all been selected by the Christophersen Group: the introduction of natural gas in Greece and in Portugal, the interconnection of the latter network with the Spanish one, and the interconnection of the Italian and Greek electricity networks. Among the actions which can be funded under the cross-border chapter are 'measures in the fields of energy, telecommunications and transport which complete the TENs'. All the inland cross-border areas (NUTS III) and some maritime ones are eligible under this chapter.

The Cohesion Fund, which was formally established in May this year (Council Regulation (EC) No 1164/94), will play an important part in facilitating the development of trans-European network projects in the four beneficiary Member States: Spain, Portugal, Greece and Ireland. Over the period 1994-99, it could allocate around ECU 7 300 million of assistance to transport infrastructure projects in these countries.

Considerable progress has already been made since April 1993, when the interim cohesion financial instrument came into force, with over ECU 1 100 million of grant assistance having been approved for transport projects directly related to the trans-European networks or giving access to such networks. Major road projects have been the main beneficiaries, but significant assistance has also been allocated to high-speed and conventional railway projects, and maritime projects, including vessel-traffic systems.

As regards the Christophersen Group's lists, four of the eleven most mature projects are located in the cohesion countries: high-speed train South, the Greek motorways, the Lisbon–Valladolid road corridor and the Cork–Dublin–Belfast–Larne–Stranraer rail link. To date, some ECU 176 million of assistance has been approved for these projects under the Cohesion Fund, and a further ECU 900 million is the subject of formal applications which are at present being considered by the Commission.

A proposal for a new financial regulation for financial support to TENs was adopted by the Commission on 2 March 1994 (COM(94) 62). It is still being discussed at the Council and the Parliament (procedure 189C) and will possibly be approved by the spring of next year, though its entry into force will only take place after the adoption of the guidelines, foreseen by autumn. According to the Commission's proposal, the regulation will enable the Community to provide its financial support through feasibility studies, interest rebates, subsidies for guarantee fees, and, by way of exception, through straight grants.

This new regulation applies to the three TEN sectors the experience gathered by the previous Regulation setting an action programme in the field of transport infrastructure (Council Regulation (EEC) No 1738/93 of 25 June 1993).

The allocation for 1994 has been completed, while a number of CG projects will benefit from major support. The transport budget line has co-financed 68 studies and projects during the current year, for a total amount of ECU 200 million. Among these projects, 25 belonged to the lists set up by the Christophersen Group.

It is estimated that for the period 1994-99 the TENs will be endowed with ECU 2 395 million, of which ECU 1 868 million for transport, ECU 105 million for energy and ECU 422 million for telecommunications. Further strengthening of these budget lines is to be expected as a

result of the revision of the financial perspectives resulting from enlargement.

After the Brussels Summit of December 1993, the EIB has enhanced its role as a provider of long-term financing for infrastructure, both in a quantitative and a qualitative way. In respect of the latter, the EIB identified, last May, six areas where it could make an additional effort to increase the flexibility of its lending: the financing of interest during construction, the provision of extended capital grace periods, the provision of long maturities, the possibility of fixing loan rates in advance of drawdown, the cofinancing of a project's debt after construction, and the establishment of framework credit-line agreements.

Beyond its traditional role of provider of long-term finance, the EIB has offered to play an enhanced role in structuring contractual and financing arrangements in relation to TENs. The Bank is already carrying out the appraisal of each of the first priority transport and energy projects selected by the Christophersen Group.

The Bank has already approved loans — or envisages to do so in the short term — for the following transport projects: Brenner axis (ECU 200 to 300 million), PBKAL–Belgium (ECU 500 million), Greek motorways (ECU 230 million), Lisbon–Valladolid motorway (ECU 120 million), Cork–Larne railway (ECU 50 million), Malpensa airport (ECU 200 million), and the Øresund link (ECU 660 million). The EIB also participates actively in the financing of projects in Central and Eastern Europe and in the acceding countries.

It has also approved loans — or is possibly going to do so soon — for the following energy priority projects: Spain–Portugal gas interconnection (ECU 220 million), Portuguese natural gas network (ECU 350 million), and the introduction of natural gas into Greece (ECU 230 million). The laying-down of the new Iberian network relies on the pipeline being built in Algeria and Morocco with the support of the EIB (ECU 660 million).

The EIB has almost completely allocated the financial package for TENs and other infrastructure projects known as the Edinburgh facility. This temporary credit facility had been decided at the Edinburgh Summit in December 1992, as part of the growth initiative; six months later its initial financial envelope of ECU 5 000 million was increased by the European Council at Copenhagen to ECU 7 000 million (plus ECU 1 000 million for SMEs). By the end of December, loans corresponding to the whole amount of the ECU 7 000 million package will have been approved. In combination with a further ECU 15 000 million of standard EIB loans, this has contributed to the financing of ECU 48 000 million worth of infrastructure projects.

The creation of the European Investment Fund was also decided by the Edinburgh Summit as a part of the growth initiative. It started operations in June 1994. It is due to provide guarantees for TEN infrastructure projects and for SMEs. Once in its third year of operation, the fund will be able to provide equity, if its governing bodies so decide.

The fund has an authorized capital of ECU 2 000 million; it has a tripartite ownership structure as the capital is provided by the Community (30%), the EIB (40%) and financial institutions (up to 30%). It intends to provide about ECU 500 million in guarantees during its first (half-) year of operation. The first priority project to receive an EIF guarantee will probably be the Malpensa airport project.

In the light of the expiry of the ECSC Treaty in 2002, the Commission decided to stop new lending under Article 54.2, for large projects of Community interest. Only loan applications introduced before 1 July 1994 will still be examined, and the maturity of loans decided from this date onwards cannot exceed 23 July 2002. An exception may be made for loans not requiring coverage by ECSC reserves. The Council invited the EIB to examine those other loan proposals with which the ECSC could no longer deal.

The European Council at Copenhagen authorized the PHARE programme to spend a maximum of 15% of its existing programme's resources for investments on infrastructure projects; before this decision PHARE was only able to support infrastructure projects with technical assistance. Following the desires expressed by the countries concerned, the Commission proposes that the abovementioned ceiling be replaced by a more flexible regime.

The appropriations set aside for 1994 amount to ECU 835 million and include ECU 83 million (indicative programming) of PHARE financing for TENs in the

Central and East European countries, and ECU 130 million for border-crossing facilities.

The overall level of coordination between the different Community financing sources mentioned above is that derived from the establishment by the Community of a series of guidelines for the TENs, as established by Article 129c of the Treaty. The same article, moreover, urges the Commission to take 'any useful initiative' to promote coordination among the Member States, in cooperation with the latter.

The round tables organized by the Christophersen Group — and the Group itself — are the latest steps in the ongoing system of coordination within the Community.

The main instance of coordination takes place, however, at Member-State level, as they are responsible for putting forward project proposals (or programmes in the case of the support frameworks) for Community grant support.

5. Options for Community support

Major infrastructures differ widely in the way they are financially engineered. Increased recourse to private financing or to partnership solutions is reinforcing this trend. The Community could help to underpin this evolution, notably by ensuring that the rules which govern the extension of Community support do not unnecessarily constitute an obstacle to financial innovation or introduce an unnecessary bias in favour of traditional financing models. Whenever possible, public support should thus be prepared to adapt flexibly to the emergence of different needs. The impact of Community support will therefore not only depend on its size, but increasingly also on the form in which it is made available to projects of Community interest.

The scarcity of public resources in relation to the overall size of the funds needed for TENs is another reason to optimize the use of public funds and look for improved cost-efficiency. Following this logic, and as a general rule, subsidies should never exceed the amount which is strictly needed to achieve a particular aim. Whenever appropriate, public funds should thus act as a catalyst for the mobilization of funds provided by other parties.

The present section focuses on a number of possibilities to tailor or adjust the use of Community funds to specific project needs. As Community support is typically extended in conjunction with other forms of public support, primarily at national or regional level, many suggestions put forward in this section can also be applied to other levels of public support.

The various options presented below provide some practical illustrations on how Community resources could be used cost-effectively in relation to TENs. These examples are not to be interpreted as a list of measures on which the Union is invited to take immediate action, even if some of the proposals could eventually be transformed into concrete actions at a later stage. In many instances, their implementation could take place without the need for specific legislation.

The options outlined below have been classified per type of financing instrument and cover in particular:

grant financing,

equity financing,

loan financing,

guarantees.

These various instruments were all enumerated in the Commission's earlier communication on the financing of TENs (SEC(94) 860). The outline below provides some more detail on possible implementations; the legal implications need to be examined further.

(a) Grant financing

Grants obviously constitute the preferred means of public support from the point of view of the project promoter. Inversely, they are the most expensive way from a budgetary point of view. Under current rules, EU grants to projects are not repayable unless some contractual conditions have not been fulfilled (for example, absence of implementation of the project). Given the budgetary constraints in Member States and at Union level, it would therefore be attractive if instead of public grants, reimbursable advances could obtain the same results. The use of advances could, for instance, be justified if a project has a reasonable chance of achieving a highly positive financial outcome. Union advances could then be used as risk-absorbers at a stage when the eventual outcome of a

project is still highly uncertain (for example, reimbursable grants for feasibility studies, financial support at the very early stages of a project, etc.), while the repayments would contribute to raising the volume of public funds available in favour of the networks. The legal set-up should encourage Member States to use advances instead of grants whenever appropriate. One way to achieve this would be to recycle the repaid advances at Member State level. Advances would then not flow back as EU budget revenues, but could be collected into revolving funds for future reallocation to subsequent projects. 'Advances' in this sense would be treated in exactly the same way as grants as far as the EU budget is concerned.

Some projects need Community support spread out over several years, particularly when financial gaps are substantial and when budgetary or other constraints prevent the commitment of the entire amount in any single year. In the case of Structural Fund appropriations, this difficulty is largely overcome by the existence of multiannual frameworks (CSFs). In the case of the TEN budget line, a similar system of multiannual frameworks could be envisaged to provide project promoters with the necessary assurance that Community support will be available over several years.

(b) Equity financing

The emergence of more sophisticated financing schemes for major infrastructures calls for new and innovative means of Community support. In many instances, the kind of public support which is expected by private partners is more related to the reduction and/or the sharing of risks than to the provision of subsidies. The structural shortage of equity resources for infrastructure projects has been repeatedly stressed by the private sector; non-recourse lenders are only willing to step in once an equity buffer of sufficient size has been put in place, as they can only rely on the revenues and assets of the project concerned. The equity shortage can be partly explained by the inadequacy of the financial returns which private investors can expect in return for the substantial risks they are supposed to bear. In addition, the role of the public sector as an equity provider to mixed partnership projects has remained underdeveloped. Capital ownership typically goes together with control over the project's assets, although possibilities exist to weaken this link, for example subordinated lending, preference shares without voting rights, etc., which allow for involvement in the risk-reward structure of the project without a transfer of decision-making.

Compared with grants, equity contributions have the advantage that the public sector can take part in the upside potential of the project and collect revenues which can be recycled into other projects. Once the project is up and running, and the financial performance of the project has become more predictable, the public sector could also decide to withdraw and make all or part of its shares available to other investors.

The recent creation of the EIF (as a public/private partnership) constitutes a significant step forward in this direction as the Union now disposes of a specialized vehicle with the potential to provide equity finance to TEN projects. By providing equity to some of these projects, the fund will enhance and facilitate the involvement of other investors, notably the private ones. Because of statutory constraints, the EIF will only be able to start its equity operations from June 1996 onwards, provided that the fund's general meeting lifts this particular constraint in relation to equity operations.

Because of prudential constraints and the EIF's limited capital resources (ECU 2 000 million), certain limitations could apply to the size of the fund's involvement in very large TEN projects. The Member States could use part of the resources transferred to them by the Community budget to strengthen the role of the fund as a structural provider of equity resources, in particular for these large projects. One possibility would be to invite the fund, on a case-by-case basis, to invest certain volumes of equity (possibly on a *pari passu* basis, i.e. on identical terms and conditions) on behalf of one or several Member States, particularly when the fund is involved as an equity provider on its own account. The EIF would then act as manager or trustee of equity resources entrusted by Member States through the Community budget. The fund's involvement could prove particularly valuable when several Member States have a direct interest in the project, for example transnational projects and/or cross-border sections of such projects.

For projects where the EIF is not involved on its own behalf, Member States could consider the possibility of using part of Union appropriations (extended through the SF, CF, TEN budget lines, etc.) for the purpose of taking

equity or quasi-equity holdings whenever appropriate. The technicalities of this are obviously a matter for further study; one possibility would be to create specialized national funds for equity investments in TENs, which would be owned and managed by Member States but partly capitalized through the Community budget. Revenues would be reinvested in other TEN projects. Similar financial constructions could be considered for individual projects, especially when several Member States are directly involved (for example, equity vehicles for transnational or cross-border projects).

(c) Loan financing

Loan instruments are of particular relevance for TENs as the major part of the funds is typically provided in the form of loans. In view of the importance of overall financing needs, the Union's own borrowing and lending capacity could play a useful complementary role as suggested below. This could take the form of Union partnership loans with certain characteristic features, such as fixed rates combined with very long maturities: the partnership loans would only be used as a complementary lending instrument destined to facilitate and accompany the involvement of other forms of Community financing, EIB and EIF in particular. Moreover, recourse to such loans should remain limited to projects which can demonstrate a duly justified need for such additional funds. A few options are described below.

The long economic life of many TEN projects, particularly in the transport sector, combined with their high capital intensity, calls for lending instruments with very long maturities (30 or 40 years and possibly beyond). Fixed-rate lending of this type is typically in short supply, especially by commercial lenders, as the supply side of the market is limited in size and as access to such funds is generally restricted to borrowers with the highest creditworthiness. The EIB obviously falls within this category of borrowers; the Bank has, moreover, indicated its willingness to enlarge the scope for very long-term lending at fixed rates to promoters of TEN projects. The Union could enlarge the scope for raising long-term funds at fixed rates, notably because the investors willing to 'invest' in these instruments (institutional ones in particular) would be provided with a possibility of diversification. The existence of EU borrowings under two separate signatures will therefore enhance the volume of available funds, while exerting downward pressure on the funding cost. The scope for alternative and/or complementary forms of EIB-EU coordination on fund raising for very long maturities deserves further investigation. The actual lending to projects could be entirely managed by the Bank; the funds raised could be used as a source of co-financing (partnership loans) alongside the EIB's own lending for selected projects identified by the Bank and which are in particular need of such long-term resources.

Limited access to very long-term funds restricts the potential involvement of financial institutions as commercial lenders to TEN infrastructures. EU partnership loans, characterized by long maturities and low cost, could help to weaken this constraint, especially if commercial banks were allowed to have access to such long-term funds collected by the Union for onlending to TEN projects (alongside their own loans). The financial institutions in question would then act as (EU) intermediaries by onlending these funds (partnership loans), provided they commit these funds on their own behalf (thus also bearing the repayment risk) to the beneficiary projects together with an equal or larger amount of their own lending resources. Partnership loans and commercial bank financing could have different maturities and repayment characteristics and would thus be complementary. The risk to the Community budget would be limited as all project risk associated with the partnership loans would be borne by the intermediaries, all of which should be highly creditworthy banks. Here again, these provisions should preferably only apply for projects where the EIB is involved on its own behalf. The mechanism would result in a broader supply of long-term fixed-rate funds, while risks would be diversified over a larger number of lenders.

In the context of the discussions on project financing in the Christophersen Group, the EIB has put forward a number of important suggestions for extending the Bank's involvement in the financing of the networks. The Bank's proposals respond in particular to typical financing problems related to long construction times, long pay-back periods, etc. and introduce considerable scope for additional flexibility in its interventions. Many of the proposed features could be integrated into a targeted facility in favour of TENs, which could perhaps succeed the former Edinburgh facility; the terms and conditions attached to the loans from this mechanism could be adjusted in the light of experience gained with Edinburgh loans. Provided the Bank's organs are prepared to consider

such a renewal or extension, the removal of ceiling or target amounts could lead to the transformation of a temporary mechanism into a more or less permanent window.

(d) Guarantees

The extension of guarantees is explicitly referred to in the Treaty (Article 129c) as one of the possible means of EU support in favour of TEN projects. Together with equity contributions, guarantees constitute an important means of public support for projects which call for a reduction or a sharing of risks.

The Union budget currently guarantees a significant amount of EIB project loans for infrastructures; budget cover is, however, only provided to the Bank for the part of the Bank's own-resource lending which takes place outside the Community (for example, Central and Eastern Europe, Mediterranean basin, etc.). One of the essential purposes of the Union's guarantee is to reduce the Bank's exposure to political risk when it lends outside the Union.

The European Investment Fund, which was set up in June 1994, is going to be an important actor for projects within the Union as loan guarantees for TENs constitute a primary target area for the fund. The EIF operates on a commercial basis, which implies that the size of the guarantee premiums will be commensurate with the level of risk taken on.

With the EIF now in place, the need for any direct Union budget guarantees for TEN projects within the Union needs to be examined and thoroughly justified. For very large projects, requiring guarantees going far beyond the fund's capacity, the extension of joint EU-EIF guarantees could be considered. This would, however, expose the budget to liabilities of considerable size and would possibly lead to the creation of a guarantee fund, similar to what has been done in relation to Community lending to third countries, so as to back up the budget in case of significant defaults. This guarantee fund could be partially capitalized through the premiums received for these EU co-guarantees.

The EIF could also act as a channel for public support in favour of TENs, for example, when the cost of the EIF guarantee premium for selected projects is borne by the budget. The draft financial regulation relative to Community support for TENs (COM(94) 62) explicitly refers to this possibility. The fund also offers new opportunities for Member States as it allows them to provide loan guarantees to certain priority projects at a cost which is known in advance, instead of exposing national budgets to future liabilities of unknown size.

While traditional public guarantees usually cover whole or part of a project's borrowings, irrespective of the underlying cause of default, such blanket guarantees are not necessarily appropriate, especially when the private sector gets involved. As discussed in Annex VI.C, private financing only becomes meaningful to the extent that the private sector is taking on an essential part of the risk related to the funds which it contributes to the project. Public guarantees should then only reach the level necessary to allow private bankers and investors to step in, and be targeted to certain types of risks, essentially the ones which the private sector is unable to influence or control.

Depending on the project, these risks could be related to the revenues of the project (for example, minimum guaranteed traffic), the full and/or timely completion of the project (completion guarantees), financial risks (exchange risk, interest-rate risk, refinancing risk), etc. A summary list of the most relevant risk categories applying to infrastructure projects is provided in Annex VI.D. It should, however, be recognized that partial guarantees, if loosely defined, can easily transform into blanket guarantees as project failures or financial difficulties are typically related to a multiplicity of causes and effects.

In order to secure a significant supply of very long-term loans for TENs, refinancing guarantees could be of particular significance. To the extent that these long-term resources cannot be raised in sufficient quantities in the market, the possible creation of a Community mechanism extending refinancing guarantees (or providing comparable means for maturity lengthening) deserves further attention. In its earlier contribution to the work of the Group (see SEC(94) 860, Annex 5), the Bank had already suggested increased involvement on its part in the refinancing of project debt provided by commercial banks for the length of the construction period. Although the refinancing risk is generally hidden (although certainly not absent) in publicly financed projects (it takes the form of the regular and periodical renewal of public debt stocks at interest rates varying over time), this risk becomes all the more relevant for privately funded projects as it

introduces uncertainties on a project's future debt service levels.

Refinancing guarantees, possibly extended at EU level, could give rise to either gains or losses, depending on the evolution of interest rates; a premium could also be charged (for example, in the form of a small margin on the lending rate). By pooling refinancing risks at a more global level, a larger diversification of risks would arise. Such a mechanism could, for instance, be confined to EIB loans with very long maturities, and should ideally associate the EIF as managing entity, acting under a mandate from the Community. In addition, the fund may want to share some of the risk as co-guarantor. A pooling of refinancing risks under a Union umbrella would not create new or additional risks at the overall Community level (Union and Member States), but simply provide a means to manage and monitor these risks more efficiently, while creating opportunities for enhanced private sector involvement in priority projects.

(e) Conclusions

The present section emphasizes the specific financing needs of TENs, specifically when these large infrastructure projects are implemented as public/private partnerships. Innovative and flexible means of Community support should be considered whenever appropriate and desirable to foster new forms of cooperation between the public sector and the private sector. Budgetary constraints at Member State and Union level constitute an additional reason to allocate scarce public resources in favour of TENs in the most cost-efficient manner. The various suggestions and examples proposed in this document do not constitute a call for additional budgetary resources at Community level. The emphasis lies on the possible scope for widening the forms of Community support currently available in favour of TENs within the existing financial perspectives, rather than on the need to raise the overall volumes of available support (although this possibility should not be excluded altogether).

The work of the Christophersen Group has amply demonstrated that individual projects differ widely in terms of their specific financing needs. Community support measures of the kind illustrated in Section 5 above should be tuned to these specific needs and therefore not be implemented as horizontal measures with predetermined target amounts. In those cases where a specific legal base would be required to allow for complementary action at Community level (for example, in the case of loans or guarantees), the actual decisions on the use of such facilities should always be taken case by case on the basis of proper justification at individual project level, and only to the extent that existing financial instruments at Union level (EIB, EIF, Community grants, etc.) cannot respond to these needs with the same effectiveness.

New forms of financial support for TENs should be well integrated into the operations of the already existing instruments at Community level, and be defined in complementary terms with the latter. Both the EIB and EIF would have to be closely associated at the initial stages (conceptual framework and design) and directly involved in the actual implementation and management (for example, allocations to individual projects).

The financial engineering relevant for the TENs must be considered project by project. Technically, the range of innovative possibilities for combining private involvement and public support from either the Member States or the Community is so large that it makes little sense to list individual options. What is needed, on the contrary, is flexibility in the forms by which public support can be extended, and procedures for efficient coordination between the potential financing sources when setting up the financial plans of projects.

The options outlined above focus on enlarging flexibility in the forms of public support. In parallel with increased flexibility in the public sector's approach to the financing of TENs, the private sector can be expected to develop further the market mechanisms relevant for infrastructure financing. In view of the relative weakness of such markets in Europe, there is scope for such an evolution which should be welcomed.

Annex VI.A

TEN projects: Estimated financing needs for the period 1994-2010[1]

Possible scheduling based on current plans and available information

(1 000 million ECU)

	Total cost (constant prices) 1994-2010	of which 1994-99	Average 1994-99
Transport: First list of priority projects	75.80	38.07	6.3
Energy: First list of priority projects	5.00	4.25	0.7
Total cost first list	**80.80**	**42.32**	**7.0**

	Total cost (constant prices) 1994-2010	of which 1994-99	Average 1994-99
Transport projects (EU): Second and third lists	51.00	20.80	3.5
Transport projects: Acceding countries	4.40	1.40	0.2
Transport projects: Links with CEEC	4.75	2.70	0.5
Other energy projects	25.00	9.00	1.5
Total cost other lists[2]	**85.15**	**33.90**	**5.7**

1 Situation corresponding to the Corfu European Council; changes proposed in preparation for the Essen European Council not included.

2 Figures for second and third lists are approximations as complete data for some projects have not been provided.

Annex VI.B

Classification of priority projects approved by the Corfu European Council[1]

Investment outlays

(million ECU)

	Up to 1999	Up to 2010
A — *Mature public/private partnerships*		
PBKAL–NL	950	2 740
Betuwe line	2 340	3 290
PBKAL–UK	3 420	5 360
Malpensa Airport	990	1 050
Total	7 700	12 440
B — *Mature projects which are publicly financed on the basis of user charges with government guarantees*		
Øresund fixed link[2]	3 070	3 070
C — *Conventionally financed national railway projects*		
PBKAL–B	3 070	3 700
German high-speed train (Berlin–Nuremberg and link with TGV–Est (high-speed train East))	4 470	8 790
TGV–Est (high-speed train East)	2 900	4 100
Total	10 440	16 590
D — *Projects with substantial EU grant support for cohesion motives*		
Athens–Patras (Rion–Antirion included) motorway	3 010	3 890
Via Egnatia motorway	2 460	2 480
Lisbon–Valladolid motorway	770	1 070
Conventional rail Cork–Stranraer	240	240
Total	6 480	7 680
E — *Projects with open financial plans*[3]		
Brenner (high-speed/conventional train)	860	12 400
Lyons–Turin (high-speed/conventional train)	1 820	6 800
Madrid–Montpellier (high-speed train)	3 250	8 370
Madrid–Vitoria–Dax (high-speed train)	1 130	4 500
PBKAL–Germany	3 320	3 950
Total	10 380	36 020
Total	**38 070**	**75 800**

[1] *List of 11 transport projects approved by the Corfu European Council, June 1994.*
Projects proposed as new first priorities to the Essen Council:

(million ECU)

Nordic triangle (E)	1 400	4 400
Øresund (Swedish access) (B)	300	300
IRL–UK–Benelux road corridor (A)	1 580	2 680
West coast main line (E)	880	880
Turin–Milan–Venice–Trieste (E)	2 100	6 750
	6 260	15 010

[2] Not including Swedish access routes.
[3] Of which, Brenner (access routes) and Barcelona–French border conventionally financed.

Annex VI.C

The concept of private financing in relation to TENs

A — General

1. From the outset, the financing of TENs has been strongly associated with private sector involvement. COM(90) 585 emphasizes that TENs — particularly in the telecommunications sector — show a potential for financial profitability as they respond to strong user needs. Market logic should therefore apply, notably through the application of user charges for the services provided, without, however, excluding public support in specific circumstances.

The White Paper specifies that 'the major portion of finance for these investments will be raised at the level of the Member States, either through private investors (especially in the telecommunications sector) or via public enterprises'. In the conclusions of its provisional report to the Corfu European Council, the Christophersen Group advises favouring private participation whenever possible, while possible involvement of the private sector is mentioned as one of the criteria for selecting priority projects. The various forms which private involvement could take are discussed in greater depth, although still in very general terms, in the section of the report dealing with public/private partnerships. Finally, the Corfu conclusions emphasize 'the leading role of private funding'.

2. The precise meaning of the concept has remained vague and ambiguous and has therefore given rise to diverging interpretations. The Treaties themselves remain neutral on the public/private issue as Article 222 EC and Article 83 ECSC specify that 'the Treaty shall in no way prejudice the rules in Member States governing the system of property ownership'. In the field of competition, the Treaty provides that, subject to the carrying-out of certain public service obligations, public companies are subject to the same rules and must be treated on an equal footing with private companies (Article 90(2) EC). These Treaty provisions obviously deal more with the ownership question than they do with financing as such.

This annex therefore attempts to provide some clarifications on the issue of private financing and to give some operational content to this notion. It needs to be stressed from the outset that, for reasons of simplicity, this annex will focus on 'pure' forms of private financing. Particularly in the transport sector, such genuine forms are highly unusual in practice because they are rarely feasible and often not desirable. Section C refers to the more common approach, whereby mixed financing solutions are generally worked out.

The emphasis put on private financing is inspired by a number of benefits which are generally associated with this particular form of financing:

(a) it diminishes the pressure on public budgets and on public debt levels (through a reduction in public investment expenditure, risk sharing, etc.);

(b) it can therefore contribute towards increasing and speeding up the supply of new infrastructure or the upgrading of existing facilities through the availability of extra resources (although the complex institutional and financial set-up of individual projects often delays the implementation in comparison with publicly funded projects);

(c) it increases efficiency, in both construction and operation;

(d) it fosters competition, both between public and private sectors and between private groups;

(e) it improves market awareness and responsiveness to user needs.

B — Criteria and conditions

If private financing is to produce any effect on public sector budgets (see point (a)) and/or on the total supply of funds in favour of TENs (see point (b)), the financing in question will have to be repaid, in the case of loans, or remunerated, in the case of equity, out of the revenues generated by the project itself, without recourse to public budgets. The notion of private financing, in the form of equity, loans or any other form, therefore implies that (at least a clear and meaningful part of) the risks associated with their financial contribution (for example, arising from revenue shortfalls, cost overruns, etc.) are borne by the private investor himself and not covered by the State or any other public body.

A likely consequence, particularly if a public enterprise is involved (for example, the construction of a new railway link), is that the infrastructure project will necessarily have to be implemented in the form of an independent entity with separate accounts and with revenues and expenditure of its own. If this is not the case, the project will form part of a broader set of assets belonging to the promoter company, which implies that the financial performance and profitability of the project can no longer be separated from the rest of the promoter's assets. In addition, the project entity in question will have to operate on a commercial basis and be profit-seeking so as to maximize the likelihood of a full and timely repayment of the loans and to generate an adequate profit for the shareholders.

The purest example, although rarely encountered in practice, is a project which is entirely built, financed and operated by a private promoter in return for a concession granting him the right to collect the revenues over a given period of time. Besides the equity capital brought in by the promoter, the loans will typically be provided on a non-recourse basis by a consortium of private banks. The public purse remains out of reach, particularly when the project fails or is unable to service its debts, as creditors cannot express claims beyond the project's revenues and assets.

The advantages mentioned under points (c), (d) and (e) are associated with private sector management (as distinct from financing) of the projects concerned. In practice, however, private financing will almost automatically imply private management, as the private sector is in general unwilling to put its resources at risk in projects that it is not allowed to manage or control.[1]

In those instances where the role of the private sector is limited to the provision of risk-free forms of financing (for example, provision of a State-guaranteed loan to a public entity for the construction of an infrastructure link), it is unlikely that any of the advantages mentioned in the above list will materialize and one can therefore conclude that this form of financing, even if extended by a private bank, is little different from the classical forms of public financing.

[1] The opposite situation, i.e. private management combined with public ownership, is perfectly conceivable, for example, a motorway built out of public funds and subsequently managed by a private operator.

If a particular TEN link is entirely built and financed by a public enterprise, none of the conditions set out above (private sector liability, separate entity seeking profit) are fulfilled and the notion of private financing is therefore not directly applicable. In other instances, the issue is less clear-cut, for instance when the public enterprise in question (or the State itself) decides to set up and capitalize a separate (private) promoter company for the project in question, possibly with equity contributions from other public or private partners. Assuming that the promoter company is entirely self-sustaining (i.e. the project generates sufficient revenues to cover the investment and operating costs) and is, moreover, operating on a commercial basis, the question arises to what extent a financial construction of this kind could be qualified as private financing.

Referring to the criteria set out above, the risks associated with the funds provided to this private vehicle should be entirely borne by the public and private investors up to the level of their financial involvement. More particularly, no spillover effects should exist for the parent company (for example, in the form of blanket guarantees or other), as the latter then becomes the ultimate risk bearer; this will inevitably increase the funding cost, but confine the risks to the project company itself (for example, non-recourse lending). The extent of the public sector's involvement in the capital (majority share) and management is probably also a relevant element, as the likelihood of an eventual bail-out in case of financial difficulties will inevitably be linked to the overall level of public involvement.

C — Combining private financing with public support

The extension of public support in favour of a project is definitely not in contradiction with the concept of private financing. Public support will actually be indispensable for those projects which are not financially viable. This support can be justified on various grounds, such as the important socioeconomic benefits and externalities of the project, public service obligations imposed upon the operator, etc.

Public support can take a variety of forms, depending on the objectives pursued:

investment grants, reimbursable advances and support in kind (building of access roads, provision at no cost of an already existing infrastructure, etc.);

equity contributions to the promoter company;

interest subsidies;

long-term loans;

guarantees for specific risks, etc.

In order to remain compatible with the private financing logic, the following conditions are relevant:

(i) the private sector needs to bear (at least a meaningful part of) the risk related to its own financial contribution;

(ii) the size of the public contribution needs to be minimal, i.e. not greater than necessary to involve the private sector, as the financial return to the private sector would otherwise be virtually guaranteed and the incentives would disappear.

Annex VI.C

The first condition is not incompatible with certain types of public guarantees, notably for risks which the private sector is unable to control or to insure elsewhere. However, they should not produce the effect of suppressing the liability of private funders while shifting the risks back to the State (for example, loan guarantees extended at no cost, guaranteed returns for the private sector, etc.). The second condition is the most difficult one to verify in practice and constitutes the main difficulty in setting up mixed financing solutions. A bidding procedure, whereby the project is assigned to the promoter requiring the lowest level of public support, is probably the only satisfactory means of testing this condition.

Annex VI.D

Categories of risks generally identified in relation to infrastructure projects

A — *Precommissioning period*

Administrative delays (planning, legislation, environmental, compulsory land acquisition, etc.)

Construction cost overruns and delays

Non-completion risk

Non-completion by third parties of associated infrastructure (access roads etc.)

B — *Post-construction period*

Revenue generation (market risk)

Defects, design errors, etc.

C — *Financial risks*

Interest rates and inflation

Exchange rates

D — *Political risks*

Taxation, accounting rules

Construction of a competing infrastructure

VII — Administrative and regulatory environment for transport and energy infrastructure projects

A — Transport

1. Mandate given and work done

The Corfu European Council asked the Christophersen Group to examine transport infrastructure projects with a view to accelerating administrative, regulatory and legal procedures.

This examination has been carried out in respect of the transport projects agreed by the European Council. It concerned the following aspects:

political decision-making;

studies, in particular environmental impact assessments;

construction authorization procedures;

establishment of legal arrangements for ownership, construction and operation;

compliance with rules on public procurement;

application of competition rules;

interoperability;

transport policy measures, such as the charging of infrastructure costs to users.

Information sheets have been drawn up describing the situation of each project.

On the basis of information supplied by the States concerned and discussions with experts, common problems have been identified for which solutions could be proposed following more detailed consideration.

2. General comments

It is not possible to dissociate regulatory problems from the conditions for private sector involvement in the financing of major transport infrastructure projects, as regulatory problems have a direct bearing on the very principle of private sector involvement and the nature of the risks which the private sector is prepared to accept.

The first problem is the highly political nature of the decision to go ahead with a major infrastructure project. The higher the political profile of the decision, the more it puts a public stamp on the project. The political profile of the project can be an obstacle in itself if the project involves negotiations between different levels of authority. Such a situation can lead to the private sector losing interest in the project or setting a very high price for getting involved, on account of the associated risks.

For a whole range of reasons, which can vary from one country to another, the national authorities responsible for transport infrastructure tend to regard themselves as the promoters of major infrastructure projects. This attitude goes hand in hand with the idea that such infrastructure can be built only with public funding or funding under public sector control. It almost naturally leads to arrangements which fail to make optimum use of the potentialities of the private sector.

In the case of cross-border projects involving two or more national authorities, such attitudes and the diversity of such attitudes can constitute major obstacles to the establishment of dynamic conditions for project implementation.

These difficulties, the result of a long tradition and of a predominantly national approach, combine to make the political decision and the financing arrangements very complex and difficult.

The solutions to these problems are not exclusively legal in nature: the first step is to recognize that national frontiers have given way to an area without internal frontiers, and that the various authorities must cooperate to manage this area and make it dynamic. All potentially interested parties must then be much more actively associated with the project rather than seeking to superimpose the controls which each intends to exercise in its own territory.

3. Scope for accelerating national procedures

For obvious reasons relating to the protection of the general interest and of individual rights, each Member State has set up administrative procedures, accompanied

by judicial guarantees, to permit the implementation of infrastructure projects. These procedures concern the way the project fits into regional planning and the solutions to be adopted to minimize the environmental impact. The length of these procedures varies from one Member State to another, as the following examples show:

(i) in France, the procedures for the preparation of major infrastructure projects take six to seven years, from the outline plan to the start of construction;

(ii) in Germany, an average of six to seven years must be allowed from project identification to the construction licence;

(iii) in the United Kingdom, a period of seven to nine years is needed from project planning to the start of construction;

(iv) in the Netherlands, four to five years must be allowed for completion of the procedures.

Such long lead times are common to all Member States, although some have recently endeavoured to reduce them by shortening procedures and by accomplishing several tasks in parallel rather than consecutively.

Attempts to shorten lead times have been made in several countries, reflecting a desire to speed up the completion of infrastructure projects:

(i) On 24 December 1993 Germany adopted a Federal Law (Planungsvereinfachungsgesetz) designed to speed up procedures by setting stricter deadlines for the authorities themselves, for the public enquiry and for the examination of objections, which rarely have a suspensive effect. It is now possible to complete the whole process in two years.

(ii) In France, an administrative circular dated 17 December 1992, on the conduct of major national infrastructure projects, emphasizes the need for high-quality assessments (environmental impact, socio-economic impact), the grouping of procedures and the organization of a democratic debate ahead of the public utility enquiry so that account can be taken of the concerns of all parties in advance.

(iii) The Dutch law (Tracéwet, 1994) and the British law also permit the acceleration of procedures for major infrastructure projects. One of the means provided is the approval of major projects by act of parliament, thus limiting public debate to the duration of the parliamentary debate; however, this can itself be long where detailed examination by a parliamentary committee is involved. For example, the debate on the bill to be tabled in November 1994 on the Channel Tunnel rail link is expected to last 18 to 24 months.

Without a doubt, the most important thing is still to take account, from the outset, of all interests concerned by the project, in particular the interest of the regions and areas affected.

The above finding leads to the following two conclusions:

(i) States which still have long procedures could imitate the above examples, taking care to ensure that the accelerated procedures comply with Community rules on environmental impact.

(ii) In the case of cross-border projects concerning a Member State having an accelerated procedure and another with no such accelerated procedure, project implementation will automatically follow the speed of the slower Member State, with all the negative consequences this may have. Greater synchronization of national procedures is therefore desirable.

4. Lack of a common legal framework for cross-border projects

In both legal and economic terms, cross-border projects are generally designed from a narrow perspective. A project of direct concern to two Member States will be pieced together by superposing two national projects, each of which complies with national law, with a minimum amount of joint work and often without any legal framework, each Member State being responsible for its part of the project. The Øresund is a good example of the splintering of a single project into several parts for which different legal bodies are responsible (a Danish body, a Swedish body, and a jointly owned body solely for the fixed link (bridge/tunnel)). The TGV-Est (high-speed train East) is currently presented as a French section and a German section, with the result that it fails to cross the Rhine.

This minimalist approach tends to ignore the interest which other States can have in a given project in terms of the development of their own network and their economic activities. Why, not, then, find a way of involving them in the development and financing of the project?

There are several recent examples:

(i) The Netherlands is prepared to participate in contributing to the funding of the Belgian section of the TGV-Nord in order to advance this project, which has an impact on its own projects.

(ii) In the context of the TGV-Est project, Luxembourg has given France an undertaking that it will contribute to the funding of the investment needed in France in addition to the work involved in adapting its own rail infrastructure.

Luxembourg is also prepared to consider contributing towards the costs of developing the Belgian part of the Luxembourg–Brussels railway line, to upgrade it to high-speed standard, in accordance with procedures yet to be negotiated.

Moreover, the absence of a joint structure does not encourage the optimal search for common solutions to problems, the lowest common denominator being the rule.

Two examples can be quoted here:

(i) PBKA (Paris–Brussels–Cologne–Amsterdam) is a project which, in terms of infrastructure construction, was planned as a juxtaposition of national projects, the European Community being kept out of the inter-State discussions. In terms of operation and revenue distribution, and hence return on investment, although agreement was reached on the principle of solidarity, this appears not to be sufficient, as it was not finalized within the period agreed in December 1989 by the ministers of the States concerned and the project is still far from completion;

(ii) Eurostar is a service offered jointly by the Belgian, British and French railways on the Paris–Lille–London and Brussels–Lille–London routes. A steering committee, and not a joint body, is responsible for resolving any problems concerning the operation of the service. The lack of a joint body means that each network defends its own interest on each question, such as the uniform worn by staff, the number of staff seconded by each network, timetables, etc.

The approach to all cross-border projects is at present strictly intergovernmental, which considerably weakens them by allowing national interests to prevail over the common interest. It should be possible to find solutions to this major shortcoming by having recourse to legal entities pooling the interests concerned and promoting them in the common interest. The main aim would be to save the project from short-term or partisan considerations which could endanger it. Bringing the interested parties together within a specific body responsible for implementing the project would give it greater support and would reduce the risk of it being blocked by one of the parties.

The body in question should be able to bring together the interested parties and yet have sufficient independence to promote the common interest effectively. A detailed legal study is needed to identify the instruments which could be used. At European level, two types of legal framework could provide the solution:

(i) the European Economic Interest Grouping (EEIG) could bring the interested parties together at the planning stage with a view to carrying out the necessary feasibility studies.

The EEIG is a particularly appropriate instrument in this case. It is the legal form adopted by the SNCF and FS for the Lyons-Turin project studies, which demonstrates the usefulness of a single instrument bringing private and/or public partners from different Member States together for the purposes of a well-defined project;

(ii) the European company: although the regulation on the European company has not yet been adopted, the proposed articles of association would enable the partners in a major project to be brought together at the construction and/or operation stage within a commercial company complying with uniform rules applicable throughout the Community, the rules applicable at its chosen headquarters applying to aspects not covered by the Community regulation. Fiscal matters can be crucial in the choice of such an instrument.

In order to facilitate cooperation between the public authorities concerned, other instruments have also been referred to by professional associations and by working

parties which have looked at the trans-European transport network.

The idea of a European infrastructure agency responsible for promoting the construction of the infrastructure needed for the operation of the trans-European transport network has been put forward. To be worthwhile, such an agency would need to have sufficient powers to ensure the coordinated implementation of cross-border projects and to settle the conflicts liable to arise between partners.

An independent (public-law) authority could also be set up for a project or a group of interdependent projects with the task of coordinating the project, defining the conditions for its implementation, and seeking the necessary partners and sources of funding.

5. Competition imperatives

Considerable economic interests are involved in the construction and operation of major items of infrastructure, and it is essential that interested economic operators should have equal opportunities to participate. The public interest also requires acceptance of the most economically advantageous offers in terms of costs (in particular to the public purse) and efficiency in the successive construction and operation stages. These requirements must be met in accordance with the procedures for public procurement which, in certain cases, could put off potentially interested private partners.

At the project promotion and design stage, competitive tendering is essential for design studies and project promotion activities wherever a significant amount of national or Community public resources are devoted to the financing of the studies and activities in question. However, in cases where private promoters propose to fund all or virtually all of the promotion, study and implementation costs, or are recognized as having exclusive rights in the field in question (as regards major transport infrastructure these are probably exceptional cases), the competitive tendering requirement could inhibit the formation of consortia and delay the implementation of projects of European interest.

The public authorities could also hold competitions to come up with ideas for the implementation of specific projects on the basis of a detailed description of the objectives pursued. However, this method, which draws on the imagination and know-how of the private sector, must be sufficiently well organized to ensure real competition.

At the construction stage of an infrastructure project, competitive tendering between the firms or groups of firms responsible for project management or for the implementation of various parts of the project is always desirable in order to guarantee the quality of the infrastructure, compliance with the constraints imposed by the contracting authority and compliance with the minimum construction deadlines. Community rules require competitive tendering for all work carried out under the responsibility of the public authorities or of a concession-holding company subsidized by the public authorities or partly publicly owned. It is not compulsory for infrastructure built by a concession-holder whose capital is exclusively private, who receives no public subsidies and no public or Community cover for the financial risks involved.

At the operation stage of an infrastructure project, when a concession is to be granted for the operation of the infrastructure, the procedure for selecting the concession-holder must comply with the same rules as for the implementation stage, unless the concession covers both stages (construction and operation). Moreover, the conditions for access to the infrastructure, once it has been completed, can have a decisive impact on the search for private funding at the design and construction stages. Under Community law, infrastructure must generally be open to all operators who meet the necessary technical and legal conditions for the provision of transport services.

This general principle does not preclude the conclusion of specific agreements, particularly where transport undertakings participate directly or indirectly in the financing of the infrastructure. In view of the investment costs, such agreements may prove essential.

However, transport undertakings can only make a financial commitment if they receive guaranteed access to the infrastructure to provide their own services.

It is therefore conceivable that the infrastructure operator may give a contractual undertaking to reserve part of the

available capacity for these undertakings. The lawfulness of such agreements must be assessed in the light of the competition rules on a case-by-case basis. However, two general principles can be identified:

(i) the restriction on competition, i.e. the reservation of capacity, cannot go beyond what is strictly essential for the success of the project;

(ii) the agreement in question must not eliminate competition on a substantial part of the market, which in principle precludes the reservation of all available capacity for one undertaking or group of undertakings.

In any case, competition imperatives must be reconciled with the specificities of major infrastructure works: very long time-scales and construction risks, difficulties of forecasting traffic, insufficient financial profitability, operating risks, etc.

In this context, transport undertakings may consider concluding cooperation agreements for the operation of European services, the lawfulness of which must also be assessed in the light of the competition rules.

When examining such agreements, the Commission will take account of the fact that the trans-European networks have been designed from the outset from a European perspective and that commercial use thereof must be considered from the same perspective.

It is also necessary to examine in each case how:

(i) the need for transparent and open public procurement can take account of arguments relating to the taking of initiatives and risks by a given promoter;

(ii) potential competition problems can be identified and dealt with satisfactorily at an early stage of project development.

6. Interoperability

Divergences in technical and operational rules are characteristic of many projects. Superposing technical solutions rather than adopting common standards is a widespread and deplorable practice. It has a considerable impact on costs, especially in the rail sector. By way of example, in order to be able to run on the three networks concerned and in the Channel Tunnel, Eurostar must be able to use three types of power supply and four types of signalling. The PBKA train will not be able to run on the Eurostar network. The Spanish gauge is another problem to be resolved. The elaboration of common technical solutions and the corresponding standards is a slow process which is under way. The projects examined have not revealed any new problems not already covered by the proposals which the Commission has formulated, in particular for the construction of a high-speed train network (see proposal for a Directive on the interoperability of the European high-speed train network).

Telematic developments applied to transport require the definition of joint standards, whether for the introduction of road-use charges or for the control of shipping. Air-traffic control also requires the application of joint standards for the establishment of a unified system.

7. Developments in the common transport policy

The Community wishes to develop a transport policy which makes the best possible use of each mode of transport. This implies fair competition between transport modes and the charging of costs to infrastructure users. Developments under way will have a not inconsiderable impact on the way the operation of infrastructure is organized.

Charging for the use of transport infrastructure can provide a means of generating new funds with which to finance the new infrastructure which the Community needs. The implementation of a consistent policy in this field meets with strong resistance linked to long-standing traditions and the debate on the fiscal nature of infrastructure charges.

In the road transport sector, Directive 93/89/EEC establishes the basic conditions for the development of charges for the use of road infrastructure. The means of collecting road-use charges must be sufficiently harmonized to avoid splits between national networks, and telematics should provide appropriate solutions.

The possibility of collecting such charges is being studied more frequently, even in the peripheral countries: the search for optimum private funding of the Greek PATHE (Patras–Athens–Thessaloniki) project involving a toll is evidence of this.

In the rail transport sector, Directive 91/440/EEC calls for a separation between infrastructure provision and service operation. The Council reached political agreement on the two subsequent Directives — on the licensing of railway undertakings, and on the allocation of railway infrastructure capacity and the charging of infrastructure fees — at its meeting on 26 September 1994. The adoption of these two Directives should bring new dynamism to the railway sector, making it easier to finance trans-European infrastructure.

The approach followed for the TGV–Est in France does not make use of these possibilities: French law does not permit any operator other than the SNCF on the French network. The structure of the project results in considerable public financing requirements.

8. Conclusions

Trans-European infrastructure projects suffer from a host of uncertainties which make them harder to implement and more costly than traditional national projects.

These uncertainties stem from:

the difficulty of taking the political decisions enabling the project to be implemented;

the splintering of the project into several parts;

the lack of a single promoter;

the fact that the status of network operators is under revision;

technical difficulties.

To these uncertainties, which discourage the private investor, increase lead times and increase costs, must be added an attitude on the part of the national authorities — who are used to infrastructure being publicly funded and to a national environment — which does not really encourage an international partnership of private and public bodies. Several actions can be taken, in technical terms, to solve the problems examined, but none of them will be fully effective unless there is a real desire to cooperate on the part of all parties concerned by a cross-border project. The European dimension of the projects also requires them to be designed, implemented and operated from a truly European perspective.

Recommendations can be formulated. They call for more detailed consideration of the subjects examined with a view to facilitating implementation of the projects. A pragmatic approach would involve testing some of these proposals on one or other of the feasibility projects.

(a) The Member States

The Member States should:

(i) consider each cross-border project in its entirety and not as an amalgam of national subprojects;

(ii) examine the scope for reducing the time taken to obtain administrative authorization in the light of the experiments already undertaken by a number of Member States;

(iii) ensure that the national procedures to be followed for the implementation of a cross-border project are synchronized;

(iv) set up joint bodies bringing together the partners interested in the promotion of a given project and capable of embracing both public and private bodies;

(v) as far as possible, associate the national, regional and local interests affected by a project from the project design stage;

(vi) adopt a positive attitude to the association of private capital with the legal persons responsible for project promotion.

(b) The European Union

The Union should:

(i) actively contribute to bringing together partners who may potentially be interested in a cross-border project;

(ii) adopt the regulation on the European company as soon as possible so that it can be used by project promoters;

(iii) be able to increase the degree of legal certainty which promoters need prior to the adoption of a project as regards the scope for cooperation between partners and possible ways of operating the infrastructure;

(iv) encourage the European Investment Fund to play a more active role in the legal and financial organization of projects, in particular by taking a holding in promotion companies bringing together the partners interested in a project;

(v) speed up work on the Directive on the interoperability of high-speed trains and on technical specifications and standards in the field of telematics applied to transport;

(vi) implement the various measures to ensure that infrastructure users bear more of the infrastructure costs.

B — Regulatory framework for the energy sector

1. Mandate given and work done

The Group also examined the scope for accelerating administrative, regulatory and legal procedures for energy network projects.

It focused on two aspects:

(i) administrative procedures leading up to the authorization to carry out projects;

(ii) establishment of a legislative framework for the electricity and natural gas markets compatible with the internal market.

The Group would emphasize that the rules laid down pursuant to Community policies, including public procurement and competition rules, must be complied with in the case of energy network projects too.

2. Administrative procedures

In its proposal for a decision on a series of actions aimed at creating a more favourable context for the development of trans-European networks in the energy sector,[1] which accompanied its proposal on a series of guidelines, the Commission emphasized the problems of the duration and complexity of the administrative procedures for authorizing projects and of delays in such procedures. These problems are particularly severe in the case of electricity transmission line projects.

Analysis of the problems encountered in the Member States shows that they are quite diverse in nature and that the solutions which may be envisaged range from the amendment of national legislation to informing the public of the advantages of the projects in question.

Eurelectric, the association representing the electricity sector in the Union, agrees with this analysis and proposes that deadlines be laid down for the completion of the procedures, that the legal procedures and environmental requirements in the Member States be harmonized, and that the public be properly informed so as to increase public acceptance of this kind of project.

The Group suggests that the European Council recommend to the Member States, who, in accordance with the principle of subsidiarity, are responsible for the administrative procedures:

(i) that they take the necessary measures to avoid delays in the administrative procedures for priority projects;

(ii) that they cooperate among themselves and with the European Commission with a view to simplifying the administrative procedures that apply to all the energy network projects, and to ensuring that they are completed within a reasonable time-scale.

3. Operating conditions for energy networks

The Union has a duty to place its energy networks at the service of the common interest, which implies integrated operation of the networks in the framework of the internal market.

[1] COM(93) 685 final.

The Directives on transit already ensure that the operators of all major networks can use any interconnected network to buy or sell energy (provided such trade is across a national boundary) and to gain access to energy produced in another Member State or in a third country.

The Commission's proposals for common rules for electricity and gas will enable a major consumer or a distribution network to have direct recourse to the transport capacities made available by the network in order to buy electricity or natural gas in other Member States. The operation of the internal market depends on energy transport infrastructure being developed and adapted in line with the new demand that this system will generate.

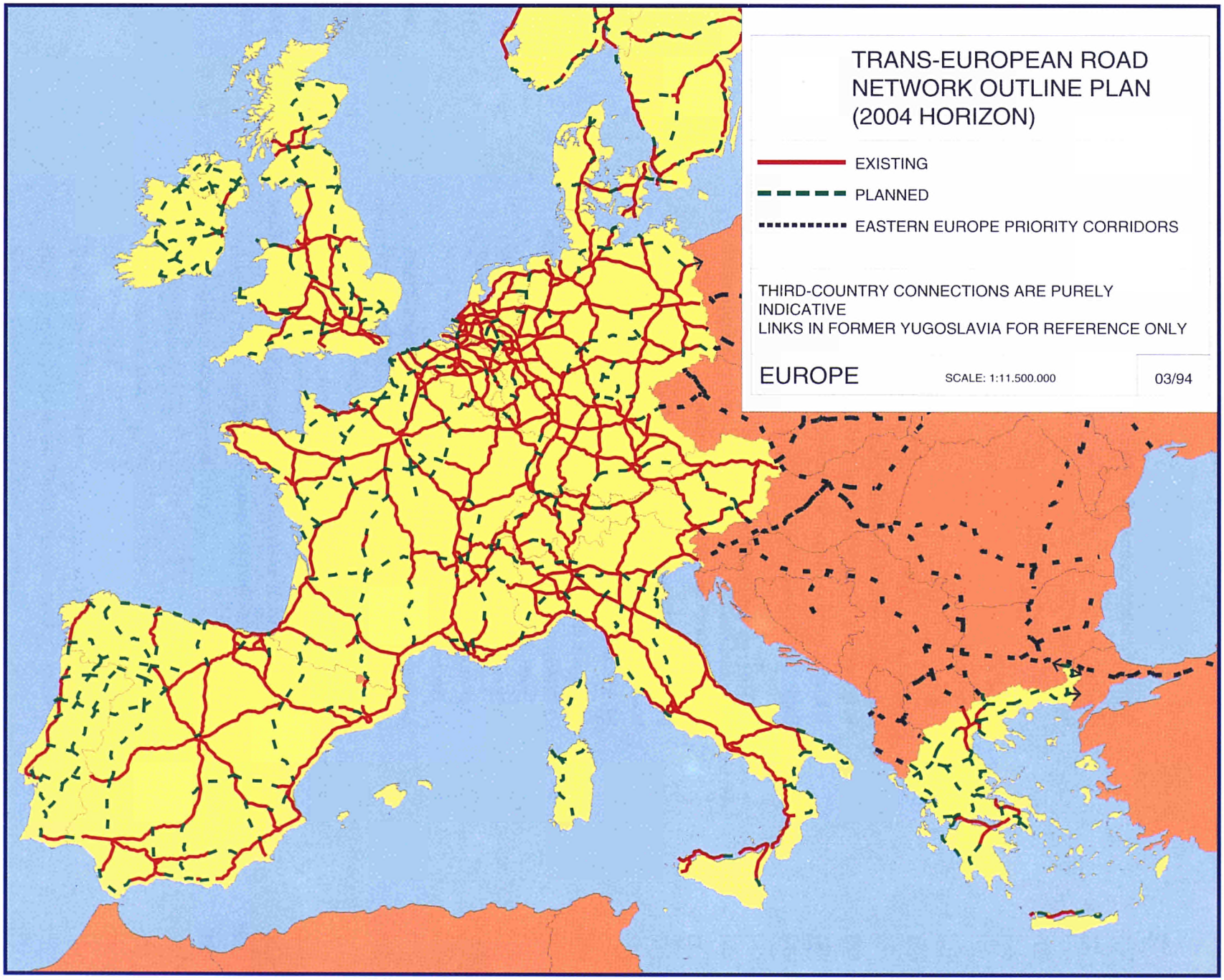
These Commission proposals for new market rules, which were amended following the opinion of the European Parliament, are still being discussed by the Council. Progress has been made on certain aspects, including the opening-up of electricity generation and 'unbundling'.

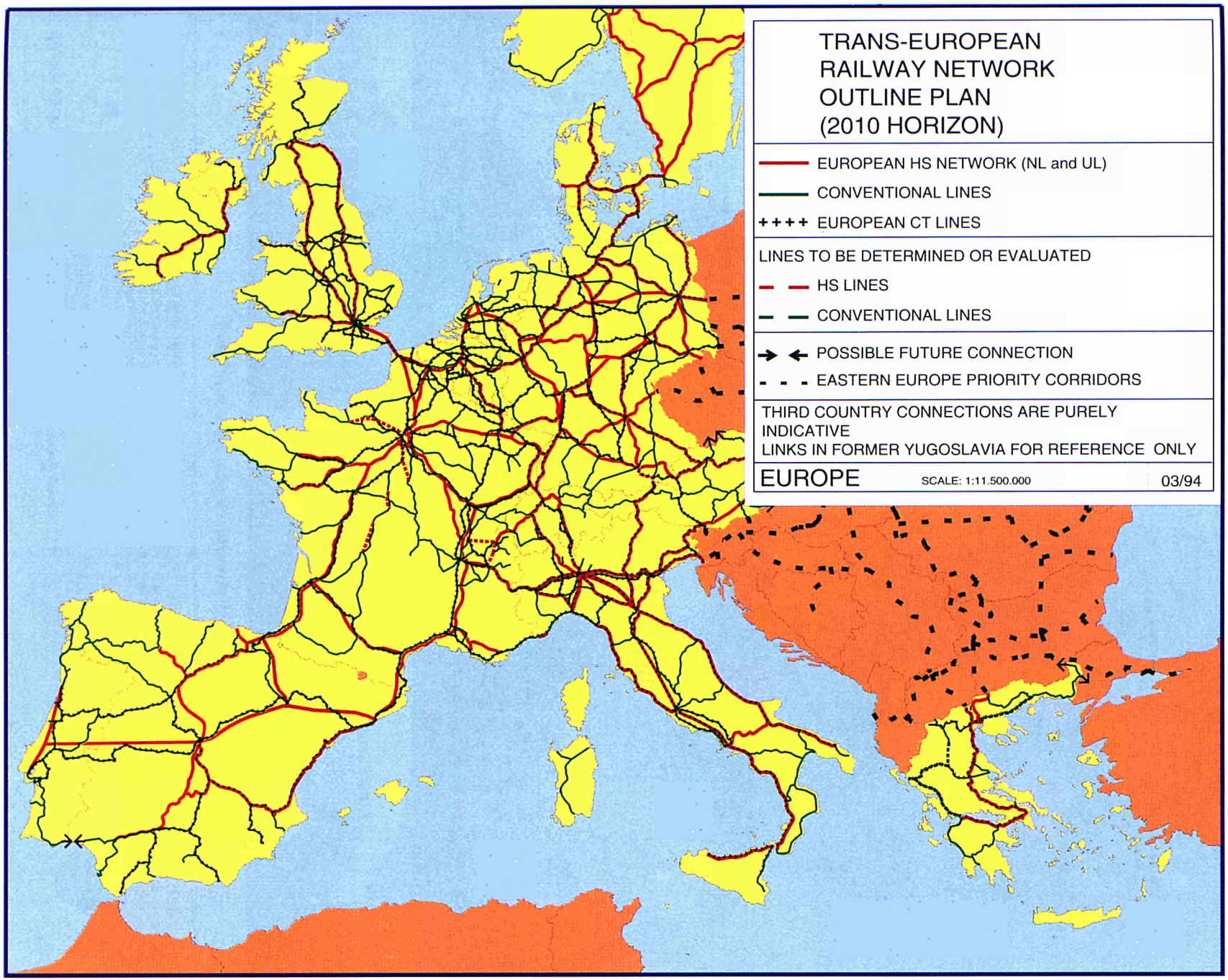
The Group suggests that the European Council reiterate the importance of rapidly completing the internal energy market, on account of the synergy with the physical development of energy networks and so that the consumers and the economy of the Union can benefit from the anticipated advantages of the single market in the energy sector and the improved interconnection of existing networks and the creation of new trans-European networks does not strengthen the dominant positions of operators of major energy networks.

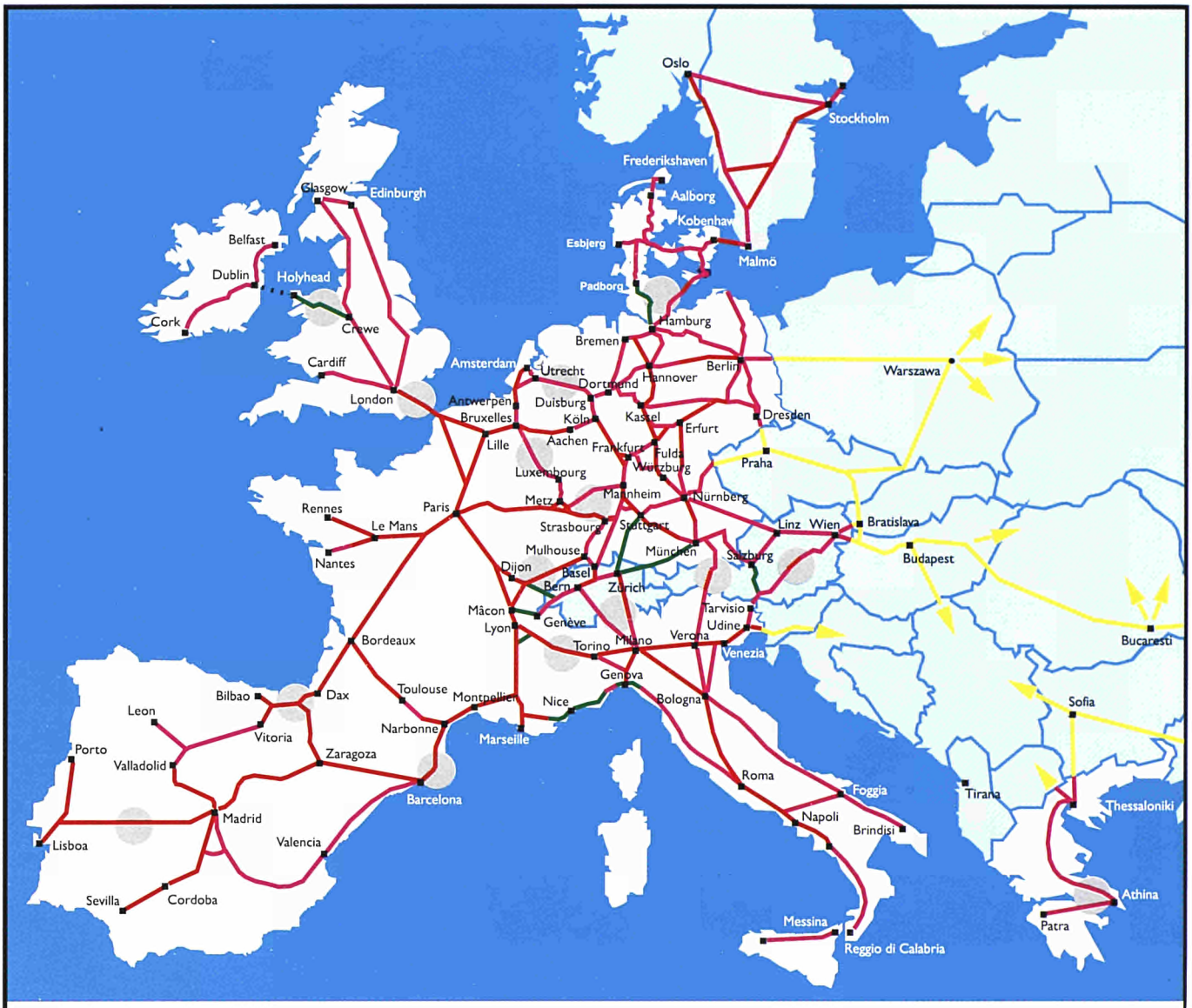
VIII — Annexes

Contents

Maps


TRANS-EUROPEAN ROAD
NETWORK OUTLINE PLAN
(2004 HORIZON)
EXISTING
PLANNED
EASTERN EUROPE PRIORITY CORRIDORS
THIRD-COUNTRY CONNECTIONS ARE PURELY
INDICATIVE
LINKS IN FORMER YUGOSLAVIA FOR REFERENCE ONLY
EUROPE
SCALE: 1:11.500.000
03/94


TRANS-EUROPEAN
RAILWAY NETWORK
OUTLINE PLAN
(2010 HORIZON)
EUROPEAN HS NETWORK (NL and UL)
CONVENTIONAL LINES
++++ EUROPEAN CT LINES
LINES TO BE DETERMINED OR EVALUATED
HS LINES
CONVENTIONAL LINES
POSSIBLE FUTURE CONNECTION
EASTERN EUROPE PRIORITY CORRIDORS
THIRD COUNTRY CONNECTIONS ARE PURELY INDICATIVE
LINKS IN FORMER YUGOSLAVIA FOR REFERENCE ONLY
EUROPE
SCALE: 1:11.500.000
03/94



Trans-European high-speed train network outline plan (2010)

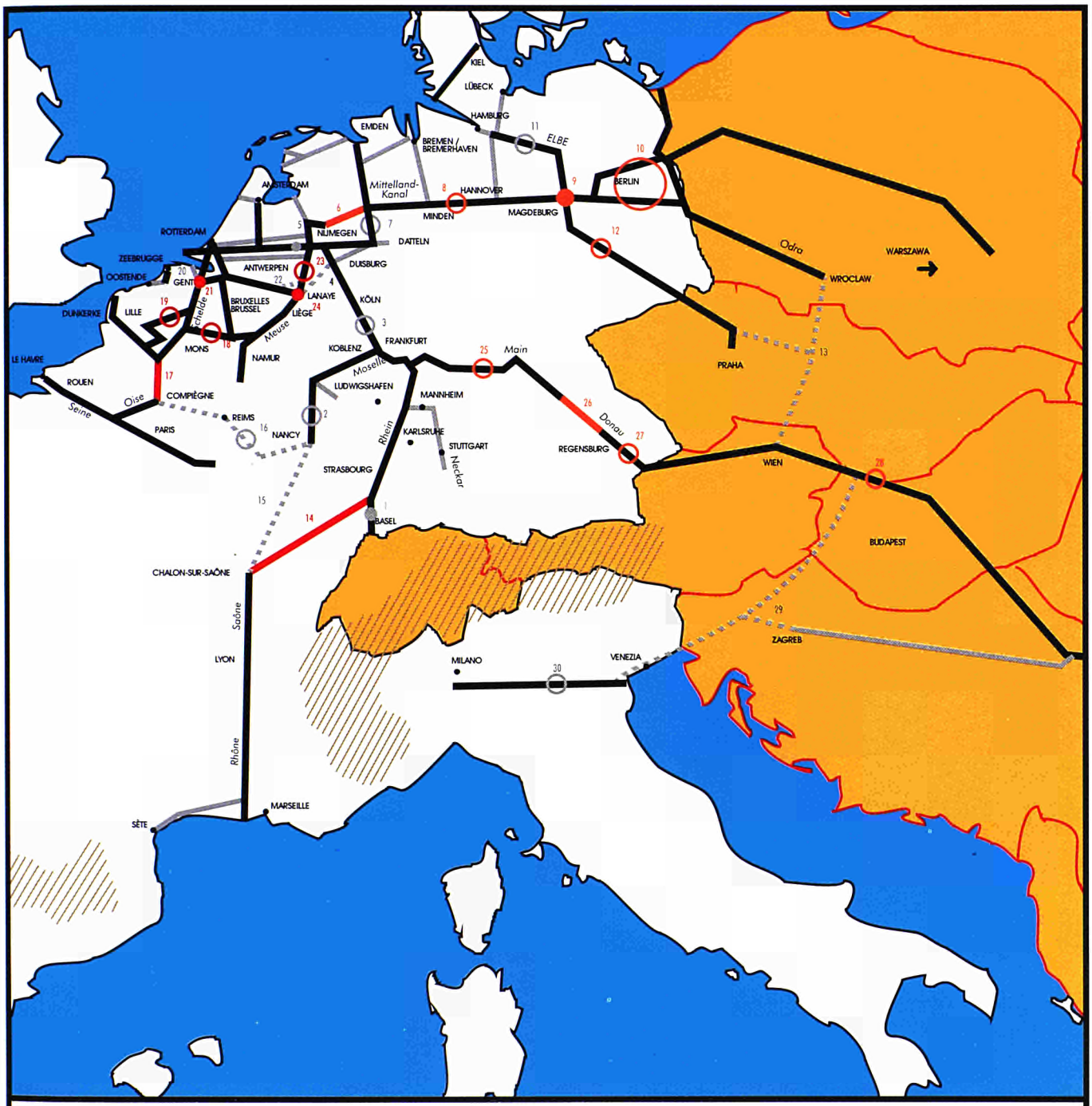
NEW LINES (NL) ≥ 250 km/h

UPGRADED LINES (UL) ± 200 km/h

OTHER LINES

EASTERN EUROPE PRIORITY CORRIDORS

KEY LINKS



Trans-European inland waterway network

PRIORITIES

Missing link

Bottleneck

OTHER PROJECTS

Missing link

Bottleneck

RHINE AND TRIBUTARIES

1 – Canal latéral au Rhin (Kembs)
2 – Moselle (Nancy-Koblenz)
3 – Mittelrhein (Köln-Koblenz)
4 – Rhein/Meuse
5 – Waal (Nijmegen)

EAST- WEST ROUTES

6 – Twentekanaal / Mittellandkanal
7 – Dortmund-Ems-Kanal (Datteln/Bergeshovede)
8 – Mittellandkanal (Hannover-Minden)
9 – Elbe-Mittellandkanal (Magdeburg)
10 – Elbe/Oder
11 – Elbe (Hamburg/Magdeburg)
12 – Elbe (Magdeburg/CS)
13 – Elbe/Oder/Donau (*)

NORTH-SOUTH ROUTES

14 – Rhin/Rhône Link
15 – Moselle/Saône
16 – Seine/Moselle
17 – Seine/Escaut
18 – Canal du centre (Mons/La Louvière)
19 – Deûle/Lys
20 – Zeebrugge/Gent
21 – Gent (Evergem)
22 – Cabergkanaal
23 – Julianakanaal
24 – Lanaye

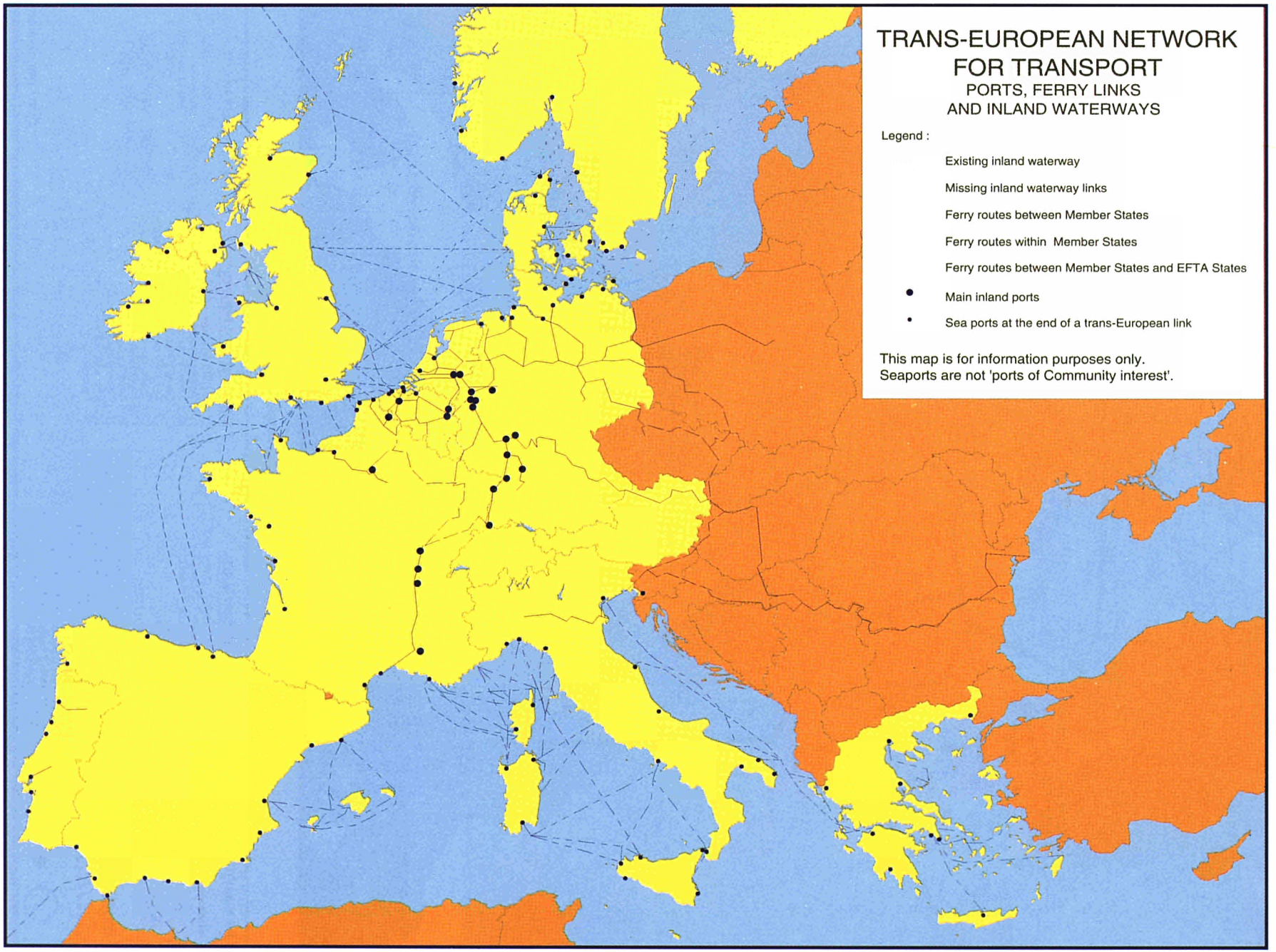
SOUTH-EAST ROUTE

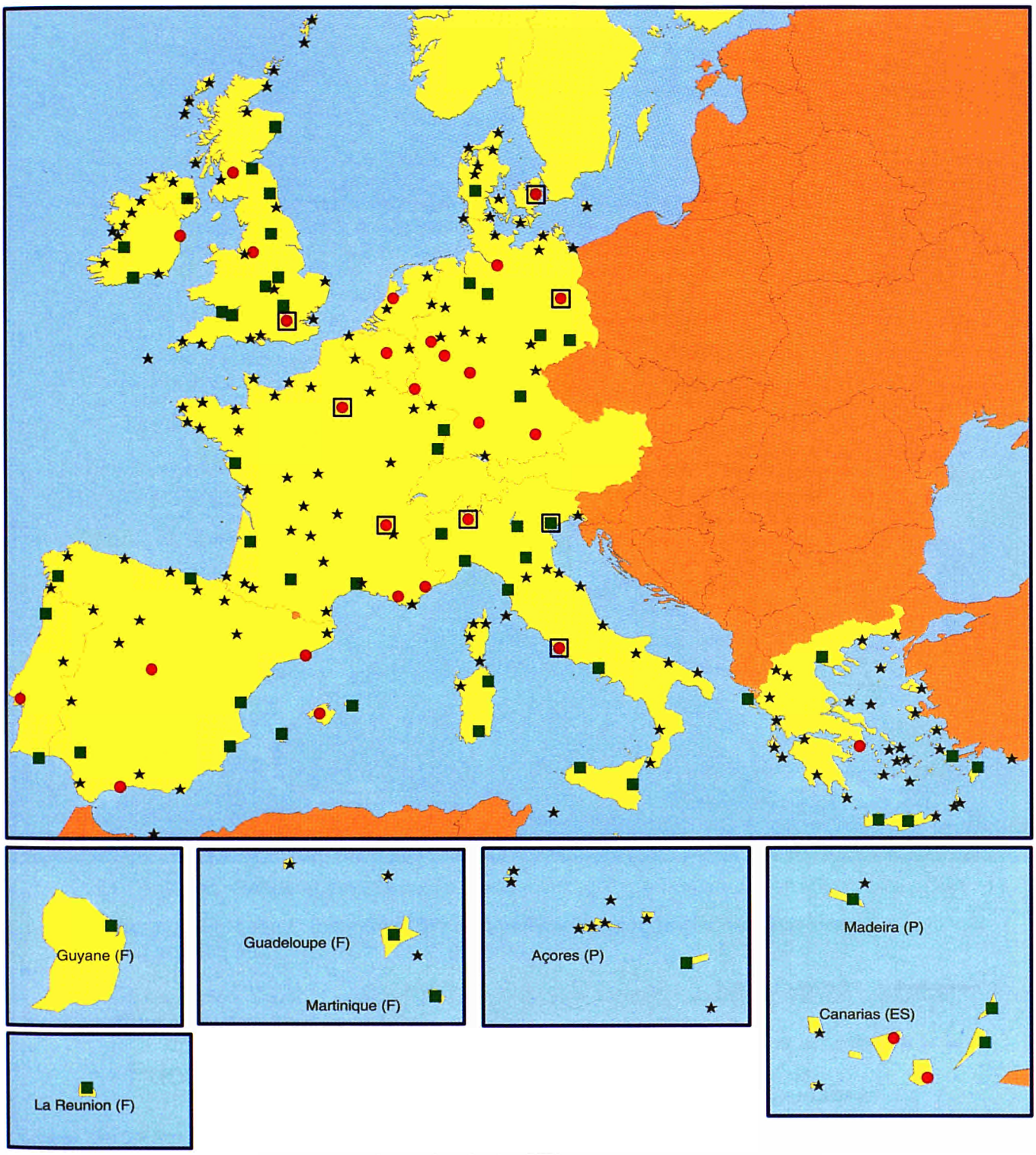
25 – Main/Main-Donaukanal
26 – Main-Donaukanal
27 – Donau (Straubing/Vilshofen)
28 – Donau (Wien/Budapest) (*)

DANUBE/PO - ADRIATIC

29 – Adriatico/Danubio (*)
30 – Pô

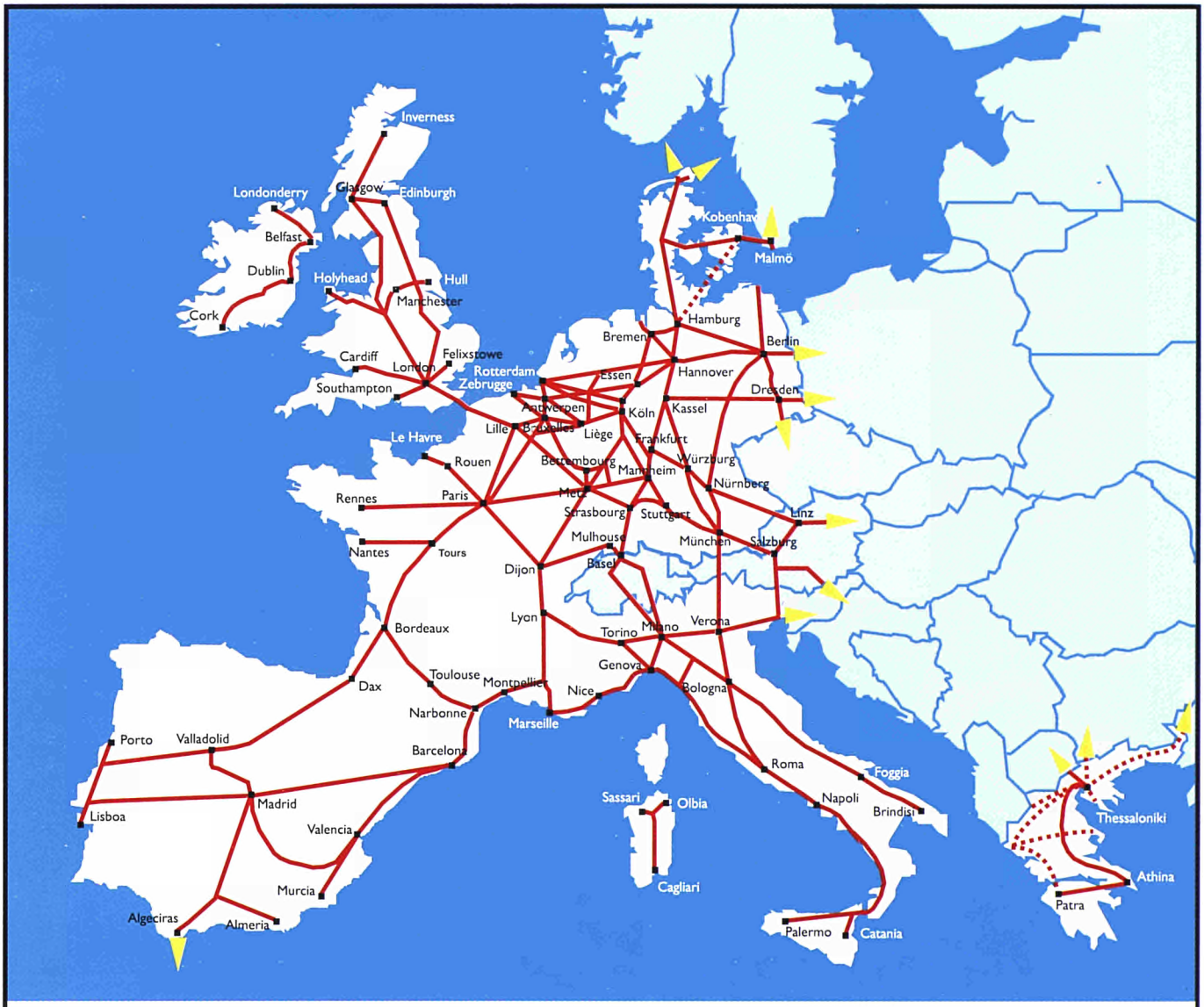
(*) No Community project


TRANS-EUROPEAN NETWORK
FOR TRANSPORT
PORTS, FERRY LINKS
AND INLAND WATERWAYS
Legend :
Existing inland waterway
Missing inland waterway links
Ferry routes between Member States
Ferry routes within Member States
Ferry routes between Member States and EFTA States
Main inland ports
Sea ports at the end of a trans-European link
This map is for information purposes only.
Seaports are not 'ports of Community interest'.



Trans-European airport network - network components

- Community connecting points
- Regional connecting points
- Accessibility points
- Airport systems

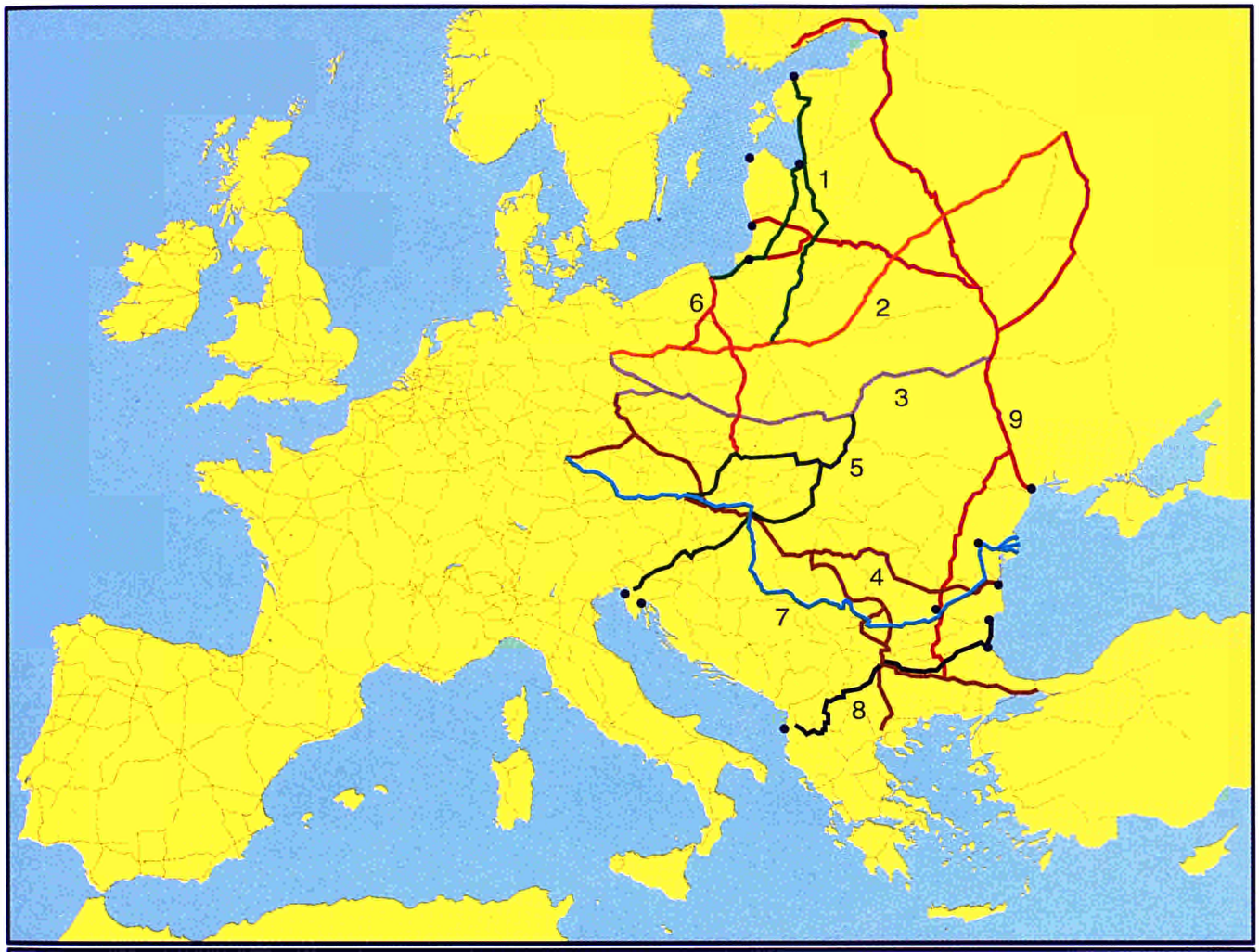


Trans-European railway network outline plan (2010 horizon)

EUROPEAN CT LINES

POTENTIAL CONNECTIONS

THIRD COUNTRY CONNECTIONS ARE INDICATIVE



EUROPEAN ROAD NETWORKS

(as proposed at the second Pan-European Transport Conference, Crete, 14 to 16 March 1994)

EFTA States: Roads of the European Agreement on main international traffic arteries (layer 1)

Other non-European Union States: Roads of the European Agreement on main international traffic arteries and other main roads (layer 1)

European Union: Council Decision 93/629 of 29 October 1993 on the creation of a trans-European road network (layer 2)

Priority corridors in Central and Eastern Europe

Including part of the TEM network (layer 2, 2010)

1 Talin-Riga-Warsaw

2 Berlin-Warsaw-Minsk-Moscow

3 Berlin/Dresden-Wroclaw-Lvov-Kiev

4 Berlin/Nuremberg-Prague-Budapest-Constanta/Thessaloniki/Istanbul

5 Trieste-Ljubljana-Budapest-Bratislava-Uzgorod-Lvov

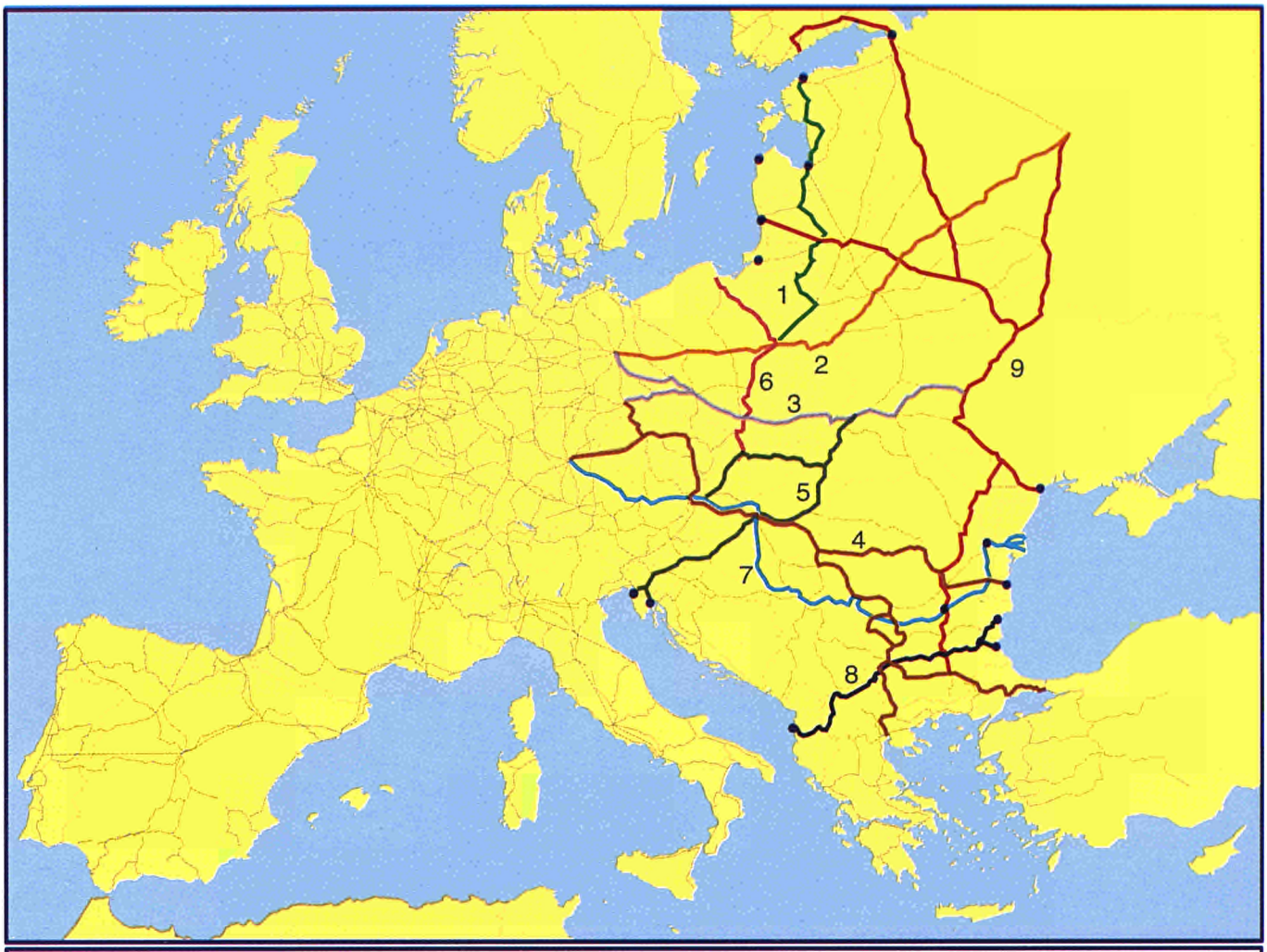
6 Gdansk-Warsaw-Zillna

7 Danube (waterway corridor)

8 Durres-Tirana-Skopje-Sofia-Varna

9 Helsinki-Kiev/Moscow-Odessa/Kishinev/Bucharest-Plovdiv

Port belonging to a corridor



EUROPEAN RAILWAY NETWORKS

(as proposed at the second Pan-European Transport Conference, Crete, 14 to 16 March 1994)

Non-European Union/EFTA States: Railways of the European Agreement on main international railway lines and other main railways (layer 1)

European Union and EFTA States: Report of the *ad hoc* group of the Commission (DG VII, October 1993; layer 2)

Priority corridors in Central and Eastern Europe

Including part of the TER network (layer 2, 2010)

1 Talin-Riga-Warsaw

2 Berlin-Warsaw-Minsk-Moscow

3 Berlin/Dresden-Wroclaw-Lvov-Kiev

4 Berlin/Nuremberg-Prague-Budapest-Constanta/Thessaloniki/Istanbul

5 Trieste-Ljubljana-Budapest-Bratislava-Uzgorod-Lvov

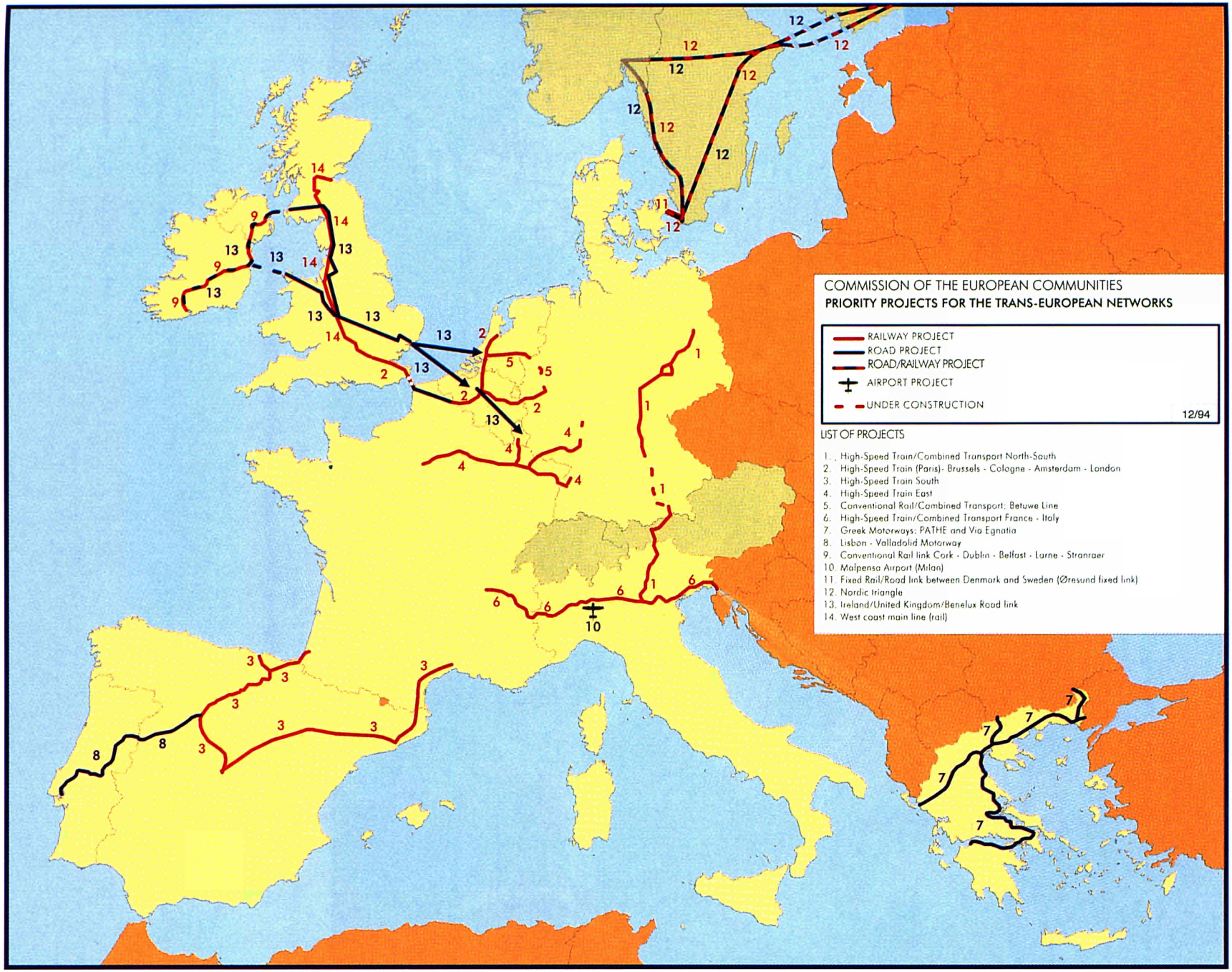
6 Gdansk-Warsaw-Zillna

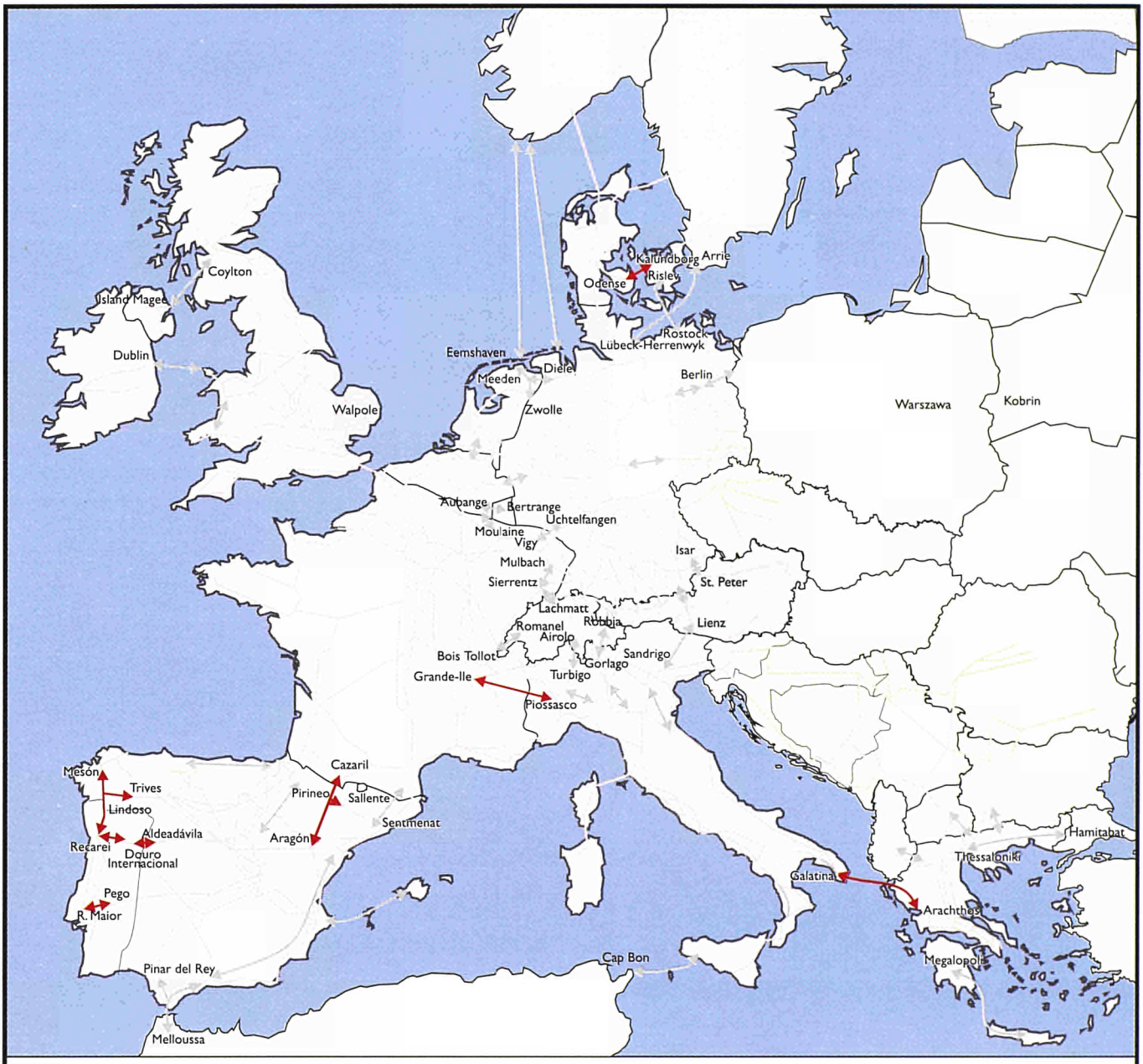
7 Danube (waterway corridor)

8 Durres-Tirana-Skopje-Sofia-Varna

9 Helsinki-Kiev/Moscow-Odessa/Kishinev/Bucharest-Plovdiv

• Port belonging to a corridor


COMMISSION OF THE EUROPEAN COMMUNITIES
PRIORITY PROJECTS FOR THE TRANS-EUROPEAN NETWORKS
RAILWAY PROJECT
ROAD PROJECT
ROAD/RAILWAY PROJECT
AIRPORT PROJECT
UNDER CONSTRUCTION
12/94
LIST OF PROJECTS
1. , High-Speed Train/Combined Transport North-South
2. High-Speed Train (Paris)- Brussels - Cologne - Amsterdam - London
3. High-Speed Train South
4. High-Speed Train East
5. Conventional Rail/Combined Transport: Betuwe Line
6. High-Speed Train/Combined Transport France - Italy
7. Greek Motorways: PATHE and Via Egnatia
8. Lisbon - Valladolid Motorway
9. Conventional Rail link Cork - Dublin - Belfast - Larne - Stranraer
10. Malpensa Airport (Milan)
11. Fixed Rail/Road link between Denmark and Sweden (Øresund fixed link)
12. Nordic triangle
13. Ireland/United Kingdom/Benelux Road link
14. West coast main line (rail)

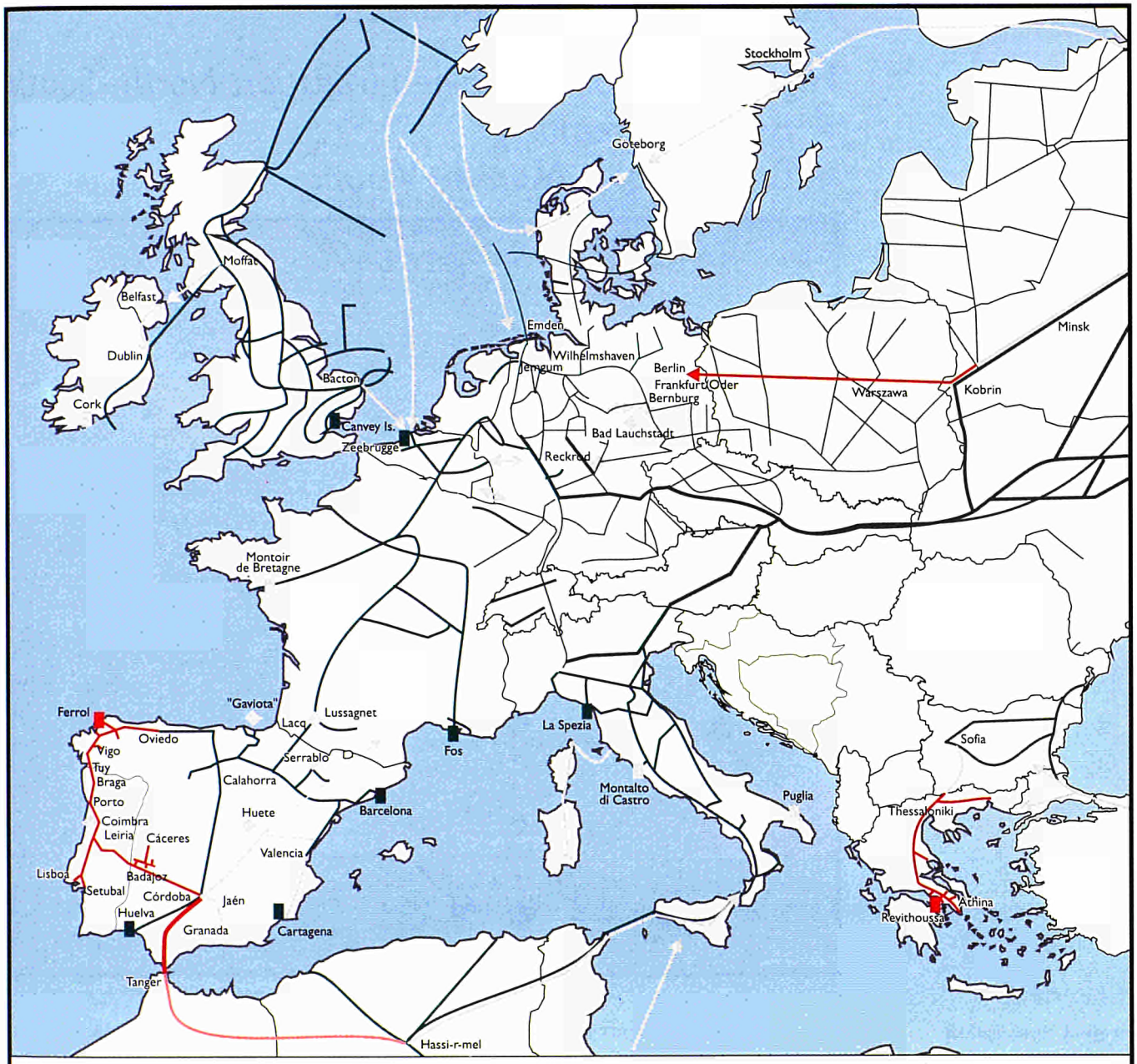


Christophersen Group — Electricity network priority projects (List A)

PRIORITY PROJECTS

OTHER PROJECTS

EXISTING NETWORKS



Christophersen Group — Natural gas network priority projects (List A)

PRIORITY PROJECTS

OTHER PROJECTS

EXISTING NETWORKS

Annex A

Transport project descriptions

Part I — Priority projects

High-speed train/combined transport North–South

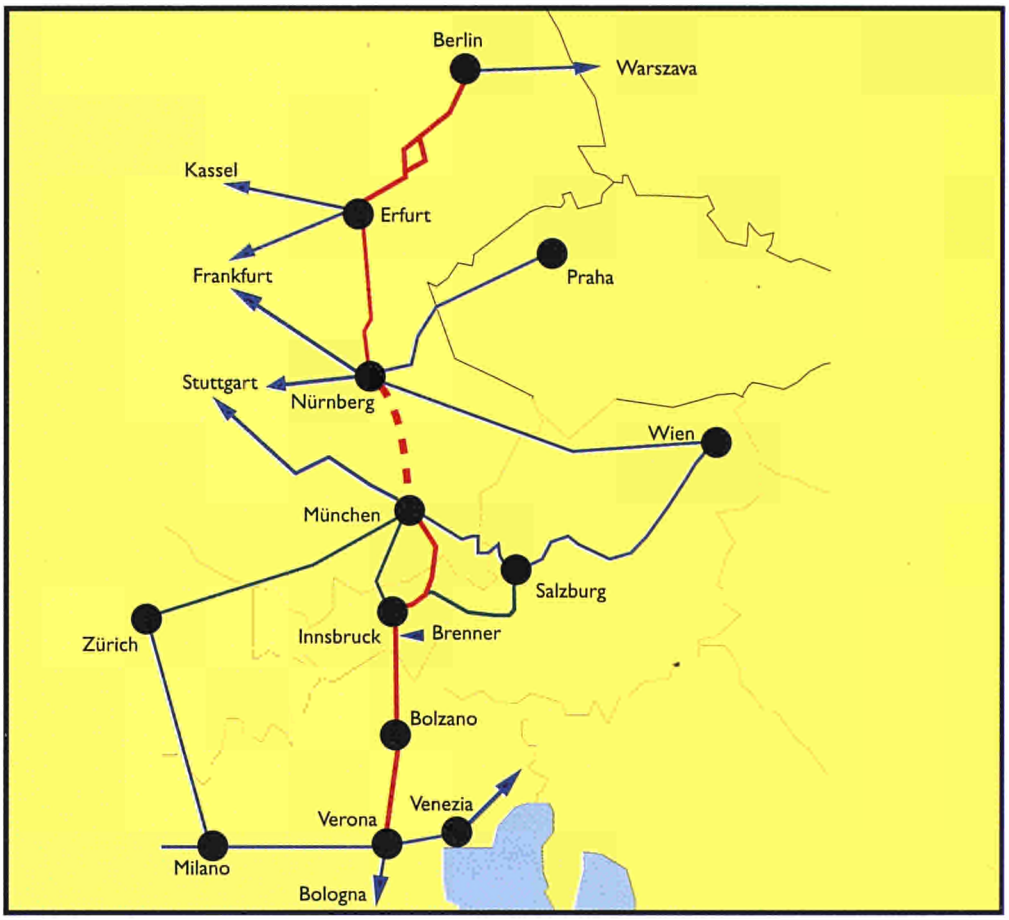
- Berlin–Nuremberg
- Brenner axis Munich–Verona

Project

Under construction

Conventional lines

Other lines of the trans-European high-speed train network outline plan



Project description

The Berlin–Munich–Verona axis forms part of a strategic European rail corridor which links Scandinavia, Germany, Austria and Italy; it is also important for connections with Greece. It consists of two parts: the Berlin–Nuremberg line and the Brenner axis Munich–Verona. The Nuremberg–Munich section is already under construction; administrative procedures have been completed and (public) financing is secured; it was therefore excluded from the project dealt with by the Christophersen Group.

The entire link has been included in the Commission's proposal for the development of the trans-European transport network, submitted in April 1994. It is planned to allow both high-speed and combined transport services. In the very first trans-European network in the transport sector, that for high-speed rail, which was adopted by the Transport Council in 1990, the Brenner axis was already identified as being of great significance; it formed part of 15 key links requiring particular effort in studying their feasibility and in laying the foundations for their construction.

The implementation of this large-scale project, demanding investments of more than ECU 20 000 million, should lead to marked improvements in the competitive situation of rail

transport over the whole of the almost 1 000 km long line. Increases in speed — up to 250 km/h — and capacity will render rail transport more attractive. Passengers and hauliers should therefore gain a decisive advantage over the use of roads when choosing the rail mode, especially over medium and long distances. Road traffic, which causes particularly negative effects on the natural environment (various emissions, etc.) is expected to be reduced and, by so doing, an important contribution to achieving sustainable mobility can be made.

Exhibiting, as they do, a number of specific differences with respect to financing, political, administrative and technical issues, the two parts Berlin–Nuremberg and Munich–Verona will hereafter be dealt with separately.

Annex A

High-speed train/combined transport North–South • Berlin–Nuremberg

Project description

The Berlin–Nuremberg railway line traverses to a large extent the new German *Länder*, which still face a difficult economic situation. The implementation of the project is expected to give an important impetus to regional development and economic upturn. It is estimated that, during the construction period, employment of about 300 000 man-years can be created.

The total length of the line amounts to 552 km, 40% of which has to be newly constructed whereas 60% represents upgrading of an existing line.

Indicative costs and construction period

Section	Length (km)	Cost (million ECU)	Construction period
Berlin–Halle/Leipzig	195	1 600	1993 to after 2000
Halle/Leipzig–Erfurt	161	2 450	1995-2003
Erfurt–Nuremberg	196	4 380	1995-2000
Total	552	8 430	

Thanks mainly to the expected benefits to regional and economic development, the project shows good prospects regarding socioeconomic profitability. The benefit-cost ratio has been evaluated at more than 3; consequently, the project was included in a list of priorities (vordringlicher Bedarf) in the framework of the German infrastructure master plan 1992-2010.

As regards the financial profitability of the project, no data has been released as yet. Unfavourable rates of return, however, may be found because the costs of the Berlin–Nuremberg line are relatively high.

State of maturity

All relevant political decisions have been taken. Because this project is included in the abovementioned infrastructure master plan, and in addition in the law on the construction and upgrading of railway infrastructure (Schienenwegeausbaugesetz), as a priority project, commitments by the government are likely to be secured to the necessary extent.

Whereas construction has already started on the Berlin–Halle/Leipzig section, the relevant administrative procedures are in progress for the remaining sections. As regards Erfurt–Nuremberg, the public inquiry has revealed some objections by people concerned; however, no major delay is to be expected as a new law on the simplification of planning procedures (passed in 1993) made special provisions for priority projects and introduced deadlines both for the filing of objections and for the treatment within public administrations.

No financing plan has been identified as yet; however, the availability of sound data regarding profitability is a prerequisite for this. The recent transfer of the railways (Deutsche Bahn) from a public service to an entity with the legal status of a joint-stock

company has caused some delay in the financial analysis of the project; the railway company and government have since announced that they intend to make progress on this matter in the very near future. For the time being, they envisage conventional financing, based on 50% State support and 50% contributions from Deutsche Bahn AG. Deutsche Bahn AG is still publicly owned but intends, in the medium term, to sell shares to private investors.

The abovementioned high cost of the project (about double the average for railway lines) is largely linked to technical particularities: the topographical situation, for parts of the project, requires extensive earthworks; also, the envisaged technical standard of the infrastructure is expensive. It seems advisable to examine alternative solutions.

The work done in the context of the Christophersen Group has helped to increase understanding of the project. Whereas administrative procedures, thanks to progressive legislation that has recently been adopted by the German Parliament, are unlikely to become a delaying factor, the critical financing issue is still to be solved. The envisaged financing plan, 100% based on public funds, should be subject to further analysis; efforts should be made to enhance profitability of the project and to include private partners.

On the basis of financial data to be provided by the project promoter, the Commission should further encourage an innovative financial scheme. The experience gained from the analysis of the other priority projects during the last year should enable valuable conclusions to be drawn for this project. Further meetings between national authorities, the project promoter, the Commission and, if appropriate, private sector representatives, should therefore be organized. By exploring the scope for private capital involvement, they could contribute to accelerating the financing and, by so doing, the completion of the project.

Annex A

High-speed train/combined transport North–South • Brenner axis Munich–Verona

Project description

The discussions on the construction of a new transalpine railway line between Munich and Verona, comprising a base tunnel under the Brenner pass, were started more than a decade ago. Stimulated mainly by the fact that road traffic, and freight traffic in particular, causes considerable damage to the natural environment and affects the living conditions of the people concerned, this project developed steadily over the years. Recent political events, such as the democratization in Central and East European countries and the forthcoming EU membership of Austria, are very likely to generate additional demand for traffic on the Munich–Verona link; this, in combination with the 'normal' traffic increase, will test the capacity of the existing infrastructure. Environmental considerations in this sensitive area do not permit significant motorway extensions; as regards the rail mode, traffic forecasts indicate that the existing Brenner line will reach its capacity limit by the year 2010 at the latest. If congestion and irregularities in the provision of services are not to lead to negative economic effects, the implementation of the new Brenner project needs to be considered as a matter of urgency.

Especially over medium and long distances, the new Brenner axis should establish a competitive alternative to road traffic. It is planned that freight services, including piggy-back, will account for 80% of total capacity. This should decisively contribute to increasing quality and attractiveness in this sector. Passengers going from Munich to Verona will in the future enjoy the benefit of a 50% saving in journey time as compared to the present situation.

The implementation of the Brenner project is a technical challenge: due to the topographical situation and environmental requirements, it is envisaged that almost 70% of the line will go through tunnels; this concerns mainly the southernmost part which traverses the Trentino–Alto Adige region. The 55 km long base tunnel, being situated both on Austrian and Italian territory, represents the core element of the project. The total length of the new line amounts to 409 km; it will be constructed, in addition to the existing Brenner axis, as a new double-track line. Whereas the old infrastructure will continue to be used for conventional services, the new link will provide high-speed services for passengers as well as highly efficient transport of freight.

Indicative costs and construction periods (taken from Brenner General Consult)

Section	Length (km)	Cost (million ECU)	Construction period
Munich–Innsbruck Brenner, access north	165	2 800	1995-2000[1] and after 2008
Innsbruck–Fortezza Brenner, base tunnel	55	4 400	2001-2010
Fortezza–Verona Brenner axis, access south	189	5 200	in stages from 2002 onwards
Total	409	12 400	

[1] About ECU 2 100 million up to the year 2000.

Although a detailed socioeconomic analysis for the project still has to be conducted, it is expected to entail important positive effects; improvements regarding the environment in particular will generate external benefits which should motivate the States concerned to make commitments to this project.

By relying exclusively on public funds, this large-scale project is unlikely to be completed within the necessary time horizon. Private sector involvement is needed, and potential investors have already shown much interest in the new Brenner axis. The establishment of a public/private partnership seems therefore appropriate — on the basis of an adequate risk-sharing between the partners. This in turn presupposes the sound assessment of the financial profitability. The internal rate of return (IRR), a commonly used indicator of the profitability of a project, has been calculated for several scenarios: differing from each other mainly in traffic forecasts and interest rates for borrowing, the most optimistic assessment results in a 12.5% IRR whereas the most pessimistic one leads to a 3.4% IRR.

State of maturity

In the past, the States concerned gave different priorities to the project: for Austria, the Brenner project was of first priority while this was not the case for Italy and Germany.

In such situations, transborder projects are likely to run into difficulty and consequently may suffer from a shortage of public funds.

A breakthrough was reached in November 1994 when the three States involved in the Brenner axis arrived at a political agreement as to the common implementation of the entire Munich–Verona link. The Commission contributed decisively to achieving this result, which is a landmark in the construction of this new railway line. The memorandum on the development of the project was signed by the Commissioner for Energy and Transport, Mr Oreja, and by the Ministers for Transport of Germany, Italy and Austria. It was made possible thanks to intensive preparatory work, the cornerstones of which were Joint Declaration No 20, attached to the Act of Accession of Austria to the European Union, and a relevant agreement between the Ministers for Transport reached at the ministerial conference in Montreux in June 1994.

The Innsbruck bypass, as a part of the Austrian section, is already completed; construction works in the Lower Inn Valley (also situated in Austria) are likely to start soon. The three sides have conducted common feasibility studies on the base tunnel (1987/89), the northern and southern access routes (1992/94) and on safety and interoperability issues. A first environmental impact assessment has formed part of these studies; the results confirm that negative effects will be noticeably reduced. All this preliminary work resulted in a Munich-Verona route proposal which was submitted by an independent consultant in March 1994 and acknowledged by the three Ministers for Transport in June 1994.

The necessary administrative procedures for certain sections will be launched in the very near future (for example the land-use planning procedure 'Raumordnungsverfahren' for the Lower Inn Valley section). As it is envisaged that the project will be implemented in stages — according to economic needs — further procedures should be carried out correspondingly. It appears that, in some regions, public information on the project preparation has so far been given too little attention; the people directly concerned should therefore be consulted as soon as possible in order to integrate their concerns in the further considerations and to avoid delays once procedures have been started.

Austria plans to start construction works in the Lower Inn Valley — where, due to the coincidence of the Brenner axis and an important east-west axis, capacity problems are particularly grave — in 1997. Germany intends to start upgrading works on the northern access route (German territory) very soon; it aims at ensuring a capacity of 270 trains per day in both directions, which would be sufficient to meet the needs while the base tunnel is not yet in operation.

In response to capacity constraints, Italy intends to upgrade the existing line between Verona and the Brenner pass as a first phase of the long-term improvement of rail infrastructure on the Brenner axis. Work includes the construction of four new tunnels (34 km of track, 31 km of which make up the tunnels themselves) as well as the improvement of power supply and signalling systems.

To optimize the financing of the project on the basis of a public/private partnership, it is crucial to treat the new Brenner axis as a single project. Germany and Italy declared their willingness to facilitate the financing of their respective parts by the provision of public funds (loan guarantees, budget); however, they intend to limit their involvements to their territory. In order to make decisive progress with the project as a whole (and to ensure the construction of the particularly expensive base tunnel, large parts of which will be on Austrian territory), a joint financial arrangement is imperative. The financial commitment which should be made by the three States depends on the results of further sound financial studies; these in turn have to be based on common traffic forecasts that take account of recent political developments. According to the present state of knowledge, it can be estimated that about 30 to 40% of the total cost will have to be provided by the three States in order to make the project feasible for private investors.

The EIB (European Investment Bank) will provide a loan of ECU 360 million for the first phase of the upgrading work on parts of the Italian access routes, referred to above.

Such a joint approach calls for the creation of a body which brings together all interested partners, namely governments, railways and private sector representatives. Such a body could take on the form of a European Economic Interest Grouping.

The reconsideration of some technical aspects, such as the reduction in the maximum speed, may improve the profitability prospects. The technical solution of the base tunnel also appears to permit cost savings. The alignment, on the other hand (high tunnel proportion) seems unlikely to allow modifications. A difficulty of another type is caused by the non-availability of identical power-supply systems in Germany and Austria, on the one hand, and Italy, on the other. This interoperability problem is likely to be solved by the operation of multisystem locomotives.

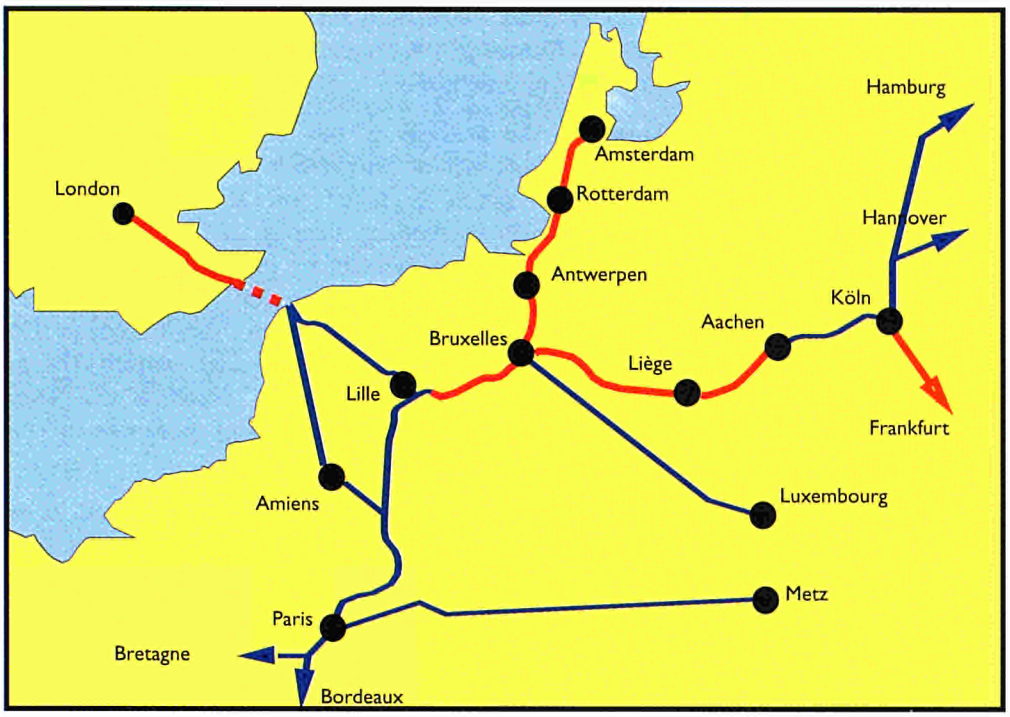
The work of the Christophersen Group has produced a real breakthrough for the Brenner project as it has contributed significantly to reaching an intergovernmental agreement; it has also helped to identify obstacles to the financing of the project, as well as problems regarding regulatory aspects.

Annex A

High-speed train (PBKAL) (Paris–Brussels–Cologne–Amsterdam–London)

Project

Other lines of the trans-European high-speed train network outline plan



Situation/routeing

The Paris–Brussels–Cologne–Amsterdam–London (PBKAL) high-speed train project is one of the most important projects of the Union's transport infrastructure programme; it represents a total investment of about ECU 13 000 million.

The PBKAL consists of the following sections:

Paris–Lille–(Channel Tunnel)–London,

Brussels–Lille (western branch),

Brussels–Amsterdam (northern branch),

Brussels–Cologne (eastern branch).

Noticeable reductions in travelling time for passengers between European capitals and other important cities can be expected as soon as the project is completed, for example Brussels–London: 4 hours 55 minutes reduced to 2 hours 5 minutes; Brussels–Paris: 2 hours 25 minutes reduced to 1 hour 20 minutes. It thus establishes an attractive and competitive alternative to short-haul flights.

By creating new, high-quality links for passenger traffic, the existing conventional railway network will be relieved; this will contribute to improved conditions for freight traffic using the conventional network. Consequently, the quality of services can be increased (for example, improvement in punctuality) thus rendering rail transport more attractive and helping further to stimulate the switch from road to rail. In view of the enormous negative effects which medium- and long-distance freight traffic by road especially causes to the environment, this can be considered an important step towards sustainable mobility.

Annex A

With the entry into operation of the Paris–Lille section in 1993 and, in particular, of the Channel Tunnel in 1994, the first important steps towards the completion of the PBKAL project have been taken.

However, the analysis of this large-scale project, conducted during recent months, revealed a number of problems which might slow down further progress. Therefore, appropriate action is called for, and the identification of these difficulties is a prerequisite to overcoming them. It is crucial to treat the PBKAL as a single project. A workshop held in September 1994 laid the foundations for the establishment of a permanent high-level working group which should bring together all Member States concerned, the railway companies, the European Commission and the European Investment Bank as well as a financial adviser. The main objectives of this group's work should be to coordinate the action of all partners involved, to optimize the financing of the entire project, to help accelerate its completion and to give particular attention to key border-crossing links.

The Brussels–Luxembourg link can be considered to be an extension of the PBKAL; Luxembourg has declared its readiness to consider its participation in the financing.

The project is described in more detail below. As political, technical, administrative and financial matters differ significantly in the Member States concerned by the PBKAL, this description is made country by country.

Annex A

PBKAL: Belgian section

Project description

This project is the core of the North European high-speed railway network. It consists of three subsections, the total length of which amounts to 312 km. Almost 50% of this will have to be newly constructed, whereas the remaining part represents existing lines to be upgraded. Tunnels of about 10 km total length form part of the project.

Indicative costs and construction period

Subsection	Length (km)	Cost (million ECU)	Construction period
Brussels–French border	88	1 271	1992-97
Brussels–German border	145 including 8 km tunnels	1 648	1992-99/2004
Brussels–Dutch border	79	815	entry into operation: 2000
Total	312	3 734	

NB: ECU 1 = BFR 39.5.

The financial profitability for the entire Belgian project has been calculated at 6.1%. This is based on the assumption that the operators who will use the new line (Belgian, Dutch, French and German railways) share the generated revenues according to a basis already suggested for an international agreement. The socioeconomic profitability has not yet been evaluated.

State of maturity

The project preparation and implementation is considerably affected by political problems which result largely from discussions between the Belgian regions. Significant delays have already been caused because of that: the Paris–Brussels section was originally planned to enter into operation in 1993, then 1996 was envisaged and now it is clear that it will not be opened before 1997.

The further preparation of the Brussels–Dutch border–(Amsterdam) section suffers also from political difficulties. No agreement has been reached yet between the governments of the Flemish region and of the Netherlands as regards the alignment. Although two possible routes have been identified, neither of them gets the support of both parties. This is delaying the adoption of the New Line Bill by the Dutch Parliament (see Dutch section below).

Administrative procedures are not yet completed for an important part of the Brussels–French border and the Brussels–German border sections; they were started in 1993. Technical and environmental issues in particular entail delays; they are likely to lead to noticeable cost increases.

A conventional financing scheme is envisaged: the Belgian State Railways (SNCB/NMBS) will finance the project by benefiting from public grants to be provided by the Belgian State and the Union. EIB loans of ECU 500 million have been approved. However, the financing is not secured for all sections; this is for instance true for the (Brussels–)Liège–German border section, which shows high costs and low traffic (only in the long term can a noticeable traffic increase be expected). Due to cost escalations (around 20% or more), financial difficulties are likely to occur.

The work of the Christophersen Group has helped to identify delaying factors; they cover political, financial and administrative issues.

The international working group which is to be established in the near future should be the appropriate body to advance the project as a whole; problems related to Belgium could then be dealt with in a wider context, which brings more opportunities to compensate diverging interests (such as the different preferences regarding the alignment in the Belgian/Dutch border area) and to combine the limited public funds in such a way that they produce the most efficient leverage effect for the involvement of private capital.

Annex A

PBKAL: Dutch section

Project description

The section from the Belgian/Dutch border to Amsterdam is about 130 km long. The major part of the line is to be newly constructed. However, the final decision on the alignment has not yet been taken; this is due to ongoing negotiations with Belgium with respect to the border area (as described in the Belgian section of the project).

The total investment for this part of the project amounts to ECU 2 740 million; construction work is planned to start in 1997 and the entry into operation of the line is envisaged for 2003.

The discounted financial profitability has been calculated at 6.5%. This is based on the assumption that the State and the European Union contribute to the financing of the project.

State of maturity

The preparation of this project is subject to a new law, the New Line Bill, which authorizes the construction of the line and by doing so contributes to accelerating administrative procedures. It is expected that the Parliament will adopt this bill in the spring of 1995.

The lack of political agreement between the Dutch and Flemish Governments on the alignment is a major obstacle to further progress; it may delay the adoption of the New Line Bill. The new Dutch Government declared, in its coalition agreement in mid-1994, that it will abide by the decision of the former government to build this new railway line.

Once the New Line Bill is adopted by the Parliament, further administrative procedures can be launched. They include public consultations as a major part and will result in building permission being granted by regional and local authorities. This process is expected to last about two years so that construction, theoretically, could start by mid-1997.

A public/private partnership is envisaged with respect to the financing of the project. In this partnership, the government will take on the responsibility, including the full risk, of construction; it envisages providing 75% of the total investment, whereas 25% is to be contributed from private partners.

Under a particular form of concession agreement, at a certain point during the construction period a private partner will start investing in the project (without assuming risk). Risk transfer to the private sector will be subject to discussions at a later stage.

High-speed and conventional railway lines will be operated separately. The operator of the new line will be obliged to pay an infrastructure fee to the concessionaire for the use of this line.

Technical problems related to the operation may cause considerable additional cost: Belgian, Dutch, French and German railways have invested heavily in special rolling-stock which can be used on existing and new railway lines in the four countries. This rolling-stock will, however, not be compatible with the future European control-command norm (ERTMS), and modification at a later stage will be necessary.

Future action regarding this project needs to be embedded in the joint work which aims at the accelerated implementation of the whole PBKAL project.

Annex A

PBKAL: German section

Project description

This project consists of the extension of the existing railway infrastructure to enable it to meet future needs. It includes the link between Cologne and the industrial area around Frankfurt-on-Main (Rhine/Main). The section from the Belgian/German border (Aachen) to Cologne has been excluded from the project dealt with by the Christophersen Group; its implementation will start this year.

On the Cologne–Rhine/Main section, an additional high-speed double-track line, to be exclusively used for passenger traffic, will be constructed. Once it is completed, the existing conventional line will allow for the provision of improved services for freight and regional traffic.

The line is 216 km long; its main part will be newly constructed. Total costs amount to ECU 3 950 million; the construction work is planned to start very soon and the entry into operation is envisaged for the year 2000.

No information is available on the financial profitability. It is not yet clear whether the Deutsche Bahn AG will be ready to act as project promoter.

State of maturity

Germany and Belgium follow diverging objectives as regards the year for the entry into operation of the Brussels–Cologne–Rhine/Main link. Belgium intends to complete the border section Liège–Aachen in 2002 to 2004 at the earliest.

The international working group,which is expected to become effective in the near future, should not only help to solve cross-border problems with Belgium but also to gain deeper insight into financial aspects on the German side.

Annex A

PBKAL: UK section
Channel Tunnel access–London

Project description

The implementation of this project is particularly important in order to ensure the continuation of the high-speed link Paris–Lille–Channel Tunnel and to allow full benefit to be drawn from the entry into operation of the first fixed link between the British Isles and the European mainland. The existing railway line between the Tunnel and London is not able to meet future demands regarding speed and capacity. The proportion of international traffic is expected to increase noticeably, and rail freight traffic, in particular, should benefit from the best possible conditions so that the use of roads by heavy goods vehicles may be limited. As regards passenger services, the new link, once completed, allows a competitive — and more environmentally friendly — alternative to air, especially for the Paris–London link.

The length of the new Channel Tunnel rail link (CTRL), to be constructed completely from scratch, will amount to 108 km. In addition to international passenger and freight services, the new line will also be of significance to national traffic.

The total cost of the project is estimated at ECU 5 239 million; this amount includes about ECU 2 000 million which has already been spent (mainly on studies); it also takes account of the cost of land acquisition and interest payments during the construction period. The UK Government has based its present financing scheme on the expectation of Community support of ECU 970 million.

It is planned to start construction work in 1997; the entry into operation is envisaged for 2002.

The socioeconomic profitability of the project has been assessed at 9 to 10%; the calculated financial profitability (internal rate of return) amounts to 4%.

State of maturity

The project enjoys strong political support from the UK Government. The construction and operation of CTRL is to be authorized by an Act of Parliament. At present, the government is preparing the relevant legislation, the Hybrid Bill. It intends to submit this by the end of 1994. Adoption by Parliament is expected by the end of 1996.

This special law confers powers to build the whole length of the railway line; by so doing, it reduces conventional administrative procedures (largely to be carried out by regional authorities) to a minimum and contributes decisively to acceleration. Both the concerns of people affected by the project and environmental aspects are dealt with during the discussion phase in Parliament: Parliamentary Committees will be charged with the solution of those questions. Only details in design, etc., still need to be approved by regional and local authorities once the Act of Parliament is adopted.

A public/private partnership will be established with respect to the financing of the project. The State is ready to participate with up to 50% of the total cost; it aims, however, at minimizing its contribution. Important steps with a view to the involvement of the private sector have already been taken.

A consortium of private investors shall contribute about 50% to the construction of the line. In order to accelerate procedures further, the government has decided to carry out the corresponding tender procedure in parallel with the authorization procedure in Parliament.

Such an approach entails that the government is ready to assume risk. Having been started earlier in 1994, the tender procedure has already resulted in the pre-selection of four consortia; the final selection of the successful bidder is foreseen for mid-1995. The government will then make provisions for the sharing of capital risk.

The successful bidder will be given European Passenger Services (EPS), a government-owned company responsible for the operation of international lines, and the project developer Union Railways Ltd, which is at present owned by the British Railways Board. Furthermore, the government will grant to the winner of the tender procedure a 999-year leasehold interest in the land on which the CTRL will be built. Government and the successful bidder will conclude a project development agreement which constitutes a public works concession contract and corresponds with the relevant Community legislation (Council Directive 93/37/EEC).

EPS will be required to ensure infrastructure access for the Belgian and French railways; negotiations on this matter are still in progress between these partners and the European Commission. Domestic passenger services have also to be provided capacity on the Channel Tunnel rail link by European Passenger Services.

The UK Government is very much interested in cooperating with the European Commission, in order to take account of all relevant Community legislation and to benefit from experience gained in other countries. During the work of the Christophersen Group, therefore, a number of meetings took place and the Commission was closely involved in the project development (for example, tender procedure, competition matters); this has contributed towards advancing the project.

National authorities and the Commission are willing to continue their fruitful cooperation and sharing of knowledge; this should help to implement this innovative private/public partnership scheme under the best possible overall conditions. The development of the Channel Tunnel rail link project, where the government is ready to transfer a large amount of risk to the private sector, could be exemplary to other countries.

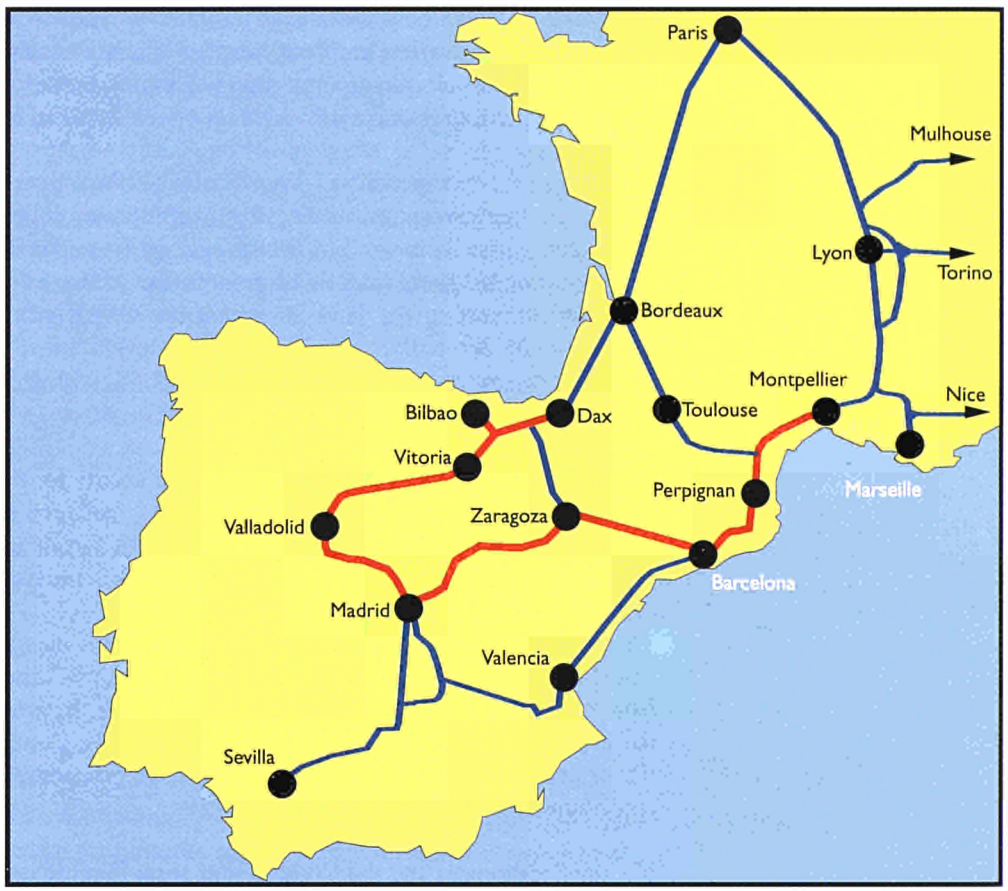
Annex A

High-speed train South

- Madrid–Barcelona–Montpellier
- Madrid–Vitoria–Dax

Project

Other lines of the trans-European high-speed train network outline plan



The project will link the Iberian peninsula with the French high-speed train network, thereby contributing to social and economic cohesion within the European Union. It consists of two parts:

(i) Madrid–Saragossa–Barcelona–Spanish/French border–Perpignan–Montpellier (Mediterranean branch);

(ii) Madrid–Vitoria–Spanish/French border–Dax (Atlantic branch).

Both the Mediterranean and the Atlantic branches of the project form key elements of fast rail connections between Madrid and Paris: one by establishing the link with the French TGV Méditerranéen (Paris–Lyons–Marseilles) and the other with the TGV Atlantique (Paris–Bordeaux).

Large parts of the new high-speed railway line, especially on Spanish territory, will be used for both passenger and freight traffic; the Madrid–Barcelona section, however, will exclusively serve passenger traffic. The completion of the line will lead to noticeable capacity increases (i.e. Madrid–Barcelona by 400%) and reductions in travelling time (i.e. Madrid–Barcelona by three to four hours). Therefore, the project makes an important contribution to the improvement of commercial relations between Spain and the central part of the Union, and it has a positive impact on the economic development in the regions concerned.

The length of these future high-speed railway lines amounts to 1 450 km, of which 1 200 km have to be newly constructed. Existing tracks will be upgraded between Valladolid and Vitoria, so that speeds of up to 200 km/h can be reached. A particularly difficult section of the new line is the Pyrenees crossing (of 170 km of new line, 40% will go through tunnels).

A significant benefit of the completion of this project is the extension of the European standard gauge to the Spanish network. This avoids track/vehicle-related stops at the border crossings, thus contributing towards solving interoperability problems.

Annex A

High-speed train South • Madrid–Barcelona–Spanish/French border–Montpellier

Project description

The implementation of the project will allow the completion of the high-speed axis Seville–French border. The two most important cities along the line, Madrid and Barcelona, represent 30% of the Spanish population as well as 40% of GNP.

The project consists of a 750-km-long line which has to be newly constructed, in European standard gauge. The maximum speed on the new line will amount to 350 km/h. It will be exclusively used by passenger traffic between Madrid and Barcelona, as well as between Perpignan and Montpellier; between Barcelona and Perpignan, both passenger and freight traffic will use the line.

The total cost of the Madrid–Barcelona–Montpellier line amounts to ECU 8 430 million, of which ECU 6 300 million concerns Spain and the remaining part France.

Construction work will start on some sections of the Madrid–Barcelona link, as well as on the border section Barcelona–Perpignan, in 1994/95. The line will be completed in stages, and the entry into operation of the entire Madrid–Montpellier link is planned for the year 2005; it is envisaged that the international section Barcelona–Perpignan will be opened earlier, namely in 2002.

The socioeconomic profitability of the Madrid–Barcelona section has been evaluated at 8 to 10%. The financial profitability varies from one section to another: for the Madrid–Barcelona section, it amounts to 3.5 to 5%, for the section Barcelona–French border to 9% and for the section Spanish border–Perpignan to 5%.

State of maturity

On the occasion of meetings of the Heads of State of Spain and France, in Albi (1992) and Toledo (1993), an agreement in principle was reached as to the implementation of the project. In Foix (1994), the two Ministers for Transport decided to create a European Economic Interest Grouping (bringing together the two railway companies — SNCF and RENFE), with the aim of finalizing the studies on the international section between Barcelona and Narbonne. According to the latter agreement, the international section should be completed between 2002 and 2005.

The French authorities consider it to be important that construction work on this route should start with the Barcelona–French border section. They are, therefore, hoping for a corresponding priority setting by the Spanish authorities.

The Spanish transport infrastructure master plan provides for the construction of two key sections of the Madrid–Barcelona link (being, at present, still single-track lines) as priority projects: Calatayud–Ricla and Saragossa–Lleida; the traditional RENFE gauge will be maintained but the track will be equipped with adaptable sleepers so that it can, at a later stage (in the framework of the construction of the entire Madrid–Barcelona link), be changed to standard European gauge. Work on these sections is still expected to begin in 1994.

Feasibility studies for the Spanish part of the project are almost completed and show positive results; administrative procedures, including public consultations, are being carried out in phases; the project is supported by local and regional authorities.

The enquête d'utilité publique for the section from the Spanish/French border to Montpellier is still likely to start in 1994; this would mean that work could start at the beginning of 1996.

The Spanish Government will finance the upgrading of the subsections Calatayud–Ricla and Saragossa–Lleida. As regards the new line, it intends to involve the private sector. For the Madrid–Barcelona section two hypotheses are being considered in this context:

(i) a private investor would build and operate the line; in order to be profitable, he would need to capture 70 to 80% of the traffic of the corridor, as well as to receive a public subsidy amounting to 65 to 70% of the total investment;

(ii) in the case of a concession agreement covering only the operation of the line, the State would fully finance the construction and, in addition, it would have to contribute between 30 and 40% to the operation.

For the section from Barcelona to the French border, the Spanish Government envisages traditional budgetary financing.

As far as the French part is concerned, SNCF at present acts as the promoter; the railway company intends to finance the project. However, France is open as far as the operation of the international section by a private partner is concerned.

In the framework of the Christophersen Group, a workshop was held which enabled the identification of a number of obstacles to the further progress of the project. These obstacles are, in particular, diverging results of traffic forecasts carried out in France and Spain and the lack of a legal entity for the development of the international section of the project.

The Commission is ready to support the decisions which have been taken by the Ministers for Transport on the occasion of the Toledo Summit, and to coordinate future common actions. It envisages organizing further workshops and examines possibilities of co-financing financial studies as well as studies on legal aspects related to public/private partnership in this transborder project.

Annex A

High-speed train South
• Madrid–Valladolid–Vitoria–Spanish/French border–Dax

Project description

The project includes the construction of a new line on the sections Madrid–Valladolid and Vitoria–Bilbao–Dax. On the remaining section, Valladolid–Vitoria, the existing line will be upgraded. The maximum possible speeds on the new line will be 300 km/h, and 200 km/h on the upgraded one.

In a first phase, the new lines will be constructed to the traditional RENFE gauge; the tracks will, however, be equipped with adaptable sleepers which will allow them to be changed to the European standard gauge at a later stage.

Both passenger and freight traffic will use the Spanish part of the line; no decision has been taken yet regarding the French part.

The total cost of the Madrid–Valladolid–Vitoria–Dax line amounts to ECU 4 500 million.

The main stages of the project implementation are:

(i) 1994: First construction work (subsection Valladolid–Burgos)

(ii) 1997: Beginning of construction work on the Madrid–Valladolid and Vitoria–Bilbao sections

(iii) 1999-2007: Entry into operation (in stages) of the section Madrid–Valladolid–Vitoria–French border.

The financial profitability of the project has been estimated at 9% for the Madrid–Valladolid section, at 5% for the Valladolid–Vitoria section and at 3% for the Vitoria–French border section. Traffic forecasts and financial profitability for the international section Vitoria–Dax are, at present, being studied by a Spanish/French working group.

State of maturity

Although France acknowledged, on the occasion of the Corfu European Council, the strategic importance of this project, it has not yet decided on the construction period. It appears to give priority to the Mediterranean part of the high-speed train South project.

In the French Basque region, administrative procedures are affected by some environmental problems.

On the French side, due to constraints in the State budget, no public funds have been foreseen for the project so far.

To reduce interoperability problems, it would be important for the Spanish side to adapt the line to European standard gauge as early as possible.

Annex A

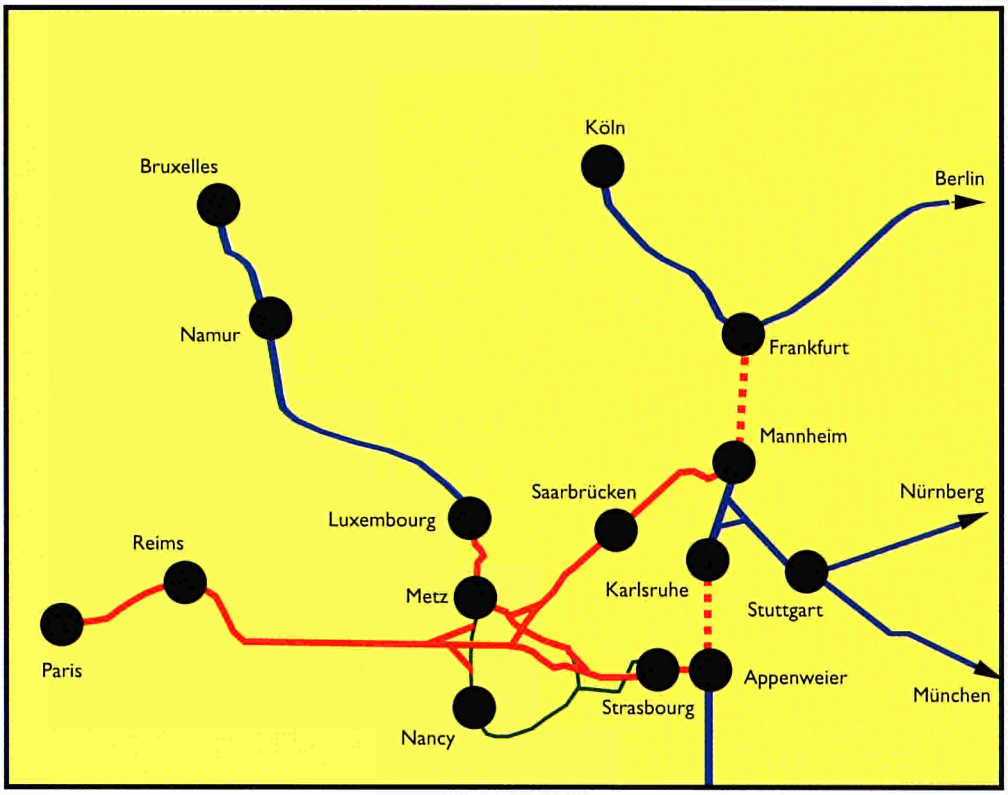
High-speed train East
Paris–eastern France–southern Germany
(including Metz–Luxembourg branch)

Project

Under construction

Conventional lines

Other lines of the trans-European high-speed train network outline plan



Project description

With the Paris–eastern France–southern Germany project an important European east–west axis will be implemented. It will be of great significance, not only for the connection of such important centres as Paris and Frankfurt (seat of the future European Central Bank) but also for connections between the European institutions as well as with Central and Eastern Europe.

Included in the project is the construction of a new line from Paris to the eastern border of France where, at two points, the French and German high-speed railway networks will be interconnected: at Forbach/Saarbrücken and Strasbourg/Kehl. Furthermore, a branch will be constructed which links Metz with Luxembourg.

Connecting the French and German networks would allow noticeable reductions in travelling time for such important connections as Paris–Munich (8 hours 40 minutes reduced to 4 hours 25 minutes) and Frankfurt–Paris (5 hours 55 minutes reduced to 3 hours 10 minutes).

The French part of the project consists of the construction of 472 km of new line. The German part includes two branches: French/German border–Saarbrücken–Ludwigshafen/Mannheim (128 km to be upgraded for speeds of up to 200 km/h) and (Strasbourg–)French/German border–Kehl–Appenweier (17 km to be upgraded for speeds of up to 200 km/h).

The project should be seen in a larger context. The northern branch is intended to be continued via Berlin; the section Mannheim–Frankfurt is already under construction; the

extension to Berlin is subject to the German infrastructure master plan. Further studies are however necessary. The southern branch continues from Appenweier to Karlsruhe, Stuttgart and Munich. Besides the east-west connection, the project also envisages an extension to the south (Basle). The line thus links a number of important cities of the Union.

The project belongs to the key links which have been identified in the first trans-European network in the transport sector, the high-speed railway network, acknowledged by the Council in 1990.

The cost of the project amounts to ECU 4 460 million (ECU 4 100 million French part and ECU 360 million German part). The first phase of the French part will cost ECU 3 300 million (1992 prices).

The construction work on the French part is planned to start by the end of 1995 or the beginning of 1996 (first phase); the entry into operation is envisaged for 2001. The second phase is to be completed by the year 2010. Germany also envisages the completion of construction work around 2000/2001.

The socioeconomic profitability of the French part of the project has been evaluated at 9.7%; the financial profitability at 4.0%.

State of maturity

On the occasion of the French-German summit in La Rochelle, in May 1992, the Ministers for Transport of the two States signed an agreement which constitutes the political basis for the implementation of this project. The agreement stipulates, in particular, that the German and the French high-speed railway networks are to be interconnected via Saarbrücken (northern branch of the project) and Strasbourg (southern branch). Furthermore, it lays down that a new line is to be constructed between Paris and Vendenheim (near to the German border) and that, on German territory, several lines are to be upgraded in order to permit the continuation in southern, eastern and northern directions.

The French authorities declared the TGV-Est project to be the first national priority. The project is often referred to as a major 'Aménagement du Territoire' project, i.e. a project with a major structuring effect for the eastern part of France.

Administrative procedures are in progress for the French part of the project; they are much more comprehensive and time-consuming than for the German part. This is due to the fact that the Paris–German border link will be newly constructed whereas the German branches will only be upgraded.

For the French part, the public inquiry has been launched; it is expected to be completed by 31 October 1995. In parallel, the studies with regard to the pre-design phase (avant-projet détaillé) are being carried out. On the basis of the results of this study and the public inquiry, the Conseil d'État should endorse the project; this is, in turn, the precondition for the Declaration of Public Utility (Déclaration d'utilité publique) which constitutes the permission for land acquisition and, subsequently, for construction.

For the German part, no further procedures need to be conducted.

The main part of the investment for the French section will be borne by the railway company SNCF. The State intends to contribute ECU 530 million to the financing of the project; the regions concerned plan to provide another ECU 530 million. Furthermore, the French State has decided to subsidize the project in such a way that an 8% profitability rate can be achieved on the commercial capital element. This means that, in addition to the abovementioned contribution, further State support may be required to ensure the financing of the project. The French Government bases the financial scheme on the expectation of Community support of ECU 530 million.

It would be recommendable for the French authorities to explore unconventional ways which could lead to an enhancement of profitability (such as the inclusion of associated developments). This could be a first step towards the inclusion of private partners; even at a later stage, it should still be possible to establish a public/private partnership.

As regards the German part, joint financing by State and railways is foreseen.

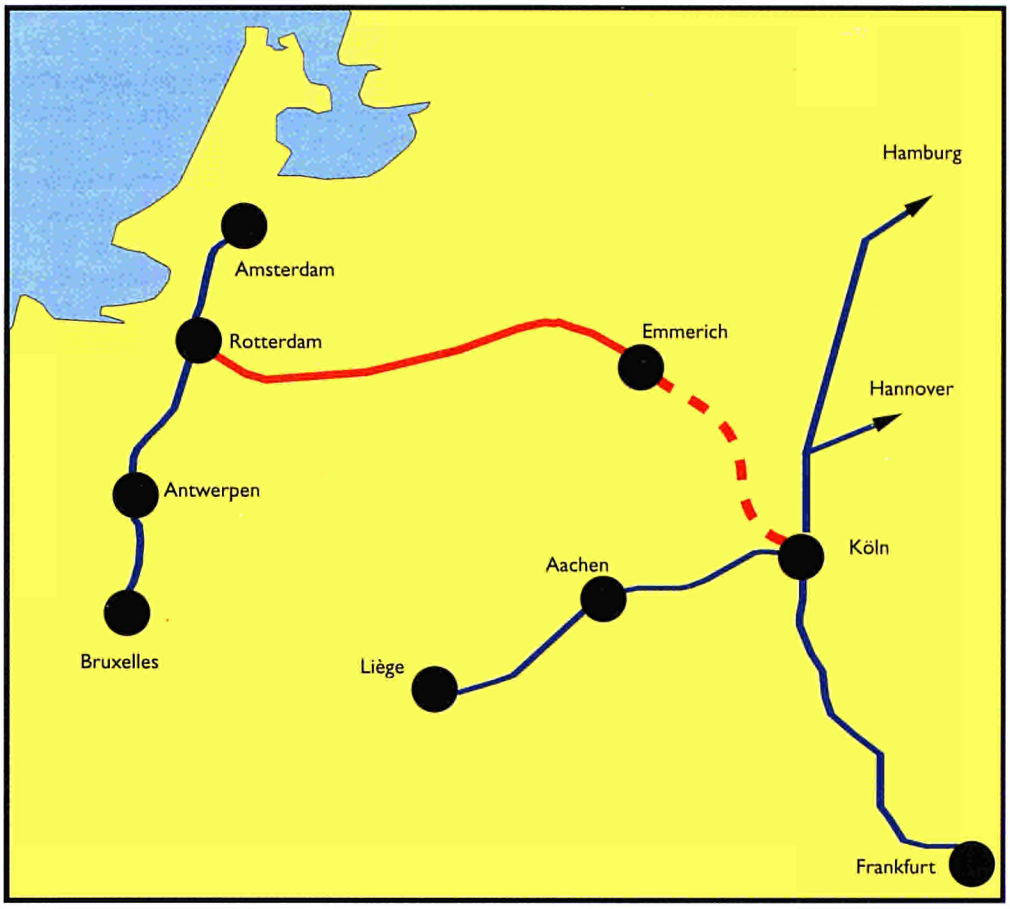
Annex A

Conventional rail/combined transport: Betuwe line Rotterdam–Dutch/German border (–Rhine/Main)

Project

Under construction

Other lines of the trans-European combined transport network outline plan



Project description

The Betuwe line will connect major European industrial and consumer centres (Rhine/-Main; Rhine/Neckar) with the port of Rotterdam. It will be a conventional railway line with a total length of 160 km, 75% of which will be newly constructed; on the remaining sections, existing lines will be upgraded.

While the Betuwe line project covers only Dutch territory — from Rotterdam to the German border — on the German side, efforts are being made to ensure the continuation towards the Rhine/Main area. A governmental agreement, signed by the Ministers for Transport of the two States in August 1992, stipulates that the link from the Dutch border to Oberhausen will be completed in the same time as the Betuwe line. Further projects to be implemented in Germany will allow connections between Rotterdam and the south and east of Europe.

The project is of great importance to the development of the integrated trans-European transport network. The new line will be used, almost exclusively, by freight traffic; it will extend modal choice in a corridor where, at present, only road and inland waterway infrastructure exist. For medium- and long-distance freight traffic in particular, it should thus stimulate the switch to environmentally friendly transport chains, for example rail-maritime transport. By so doing, it contributes to reducing such negative effects as

emissions and noise pollution caused by heavy goods vehicles on roads. To facilitate transhipments an intermodal container terminal will be constructed in the context of the project.

The new line should contribute towards improving the punctuality of freight transport to and from the port of Rotterdam; the existing infrastructure, especially road, is no longer able to meet the demands made of it.

The implementation of the Betuwe line project also establishes the basis for improving the standard of passenger services. By freeing the existing lines from freight traffic, it would allow a reduction in delays and journey time.

A noticeable impact on economic development can be achieved by building the Betuwe line: the execution of construction works requires about 75 000 man-years of employment; after completion, 5 000 to 7 000 additional permanent jobs will be created (direct and indirect effects).

The total investment, including cost for studies and land purchase as well as payments of interest during construction, amounts to ECU 3 291 million.

At present, it is planned to start construction work in 1995; the intended year for entry into operation of the line is 2001.

According to estimations made by the Dutch Government, the project will show a discounted financial profitability of 6.5% (internal rate of return).

State of maturity

The Dutch Parliament adopted the project (at a scale plan of 1:25 000) early in 1994. The government has now suspended its approval for six months. It has launched a new political initiative with the aim of exploring alternative ways of financing the line. It is now expected that the final decision will be made in March 1995.

Administrative procedures are in progress; however, their completion depends on further political decisions. Provided that the green light for the Betuwe line is given next March, construction could start in the same year, as authorization procedures are being carried out in stages and are almost complete for some sections. The entry into operation of the line, on the other hand, may be delayed because of reconsideration within the government.

The environmental impact assessment was conducted and brought positive results; alternative configurations for the line are now being discussed, and in this context a new study might become necessary.

According to the current state of knowledge, the financing of the project will largely be ensured by the State. Parts of the investment are already provided for in budgetary planning. The national infrastructure fund, which is amongst others fed by benefits from the export of natural gas, will also contribute to the financing of the project.

In a similar way as for the Belgian/Dutch border to Amsterdam part of the PBKAL high-speed train, the government intends to involve the private sector at a later stage; initially, it will bear the major part of the investment and assume the full construction risk;

subsequently, a concessionaire will participate by paying a concession fee and operate the line after its completion.

It is now intended to conduct a study on the financial matters, with the aim of identifying more efficient solutions.

During the work of the Christophersen Group, cooperation between the Dutch authorities and the Commission became increasingly close. Progress was made in particular as regards the analysis of risks involved in the project.

As soon as the government has made its decision to go ahead with the project, the joint efforts should be continued; amongst other things, the issue of risk-sharing in a private/public partnership (possibly with Community support) should be dealt with thoroughly.

Annex A

High-speed train/combined transport France–Italy

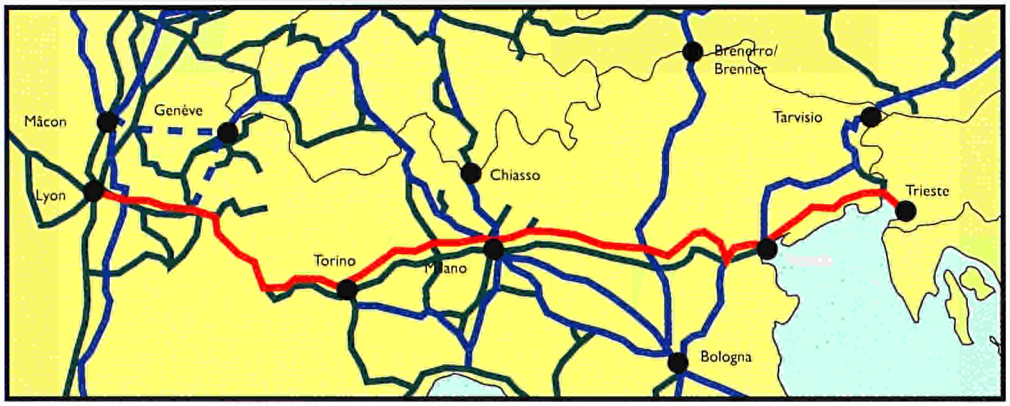
- Lyons–Turin
- Turin–Milan–Venice–Trieste

Project

Tunnel

Conventional lines

Other lines of the trans-European high-speed train and combined transport network outline plans



Project description

This east–west railway line, the total length of which amounts to approximately 680 km, consists of two parts:

- the Lyons–Turin axis;
- the Turin–Milan–Venice–Trieste axis.

Whereas the construction of a new Alpine crossing link between Lyons and Turin would contribute to the facilitation of commercial and social exchanges between France and Italy, its continuation towards Trieste via the Po valley would help to improve contacts between the Community and Eastern Europe.

Lyons–Turin

The project consists of approximately 250 km of new railway line between the Lyons area and Turin. The line would be constructed to handle both high-speed passenger trains (although with their maximum speed somewhat reduced — 220 km/h — in the tunnel section) and freight trains. The possibility of including a provision for a 'rolling road' operation (with lorries carried on trains) is being examined. The potential advantages of this system would be in environmental savings and in the possibility of reducing road and tunnel investments. The project forms part of the high-speed network examined by the Council in 1990 (key link No 8). It would form a vital link in the trans-European rail network and is an international link *par excellence*.

For the Italian authorities, this project is seen as a vital part of a wide-ranging scheme to improve contact with the rest of the Community and via the east–west continuation of the route towards Eastern Europe.

On the French side, it is underlined that the development of the TGV network is now well advanced and when the project comes into service the network will include links to the UK and the Benelux; this will generate extra traffic on the new link to and from Italy.

The project involves the construction of a new line to high-speed standards, but including the movement of freight trains on certain sections; 54 km of tunnel under the Alps plus other tunnels will be called for. If the 'rolling motorway' option is adopted, the facility to

load/off-load lorries and a wide loading gauge will need to be provided. Technically, the project should not pose new problems, although the costs of tunnels are always subject to some risk.

The new transalpine rail link will allow growing traffic demand to be met and, in particular, the share of rail traffic to be increased — which serves the overall objective of achieving an efficient and environmentally friendly transport system. The existing rail line is inadequate in terms of capacity and quality and only a new tunnel can improve the situation.

The total cost of the project amounts to ECU 6 800 million; the option that includes the rolling motorway will cost ECU 7 450 million. These figures represent an estimate of the maximum costs for the entire project; there are still various options under examination that have different costs.

The implementation of the project will be divided into two basic phases:

(i) the section between Lyons and Montmélian: scheduled for completion in 2002;

(ii) the section between Montmélian and Turin:
- — completion of tunnel: envisaged for 2005;
- — completion of access routes: envisaged for 2010.

These dates depend on a rapid start and also on the results of further research. Various options are also being studied that could affect the timing.

According to the present state of knowledge, construction work on the Montmélian–Turin section is envisaged to start in 1995 and on the Lyons–Montmélian section in 1996 (trial bore).

Taking into account external factors, the socioeconomic profitability (rate of return on the project) varies from 9.4 to 11.4%. This includes only the transport benefits (time savings, etc.). As regards the benefits in terms of increased economic activity in the regions concerned, it has been estimated that 170 000 man-years work will be generated in the construction period. During operation, over the life of the project, the number of permanent work years generated is estimated to be 60 000.

The financial rates of return on the project vary, for the different options, from 5.4 to 9.1% (the latter including a 30% contribution from public sources).

State of maturity

There is general political agreement between the French and the Italian authorities on the need for the project. The local and regional authorities are also involved. The French authorities give priority to the TGV Est (high-speed train East) in their planning, and this may have consequences for the timing of the Lyons–Turin project. On the Italian side, the government is preparing proposals that would make up to ECU 50 million available for the development of this and the Brennero project from January 1995.

Administrative procedures are under way. In this context, an environmental impact analysis has been undertaken on the section Lyons–Montmélian, where the options are

clearly defined, and has produced results that are judged positive. In the light of the further work needed to define the rest of the project, environmental studies have not yet been undertaken.

The section between Lyons and Montmélian is now being examined by a joint body of public and private sector organizations (a French public interest grouping). It is simpler and more profitable than the tunnel section and could go ahead first with a view to completion in 2002.

For the development of the cross-border section, a European economic interest grouping consisting of the two railways SNCF and FS has recently been established.

The more complicated international tunnel section could be opened by 2005 but requires extensive studies and preliminary work in order to establish the costs and reduce the risks involved. In particular, the rolling-road option for combined transport requires considerable analysis.

A number of administrative/legal questions have to be resolved, notably the form of a cross-frontier grouping which might undertake the project, and the question of the special rights that might be assigned to any concessionaire appointed.

The overall profitability and the risks seem to rule out the possibility of a pure private sector financing scheme: this would in any event not be in keeping with the philosophy of the authorities concerned. However, if the risk factor could be quantified and an injection of public funds be granted, early in the project, it appears to be a suitable case for exploring the possibility of some form of public/private partnership. A question to be adressed is whether the preliminary work for the 'rolling road' should be included: this question can only be answered if the full possibility of making savings in the construction of road facilities is known. On the basis of the economic and other studies it will be necessary to define the optimum project in terms of its financeability; this would involve the question of scope: should the whole section from Lyons to Turin be included, and should the rolling road be included in the main project or not?

The contacts and work undertaken in the course of the examination of this project in the framework of the Christophersen Group exercise have allowed the project to be better understood and many aspects have been clarified.

Overall, the project appears to justify further work and support at Community level. Initially the support could be concentrated upon:

(i) refining the economic and financial analysis to establish the range of rates of return with greater certainty and measure the risks involved;

(ii) supporting engineering and other studies leading to the construction of a trial gallery;

(iii) examining the combined-transport possibilities in detail.

It would seem to be useful to include private-sector parties in the next stages of the project to address the financing issue; the whole question of the 'rolling motorway' should be studied in detail and the creation of a working group with the motorway and tunnel authorities should be considered.

For the Italian authorities, this project is seen as a vital part of a wide-ranging scheme to improve contact with the rest of the Union and via the east–west link through the Po valley towards Eastern Europe. They plan, as a direct extension of the Lyons–Turin link, to build the Turin–Venice–Trieste high-speed railway line. The construction of the first section of this 430-km-long new line — Turin–Milan — is envisaged for the period 1995-2001.

Turin–Milan–Venice–Trieste

Some sections of the existing line are not able to meet present-day demands on capacity. The construction of a new line between Turin and Trieste is necessary to meet future traffic growth — both national and international.

The construction of this new line would allow noticeable increases in rail traffic: on the Turin–Venice section, passenger traffic is expected to increase by 30% and freight traffic by 100% once the line has entered into operation. Passengers would benefit from considerable time-savings: 2 hours and 45 minutes on the section between Turin and Venice.

With a total length of 430 km, the construction of the new line will be divided into three phases: the Turin–Milan, the Milan–Venice and the Venice–Trieste sections.

The Turin–Milan subproject is the most mature one; construction work is envisaged to start at the beginning of 1995, and the line is planned to enter into operation by the year 2000.

As far as the Milan–Venice subsection is concerned, a process is currently under way regarding the adoption of a law on the financing of this project; this proposal was discussed by the Senate on 5 December 1994. Its adoption will allow 60% of the work to be financed by TAV (the entity in charge of promotion and development of the Italian high-speed railway network) and 40% by the State. Thanks to efforts made by the Italian authorities, work is expected to begin during the course of 1995 instead of 1998 as originally planned. The Venice–Trieste section, on the other hand, has not as yet been scheduled.

Total investment costs for the entire link amount to ECU 6 750 million, of which ECU 2 100 million concern Phase 1 (Turin–Milan).

State of maturity

As far as the implementation of the Turin–Milan subproject is concerned, the Italian Government and FS (Italian railways) concluded an agreement in 1992; administrative procedures, including a public inquiry, have almost been completed.

Outstanding procedures will be launched in due course.

The State concluded a concessionary agreement with TAV; this agreement is to last 50 years.

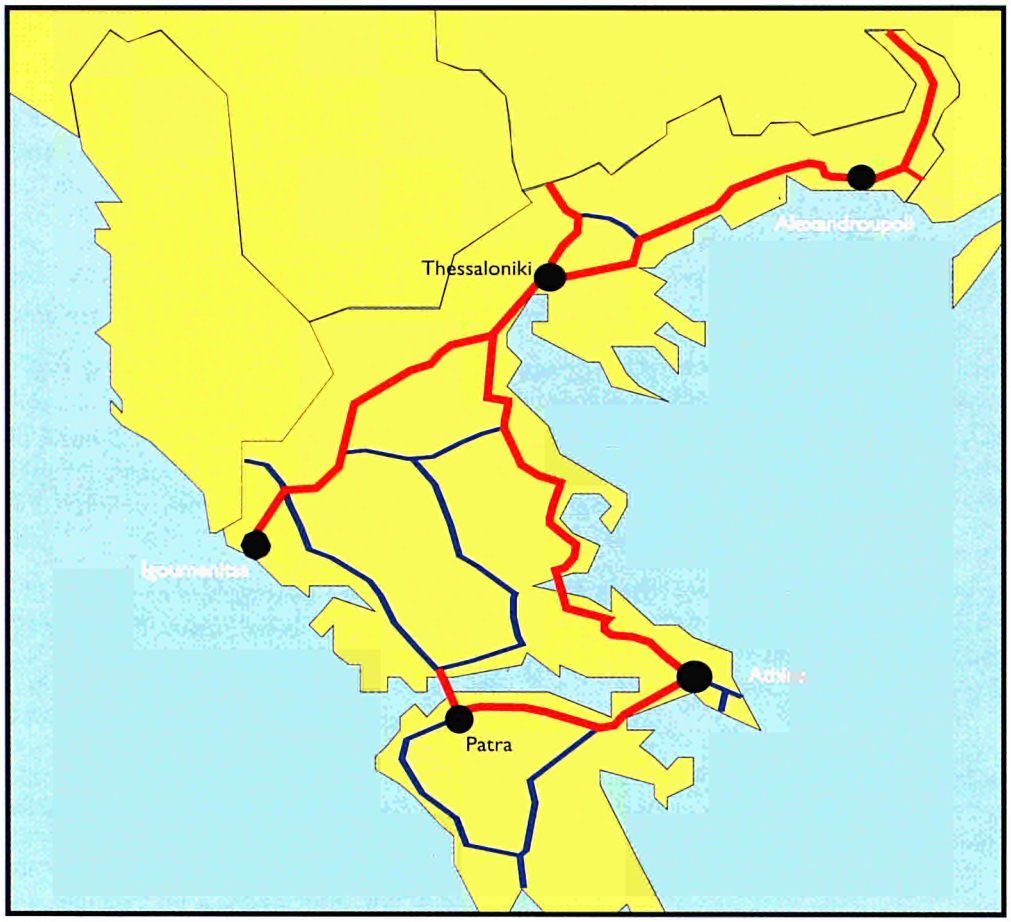
While 60% of the total investment will be borne by the concessionare, the State will contribute to financing the remaining 40%.

Annex A

Greek motorways
PATHE and Via Egnatia

Project

Other roads of the trans-European road network outline plan



Project description

The project will form the backbone of the Greek road system and is crucial to the transport infrastructure development in Greece. Directly or via branches, it connects this isolated EU Member State with all of its neighbours: Albania, Bulgaria, FYROM and Turkey.

The project consists of two axes:

(i) PATHE, the north–south axis: Rion–Antirion, Patras–Athens–Thessaloniki–Promahon (Greek/Bulgarian border)

(ii) Via Egnatia, the east–west axis: Igoumenitsa–Thessaloniki–Alexandroupolis–Ormenio (Greek/Bulgarian border–)Kipi (Greek/Turkish border).

The project belongs to the trans-European road network and the trans-European motorways (United Nations). In addition, the northern section of the PATHE axis forms part of a European road corridor identified by the Crete pan-European transport conference, which passes through several South European countries and connects to Germany. Via the sea ports of Igoumenitsa and Patras (ferry services), the Greek and Italian motorway networks will be interconnected.

The implementation of the project will entail noticeable reductions in travelling time between important Greek cities, and it will lead to marked improvements in road safety.

About 70% of the Greek population is distributed along the PATHE–Egnatia axes. Consequently, the new infrastructure is expected to contribute decisively to stimulating commercial exchanges; it will thus be significant with respect to economic development. About 270 000 man-years of employment will be needed during the construction period of the motorway; in addition, an important number of permanent jobs should be generated after its completion. The project also plays a vital role in regional development and social cohesion; it improves in particular the accessibility of the remote northern regions of Thrace, Epirous and Macedonia.

The two parts of the project display the following features:

PATHE will be 860 km long; the project consists mainly of upgrading an existing road to motorway standard (dual carriageway with 2 × 2 lanes; 2 × 3 lanes are being built near Athens and Thessaloniki). The existing alignment needs only minor modifications; mainly widening is foreseen. One quarter of the axis has already been upgraded; work is at present in progress over 100 km; 316 km are to be ameliorated with Community support and the remaining 224 km with private means.

The Egnatia part includes the construction of 780 km of new motorway. Technically the project features a dual two-lane motorway that bypasses large cities and some single carriageway sections in the mountainous area from Igoumenitsa to Thessaloniki.

The total cost is estimated at ECU 3 880 million for PATHE and ECU 2 480 million for Egnatia.

Work on PATHE and Egnatia was started in 1990 and is scheduled to finish before 2002.

As regards socioeconomic profitability, existing studies show positive results; the expected socioeconomic rate of return for Egnatia, for example, amounts to 8.8%. Further analysis on this matter should be carried out; the positive impact on cohesion and the exceptional scale of the project indicate promising results.

As far as financial profitability is concerned, only preliminary data is available for the time being: whereas PATHE appears to show promising rates of return, the prospects for Egnatia are less optimistic. However, a detailed study on the financing of the entire motorway has been launched, and the results are expected to be released by the end of 1994.

State of maturity

The Greek Government has given political support to the preparation and implementation of the project, including the establishment of public/private partnerships. All political parties in the parliament endorsed the motorway project.

Conventional administrative procedures can be accelerated thanks to the new legislation passed by the parliament. It is expected that all procedures will be concluded by the end of 1997.

Environmental impact assessments have been carried out and approved for large parts of the project. As regards the Via Egnatia, some environmental problems have been identified. In the River Nestos region, for example, special effort will be necessary to meet the requirements. Since work on PATHE mainly concerns upgrading, minimal negative effects are likely to be caused; only the Tempi Valley section is environmentally sensitive.

Three subprojects have already been selected as candidates for private financing:

(i) Rion–Antirion fixed link;

(ii) external ring road of Athens;

(iii) Malliakos Bay fixed link.

The tendering procedure for the Rion–Antirion project has already been completed, with the announcement of the successful candidate; the tendering procedure for the Athens ring road has been launched. As regards the Malliakos Bay fixed link, on the other hand, various technical solutions are still under consideration.

The financial study launched by the Greek Government is expected to bring valuable information regarding the self-financing potential of the motorway. Several scenarios are under consideration. The back-to-back approach seems to be more promising. The self-financing principle has been firmly adopted by the Greek Government, although the toll levels (existing tolls average DR 5/km on expressways and DR 10/km on motorways) and the distribution of revenues (public/private) are still to be assessed.

For PATHE, of the total costs (ECU 3 880 million), the Greek Government has stated its willingness to contribute ECU 970 million (25%) from the national budget and to ask for 23% of the total investment to be covered by Community funding (ERDF, Cohesion Fund and the trans-European networks budget line). For the remaining part, private funding will be sought.

As regards Egnatia (ECU 2 480 million total costs), the Greek Government has stated its willingness to contribute ECU 790 million to the project, and to ask for ECU 900 million (36%) to be covered by allocations from the ERDF and Cohesion Fund. For the remaining part (ECU 790 million), private funding will be sought.

The existing legislation provides for the involvement of the private sector; improvements in the regulatory framework for private financing of projects are, however, being examined.

A new law for public works (No 2229/94) solved problems regarding competition rules. New legislation has been approved to raise the quality of construction plans, economic bids, budget estimates and timetables.

The average daily traffic varies considerably along the roads in question (10 000 and 30 000 vehicles per day in 1994). With a view to the determination of the necessary technical standard of the motorway, traffic forecasts were carried out. On some sections of the Egnatia (traversing mountainous areas), construction is particularly expensive; in these cases, a reduced standard appears to be appropriate.

The Christophersen Group exercise has contributed decisively to the progress made with this project. Two workshops were organized, and the Commission played an active role with respect to the financial study by giving financial support and technical advice.

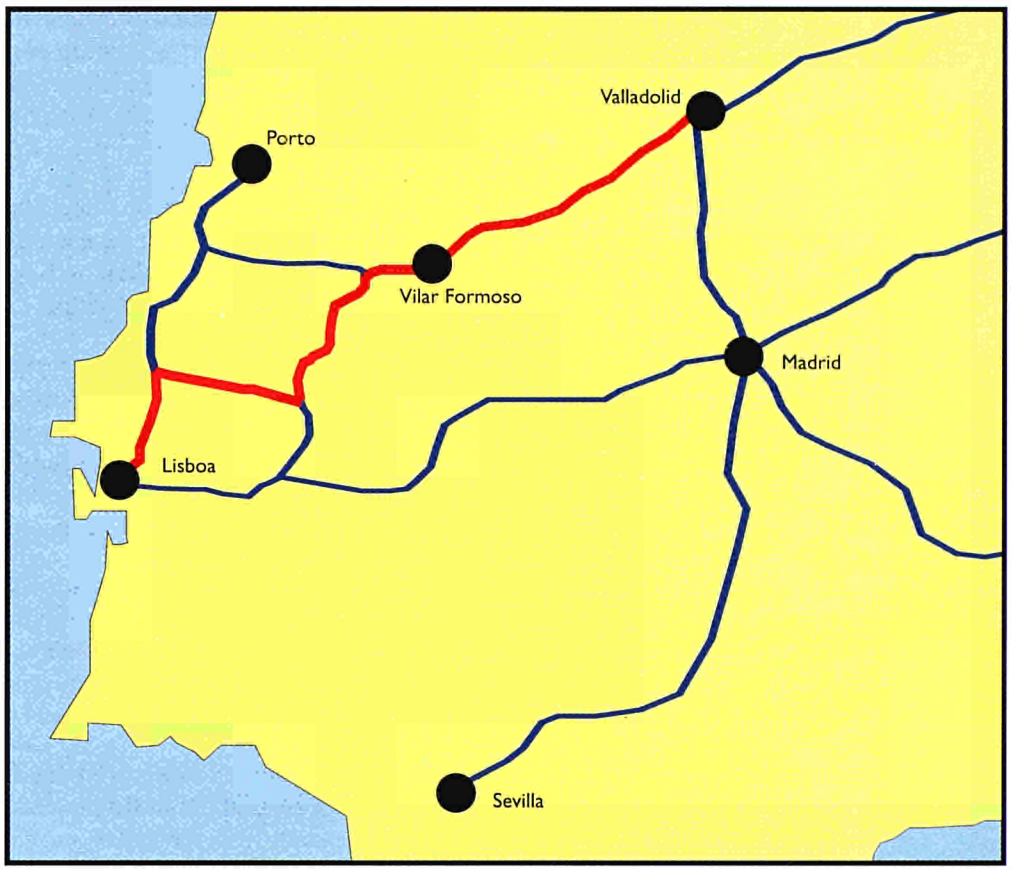
The Community should continue accompanying the implementation of this motorway project. The exceptionally high proportion of Community financial support should stimulate both the national authorities and the Community to identify innovative ideas, implement an optimal financing scheme and integrate as much private funding as possible.

Annex A

Lisbon–Valladolid motorway

Project

Other roads of the trans-European road network outline plan



Project description

This project is of great importance for the interconnection of the Portuguese and Spanish motorway networks; it also facilitates the link between the networks of the Iberian peninsula and France and, by so doing, it contributes to social and economic cohesion within the Union. In the regions directly concerned, the new motorway will stimulate development: it is estimated that the construction of the road itself will require about 25 000 man-years of employment and that, directly and indirectly, a considerable number of permanent jobs will be created. The improved infrastructure should enhance the competitiveness of the industries of the Iberian peninsula — particularly of the Portuguese area north of Beira Baixa and Ribatejo.

The motorway comprises the following sections:

(i) Portugal: Lisbon–Torres Novas–Castelo Branco–Guarda–Vilar Formoso (Spanish border);

(ii) Spain: Fuentes de Oñoro (Portuguese border)–Salamanca–Tordesillas–Valladolid.

The connection with the French network is ensured via existing roads (Burgos–Spanish Basque region).

As a result of the project implementation, marked improvements, especially for international traffic, will be achieved; journey times will be noticeably reduced and road safety

will be decisively increased; thanks to capacity increase and consequently less congestion, negative environmental impacts such as noise pollution and emissions will be limited.

The total length of the motorway amounts to 585 km; parts of it will have to be newly constructed whereas the remaining parts already exist and will be upgraded: 363 km traverse Portugal; the remaining 222 km concern Spain. In all, 123 km of the motorway are already in operation, thus leaving 492 km to be completed.

In Portugal, the project will be implemented as a dual-carriageway expressway with 2 × 2 lanes (3 lanes per direction near Lisbon); it includes the construction of the tunnel of Gardunha. Spain plans the construction of an expressway (autovía) with two lanes per direction.

Indicative costs and construction period

Section	Length (km)	Cost (million ECU)	Construction period
Lisbon–Torres Novas (P)	93		completed in the mid-1980s
Torres Novas–Vilar Formoso/Spanish border (P)	270	530	1993-99
Fuentes de Oñoro/Portuguese border–Salamanca (E)	117	300	completion after 2004
Salamanca–Tordesillas (E)	75	240	1995-98
Tordesillas–Valladolid (E)	30		completed at the beginning of the 1990s
Total	585	1 070	

No data on financial and socioeconomic profitability are available as yet; considering the external effects such as economic and environmental benefits, positive socioeconomic results can be expected. According to the Spanish authorities, the project does not show sufficient financial profitability to attract private sector involvement; at present, the average daily traffic amounts to 8 000 to 9 000 vehicles.

State of maturity

Tolling is an issue to be promptly assessed in both countries on a political level. While it facilitates, on the one hand, the financing of motorways it may, on the other hand, produce traffic diversion to the regional network, which counteracts the goals of both reduction of negative environmental effects and cohesion.

The whole axis is part of the trans-European road network. The entire route from Valladolid to the Portuguese border is included in the Spanish infrastructure master plan as a toll-free express route. The Salamanca–Tordesillas link forms part of the road

priorities programme for the period 1993-95 adopted by the Spanish Government. The Portuguese section is also included in the national plans.

Environmental impact assessments are in progress for the various sections. No major problems have been encountered so far, except for the tunnel of Gardunha.

As regards financing, the Spanish authorities see only a limited possibility of private involvement due to low traffic volume and profitability prospects. They envisage public funding for the entire project and are not considering the levying of tolls.

In Portugal, the current traffic densities do not exceed those of the Spanish sections. Unlike in Spain, the completed motorway section is tolled; it is, however, operated by the national road administration. With respect to the sections to be newly constructed, the Portuguese authorities also show openness to tolling.

Community financial support has already been provided for the construction of some Spanish and Portuguese sections: Spain received ECU 3.1 million from the budget line for trans-European networks and the Community initiative Interreg; in Portugal some sections in construction are co-financed by the Cohesion Fund (in combination with funds from the State budget). The European Investment Bank has contributed to the financing of the links Atalaia–Abrantes, Castelo Branco–Soalheira and the tunnel of Gardunha.

In Spain, the project is promoted by the State, and in Portugal by the Ministry of Public Works and Communications through Junta Autonóma de Estradas. In Portugal, some problems regarding tendering procedures have emerged.

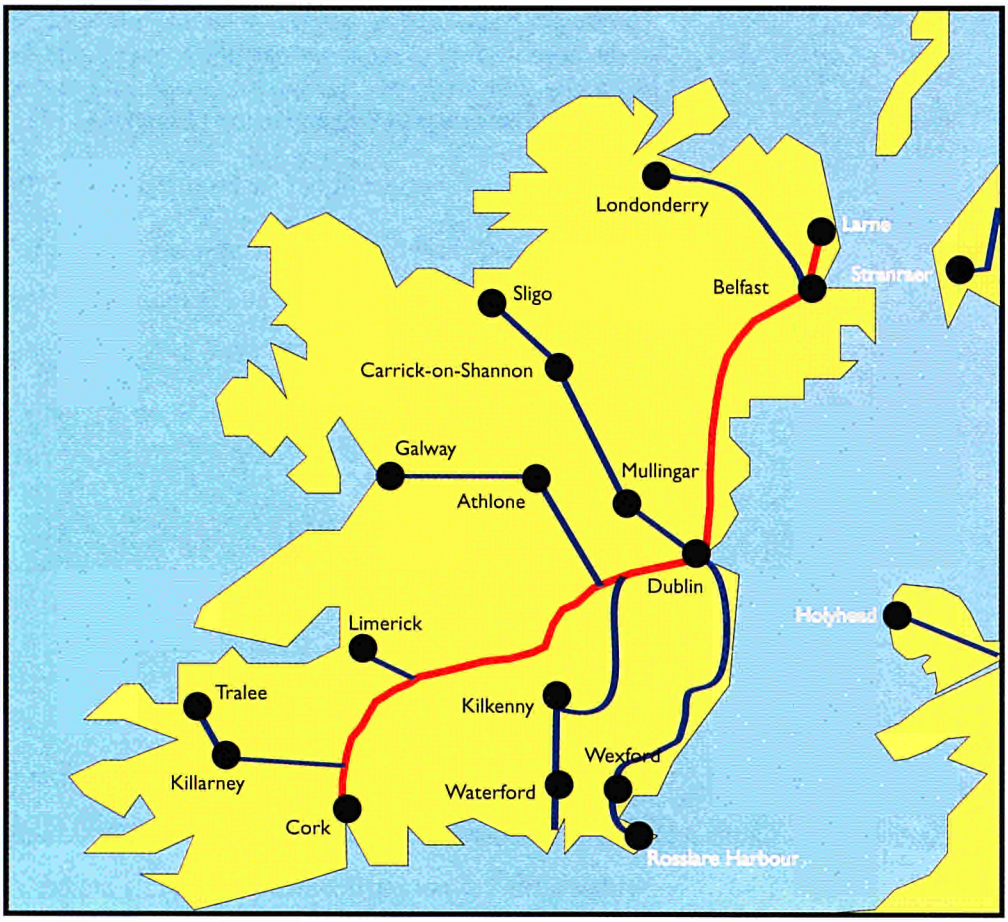
It would be recommendable to conduct specific studies in order to explore possibilities for public/private partnerships. The European Commission may act as coordinator with a view to a joint proceeding in this respect, and organize further workshops or informal meetings. As both Spain and Portugal have already gained experience with concessions for motorways and with tolling, there should still be a possibility for integrating the private sector and reducing the public funds to be spent on this project.

Annex A

Conventional rail link: Cork–Dublin–Belfast–Larne–Stranraer

Project

Other lines of the trans-European railway network outline plan



Project description

The Cork–Dublin–Belfast–Larne axis — which is already in operation — constitutes the spine of the Irish railway network. Being the only cross-border line in the network, it provides a crucial transport link between Ireland and Northern Ireland and is vital to the connection with the British network. It serves a key economic corridor and is of great importance for both passenger and freight traffic.

The line complements the trans-European rail link (Cork–)Dublin–(Belfast–) Holyhead–London–Channel Tunnel–Benelux countries.

As the existing line shows marked signs of underinvestment in infrastructure (track, signalling) and rolling-stock assets, improvements are urgently called for. Increasing demands require appropriate infrastructure, both in terms of capacity and quality. The line needs to be upgraded; after completion of these works it should attract more traffic. By so doing, it contributes towards developing an efficient and environmentally friendly transport system; modal choice will be increased and an interesting alternative to road and air traffic will be established.

The implementation of the project will have a positive effect on the labour market in Ireland.

The project consists of the gradual upgrading of the 502-km-long existing line, as well as of the improvement of the corresponding rolling-stock; the line will be adapted for speeds of around 200 km/h. Several ferry lines provide the connections with the British rail network, in particular to Stranraer and to Holyhead.

Construction work on sections of the project started in 1992.

The project is divided into two basic phases:

(i) 1992-96: upgrading of the Dublin–Belfast line for speeds of up to 160 km/h;

(ii) 1996-99: upgrading of the remaining part.

The total costs of the project amount to ECU 238 million; this sum covers track works, civil works, signalling, rolling-stock as well as interest payments during the construction period.

On the basis of a 5% discount rate, a net present value of ECU 12.6 million has been calculated.

The socioeconomic profitability was estimated at 8%.

State of maturity

A political agreement on the implementation of the project was reached between the Irish and UK Governments as well as the European Commission in 1991. Ireland gives the highest priority to the railway project. The link of the railway line to the port of Larne, and via ferry to Stranraer, is of particular importance to Northern Ireland.

Neither technical nor environmental feasibility studies needed to be conducted for this upgrading project. Work is already in progress, and no particular problems have been encountered. Administrative procedures are required only to a minimal extent.

No significant scope for private sector involvement has been identified so far; the Irish authorities are, however, willing to explore such possibilities as the franchising of retailing space at the main railway stations along the route. This may enhance the profitability of the line.

For the time being, it is intended to finance the project with public funds only. It has already benefited from Community support (Cohesion Fund, Structural Funds), and further significant Community contributions are envisaged. The project has been included in the Community support framework and operational programme on transport 1994-99. The remaining part of the investment will be provided by the Irish Government.

On the occasion of a project workshop held at the end of November 1994, the UK and Irish authorities proposed to extend the Cork–Stranraer railway project to Londonderry and Limerick, respectively. This extension might be subject to further examination over the next few months.

Annex A

Malpensa airport (Milan)

- Community connecting points
- Regional connecting points
- ★ Accessibility points
- Part of an airport system

Project description

Malpensa airport forms part of the existing Milan airport system, which also comprises Linate airport as well as the relatively small Bergamo airport.

For technical and environmental reasons, it is not possible to extend airport capacity at Linate. In order to meet increasing demand at Milan and promote efficient distribution of air traffic, the intention is to develop Malpensa airport as an international hub for northern Italy. By concentrating on intercontinental and intra-Union flights, the new Malpensa airport will thus contribute to connecting an important commercial and cultural centre of the European Union with the rest of the world. Linate airport, on the other hand, will mainly serve limited short-haul traffic. The development of Malpensa airport will not only increase capacity, but should also lead to noticeable improvements in the quality of services for the entire Milan airport system.

The transfer of airport activities from Linate to Malpensa — that is from a location close to the centre of Milan city to a location at a distance of 50 km — will make it possible to contain better the environmental impact, particularly in terms of noise pollution.

The completion of the extension of Malpensa airport is envisaged by the year 2000. The main features of the 'Malpensa 2000' project are:

(i) the doubling of the runway capacity;

(ii) the construction of a completely new terminal so as to increase the overall terminal capacity (including the existing one) by 350%, bringing it up to 18 million passengers per year;

(iii) the development of new apron and cargo areas;

(iv) the construction of technical buildings and facilities to meet the needs resulting from the airport extension; these facilities also include high-standard safety systems.

The related access infrastructure forms an integrated part of the airport project: a rapid rail service — the Malpensa express — will link Milan city centre with Malpensa; access roads will ensure the connection of the airport with the national network. The Malpensa project is thus entirely in line with the objectives of the trans-European transport network: it allows for the efficient interconnection of rail, road and air transport and is thus to become a major European intermodal connection.

The new Malpensa airport will have a significant impact on regional and economic development: it will generate 6 000 direct permanent jobs; the indirect effect is estimated at another 12 000 to 18 000 jobs. During the construction period, approximately 20 000 man-years of employment will be generated.

Indicative costs and construction periods

Phase	Characteristics	Cost (million ECU)	Construction period
I	Runways — aprons — Passenger terminal access	615	1993-97
II and III	Runways — aprons — Passenger terminal cargo area	320	1997-2000
	Total	935 (construction) + 112 (other)	
		1 047	

Data regarding the socioeconomic and financial profitability are dealt with confidentially. They have been made available to the European Investment Bank.

State of maturity

Politically, the Malpensa project has the firm backing of the Italian Government as well as that of the regional and local authorities.

The Italian State has decided to grant a substantial subsidy for the construction of the rail link between Milan city centre and Malpensa airport. This support was approved by the parliament and represents a key element in completing the rail access.

Administrative problems have been solved thanks to the two workshops held in June and October 1994.

The project will be financed by a public/private partnership. The Italian State envisages a contribution of 47% of the total investment, whereas 53% will be provided by the private sector. These private funds will come mainly from SEA, the Milan airport authority. In addition, the participation of other investors is envisaged. Possibilities of reducing the State contribution should be explored.

The financing of the rail access will be finalized by a State subsidy of ECU 240 million. In its 1995 budget, the Italian Government plans to make provision for the construction of the road access to the airport. The European Investment Bank has agreed in principle to grant a loan of ECU 200 million. The EIF has agreed in principle to contribute to the project through loan guarantees on a loan up to an amount of ECU 50 million to ECU 75 million. Italian banks have expressed interest in participating in the financing of the project and are waiting for requests from SEA. The European Union is ready to co-finance feasibility studies for the rail access.

The outstanding issue with respect to the Malpensa airport project concerns the redistribution of air traffic within the Milan airport system. This problem should be solved by the end of autumn 1994 with the presentation of a new scheme by the Italian Civil Aviation Authority. The Commission has been asked by the CAA to take part in working out this new scheme.

In the context of the work of the Christophersen Group, two workshops have been organized so far. They have contributed to unblocking a number of long-standing problems. Three issues were identified as the main obstacles to rapid completion of the project: the redistribution of air traffic within the Milan airport system, the completion of the land-side access to the airport, in particular the rapid rail link, and the financial set-up. Recommendations have been made with a view to overcoming these problems and firm political commitments have been made by the relevant authorities, thus ensuring the necessary basis for rapid progress. The project is now well launched.

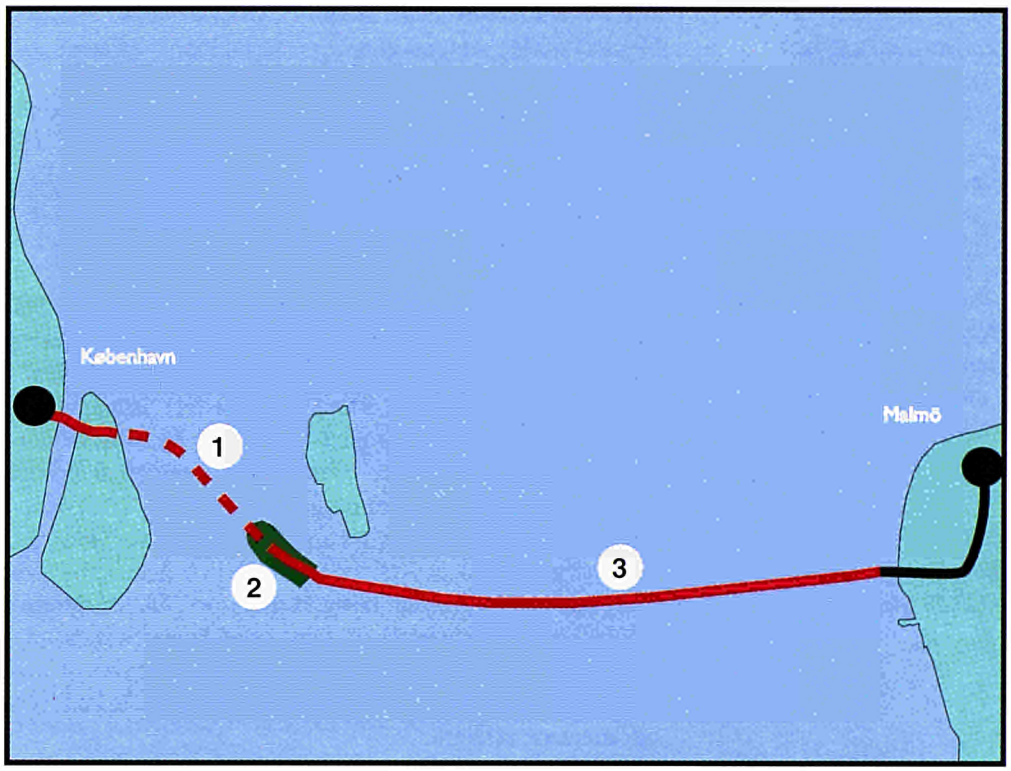
Annex A

Fixed rail/road link between Denmark and Sweden Øresund fixed link (including access routes for road, rail and air)

Project

Swedish access link

1 Submerged tunnel
2 Artificial island
3 One low-level bridge and two high-level bridges



Project description

The Øresund link will be the first fixed link between the Scandinavian mainland and continental Europe. Once complete, international freight and passenger traffic will be able to enjoy considerably improved conditions. Long-distance traffic coming from Finland and Sweden and going to Germany, as well as regional traffic commuting between the areas around Copenhagen and Malmö, will be noticeably facilitated: waiting time and embarkation problems linked to the crossing by ferry boat will be minimized; this is of particular importance to rail traffic.

It is expected that the entry into operation of the Øresund fixed link will lead to a marked increase in the proportion of rail traffic; passenger traffic by rail is expected to go up by 450%. In view of the fact that road traffic causes enormous negative environmental effects and that, especially for long-distance traffic, the comparative advantages of rail traffic should be further developed, this project makes an important contribution to achieving sustainable mobility.

The Danish rail access, which connects Copenhagen with the Øresund bridge-tunnel combination, is directly linked to Copenhagen Airport; at present, the airport has no connection with the railway network. The road link between the Øresund crossing and the city centre of Copenhagen will also contribute to the improvement of the access to the airport. These enhanced conditions, together with the expected additional traffic from and to Swedish regions as a result of the implementation of the Øresund fixed link, entail the necessity to expand Copenhagen airport, the intermodal character of which will be strengthened.

Plans to further develop Denmark's central international airport near Copenhagen are also closely related to the construction of the fixed link across the Øresund. Copenhagen airport is a natural hub for communications in air transport to and from Scandinavia and the Baltic region. The development plans for Copenhagen airport involve a number of significant investments in the range of ECU 1 000 million including the construction of a terminal in connection with the coming railway station at the airport. The first phases of the development plans are at an advanced stage and will be implemented within the next few years.

The Øresund fixed link, as the key element of the project, bears a four-lane motorway and a double-track railway line; it consists of three main parts: a 4-km-long tunnel under the sea (starting from the Danish coast), a 4-km-long artificial island and a 7.5-km-long bridge starting from the Swedish coast. Both on the Danish and the Swedish side, four-lane motorways and double-track railway lines will ensure the connection with Copenhagen and Malmö, respectively.

The fixed link is being designed and will be built and operated by a Danish/Swedish consortium which is owned by the two States in equal shares; this consortium has been legally entitled to levy direct user charges on the road part of the fixed link. The revenues generated will also contribute to financing the access routes.

It is expected that the project (not including access routes) will be amortized after a period of 22 years; among other things, this is based on the assumption that the toll level equals the fare to be paid for the Øresund crossing by ferry. The ferry line will continue operating after the entry into operation of the fixed link; modal choice will thus be improved.

Indicative costs and construction period (current prices)

Section	Length	Cost (million ECU)	Construction period
Danish access routes	motorway: 9 km railway line: 18 km	825	1993-97 1993-98
Fixed link	16 km	2 240	1995-2000
Swedish access routes	motorway: 10 km railway line: 26 km	300 [1]	1995-2000
Total	motorway: 35 km railway line: 60 km	3 366	

[1] To be included only after the accession of Sweden to the European Union.

The figures for the Danish access routes and the fixed link include studies, land purchase and interest payments during construction.

State of maturity

In 1991, the Swedish and Danish Governments reached a political agreement as regards the joint preparation, financing, construction, maintenance and operation of the Øresund fixed link. The relevant contract was ratified by acts of parliament in the two States; it

provided also for the construction of access routes towards Copenhagen and Malmö. The minimization of negative environmental effects was dealt with explicitly in this intergovernmental agreement.

Administrative procedures for the fixed link were completed both in Denmark and in Sweden in mid-1994; they resulted in building permission being granted. However, in both countries some court proceedings (mainly concerning environmental issues) are still pending. A major objective pursued during the preparatory period has been to ensure that waterflow to and from the Baltic Sea would not be affected by the construction of the fixed link; the two governments consider the option which has now been adopted to be a zero solution. The Danish access routes were approved in 1993, and construction is now in progress. Procedures regarding the Swedish access routes are still under way; they are expected to be completed by mid-1995.

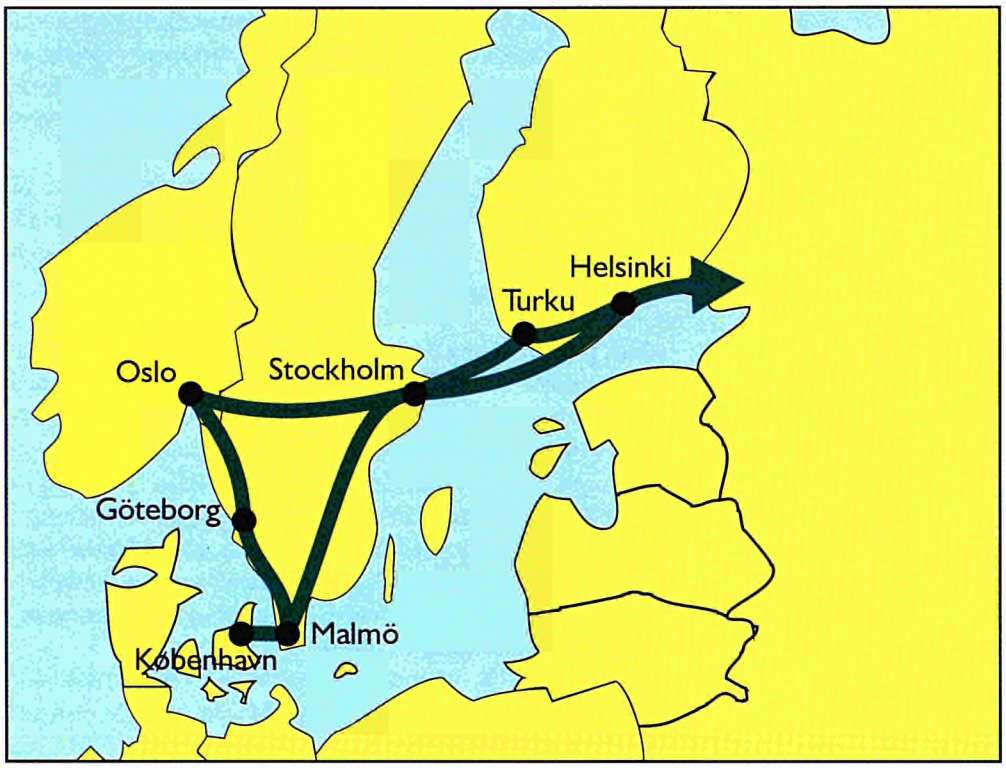
Pursuant to their 1991 political agreement, the two governments set up the bi-national Øresundkonsortiet: in 1992, each of them established a limited liability company, the Swedish one (called Svedab) being owned by the national railways and the road administration, the Danish one (called Øresundforbindelsen) by a holding company; these companies are fully owned by the respective State. Being, on the one hand, responsible for financing and building access routes in Sweden and Denmark respectively, they established, on the other hand, the Øresundkonsortiet.

The two States will guarantee the Øresundkonsortiet's borrowing on the market so that the latter benefits from the best possible conditions. Public ownership of the consortium as well as the assumption of risk by the States will thus considerably facilitate the financing of the project. The 'user pays' principle will not only be applied for the road part of the fixed link but also to the railway line: both the Danish and Swedish railways will have to pay a yearly flat rate to the Øresundkonsortiet for the use of the infrastructure. As far as the Swedish access routes are concerned, the government and Svedab envisage starting construction work as late as possible in order to minimize capital cost. Unlike the Danish access routes, which are of significance to the development of Copenhagen airport, the Swedish ones are exclusively linked to the Øresund crossing; for this reason, there is no need to open these routes before the completion of the fixed link.

Annex A

Nordic triangle[1]

Project



Project description

The Nordic triangle project is a joint proposal put forward by Finland, Norway and Sweden. Interconnecting the peripheral Nordic countries with both continental Europe on the one side and third countries on the other, the upgrading and improvement of routes on this triangular corridor will create important new opportunities for economic and political development within the extended European Union.

This multimodal corridor is divided into four sections:

Oslo–Copenhagen,

Oslo–Stockholm,

Copenhagen–Stockholm,

Turku–Helsinki(–Russian border),

comprising the following distances to be covered by the project:

roads: 1 300 km (out of a total of 1 800 km)

rail: 2 000 km (out of a total of 2 000 km).

Some subprojects have already been identified by the States involved, for instance:

— high-speed railway line Göteborg–Malmö (total investment ECU 400 million; 1994-2003)

— railway upgrading Turku–Helsinki (ECU 300 million; to be completed in 1995).

[1] The Norwegian part of the Nordic triangle is subject to future cooperation between Norway and the European Union.

An integral part of the Nordic triangle concept is the Øresund rail/road fixed link to Copenhagen and continental Europe. It constitutes a key element in this triangle, forming a direct inner Community physical link between mainland Europe and Scandinavia. Indeed, it is already one of the Christophersen Group's priority projects.

It is Finland's intention to extend the corridor up to the Finnish/Russian border. Norway's proposal also makes mention of a direct link across the Oslofjord between the E18 (on the west coast of the fjord) and the E6 (on the east coast), which would thus form a bypass of the city of Oslo, drawing transit traffic away from the capital.

The project represents the most important mainland corridor for freight and passenger traffic coming from Scandinavia, Finland and third countries; it allows the integration of areas that are, geographically speaking, both landlocked and situated on the periphery of the Community. The Nordic triangle project is the natural continuation of the fixed rail/road link between Denmark and Sweden (Øresund fixed link), with the added benefit of relieving pressure from the expected growth resulting purely from the new possibilities offered by the Øresund crossing. Its implementation will bring a noticeable reduction in travelling time, both by road and by rail, leading to improved traffic flows and considerable improvements in environmental and safety considerations. Major urban centres are linked by high-quality infrastructure.

The total investment costs for the Nordic triangle project are expected to total ECU 4 400 million. This is divided as follows: for Finland, ECU 700 million costs are envisaged for road sections and ECU 800 million for rail lines, making a total of approximately ECU 1 500 million (it should be noted that these figures include the section up to the Finnish/Russian border); for Norway, costs are estimated at ECU 775 million and ECU 325 million for road and rail upgrading work, respectively, making ECU 1 100 million altogether; for Sweden, a total of ECU 1 800 million is envisaged, although no precise financial breakdown is available as yet.

For some sections, the socioeconomic and financial feasibility studies have been assessed by means of technical feasibility studies; nonetheless, more detailed analysis is needed.

State of maturity

Norwegian and Swedish road authorities have reached an agreement on a new bridge planned to be built at Svinesund (the natural border between the two countries on the E6 route) as a joint Swedish-Norwegian toll project. However, the regional authorities of Halden have vetoed the project, leading to an objection being raised to this decision. The Ministry for the Environment will have the final say, in cooperation with the Ministry of Transport.

The east-west axis (Oslo–Stockholm–Helsinki) is given lower priority by Norway than the one running from Oslo to Copenhagen, with construction work expected to begin in 1997 at the earliest; however, this does not appear to hamper the project's progress.

In accordance with the provision on environmental impact assessment (EIA) of the Norwegian Planning and Building Act, when investment costs in any one project exceed ECU 24 million then the Directorate of Public Roads or the Norwegian State Railways (NSB) decides whether or not an EIA should be elaborated on for the central authorities or become part of the regular planning process.

In Norway, the Public Roads Administration and Norwegian State Railways are cooperating on the planning of a new motorway and double-track railway line for a 10-km-long section in Vestby. This is a common corridor linking construction work on both modes of transport between 1993 and 1995.

The Norwegian State (through the Public Roads Administration and the Norwegian State Railways) owns and operates all national roads and main railway lines, regardless of whether or not they are financed by tolls or public funds.

It would be advisable to investigate possibilities of financing from the private sector. However, due to generally low traffic flows, traditional private concessions are not considered appropriate on the whole, with the exception of bridges, tunnels, certain stretches of road, as well as road-pricing in major cities. As regards the rail sector, the levying of infrastructure fees is also under consideration.

The annual budgeting for the first two years of the Norwegian railway plan (1994 and 1995) shows that it will be difficult to fulfil more than the basic programme of ECU 285 million: this could obviously have a significant effect on the financing of Norwegian railway sections within the Nordic triangle.

Corresponding appropriate information is still lacking from the other two countries.

No problems regarding competition, tendering, fiscality, etc. have been identified so far; however, it is essential to ensure interoperability in cross-border rail systems.

As it was included in the Christophersen Group's programme at a relatively late stage, a great deal more intensive research still remains to be carried out. More comprehensive data are still being gathered. There is a great deal of work still to be done, which could be greatly helped by the Commission's support.

Construction and upgrading throughout the corridor is at varying stages of development, on some sections ranging from being under construction to expected completion in 2003. More detailed information is needed on most parts of the corridor.

Very little detail is available regarding financing issues; a preference has, however, been shown for partial toll financing coupled with State Funding.

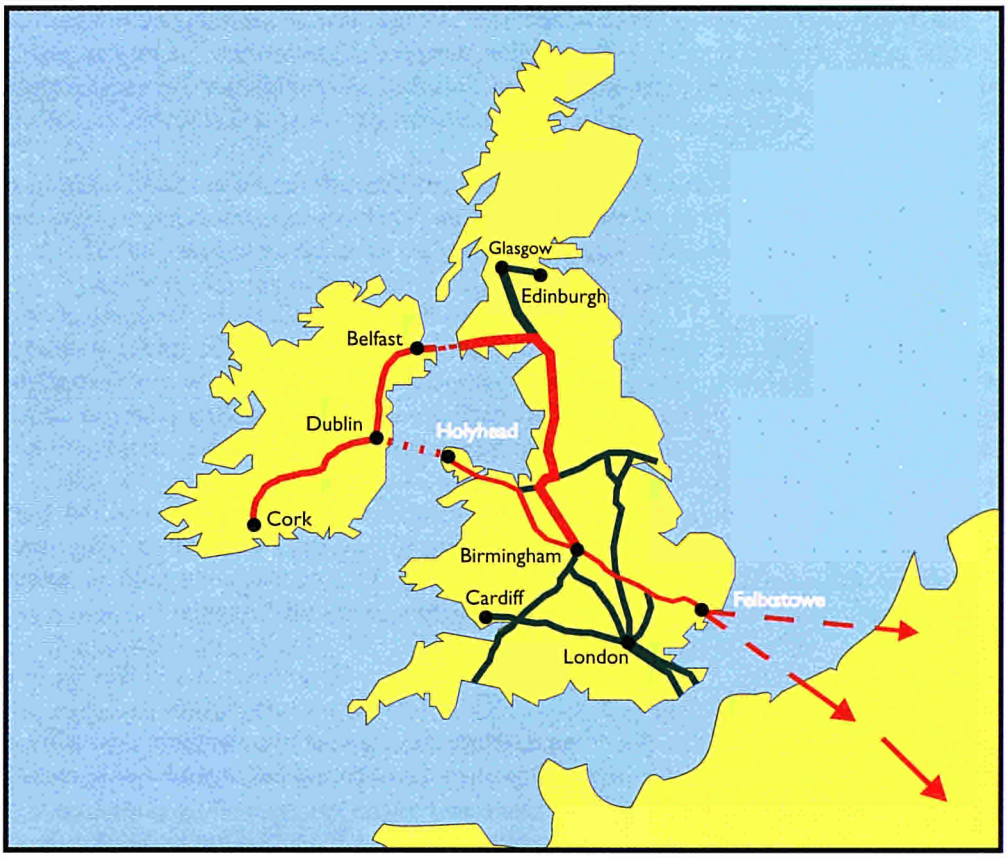
Annex A

Ireland–United Kingdom–Benelux road link

Project

Ferry link

Other roads of the trans-European road network outline plan



Project description

The corridor connects the three main cities in Ireland — Belfast, Dublin and Cork — by road and ferry links with Scotland and Wales, and southward, diagonally through the road system in England, with the Felixstowe/Harwich ferryport; via the English Channel crossing, it provides the connection with the road network of the Benelux countries. The link is included in the trans-European road network adopted in October 1993, and in the European Commission's proposal for the development of a trans-European transport network, submitted in April 1994. A coordinated development of the link facilitates access from Ireland/Northern Ireland to and through Scotland, Wales and England to continental European and external markets.

The implementation of the project will lead to a significant reduction in travelling times, for transit traffic in particular; it will contribute towards relieving occasional very severe traffic congestion and thus to reducing exhaust emissions. Traffic safety will be enhanced. In the regions directly concerned, economic and regional development will be stimulated.

The total length of the corridor is 1 455 km, of which 827 km are already included in various road development schemes.

The various sections of the corridor will be at motorway, expressway or high-quality single carriageway standard, depending on regional traffic density. In some cases, the projects on the corridor involve new construction, in others realignment or road widening.

Cost-benefit analyses conducted for various sections produced positive results.

Estimated construction costs

Work is planned on various individual schemes as follows:

Section	Length (km)	Cost (million ECU)	Construction period
England	381.5	1 730-1 740	beginning of work: from 1996 on
Ireland	377.9	930-940	122 km: completed; 55 km: under construction; remaining part: beginning of work from 1996 on
Wales	37.9	160-170	30.6 km: completed; remaining part: still to be determined
Northern Ireland	30.6	80-90	beginning of work: from 1996 on
Scotland	na	18-20	still to be determined
Total	827.9	2 920-2 960	

State of maturity

The UK and Irish Governments, and the European Commission recognize the importance of the Ireland–United Kingdom–Benelux road-corridor concept. The Cork–Dublin–Belfast–Larne link will play, in particular, a major role in the context of developing closer North-South economic cooperation as a component of the wider process of enhancing economic, political and social contacts between the two parts of Ireland.

A broad framework for cooperation between the five road administrations involved has been agreed upon; detailed coordinated project planning will be undertaken. A considerable number of subprojects have already been completed as part of local upgrading programmes. The work has fully complied with the requirements of Directive 85/337/EEC on environmental issues.

United Kingdom: The central government carries the responsibility for the design and management of the trunk road system whereas other roads fall within the domain of local authorities. A national priority system has been established for the various planned schemes, and some adjustments may be necessary in the existing priorities, in order better to support the Ireland–United Kingdom–Benelux link.

Ireland: The management and administration of the national road network has recently been assigned to a new National Roads Authority. The overall planning remains centralized

at governmental level. The corridor includes two of the four strategic sections identified as priorities in the 1989-93 operational programme for peripherality and further sections in the 1994-99 operational programme for transport. Several major projects have already been completed or are at an advanced stage of planning.

No significant problems are expected in the future as regards the implementation of new projects on the Ireland–United Kingdom–Benelux link; however, some administrative obstacles may arise from the necessity to complete statutory procedures in an appropriate sequence in the various regions involved.

In the United Kingdom, opportunities to include private financing and concessions are worked out on a scheme basis. Possibilities for electronic tolling are under investigation. In the meantime, a system based on 'shadow tolls' — operation involving payments by the central government to concessionaires in proportion to the traffic volume — is being promoted (design-build-finance-operate concession). Private-sector funding is also a policy goal in Ireland, despite the impact of low traffic densities on profitability. Preliminary finance schemes propose a combination of national budgetary resources, Cohesion Fund assistance (Irish projects), EIB loans and private sector investment funds. There is a need for a corridor overview study.

No significant problems of a technical nature or of interoperability are foreseen. All individual projects along the corridor have been estimated to be technically feasible. All major road-improvement projects are undertaken by competitive tender and meet EU requirements for public sector procurement.

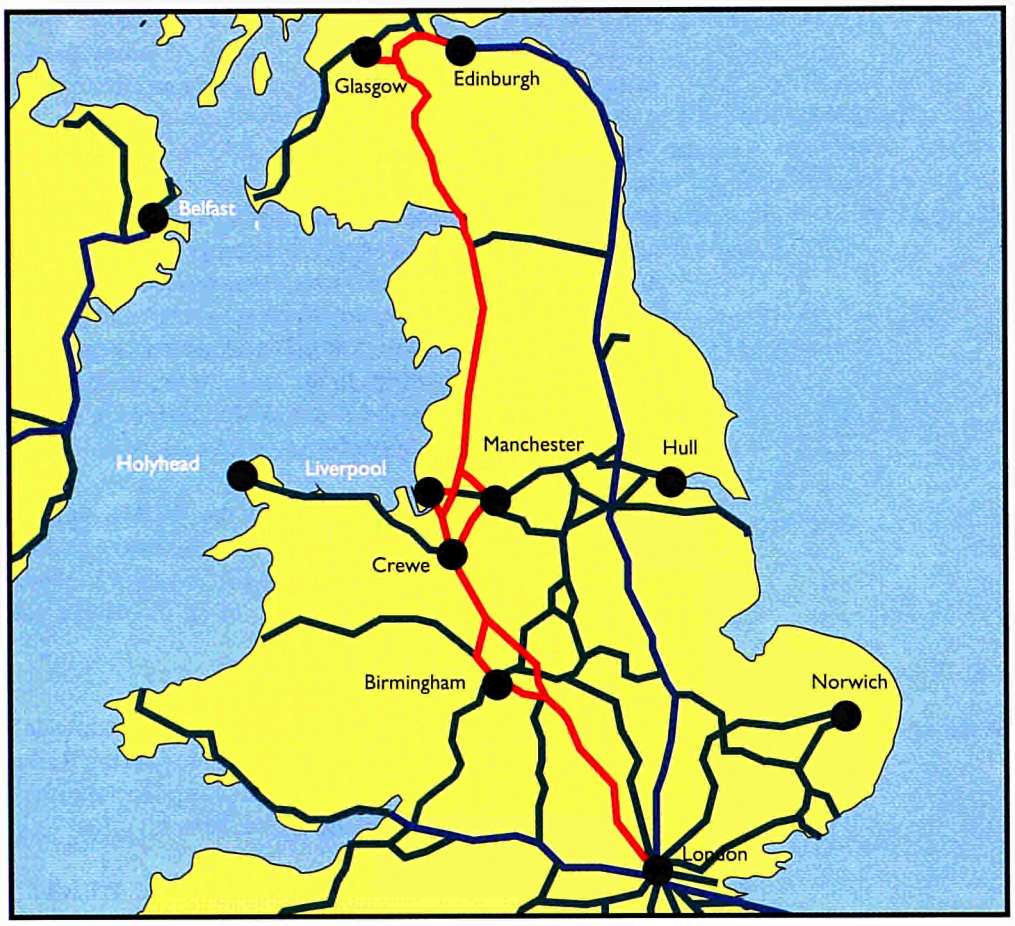
Annex A

West coast main line

Project

Conventional lines

Other lines of the trans-European high-speed train network outline plan



Project description

Forming part of the existing UK railway network, the west coast main line (WCML) is one of the most important InterCity routes. It is a vital artery between five of the greatest conurbations of the United Kingdom, and serves a catchment area of about 15 million people (outside of London) which covers important industrial zones. The line is included in the Commission's proposal for the development of a trans-European transport network; via the ports of Holyhead in north Wales and Stranraer in Scotland, it provides access to the corresponding Irish railway network, in particular the Cork–Dublin–Belfast line.

To enable the west coast main line to meet future demand, it is absolutely necessary that it be upgraded in the foreseeable future. International traffic especially is expected to increase as a result of the entry into operation of the Channel Tunnel. With a view to the construction of a new high-speed rail link between the Channel Tunnel and London (this project is also amongst the priority projects dealt with by the Christophersen Group) within the next decade, the international importance of the WCML will continue to increase; in fact, it represents the northward prolongation of this link. To allow a comparable quality of services on the entire north-south axis, the WCML project aims at infrastructure improvements which entail increases in speed (up to 225 km/h) and capacity.

Besides enhanced conditions for passenger traffic, the implementation of the project will bring significant advantages for freight traffic; combined transport services, including

piggy-back, will play a significant role in this context. By leading to higher attractiveness of the rail mode and a reduced volume of heavy goods vehicles on roads, the project makes a valuable contribution to achieving an environmentally friendly transport system.

The existing west coast main line is 850 km long; the upgrading work to be done consists to a large extent of line re-electrification and modernization of signalling systems and in improvement and replacement of the track; some relatively minor changes of the alignment may transpire to be necessary. As regards electrification, the southern part requires more effort than the northern one, which was renewed more recently.

The modernization project itself is expected to generate directly and indirectly 2 500 man-years of employment. In the longer term, improved passenger and freight services on the line may encourage the location of industries in depressed areas and thus contribute to the creation of employment for several thousand persons.

The British authorities estimate that the WCML upgrading project shows higher-than-average profitability prospects; however, figures regarding this have not yet been released. It is expected that the private sector participation in the financing of the project could be significant and would take the form of an innovative package involving significant risk transfer.

State of maturity

The UK Government, wishing to see private funding in the railways, announced in the November 1993 budget statement that it was asking Railtrack plc, the owner and operator of Britain's national railway infrastructure, to take the WCML modernization project forward in partnership with the private sector.

A feasibility study into the modernization of WCML is now under way and will be completed by the end of 1994. Some planning permission and compulsory purchase powers may be required for realignments and bridge modifications. However, these should not delay the implementation of the main works. Where planning permission and compulsory purchase powers are required, these will probably be sought under either the UK Planning Act or Transport and Works Act. Assuming draft orders are issued in early 1995, the necessary powers could be obtained by mid-1996.

The costs of the project depend on the final decision on the definition of the modernization works. Current expectations are that costs will be as follows:

(i) ECU 5 million for the current feasibility study;

(ii) ECU 45 million for land purchase;

(iii) ECU 300 million to ECU 500 million for construction work, including improvement of track, signalling, electrification and other equipment;

(iv) ECU 250 million for engineering work.

The total investment of ECU 600 million to ECU 800 million is intended to be spread over the period between 1995 and 1999. Significant expenditure may be possible during 1995.

The investment cost will be borne by the publicly owned Railtrack plc and a private partner; the UK Government has, however, declared that it may be prepared to pay capital

grants direct to Railtrack to help to secure non-user benefits arising from railway infrastructure.

Railtrack plc is the promoter of the WCML project. After an EU-wide tendering procedure in April 1994, WCML Development Company, a wholly private sector-owned company possessing a wide range of engineering and finance skills, has been selected to conduct the feasibility study. It is intended that a further tendering procedure, to select the private sector partner for carrying out the project itself, will take place early in 1995.

A joint effort between Railtrack, the UK Government and the Commission should facilitate the establishment of a stable framework for the incorporation of the private sector.

Annex A

Part II — Further projects of importance

Combined transport

Project description

Combined transport is a goods transport service that uses various transport modes to carry an individual consignment (swap bodies, containers, semitrailers or lorries). Most of the journey is by rail, inland waterway or sea, while the initial and/or terminal (i.e. distribution to the consumer) sections are by road and are kept as short as possible.

This service continues to make the best possible use of the comparative benefits of the individual modes of transport. By establishing efficient transport chains it takes advantage of synergies and in particular minimizes the negative impact of road transport emissions. Combined transport is perfectly compatible with a multimodal transport network, and is in fact an important basic component.

In October 1993, the Council of Transport Ministers decided on a trans-European combined transport network. This network consists of all the infrastructure required for combined transport services, namely rail and inland waterway links which, together with any road sections required, are of major importance for long-distance goods transport, and the equipment required for transhipment between rail, inland waterway, road and sea, as well as specialized equipment.

The combined transport project under consideration by the Christophersen Group contains features relating to all modes (but obviously only the specific combined transport aspects). The Commission has quite a choice of projects, such as the France–Spain rail link via Irun/Hendaye, the two north–south coastal lines in Italy, and smaller projects designed to constitute a European network of multimodal terminals.

The total cost of the projects proposed by France, Germany, Italy, Belgium, Portugal and Spain is some ECU 3 000 million.

State of maturity

In all Member States, combined transport features very prominently in the countries' transport policies, emphasizing its benefits to their national economies and to the environment. The States are earmarking considerable sums to improve combined transport infrastructure.

As this combined transport project consists of a large number of subprojects of different kinds, the degree of preparation varies from one project to another; nevertheless, constituting a transport chain, each project is necessary regardless of its size.

For most projects, the Member States concerned are planning public financing. A large proportion of the projects in the abovementioned countries will benefit from financial support from the Community (under the trans-European network budgetary heading).

However, it would seem worth recommending that, in the near future, they consider the possibility of involving the private sector much more closely. It would be very useful for Member States to report on their experiences and for the Commission to play a coordinating role.

Annex A

Spata airport (Athens)

- Community connecting points
- Regional connecting points
- ★ Accessibility points
- ◆ Location of new Athens airport not yet decided

Project description

The idea of building a new airport in Athens to replace the existing one has been mooted for many years. A site at Spata, 25 km north-east of the city, was selected in 1974. Land was acquired by the State between 1978 and 1980.

As a result of political and economic difficulties, the project was shelved for many years.

It was not until 1991 that the Greek authorities revived the project to replace the existing airport as a result of the growing congestion of infrastructure that is difficult to extend because of the small size of the existing airport site. Since, in addition, the airport is situated within the urban area, the increased noise to which the inhabitants are subjected as a result of the growth in air traffic militates in favour of constructing a new airport further away from the city.

The first phase of the new airport project comprises two runways, the terminals and the equipment needed to handle 10 to 12 million passengers. Ultimately, the airport should be able to handle 50 million passengers, in particular as a result of the construction of a third runway.

Indicative costs

The total project cost is put at around ECU 2 000 million.

The method of funding is not yet clearly established. The previous government had considered entrusting the construction and operation of the new airport to a consortium under a concession, with the Greek State to hold 40% of the shares of the concessionary company. The present government has questioned the proposed arrangement.

State of maturity

Action within the context of the Christopherson Group hinges on the official decision of the Greek Government on the legal and financial arrangements for the new airport project.

Annex A

Berlin airport

- Community connecting points
- Regional connecting points
- Accessibility points
- Part of an airport system
- Location of new Berlin airport not yet decided

Project description

At present, the Berlin airport system consists of three airports: Tegel, Tempelhof, Schönefeld.

These three airports will not be able to handle the increase in demand for capacity in the Berlin/Brandenburg region, expected as a result of the new role of Berlin as federal capital and the growth in commercial and other relations with Central and Eastern Europe. Furthermore, environmental considerations will put additional pressure on the closing-down of the two inner-city airports.

Therefore, the construction of a new airport, 'Flughafen Berlin Brandenburg International', is envisaged. Three potential sites are at present under consideration: Jüterbog-Süd, Sperenberg and Schönefeld-Süd.

Indicative costs

The total investment is estimated at ECU 4 100 million (ECU 2 600 million for actual construction, ECU 1 400 million for land acquisition and preparatory works on the site and ECU 100 million for studies). Means of financing have not yet been discussed.

State of maturity

The procedure for site planning (Raumordnungsverfahren) has been finalized and was made public on 17 November 1994.

The conclusions drawn do not include a decision on the location of the new airport, but give important indications on which to base such a decision. The economic assessment of

the project, on the basis of the Raumordnungsverfahren, and the possibilities for road and rail access will now have to be refined.

Of the three alternatives under examination, two will necessitate the construction of an entirely new airport (Jüterbog-Süd and Sperenberg), whereas in the case of Schönefeld-Süd, the existing infrastructure at the present Schönefeld airport would be incorporated and extended.

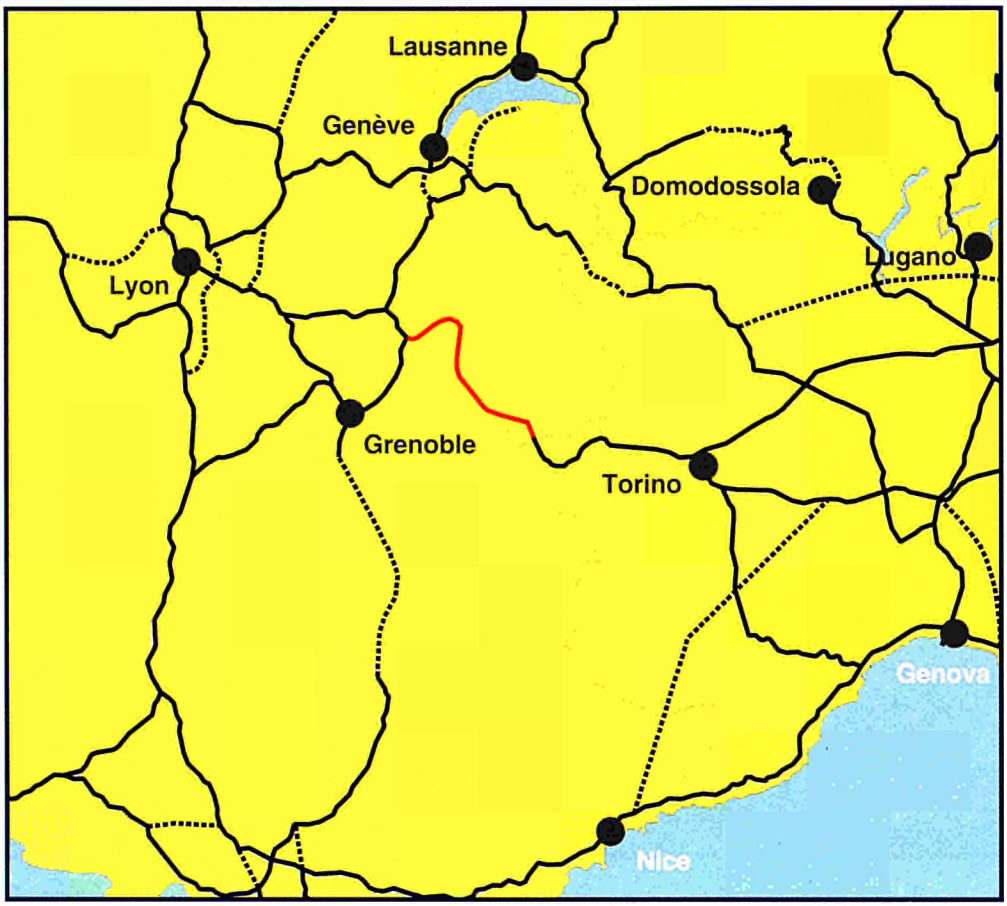
A proposal for the location of a site is expected at the beginning of 1995. Until then the Commission is not in a position to take further initiatives.

Annex A

Maurienne motorway

Project

Other roads of the trans-European road network outline plan



Project description

The Maurienne motorway will connect the French motorway network with Italy via the Fréjus tunnel. Completion of the Maurienne motorway will provide a direct motorway link between the North and South of Europe through one of the most important Alpine passes. In fact, of the European motorway link between Denmark and Northern Germany and Sicily, only the section between Aiton and the Fréjus road tunnel is not complete. Completion of this section should also open up the Maurienne valley, which is an important route for transalpine traffic through the Mont Cenis pass and the Suze valley, and should contribute towards the economic development of this part of the Rhône-Alps region.

The section is 63.6 km long and, because of the special topography of the area, will require 19 special construction projects, including 8 viaducts across the river Arc and its tributaries, together with improvements to Route nationale 6 and 3 tunnels (Aiguebelle, Hurtières and Orelle).

Traffic forecasts range from 6 000 to 9 000 vehicles a day by the year 2000 and from 8 000 to 12 000 by 2010, depending on the particular subsection.

The cost of the project is put at ECU 1 000 million. The relatively high cost is due to the very difficult terrain (the rocky spurs, the deep valleys and the rivers that have to be crossed).

Work has already started. The motorway will be opened in stages between December 1997 and December 1999.

State of maturity

In the national road improvement plan, adopted on 1 April 1992, it was agreed, in principle, to build a motorway through the Maurienne valley under concession.

A decree of 17 November 1992 recognized the 'utilité publique' of the project. The concession for this section was granted to the Société française du tunnel routier du Fréjus (SFTRF) by decree of 31 December 1993.

Various technical modifications may require a new 'déclaration d'utilité publique' (for instance for the Orelle tunnel).

The project is being financed by the SFTRF, the company holding the concession, by borrowing from banks. The first loans were from the Caisse nationale des autoroutes and the European Investment Bank (ECU 25 million in 1993 and ECU 99 million in 1994).

User charges will depend on the particular subsection (between FF 0.7 and FF 1.3 per km for cars and between FF 1.8 and FF 5 per km for heavy goods vehicles). Charges will keep pace with inflation.

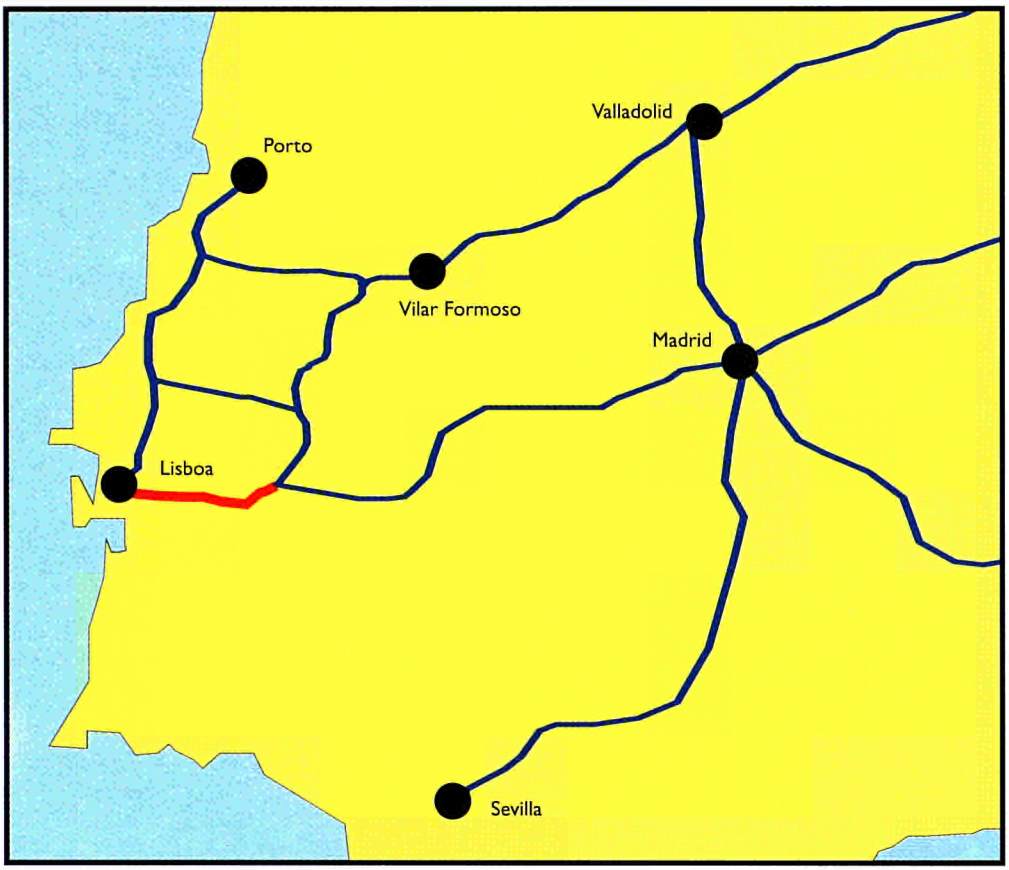
Land acquisition is already in progress and should be completed by the middle of 1995. The first part of the tendering procedure is already completed and contracts have been awarded for the lower and central part of the motorway.

Annex A

Marateca–Elvas motorway

Project

Other roads of the trans-European road network outline plan



Project description

The objective of the project is to ensure a short, high-standard road link between the two capital cities of the Iberian peninsula, Lisbon and Madrid.

A motorway (2 × 2 lane dual carriageway) of 204 km length was planned between these two cities. Large parts of its Spanish section have already been completed, and on Portuguese territory the 50-km-long stretch between Lisbon and Marateca has entered into operation.

In order to draw full benefit from the infrastructure sections of the Lisbon–Madrid link which are already open, the missing links should be established as rapidly as possible. This means, in particular, that the link between Marateca and Elvas (situated at the Spanish border) has become a matter of urgency.

Although traffic volumes, at present, range only from 3 600 to 8 500 vehicles (average daily traffic), they are expected to rise to 11 000 to 22 000 by the year 2020 (forecasts concern the entire Lisbon–Madrid link and vary for the different sections).

Besides its importance to international long-distance traffic, the new motorway is vital for the areas directly concerned; its completion should, in particular, contribute to the regional, economic and social development of the less-favoured areas on both sides of

the border. Marked improvements in road safety, which should result from the implementation of the project, are also worth mentioning.

Thanks to these benefits, the project is expected to show a good socioeconomic profitablity.

The total investment needed to construct the Marateca-Elvas motorway section has been estimated at ECU 396 million.

It is planned to complete work by the end of 1997.

State of maturity

About 65 km of the Marateca–Elvas motorway are already under construction. For the remaining section, feasibility studies have basically been completed and produced positive results; some additional studies, however, are yet to be made. The environmental impact assessment has been carried out in this context; all necessary compensation measures can be ensured.

Land acquisition procedures are still in progress.

The financing of the sections already under construction is provided for by Community funds (Cohesion Fund, ERDF or Interreg) and national budgetary sources.

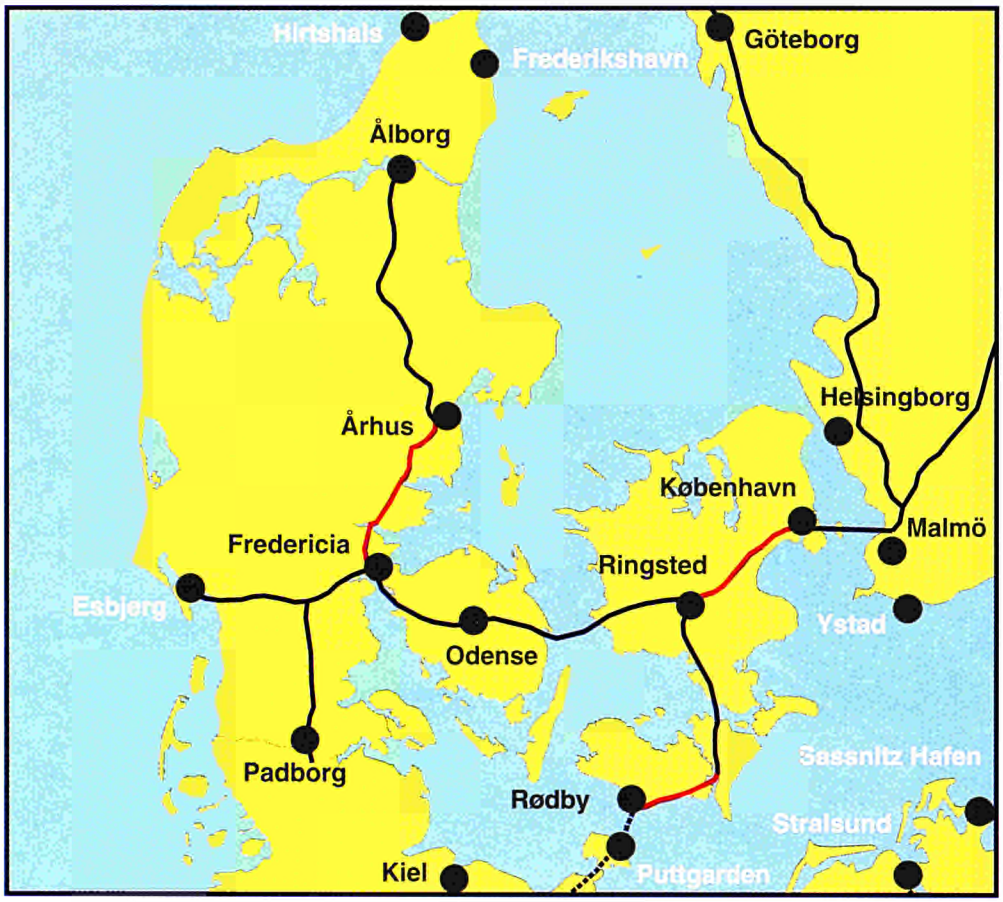
The government stance is in line with the self-financing principle; consequently, the subject of toll collection for the road is a matter for further investigation.

Annex A

High-speed train in Denmark

Project

Other lines of the trans-European railway network outline plan



Project description

In cooperation with its neighbours, Sweden and Germany, Denmark is currently planning to build fixed high-speed rail links. In addition, a project to build a fixed link between two Danish islands (the Storebælt link) has already started. Completion of these projects should result in considerable improvements for rail transport (replacement of ferries and reduction of journey times). In this context it will be necessary to take measures to bring the national rail network into line with this improvement.

To this end, the Danish Government has put forward the Denmark high-speed train project which is in four parts:

- the Copenhagen–Ringsted section (the east–west corridor which is particularly important in terms of completing the Øresund and Storebælt fixed links);
- the Fredericia–Aarhus section (improvements; this is part of the single north–south line that crosses the whole country linking northern Denmark and the German border; this also includes electrification of some sections of the line);
- Rødbyhavn–Storstrøm bridge;
- possibly also the Vordingborg–Køge section.

These two sections are a direct continuation of the planned Fehmarn Belt fixed link. A feasibility study is under way for the Copenhagen–Ringsted section which is expected to take around two years. The Danish Government will take a decision based on the results of this study.

The total cost of the high-speed train in Denmark is put at ECU 1 800 million; for individual sections the estimated costs are as follows:

- Copenhagen–Ringsted, varying according to the option chosen, with a minimum of ECU 700 million;
- Fredericia–Aarhus: ECU 400 million;
- Rødby bridge of Storstrøm and Vordingborg–Køge: ECU 300 million and ECU 400 million respectively; these costs refer to a specification allowing the journey time between Copenhagen and Hamburg to be reduced to 2 hours.

It is planned to open some sections in 2002; the first works should be started on the Fredericia–Aarhus section in 1996.

The socioeconomic rate of return on all sections has been estimated to be 5%.

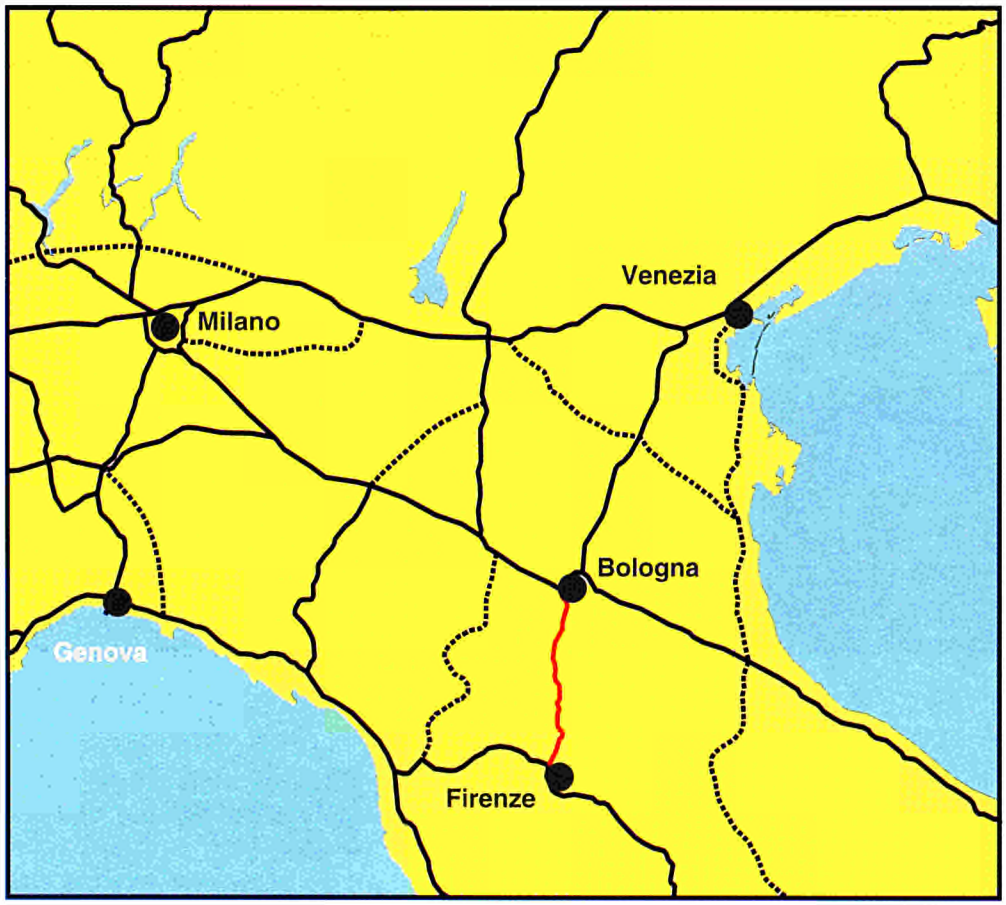
The Danish Government considers public financing to be the most realistic option.

Annex A

Transapennine highway Bologna–Florence

Project

Other roads of the trans-European road network outline plan



Project description

The project concerns the construction of 59 km of new motorway which will run parallel to the existing link between Bologna (Sasso Marconi) and Florence (Barberino di Mugello), i.e. the Apennine section of the existing A1 motorway (Milan–Rome). The existing section has an average daily traffic volume of 40 000 vehicles and it is frequently in need of extraordinary maintenance with high inherent costs.

As regards traffic split, it is expected that the new motorway will attract almost all heavy traffic, whereas light traffic will mainly be directed to the existing link. By eliminating congestion, negative environmental impacts will be reduced; consequently, the project will be beneficial to the economic development of the Apennine area.

The infrastructure shows the following technical dimensions: a dual two-lane carriageway, 29 km of tunnels, and 10 km of bridges. The new link will have a pass altitude 300 m lower than that of the existing motorway, thus contributing to a smoother running of traffic and to improvements in road safety.

In the European context, the project furthers the goal of cohesion by facilitating the transport flows between southern and northern Italy. The A1 runs from Milan via Bologna, Florence and Rome to Naples, and is the only central north–south connection in the

country; it forms part of the E35 north–south transport axis traversing Italy, Switzerland and Germany.

The total cost, including interest during construction, has been estimated at ECU 3 158 million; the foreseen construction period is 1995-2000.

No data on financial and socioeconomic viability are available.

State of maturity

The project is included in the national and regional transportation plans.

The environmental impact assessment and the technical design of the motorway have been successfully concluded.

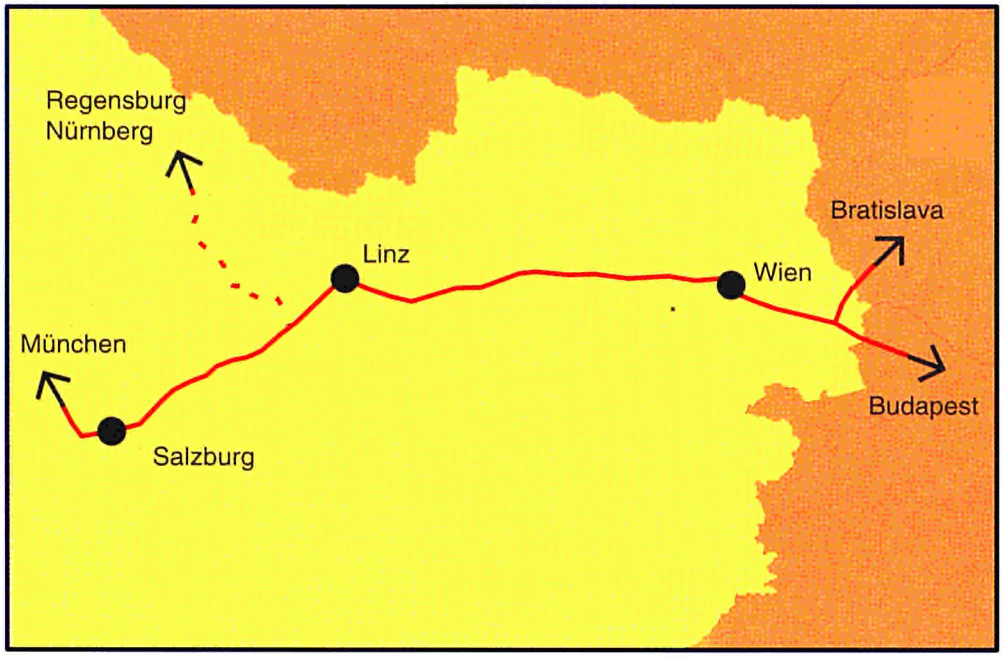
The project is promoted by the Italian Ministry of Public Works; the operator will be the Autostrada Company. Commitments from the national budget and by the private sector are yet to be determined.

Annex A

High-speed train/combined transport Danube axis Munich/Nuremberg–Vienna(–Budapest–Bratislava)

Project

Under construction



Project description

With a total length of over 400 km, this high-speed railway line is the most important east–west rail axis within Austria, connecting Salzburg (on the German border to the west), through to Linz, Vienna and both the Hungarian and Slovakian borders to the east. Only sections on Austrian territory are covered here; as the project was included in the priority list at a late stage, no information was available regarding the continuation on German territory.

Between Salzburg and Attnang-Puchheim, the construction of a new four-track railway line is deemed necessary, as, due to topographical difficulties, the existing line cannot be adapted to high-speed travel. As regards the section Attnang-Puchheim to Wels, the existing double tracks are to be upgraded to allow speeds of up to 200 km/h. There is at present no apparent need to widen this section to four tracks.

The main core of the project lies between Wels and Vienna. Work on the Wels–St Pölten section is already under way, consisting of the creation of a four-track railway line. This is essentially made up of two double-track lines adapted for mixed transport, which are then interconnected at intervals of 25-30 km. At the moment it is planned that at least one of these double-track lines be capable of allowing speeds of up to 200 km/h, the other possibly supporting local traffic. The construction of a new four-track section between St Pölten and Vienna is also deemed necessary due to topographical difficulties with the existing route.

With the construction, in Vienna, of the new 15-km Lainzer tunnel and a four-track section for transit traffic being added to the station, journey times for transit traffic should be reduced by up to 30 minutes.

New track is to be laid on the section from Vienna to Nickelsdorf, in order to allow speeds of 140 km/h (in some cases 160 km/h). On the line between Parndorf and Kittsee the existing track is to be upgraded for speeds of 160 km/h; from Kittsee to the border upgrading work is expected to allow speeds of 140 km/h.

Forecasts carried out by the Austrian Railways show that freight traffic is expected to rise, on average, by approximately 26% between the years 1990 and 2000. This means an increase from 70 to almost 90 million nett tonnes per year. As regards passenger traffic, it is estimated that traffic between Vienna and Linz will increase by approximately 9% to 101 million passengers per year (including local traffic) by the year 2010.

Total investment needed for this line is expected to be in the region of ECU 4 700 million; the completion of construction work is foreseen for the year 2010.

State of maturity

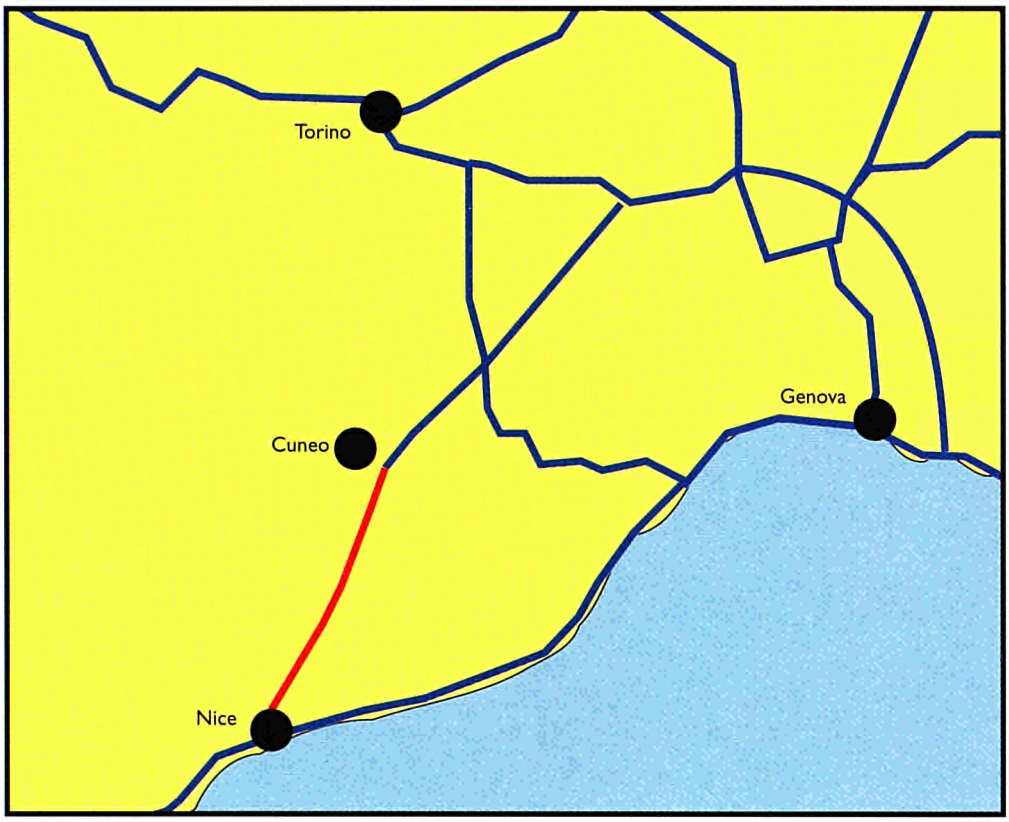
More than 200 km are already under construction; the section Vienna–Nickelsdorf, for instance, is expected to be completed by 1996. For the remaining sections (notably Salzburg–Attnang-Puchheim and St Pölten–Vienna) studies are now under way regarding the exact route to be followed or concerning improved technical and safety measures.

Annex A

Nice–Cuneo motorway

Project

Other roads of the trans-European road network outline plan



Project description

As a result of sustained increase in commercial exchanges between France and Italy, a suitable cross-border transport infrastructure is called for. To this end, the authorities of these neighbouring countries plan to build two new links across the Alps: the Lyons–Turin railway line (included in Part I of the projects) and the Nice–Cuneo motorway. The latter project aims to interconnect the motorways of the French Mediterranean coastal area with those of the Italian Piedmont region (towards Turin and Milan).

The new Nice–Cuneo motorway will be about 100 km long; it will include a tunnel under the Isola 2000 massif (length 16 to 17 km). Approximately 30 km of existing road on French and 40 km on Italian territory still need to be upgraded to dual two-lane standard. The tunnel section of the road will consist of two lanes only.

It is expected that the traffic volume in the year 2010 will reach 5 000 to 6 000 vehicles per day; between 25 and 30% of this will be heavy goods traffic.

The total cost of the project has been estimated at ECU 1 900 million (ECU 615 million for the tunnel, ECU 515 million for the Italian access routes and ECU 770 million for the French access routes).

Construction work is envisaged to start at the end of 1996 or the beginning of 1997; it is foreseen that the tunnel will enter into operation between 2005 and 2010.

State of maturity

On the occasion of the 1993 French–Italian Summit, an agreement in principle was reached as to the implementation of the project. An intergovernmental commission was set up which took over responsibility for the completion of preliminary studies and the preparation of a bilateral international contract.

This commission is also preparing the tendering procedure planned to be launched after the French–Italian Summit of November 1995. Special working groups are examining technical questions as well as legal and financial matters.

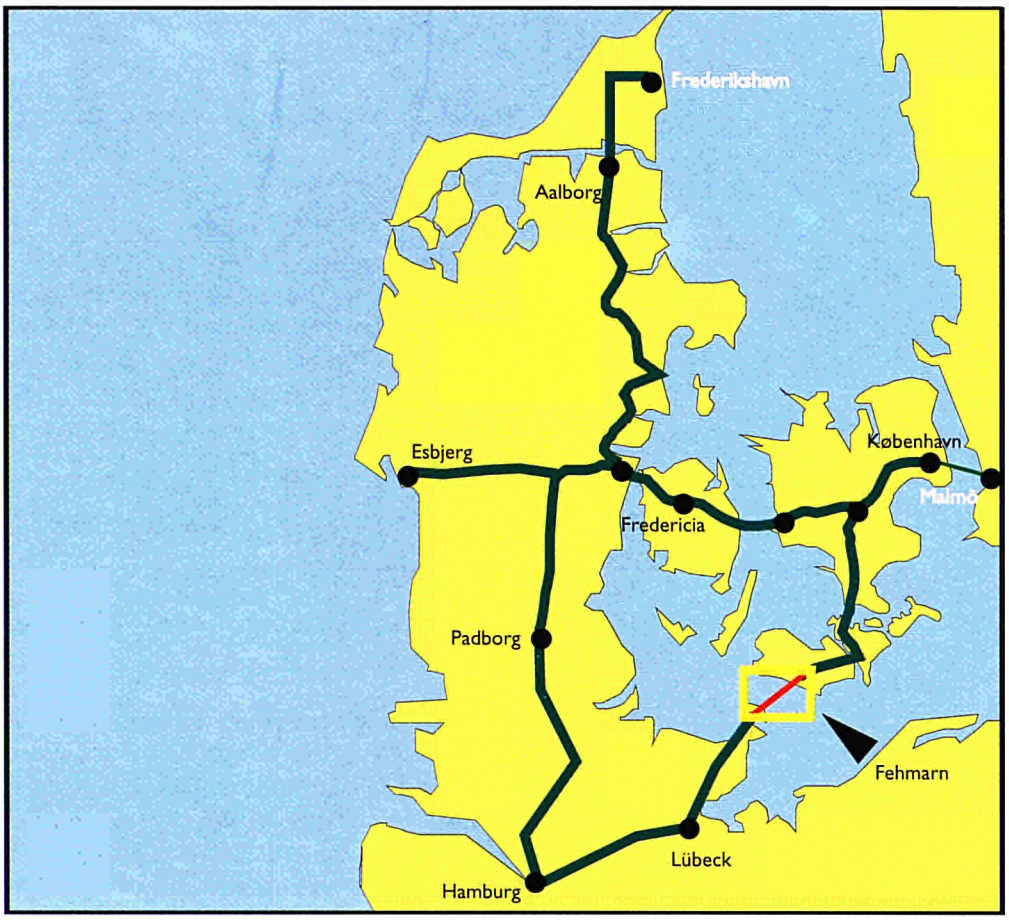
A BOT (build-operate-transfer) scheme is envisaged for the project; the future concessionaire would be allowed to levy user charges on the tunnel section. In comparison with other cross-border projects, this one appears to be unique in that both national authorities have agreed to grant one single concession for the entire Nice–Cuneo link.

Annex A

Fehmarn Belt fixed link

Project

Other lines of the trans-European high-speed train network outline plan



Project description

While the Channel Tunnel is open for regular services, a tunnel-bridge construction over the Storebælt is in progress and another, namely that over the Øresund, is in the last stage of preparation, the project of a new fixed link over an important European strait is developing: the Fehmarn Belt fixed link.

This fixed link would enable high-speed trains to operate between Hamburg and Copenhagen, provided that the access railway lines on the Danish and the German sides are upgraded appropriately (including the removal of bottlenecks); time-consuming crossings by ferry, linked with the embarkation of trains, would no longer be necessary.

The Copenhagen–Hamburg link has been included in the trans-European high-speed railway network, endorsed by the Transport Council in 1990. The importance of this link is expected to increase in the coming years: increasing commercial relations between Nordic countries and the European Union call for a fast and direct link, which could be ensured by the route Øresund fixed link–Copenhagen–Fehmarn Belt–Hamburg; the construction of the Øresund fixed link will, in all probability, generate a great deal of new traffic on this route, especially as regards the rail mode. The construction of the Fehmarn Belt fixed link would thus make a significant contribution to providing a land infrastructure link which meets the high quality and capacity requirements for decades to come.

So far, no decision has been made with respect to the technical features of the Fehmarn Belt fixed link.

An initial cost evaluation by the Commission has produced a figure of about ECU 4 500 million.

State of maturity

In 1991, the Fehmarn Belt Consortium, composed of Danish, German and French construction companies and banks, was established. During the years that followed, this consortium undertook feasibility studies on the fixed link; it based its considerations on the rail–road option and analysed different technical solutions: a bridge, two different tunnel constructions and a combined bridge–tunnel. The studies addressed safety issues and included a first evaluation of the environmental impact. The combined bridge–tunnel solution would, according to the results of the study, be most advisable from an environmental point of view.

Besides the members of the Consortium, other banks have also shown interest in the Fehmarn Belt project.

All options, tunnel, bridge and bridge–tunnel, would require the construction of a crossing of about 19 km length.

The Danish and German Governments still aim to study the feasibility of the project in more detail; they consider an agreement on the construction of the link to be premature. Recently, they decided to launch a common feasibility study which will cover technical, socioeconomic and financial aspects. Relevant tender procedures will be completed before the end of 1994, and work on the studies is planned to start early in 1995. Community support has been made available for this study.

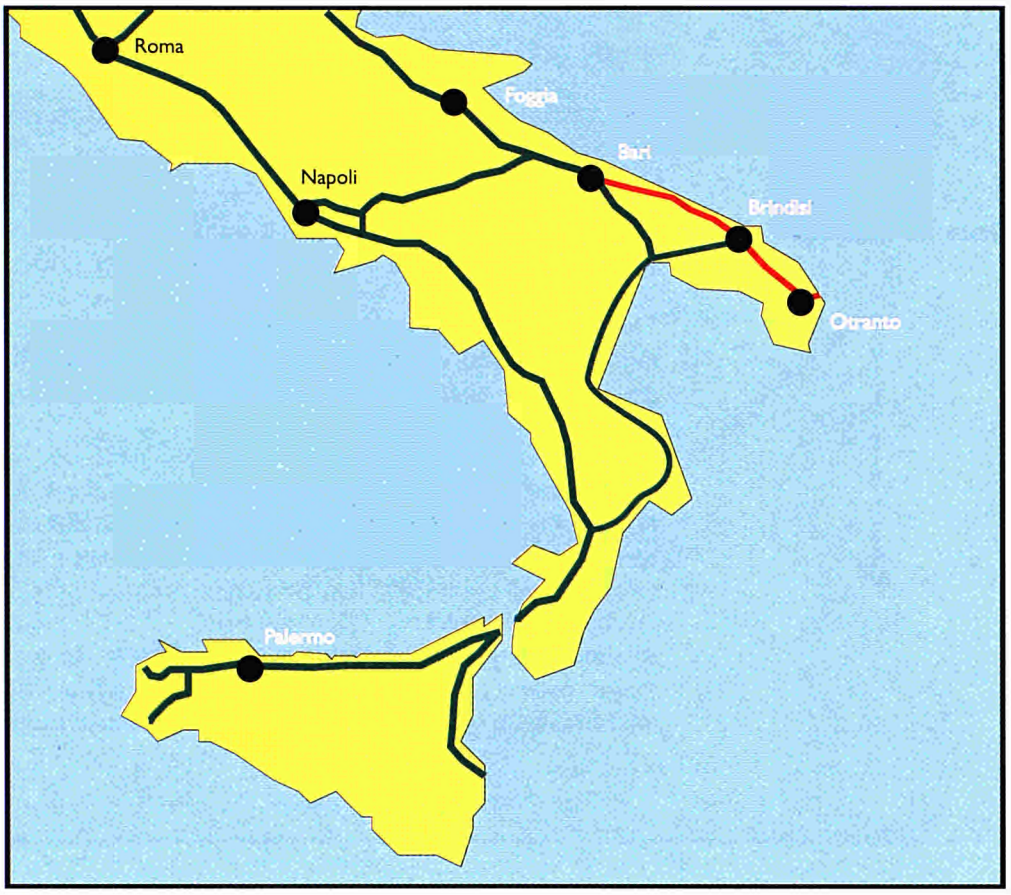
No information is available so far as regards the profitability prospects of the project. The level of potential user-charges is likely to be approximately the same as the fare currently paid for the crossing by ferry. It may be assumed that the implementation of the project contributes to enhancing the competitiveness of the Baltic Sea area.

Annex A

Bari–Brindisi–Otranto motorway

Project

Other roads of the trans-European road network outline plan



Project description

The Bari–Brindisi–Otranto motorway is to follow the Adriatic coast in southern Italy. It will link the major sea ports, which have services to Greece, Albania and former Yugoslavia, and thus play a key role in the development of a multimodal transport network. In particular, present and future demand for transport between two Member States of the European Union, Italy and Greece, will require improved road infrastructure. Most of this traffic uses the ferry service between Otranto and Igoumenitsa, but completion of this project is required to meet not only international traffic needs but also regional needs.

The purpose of the whole project is to upgrade an existing 207 km stretch of road into a high-quality route, which will significantly improve road safety and journey times. Moreover, by reducing congestion, the project will help to limit environmental impact (by reducing emissions).

The motorway will help to improve the economic development of the regions directly concerned. Its construction will create 3 000 man-years of work and, once in use, it will encourage trade and thus help directly and indirectly to create more jobs.

Improvement work has been completed on some 50% of the total length of the Bari–Brindisi–Otranto route.

The investment required to complete the project, that is to improve the remaining 102 km of road, is ECU 290 million.

The main work on the project should start in 1998; the motorway should be ready for use by 2003.

State of maturity

The project is to be prepared in stages. It has been estimated that all the administrative procedures will have been completed by the end of 1997.

The Italian Government has decided to finance the motorway from the budget. To date, a third of the total investment required for the project has been covered by budgetary decisions. The section already completed was financed from separate funds.

The motorway will be operated by the National Roads Authority which does not plan to charge a toll. Nevertheless, traffic forecasts indicate a strong likelihood of financial profitability. On the north Bari–Brindisi section, for example, average daily traffic is already approaching 50 000 vehicles; and it has been estimated that it will reach 64 000 vehicles by the year 2010. Traffic volume is almost as high on the remaining section.

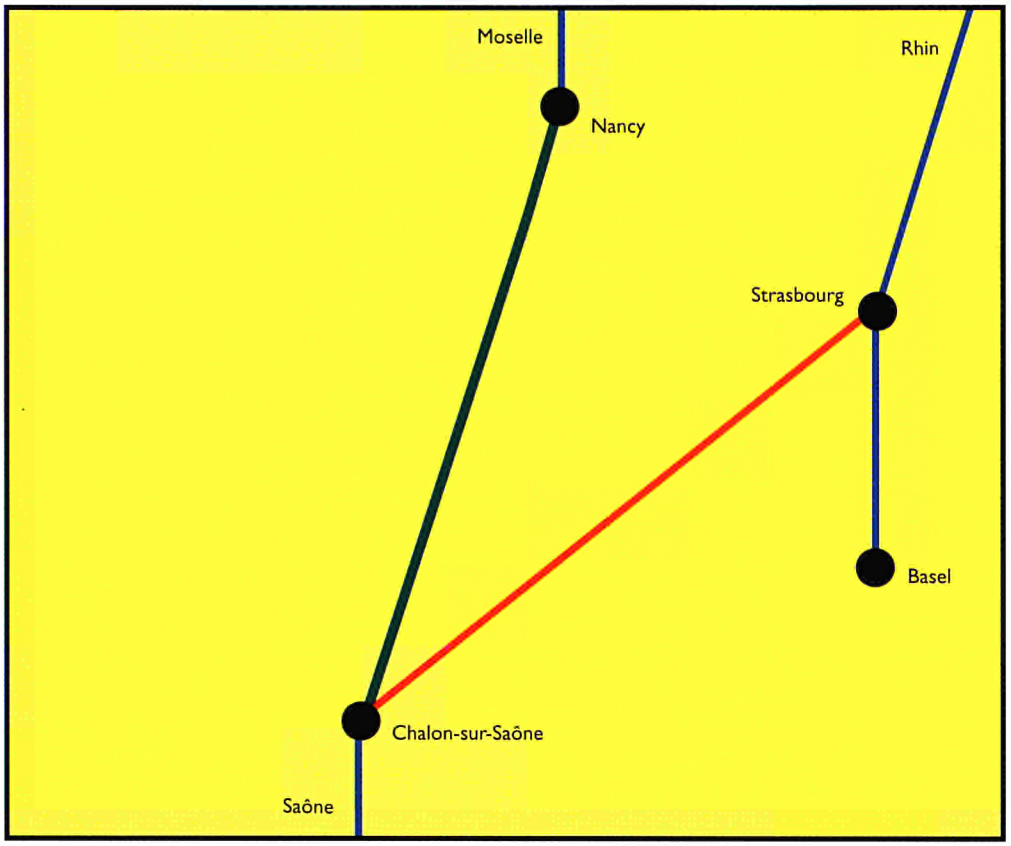
It is recommended that consideration be given to the possibility of involving the private sector since conditions are favourable. This is a low-risk project because it concerns a road already in service and used by a high volume of traffic.

Annex A

Rhine–Rhône link

Project

Other waterways



Project description

The purpose of the Rhine–Rhône project is to complete the last missing link in a European route of strategic importance, namely the inland waterway route from the North Sea to the Mediterranean, which is nearly 1 600 km in length and links Rotterdam with Marseilles. It should also connect the Mediterranean and the Black Sea (via the Rhine, Main and Danube).

There is already a Rhine–Rhône canal, built some 150 years ago, although the gauge of the canal — a maximum of 300 tons — is no longer adequate. According to forecasts of goods traffic as a whole, the total volume is likely to increase considerably and inland waterways will be called upon to play an increasingly important role in meeting this new demand. The inland waterways form an essential component of a transport system aiming at greater efficiency and more respect for the natural environment. In conjunction with the other modes, the inland waterways help towards the development of an integrated transport network while at the same time maintaining their own comparative advantages.

For these reasons, it is essential to improve the Rhine–Rhône link, in order to increase the gauge over the whole of the stretch from Rotterdam to Marseilles.

The missing section — the Rhine–Rhône link project — is between the large Alsace canal near Mulhouse and the river Saône (the Rhône–Saône stretch) near Laperrière. The total length of the stretch for development is 229 km and this includes 23 reaches separated by a 336.5 metre summit level and 15 dams.

The specifications decided upon for this project make it a Class Vb inland waterway according to European standards. The project forms part of the trans-European inland waterway network approved in October 1993 and was designated as a priority project.

Apart from the benefits to international traffic, this development project is of structural importance at national level. The Rhine–Rhône link, in all, passes through six regions and two of the largest cities in France, namely Lyons and Marseilles.

The project includes a number of sites for small businesses, industry and port activities. Eventually, these areas should be able to provide between 13 000 and 27 000 jobs, of which between 2 600 and 5 400 could be considered to be directly linked to the waterway.

The total cost of improving the Rhine–Rhône canal is ECU 2 500 million, including the cost of land. The main part of the project is to be completed between 1996 and 2005.

A study carried out with the financial support of the Community estimates the financial profitability of the project at between 7.2 and 9.4% (internal rate of return); the socioeconomic profitability is likely to be between 8.9 and 10.9%.

State of maturity

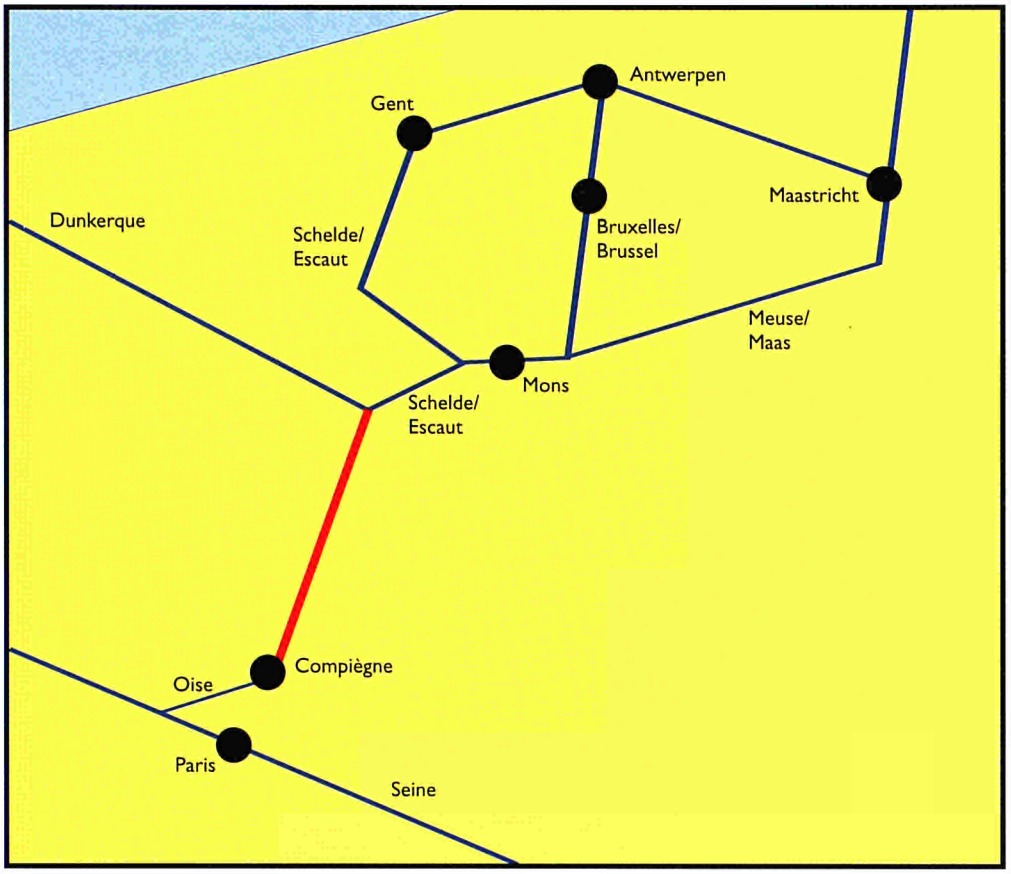
During the debate on the land improvement and development bill in the autumn of 1994, the French Government decided to set up a company as a subsidiary of the Compagnie nationale du Rhône (CNR), Electricité de France (EDF) and Voies navigables de France with the task of improving the Rhine–Rhône canal. Under this scheme, EDF, able to exploit the hydroelectric potential, will finance the operation together with the regional authorities.

Administrative procedures are already well in hand. The 'déclaration d'utilité publique' was published by decree of the Council of State of 29 June 1978, and its effects where extended by a decree of 28 April 1988. At the same time, an environmental impact assessment was carried out. It will take between 8 and 11 months to complete the administrative procedures, which means that the main work can begin as planned.

Work has already begun on the two end sections (Niffer-Mulhouse and north of Châlon-sur-Saône).

Annex A

Seine–Scheldt link



Project description

The Seine–Scheldt project is designed to link the whole of the Parisian region and the Seine basin, which have the heaviest inland waterway traffic in France, with the whole of the Benelux inland waterway network, which will thus considerably extend the European wide-gauge canal network.

The Seine–Scheldt project was designated as a priority project in the European inland waterway improvement plan adopted in October 1993.

Not only will the project benefit transit traffic and help to free other land transport bottlenecks, but it will also benefit the regions through which it passes, where there are plans for multimodal transhipment terminals. The project will include the development of industrial and port sites, which are expected to create between 12 000 and 20 000 jobs in the relatively long term.

Improvements are to be made to 134 km of existing waterways, which include 16 locks or 10 locks plus two waterslopes depending on the options chosen.

The total cost is estimated at ECU 1 350 million.

The construction period is to run from 1999 until 2006.

A study carried out with the financial support of the Community calculated financial profitability at between 7.1 and 8.4% (internal rate of return) while socioeconomic profitability varies between 8 and 9.6%.

State of maturity

The first stage in the administrative procedure leading up to a 'déclaration d'utilité publique' has been launched and is expected to be completed in the autumn of 1994. It is estimated that five years will be required to complete all the procedures.

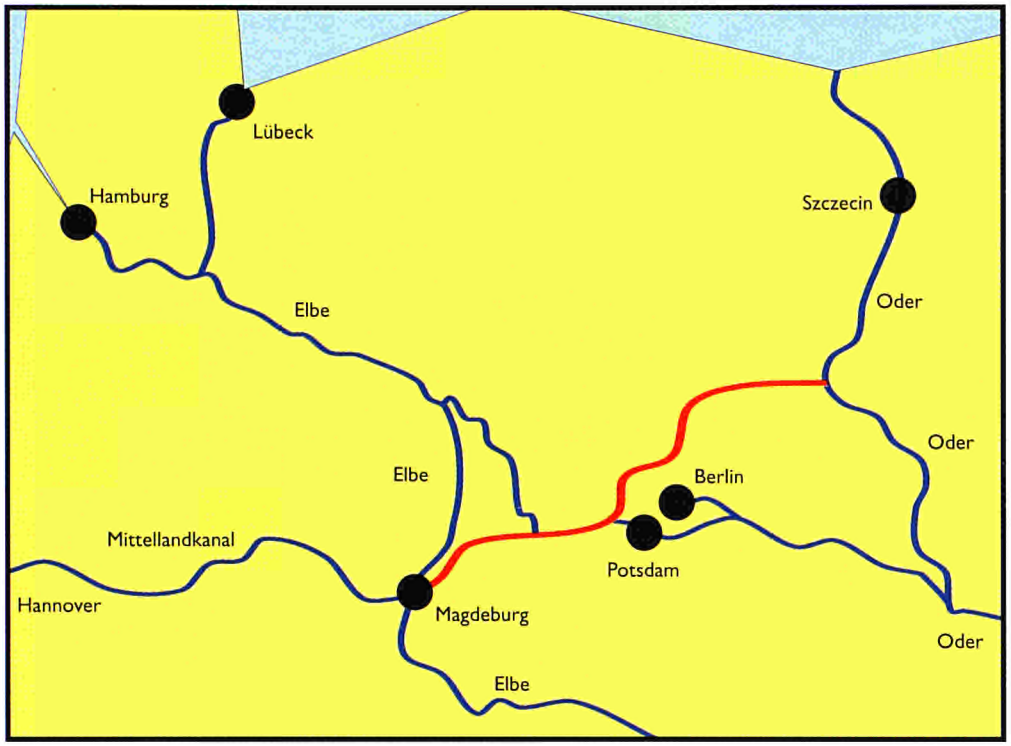
Financing of the project has not yet been decided upon. A large proportion of the financing could be based on hydroelectric returns (as with the Rhine–Rhône canal). Another possible source of funding is a land transport investment fund, as provided for in the land improvement and development bill currently being discussed by Parliament.

Annex A

Elbe–Oder link

Project

Other waterways



Project description

The Elbe–Oder inland waterway link is of great importance to east-west traffic between North Sea ports, the industrial areas of Magdeburg and Berlin, the Polish Baltic Sea ports and the Polish inland waterway network. It forms part of the trans-European network that was adopted by the Transport Council in October 1993 and is one of the priority projects identified in this context.

The existing infrastructure, having been completed in 1938, will not be able to meet future demand: traffic forecasts indicate that, in 2010, 25 million tons will be carried on the section Magdeburg–Berlin and 10 million tons on the section from Berlin to the Polish border. The entire link Magdeburg–Szczecin, comprising three subsections, needs to be upgraded in order to provide sufficient capacity with a view to future traffic flows. The German infrastructure master plan 1992-2010 includes all of these sections (ECU 2 400 million total investment).

The project dealt with by the Christophersen Group, however, considers only the section Berlin–Polish border–the Oder–Havel–Wasserstraße. North of Berlin, this canal goes towards the River Oder, and then runs parallel to it; at the Polish border it joins the Oder as the latter is deep enough for navigation. The implementation of the project should lead to considerably improved conditions on the link Berlin–Szczecin.

The Oder–Havel–Wasserstraße upgrading to inland waterway category Va requires an investment of about ECU 650 million.

The socioeconomic profitability of the project (German part) has been evaluated; the benefit-cost ratio amounts to 2.8.

State of maturity

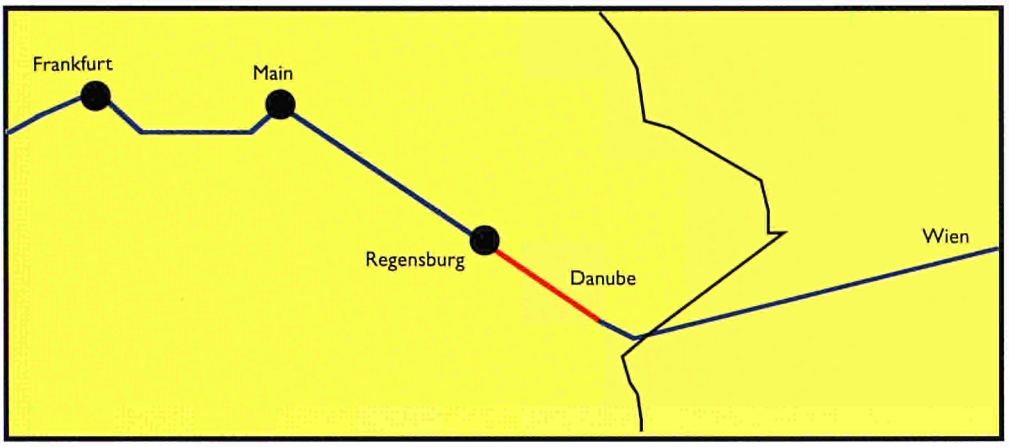
Its inclusion in the German infrastructure master plan entails the insertion of the project into the medium-term budgetary planning. However, the authorities estimate that alternative ways of financing could accelerate the project's implementation by about five years.

The detailed design and administrative procedures are in progress; the initial phases are expected to be finalized by the end of 1995.

If financing is secured, construction could start in 1996.

Annex A

Danube upgrading between Straubing and Vilshofen



Project description

This project consists of the upgrading of approximately 70 km of the Danube. It serves the objective of eliminating a bottleneck on the Rhine–Main–Danube axis which links the North Sea with the Black Sea. At present, the Straubing–Vilshofen section is the shallowest on the entire link; the upgrading will thus enable constant inland navigation on this axis and noticeably contribute to improved conditions for international traffic.

According to traffic forecasts, 8 million tons of goods will be carried on this link in the year 2010.

The cost of the project amounts to ECU 700 million.

It is envisaged that the upgrading work will be carried out from 1999 onwards.

The socioeconomic benefit-cost ratio has been evaluated at higher than 2.

State of maturity

The project is included in the German infrastructure master plan.

Administrative procedures are in progress (Raumordnungsverfahren: impact on regional development). In this context, it is currently being examined whether or not alternatives to the existing technical solution for the removal of the bottleneck can be found; a respective feasibility study is under way. As soon as this question is solved, the completion of the 'Raumordnungsverfahren' and the beginning of subsequent procedures (requiring three to four years) are possible. Studies presently under way involve an assessment of the impact on the environment. The German authorities estimate that possible negative impacts can be compensated by corresponding technical measures.

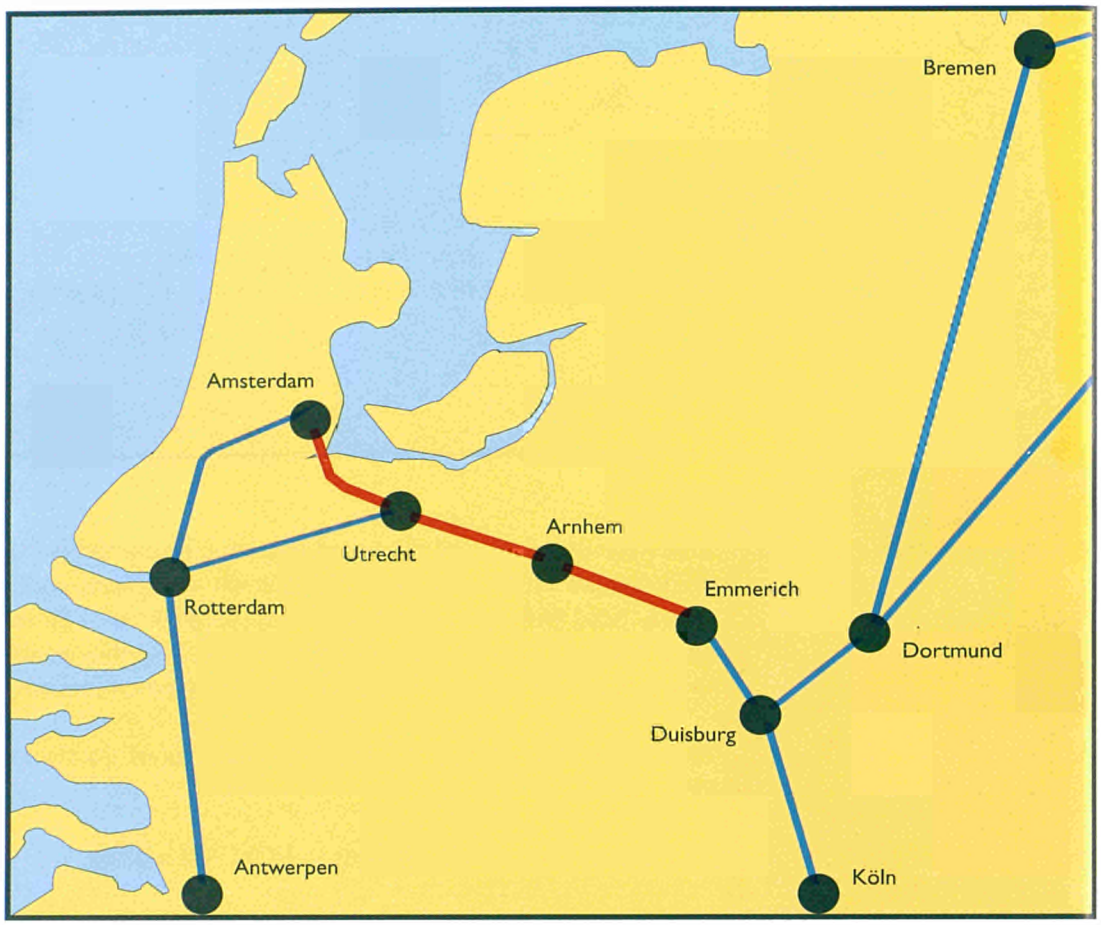
The project will be financed from the Federal State budget (two thirds) and the budget of the *Land* of Bavaria (one third).

Annex A

High-speed train Randstad–Dutch/ German border(–Rhine/Ruhr)

Project

High-speed lines



Project description

The objective of this project is to improve the existing railway line between Amsterdam and the Dutch/German border so that speeds of up to 200 km/h can be achieved. The implementation of the project will thus contribute to completing such important European high-speed rail links as Amsterdam–Oberhausen (situated in the German industrial and consumer centre Rhine/Ruhr)–Frankfurt-on-Main–southern Germany–Basle/Switzerland, and Amsterdam–Düsseldorf/Cologne–Frankfurt-on-Main–Stuttgart–Munich–Vienna.

The construction of the Betuwe line (conventional rail) Rotterdam–Dutch/German border(–Cologne) will free the Amsterdam–Dutch/German border line from freight traffic; this should ensure the provision of high-quality passenger services on this line. Between Amsterdam and the German Rhine/Ruhr area, for example, travelling times can be reduced by about 30 minutes.

The Amsterdam–Dutch/German border line, which has to be upgraded, is 111 km long. On the German side, upgrading work will be carried out on the 73-km-long section from the State border to Oberhausen in order to allow speeds of 200 km/h.

The total cost of the project Amsterdam–German border amounts to ECU 1 560 million.

It is intended to upgrade the line in two phases, namely:

(i) Amsterdam–Utrecht: 1998-2005;

(ii) Utrecht–Emmerich (cross-border section): 2005-2010.

The latter subsection still needs to be studied in detail.

The financial and socioeconomic profitability of the project have been evaluated; the following results have been achieved so far: 1% (IRR) and 4.4%, respectively. Given the density of population in the catchment area, these figures should, however, be re-examined.

tate of maturity

On 31 August 1992, the Ministers for Transport of Germany and the Netherlands signed an agreement on the upgrading of the link Amsterdam–Dutch/German border–Oberhausen for speeds of up to 200 km/h.

The agreement lays down the abovementioned construction period for the Dutch project; as regards the continuation on the German side, it stipulates that the completion should be linked to the entry into operation of the Betuwe line (around 2001).

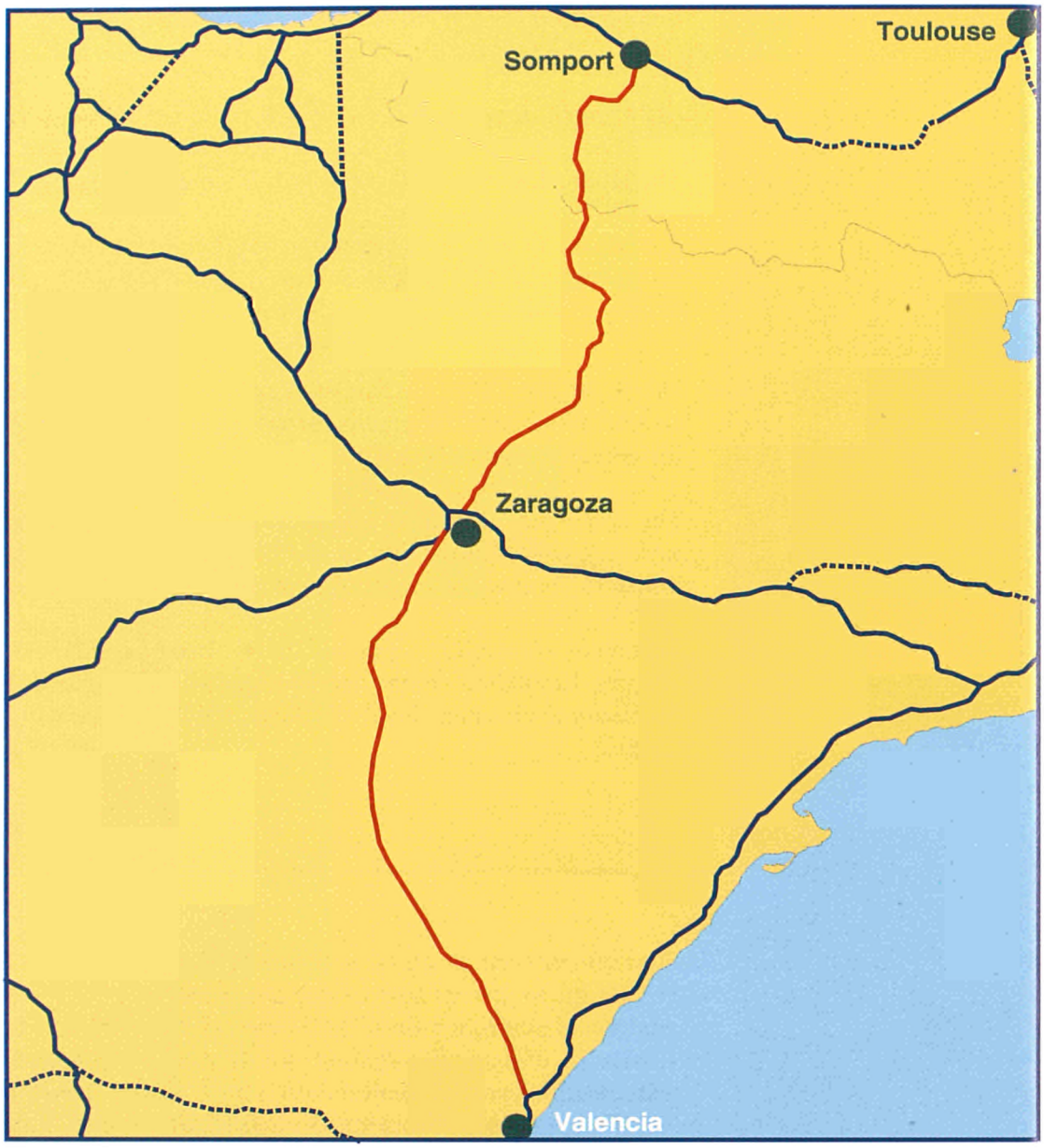
Technical feasibility studies have been conducted; however, for the section Utrecht–Emmerich, more detailed studies are needed. Over the entire link, it will be necessary to eliminate level-crossings; the future line will, to a large extent, consist of four tracks.

Annex A

Road corridor Valencia–Saragossa–Somport

Project

Other roads of the trans-European road network outline plan



Project description

The project will improve substantially the interconnection of the Spanish and the French motorway networks; it concerns the construction of a road link from the Spanish Mediterranean arc (Valencia) via Saragossa and the Somport Tunnel to Pau in France. The link, 472 km in total, comprises the following four sections:

Sagunto (Valencia–)Teruel,

Teruel–Saragossa,

Huesca–Somport,

Somport Tunnel (French border).

Goods transport across the Pyrenees will be facilitated and substantial reductions in travelling time will be achieved by implementing the project. Consequently, a boost will be given to the economic activity and competitiveness of the Spanish Mediterranean arc, the Ebro Valley, the Pyrenees and the French Aquitaine region, situated in a triangle formed by Pau, Toulouse and Bordeaux.

An express route (autovía) is planned from Sagunto to Huesca. The section Huesca–Somport will be implemented as an ordinary two-lane road (one lane in each direction). The work consists mainly of upgrading the existing ordinary road between Somport and Sagunto.

The environmental impact assessment for the section Saragossa–Huesca has been approved. The particularly sensitive nature of the Somport area has triggered the interest, as well as the protests, of many environmentalists.

Indicative costs and construction periods

Section	Length (km)	Cost (million ECU)	Start of construction	Entry into operation
Sagunto–Teruel	120	450	1995-96 [1]	1998 [2]
Teruel–Saragossa	181	510	1997	no data
Saragossa–Huesca	70	143	1995-96	1997
Huesca–Somport	101	63	no data	no data
Somport Tunnel		63	started	1997
Total	472	1 229		

[1] Sagunto–Segorbe (1997: Segorbe–Teruel).
[2] Sagunto–Segorbe (Segorbe–Teruel: to be determined).

As regards financial and socioeconomic profitability, further studies are needed on the corridor.

State of maturity

In the Community context the Valencia-Pau link has been included in the trans-European road network approved in December 1993. The road priorities programme for 1993-95, drawn up by the Spanish Government, includes the Saragossa–Huesca section and the last 40 km of the link between Segorbe and Sagunto. The Saragossa–Huesca link will be put out to open tendering in 1995.

The Spanish Government plans to invite the private sector to participate in the financing of the road. The Cohesion Fund has provided funding for studies on the section

Saragossa–Huesca in 1993; additionally, an application concerning the Somport Tunnel is under consideration under the 1994 budget line.

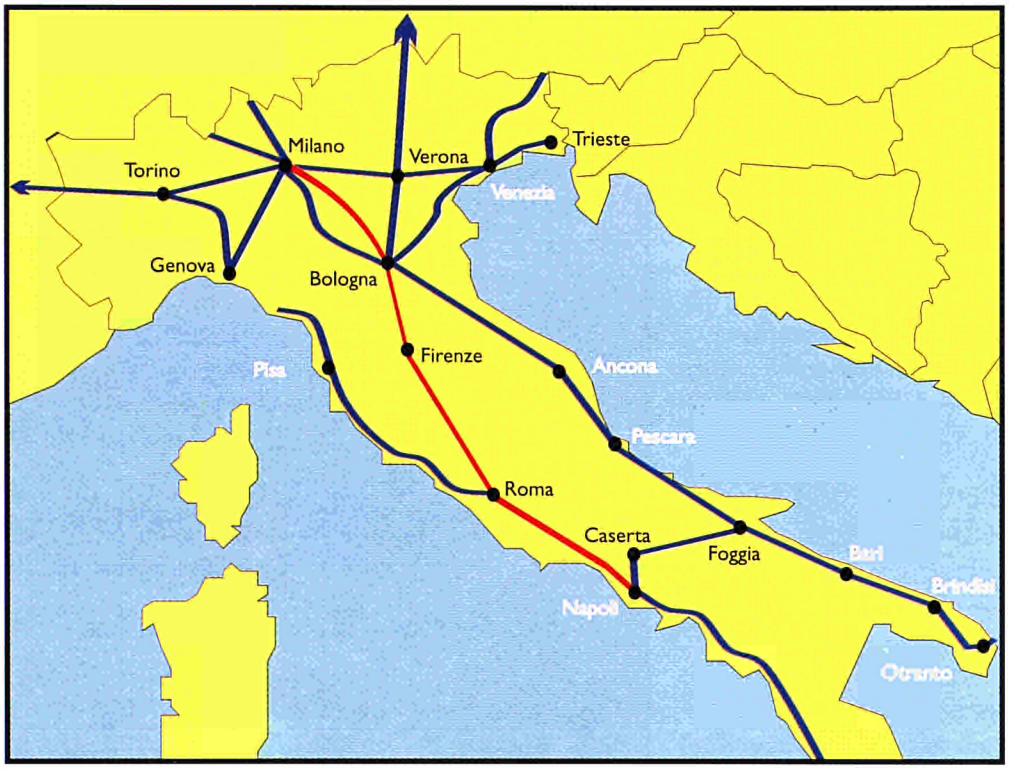
For the majority of the sections along the corridor, the role of Community funding has yet to be determined. The same applies for possible EIB or EIF lending.

Annex A

High-speed train (Brenner–)Milan–Rome–Naples

Project

Other lines of the trans-European high-speed train network outline plan



Project description

The Milan–Rome–Naples railway line, which links northern and southern Italy, is of great importance to international traffic. It ensures the continuation of such axes as Frankfurt–Basle–Milan and Berlin–Munich–Verona (Brenner axis) towards the south of Italy.

The entire line is to be newly constructed; the section Florence–Rome was already completed in 1993. The remaining sections Milan–Florence and Rome–Naples remain to be built.

The length of the new railway line amounts to approximately 630 km. Once the project is completed, high speeds of about 250 km/h will be possible.

The cost of the project amounts to ECU 8 300 million.

State of maturity

The project has been included in the five-year plan; it is planned to be built, financed and operated by TAV, the entity in charge of the promotion and development of the Italian high-speed railway network. The State subsidizes the financing of the project.

Technical feasibility studies are in progress. As the line largely traverses mountainous regions (Apennines), a significant number of tunnels needs to be constructed (especially between Florence and Bologna).

Construction work is already in progress on the Rome–Naples section.

Annex A

Transrapid magnetic levitation train

Project

Project description

This project concerns the implementation of a completely new transport technology: the magnetic levitation train.

Once in operation, magnetic levitation trains may constitute a real alternative to inter-EU short-haul flights: the speeds which can be achieved with this innovative means of transport amount to 400 to 450 km/h. It is designed only for passenger transport.

A field test of this new system, carried out in Germany, has shown positive results. Germany now plans to build the first line for regular services: the 284-km-long Hamburg–Berlin link.

This new transport system should enable passengers to cover the distance of almost 300 km in 53 minutes. Every 10 minutes, a 'Maglev' train will operate between the seaport in the north of Germany and the capital Berlin. The line will have a capacity of 14.5 million passengers per year.

German authorities selected the Hamburg–Berlin link to be the first in Europe to put this new technology into practice for two main reasons:

(i) construction and operation of the line will give a decisive impetus to the economic upswing in a rural area which has not only suffered from the cyclical economic

downturn but, in addition, from the structural changes linked to German unification, i.e. the *Land* of Mecklenburg-Western Pomerania; the main part of the line traverses this region;

(ii) forecast traffic — in combination with a sound financing scheme — points to promising profitability prospects; the financial profitability (internal rate of return) was assessed at 12.4% (assuming a 40-year operation period).

It is estimated that the project will have a significant impact on employment: during the construction period, 68 000 man-years of employment could be generated; know-how transfer and the creation of jobs in such industries as construction and mechanical engineering contribute essentially to stimulating structural changes in the area concerned. In addition, 2 800 permanent jobs — directly and indirectly related to the project — could be created.

The total cost of the project amounts to ECU 4 700 million, of which ECU 2 900 million has to be invested in infrastructure and the remainder in the rolling-stock and the traffic-management system.

Construction is planned to start in 1995 and to take eight years.

State of maturity

On the basis of a financing scheme, proposed by industry representatives, as well as of the results of technical studies and tests, the German Ministers for Research and Technology and for Transport agreed, in December 1993, to continue preparing the project's implementation.

The private sector intends to play a significant role in the construction, financing and operation of the line.

It is planned to form two joint-stock companies:

(i) Fahrweg AG, responsible for the infrastructure (State-owned company);

(ii) Betriebs AG, responsible for the operation of the line.

The State will contribute to the infrastructure, financing the amount which would be necessary for the construction of a Hamburg–Berlin high-speed railway line. The remainder will be borne by the operating company, in the form of a concession fee. The infrastructure company will levy user charges from the operating company.

The provision of the equity capital of the operating company by German railways Deutsche Bahn AG and the airline Deutsche Lufthansa (total 20%), industry and banks (47%) as well as small investors (33%) is under consideration.

The operator will borrow via a bank consortium, without benefiting from State guarantees.

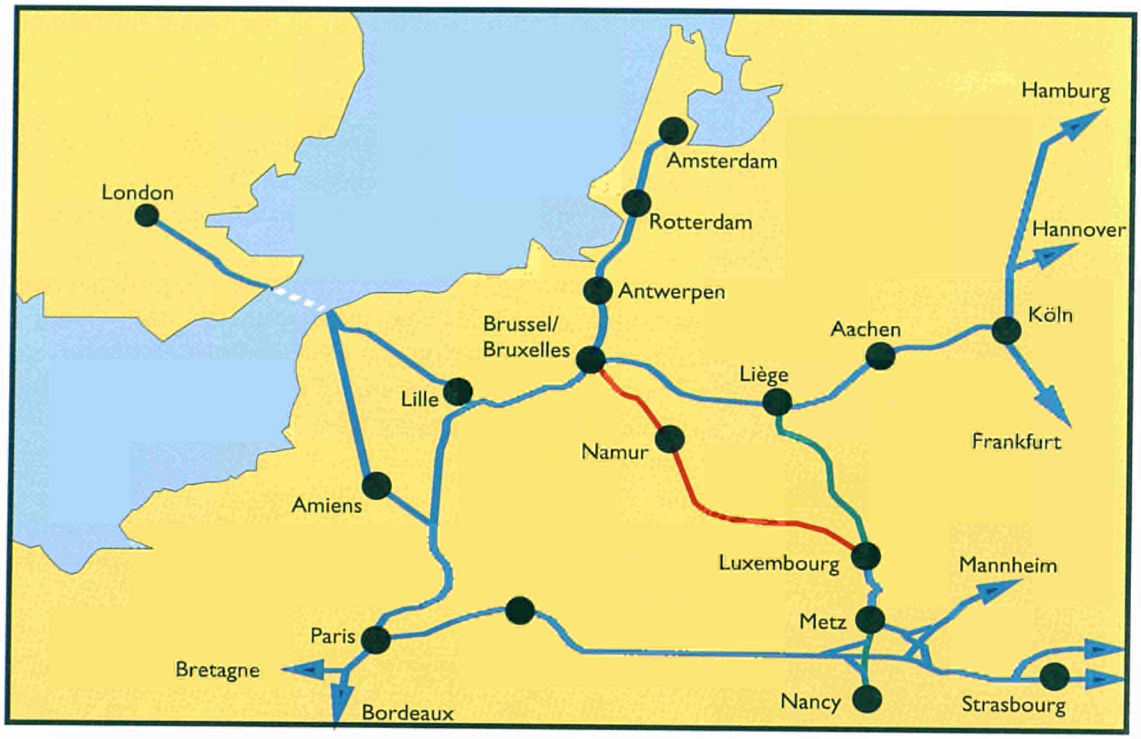
Annex A

High-speed train Luxembourg–Brussels

Project

Conventional lines

High-speed lines



Project description

The high-speed train project Luxembourg–Brussels is of great importance to the improvement of the connections between all of the European institutions.

It will link Luxembourg with important north European high-speed train lines and allow noticeable improvements for a number of destinations (for example Luxembourg–Amsterdam; Luxembourg–Channel Tunnel–London). Via the branch line Metz–Luxembourg of the high-speed train Paris–eastern France–southern Germany (TGV-Est), fast direct links Brussels–Luxembourg–Strasbourg should become possible.

The Luxembourg–Brussels link is 222 km long.

Two options are considered: upgrading of the existing line and construction of a new line. The reduction in travelling time which can be achieved amounts to 19 minutes and 43 minutes, respectively.

The cost for the two options has been estimated at ECU 85 million and ECU 500 to 850 million, respectively.

In the event of upgrading, the financial profitability will amount to 6.8% and the socioeconomic profitability to 20.7%. For new construction, these data are expected to be 2.9 and 11.9%, respectively.

Construction work could start quite soon if the line is to be upgraded, as no comprehensive administrative procedures would be necessary.

State of maturity

A political decision with respect to the project implementation will have to be taken by the governments concerned and by the Belgian and Luxembourg railways.

Luxembourg is prepared to participate in the financing of the Belgian part of the project.

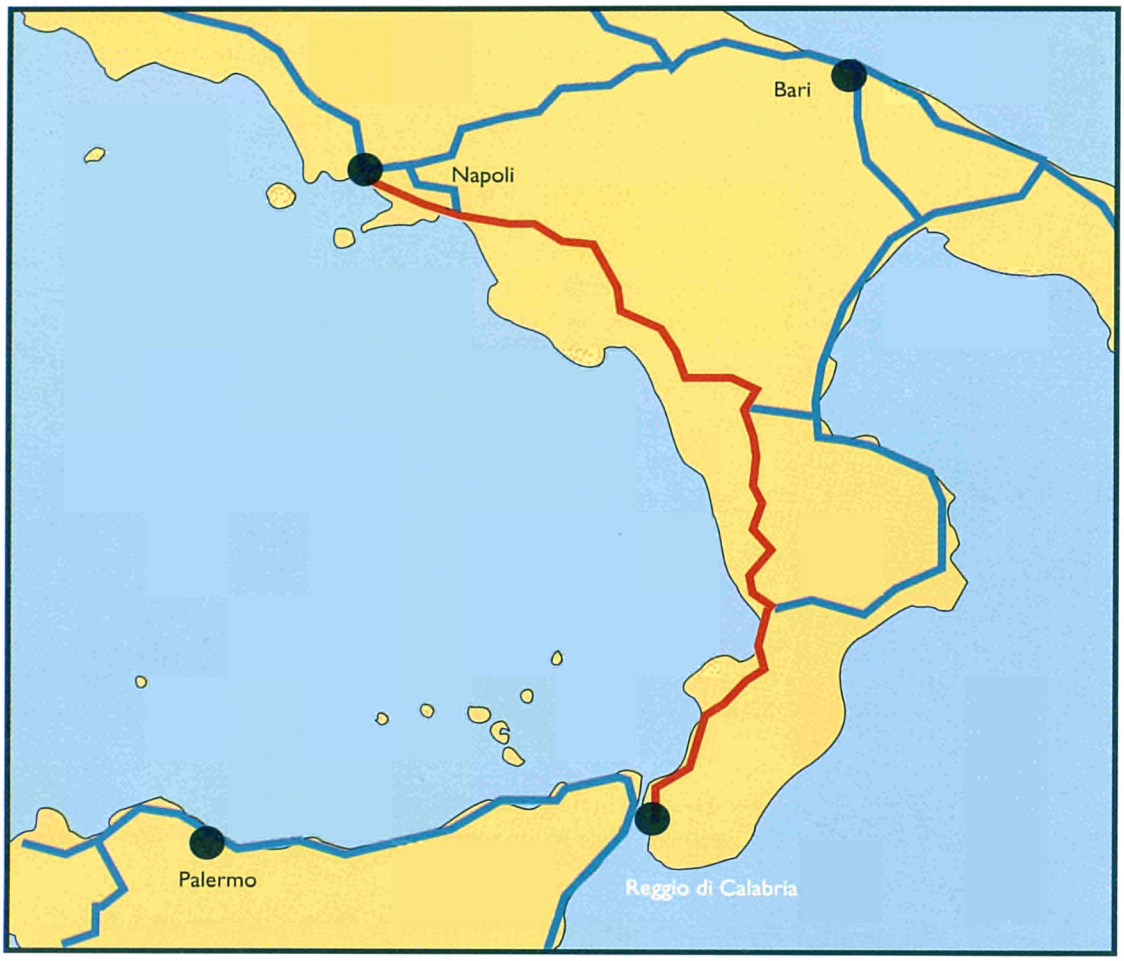
For the time being, public financing is envisaged.

Annex A

Road corridor Naples–Reggio di Calabria

Project

Other roads of the trans-European road network outline plan



Project description

This project concerns the upgrading of a motorway which is of great importance for regional and economic development in the south–west of Italy. This 493-km-long route is divided into two sections, namely Naples–Salerno (50 km) and Salerno–Cosenza–Reggio di Calabria (443 km).

The improved road link between the extreme south of Italy and Naples would allow better connections to be created with northern Italy and central regions of the Union. As the Naples–Reggio di Calabria motorway is linked with several maritime ports, project implementation would make a noticeable contribution to the development of the multimodal transport network.

An ever-growing volume of passenger and freight traffic is causing increased constraints on capacity, with the existing road no longer being able to meet demand; for instance on the stretch of road between Naples and Salerno alone average traffic figures are quoted as around 170 000 vehicles per day. Upgrading of the existing dual-carriageway (widening) is therefore of great importance; indeed, this project is given high priority by the Italian authorities.

Work on the 50-km-long section is divided as follows: between Naples and Scafati, a third lane is to be constructed in both directions; intersections on the remaining part of the route

to Salerno are to be upgraded. Costs for this whole section are expected to be in the region of ECU 350 million.

As regards the remaining 443 km to Reggio di Calabria, two strategies have been proposed: the first of these involves the building of an emergency lane or hard shoulder on some 52% of the total length of this section at a cost of ECU 1 100 million; the second concerns the construction of a third lane along 52% of this section, with costs amounting to approximately ECU 2 700 million. In both cases, if upgrading work were extended to cover the whole distance, this would result in a substantial increase in cost, owing to difficulties presented by the many tunnels and viaducts at different levels.

Total cost of the project would, therefore, be approximately ECU 1 450 million including the first strategy and ECU 3 050 million for the second.

Construction work is expected to be completed by the year 2000.

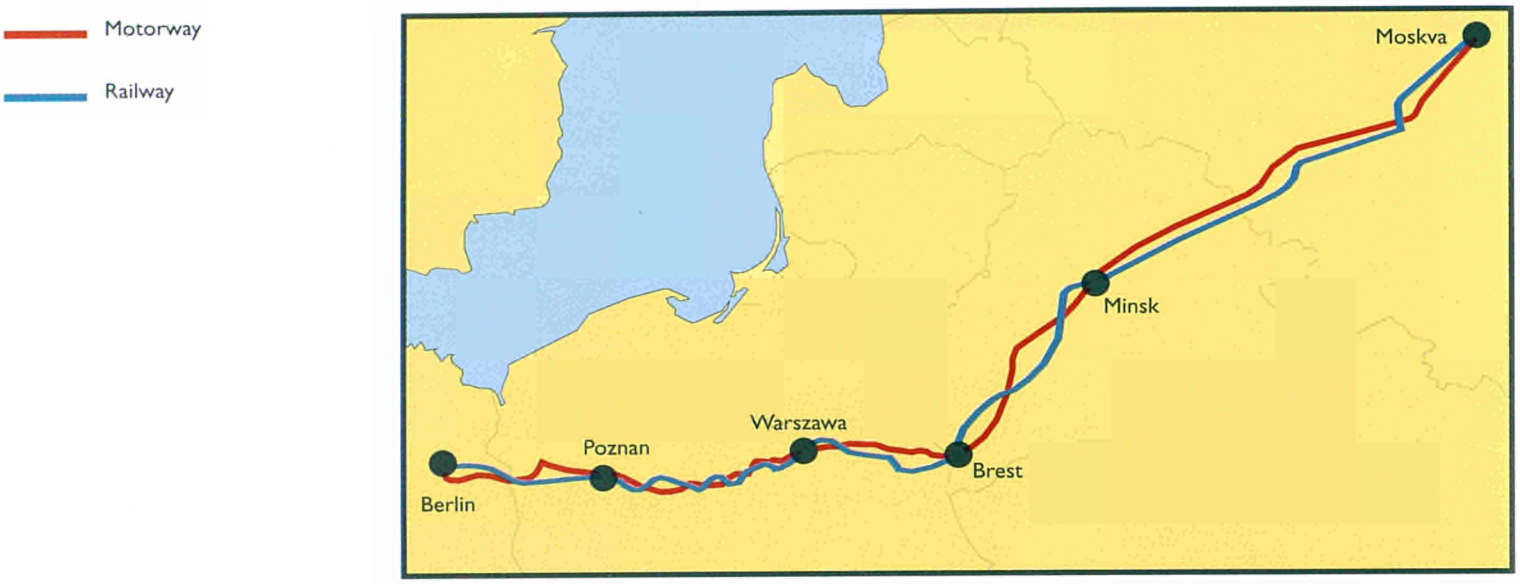
State of maturity

Although no information has been made available by the Italian authorities as to which strategy is to be followed for the entire link, for certain subsections project preparation already appears to be well-advanced: for example, tendering procedures are under way for the executive design of 97 km of emergency lane to be added on the section between Salerno and Reggio di Calabria with expected costs in the region of ECU 260 million.

Annex A

Part III — Projects connecting to third countries

Berlin–Warsaw–Minsk–Moscow (rail and road)



Project description

The Berlin–Warsaw–Minsk–Moscow route, identified by the Crete conference as one of the priority corridors, is part of the extension of the trans-European networks (TENs) towards the Central and East European countries. It is a concrete and visible means of supporting the reform process in Poland and the Commonwealth of Independent States (CIS) and contributes to the integration of the continent. The central position of Poland in Europe between the West European countries and the CIS generates the necessity of creating and operating an effective transport network.

As one of the main corridors for passenger and freight transport, the Berlin–Moscow itinerary has considerable international importance. The volume of road traffic is expected to grow in parallel with already increasing trade flows. The Berlin–Moscow railway corridor has special strategic importance in the larger European context for long-haul transit traffic and connects the main industrial areas of Central and Eastern Europe with the EU. Its upgrading should enable the railway to compete with road and air transport, and will therefore contribute to obtaining a modal balance in order to fulfil the general objective of sustainable mobility. It is well suited for combined road and rail transport.

The main results of the modernization will be a reduction in transport times, an improvement in quality and safety, an increase in capacity and an economic stimulation of East-West trade.

The corridor is part of the TEM and TER networks. The corridor's length of approximately 1 820 km is divided into four sections:

100 km	within Germany	5% EU territory
650 km	within Poland	36% PHARE countries
600 km	within Belarus	59% TACIS countries
470 km	within Russia	

On the German part of the corridor (included in the Bundesverkehrswegeplan), the road is already upgraded to motorway standard. The railway has a designed speed of 200 km/h.

The whole Polish section needs considerable upgrading. The existing normal road (A2) is in a relatively poor condition. A project, upgrading the railway between the German border and Warsaw, is already under way.

The Belarus and Russian sections account for the major part of the corridor. The current involvement of the EU is limited (up to now, TACIS does not permit investment in infrastructure). To facilitate obtaining long-term funds for infrastructure projects, legal and administrative conditions need to be improved. On the other hand, both rail and road corridors are in better condition than they are in Poland. As regards the railway, there is, for the time being, only a need to modernize. A reasonably good motorway links Belarus with Poland (Brest–Minsk–Orska route).

A number of improvements are needed at the border-crossings. Some parts of the Russian and Belarus section of the corridor are under rehabilitation.

Within the G24 framework, private investors have shown great interest in investing in specific projects on this corridor.

A Memorandum of Understanding on the development of the Berlin–Warsaw–Minsk–Moscow transport corridor between the Ministers for Transport of Poland, Russia, Belarus, Germany and the European Commission has been initialled. A task force of customs and transport experts will be established to find solutions to existing problems on the corridor.

Selected projects on the corridor

The most important projects on the corridor ready for implementation are situated in Poland and on its borders.

Section	Cost (million ECU	Construction period	Traffic data
Road			
German border–Warsaw	1 111	1995-2003	For the whole stretch German border–Belarus border until 2011: 100% increase forecast
Rail			
Warsaw–Terespol (E20)	433.5	up to 2000	
Bypass Warsaw (CE20)	398	up to 2000	
Brest–bottleneck border-crossing Poland/Belarus	90.0	1994-96	Passengers: 1992 4.1 (millions) 2010 9.8 freight: 1994 1.4 (million t) 2010 20.4

Road project: Construction of concession motorway German border–Warsaw

The road on the corridor (E30) is subdivided into the following sections with a total length of 1 857 km:

Germany	Berlin–Frankfurt-on-Oder (105 km)	Motorway exists
Poland (A2)	Swiecko (German border)–Warsaw (455 km) Warsaw–Belarus border (247 km)	Construction of a motorway foreseen
Belarus Russia	Polish border–Brest–Minsk–Russian border (590 km) Russian border–Moscow (460 km)	Maintenance and rehabilitation sufficient for the time being

State of maturity

The section Swiecko–Warsaw (455 km) is the continuation of the already existing motorway from Berlin to the Polish border. On the Polish side, only 50 km from Wrzesina to Konin has been built (a stretch of about 10% of the section considered). The envisaged programme of construction is in two stages:

Stage 1: 1995-97 — section Swiecko–Kolo (280 km);

Stage 2: 1997-2003 — section Kolo–Warsaw (175 km).

The subsequent stretch, from Warsaw to the Belarus border, is planned to be finalized by 2007.

The whole project is included in the 15-year master plan, adopted by the Polish Council of Ministers in 1992.

A preliminary feasibility study for a concession motorway was finalized by Transroute in 1993. A more detailed traffic study financed by PHARE is under way.

The alignment study for the A2 Swiecko–Warsaw is agreed with local authorities. The starting-point at the German border is fixed in agreement with the German authorities. Between Swiecko and Poznan three alternatives (approximately 30 km) for crossing the Lagów National Park have been studied. The Poznan bypass is planned on the southern side. The stretch between Konin and Warsaw has been fixed.

The environmental impact assessment has yet to be completed.

The implementation of cross-border facilities on the German/Polish border (Swiecko) is supported by the German Government and the construction of a cargo terminal is supported by PHARE. The cargo terminal has a design capacity of 4 000 trucks per day and aims at a 30-minute waiting-time for trucks (present average waiting-times: from Poland to Germany 5 hours, from Germany to Poland 25 hours). The construction will be completed in May 1995.

Annex A

Estimated investment

The construction costs of the section are estimated at ECU 1 111 million. The State budget commitments will be limited to 15% of total costs, to be used mainly for land acquisition. A State guarantee of up to 50% of the total construction costs will be provided.

It is the intention of the Polish Government to have the A2 motorway built by a private concessionaire with the financial participation of the IFIs and the European Union.

Regulatory framework

A Toll Motorway Act has been submitted to the Parliament. An Agency for Motorway Construction and Operation has been created for the implementation of the motorway programme.

Railway projects

The rail line of the corridor Berlin–Moscow (E20: total length 2 050 km) is subdivided into the following sections:

Germany	Berlin–Frankfurt-on-Oder (89 km)
Poland	Kunowice–Poznan–Warsaw (478 km) Warsaw–Terespol (Belarus border) (211 km) Warsaw freight bypass (180 km)
Belarus Russia	Brest–Minsk–Russian border (605 km) Russian border–Moscow (487 km).

1. Modernization of the section Warsaw–Terespol

State of maturity

The section Warsaw–Terespol, together with the Warsaw bypass, is the continuation of the already upgraded section Berlin–Frankfurt-on-Oder (Germany) and the section Kunowice–Warsaw (Poland), the upgrading of which is scheduled to be completed by 1997.

The technical and economic feasibility study for the modernization of the E20 railway section Warsaw–Terespol financed by PHARE is under public tender. The study will be completed within 13 months.

The line is currently double-track and electrified. Between Lowicz and Luków, it has two parallel lines: the main line through Warsaw and the Warsaw bypass, which is exclusively used for freight transport.

The entire line is included in the AGC and AGTC agreements, but does not yet meet their requirements. The maximum speed is 120 km/h on the main line and 100 km/h on the bypass. The initial aim is to reach 160 km/h on the main line and 120 km/h on the bypass. The necessary modernization is foreseen by the year 2000. In a second stage, plans include an upgrading of the line to a high-speed railway link.

Improvements on the transfer station Malaszewicze–Terespol are necessary. The average waiting-time in 1992 was two hours for passengers, and 30 to 100 hours for freight. A feasibility study and technical documentation is in preparation.

Estimated investment

The IFIs and other potential investors await the completion of the technical and economic feasibility study financed by PHARE. The estimated costs for the section Warsaw–Terespol are for the main line ECU 433.5 million and for the bypass ECU 398 million; no specific financing plan has yet been developed. However, the PKP and the Polish Government hope to limit their contribution to around 43% of total costs and to win external financing for the remainder, as in the case of the section Kunowice–Warsaw.

The modernization of the connecting section between Kunowice and Warsaw is under way with contributions by the EIB (ECU 200 million), the EBRD (ECU 50 million), PHARE (ECU 30 million) and Poland (ECU 207 million). PHARE also contributes ECU 1.5 million to the modernization of the border station Malaszewicze–Terespol.

Regulatory framework

A new regulatory framework is envisaged for railways in Poland: the Transportation Code which provides price and tariff freedom (under State anti-abuse regulation) with respect to railway and road carriers; the Railway Industry Law which sets different regulations for railway carriers and railway infrastructure operators, in compliance with the relevant 1991 EC directives; and the PKP Law which defines the new statutes for the PKP as a commercial public enterprise.

2. Modernization of the Brest railway junction

State of maturity

The multimodal Brest railway junction, located at the Polish/Belarus border, is the most important junction of freight traffic on the interface between two different gauges (standard 1 435 mm and broad 1 520 mm). Significant amounts of traffic to and from Western Europe, which normally should take the shortest route Berlin–Warsaw–Belarus, currently utilize much longer land and sea routes because of the existing waiting-times at the border. This is a major obstacle to the growth and efficiency of the flow of passengers and goods along the corridor. Investment is needed in order to achieve better efficiency in the operation of the Brest station (reduction of stop-over times, better transhipment service).

On the basis of a technical and economic feasibility study financed by TACIS, the EBRD has developed an investment concept for the Brest railway bottleneck.

The project concerns technical improvements to reduce waiting-times for rail passengers and rail freight (at the moment, frequently three days for freight), in particular through the introduction of modern information systems, modern container systems, efficient transfer techniques for the change of railway gauge, adequate passenger bogie exchange facilities and automatic axle-change sites on both sides of the border. Investments in fixed installations and rolling-stock shall be undertaken by the railways concerned, with a participation by the private sector and other external contributors.

Poland (60%) and Germany (30%) are the most important countries of origin forwarding freight through the Brest junction. In passenger traffic, the main user is Poland followed by Germany and France.

Estimated investment

The estimated investment necessary for the full-scale project as devised by the EBRD is ECU 90 million.

Regulatory framework

As far as the investment in fixed installations is concerned, no major obstacles have been detected. The investment in and joint operation of rolling stock might require flexibility in the application of the regulatory framework for the railways. Amendments might be required if a flexible application is not possible.

Annex A

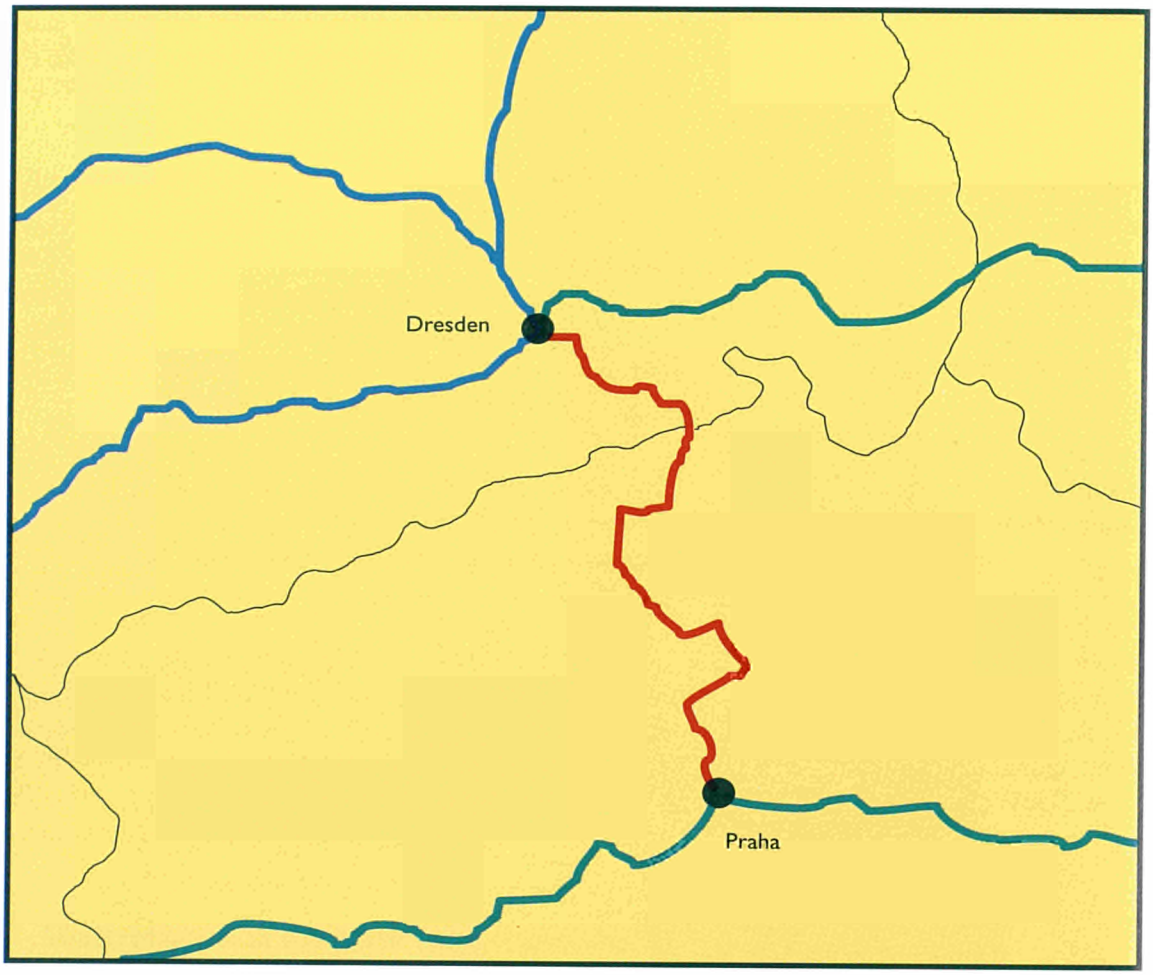
Dresden–Prague (road and rail)

• Rail project

Project

Other corridors identified by the 1994 pan-European Transport Conference

Other lines of the trans-European railway network outline plan



Project description

The Dresden–Prague railway section (180 km) is situated in priority corridor No IV identified in Crete, continuing via Budapest and Thessaloniki (maximum length = 1 640 km). It is potentially a critical bottleneck on the line providing the interconnection of the North Sea ports with central and south-eastern Europe, touching Austria and going on to Greece and Turkey. This axis is joined by several lateral branches which substantially contribute to the importance of the international traffic flows. In addition to that, corridor No IV is interconnected with project No 7 (motorway Patras–Bulgarian border) retained by the European Council in Corfu.

Totally new traffic flows appeared on the Dresden–Prague section after the political changes in Europe, leading to an extremely high density of international freight and passenger traffic. The upgrading of the railway stretch responds also to the need to discharge transit roads between Saxony and Bohemia. In this context, the upgrading also helps to establish the conditions for the development of an effective combined transport system. In addition to the general objectives of increases in capacity, reduction in transport times and improvement of quality and safety, the rehabilitation and upgrading of the Dresden–Prague section would enable the railway to compete better with road transport and mitigate the high environmental burden in the region.

Annex A

Indicative costs, construction period and traffic forecast

Section	Length (km)	Cost (million ECU)	Construction period	Traffic growth forecast 1992-2010
Germany				
Dresden–Decin	51	7.5	up to 2000	
Czech Republic				+ 33.3%
Decin–Prague	129	270	up to 2000	persons/km
Total	180	277.5		

State of maturity

The Bundesverkehrswegeplan 1992 already provides for the upgrading of the Dresden–Prague stretch in accordance with the Czech railways. In the Czech railway development plans, the corridor is rated as being the first priority.

The Dresden–Prague stretch and its continuation to Budapest (line E55/E40/E51) is classified in the AGC and AGTC international network, but does not yet meet these requirements.

Technical and environmental feasibility studies for different solutions were elaborated. Following a cost-benefit analysis, a solution was chosen which combines selected rehabilitation measures on the track with the use of tilting trains. The latter will significantly increase the speed of passenger transport (reduction of travelling time by 31% between Dresden and Prague).

On a part of the Dresden–Prague link (Dresden–Lovosice), a rolling motorway service was opened recently; the governments of the Czech Republic and of the State of Saxony contributed decisively to preparing this project.

The modernization of the Dresden–Prague section has already been started with the reconstruction of 17 km for speeds of 160 km/h between Uvaly and Porcany.

To speed up the process of further modernization, the Czech Government provides a guarantee for investments up to ECU 450 million on the line Decin–Breclav. A major part of it will be used for the stretch Decin–Prague.

The Czech legislation for rail transport has already incorporated the relevant EU experience. A governmental agreement between the Ministers for Transport of Germany, the Czech Republic and Austria is in the final stages of preparation.

An agreement has been concluded between the German, Czech and Austrian railways regarding the increase in commercial speed and reduction of travelling time between Berlin, Prague and Vienna. A further agreement concerning the development, use and financing of the tilting train between the abovementioned railway administrations is in preparation.

Estimated investment

The estimated cost for the German section Dresden–Decin (51 km) amounts to ECU 7.5 million (financing is assured through the State budget) and ECU 270 million on the Czech side between Decin and Prague (129 km).

For the whole stretch of 504 km in the Czech Republic, leading from Decin via Prague to Breclav (Slovak border), an amount of ECU 470 million is estimated. The Czech Government expects a decision from the EIB by December 1994 on a loan of ECU 200 million. Discussions are under way for a loan of USD 50 million (approximately ECU 45 million) from the EBRD. Furthermore, a substantial contribution by the German Bundesbahn AG is under consideration. A concept which will allow repayment of this contribution through a scheme of user-charges is being developed.

It should be noted that the Czech Government intends to provide a guarantee which to a large extent would cover investments on this section. Under these circumstances, private banks have shown much interest in participating in the financing.

The IRR (internal rate of revenue) of the project on the Czech side is estimated at 28.9%.

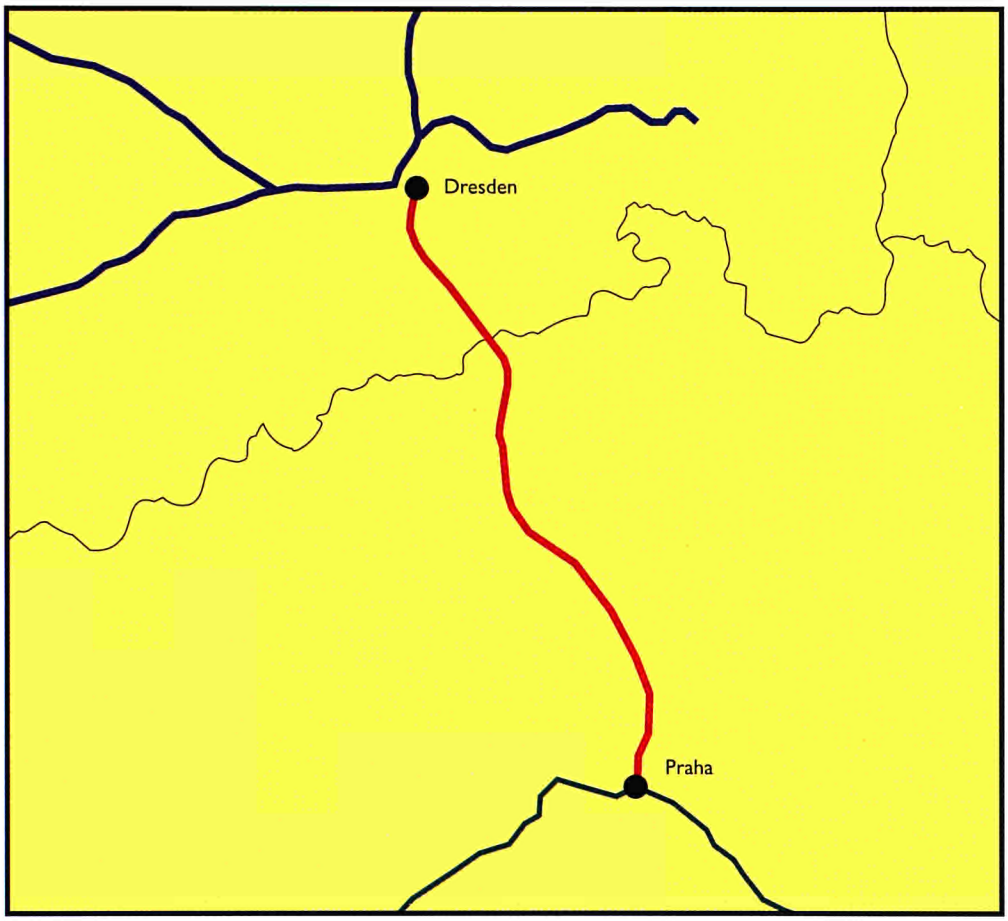
Annex A

• Road project

Project

Other corridors identified by the 1994 pan-European Transport Conference

Other roads of the trans-European road network outline plan



Project description

This motorway forms part of the road corridor (Berlin–)Dresden–Prague–Bratislava–Budapest–Sofia–Thessaloniki which was identified by the second pan-European Transport Conference in Crete in March 1994. It constitutes thus an important link connecting the Union with the south-east of Europe and allowing for the interconnection of Greece with the other Member States (especially Germany).

The entire Dresden–Prague motorway has to be newly constructed. It will be 136 km long (46 km on German and 90 km on Czech territory).

After completion of the new motorway, it should be possible to bundle traffic, thus reducing traffic on national roads passing through ecologically sensitive mountainous areas as well as a large number of cities and villages. By so doing, it will make a significant contribution to more environmentally friendly transport.

Future traffic on the German section has been estimated at 25 000 to 30 000 vehicles per day; in the area near Dresden, daily traffic is expected to reach about 80 000 vehicles.

An important part of the traffic will be directly linked with the development of the Upper Elbe Valley binational industrial region, in which great potential for manufacturing enterprises and service industries lies.

While on the Czech part a few short sections have already been completed (14 km) or are under construction, the German authorities are planning to start work in 1996. The completion of the motorway is envisaged for the year 2000 (Czech part) and 2002 (German part) respectively.

The total investment has been estimated at ECU 1 070 million, ECU 740 million of which for the German part and ECU 330 million for the Czech part. The German part appears to be relatively expensive; this may be partly due to the topographical situation; on the other hand, however, the Czech part may be subject to noticeable cost increases (adjustment of exchange rate).

State of maturity

Both the Czech and the German parts of the project are included in the national master plans.

Preparatory work for the Czech part is already well advanced (on the basis of a government decision made several years ago). While two of the total seven subsections are already complete, for the remaining subsections administrative procedures are still to be finalized. In one case, for example, ecological problems will have to be solved. Especially with regard to the border area, the decision on alignment is pending.

As regards the German section, the 'Raumordnungsverfahren' (assessment of regional impact; responsible authority: *Land* of Saxony) has been completed; this means that the route, to a scale of 1:25 000, has been determined and an environmental impact study has been carried out. On this basis, the 'Linienbestimmungsverfahren' (determination of the route within a 400-m wide corridor) is now under way; the relevant decision by the Federal Government is expected by the end of 1994.

An agreement between the German and Czech Governments on the alignment in the border section is still outstanding.

The Czech part of the motorway will be traditionally financed. However, revenue generated from a permit to be introduced on the entire main road network should facilitate the public financing.

As regards the German part, the introduction of a permit for heavy goods vehicles (Euro-Vignette) in 1995 will also generate additional revenue which, however, will not feed a separate fund. The introduction of direct user charges on motorways is at present being analysed; no decision has been made by the government as yet. At a later stage, the levying of tolls may thus become relevant for the project and the involvement of the private sector may be considered.

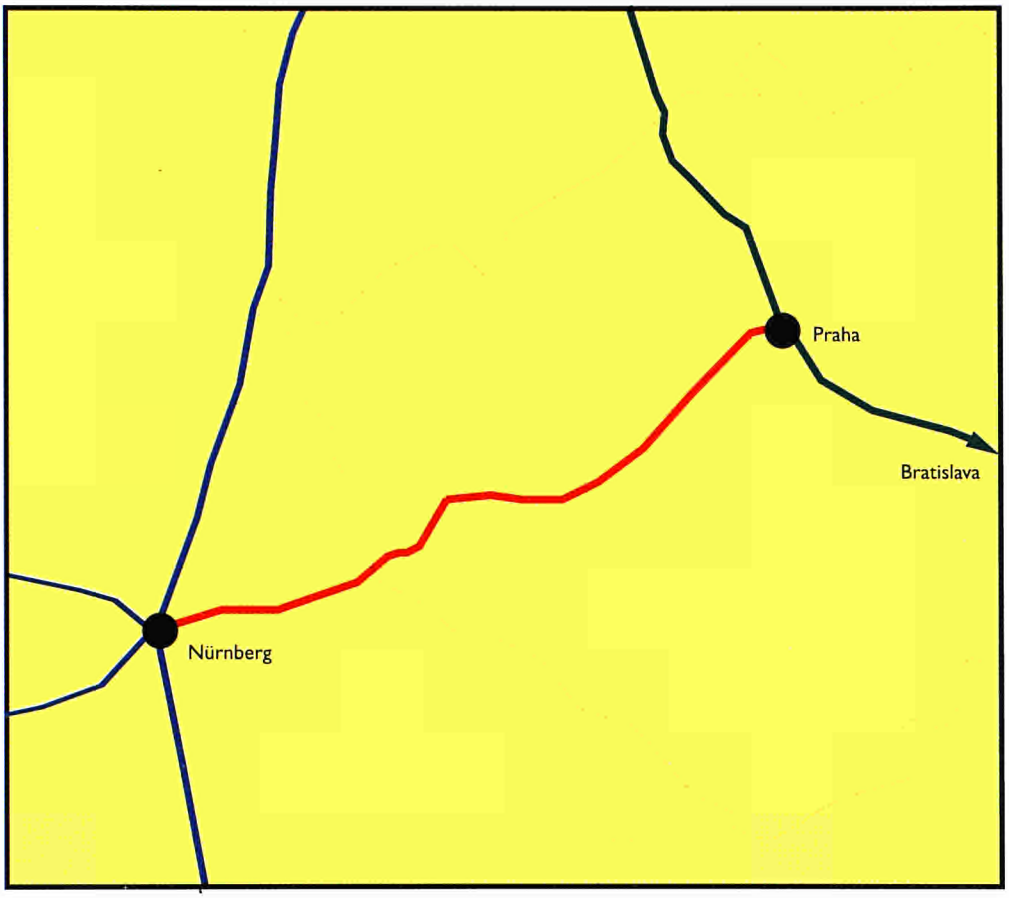
Annex A

Nuremberg–Prague (road)

Project

Other lines of the trans-European railway network outline plan

Other corridors identified by the 1994 pan-European Transport Conference



Project description

The Nuremberg–Prague motorway forms part of the priority corridor IV identified by the Crete pan-European Transport Conference in March 1994; this corridor continues via Bratislava, Budapest and Sofia towards Thessaloniki/Istanbul.

The construction of this new four-lane motorway is of national priority for both Germany and the Czech Republic. Its total length amounts to 250 km, of which 93 km are in Germany. A 36-km-long stretch (Nuremberg–Amberg) on German territory and a 42-km-long stretch on Czech territory have already been constructed and are now open.

The completion of the Nuremberg–Prague motorway will be of particular benefit to international traffic. Road capacity on this link will be considerably increased in response to ever-increasing traffic flows, which have been greatly influenced by the political events of the year 1990. Whereas the traffic volume on the border-crossing for 1998 is estimated at 17 000 vehicles per day (of which 2 300 heavy goods vehicles), this amount is expected to rise to about 35 000 vehicles per day by 2010 (forecast for the Czech section). Lengthy waiting times at the present Waidhaus/Rotwadar border-crossing and, with that, journey times on the entire link should be considerably reduced. The opening of the new motorway should also produce important improvements in road safety.

Once completed, the new motorway should make a valuable contribution to reducing negative environmental effects of road traffic, as it relieves national and regional roads passing through local centres and thus reducing noise pollution and emissions.

Estimated costs for the construction of the missing sections amount to ECU 925 million (ECU 374 million on the German side and ECU 550 million on the Czech side).

The opening of the completed motorway is foreseen for the year 2000.

Maturity

The German part of the project is included in the 'Bundesverkehrswegesplan' 1992. Administrative procedures are in progress on the 57-km-long section which has still to be constructed; the 'Planfeststellungsverfahren' (resulting in the building permission) is finalized for some subsections; for the remaining ones, it is in preparation. The major part of the alignment has been fixed.

Of the 115 km still to be constructed on the Czech side of the border, work on 25.2 km is already under way.

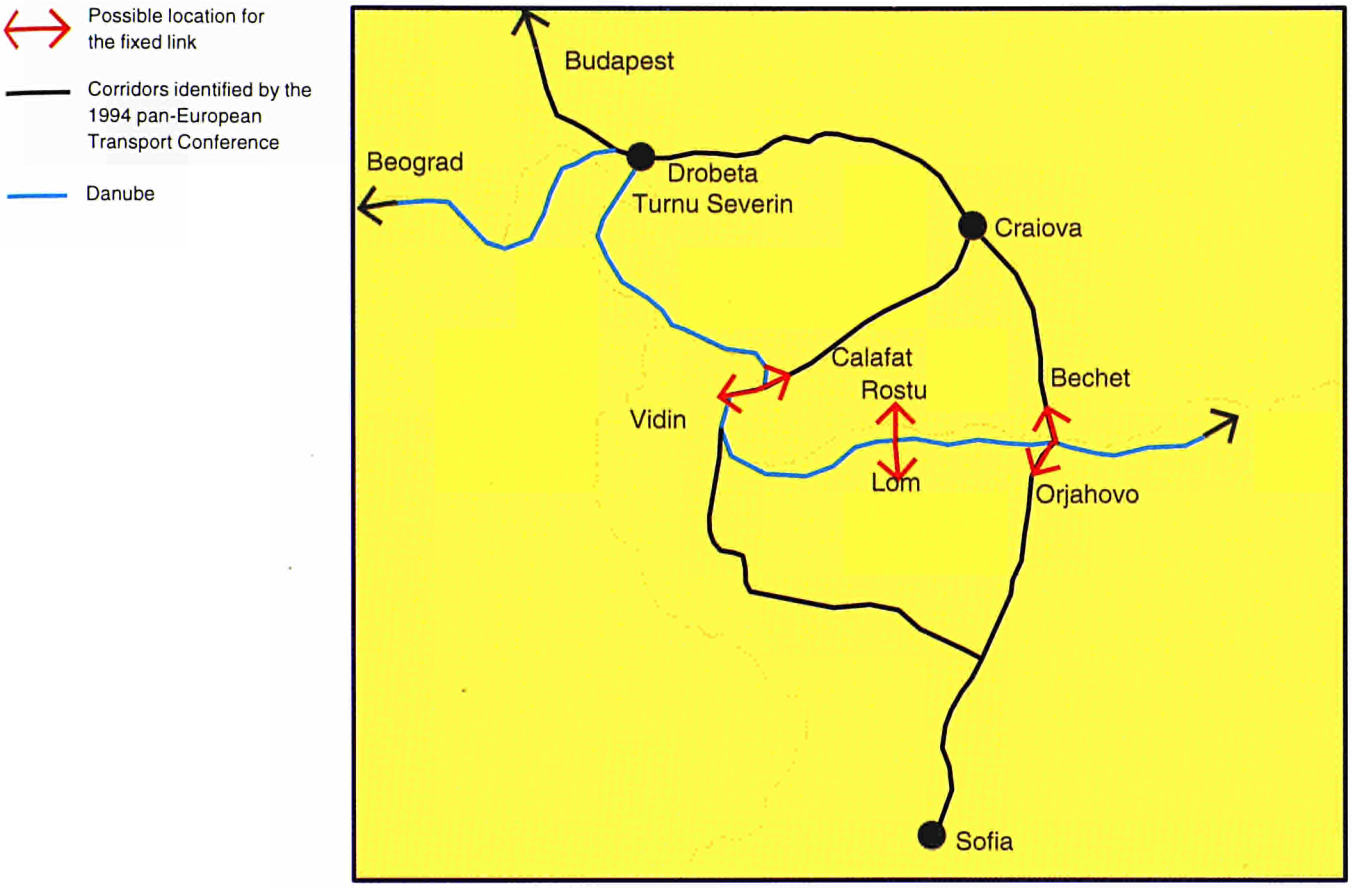
In 1990, the Czech and German Governments signed an agreement regarding the establishment of a new common border-crossing point by 1997 at the latest.

For the time being, both Germany and the Czech Republic envisage traditional budgetary financing of their respective parts. After the Czech Government had launched a tendering procedure in 1993 aimed at attracting a private concession, it finally decided to go back to public financing (main reason: cost increase due to high capital cost). To facilitate the financing of the national motorway network, the government now plans to introduce a permit system on the entire main road network.

As from 1995 heavy goods vehicles using the motorways in Germany will be required to buy a permit (vignette); revenues obtained in this way will, however, not be channelled into a separate fund. The introduction of direct user charges on motorways is at present being analysed; no decision has as yet been made by the government. The levying of tolls might, therefore, become relevant for the project at a later stage and the integration of the private sector might also be considered.

Annex A

Fixed link across the Danube (road and rail) between Bulgaria and Romania



Project description

The project is located on a corridor which provides an essential link between Greece and the rest of the European Union. It covers a critical bottleneck on priority corridor No IV identified in Crete, which is interconnected with project No 7 (motorway Patras–Bulgarian border), retained by the European Council in Corfu.

The construction of a new fixed link across the Danube between Romania and Bulgaria could also improve traffic flows appreciably between the economic centres of south-eastern Europe, Turkey and the Middle East and the EU while at the same time serving regional needs.

The fixed link is part of a wider project which includes the links into the existing main road and rail networks on either side of the border.

State of maturity

A study financed by the PHARE regional programme, which is planned to be finalized by 15 January 1995, aims at defining the most appropriate place (three sites are still under consideration) and type (bridge or tunnel, for road and/or rail) of construction. The study will also determine whether the construction of a fixed link is economically viable in comparison with improved ferry services.

Estimated investment

Total estimated costs for a bridge vary — depending on the location — between USD 340 and 221 million. Total costs for the bridge, including road and rail links into existing networks on both sides, vary between USD 1 333 and 1 244 million.

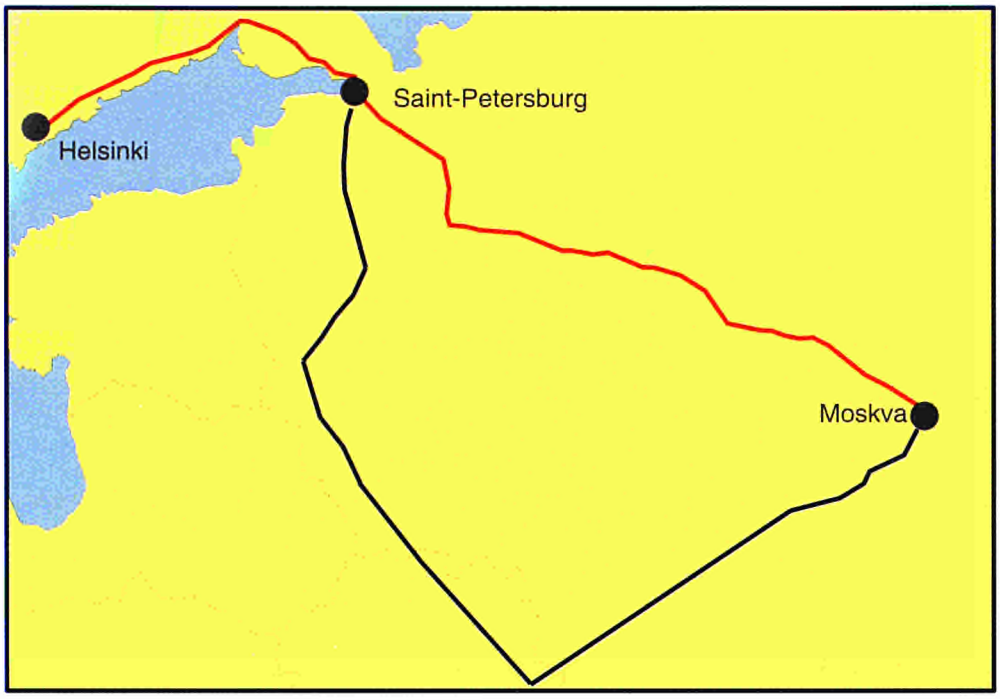
The two governments would prefer a BOT (build-operate-transfer) solution for the construction of the new bridge. This type of project is particularly suited to mixed financing since the direct revenues generated, in the form of tolls by this new infrastructure, might be significant.

Annex A

Multimodal corridor (Helsinki–)Finnish/Russian border–St Petersburg–Moscow (rail and road)

Project

Corridors identified by the 1994 pan-European Transport Conference



Project description

The Finnish/Russian itinerary Helsinki–St Petersburg–Moscow, located on priority corridor No IX identified by the Crete Conference, connects Finland and the Nordic countries with the St Petersburg and Moscow region, the main growth area of the Russian economy. The project is of strategic importance for access to the Russian market via Finnish ports, in terms of both imports and exports of goods. It is also of considerable interest for passenger transport. Whereas after the economic changes in Eastern Europe traffic flows generally decreased, on corridor IX traffic flows increased rapidly. With Finland joining the Union in 1995, there is a major interest in the project.

The Russian part of the corridor includes around 946 km of roads and 834 km of railway lines. It has been divided into a number of sections where specific projects of new construction, rehabilitation and upgrading of existing road and rail infrastructures are already under way or foreseen in the near future. The benefits of these projects will be an increase of capacity, a reduction in travelling times and an improvement in reliability and safety of transport. Combined transport with the inclusion of sea routes will be facilitated.

Costs have been estimated only with respect to some specific projects.

State of maturity

The development of the corridor has been made a priority of both the Russian and Finnish Governments. The Finnish Government and the Russian regions concerned by the corridor signed an agreement on cooperation in 1992.

On Finnish territory, the continuation of this corridor via Helsinki to Turku is part of the Nordic triangle (one of the Christophersen Group priority projects).

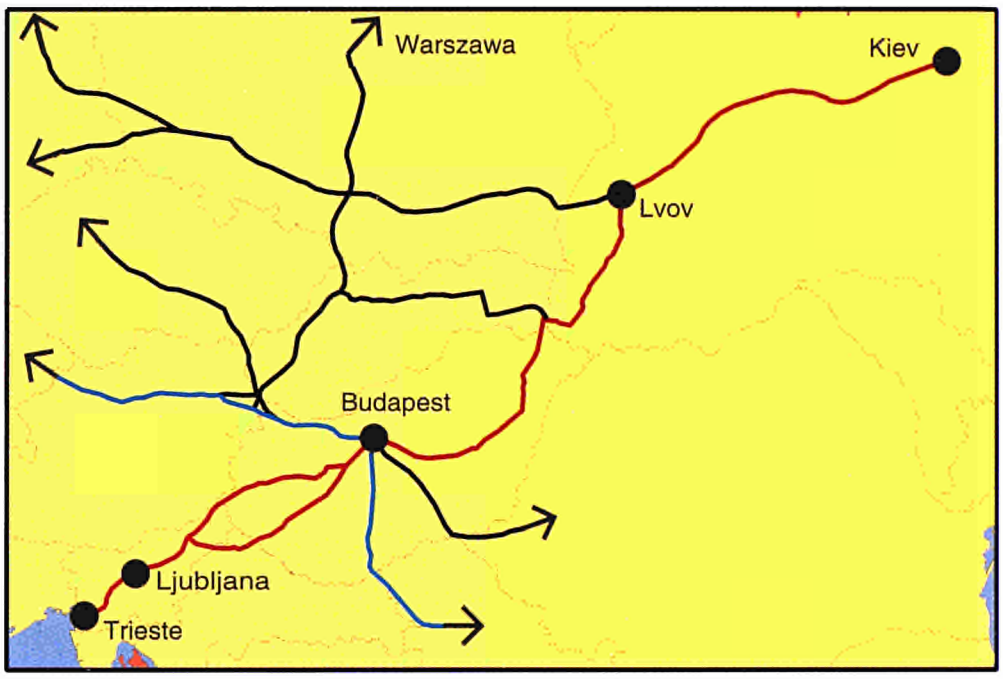
Annex A

Trieste–Ljubljana–Budapest–Lvov–Kiev (rail and road)

Project

Corridors identified by the 1994 pan-European Transport Conference

Danube



Project description

The Trieste–Ljubljana–Budapest–Lvov(–Kiev) route, located on the main branch of priority Corridor No V, identified by the Crete Conference, is part of the extension of the trans-European network. It connects Italy with Slovenia, Hungary and the Ukraine.

Corridor V is linked to the Crete priority Corridors IX (Plovdiv–Kiev–Helsinki) and III (Berlin–Kiev).

The improvement of the infrastructure and removal of bottlenecks will facilitate commercial relations within the regions as well as trade with the European Union. Trieste, as the starting point of Corridor V, is the most important port in the North Adriatic; the further development of short sea shipping routes and combined transport would substantially increase trading potential in the corridor. Potential distance savings for international transport, increase of capacity, reduction in travelling and waiting times, improvements in reliability and safety are further benefits to be gained from the specific projects of upgrading or new construction of existing road and rail infrastructures.

The development of the corridor is a priority for all participating countries.

A transport agreement was concluded between Slovenia and the European Union and a memorandum of understanding on the establishment of the Slovenian and Hungarian direct railway link was signed by Slovenian and Hungarian ministers of transport.

The road corridor is part of the trans-European motorways (TEM) up to the Hungarian border. Its total length is about 1 900 km.

Part of the Slovenian corridor is already upgraded to motorway standards. A further upgrading of the network to a four-lane motorway with a designed speed of 100/120 km

and the construction of a direct link between Slovenia and Hungary, which is the main component of the development of the road corridor, is foreseen.

As far as Hungary is concerned, the planned motorways M3 (25% already in operation) and M7 (40% already existent) are on the corridor and are to be considered as Hungarian infrastructure priorities. The Budapest ring motorway, connecting the M3 and M7, is under construction.

The location of the border-crossing point to Ukraine has been determined. On the Ukrainian side, a severe upgrading of the existing road system is necessary.

State of maturity

Financial studies and a preliminary routing of the corridor on Slovenian and Hungarian territories up to the Ukrainian border are under way. Feasibility studies regarding the layout were financed by the EBRD and are included in the Slovenian and Hungarian road plans.

For the M3 and M7 projects in Hungary, a competitive bidding concession is under way.

A general study for the Hungarian border–Kiev link (770 km) has been finalized. Work on the corridor should be completed by the year 2008.

Investment costs

The estimated cost for the whole motorway project amounts to ECU 3 491 million.

The estimated total cost on Slovenian territory is ECU 99.2 million. Loans from the EBRD and the EIB for an amount of ECU 48.5 million for the improvement of the main east–west road network in Slovenia have been signed.

As regards the total estimated costs on the Hungarian territory, the M3 motorway programme amounts to ECU 1 051 million and the M7 programme to ECU 840 million.

Regarding the Ukrainian part, from the Hungarian border up to Kiev, the expected costs are about ECU 1 500 million.

The rail corridor is part of the TER network. Its total length is about 1 800 km.

The major part between Trieste and the Ukrainian border is included in the AGC and ACCT network but does not meet their requirements. The creation of suitable conditions for the development of combined transport will be a priority.

The construction of a link missing between Slovenia and Hungary constitutes the major component of the development of the rail corridor. The approximate length of this missing link is 42 km.

Existing rail infrastructures on the Slovenian territory are rehabilitated and partially upgraded with support of the Community under the financial protocol to the Transport Agreement between the Community and Slovenia and with a loan from the EBRD. These works should allow speeds of 160 km/h.

A general upgrading programme on the Hungarian territory includes the railway lines located on the corridor. The upgrading and reconstruction works planned should allow speeds of 140-160 km/h.

The Ukrainian section needs modernization and reconstruction in order to allow speeds of 120 km/h and the introduction of inter-modal facilities.

State of maturity

On Italian territory, a high-speed train is planned in three phases leading from Turin to Trieste. This project will constitute an appropriate continuation on Corridor V.

Work on Slovenian territory is under way. As regards the Hungarian upgrading works, a preliminary feasibility study has been completed but the starting date cannot be estimated at this stage.

As regards the missing link, the transport ministers of Slovenia and Hungary signed a memorandum of understanding in December 1993. Building this section is one of the priorities in the infrastructure planning of both countries.

A financial feasibility study is to be carried out on the Ukrainian section. TACIS could possibly be involved in its financing.

Work on the corridor should be completed by 2007.

Estimated investment

The estimated total costs for the railway projects are estimated at ECU 4 500 million.

Concerning the missing link between Slovenia and Hungary, the estimated construction costs amount to ECU 74 million on Slovenian territory and ECU 89 million on Hungarian territory.

The EIB supports the modernization of Slovenian Railways with a loan of ECU 60 million and the EBRD with a loan of ECU 50.5 million.

Annex A

Baltic Sea telematic platform

Project description

A Finnish proposal on a Finnish/German/Russian pilot project entitled 'Telematics in foreign trade delivery management in the Baltic Sea area' has been made to the Group. This pilot project aims at improving logistic systems on the Baltic seaboard and adjacent areas. The introduction of these systems will improve the competitiveness of companies operating in the area and allow for a more effective use of multimodal transport chains between riparian Baltic States and between these States and the European Union, in particular after the accession of Finland to the Union.

The TEDIM programme was prepared by Finnish, German and western Russian private companies and supported by their respective governments. It contains 13 subprojects that can be summarized in three main components that will ensure a balanced development of the transport land/sea corridor:

(i) development of network-based logistic information systems;

(ii) telematics cooperation between customs authorities and railway companies;

(iii) modernization and upgrading of cargo handling and data-communication facilities.

The networked systems that will be developed in the framework of this programme will increase the cohesion of participating countries by introducing common business practices and technical and other standards. It should be noted that, whenever possible, the technical solutions chosen will be based on existing or developing Union standards so as to ensure the interoperability of the logistic systems with other systems developed in European waters.

The project will be kept open to all riparian Baltic States.

State of maturity

The TEDIM programme is based on an ongoing Finnish/Russian project. The various work packages of the programme are expected to be completed between 1995 and 1998.

Investment costs

A preliminary evaluation of the estimated cost for the entire programme is ECU 80 million. The investment costs will, to a large extent, be borne by the participating private firms. Specific breakdowns are not available.

Annex B

Energy project descriptions

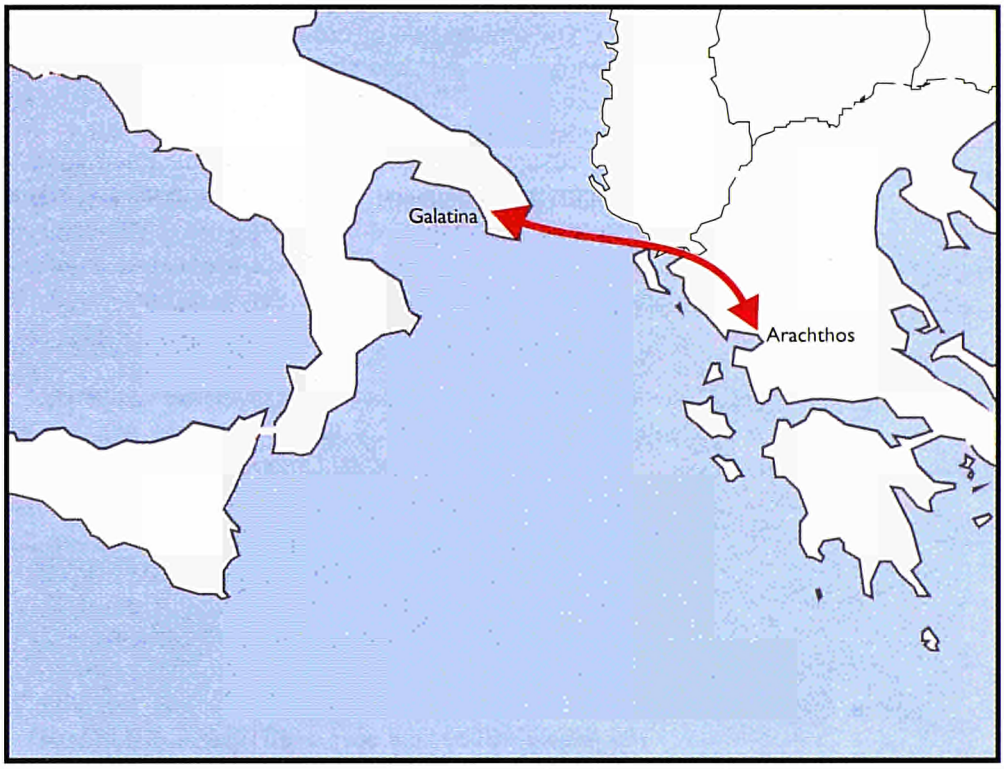
List A: Priority energy network projects

a4: Electrical interconnection between Italy and Greece

Priority projects

Other projects

Existing networks



Project description

The purpose of this project is the connection of the Greek network (at present isolated) to that of Italy and to the interconnected European network (the UCPTE network), improving the system reliability and security of supply. This will also contribute to the implementation of the internal market, allowing electricity exchanges, giving access to new supply sources and creating the physical conditions for increased competition in the electricity markets.

The project consists of the following elements:

(i) submarine cable: 160 km long, from Porto Badisco (Italy–Puglia) to Aetos (Greece–Ipiros), 500 MW/400 kV, one of the deepest cables in the world (1 000 m deep near Corfu);

(ii) overhead lines: to Galatina in Italy (45 km) and to Arachthos in Greece (190 km);

(iii) conversion stations: DC/AC at Galatina and Arachthos.

The total cost is approximately ECU 300 million (75% for Italy and 25% for Greece).

The financial viability is limited because of the high construction costs. However, there is potential long-term economic viability if other elements, in many cases very difficult to quantify, are taken into consideration, such as:

(i) possible electricity exchanges through Greece between Italy and the other Balkan countries and Turkey;

(ii) direct and indirect economic benefits in Greece and southern Italy;

(iii) political aspects of the project;

(iv) security of supply in southern Italy.

Environmental impact assessments (EIAs) have been carried out in Italy and partly in Greece (for a conversion station and a part of the route). In Italy, the routing had to be modified; approval from the Ministry of the Environment is pending. In Greece, no major problems are anticipated; small changes in the DC layout (110 km from the coast) have been required and the EIA for this part was submitted in November 1994.

State of maturity

Given the configuration of the seabed, there is a need for a trial laying of the cable. A prototype of the cable is being manufactured. The construction permits will be issued in both countries as soon as the environmental impact assessments are approved. The final ordering of the cable is subject to the successful completion of the authorization procedures.

Commissioning is foreseen by the end of 1997.

The financing of the project is not yet finalized. Aid of ECU 35 million has been granted by the Community initiative REGEN I (ERDF 1989-93). Further aid from Interreg — REGEN II (ERDF 1994-99) is foreseen. The EIB has been contacted for a loan by the two operators.

Some progress has been made during the Christophersen Group exercise. The contract for the manufacture of the cable has been signed, manufacture of a prototype cable (several kilometres in length) to carry out laying tests *in situ* has advanced and an agreement on the use of the interconnection has been reached between the two companies concerned (ENEL and PPC).

The remaining problems are:

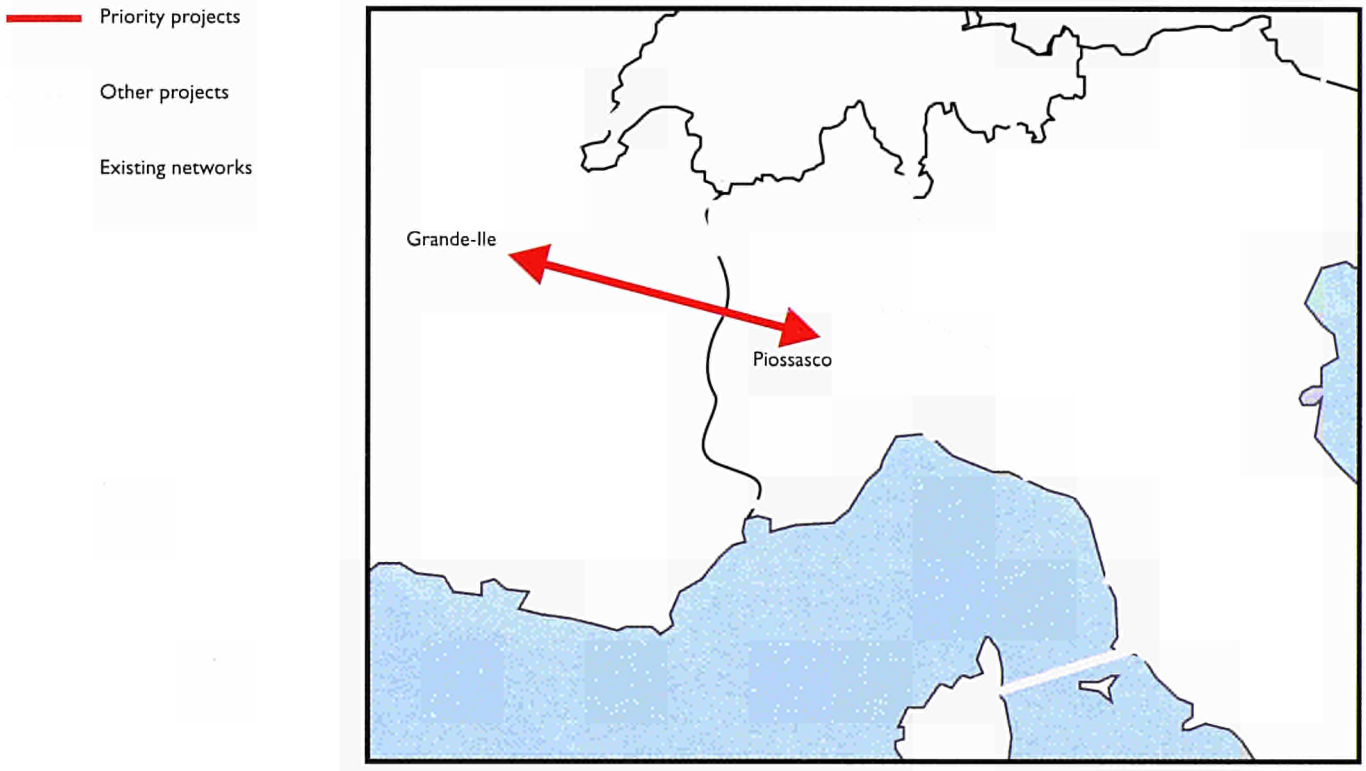
(i) the low financial profitability and thus the need to take into consideration long-term elements;

(ii) the authorization procedures which have to be completed in Italy and Greece;

(iii) the financing of the project, which has to be finalized.

Annex B

b6: Electrical interconnections between France and Italy



Project description

The purpose of the project is to increase the capacity of the interconnection between France and Italy while improving security of supply. The interconnection capacity will be doubled. This will contribute to the implementation of the internal market, allowing increased electricity exchanges and transit, and improving the physical conditions for increased competition in the electricity markets.

The project involves the construction of 151-km-long (95 km in France and 56 km in Italy) overhead lines (400 kV/2 × 2 000 MVA).

The total cost is approximately ECU 170 million (ECU 110 million for France and ECU 60 million for Italy).

The profitability is excellent because of the optimization of production capacities and the supply of electricity for a potential new industrial zone near Turin.

Environmental impact assessments (EIAs) have been carried out in both countries. In France, the EIA has been completed and accepted. In Italy, the routing will have to be revised by the company concerned (ENEL).

State of maturity

In France, the Déclaration d'utilité publique (Declaration of Public Utility) was confirmed in 1992. Construction has not yet commenced, pending authorization from the Prefet de région. In Italy, a new route will be proposed by ENEL.

Commissioning is foreseen for 1998.

The project will be entirely financed by the companies concerned (EDF and ENEL).

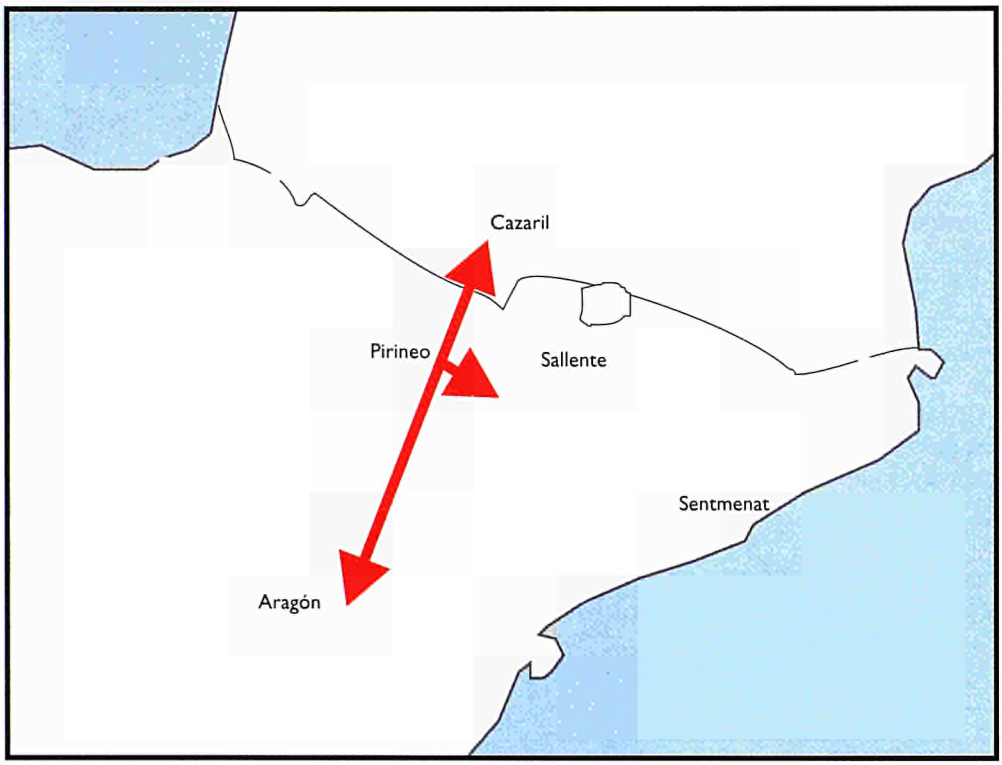
Annex B

b7: Electrical interconnection between France and Spain

Priority projects

Other projects

Existing networks



Project description

The purpose of the project is to increase the electricity exchange capacity between the electrical systems of the Iberian peninsula and those of France and the rest of Europe. This will contribute to security of supply as well as the internal market and cohesion objectives.

The project consists of 242-km-long (55 km in France and 187 km in Spain) overhead lines (400 kV/2 × 1 600 MVA).

The total cost is approximately ECU 115 million (ECU 60 million in France and ECU 55 million in Spain).

The economic viability of the project is good and there are no problems concerning financing.

State of maturity

In France, the Déclaration d'utilité publique and the construction permits were confirmed in 1994. Construction has not yet started.

In Spain, most of the work is already completed. Remaining work will progress in parallel with the work in France.

A construction period of three years will be required.

The project will be entirely financed by the companies concerned (EDF and REE).

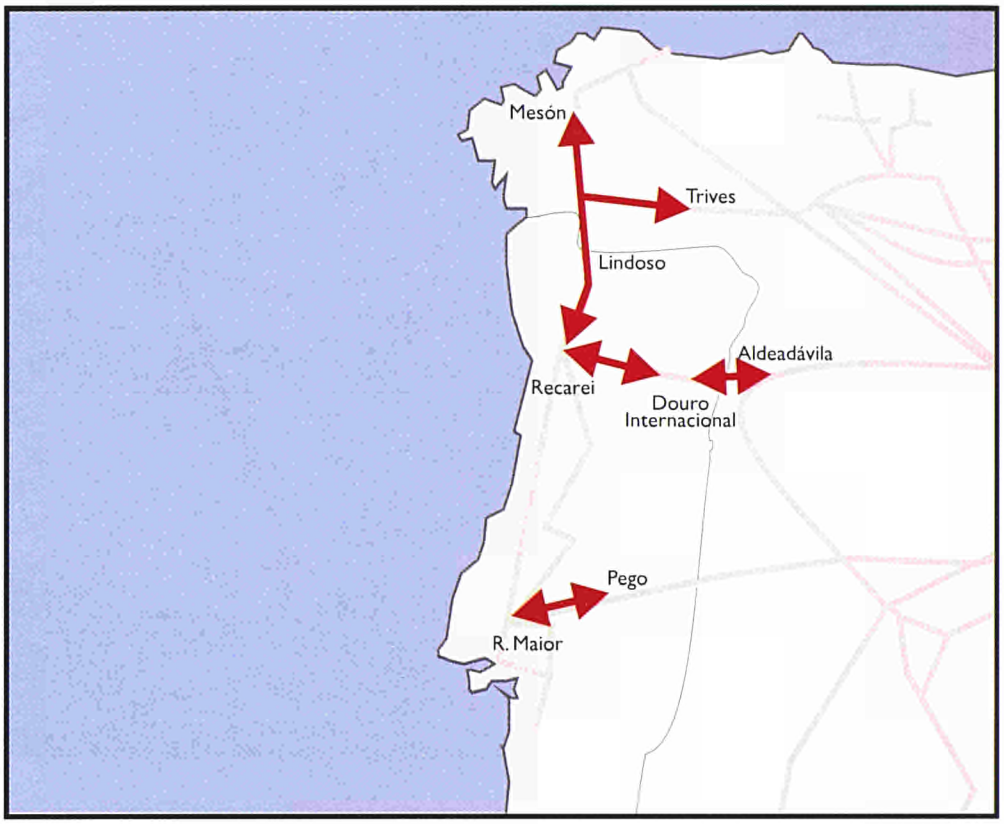
Annex B

b10: Spain–Portugal: Electricity interconnections (including an internal connecting line within Portugal)

Priority projects

Other projects

Existing networks



Project description

The project will significantly increase the capacity of interconnection between Spain and Portugal; it will contribute to the implementation of the internal market allowing increased electricity exchanges between Spain and Portugal and, in the longer term, transit of French electricity to Portugal; it will improve the physical conditions for increased competition in the electricity markets. The project will also improve security of supply: the enhanced interchange capacity will make it possible to benefit from the complementarities, in terms of security of supply, of the Spanish and Portuguese electrical systems.

The electricity interconnections between Spain and Portugal comprise the following three complementary projects:

(i) northern interconnection: Mesón (E)–Cartelle (E)–Lindoso (P)–Recarei (P)

This project is composed of the following three sections:

- Mesón (E)–Cartelle (E)–Lindoso (P): the interconnection line between the two countries;
- Lindoso (P)–Riba d'Ave (P)–Recarei (P): the construction of a second line to reinforce the capacity over this section;
- Cartelle (E)–Trives (E): the construction of this new line will complete the transmission infrastructure in Galicia and improve the security and reliability of the northern interconnection;

(ii) north-eastern interconnection: Recarei (P)–Douro International (P)–Aldeadávila (E). This project concerns the reinforcement of a line in Portugal and the construction of a few kilometres of new lines in Spain;

(iii) central connection: Rio Maior (P)–Pego (P). This project concerns the reinforcement of this line within Portugal.

These three projects should be seen as the achievement of an overall highly coherent interconnection strategy between the two countries. The guaranteed capacity of interconnection between Spain and Portugal will grow from 300 MW to 1 800 MW (35% of the peak load in Portugal).

The total cost of these three projects amounts to approximately ECU 110 million.

The economic viability is good. The project will reduce production costs and losses and will allow the best use of the available production capacities (hydroelectric versus thermal) of the Spanish and Portuguese power systems.

Environmental impact assessments (EIAs) were carried out for the northern interconnection. In Portugal, principles of a solution have been found for the layout in a national park. In Spain, an EIA is not necessary for the remaining 10 km of the interconnection near the Portuguese border.

For the north-eastern interconnection and the central connection, no major problems are anticipated.

State of maturity

The northern link is under construction:

(i) for the Mesón (E)–Cartelle (E)–Lindoso (P) line, 10 km remain to be constructed in Spain, near the Portuguese border, due to the modification of the original route. Completion of this work is expected by June 1995;

(ii) completion of the second line, namely Lindoso (P)–Riba d'Ave (P), is expected by May 1996, the section Riba d'Ave–Recarei being already completed;

(iii) completion of the new line Cartelle (E)–Trives (E) is expected by the end of 1996.

The completion of the central connection is expected by 1997 and the north-eastern interconnection by 1999.

The projects will be financed by the companies from own resources and through loans. The EIB has approved an ECU 57 million loan to the Spanish operator for the northern interconnection.

The remaining problems are:

(i) for the northern interconnection, the obtaining of construction permits for the remaining (approximately 10 km) section of the line in Spain (waiting for a Declaration of Public Utility to be signed) and Portugal (waiting for the approval of modifications to the layout);

(ii) for the north-eastern interconnection and the central connection, progress on the authorization procedures.

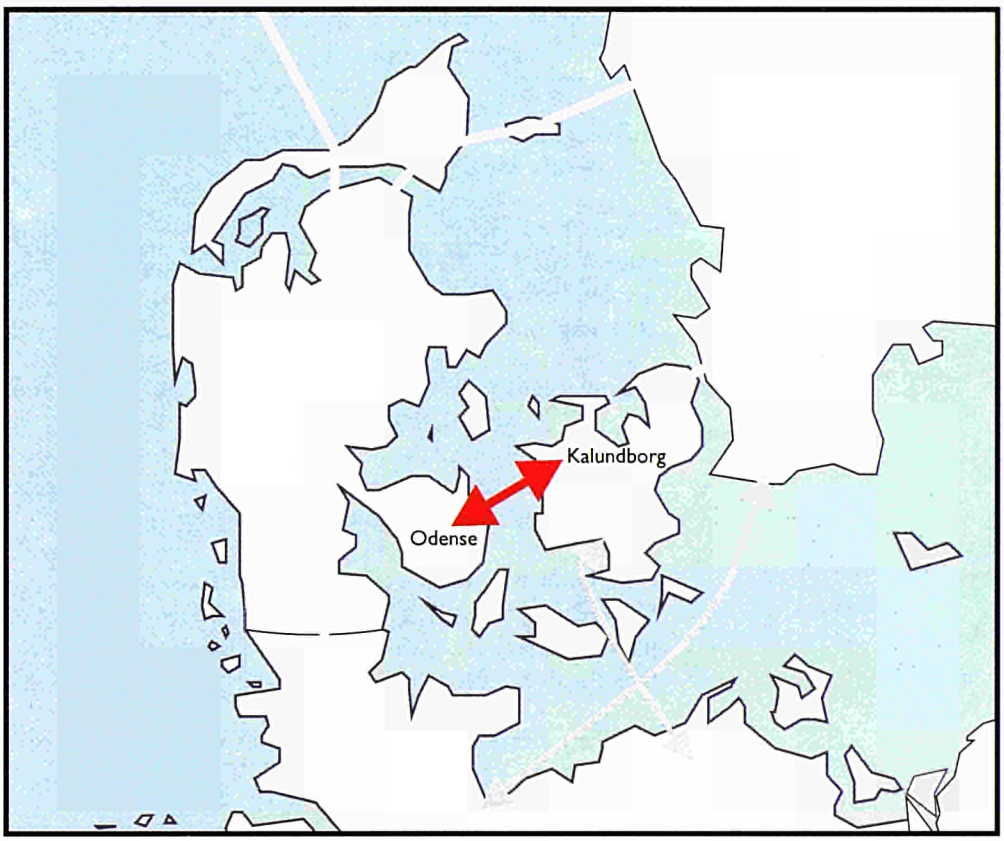
Annex B

c2: Electrical interconnection between the eastern and western parts of Denmark

Priority projects

Other projects

Existing networks



Project description

The purpose of this project is the connection of the eastern and western networks in Denmark, at present separate. The continental part (western part) is synchronously connected to UCPTE, while the island part (eastern part) is synchronously connected to Nordel. The project will thus enable exchanges of electricity between east and west Denmark and between UCPTE and Nordel operators in general. The project consists of a DC link composed of 30 km of 400 kV submarine cable and 40 km of underground cable and conversion stations. The cable will enable electricity exchanges of up to 500 to 600 MW within Denmark.

The estimated total direct cost for the project is between ECU 135 and 200 million, to be shared between the two utilities operating respectively in east and west Denmark.

The short-term financial profitability is uncertain but is under study and the use of the interconnection is being negotiated. There is potential long-term economic viability in view of the strategic aspects, and if wider exchanges are taken into consideration. It would marginally facilitate overall transfers of hydroelectricity from Scandinavian countries to northern Germany. As with all the other existing or foreseen links between the Nordel and the UCPTE networks, the project will contribute towards realizing the role of 'pumping storage capacity' that could be played in the future by these Nordic countries for the rest of northern Europe.

State of maturity

Technical specifications of the project will be published shortly.

Commissioning is expected by early 1998.

The remaining problems are:

(i) the cost of investment may be recovered by the companies responsible for the project through tariff increases, under the Danish Electricity Act. However, the financial profitability of the project is uncertain;

(ii) negotiations on use and financing of the interconnection have to be completed.

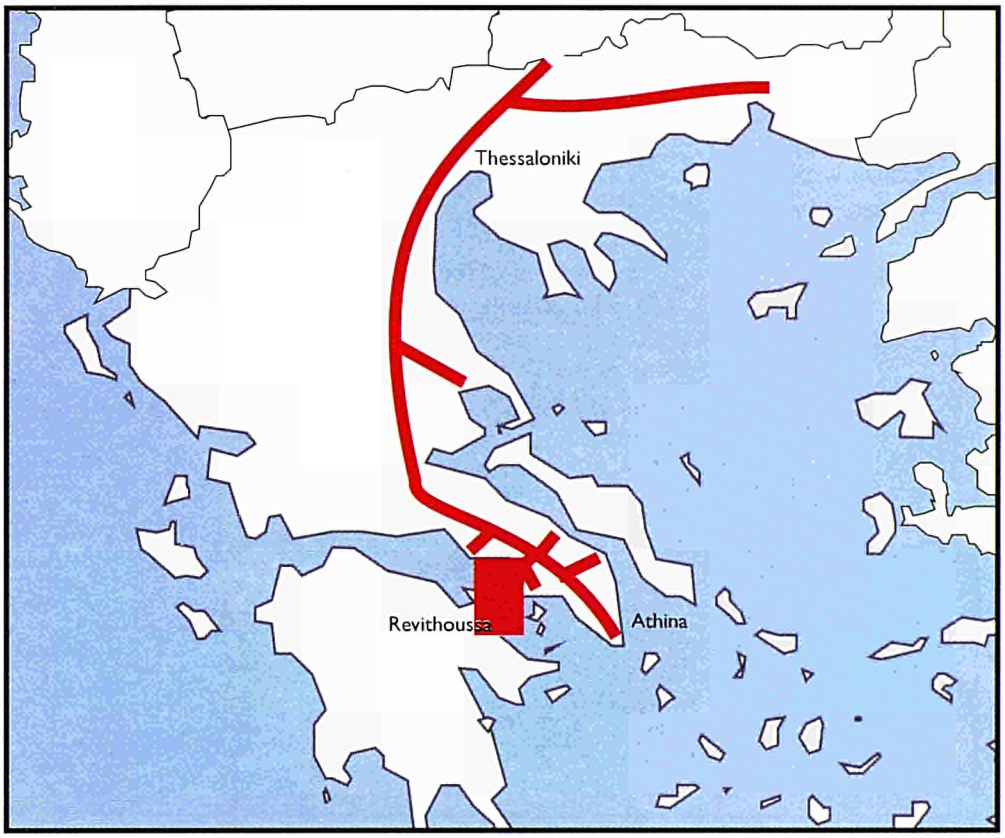
Annex B

e6: Introduction of natural gas in Greece

Priority projects

Other projects

Existing networks



Project description

The purpose of the project is to give Greece access to a new source of energy.

The project is of strategic importance for Greece; it will foster regional development, enhance the diversification of primary energy supply away from oil, make a major contribution to the improvement of the environment via the reduction of pollution, particularly in urban areas, and introduce new degrees of freedom in electricity generation.

The project will make an important contribution to cohesion and security of energy supply objectives and will improve the competitiveness of economic activities established in Greece.

The supply of natural gas will come to Greece from Russia by pipeline and by LNG from Algeria. The project involves the construction of a gas pipeline (510 km) from the border with Bulgaria to the Athens area, several branches to the main consumer centres, and an LNG terminal at Revithoussa (an island facing the coast west of Athens).

The total cost (apart from the distribution networks) is estimated between ECU 1 300 and 1 500 million.

Although the financial profitability is low, the project has an acceptable economic viability because of the benefits derived from supply diversification, reduction of pollution and other strategic advantages.

Environmental studies have already been undertaken, demonstrating the substantial benefits to be expected with virtually no adverse impacts. The completed project will bring about a decisive improvement in environmental conditions in the Athens, Thessaloniki and other urban areas.

State of maturity

Internal discussions, followed by the setting-up of a project group, started in 1982. A special body for the realization of the project was established in 1987 (DEPA). The construction of the main pipeline commenced in 1991, and 495 km of the total length of 511 km have been welded so far.

The complete project (main pipeline, high-pressure branches, LNG terminal) is scheduled for completion in 1998.

Total expenditure in the years 1990 to 1994 amounted to ECU 400 million, financed by ECU 149 million of Community aid, a USD 10 million loan from the EIB and a USD 100 million loan from the ECSC Guarantee Fund.

For the 1994-99 period, total expenditure might reach ECU 2 000 to 2 200 million (including public distribution networks). The sources of funds foreseen for the period 1994-99 will be:

(i) the ERDF aid already decided under the new CSF for Greece and that foreseen under the Interreg-REGEN II Community initiative;

(ii) ECSC loan (the remainder);

(iii) bank loan(s) (the EIB has been contacted);

(iv) government (as a shareholder);

(v) private partners (as shareholders in the distribution companies).

Considerable progress has been made during the Christophersen Group exercise, namely:

(i) completion of the construction of the main gas pipeline;

(ii) setting-up of a more efficient project management structure;

(iii) signing of the contract for the sale of gas to the electricity undertaking, which will be the biggest customer;

(iv) ERDF aid provided for in the new Community support framework for Greece and in the Interreg II initiative;

(v) negotiation of an agreement in principle with Russia to postpone the first gas supplies to 1997;

(vi) drafting of the bill concerning the urban distribution system.

The remaining problems concerning basically financial profitability, financing and construction delays are as follows:

(i) to make the agreement with Russia official;

(ii) to have the distribution bill adopted by the Greek Parliament;

(iii) to speed up the completion of the high-pressure branches and prepare for the penetration of gas into the industrial market;

(iv) to speed up the completion of the urban distribution networks, this being the sector in which the introduction of gas will have its greatest economic value;

(v) to speed up construction of the LNG terminal (Algerian contract);

(vi) to tie up the financing.

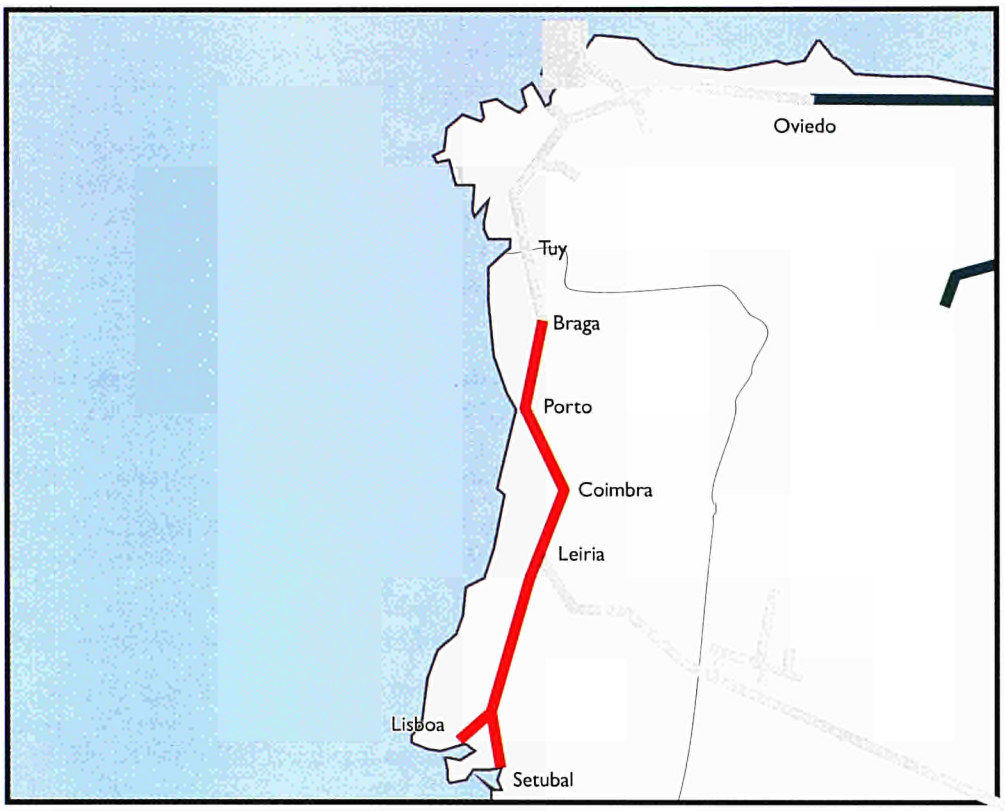
Annex B

e5: Introduction of natural gas in Portugal

Priority projects

Other projects

Existing networks



Project description

The purpose of the project is to give Portugal access to a new source of energy. Portugal has traditionally been heavily dependent on imported oil and coal for its energy needs, the current level of that dependency being around 90%. Given the desirability of diversifying energy supply, thus enhancing supply security, and under increasing environmental pressures, the government has sought to introduce gas to the energy economy of the country. The government has formed a Portuguese consortium named Transgás. Shareholders of Transgás are: Gás de Portugal (34%), Electricidade de Portugal (EDP) (29%), Caixa Géral de Depósitos (29%), the Portuguese State (5%) and Portgás, Lusitaniagás and Setgás with 1% each, the first three being State-owned companies. Another consortium, Turbogás, has been set up to build and operate a new combined-cycle gas turbine which will consume the bulk of the gas. The project as a whole is the biggest civil project ever undertaken in Portugal. The proportion of the country to benefit from the gas supply will be considerable: 80% of the population and 85% of industry are ultimately expected to have access. During the building phase, 4 000 new jobs will be created, while in the longer term it is expected that lower energy costs will improve industrial competitiveness, thus boosting market share and jobs.

The project involves the construction of the Sétubal–Braga pipeline to supply natural gas to Portugal. Natural gas will be taken from the Maghreb–Europe line and transported by means of an interconnecting pipeline (see Project f6) running through Spain and which will connect with the Sétubal–Braga pipeline.

The total cost of the project (1993-97) amounts to ECU 440 million.

The economic viability is acceptable; this has been confirmed by the EIB evaluation of the project. Financial profitability is acceptable if there is public aid (results of the preliminary feasibility study: 11% ROR with 40% of public aid).

The project is expected to make a major contribution to the reduction of pollution, with a reduction of 20 to 30% in CO_2 emissions expected for the year 2000, notably in Lisbon and other urban areas. Specifically, CO_2 emissions will be reduced by 2.5 mt/year, and SO_2 by 50 kt/year. The project has been the subject of public consultations, following which the corresponding competent authorities have given their approval.

State of maturity

About 80% of the construction contracts have been committed to date. Construction work started in July 1994.

The financing arrangements have been designed as follows:

(i) the concession agreement established that, at the end of each year, 25% of the assets of Transgás should be financed from shareholders' funds;

(ii) as far as the main pipeline (Sétubal–Braga) is concerned, the European Regional Fund committed ECU 82 million in 1993 under the Community initiative REGEN I.

It is foreseen that the project will also receive a further Regional Fund subsidy under the Community support framework for Portugal for the period 1994-99, or alternatively obtain Interreg II funds, to cover 40% of the investments;

(iii) Transgás has obtained an ECU 354 million loan from the EIB for the project, as well as for the Portuguese section of the interconnecting pipeline (Leiria–Spanish border). Transgás has also requested an additional PTS 20 000 million loan from the ECSC.

The project has considerably advanced during the Christophersen Group exercise, namely:

(i) economic viability has proved to be acceptable;

(ii) financing of the project has been finalized;

(iii) signing of the contracts for the construction of the project has made good progress;

(iv) construction of the main gas pipeline (Sétubal–Braga) has started.

The remaining problems are:

(i) to conclude the contracts with the electricity sector (main gas user);

(ii) to prepare the penetration of gas into other sectors.

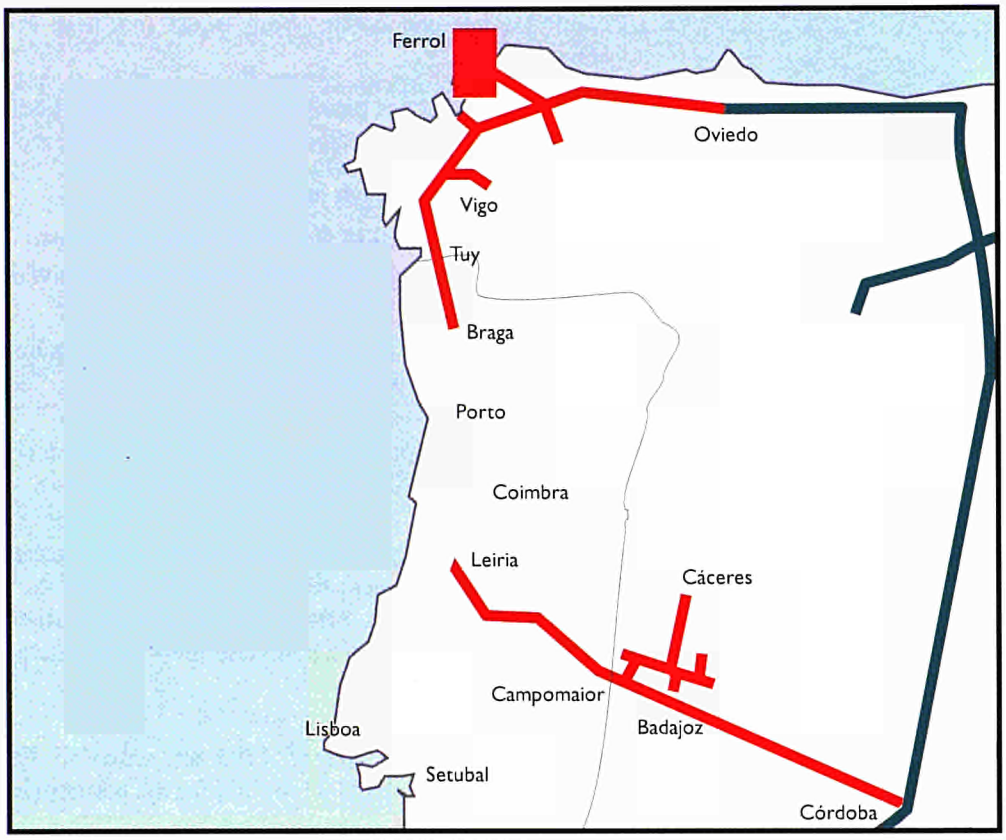
Annex B

f6: Spain–Portugal natural gas interconnections (including introduction of natural gas into Galicia and Extremadura)

Priority projects

Other projects

Existing networks



Project description

The purpose of the project is the interconnection of the natural gas networks of Portugal and Spain and the extension of the natural gas networks to new regions. The southern interconnection will bring gas to Portugal and at the same time will provide gas to the Extremadura region of Spain. The northern interconnection will connect with the existing Spanish network (already connected to the French system) providing security to the Iberian system and, at the same time, will bring gas to the north-western part of Spain.

The realization of this project is connected to the introduction of natural gas in Portugal. As in the case of Portugal, the arrival of natural gas in Galicia and Extremadura will benefit the economic activity established in these regions.

The project will interconnect the natural gas networks of Portugal and Spain by means of two high-pressure pipelines, located as follows:

(i) southern interconnection: from Cordoba (Andalusia) to Leiria (central Portugal)

The Cordoba–Leiria line will form a branch of the Maghreb–Europe pipeline, enabling Algerian gas arriving at Cordoba from Tarifa to be transported on to Leiria in Portugal and to be delivered to the Sétubal–Braga line.

The Cordoba–Leiria line will be devoted almost exclusively to transit purposes. Only 5 to 10% of the gas will be used for sale to Spanish customers in the Extremadura region;

(ii) northern interconnection: from Braga (northern Portugal) to Tuy (Galicia) and to Oviedo

The Tuy–Braga gas pipeline will connect with the Sétubal–Braga line at Braga, thus linking the Portuguese and Spanish networks via the Galician extension.

This Galician extension includes:

- an LNG terminal at El Ferrol, able to receive vessels with a capacity of up to 130 000 m^3, two LNG tanks with a capacity of 100 000 m^3, and a regasification capacity of 500 000 m^3/h;
- 450 km of 20/26 inches 72-bar pressure pipelines with capacities ranging from 225 000 m^3/h to 500 000 m^3/h.

The total cost of the project is about ECU 800 million (ECU 337 million for the southern interconnection and ECU 461 million for the northern).

The economic viability of both interconnections is acceptable. The financial profitability for the southern interconnection is acceptable given the public aid from the ERDF. This has been confirmed by the EIB evaluation. For the northern interconnection, the subproject Oviedo–Tuy appears to have a limited financial profitability.

State of maturity

Expenditure up to the end of 1993 amounted to ECU 7 million for the southern interconnection and to ECU 37 million for the northern interconnection.

The project is scheduled for completion in 1996, for the southern interconnection, and in 1997, for the northern interconnection.

The project is in Objective 1 regions as defined for the purpose of assessing eligibility for European Regional Fund support. Portugal and Spain have included this project in their regional development plans (1994-99) submitted to the Commission with the intention of obtaining such support (through the Community support framework or Interreg II scheme).

The Portuguese and Spanish CSFs (1994-99) have been approved by the Commission. Regional Fund support to the southern and northern interconnecting pipelines is foreseen under the Interreg II initiative.

For the southern interconnection, the EIB has agreed a loan for the construction of the Portuguese section. For the Spanish section an agreement on the shares of Transgás and Enagás in the operating company has recently been reached (49 and 51% respectively).

During the Christophersen Group exercise, a firm decision to make the gas interconnection through the south was taken. In particular, for the section within Portugal, financing of the project has been finalized (as in the case of Project e5) and about 40% of the contracts for the construction have been signed.

The main remaining problems are:

(i) for the northern interconnection, the low financial profitability;

(ii) for the southern interconnection, on the Spanish side, the delay in tying up the financing due to negotiations concerning the operator;

(iii) the finalizing of ERDF aid decisions;

(iv) the need to optimize the development of the gas infrastructure throughout the geographic entity constituted by Portugal and the contiguous regions of Spain, while taking account of the storage capacity requirements and of concern regarding diversification of the gas supply.

Annex B

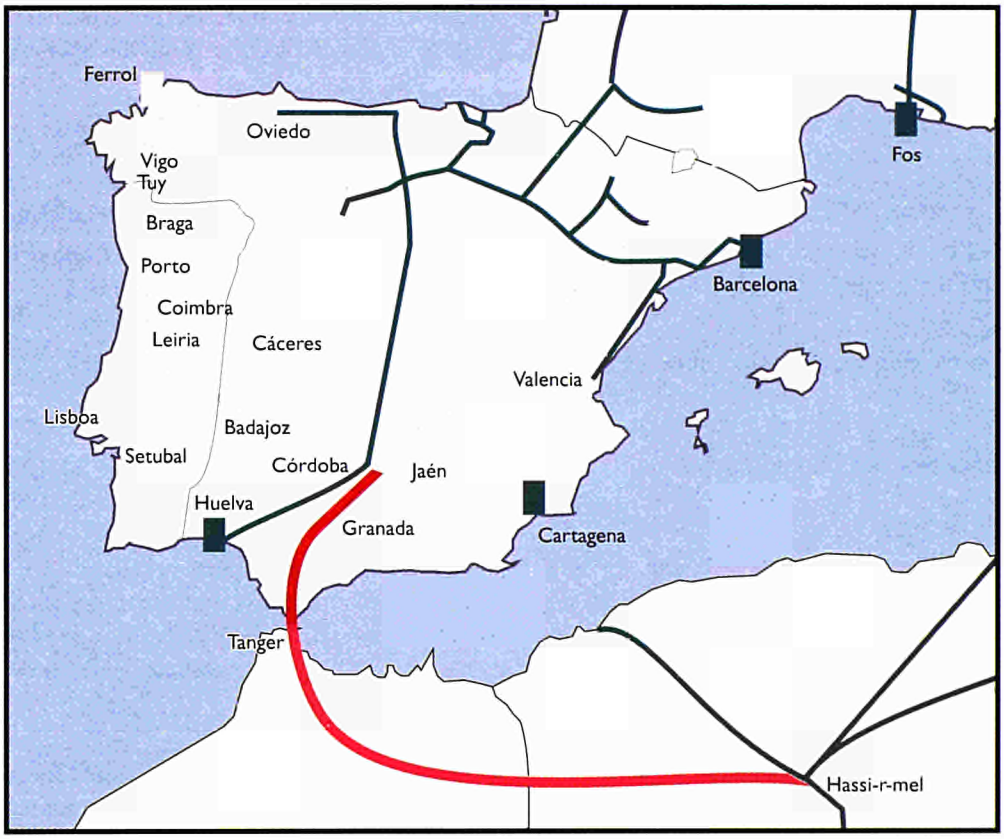
h4: Natural gas pipeline Algeria–Morocco–European Union

- section from Tangier to Tarifa and
- section from Tarifa to Cordoba

Priority projects

Other projects

Existing networks



Project description

This project gives access by pipeline to the Algerian gas reserves, facilitates the planned doubling of present gas consumption in Spain, and enables the transit of gas for the Portuguese market. In a later phase, this project could be extended (from Cordoba to Fos/Toulouse) to provide an alternative route for Algerian gas to the rest of Europe. This project will increase diversification of overall energy supply, and thus supply security. It will also help to foster cooperation and stability in the Maghreb countries, which is in the interest of the European Union.

The arrival of the Maghreb line in Europe is of long-term significance for European gas supply, providing as it does a major new input to the European gas system. It has been designed with a capacity that is intended to be sufficient to supply other European countries in addition to Portugal and Spain.

The project covers the Gibraltar crossing (from Tangier in Morocco to Tarifa in Spain) and the Iberian section (from Tarifa to Cordoba, also in Spain) of the Maghreb–Europe high-pressure gas pipeline.

The line is sized to provide for a net export capacity of 18 500 million m^3/year. The used capacity in this first phase will be 8 500 million m^3/year for the supply of all the

Portuguese market and part of the Spanish market. The remaining 10 000 million m^3/year will be available for future new markets.

The cost of the line from Tangier to Cordoba is estimated at ECU 446 million (Tangier–Tarifa, ECU 198 million, and Tarifa–Cordoba, ECU 248 million).

The appraisal of the overall project (including the pipelines to be constructed in Algeria and Morocco) resulted in acceptable economic ROR. The assessment done by the EIB confirmed the economic viability of the overall project.

From the environmental point of view, there are substantial benefits with virtually no adverse impacts. The project is expected to bring about a reduction in emissions of 7.9 mt/year in CO_2 and 170 kt/year in SO_2 throughout Spain.

State of maturity

The construction of the Spanish land section has recently been awarded to two construction groups. The construction of the underwater section across the Straits of Gibraltar has recently started.

Construction of a 530 km section from southern Algeria to the border with Morocco began on 30 June 1994.

The contract for the construction of the 545 km section across Morocco has been awarded.

The EIB has authorized a loan of USD 530 million to EMPL (100% Enagás affiliate) to finance the 40% of Enagás' participation in the cost of the Moroccan and Tangier–Tarifa sections of the pipeline. The Banco Central of Spain has also agreed to a USD 92 million loan for this section.

The Tarifa–Cordoba line has been included by the Spanish Government as an Objective 1 region project in its 1994-99 regional development programme, which has been submitted to the European Regional Fund as part of its application for assistance. The amount of Regional Fund aid to be given to this project is not yet known.

For the Tarifa–Cordoba line, an agreement on the shares of Transgás and Enagás in the operating company (30 and 70% respectively) has recently been reached.

During the Christophersen Group exercise, the financing of the project has been finalized for the sections in Algeria and Morocco, including the Gibraltar crossing (operators' own funds and EIB loans), and the construction of the gas pipeline in Algeria commenced.

The remaining problem for the section in Spain (Gibraltar–Cordoba) is the delay in finalizing the financing due to the negotiations concerning the operator.

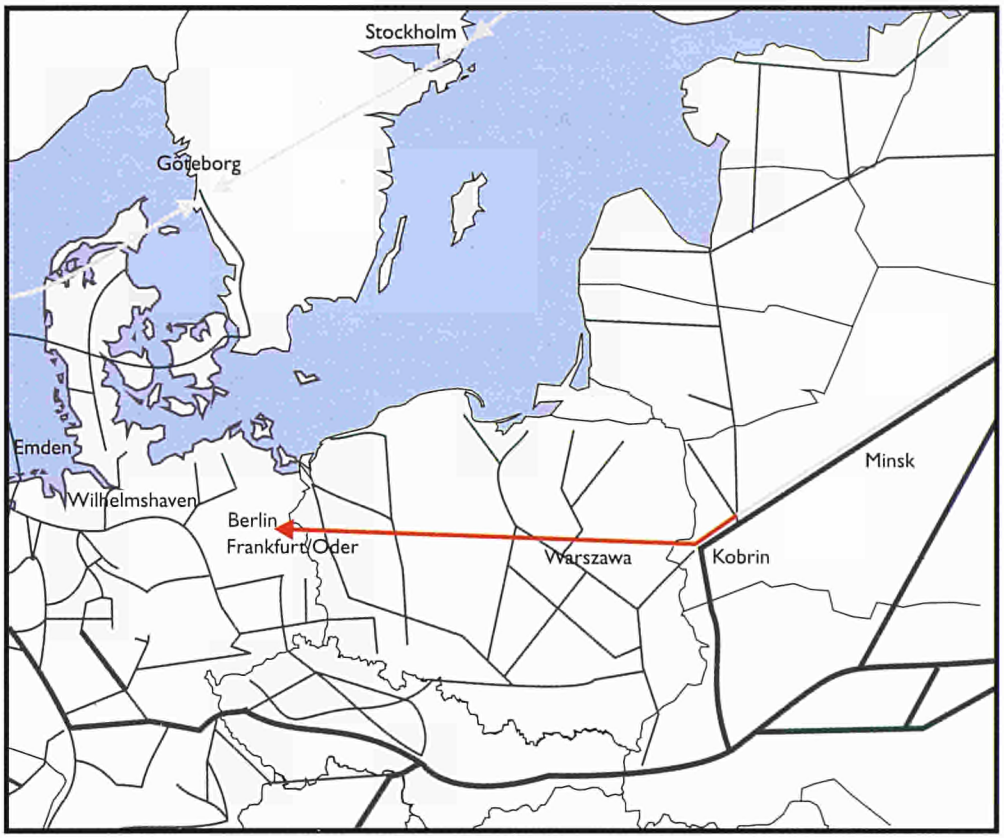
Annex B

h7: Natural gas pipeline Russia–Belarus–Poland–European Union

Priority projects

Other projects

Existing networks



Project description

The purpose of the project is to enhance the supply and security-of-supply situation of the European Union by establishing an alternative route (via Poland) to the already existing route (via Ukraine, Slovakia and the Czech Republic) for Russian gas. The project is of importance for the traditional customers of Russian gas in the Community (Germany, Italy and France).

The project involves the construction of a new interconnection pipeline linking the gas networks of eastern Germany, Poland and Belarus. In Belarus, this new interconnecting pipeline will be connected to the existing pipeline system coming from Siberia. The project would consist of about 200 km of pipeline in Belarus, about 700 km of pipeline in Poland and a system of lines in eastern Germany for the transmission of the gas within the European Union (several thousand million m^3/year).

The project could be implemented in two stages:

(i) in a first stage, the interconnecting pipeline will link eastern Germany and western Poland and could transmit, in an initial period, around 700 million m^3/year. This section would be commissioned by end 1995/beginning 1996;

(ii) in a second stage, the interconnecting pipeline will link western Poland to Belarus, raising the capacity of the line to around 5 000 million m^3/year. This section would be commissioned in 1997-98.

It is worth noting that, in a final phase, Russia plans to produce natural gas on the Yamal peninsula in north-west Siberia: 150 to 200 000 million m^3/year of which 50 000 million m^3 could be supplied at the German border (Frankfurt-on-Oder). For the transport, a new multipipeline system of 2 900 km in Russia, 600 km in Belarus and 700 km in Poland will be needed. The final phase is scheduled to be completed around the year 2010. This final phase is to be considered as a separate project from the present one.

The cost of investments needed in Germany is estimated at ECU 830 million.

The project shows a potential economic viability that needs to be demonstrated.

From the environmental point of view, huge benefits can be expected during the operation phase.

State of maturity

The two stages of the project could be realized within the next three to four years. The contractual basis between Russia, Belarus and Poland for the construction has been laid down and the discussions with regard to the marketing of the gas arriving at Frankfurt-on-Oder are ongoing.

A clear definition of the project and of the ownership-financing implications is still to be disclosed.

The receiving system in eastern Germany may be eligible for aid from EU Structural Funds (ERDF). The sections in Poland and Belarus may be eligible for aid respectively from the PHARE and TACIS programmes. Both the EBRD and the EIB have manifested their interest in considering short- to medium-term investment in energy transmission lines in Central and Eastern Europe.

During the Christophersen Group exercise, the definition of the project has progressed. There is, however, insufficient published information about the first stage, although it seems to be nearing completion.

Annex B

List B: Other energy network projects

d6: Electrical interconnection between Austria and Italy

The purpose of the project is to increase the electricity exchange capacity between the electrical systems of Austria and Italy and to enable full use to be made of the extensive hydroelectricity resources of these two countries. In addition, it will allow the transit, through Austria to Italy, of electricity produced in Bavaria, the Czech Republic and Slovakia and vice versa.

The present exchange capacity between Austria and Italy is very low (approximately 200 MW), when compared with the size of both systems, and is fully used.

The project consists of 185-km-long (152 km in Italy and 33 km in Austria) overhead lines (400 kV/1 500 MVA) linking Linz in Austria to Sandrigo in Italy (approximately 60 km north-west of Venice), and would be in operation in 1998.

d3/d11: Electrical interconnections between Norway and the Continent

This project has great significance for the economy and security of supply in the north-west of the European continent. The purpose of the project is to increase the electricity exchange capacity between the electrical systems of Norway (member of the Nordel network) and Germany and the Netherlands (and the rest of the UCPTE network). The project will enable increased use to be made of the large hydroelectricity-generation resource and capacity existing in Norway in order to supply the German and Dutch markets. During the night the Netherlands would supply electricity to Norway.

In the present configuration of the networks, electricity can be exchanged between Norway and Germany, transiting through the Danish and/or the Swedish grids.

The project consists of two submarine HVDC cables to be laid down from the south-western coast of Norway (Lista) respectively to Germany (to be interconnected to the Preussen Elektra grid) and to the Netherlands (to be interconnected to the SEP grid). The transmission capacity of each of these new cables will be in the range of 600 to 800 MW. The project also includes the reinforcement of the internal electricity transmission grid in Norway, by new overhead lines and the reinforcement of existing lines, needed to serve these new submarine cables.

n2: Baltic ring electrical interconnections

The purpose of the project is to establish electrical interconnections between the networks of Germany, Poland, the Baltic countries and Finland and, where needed, to reinforce them. Given the fact that the electrical networks of Finland, Sweden, Denmark and Germany are already interconnected, the implementation of the project will constitute an electrical ring around the Baltic.

The project includes:

(i) an AC/DC/AC (back-to-back) conversion station near the Polish/Lithuanian border and a connecting line to the Polish grid;

(ii) the strengthening of high-voltage lines in Poland and the Baltic countries;

(iii) the strengthening of the interconnection between Finland and Estonia, either through the St Petersburg area or through a new submarine cable;

(iv) the laying of new submarine cables across the Baltic (possibly between Sweden and Finland and/or Sweden and Poland).

It is worth noting that the 'East–West high voltage DC interconnection' project (Borken–Berlin–Warsaw–Minsk–Smolensk) is to be considered as a separate project from the Baltic ring project, because of its technical characteristics (long-distance transmission and large capacity, in the order of 4 000 to 5 000 MW) which introduce a new concept into the transmission of electricity.

IX — Conclusions of the Essen European Council (on the subject of trans-European networks)

Trans-European networks in the transport, energy and environment spheres

The European Council welcomes submission of the report from the Group of Personal Representatives. It confirms that the 11 projects decided in Corfu and the three new projects concerning the Nordic Member States and Ireland have already been started or can be started shortly. The list of priority transport and energy projects is set out in Annex I. For the rest, the European Council endorses the most important recommendations of the report of the Christophersen Group (see Annex II).

It welcomes the progress that has been made in selecting major transborder projects, particularly with the countries of Central and Eastern Europe (CCEE) and the Mediterranean basin. The European Council stresses the importance of traffic management systems, particularly in the case of air traffic.

The European Council welcomes the creation of a special window at the European Investment Bank for the financing of trans-European networks, as indicated in Annex III to these conclusions. The Member States, the Commission and the European Investment Bank will continue to monitor progress made in financing priority projects. It shares the Group's view that the financing requirements for each project must be examined individually.

The European Council is pleased that a start is to be made on priority transport infrastructure projects, particularly rail projects, as from 1995.

The European Council calls upon the Ecofin Council to adopt the necessary decisions, acting on proposals from the Commission, to top up the funds currently available for the trans-European networks.

The European Council emphasizes the Group's finding that obstacles are mainly of a legal and administrative nature, and urges the Commission and the Member States to take appropriate measures to overcome these obstacles.

The European Council calls upon the European Parliament and the Council to take the necessary decisions on the guidelines for transport and energy in the near future, in order to create a lasting framework for the Union's activity in this area.

Annex I

List of priority transport and energy projects

A. Transport projects

Work begun or to begin by the end of 1996

1.	High-speed train/combined transport North–South	I/A/D
	Nuremberg–Erfurt–Halle/Leipzig–Berlin	
	Brenner axis: Verona–Munich	
2.	High-speed train (Paris–)Brussels–Cologne–Amsterdam–London	
	Belgium: French/Belgian border–Brussels–Liège–Belgian/German border;	B
	Brussels–Belgian/Dutch border	B
	United Kingdom: London–Channel Tunnel access	UK
	Netherlands: Belgian/Dutch border–Rotterdam–Amsterdam	NL
	Germany: (Aachen–)[1] Cologne–Rhine/Main	D
3.	High-speed train South	E/F
	Madrid–Barcelona–Perpignan–Montpellier	
	Madrid–Vitoria–Dax	
4.	High-speed train East	
	Paris–Metz–Strasbourg–Appenweier(–Karlsruhe)	F/D
	with junctions to Metz–Saarbrücken–Mannheim	F/D
	and Metz–Luxembourg	F/L
5.	Conventional rail/combined transport: Betuwe line	NL/D
	Rotterdam–Dutch/German border(–Rhine/Ruhr)[1]	
6.	High-speed train/combined transport France–Italy	F/I
	Lyons–Turin	
	Turin–Milan–Venice–Trieste	
7.	Greek motorways: PATHE:	GR
	Rion–Antirion, Patras–Athens–Thessaloniki–Promahon (Greek/Bulgarian border) and	
	Via Egnatia:	
	Igoumenitsa–Thessaloniki–Alexandroupolis–Ormenio (Greek/Bulgarian border–)Kipi (Greek/Turkish border)	
8.	Motorway Lisbon–Valladolid	P/E
9.	Conventional rail link Cork–Dublin–Belfast–Larne–Stranraer	IRL/UK
10.	Malpensa airport (Milan)	I

[1] Ongoing construction support already provided at Community level.

11.	Fixed rail/road link between Denmark and Sweden (Øresund fixed link) including access routes for road, rail and air	DK/S
12.	Nordic triangle (rail/road)	FIN/S
13.	Ireland/United Kingdom/Benelux road link	UK/(IRL)
14.	West coast main line	UK

B. Energy projects

(Projects on which work has already begun or may begin in the short term — up to 1997 — and which are to be completed in the medium term, up to 1999).

Projects in the European Union

1.	Italy–Greece	electrical interconnection (submarine cable)
2.	France–Italy	electrical interconnection
3.	France–Spain	electrical interconnection
4.	Spain–Portugal	electrical interconnections
5.	Denmark	east-west electrical interconnection (submarine cable)
6.	Greece	natural gas network
7.	Portugal	natural gas network
8.	Portugal–Spain	gas interconnection

Projects with neighbouring countries

9.	Algeria–Morocco–European Union	gas delivery pipeline
10.	Russia–Belarus–Poland–European Union	gas delivery pipeline

Annex II

Main recommendations

The Group of Personal Representatives of the Heads of State or Government invite the European Council to endorse the recommendations contained in the Group's report. These can be summarized as follows:

The European Council is asked to:

(a) endorse the priority nature of the projects in Annex 1, Part I, and Annex 2, list A, and invite:

— the Council and the European Parliament, in setting up the guidelines identifying the projects of common interest, to include these priority projects;

— the Member States and the Community to give all appropriate support to these projects and to implement them as soon as possible;

(b) urge the European Parliament and the Council to adopt as soon as possible the guidelines and the accompanying financial Regulation;

(c) take note of the potential relevance of a network approach in selected sectors of environmental protection, and invite the Commission, the Council and Member States to examine the possibility of establishing guidelines for environmental network infrastructure and the obstacles to environmental infrastructure, stressing the use of existing financial instruments in support of possible future guidelines and priority projects;

(d) acknowledge that obstacles of an administrative, legal and regulatory nature are a major brake on the implementation of priority projects, and invite Member States and the Commission to take all appropriate initiatives needed to eliminate such obstacles;

(e) confirm the objective of strengthening cooperation with neighbouring countries to connect the trans-European networks with networks outside the Union, in particular in Central and Eastern Europe and the Mediterranean area;

(f) confirm the objective of facilitating private/public partnerships, and invite Member States, the Commission, the EIB and the EIF to take appropriate measures to this effect;

(g) confirm that measures will be taken — if proven necessary — in order that priority projects do not run into financial difficulty or other obstacles which would jeopardize their implementation;

(h) acknowledge that the particular approach of the Christophersen Group, consisting in identifying and accelerating selected priority projects, gives added-value to the implementation of trans-European networks, and that this effort should be continued in the future, and consequently to endorse the follow-up procedure recommended by the Group, namely that:

(i) The European Council should provide, on a continuing basis, the necessary impetus to the implementation of priority projects on the basis of an annual report to be submitted by the Commission to the European Council in accordance

with the White Paper action plan adopted by the European Council in December 1993.

(ii) If the achievement of individual priority projects is threatened, the Commission should report to the Council, which shall immediately consider appropriate responses together with, as appropriate, the Commission and the EIB.

(iii) Member States and the Union should be asked to consider the creation of suitable vehicles ('project authorities'), open to public and private operators as appropriate, to ensure the promotion of priority projects; the Commission, the EIB and the EIF should support actively the coordination between parties potentially interested in priority projects, *inter alia* by project seminars arranged by the Commission; the Commission will examine how the abovementioned vehicles can be facilitated through Community legislation.

(iv) The Commission and the EIB should, in consultation with Member States, monitor progress in the financing of individual priority projects, and if financial obstacles of a general nature and common to several priority projects occur, they will consider appropriate action.

Annex III

EIB financing of trans-European networks

The Council encourages the Bank to continue the work on which it is already well advanced in helping to finance the priority projects and, subject to its normal appraisal and lending criteria, to make an enhanced effort in the future. This effort should be undertaken in close association with the Member States and the promoters concerned, and should include the private sector in financing and risk-taking to the extent possible.

To push this forward, the EIB is introducing a special window for the financing of infrastructure of Community interest, in particular the list of priority TEN projects. The purpose is to maintain or increase the momentum of EIB lending which was achieved under the Edinburgh facility. This will cover transport, telecommunications, and energy investment in the public sector, the private sector and partnerships between the two, as well as environmental lending for projects of a trans-European nature. The window will be available for lending not only within the Union but also in Central and Eastern Europe as well as in Scandinavia, the Mediterranean area and the transalpine crossings.

The main features are, in appropriate circumstances:

(a) where there is a sound financial case, the provision of longer maturities and longer capital grace periods so as better to match the debt repayment required to the cash-flow characteristics of the projects;

(b) provision of refinancing facilities to the banks at the outset of a project so that they can be assured that their loans can be refinanced in accordance with their normal maturities;

(c) involvement of the EIB in the earliest possible stages of the financial and contractual structuring of a project in cooperation with the Member States and the Commission so that the Bank's involvement and that of the EIF can facilitate the identification of suitable financial arrangements;

(d) an extension of the Bank's normal eligibility rules to provide for the more systematic inclusion of transport, energy and telecommunications network infrastructure irrespective of whether it is located inside or outside the assisted areas.

The Bank will also keep its Board of Directors regularly informed on the progress which has been made and will report annually to its Board of Governors.

Annex IV

Report from the Council to the Essen European Council on a strategy to prepare for the accession of the associated CCEE (extract)

Transport/TEN

The integration of the associated countries into the trans-European networks is a key element in strengthening their economic and political ties to the Union.

In light of this, the Group of Personal Representatives of the Heads of State or Government in the areas of transport and energy has addressed the question of the expansion of the TEN to neighbouring States, taking into account the relevant guidelines for the Union area and the priorities of the neighbouring States. Their recommendation to intensify coordination procedures is an important step toward establishing the trans-European networks beyond the Union.

The group recommended further work on the following projects:

— Berlin–Warsaw–Minsk–Moscow (rail and road)

— Dresden–Prague (rail and road)

— Nuremberg–Prague (road)

— permanent connection over the Danube between Bulgaria and Romania (rail and road)

— Helsinki–St Petersburg–Moscow (rail and road)

— Trieste–Ljubljana–Budapest–Lvov–Kiev (rail and road)

— Russia–Belarus–Poland–EU (natural gas pipeline)

— Baltic Sea telematic platform and Baltic ring electricity network.

The Commission and the Member States will, in accordance with the conclusions of the Group, continue to examine intensively which corridors and projects shall be given priority and how they can be completed. For this the available financial instruments are to be used in the most efficient way possible. This applies to European Investment Bank loans, the PHARE programme and cross-border cooperation in connection with the Interreg II Community initiative.

Particular attention should be given to the special TEN window announced by the EIB, which is also relevant for projects in the associated countries. Plans in the areas of transport, telecommunications and energy, as well as trans-European plans in the environmental area, would come under this facility.

European Commission

Trans-European networks
The Group of Personal Representatives of the Heads of State or Government

Report

Luxembourg: Office for Official Publications of the European Communities

1995 — 249 pp. — 21 × 29.7 cm

ISBN 92-826-8995-6

Venta y suscripciones • Salg og abonnement • Verkauf und Abonnement • Πωλήσεις και συνδρομές
Sales and subscriptions • Vente et abonnements • Vendita e abbonamenti
Verkoop en abonnementen • Venda e assinaturas

BELGIQUE / BELGIË

Moniteur belge / Belgisch staatsblad
Rue de Louvain 42 / Leuvenseweg 42
1000 Bruxelles / 1000 Brussel
Tel. (02) 512 00 26
Fax (02) 511 01 84

Jean De Lannoy
Avenue du Roi 202 / Koningslaan 202
1060 Bruxelles / 1060 Brussel
Tel. (02) 538 51 69
Telex 63220 UNBOOK B
Fax (02) 538 08 41

Autres distributeurs/
Overige verkooppunten:

Librairie européenne/ Europese boekhandel
Rue de la Loi 244/Wetstraat 244
1040 Bruxelles / 1040 Brussel
Tel. (02) 231 04 35
Fax (02) 735 08 60

DANMARK

J. H. Schultz Information A/S
Herstedvang 10-12
2620 Albertslund
Tlf. 43 63 23 00
Fax (Sales) 43 63 19 69
Fax (Management) 43 63 19 49

DEUTSCHLAND

Bundesanzeiger Verlag
Breite Straße 78-80
Postfach 10 05 34
50445 Köln
Tel. (02 21) 20 29-0
Fax (02 21) 202 92 78

GREECE/ΕΛΛΑΔΑ

G.C. Eleftheroudakis SA
International Bookstore
Nikis Street 4
10563 Athens
Tel. (01) 322 63 23
Telex 219410 ELEF
Fax 323 98 21

ESPAÑA

Boletín Oficial del Estado
Trafalgar, 27-29
28071 Madrid
Tel. (91) 538 22 95
Fax (91) 538 23 49

Mundi-Prensa Libros, SA
Castelló, 37
28001 Madrid
Tel. (91) 431 33 99 (Libros)
431 32 22 (Suscripciones)
435 36 37 (Dirección)
Telex 49370-MPLI-E
Fax (91) 575 39 98

Sucursal:

Libreria Internacional AEDOS
Consejo de Ciento, 391
08009 Barcelona
Tel. (93) 488 34 92
Fax (93) 487 76 59

Llibreria de la Generalitat de Catalunya
Rambla dels Estudis, 118 (Palau Moja)
08002 Barcelona
Tel. (93) 302 68 35
Tel. (93) 302 64 62
Fax (93) 302 12 99

FRANCE

Journal officiel
Service des publications des Communautés européennes
26, rue Desaix
75727 Paris Cedex 15
Tel. (1) 40 58 77 01/31
Fax (1) 40 58 77 00

IRELAND

Government Supplies Agency
4-5 Harcourt Road
Dublin 2
Tel. (1) 66 13 111
Fax (1) 47 80 645

ITALIA

Licosa SpA
Via Duca di Calabria 1/1
Casella postale 552
50125 Firenze
Tel. (055) 64 54 15
Fax 64 12 57
Telex 570466 LICOSA I

GRAND-DUCHÉ DE LUXEMBOURG

Messageries du livre
5, rue Raiffeisen
2411 Luxembourg
Tél. 40 10 20
Fax 49 06 61

NEDERLAND

SDU Overheidsinformatie
Externe Fondsen
Postbus 20014
2500 EA 's-Gravenhage
Tel. (070) 37 89 880
Fax (070) 37 89 783

PORTUGAL

Imprensa Nacional
Casa da Moeda, EP
Rua D. Francisco Manuel de Melo, 5
1092 Lisboa Codex
Tel. (01) 387 30 02/385 83 25
Fax (01) 384 01 32

Distribuidora de Livros Bertrand, Ld.ª

Grupo Bertrand, SA
Rua das Terras dos Vales, 4-A
Apartado 37
2700 Amadora Codex
Tel. (01) 49 59 050
Telex 15798 BERDIS
Fax 49 60 255

UNITED KINGDOM

HMSO Books (Agency section)
HMSO Publications Centre
51 Nine Elms Lane
London SW8 5DR
Tel. (071) 873 9090
Fax 873 8463
Telex 29 71 138

ÖSTERREICH

Manz'sche Verlags- und Universitätsbuchhandlung
Kohlmarkt 16
1014 Wien
Tel. (1) 531 610
Telex 112 500 BOX A
Fax (1) 531 61-181

SUOMI/FINLAND

Akateeminen Kirjakauppa
Keskuskatu 1
PO Box 218
00381 Helsinki
Tel. (0) 121 41
Fax (0) 121 44 41

NORGE

Narvesen Info Center
Bertrand Narvesens vei 2
PO Box 6125 Etterstad
0602 Oslo 6
Tel. (22) 57 33 00
Telex 79668 NIC N
Fax (22) 68 19 01

SVERIGE

BTJ AB
Traktorvgen 13
22100 Lund
Tel. (046) 18 00 00
Fax (046) 18 01 25
30 79 47

ICELAND

BOKABUD LARUSAR BLÖNDAL
Skólavördustig, 2
101 Reykjavik
Tel. 11 56 50
Fax 12 55 60

SCHWEIZ / SUISSE / SVIZZERA

OSEC
Stampfenbachstraße 85
8035 Zürich
Tel. (01) 365 54 49
Fax (01) 365 54 11

BÅLGARIJA

Europress Klassica BK Ltd
66, bd Vitosha
1463 Sofia
Tel./Fax 2 52 74 75

ČESKÁ REPUBLIKA

NIS ČR
Havelkova 22
130 00 Praha 3
Tel. (2) 24 22 94 33
Fax (2) 24 22 14 84

HRVATSKA

Mediatrade
P. Hatza 1
4100 Zagreb
Tel. (041) 430 392

MAGYARORSZÁG

Euro-Info-Service
Honvéd Európa Ház
Margitsziget
1138 Budapest
Tel./Fax 1 111 60 61
1 111 62 16

POLSKA

Business Foundation
ul. Krucza 38/42
00-512 Warszawa
Tel. (2) 621 99 93, 628-28-82
International Fax&Phone
(0-39) 12-00-77

ROMÂNIA

Euromedia
65, Strada Dionisie Lupu
70184 Bucuresti
Tel./Fax 1-31 29 646

RUSSIA

CCEC
9,60-letiya Oktyabrya Avenue
117312 Moscow
Tel./Fax (095) 135 52 27

SLOVAKIA

Slovak Technical Library
Nm. slobody 19
812 23 Bratislava 1
Tel. (7) 5220 452
Fax : (7) 5295 785

CYPRUS

Cyprus Chamber of Commerce and Industry
Chamber Building
38 Grivas Dhigenis Ave
3 Deligiorgis Street
PO Box 1455
Nicosia
Tel. (2) 449500/462312
Fax (2) 458630

MALTA

Miller distributors Ltd
PO Box 25
Malta International Airport
LQA 05 Malta
Tel. 66 44 88
Fax 67 67 99

TÜRKIYE

Pres AS
Istiklal Caddesi 469
80050 Tünel-Istanbul
Tel. 0(212) 252 81 41 - 251 91 96
Fax 0(212) 251 91 97

ISRAEL

ROY International
PO Box 13056
41 Mishmar Hayarden Street
Tel Aviv 61130
Tel. 3 496 108
Fax 3 648 60 39

EGYPT/ MIDDLE EAST

Middle East Observer
41 Sherif St.
Cairo
Tel/Fax 39 39 732

UNITED STATES OF AMERICA / CANADA

UNIPUB
4611-F Assembly Drive
Lanham, MD 20706-4391
Tel. Toll Free (800) 274 4888
Fax (301) 459 0056

CANADA

Subscriptions only
Uniquement abonnements

Renouf Publishing Co. Ltd
1294 Algoma Road
Ottawa, Ontario K1B 3W8
Tel. (613) 741 43 33
Fax (613) 741 54 39
Telex 0534783

AUSTRALIA

Hunter Publications
58A Gipps Street
Collingwood
Victoria 3066
Tel. (3) 417 5361
Fax (3) 419 7154

JAPAN

Kinokuniya Company Ltd
17-7 Shinjuku 3-Chome
Shinjuku-ku
Tokyo 160-91
Tel. (03) 3439-0121

Journal Department
PO Box 55 Chitose
Tokyo 156
Tel. (03) 3439-0124

SOUTH-EAST ASIA

Legal Library Services Ltd
Orchard
PO Box 05523
Singapore 9123
Tel. 73 04 24 1
Fax 24 32 47 9

SOUTH AFRICA

Safto
5th Floor, Export House
Cnr Maude & West Streets
Sandton 2146
Tel. (011) 883-3737
Fax (011) 883-6569

AUTRES PAYS
OTHER COUNTRIES
ANDERE LÄNDER

Office des publications officielles des Communautés européennes
2, rue Mercier
2985 Luxembourg
Tél. 499 28-1
Télex PUBOF LU 1324 b
Fax 48 85 73/48 68 17

7 12 13

CM-85-94-777-EN-C

OFFICE FOR OFFICIAL PUBLICATIONS
OF THE EUROPEAN COMMUNITIES

L-2985 Luxembourg

ISBN 92-826-8995-6