

COMMISSION OF THE EUROPEAN COMMUNITIES

SEC(90) 2402 final

Brussels, 6 February 1991

Communication from the Commission to the Council
regarding a European high speed train network

Proposal for a
COUNCIL DECISION
concerning the establishing of a network
of high speed trains

(presented by the Commission)

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1. Introduction

- 1.1 In the communication on a Community railway policy of December 1989 (1), the Commission underlined the importance it attached to the development of a European high speed train network. The Council, at its meeting of 4/5 December 1989, adopted a resolution on the development, before 31 December 1990, of both a master plan specifying the priority projects to be undertaken, and the necessary measures to ensure the technical compatibility of infrastructure between the different parts of the network. The Council invited the Commission to consult a working party on these subjects.
- 1.2 The Commission convened a working party, which met on 4 occasions between 15 January and 15 November 1990. This group included representatives of the national administrations, the Community of European Railways and the major manufacturers of railway equipment. The Round Table of Industrialists and Eurotunnel have also participated, as well as representatives from Austria, Switzerland and Yugoslavia as observers. It should be underlined that the various parties interested in the development of high speed in Europe cooperate excellently within the group. Thanks to this cooperation, it has been possible to establish a common report, the summary of which is annexed to the present communication (Annex 1) (2).
- 1.3 On the basis of the work carried out by this group and taking into account its recommendations, it is already possible to make a certain number of important decisions for the future of high speed within the Community. This is the subject of the present communication.

(1) Communication COM(89) 564.

(2) The report will be transmitted to the Council separately, as a working document of the Commission's services (document SEC ...).

2. Principal Conclusions

- 2.1 The master plan of the European high speed train network, prepared on the grounds of the data currently available, is shown in Annex No 2 (1). This master plan is composed of the lines which are indispensable in order to ensure the coherence and continuity of the network at a Community level, with the exclusion of those other electrified lines of national or regional interest, which can also be used by high speed trains.
- 2.2 Priority action is necessary for the 15 "key-links", generally located in frontier zones and presenting a high level of Community interest, which are indispensable for the proper functioning of the network.
- 2.3 For historical reasons, rail infrastructure and equipment show a great diversity within the Community, making necessary the adoption of urgent measures in support of technical compatibility. The convergence of legislative, regulatory and administrative provisions concerning the running of high speed trains should be undertaken in order for the trains to be able to run on different kinds of railway, in different countries and operated by different railway companies.
- 2.4 In this context, the command and control system, necessary to enable high speed trains to run and be controlled on the network, requires particular attention. Harmonised systems having increasing compatibility and the continuation of research towards a unified system are called for. These actions should benefit from the financial contribution of the different parties concerned, notably from the railway companies as for rolling stock manufacturers and be supported as far as this is necessary, by the Community.
- 2.5 Complementary studies should be undertaken as rapidly as possible, notably on the following subjects:
- the socio-economic impact of the network on both the integrated transport market and the development of the Community, taking particular account of the change in gauge in the Iberian peninsula;

(1) Given the time limit for its preparation, the master plan does not take account of the political agreement recently reached for the link between Portugal and Spain (Corridors No 9 and No 10).

- the overall environmental impact of the network (including safety and energy aspects) giving comparisons with other transport modes;
- the financing of the key-links and other difficult parts of the network.

The studies planned, notably as regards the socio-economic impact of the network, will be carried out having regard to the work undertaken by the Commission in the context of the work programme "Europe 2000" (cf COM(90) 544 final of 16 November 1990).

- 2.6 The working party should continue work with a view to the preparation by the Commission, before the end of 1991, of complementary proposals which take account of the result of on-going and planned studies and which include the extension of the Community network towards neighbouring countries, notably in Central and Eastern Europe.

3. Commission proposals

The Commission proposes to the Council, as stated in the decision attached as Annex II:

- 3.1 - to adopt the master plan developed on the basis of data currently available;
- 3.2 - to adopt the list shown below of key-links, for which priority action should be taken in the appropriate framework:
 1. Hamburg-Copenhagen
 2. Belfast-Dublin-Holyhead-Crewe
 3. Utrecht-Arnhem-Emmerich-Duisburg
 4. Interconnection near Strasburg and near Saarbrücken
 5. London-Channel Tunnel
 6. Brussels-Luxembourg
 7. Rhine-Rhône
 8. Lyon-Turin
 9. Madrid-Barcelona-Perpignan
 10. (a) Portugal-Spain (b) Vitoria-Dax
 11. Milan-Basle
 12. Brenner link
 13. Tarvisio-Vienna
 14. Links towards and within Greece.

- 3.3 - to take note of the Commission's intention to present a draft directive in the near future, to ensure technical compatibility throughout the network, covering the convergence of legal, regulatory and administrative provisions, as regards the running of modern trains on the European high speed rail network;
- 3.4 - to take note of the Commission's intention to propose a strategy for the modernisation of the control-command system in the Community, based on the completion, in the short term, of harmonised systems and research, and in the medium term, on a unified system.

European High Speed Rail Network

Summary of the report of the working party

Introduction

The first high-speed trains started running in Japan in 1964 and in Europe in 1981. For passengers, this new mode of transport rapidly proved to be a distinct alternative to road and air transport. Among the high-speed train's trump cards: it can go right into city centres, it handles significant volumes of traffic, it is less harmful to the environment, and it consumes only electrical energy.

The high-speed train can run on conventional track, so within the European Community it can take advantage of a network of 52,000 km of electrified sections (out of a total network of 135,000 km). This means that it will be able to serve most regions of the Community, including any enclaves and peripheral areas. But for it to achieve the high performances which are its main feature (i.e. speeds of 200 km per hour and more) existing lines will have to be upgraded and new lines built. Within the Community, some 20,000 km of track will need upgrading to cope with the traffic to be carried between the major urban centres.

By cutting travel times the high-speed train reduces distances, thus making it a powerful tool in town and country planning. The European high-speed network will have a structuring effect on Community territory by boosting regional development and by promoting inter-regional links. High-speed trains cannot halt every 50 km, but an operating plan for the network would enable them to link up satisfactorily with secondary centres. By contributing to the financial stability of railway companies the high-speed train can also make it easier to keep open link lines connected to the main network.

The European high-speed network will work only if equipment is gradually developed that can move smoothly from any one point on the network to any other. There must be complete compatibility in terms of equipment, infrastructure and environmental impact but without hindering competition between firms. Taken together, those elements will constitute a common industrial product (1) which will benefit from what has been done within the Community and will thus be able to compete successfully in world markets.

(1) This could be called STEP (Speed transport European product).

Why high-speed trains?

More and more people wish to travel to attend meetings, or for reasons of trade, culture or entertainment, or quite simply to meet other people.

This increasing mobility, which is scarcely affected by hard times, is running ahead of economic progress. So a gap is opening up between people's desire to travel and the available transport capacity.

This phenomenon is particularly marked in the European Community, where the economy is growing yearly at around 2.5% whilst passenger journeys are increasing by more than 3.5%. The gap can only widen with the disappearance of national frontiers, the creation of a European economic area and the development of relations with the countries of Central and Eastern Europe.

There are no signs of human behaviour reversing that trend in the years and even decades to come. And despite remarkable advances, telecommunications does not seem able to offer an alternative to this nomadic drive. Businessmen still prefer personal contacts to teleconferences and to the exchange of telefaxes. Travel to visit family is on the increase despite better telephone communications. And as for tourism, people cannot be expected to stay in their armchairs if they want to travel.

So society will have to develop and improve its means of transport, and this means for a long time to come the three main modes, namely road, rail and air. Each of these has advantages and drawbacks, depending on the distances to be travelled, the natural barriers to be crossed, and the quality of service required by the users. Each mode of transport also has a different solution to major preoccupations such as the environment, safety and rational energy consumption.

Amongst those modes of transport, the railways, which facilitated industrial development in the nineteenth century, has been in decline since the end of the Second World War and its market share has continued to fall (1). But fresh opportunities are now opening up for rail transport, among other things owing to the gradual saturation of the two rival modes. Improved commercial management of railway companies, the development of new technologies for passenger transport, and the capacity that the railways can provide for freight (where the need is also great) are all factors that are bound to give impetus to a rethink of the future of the railways.

(1) (From 36.2% in 1965 to 21.5% in 1987 for international freight transport in Europe and from 13.2% to 7.4% over the same period for passenger transport).

It is clear in this context that the opportunities presented by a high-speed rail network, initial experience with which has proved most encouraging, deserve particular attention. The Commission stressed this in its communication to the Council in December 1989 on a common rail policy (1).

Creation of a high-level working party

After an initial in-depth debate, the Council adopted at its meeting of 4 and 5 December 1989, a resolution calling on the Commission to set up a high-level working party and to consult the working party on the development of a high-speed rail network.

The Commission convened the working party for the first time on 15 January 1990 and invited the national administrations of the Member states, the Community of European Railways, the major manufacturers of railway equipment, Eurotunnel, and the round table of industrialists to send representatives. Representatives of Austria, Switzerland and Yugoslavia were also invited to take part in the group's work, as observers.

The Commission consulted the high-level working party on the following points:

- the creation of a masterplan for a European high-speed rail network,
- identification of priority projects,
- deciding what measures to take to ensure an adequate level of technical compatibility between infrastructures, equipments and materials.

Three study groups were set up to define the network and priority projects in more detail, to look into technical compatibility, and to devise an integrated command and control system. In 1990 no fewer than 40 meetings of the working party and its study groups were held.

(1) COM(89) 564.

Summary of the report

This report, drafted after one year of discussions within the working party, is an "interim one" and contains key conclusions which cannot, however, be considered definitive for the following reasons:

- It was not possible to complete certain studies by the deadline set and their findings are available only in part
- the European high-speed rail network has to be continually adapted to the political, economic and social context of the Community and its relations with other European countries.

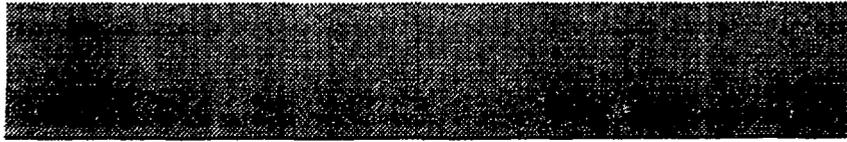
Main conclusions of the working party:

For the working party high-speed is in fact a new mode of transport which offers decided advantages to the citizens: reduction in travel time, capacity to handle a high volume of traffic, the guarantee of a high level quality service. The high-speed rail train is an alternative to road and air transport for passenger transport as well complementing those two modes of transport. The working party attaches great importance to the study under way on the complementarity between high-speed train and air transport.

The establishment of a European network is necessary to enable high-speed to develop properly and for the Community to derive the greatest possible advantages from it. The European network will comprise new lines able to cope with speeds of over 250 km per hour, old lines upgraded to handle speeds of around 200 km per hour and a number of link lines to ensure that the network is fully interconnected. The network must be designed to permit the movement of the main traffic flows in the Community (see attached illustration (1)), connections with peripheral regions, better utilisation of the European area, and improvement of links between the EFTA countries and the countries of Central and Eastern Europe.

A masterplan drawn up to cover the period up to 2010, includes the lines which are essential for the development of the European network, comprising 9,000 km of new lines, 15,000 km of upgraded lines and 1,200 km of link lines. The group agreed not to include lines designed to serve areas which are not directly situated on the main network; in any case, the whole electrified network of the Community (which is now 52,000 km) will be accessible to high speed trains. The masterplan adopted will make it possible, from Brussels, to reach London in 2h05 instead of 4h55, Madrid in 6h30 instead of 13h, Milan in 5h50 instead of 10h20, Berlin in 6h15 instead of 9h02. The masterplan is an instrument of coordination and orientation and will need to be reviewed periodically to take account of changing political, economic and social circumstances in the Community.

(1) Communication from the Commission, COM(89)238, points 2-3.



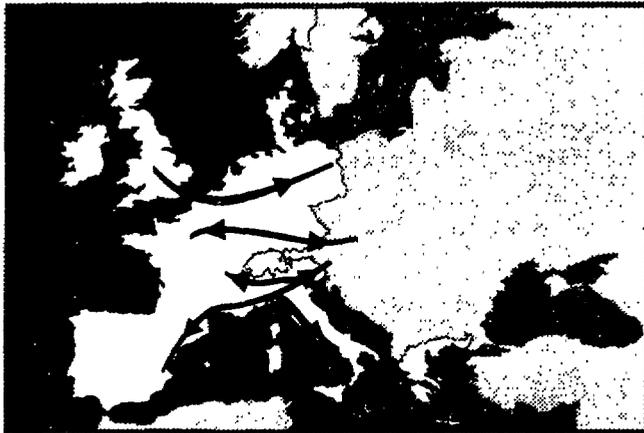
North - South Flows

Northeast - Southwest Flows

A diagram enclosed in a rectangular border. At the top is a white box with the text "North - South Flows". Below it is a map of the United States with a thick white arrow pointing from the northern states down to the southern states. Below the map is another white box with the text "Northeast - Southwest Flows".



Northwest - Southeast Flows



East - West Flows



The working party has examined in detail the fourteen principal corridors making up the masterplan. The conclusion reached is that it is in the Community's interest to intensify the economic and financial study of the fifteen key-links whose completion is necessary for the operation of the network. These sections are generally in frontier regions and have been inadequately catered for in national planning. They are considered by the working party to be priority projects.

The working party devoted particular attention to determining the level of technical compatibility necessary for the high-speed trains to be able to run on different kinds of railway line in different countries and operated by different companies. For historical reasons infrastructures and equipments currently differ widely. The whole system has been broken down into around 100 basic elements classified by origin and by the importance and urgency of harmonising them. The working party proposes that work continues on the system for guaranteeing technical compatibility and encouragement of the approximation of laws, regulations and administrative provisions on the running of high-speed trains.

One of the working party's special studies was devoted to the command and control system, i.e. the system needed to enable high-speed trains to be run and controlled on the network. At present, different and incompatible national systems co-exist. The working party recommends a strategy consisting of:

- Immediately, duplication of on-board equipment
- In the short-term (three years), adoption of harmonised systems obtained by combining common or compatible elements of the different national systems
- In the medium-term (seven to eleven years from now), definition of an overall European command and control system using the most recent developments in electronics, computing, telecommunications and avionics.

The working party recognised the need to undertake an overall environmental impact study of the European high-speed rail network to add to existing data on the comparative environmental damage caused by the high-speed trains, conventional trains, road traffic, and air traffic, and to define the measures to be taken to minimise such damage.

The contribution of high-speed to improving freight transport was also considered. No particular solution is recommended. This problem must be examined on a case-by-case basis depending on the terrain of the regions crossed, the volume of traffic, the nature of the freight, etc. However, the working party notes that establishing the high-speed network is bound to be advantageous for freight transport. The report of the high-level group on combined transport is awaited with interest.

On commercial policy, the working party confined itself to an initial discussion. The working party considered that the railway companies should bear in mind the opportunity for improving the quality of the service, communication between companies and users, examining in collaboration with the air sector the modernisation of reservation systems.

The measures to be adopted to implement the projects, namely the various legal formulas, did not concern the working party at this stage.

Finally, the crucial problem of financing the key links requires more detailed examination along the lines of Commission proposals (1) for the development of transport infrastructure and for the trans-European networks. No figure has been put on the masterplan. It is likely that it will amount to more than 100 thousand million ECU (2) for the infrastructure and 50 thousand million ECU for the rolling stock. For those countries who so wish, the financial market appears to be able to cover a large part of those amounts.

The working party's further activities

The working party considers that it should continue its work for the completion of this report, using the results of current or planned studies. Moreover, these additional considerations should enable it to take better account of the extensions of the Community's network towards its neighbouring countries.

(1) COM(86) 340.
COM(88) 340.
COM(89) 238.
COM(90) 585.

(2) cf an amount of 90 thousand million ECU quoted in the report "Proposal for a European high-speed network", Community of European Railways, January 1989.

The Main Recommendations of the Working Party

In the context of the development of a European network of high speed trains, the working party recommends that the Commission draw up proposals and take the initiatives needed to reach the following objectives:

- I. Council adoption of the master plan which has been drawn up by the working party on the basis of data currently available.
- II. Priority implementation, as appropriate, of the action needed to establish the following key-links:
 1. Hamburg-Copenhagen
 2. Belfast-Dublin-Holyhead-Crewe
 3. Utrecht-Arnhem-Emmerich-Duisburg
 4. The interconnection near Strasburg and near Saarbrücken
 5. London-Channel Tunnel
 6. Brussels-Luxembourg
 7. Rhine-Rhône
 8. Lyon-Turin
 9. Madrid-Barcelona-Perpignan
 10. Portugal-Spain and Vitoria-Dax
 11. Milan-Basle
 12. Brenner
 13. Tarvisio-Vienna
 14. Links towards and within Greece.
- III Evaluation of the socio-economic impact of the network on the integrated transport market and on the Community's development, taking into account particularly the different gauge in the Iberian peninsula.
- IV The study of the environmental impact of the network in the widest sense (including safety and energy efficiency) giving comparisons with other transport modes.
- V Application of the system for guaranteeing technical compatibility.
- VI Promoting cooperation between railways and industry in the field of standards and technical specifications.
- VII Implementation of harmonised systems of improved control-command and continued research for a single system.
- VIII Strengthening the measures taken by the railways to promote a commercial policy which guarantees, in particular, high quality services.
- IX Finance for the key links and other difficult aspects of the network.

Proposal for a
COUNCIL DECISION

concerning the establishing of a network
of high speed trains

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 75 thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas the functioning of the internal market means that the efficiency of the transport infrastructure between the regions of the Community must be reinforced and increased, in particular by means of a high speed train network to carry persons and, where appropriate, freight;

Whereas the Commission submitted to the Council in 1986 a report entitled "Towards a European High Speed Network (4); whereas the European Parliament has supported Community action in this sector (5); whereas the Community of European Railways presented at the beginning of 1989 a "proposal for a European high speed network";

Whereas the Commission submitted to the Council a communication in 1989 on a Community railway policy (6); whereas the Council adopted a Resolution on 4/5 December 1989 on the development of a high speed train network in the context of railway infrastructure and work has been carried out by the group organised by the Commission;

Whereas the development of a European high speed train network requires the elaboration of a master plan pin-pointing the priority actions to be undertaken;

(1) ...

(2) ...

(3) ...

(4) COM(88) 341 final.

(5) Starita report P.E. 109.323.

(6) COM(89) 564 final.

Whereas these actions should focus on the key links necessary for the adequate operation of the network;

Whereas a sufficient level of technical compatibility is necessary to ensure complete circulation throughout the network in the optimal conditions of service and profitability;

Whereas the recent nature of German unification has not allowed for the integration with sufficient precision of the links with the five new Länder,

HAS ADOPTED THIS DECISION:

Article 1

The European high speed network shall comprise new lines able to cope with speeds of over 250 km/h, lines upgraded to handle speeds of around 200 km/h and a number of lines to ensure that the network is fully interconnected. This network shall develop in conformity with the master plan, drawn up to cover the period up to 2010, annexed to this Decision.

Article 2

Priority actions are to be taken, in the appropriate framework, for the completion of the following key links:

1. Hamburg-Copenhagen
2. Belfast-Dublin-Holyhead-Crewe
3. Utrecht-Arnhem-Emmerich-Duisburg
4. Interconnection near Strasbourg and near Saarbrücken
5. London-Channel Tunnel
6. Brussels-Luxembourg
7. Rhine-Rhône
8. Lyon-Turin
9. Madrid-Barcelona-Perpignan
10. (a) Portugal-Spain (b) Vitoria-Dax
11. Milan-Bâle
12. Brenner link
13. Tarvisio-Vienna
14. Links towards and within Greece

Article 3

The running and control of high speed trains implies:

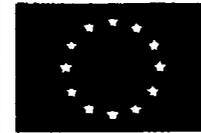
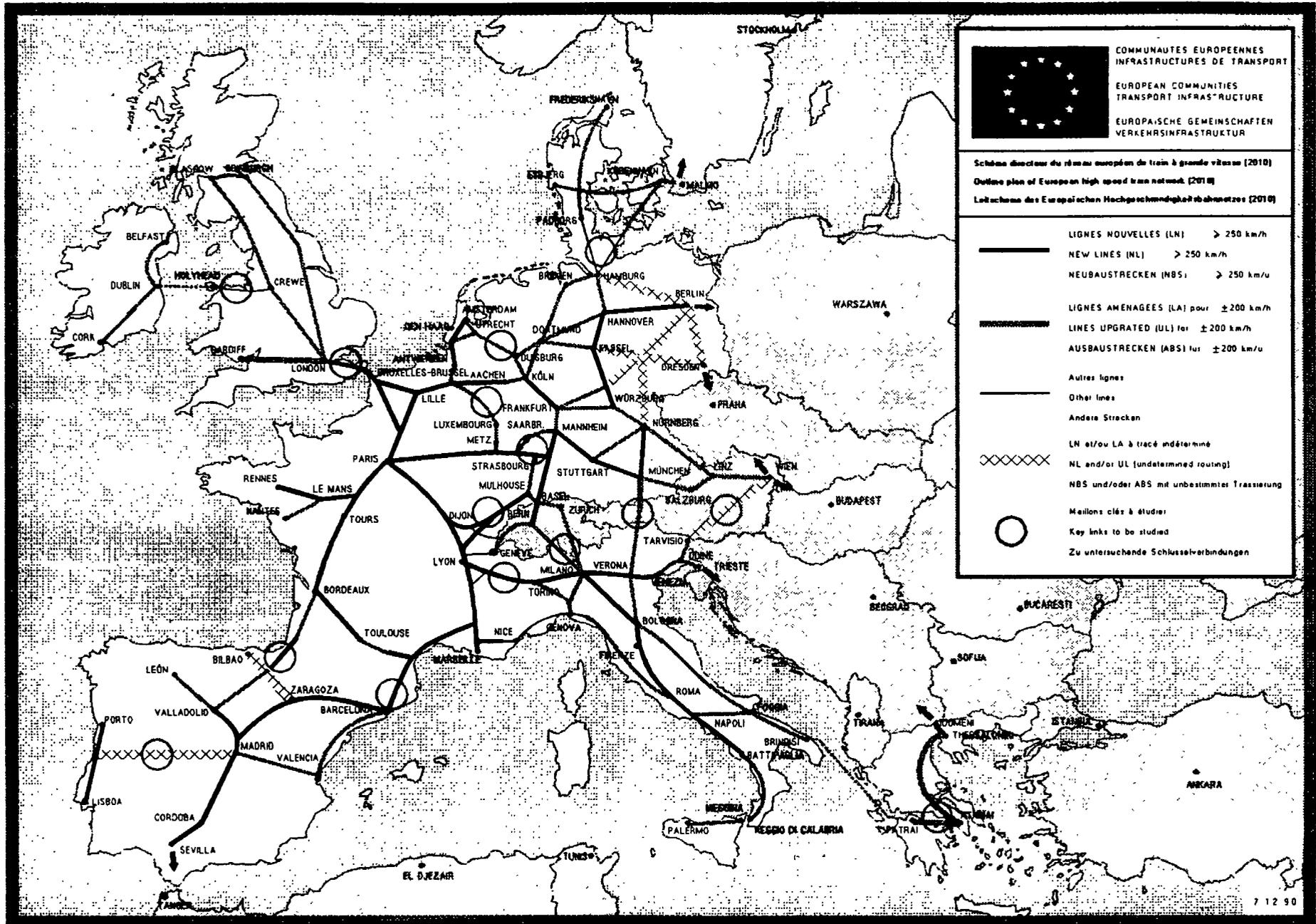
- the technical compatibility of infrastructure, equipment and rolling stock
- a harmonised control and command systems with increasing compatibility and the continuation of research towards a unified system.

Article 4

The Decision is addressed to the Member States.

Done at Brussels,

For the Council
The President



COMMUNAUTÉS EUROPÉENNES
INFRASTRUCTURES DE TRANSPORT
EUROPEAN COMMUNITIES
TRANSPORT INFRASTRUCTURE
EUROPAISCHE GEMEINSCHAFTEN
VERKEHRSINFRASTRUKTUR

Schéma directeur du réseau européen de train à grande vitesse (2010)
Outline plan of European high speed train network (2010)
Leitplan des Europäischen Hochgeschwindigkeitseisenbahnnetzes (2010)

	LIGNES NOUVELLES (LN)	> 250 km/h
	NEW LINES (NL)	> 250 km/h
	NEUBAUSTRECKEN (NBS)	> 250 km/h
	LIGNES AMÉNAGÉES (LA) pour	±200 km/h
	LINES UPGRATED (UL) for	±200 km/h
	AUSBAUSTRECKEN (ABS) für	±200 km/h
	Autres lignes Other lines Andere Strecken	
	LN et/ou LA à tracé indéterminé NL and/or UL (undetermined routing) NBS und/oder ABS mit unbestimmter Trassierung	
	Maillons clés à étudier Key links to be studied Zu untersuchende Schlüsselverbindungen	

Evaluation de l'impact sur les PME

Le développement du réseau européen de trains à grande vitesse bénéficiera aux PME en général, en améliorant les conditions de transport, et plus spécifiquement aux PME sous-traitants de l'industrie ferroviaire.