INTERMODALITY

INTRODUCTION

"*Growth has produced or exacerbated a number of imbalances and inefficiencies in the transport system taken as a whole and also within transport modes. Despite the considerable success of transport in meeting consumer demand, inadequate integration of modes is denying users some practical alternatives to current services. Inadequate capacity in some modes is producing congestion and environmental damage while, in others, underused capacities exist.*" This was one of the conclusions of the Commission's 1992 white paper on the future development of the Common Transport Policy.

Although Community policy in the transport sector is largely focused on liberalisation and safety/environmental concerns, a complementary policy objective is to improve the efficiency of the transport system as a whole. A first Directive, for example, was adopted in the 1970s to encourage the dismantling of barriers to combined transport (CT). The state aid rules were also adapted in favour of CT services. But it was only in the early 1990s that the EU developed a more determined approach, partly in response to a growing emphasis on environmental pressures and promoting sustainability in the transport sector. This resulted in the 1992 package of new measures: a Directive consolidating the previous legislation, more flexible state aid rules, the first programme to support CT pilot actions, and the implementation of the CT trans-European network (Chapter Twelve).

From promoting combined transport to an intermodality policy

During the second half of the 1990s, the Commission sought to extend the policy beyond combined transport - which generally refers to road-rail and road-waterway transport only - to encompass a wider vision of integrated transport, or intermodality. Like the more traditional policy towards combined transport, the new strategy was also aimed largely at reducing the overall dominance of the road transport sector by encouraging a shift to other modes with spare or under-exploited capacity. As a first step, the Commission published, in 1997, a Communication and action plan on freight transport intermodality. It called for the development of "a framework for an optimal integration of different modes so as to enable an efficient and cost-effective use of the transport system through seamless, customer oriented door-to-door services whilst favouring competition between transport operators". By 1999, a number of the measures in the action plan were under way, and preparations were being made for possible initiatives on intermodal liability and on logistics and supply chain management.

Although the concept of intermodality has traditionally been perceived purely in freight terms, the problems of congestion, pollution and accidents also affect the passenger sector. Until the mid-1990s, though, the Commission regarded this area as the preserve of national governments, and, in the light of subsidiarity, was unwilling to interfere in Member States' domestic affairs. Nevertheless, by November 1995 the pressure, not least from the environmental point of view, to promote a multimodal approach to public passenger transport, especially within cities and urban regions, led the Commission to publish a green paper on the "Citizens' Network". Its aim was to show how the Member States could help the various transport modes coexist and complement one another in order to improve the efficiency of the urban transport system as a whole. This was followed in 1998 by a second paper setting out the actions to be taken at Community level to help achieve this objective.

This chapter looks first at the development of Community incentives to promote combined transport, and then at the Commission's wider strategy for freight intermodality, and the initiatives launched since the publication of the 1997 Communication. It goes on to describe the background to the Citizens' Network strategy and the work which has taken place so far to help achieve the Commission's aims. The EU's evolving policy towards satellite navigation is covered in this chapter (rather than in Chapter Twelve on economic and social cohesion, for example), because its objectives fit most closely with the overall aims of the intermodal policy.

It is also worth noting that many other policies, discussed elsewhere in this book, are considered, by the Commission, to be important elements in its intermodality strategy, not least the trans-European networks policy (Chapter Twelve), the rail liberalisation efforts (Chapter Six) and RTD (Chapter Fourteen). The Commission's important, but still nascent, ideas on implementing fair and efficient infrastructure charging seek, among other objectives, to redress imbalances in the modal split (Chapter Eight). Furthermore, viable alternatives for passengers to road transport have

been augmented with the liberalisation of air transport throughout the EU (Chapter Three), and the development of high-speed rail systems (Chapter Six). The interchangeability of these two modes, moreover, has been improved with the extension in early 1999 of the Community code of conduct for computer reservation systems, allowing rail services to be booked by the same procedure as, and in conjunction with, flights (Chapter Three). A number of competition cases linked to questions of combined transport are also dealt with in the single market chapters.

COMBINED FREIGHT TRANSPORT AND INTERMODALITY

The European Community has given limited support to the development of combined transport since 1975, when it adopted a Directive requiring Member States to dismantle quantitative and administrative restrictions on feeder and final delivery road transport involved in combined operations. Between 1975 and 1991, the Directive was modified five times in order to extend its scope, to remove tariff barriers to CT road services, and to introduce the concept of tax exemptions to encourage their development.

From 1982, when the 1970 Regulation on state aid for inland transport (Chapter Two) was amended, there were special provisions allowing Member States to provide subsidies for developing CT operations. Such aid could be provided for investments in infrastructure, in fixed and moveable facilities necessary for trans-shipment; and in equipment specifically designed for, and used exclusively in, combined transport. The running costs of services across Switzerland, Austria (then a non-EU country) and the former Yugoslavia could also be subsidised. At the time, the legislation was to remain in force until 1992, but was later extended twice, once to 1995, and once to 1997.

Common Community rules for combined transport

More importantly, though, the Council adopted, also in 1992, a Directive aimed at establishing common rules for the sector, effectively consolidating the existing measures and extending them to promote CT. Under its terms, CT is defined as: "*The transport of goods between Member States where the lorry, trailer, semi-trailer, with or without tractor unit, swap body or container of 20 feet or more uses the road on the initial or final leg of the journey and, on the other leg, rail or inland waterway or maritime services where this section exceeds 100km as the crow flies and makes the initial or final road transport leg of the journey;*

Legal definition of combined transport

- *between the point where the goods are loaded and the nearest suitable rail loading station for the initial leg, and between the nearest suitable rail unloading station and the point where the goods are unloaded for the final leg, or;*
- *within a radius not exceeding 150km as the crow flies from the inland waterway or seaport of loading or unloading.*"

The Directive liberalised CT services from "all quota systems and systems of authorisation" as of July 1993. It requires Member States to reduce taxes on vehicles used for road-rail combined transport, either by a standard amount or in proportion to the length of the rail segment. In practice, this provision largely applies to 'rolling road' transport (i.e. where lorries are driven directly aboard trains). It also allows Member States to use incentives for other types of CT at their own discretion.

Growth in road transport outstripping any CT increases

In mid-1997, the Commission expressed concern about the impact of the Directive. In a report, it said the use of CT was growing rapidly, with the number of cargo units having increased 60% between 1990 and 1994, and its market share reaching a quarter of that held by rail. However, during the same period, road transport had also increased its market share significantly, thus continuing to dwarf that of CT. Moreover, it said, the effects of the 1992 CT Directive had been minimal. Its tax provisions, for example, were so limited in scope that they had had an impact in only four Member States. And, any competitive advantage held by vehicles involved in CT as a result of the Directive would be lost as of July 1998, the report noted, when the single market in road goods transport was due to be completed with the abolition of all restrictions on haulage cabotage (Chapter Five).

Little support for the Commission's 1998 CT proposals

On the basis of these conclusions, the Commission brought forward, in July 1998, two proposals designed to promote CT more extensively. The first sought to amend the CT Directive by extending the compulsory road tax exemptions to cover combined operations using inland waterway and short sea services. It also called for CT road operations to be exempted from the night time, holiday and ad hoc restrictions on lorry traffic imposed by a number of Member States, so as to provide CT operation with advantages over conventional road transport in terms of

speed and flexibility. The second proposal was aimed at allowing 44t multiple-axle and 42t two-axle lorries involved in CT to circulate freely across the EU, where currently they are banned in some Member States (Chapter Five).

Council opposition to mandatory tax exemptions

Both proposals encountered severe political difficulties. There was a dispute within the Council over the accepted definition of CT, which would govern whether or not operations could benefit from tax exemptions. A number of States wanted the road leg of qualifying services to be kept as short as possible, while others, notably Portugal, wanted no such restrictions. The dispute became academic, however, when later talks revealed that few States were prepared to support mandatory tax exemptions at all. The proposed exemption from Member States' lorry bans was vociferously opposed by France and Italy, both of whom make considerable use of traffic restrictions. France, in particular, felt that the move could jeopardise the enforcement of its driving time laws.

Proposal allowing free circulation of CT lorries rejected

The Parliament examined the two draft laws in February 1999. It approved the proposal for tax exemptions but, because the plan favoured road transport too strongly, it called for the removal of all reference to exclusions from lorry bans. The second scheme was rejected at the plenary session and returned to committee for further discussion. Following informal negotiations with the Commission, the EP went on to reject the proposal altogether at the May 1999 session. Its opposition was based on fears that the increased weight limit could cause environmental damage in some parts of the EU, and would create problems when new Member States from Central and Eastern Europe, with their inferior road infrastructure, were admitted to the EU. Following the entry into force of the Amsterdam Treaty, both dossiers fall under the codecision procedure.

Pilot actions for promoting combined transport

Results of the first PACT programme

A further initiative launched in 1992 was a five year programme for pilot actions in combined transport, or PACT. By providing short-term part-financing for innovative measures aimed at improving the quality of CT services, PACT aimed to demonstrate that CT services could be competitive and shift traffic from road to other modes in an economically-viable way. The programme, which ran to 1996 with a modest budget of just over Ecu18m, funded around 70 projects on over 20 CT pilot routes. Although it did bring about encouraging results, according to a Commission assessment in 1997, it suffered from not having any specific objectives. Moreover, the budget proved too small to meet the needs of all the sound projects proposed, and, in the later years, existing schemes had to be suspended or deferred to allow new projects to begin.

PACT II - 1999 call for proposals (projects approved)

Name of beneficiary	Project description	EU grant (Eur)
	Continuing projects - II and III phase	
European Feeder Lines	Intermodal maritime service La Rochelle-Le Havre-Rotterdam - II	220,000
Aqua Rail Transit	Intermodal rail/barge service Novara-Basle-Upper Rhine ports - III	350,000
Port Auth. of Bruges-Zeebrugge	Intermodal sea/river service Zeebrugge-Duisburg - II	200,000
Gothia Logistics Centre	Intermodal rail/ferry service Norrkoping-Almelo - III	100,000
Port Autonome de Dunkerque	Intermodal barge/maritime service Valenciennes-Dunkerque-Felixstowe-Rotterdam - III	150,000
ShortLines	Intermodal rail shuttle with private traction Koln-Rotterdam - II	300,000
Puerto Seco Azuqueca de Henares	Intermodal rail/maritime service Madrid-Bilbao-Rotterdam - II	140,000
Transfesa France.	Intermodal rail service Paris-Ljubljana - II	150,000
CEMAT	Intermodal rail service Verona-Gliwice - II	300,000
Grimaldi Co. di Navigazione	Intermodal rail/ferry service Sweden-Germany-Austria-Italy - III	200,000
Kombiverkehr	Intermodal rail/ferry service Sweden-Germany-Austria-Italy - III	
SNCF	Change border terminal Modane into jointly managed terminal - II	250,000
	New rail projects	
CNC Transports	Intermodal rail service Paris-Daventry-Glasgow	150,000
Stamford Transport Systems	Door-to-door intermodal tracking system (UK, F, D, NL, B)	150,000
Eurokombi Transport	Intermodal rail shuttle Hamburg-Gioia Tauro	400,000
M.I.C. Operations	Intermodal rail shuttle for air and maritime cargo Amsterdam-Frankfurt/M.	350,000
Norfolkline	Intermodal rail service for refrigerated cargo Valencia-London-Glasgow	400,000
	New maritime projects	
Danzas	Maritime service Venice-Patras for 13.60 metre semi-trailers	55,000
MDS France	Maritime hub and spoke system (UK, IRL, F, E, P)	400,000
	New inland waterway projects	
FLABI-Logistik	Shallow-draught barge container service ARA ports-hinterland	95,000
	New projects involving several modes	
Rhein-Waal Terminal	Intermodal barge/rail service Rotterdam-Emmerich-Duisburg-Neuss	300,000
Navicon	Intermodal rail/maritime service Madrid-Murcia-Livorno	300,000
	Feasibility studies	
Fiege Engineering	Cooperation strategies between logistics, transport and financial partners in CT chain	60,000
New Thinking-Business Dev.	An intermodal rail service between Sweden and Germany with private traction	100,000
ANTRAM	Optimisation of intermodal train services Portugal-Spain-German	85,000
Shell Nederland Chemie	Mode-neutral forwarding models for intermodal transport of chemicals	200,000
UIRR	Study on developing quality strategy for railbound CT in Alpine corridors	135,000

Source: Transport DG

The Commission addressed both these concerns in 1996. The proposal for a PACT II programme, to run from 1997 to 2001 with Ecu35m, was more formally structured, on a Council Regulation, than its predecessor. The Parliament approved the proposal in June 1997, but MEPs argued that the increased budget, while a step in the right direction, was inadequate. However, it was due to the support of the Parliament, as the EU's budgetary authority, that the programme was able to operate during 1997 prior to the Council's formal adoption of the Regulation.

German and UK opposition to new PACT programme

Ministers reached political agreement on the proposal during March 1997 but it was not formally adopted until October 1998. The Council agreement was opposed by Germany, which was reluctant to agree new budget lines at a time of domestic financial austerity, and the UK, which considered the programme to be an inefficient way of promoting combined transport. Around Ecu5m was made available for 1997 (as a result of the EP's intervention) allowing 22 schemes to be funded. A further 25 and 27 projects were accepted respectively in 1998 and 1999.

A wider strategy to promote intermodality

In a 1997 Communication entitled "Intermodality and intermodal freight transport in the European Union", the Commission outlined a new strategy going beyond the promotion of combined transport to examine how all modes could best be integrated into an efficient door-to-door transport chain. It argued that, in the current modally-oriented transport system, any change of mode within a journey involves a change of system rather than just a technical trans-shipment, and that this "creates friction costs which can make intermodal transport uncompetitive in comparison with unimodal haulage". The Commission listed a catalogue of such costs: higher prices; longer journeys with more delays or poorer reliability; lower availability of quality services; limitations on the type of goods carried; higher risk of cargo damage; and more complex administrative procedures. It also mentioned other problems including a lack of clarity over procedures for determining liability for damage to cargo, and questions over the application of competition law.

The 1997 Communication on intermodality

In order to encourage efforts to overcome or remove such hurdles to the development of a more intermodal transport system, the Commission proposed an action plan, with four main areas: integration of infrastructure and transport means; interoperable and interconnection operations; mode-independent services and regulations; and horizontal activities. The Communication also

1997 action programme on intermodality
(selected items)

Integrated infrastructure and transport means
Revision of the trans-European networks (integration of ports and terminals)
Identification of opportunities and elimination of bottlenecks for adding value to logistics
Steering the process of harmonisation of loading units

Interoperable and interconnected operations
Market analysis aiming at further integration of transport and logistics
Revision of Regulation 1107/70 with regard to aid in combined transport
Electronic forum for coordination of timetables

Mode-independent services and regulations
Promotion of intermodal real-time electronic information and transaction systems
Promotion of voluntary liability regime
Promotion of information society technologies to the benefit of intermodal transport
Paperless transport: harmonisation of message and document standards

Horizontal activities
Establishment of an intermodal freight transport research network
Research on intermodal freight transport in 5thFP
Development of methodologies for benchmarking in transport policy and intermodality
Establishment of a European Intermodal Reference Centre
Development of concepts for intermodal freight statistics

Ongoing actions
Prolongation of PACT programme
Integration of rail freight freeways in an intermodal context
Application of competition rules to intermodal freight transport
Further development of EC rules for infrastructure charging and transport pricing
Continuation of coordination work of intermodality task force

Source: COM/97/243

listed initiatives already under way for other objectives but equally serving the progress of intermodality (such as the rail white paper, the PACT programme and RTD), and drew attention to a number of planned new measures aimed specifically at the promotion of intermodality.

At the time, the Council chose not to respond formally to the Communication. The Parliament, by contrast, took a great interest in the subject and went so far as to organise a public hearing, in October 1998, with presentations from a variety of experts.

Parliament's 1999 Resolution on intermodality

A few months later, in February 1999, the Parliament passed a Resolution in which it stated that "the integration of the European transport networks to form an overall intermodal transport system is a logical development of the existing liberalisation and harmonisation policy". Because the competitiveness of rail is an important factor in promoting intermodal transport, the Parliament called on the Member States to make progress with liberalising the rail sector, and it asked them "to work towards equal tax burdens on all modes of transport . . . and to withdraw all measures encouraging long distance road haulage". The Resolution suggested the Commission press ahead with its efforts towards charging for infrastructure use and external costs. More specifically, it called on the Commission to "provide specific support for the introduction of automatic and rational trans-shipment equipment"; and to "initiate the harmonisation or coordination of national and/or modal technical, operational and administrative standards in order to ensure interoperability and the free flow of goods and loading units, and of the data and communications required in the intermodal transport chain".

Progress with the intermodal action programme

Since publication of the intermodal Communication, the Commission and other institutions have, in fact, moved ahead with a number of initiatives related to the action plan: harmonised charging principles across the different modes (Chapter Eight); the Fifth RTD Framework Programme with sustainable mobility and intermodality nominated as a Key Action (Chapter Fourteen); the alteration of the TENs Guidelines (Chapter Twelve); and the development of a European Intermodal Reference Centre for Freight Transport. Furthermore, the Commission has been working towards a Communication on logistics and supply chain management to be presented in early 2000. This will examine traffic flows within and between companies and organisations, to search out where inefficiencies might lie with regard to, for example, infrastructure, information technology, taxation and environmental pressures.

In search of a uniform liability regime

The Commission's Transport Directorate-General has also been looking into the area of intermodal liability. Traditionally, transport liability has been established according to modal-based mechanisms, laid down variously in national law and international conventions. However, the growth of seamless multimodal transport, in which there is often only one point of contact - the multimodal operator - between the shipper and the transport chain has exposed the inadequacies of existing systems. One idea under discussion, in the Transport DG during the late 1990s, was the need for legislation to establish a non-mandatory uniform liability regime. Such a regime would be applicable, by default, to all intermodal transport operations within, into and out of the Community, and it would also allow for unimodal operators to apply its provisions. Shippers would, however, be able to opt out if they so wished. The system would, in essence, ensure the contracting carrier - the multimodal operator - assumed strict liability for any losses occurring during the transport operation.

In October 1999, the Commission published a review of the 1997 action programme. It claimed to have made progress in implementing many of the identified measures, although some others had not seen progress because of a lack of resources. It also called for the programme to be extended with four further initiatives. Firstly, the Commission said, it would aim for more integration of intelligent transport system applications in the areas of traffic and freight management, through the creation of a 'thematic network' within the Fifth FP. Secondly, it would aim to create electronic commerce applications for intermodal freight transport through Fifth FP and international projects, and by making an inventory of impediments. Thirdly, it would publish a Communication on supply chain management, logistics and intermodal transport to identify the inefficiencies and the areas in need of public policy facilitation, and to propose remedial actions. Fourthly, the Commission said, it would launch and cofinance "a demonstration project aiming at the identification of shiftable cargo of manufacturing companies".

The Council's 1999 Resolution on intermodality

The Council finally got round to responding to the 1997 Communication, and to the Commission's follow-up paper under the Finnish Presidency, in December 1999. In a Resolution,

it noted "with satisfaction" that most projects in the original 1997 action programme had been launched, and it encouraged the Commission to continue its implementation. The Council, moreover, reaffirmed "its determination to promote transport modes contributing to sustainable transport, in particular rail transport, short sea shipping and inland navigation".

The Council noted, however, that further work should be concentrated on identifying obstacles to intermodal transport competing successfully in the market. It proposed that the Commission should include intermodality in its revision of the TENs, through reference to concrete actions such as: setting up new tools for assessing the ability of planned infrastructures and actions to transfer some road transport demand towards more environmentally-friendly modes; alleviating the bottlenecks for intermodalism, including those in the context of the rail freight network; and developing and optimising terminals for intermodal transport.

The Resolution concluded, in essence, with a green light for a list of specific actions mentioned in the Commission's Communications. The Council said the Commission should intensify its work by:

The Council's plan of actions for promoting intermodality

"- *Taking account of intermodalism with a view to creating a level playing field in the transport market when submitting, during the year 2000, a proposal for a revision of Regulation (EEC) 1107/70 with regard to aid to combined transport;*
- *integrating the information society into the European transport system, e.g. by submitting proposals for establishing an open architecture for data transfer and transport telematics;*
- *contributing to the realisation of an open and efficient real-time information and transaction system, as a tool for shippers and intermodal transport operators;*
- *continuing, together with the Member States, the industry and relevant international organisations, its efforts to promote an appropriate liability regime in that area, inter alia, by exploring the aspects of a liability regime for intermodal transport and by presenting a report on the economic analysis of the consequences of the absence of a generally accepted intermodal liability regime and on the work being undertaken with the industry on the legal and economic advantages of the different solutions for a liability regime for intermodal transport;*
- *presenting a communication on 'Benchmarking in Transport' and developing key performance indicators for freight intermodalism; in this context, demonstrating the potential cost-effectiveness of intermodal transport projects and publishing examples and information on best practices, particularly taking into account the experience gained from the PACT programme and the different projects under the Fifth R&D Framework Programme;*
- *directing, when proposing measures in the field of transport, the measures to the logistic and transport system as a whole and not solely to the individual modes of transport, focusing, inter alia, on harmonising the standards related to transport units and on technologies for cheaper, more efficient and environmentally friendly freight handling; to this end, presenting a communication on supply chain management, logistics and intermodal transport by the end of year 2001;*
- *planning for an appropriate follow-up to the PACT programme, focussing on innovative projects;*
- *extending the action programme on intermodality to more integrated intelligent transport system applications, electronic commerce applications and demonstration projects; and,*
- *bolstering the role of research and development projects on intermodal transport in the RTD framework programmes.*"

THE CHALLENGES OF CREATING A MULTIMODAL PASSENGER NETWORK

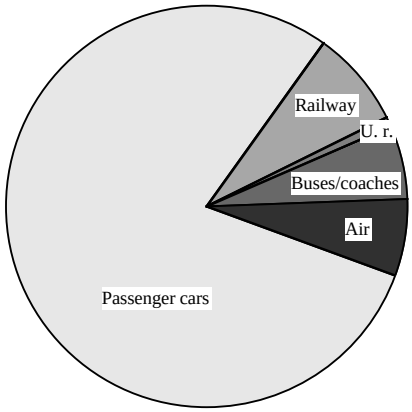
The key aim of Community efforts to encourage intermodality in the passenger sector - to reduce excessive reliance on road transport - is essentially the same as that in the freight sector, although the circumstances are different. The first important Communication on the subject, published in November 1995, was a green paper entitled "The Citizens' Network - Fulfilling the potential of public passenger transport in Europe".

The Citizens' Network green paper

The paper made the following observation: "*Effective passenger transport systems are essential for European economies and for the quality of life of European citizens. It is vital that transport systems are designed to meet people's needs, and are flexible enough to respond to their changing requirements, including the growth in demand for transport. This increasing demand has, to date, largely been met by greater use of private cars which now accounts for 75% of travel. The car has brought many advantages - in particular it gives people independence and flexibility in making their journeys. But it has also resulted in increased congestion, pollution and accidents, all of which affect both car users and those who do not have access to cars.*" Moreover, it said, the greatest problems of congestion attributable to the private car occurred within and around towns and cities.

The green paper looked at how the potential of different transport options could be exploited as efficiently as possible, in order to create "networks of public passenger systems which fit together so that passengers can change easily from train to bus to tram, from car or bike to public transport; which interconnect long-distance and local transport networks, and which enable those people with cars to reserve them for journeys where flexibility and independence of movement are important".

Passenger transport modal split (1996)



Source: Transport DG U. r. - Urban rail

The Commission emphasised that measures necessary to build up the Citizens' Network should be taken at a local, regional or national level, whereas the European Union's role is "to inform, to promote and to enable". Efforts, it said, should combine "pull measures", aimed at making public transport more attractive, and "push measures" designed to limit the use of the private car - the 'carrot and stick' approach. It suggested that Community action should focus on the dissemination of information and the promotion of best practice, the refocusing of transport RTD programmes to provide a greater emphasis on public transport, the development of the trans-European networks, efforts to promote the evolution of information technology, and the use of regional development policies to promote public transport.

The carrot and stick approach

The green paper received an enthusiastic response, with over 180 replies, and was followed, in July 1998, by a further paper setting out a work programme for "Developing the Citizens' Network". It proposed both legislative and informal action in five categories. Like the action programme for freight intermodality, it drew attention in part to general policy initiatives, such as the white paper on infrastructure charging and the evolving plans for environmental assessments (Chapter Eight). However, it also set out plans for new initiatives directed wholly at public transport (see box).

Developing the Citizens' Network

By the time the paper appeared, work was already well advanced in a number of areas. For example, in mid-1998 a pilot public transport benchmarking scheme, involving 15 European cities

1998 Citizens' Network work programme (selected items)

<u>Stimulating information exchange</u>
Set up local mobility information service
Support organisation of national round tables
Support linking up of national cycle route networks

<u>Benchmarking to improve transport systems</u>
Introduce pilot project on benchmarking local passenger transport systems
Advise on techniques for evaluating the performance of local transport services
Adopt a Recommendation to CEN on criteria for assessing passenger transport
Set up advisory group on benchmarking local and regional transport*
Present Communication on benchmarking in transport*

<u>Establishing the right policy framework</u>
Review how EU instruments can encourage land use policies supporting sustainable transport*
Adopt Directive on environmental assessments*
Present Communication on mobility management*
Set up Concerted Action on transport pricing research
Present white paper on infrastructure charging*
Present Communication on electronic fee collection*
Study public acceptability of road pricing
Work with authorities considering road pricing schemes
Support European platform on mobility management
Support RTD and deployment of telematics for payment, information, traffic control, assisting elderly and disabled
Consider developing reference standards for light rail/guided transport*
Adopt new minimum construction standards for buses and coaches
Focus on development and implementation of Auto Oil I and II programmes*
Workshop and legislative proposals on public services in local and regional passenger transport*

<u>Using the EU's financial instruments effectively</u>
Revise transport TENs guidelines to address local and regional connections*
Revise Structural Funds guidelines on transport*
Identify good practices in integrated rural transport
Provide information on EU programmes that can offer support for local and regional transport
Disseminate success stories of local, regional and urban development, including role of transport

<u>Monitoring</u>
Monitor trends in local and regional transport
Improve Europe-wide passenger mobility data
Monitor views of policy makers and practitioners

* formal policy or legislative initiative

Source: COM/98/431

was launched by the Commission. The cities agreed to work together to gather data on the efficiency and cost-effectiveness of different approaches to urban transport planning. By mid-1999, the first stages of the project were drawing to a close, and the Commission planned to publish results, and to set in motion a second phase. Furthermore, the European Local Transport Information Service, including an internet database, was launched in September 1998 to promote exchanges of information on best practice, and to allow local authorities to promote their own favoured strategies.

Existing rules restricting the use of public service obligations, adopted in 1969, had not only become outdated, the Commission said in the Communication, but were inadequate because they exempted local and regional transport. The Commission explained that it was considering new legislation to ensure that, in future, public service requirements would need to be "expressed in clear contracts between authorities and operators". Such contracts would be awarded according to fair and transparent tendering procedures; and strict rules would apply to the granting of exclusive concessions and of financial compensation. A planned proposal to amend the legislative framework covering publicly-funded inland transport services, however, was still pending in late 1999.

TOWARDS A EUROPEAN SATELLITE NAVIGATION SYSTEM

A key element of the Community's strategy to create an integrated and sustainable transport system in the 21st century is likely to be the development of global navigation satellite systems (GNSS). As traffic levels have risen, and efforts to improve both the efficiency of individual modes and the integration of different systems have accelerated, the Commission has paid increasing attention to the potential benefits of satellite navigation. Two systems currently exist - the US Global Positioning System (GPS) and the Russian global navigation satellite system (GLONASS) - but both are military networks, and, although civilian users currently have access to their signals free of charge, there are no guarantees of availability or integrity. Moreover, the signals provided for civilian use are not sufficiently accurate for precision uses, such as landing aircraft or providing guidance within harbours.

Egnos to be implemented as a prelude to GNSS2

The Commission issued a first Communication on the subject in June 1994. It suggested the Community should follow a broad approach under which, in the short term, the EU should become involved in GNSS by developing a system based on geostationary Inmarsat III satellites and additional ground-based systems, to augment the signals provided by GPS and GLONASS on a regional basis. This system, to be known as the European Geostationary Navigation Overlay Service (Egnos), it said, would be implemented as a prelude to the introduction of a second-generation global system developed wholly for civilian use (GNSS2). In December the same year, the Council of Ministers adopted a Resolution in which it gave the Commission a green light to develop the strategy more comprehensively.

In June 1996, the adoption of the trans-European networks guidelines, allowed, in Article 17, for the creation of a "positioning and navigation network", under the following terms: "*The trans-European positioning and navigation systems network shall comprise the satellite positioning and navigation systems and the systems to be defined in the future European Radio Navigation Plan. These systems shall provide a reliable and efficient positioning and navigation service which can be used by all modes of transport.*"

The Commission's action plan for developing the GNSS system

Subsequently, the Commission negotiated an agreement with the European Space Agency (ESA) and Eurocontrol, establishing a tripartite group to administer the European contribution to the development of GNSS. The accord was endorsed by the Council in June 1998, and signed shortly afterwards. Under its terms, the Community was given responsibility to define user requirements, support the validation and the development of the users segment and ensure access to the space segment, notably with regard to leasing Inmarsat transponders. Eurocontrol was responsible for civil aviation requirements, and the ESA for technical developments.

In December 1997, the Commission developed its policy with a further strategy paper which included an action plan. It argued that there were substantial benefits to be gained from developing a GNSS system for the whole of the transport sector. GNSS could, for example, allow vast improvements to be made with regard to the following: air traffic management and all weather landing systems; improved navigation facilities for shipping; simplified rail fleet management and combined transport logistics; and, improved lorry fleet management. It stated: "*It is clear that satellite navigation will increasingly play a fundamental role in transport in the future. GNSS will be part of an intelligent infrastructure, helping to ensure safety, streamline*

traffic operations, reduce congestion and environmental damage and support multimodal development." It estimated the GNSS industry could be worth up to $50bn by 2005.

The GNSS industry could be worth $50bn by 2005

The Communication detailed a variety of activities for establishing Egnos, notably with regard to its regulatory structure, and three options for GNSS2. The options involved, firstly, joint development by all the major players in the sector; secondly, the EU developing a GNSS with one or more international partners, for example the US, Russia or Japan; and, thirdly, independent development by the EU of its own system, on a regional or global basis. Transport ministers endorsed the paper in December 1997, but cautioned that any future partnership should allow full EU participation in the design, development and operation of the system, and should offer firm guarantees as to the reliability of the system.

Proposals to develop Europe's GNSS2 - Galileo

The Commission published its formal proposals for GNSS2 in January 1999, (work on Egnos was well under way by this time, with demonstrations of the system having been carried out at the September 1998 Farnborough air show in the UK). It noted that the US was unwilling to consider joint ownership of the GPS network, and recommended that Europe should develop its own global network. It also advised this should be done in partnership with Russia because the latter had "a wealth of experience in deploying and controlling the space segment", and because "building on GLONASS would allow early deployment of a global, European-led GNSS2 constellation". Russia's access to a substantial bloc of radio frequencies, a prerequisite for satellite navigation, was also considered a factor by the Commission in its recommendation.

The new network, christened Galileo, should be based on the use of medium earth orbit (MEO) satellites, the Commission said, and, although it should be a stand-alone system, it should also remain interoperable with the US GPS, in order to give users the benefits of both systems combined. Assembling the network would not come cheap, it warned, with costs likely to be in the region of Eur2.2-2.9bn. Moreover, as long as the US continued to provide a basic GPS signal for free (meaning there would be resistance from users to paying for Galileo signals), public spending would be required to fund implementation of the new system. The EU itself should make Eur750m available from the trans-European networks and RTD budgets, it said, while a further Eur500m could come from the ESA.

The Commission's plans for funding Galileo

To obtain the remaining funds, the Commission proposed the establishment of "new revenue streams", probably on the basis of regulatory action. Moreover, it said, the project should be developed as a public-private partnership "to deliver complementary finance and value for money, and to ensure that users' needs are met". Unveiling the plan, Kinnock emphasised that Europe "must have control of the systems on which safe movement by air land and water transport will increasingly depend". But he warned that political decisions would need to be taken, and failing to act would mean missing out on "a huge and probably unrepeatable opportunity".

The Council's instructions for the definition phase

A few months later, in June 1999, the EU's transport ministers agreed (in a Resolution formally adopted in July) a framework of action for the definition phase of the Galileo project. It invited the Commission "to start without delay" in cooperation with the ESA and the Member States to

Galileo - breakdown of projected costs (Eur m)

	2000-05	2005-08	Total	Post 2008 annual costs
System engineering and management	52	90	142	1.2
Space segment MEO	276	592	868	60
Space segment GEO	25	163	188	10.8
Ground segment	121	131	252	
Operations	55	80	135	56
Certification	60	189	249	5.6
Security	32	31	63	
Controlled access service	100	200	300	6.4
GNSS organisational framework				15
Total	**721**	**1476**	**2,197**	**155**

Source: COM/99/54

NB: MEO - medium earth orbit; GEO - geostationary earth orbit

"deliver exhaustive results on feasibility, design, capability, structure, reliability, control and cost of the system, including deployment and operational stages" by the end of 2000. With a view to carrying out these tasks, the Council said the Commission should set up a steering committee made up of Member States' representatives, with the ESA as an observer.

Council authorisation for Eur40m in definition phase

The Council limited funding for the definition phase to Eur40m. Moreover, it asked the Commission "to present a thorough cost-benefit analysis encompassing all relevant options for the whole project" and to "examine scenarios for the creation of revenue sources, e.g. by specific levies and charges for high quality services including worst-case and best-case scenarios, and to bring forward proposals for their implementation". Furthermore, it was requested to "develop and present, at the beginning of the year 2000, framework conditions for the proposed public-private partnership including an appropriate distribution of roles and tasks as well as costs and risks within the entire programme life cycle cost scenario".

The Commission was also asked to prepare "the medium (development and validation phase) and long term (deployment and operation phase) organisational structure of the project in order to ensure a uniform approach, with a clear presentation of management and controlling structures for the definition phase, including surveillance and control as well as the detailed analysis of its cost and finance by the year 2000". Further sections of the Resolution instructed the Commission to examine the possibility of contributions from the TENs budget and to define appropriate RTD tasks. (Indeed, in late 1999, the Commission approved a major RTD project for a GNSS Thematic Network - Chapter Fourteen.)

Mandates for negotiations with the US and Russia approved

In support of the Commission's proposal to develop Galileo with Russia, and to make it compatible with the US's GPS, the Council called on the Commission to propose negotiating mandates for agreements with both countries. The Commission duly obliged. The mandates were designed to allow the Commission to explore, in discussions with both the US and Russia, political, technical, legal, security-related, economic and practical organisational questions. "Europe's aims will be to work out agreements which will guarantee our strategic interests while giving civil users easy access to a reliable and safe system with far greater capability than today's first generation GNSS", the Commission said. Both mandates were approved by the October 1999 Transport Council.