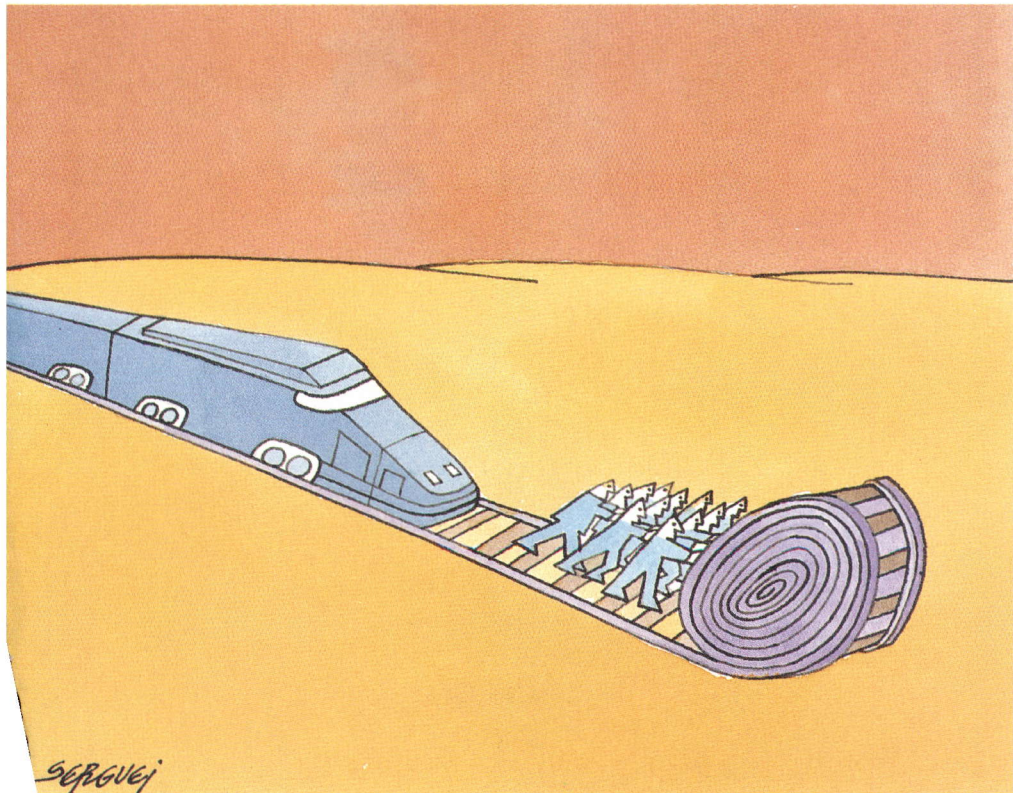


# TRANS-EUROPEAN NETWORKS



Europe  
on the move



Micha

**E**urope's ability to stimulate growth and create the millions of new jobs it needs depends in part on the creation of communications networks stretching across its territory, tying its different regions together into a dynamic single market. These networks are the arteries along which Europe's economic lifeblood flows. In concrete terms, they are the infrastructures for transporting goods, services, people and information from one part of Europe to another. They consist of roads, railways, waterways, air routes, telecommunications systems and energy distribution networks. Just as the transcontinental railways of the 19th century were instrumental in uniting the United States of America, efficient trans-European networks are vital for the future of the European Union. At present, networks are subject to bottlenecks and congestion, leading to lost opportunities, wasted resources and a single market which underachieves in terms of productivity and job creation. They need to be recast as components of an integrated European system. Trans-European networks were recognized as a priority sector in the 1992 Maastricht Treaty on European Union. A concrete programme to put them in place was set out in the White Paper on growth, competitiveness and employment issued by the European Commission and endorsed by Heads of State and Government in December 1993.

## ADDING A NEW DIMENSION

Trans-European networks provide an extra dimension to the European single market. They are essential for shrinking distances between the outlying and central regions of the EU. These networks will enable the European economy to be decentralized, particularly for the benefit of small and medium-sized enterprises (SMEs) where most future jobs are going to be created. Network improvements will not always involve cross-border links. In some instances, priority will go to upgrading weak portions of national networks which

*Combined transport using inter-modal systems for freight and normal traffic (road-rail or road-rail-waterway) are particularly important for the future. They ease road congestion and reduce vehicle emissions.*



Louagie

prevent the optimal use of the European network as a whole.

The networks will also link the members of the EU with their outside neighbours — first of all with the EFTA countries which are part of the new European Economic Area (EEA), then with Central and Eastern Europe and (particularly for energy distribution) with the countries of North Africa.

## THE ROLE OF THE EUROPEAN UNION

The importance of transport and communications infrastructures in promoting integration and stimulating economic growth has been recognized for some time. The European Parliament took the lead in 1982 when it had financial support for transport infrastructures inserted into the EC budget for the first time. Leading companies belonging to the European Round Table early on identified trans-European networks as a necessary adjunct to the creation of the European single market.

Support for trans-European networks was formally adopted as a Community priority in the Maastricht Treaty on European Union. The European Commission identified the communications revolution which is creating an information society and



Louagie

the rapid introduction of trans-European networks as key factors in its strategy for growth, competitiveness and employment contained in a White Paper submitted to the European Council at its meeting in Brussels in December 1993. The Council gave the Commission strategy its immediate backing, setting a number of priorities and specific deadlines for action. This will accelerate procedures so that major projects in the sectors of transport, energy distribution and communications can get under way as rapidly as possible.

In particular, the European Council created two special groups. One headed by the Commission is responsible for leadership and coordination in implementing transport and energy networks. The second, a panel of prominent persons, will draw up a special report for the European Council on infrastructure in the field of information. The Council will use this report as the basis for adopting an operational programme.

The main responsibility for creating and implementing trans-European networks remains with individual European governments and, of course, with operators themselves. The role of the European Union is to act as a catalyst.

It does this in several ways:

- by coordinating the work of Member States through the adoption of European master plans in key areas. These help governments identify



SNCB

*The Channel Tunnel between the United Kingdom and the Continent is symbolic of trans-European networks.*

and implement projects with a European as well as a national dimension;

- by facilitating operational contacts between promoters, users, industry and research bodies;
- through the creation of common standards to ensure that the different parts of trans-European networks are compatible with each other and can be readily interconnected;
- by taking policy initiatives to improve the internal market, especially in areas like telecoms, energy distribution and rail transport;
- by encouraging private investors (through feasibility studies, pilot projects, loan guarantees, interest-rate subsidies, some loan capital and through the system of declarations of European interest). These declarations are expressions of political support by the EU for projects of particular European significance. They do not include any financial guarantee by the EU.

The creation of trans-European networks will require hundreds of billions of ecus in new investments between now and the end of the century. Most of this money will be raised at the level of individual Member States, either through private investors (especially in telecoms, energy and air transport) or public enterprises.

The European Union is prepared to provide up to ECU 20 billion a year during this period according to need. Most of this will come via ongoing programmes in the EU budget (ECU 5 billion) or in the form of loans from the European Investment Bank (ECU 7 billion). An additional eight billion may be mobilized through other types of loan capital as required.

## TRANSPORT

By the year 2000, goods and passenger traffic in the European Union will be double the 1975 level. Part of this extra mobility will be due to the single market. But this increase in mobility will mean more congestion unless efficient trans-European networks are created.

Master plans have been developed for high-speed trains and for combined transport, road building and the development of inter-operable networks for inland waterways. Others are following for the upgrading of conventional rail links, airport infrastructure and seaports. Combined transport using inter-modal systems for freight traffic (road-rail or road-rail-waterway) are particularly important for easing road congestion and reducing vehicle emissions.

The aim is to make traffic faster, safer and more environmentally compatible, while at the same time bringing outlying regions closer to central areas of the European Union and creating transfrontier links with Central and Eastern Europe with whom the EU is deepening its economic partnership.

Priority projects which have been identified include the development of a high-speed train between Paris and

## The information society

New technology and its applications are creating an information-based society which will bring about profound changes in production, working and living habits. Rapid mastery of these changes will give Europe a competitive advantage over its rivals.


- The impact on society of the multi-media world of tomorrow in which pictures, sound, data and texts are transmitted digitally along information super-highways to workplaces and homes has been described as comparable to that of the first industrial revolution.
- Tomorrow's world is already happening: by 2000, there will be 10 times as many TV channels and three times the number of subscribers to cable networks. An estimated six million Americans now work from their homes via teleworking links to employers and customers.
- Information technology can provide answers to new needs of European society: customized communications networks within companies; widespread teleworking; easy access to scientific and leisure databases; the development of preventive healthcare; and home medicine for the elderly.

## Trans-European transport networks: First projects

Project type	Member States and non-member States involved	Indicative total cost (million ECU)
1. Brenner axis; rail connection through the Alps	I/A/D	10 000
2. Paris-Brussels-Cologne-Amsterdam-London (PBKAL); high-speed train: Belgium	B	2 500
3. Paris-Brussels-Cologne-Amsterdam-London (PBKAL); high-speed train: Netherlands	NL	2 100
4. Paris-Brussels-Cologne-Amsterdam-London (PBKAL); high-speed train: London-Tunnel access	UK	3 900
5. Madrid-Barcelona-Perpignan; high-speed train	E/F	6 800
6. Fehmarn belt crossing; fixed link between Denmark and Germany; estimated construction costs for the tunnel/bridge; new construction or upgrading of railway needs to be decided (preliminary cost estimates ECU 2 to 4 billion)	DK/D	4 500
7. TGV Est; high-speed train Paris-Strasbourg	F	4 000
8. TGV Est; high-speed train Karlsruhe-Frankfurt-Berlin	D	8 500
9. Rotterdam-Betuwe line (Cologne-Frankfurt-Karlsruhe-Switzerland-Italy); railway line (cost estimates for the corridor up to German/Swiss border ECU 9.6 billion)	NL (D/(CH)/I)	3 100
10. Lyons-Turin; high-speed train/combined transport	F/I	6 200
11. Urban by-passes for combined transport corridors and selected combined transport projects	D/F/I/E	2 300
12. Nuremberg-German/Czech border-Prague; motorway	D (Cz)	1 000
13. Berlin-Warsaw-Polish/Belarussian border (Moscow); motorway (new construction)	D/(P)	3 200
14. Patras-Athens-Thessaloniki-Greek/Bulgarian border; motorway	GR	1 500
15. Lisbon-Valladolid (Spanish/French border); motorway	P/E	2 000
16. (Dublin)-Holyhead-Birmingham-Cambridge-Felixstowe/Harwich-(Benelux); road corridor (by sections)	UK (IRL)	1 000
17. Bari-Brindisi-Otranto; motorway	I	1 000
18. Road traffic management system	EC	1 000
19. New Athens airport (Spata)	GR	2 000
20. Air traffic management system for Europe (CNS/ATM); this includes also the satellite system Inmarsat-III (navigation payloads) and associated ground segment	EC	8 000
21. Channel Rhine-Rhône	F	2 500
22. Channel Seine north	F	1 500
23. Connections between Elbe and Oder; inland waterways	D	600
24. Danube upgrading: section between Straubing and Vilshofen; inland waterways	D	700
25. Vessel traffic management system for Community waters	EC	1 000
26. Multimodal positioning system by satellites system	D/F, European Space Agency	1 000

**Total**

**81 900**



In a proposal to develop cross-border networks of infrastructure in and between the Member States (trans-European networks), the Commission has identified 26 concrete projects in the field of transport concerning almost all Member States of the European Union. They are described in the table and could be realized shortly. In some cases work is already in progress.

All the proposed train, motorway, air or waterway links have been chosen according to a range of selection criteria: economic importance for the region, employment creation, benefit for industry and viability, potential for private investment and financing, community interest like transfrontier links or interconnection of networks.

All had to pass the environmental impact scrutiny. It is now up to the public authorities of the Member States, the regions or municipalities and the private partners to decide on the implementation of these projects.

Berlin via Strasbourg, the Fehmarn belt fixed-link crossing (tunnel/bridge) between Germany and Denmark, a high-speed train and combined-transport link between Lyons and Turin and a motorway connection from Berlin to Moscow via Warsaw. In the sector of air transport priority projects include a new ECU 8 billion air traffic management system for Europe and the construction of a new Athens airport.

## ENERGY DISTRIBUTION

The development of energy networks reflects two priorities: cost-savings by making better use of existing capacities, and enhancing security of supplies. The objective for electricity is essentially to increase the interconnection of networks, easing flows from surplus to deficit areas. Making better use of existing electricity generating capacities will also help protect the environment.

In the gas sector, the European Union is becoming increasingly dependent

*The development of energy networks reflects two priorities: cost-savings by better use of existing capacities, and enhancing security of supplies. The first priority applies particularly to electricity, while the second concerns more natural gas.*



on imports from the North Sea, Russia and Algeria. For the EU's economic security it is vital to accelerate the construction of trans-European gas pipelines capable of guaranteeing supplies and creating structures for long-term cooperation with producer countries.

Priority projects include the connection of electricity grids within and between Member States and with neighbours such as Germany-Poland, France-Switzerland, Spain-Morocco and so on. Gas projects foresee the interconnection of separated gas networks like those of the United Kingdom and continental Europe and those of France and Spain. New supply lines with outside sources include:

- Norway to Germany and the Benelux countries,
- Algeria-Spain (via Morocco) and Algeria-Italy (via Tunisia),
- Russia-European Union (three routes: via Ukraine, Belarus and Scandinavia).



## COMMUNICATIONS

At present, a business setting up permanent communications links between its head office and its branches, customers or suppliers throughout Europe may be faced with a multitude of technical, administrative and even political problems. This is because it has to deal separately with the operators of several national telecommunications networks. It also has to deal with their widely different tariff structures.

Yet in terms of technology, telecoms networks will in the not-too-distant future be capable of delivering and processing voice traffic, data, image and sound between any two locations, be they homes, offices or factories. The technology to transmit the entire contents of the *Encyclopedia Britannica* from one computer to another in a matter of seconds already exists.

National networks need therefore to be interconnected in ways which create a common trans-European network so that they can function as the central nervous system of the European economy and more generally of tomorrow's information society.



*A Europe-wide system of mobile telephony has entered its operational phase enabling travellers to use their own portable phones while on the move. It is based on the digital GSM standard, developed by the European Community.*

The first priority of the European Union is to help create the high-speed 'super-highways' along which information will travel.

These new networks will transmit texts, data, films, graphics, voice, music, catalogues, images to be stored and combined in databases for use in the most diverse applications (manufacturing, financial services, education, medical care, leisure, tourism, etc).



Le Plan

*Private investors are encouraged to participate in the creation of trans-European networks.*



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