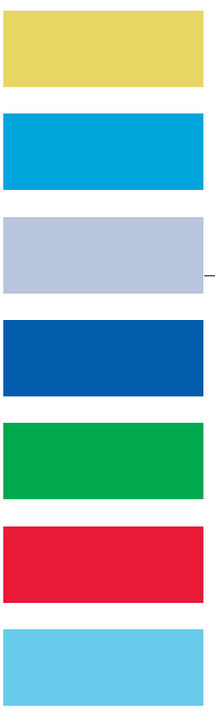
T509677in 22/09/05 8:40 Page 1

TRANS-EUROPEAN TRANSPORT NETWORK

TEN-T priority axes and projects 2005



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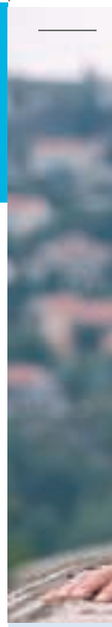
T509677in 22/09/05 8:40 Page 2



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The European Commission's Directorate-General for Energy and Transport develops and carries out EU policy in these closely linked areas. The 2001 White Paper, 'European transport policy for 2010: time to decide' sets out 60 practical measures designed to bring about significant improvements in the quality and efficiency of transport in Europe by 2010, and to break the link between economic growth and growth in the demands on transport systems. Removing the bottlenecks and building the missing links in the infrastructure for all modes of transport is essential for improving the quality of life of all European citizens.

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http://europa.eu.int/comm/dgs/energy_transport/index_en.html

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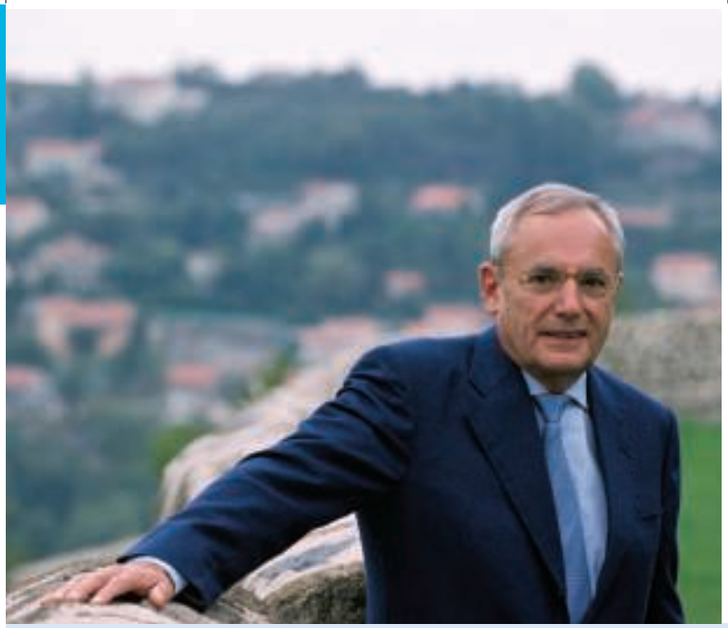
T509677in 22/09/05 8:40 Page 3



FOREWORD

The networks are essential for the citizens and the economy of the European Union

Modern economies cannot generate wealth and employment without highly efficient transport networks. This is particularly true in Europe where, for goods and people to circulate quickly and easily between Member States, we must build the missing links and remove the bottlenecks in our transport infrastructure. The trans-European transport network is a key element in the relaunched Lisbon strategy for competitiveness and employment in Europe for that reason alone: to unblock major transport routes and ensure sustainable transport, including through major technological projects.

The trans-European networks policy is not new. In fact, it has existed since the Maastricht Treaty was signed in the 1990s. After 10 years, however, it is clear that the results fall short of the original ambitions. In 2003, barely one third of the network had been built. And only three of the 14 specific projects endorsed by the European Council at Essen in 1994 had been completed.

In view of the growth in traffic between Member States, expected to double by 2020, the investment required to complete and modernise a true trans-European network in the enlarged EU amounts to some EUR 600 billion. Given the scale of this investment, it is essential for the EU to prioritise these projects better, concentrating on major projects to complete those implemented at national level, which naturally require coordination at European level.

This is exactly what the EU did last year, identifying a series of 30 transnational axes, on the basis of proposals from the Member States, according to their European added value and their contribution to the sustainable development of transport and the integration of the new Member States.

The EU also proposed a new programme to launch 'motorways of the sea' which could not only provide better connections for peripheral countries, but most importantly could be a viable and less costly alternative to new infrastructure on saturated overland corridors. For example, maritime connections between Spain, France and Italy would reduce traffic travelling across the Alps and the Pyrenees.

The trans-European network also includes major technological projects for industry. Galileo, the European system for satellite radio-navigation, is a priority project offering extremely accurate navigation and positioning facilities, such as for route planning. It will also transform freight carriage by supplying continuous information on the movements of goods. Another major industrial project developed by Europe, the European rail traffic management system (ERTMS), will be deployed on key parts of the network.

However, unlike other sectors, transport infrastructures depend on public funding, essentially from national budgets. But the level of investment in transport infrastructure has nevertheless fallen in most Member States, now amounting to less than 1 % of GDP. As the major TEN-T projects are only truly viable if they are designed, financed and implemented in a European framework, it is unlikely that Member States, acting individually, could implement the Union's major priority projects, the cost of which amounts to EUR 225 billion.

T509677in 22/09/05 8:40 Page 4

The Commission has put forward a number of solutions. In the financial perspective for 2007–13, the Commission has proposed a significant increase in the TEN-T budget so that these funds, together with the Structural and Cohesion Funds, could be used as leverage for national public funding. The Commission also proposed that a larger share of this budget be devoted to cross-border sections.

Charging for infrastructure use also plays a role in financing the network. The ongoing revision of the so-called 'Eurovignette directive', providing a framework for tolls to be paid by trucks, falls within this scope. Additional tolls to use roads in mountainous zones could be used to co-finance alternative infrastructure like the Brenner rail tunnel.

Furthermore, new methods must be found to attract private investment to large-scale public infrastructure projects. The Commission has devised a new system, which should be operational by 2007, to grant loan guarantees which will make public–private partnerships (PPPs) more attractive to private companies.

I am doing everything to ensure that these proposals are adopted quickly. Decisions on the financing of these projects, especially those relating to the financial perspective, are needed urgently.

Mobilising the various funds and key stakeholders in the different Member States not only necessitates a new approach with regard to financing, but also a new method of coordinating both political and technical aspects of the network at EU level. When several Member States are involved, the coordination of major infrastructure projects presents major difficulties. The potential profits from investments on an axis are contingent on the completion of the cross-border sections. To promote a coherent framework for investment, the Commission, at my request, appointed six prominent figures as European coordinators on 20 July. They will also act as an advisory board for project financing.

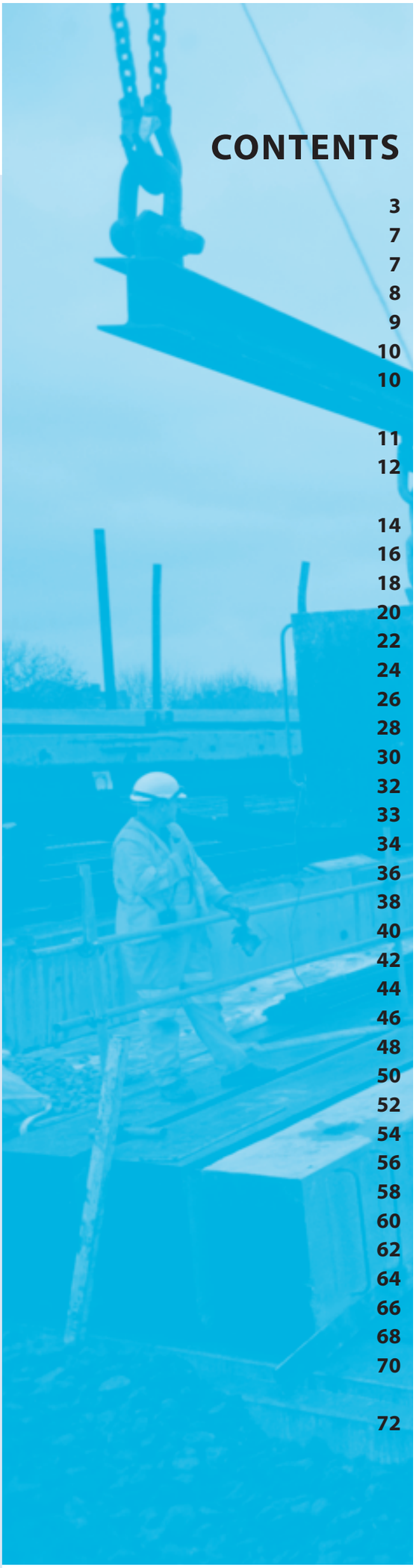
Furthermore, I am convinced that the networks presented in this brochure cannot stop at the EU's borders. That is why I have appointed my predecessor, Loyola de Palacio, to chair a new high-level group on extensions towards neighbouring countries to the south and east of the EU.

This brochure presents each major axis and priority project. It is intended to illustrate the scale and the objectives of the networks. I am sure that on reading this brochure, you will share our ambition for greater mobility throughout the EU. Space planning is no minor issue. It is a major problem both for Europe's competitive position and for the quality of life of Europeans. This is what motivates me to meet the challenge of achieving the trans-European transport network.

Jacques Barrot

Vice-President of the European Commission, with Responsibility for Transport

T509677in 22/09/05 8:40 Page 5



CONTENTS

T509677in 22/09/05 8:40 Page 6

T509677in 22/09/05 8:40 Page 7

Facts and figures

The trans-European transport network (TEN-T) plays a crucial role in securing the free movement of passengers and goods in the European Union. It includes all modes of transport and carries about half of all freight and passenger movements. One of the key objectives of creating a multimodal network is to ensure that the most appropriate transport mode may be chosen for each stage of a journey. However, for each mode, the infrastructure requirements and the main problems needing to be addressed are different as this brochure sets out to explain.

By 2020, TEN-T will include 89 500 km of roads and 94 000 km of railways, including around 20 000 km of high-speed rail lines suitable for speeds of at least 200 km/h. The inland waterway system will amount to 11 250 km, including 210 inland ports, whilst there are a further 294 seaports and some 366 airports.

Completing the network by 2020 involves the construction of the so-called 'missing links', increasing the existing road network by 4 800 km and rail by 12 500 km. In addition, about 3 500 km of roads, 12 300 km of rail lines, and more than 1 740 km of inland waterways will be substantially upgraded.

Completing the networks will have a huge impact in reducing journey time for passengers and goods. A 2004 study [1] for the Commission indicated that significant time savings would be gained from the completion of the 30 priority axes/projects which form the 'backbone' of TEN-T, through a 14 % reduction in road congestion and improved rail performance. For inter-regional traffic alone the benefits are estimated to be almost EUR 8 billion per year. In addition, freight transport in the EU is expected to increase by more than two thirds between 2000 and 2020, and to double in the new Member States. Freight transport between Member States is expected to show the largest increase overall. Without TEN-T this increase in transport would be impossible to handle, and our rate of economic growth significantly slowed.

Completing the networks will also bring important dividends for the environment. According to the study mentioned above, on current trends, CO_2 emissions from transport will be 38 % greater in 2020 than today. But completing the 30 priority axes will slow down this increase by about 4 %, representing a reduction in CO_2 emissions of 6.3 million tonnes per year.

TEN-T timeline

1990

Commission adopts first action plan on trans-European networks (transport, energy and telecommunications).

1993

TENs given legal base in Maastricht Treaty.

1994

Essen European Council endorses list of 14 TEN-T 'specific' projects, drawn up by a group chaired by then Commission Vice-President Henning Christophersen.

1995

Financial regulation for TEN-T support adopted.

1996

Adoption of TEN-T guidelines.

2001

Extension of TEN-T guidelines to port infrastructure (seaports, inland ports and intermodal terminals) adopted.

2003

A group chaired by former Commission Vice-President Karel Van Miert proposes new priority projects and calls for new means of funding.

2004

Revised guidelines and financial regulation adopted, with a list of 30 priority projects (including the original 14) and a higher maximum funding rate of 20 % in certain cases.

2005

Nomination of the first six European coordinators

2005

A group chaired by former Commission Vice-President Loyola de Palacio due to propose axes linking TEN-T to neighbouring countries outside the EU.

[1] *TEN-STAC, see http://europa.eu.int/comm/ten/transport/documentation/index_en.htm*

T509677in 22/09/05 8:40 Page 8

Finding the funds

The TEN-T legislation is only the beginning of the process, and the real challenge is to move ahead faster to get new and upgraded links into service. Procedural and technical difficulties are slowing down progress on some of the priority axes, notably on cross-border sections, but the major cause of delay is lack of funds. The EU may contribute some funding for these projects, but the majority must come from national and regional governments and the private sector.

In 2004, the total cost of completing the 30 priority axes by 2020 was estimated at EUR 225 billion, including EUR 112 billion to complete the 14 original projects. The latest information available from Member States at the beginning of 2005 indicates that the total remaining investment required has increased to EUR 252 billion. If all the other projects of common interest, but not on the priority list, are included, the total cost of completing TEN-T exceeds EUR 600 billion. Although huge, the investment needed for the 30 priority axes represents only around 0.16 % of European GDP, whereas it is estimated that completing the priority axes will bring additional economic growth of 0.23 % of GDP.

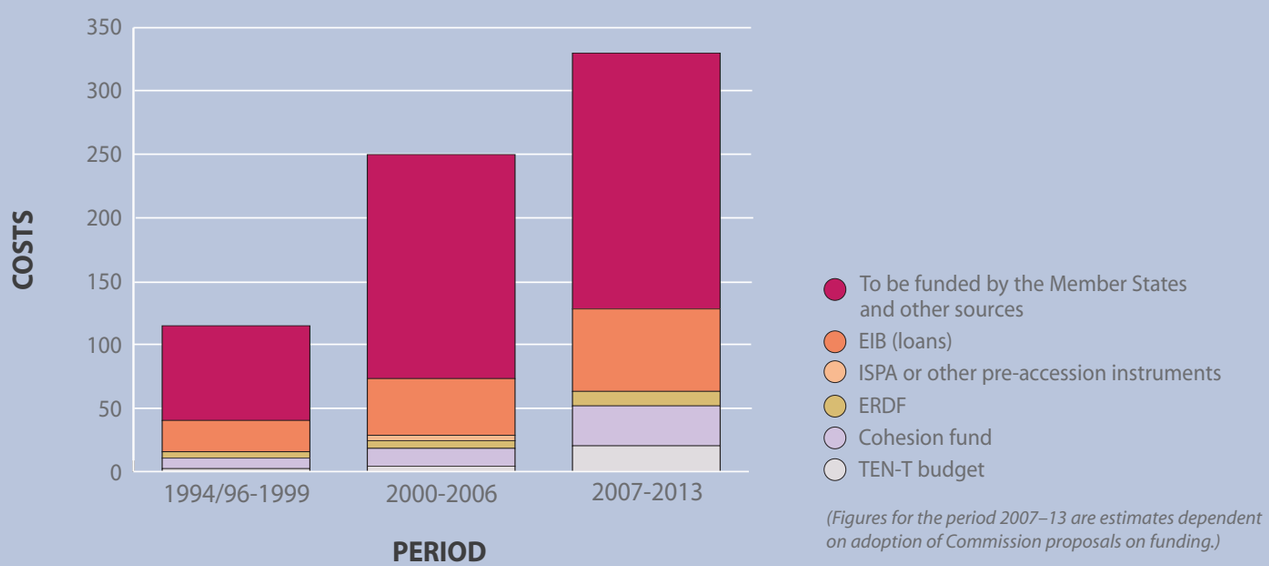
A number of EU funding sources are available to support TEN projects. The dedicated TEN-T budget is used to finance preparatory studies (up to 50 %) and to fund construction (up to 10 % of the total cost, and since 2004 up to 20 % in exceptional cases). Up to and including 2004, a total of almost EUR 5 billion has gone into TEN-T projects from this budget, or an average of EUR 600 million per year since 2000. In the years from 2007 to 2013, the Commission has proposed to increase support from this budget significantly, to a total of EUR 20.35 billion, or almost EUR 3 billion per year. Moreover, for cross-border sections, it also proposes to raise the maximum EU contribution from 20 % to 50 %. However, in mid-2005 the decision on the final budget available for TEN-T in this period remains to be taken.

The Structural and Cohesion Funds may fund TEN-T infrastructure projects in specific regions. In the period 2000–06, these funds will have contributed around EUR 20 billion to TEN-T projects, in particular in Greece, Ireland, Portugal and Spain (which have benefited from the Cohesion Fund in this period). Additional Structural Funding has been allocated to the new Member States, including EUR 2.48 billion in pre-accession support. For 2004–06, EUR 4.24 billion and EUR 2.53 billion are committed from the Cohesion and Structural Funds respectively. Beyond 2006, both the Cohesion Fund and Structural Funds will remain a major source of funds for TEN-T projects in regions with weaker economic performance.

Finally, the European Investment Bank (EIB) has lent around EUR 50 billion to Member States for TEN-T projects over the past decade. In the years up to 2010, it expects to be able to lend the same again for TEN-T projects.

Aside from EIB loans, the total EU funding available for TEN-T can provide only around 5–6 % of the investment needed. EU funding can act as a catalyst to get projects going, but Member States must find the majority of funding. Whilst governments have launched many projects

TEN-T costs and funding (Commission estimate – EUR billion)



(Figures for the period 2007–13 are estimates dependent on adoption of Commission proposals on funding.)

T509677in 22/09/05 8:40 Page 9

which coincide with their national priorities, they have been more hesitant in respect of projects, particularly cross-border links, outside their national plans. Today, investment by governments across the TEN-T network amounts to around 0.3 % of GDP, a far lower proportion than achieved in the past, hence there should be scope for greater national support efforts.

However, even with significantly increased national and Community funding (including loans), there is still a major funding gap before the TEN-T projects can be completed. It is estimated that, for certain projects, the private sector could contribute a maximum of 20 % of the necessary funds, but national governments will remain a crucial element in the funding of TEN-T.

The Commission is examining how to make 'public–private partnerships' (PPPs) for construction and operation of cross-border infrastructure more feasible, in particular through a review of procurement and concession rules. For example, the Commission plans to introduce, from 2007, a new mechanism to grant loan guarantees in order to cover commercial risks during the initial phase of exploitation of a concession, for example, if revenue is lower than expected and the concessionary has difficulties in paying back loans on time.

Raising more revenue from users is an essential part of PPPs. The EU has launched an infrastructure charging policy in the rail sector, and is revising its policy for the road sector. Modifications currently under discussion on the user-charging scheme for heavy goods vehicles – the so-called 'Eurovignette directive' – seek to set up a kilometre-based system covering the actual costs of the vehicle's trip. To manage congestion and environmental effects, charges may be differentiated to reflect the level of congestion and the sensitivity of the environment.

In addition, the draft directive allows Member States to apply mark-ups of up to 25 % to tolls for using roads in particularly sensitive areas, notably mountain regions. These funds would then contribute to the investment costs of other transport infrastructure of high European interest, especially railways. The Brenner base tunnel *(see priority axis No 1)* is but one example which could benefit from this cross-financing.

European coordinators

To improve coordination of investments, the revised guidelines allow the Commission to nominate European coordinators for individual cross-border sections, for groups of projects located on the same priority axis, or for a whole axis. These European coordinators, acting for the Commission, will mainly deal with projects which need a strong, often political, push in order to overcome difficulties in the planning and construction phases and will encourage cooperation with users and operators, promote the projects to private investors and financial institutions, including in the EU, and keep the Commission informed of progress.

In the first round, European coordinators were nominated, on 20 July 2005, for priority axes 1, 3, 6, 17 and 27, and for the implementation of the European rail traffic management system (ERTMS).

T509677in 22/09/05 8:40 Page 10

Introducing motorways of the sea

Road freight in the EU is set to increase dramatically by 2020. Substantial sections of the trans-European road network are already saturated and will suffer from increased congestion, accidents, and environmental damage in the future. In economic terms, European industry will lose competitiveness, with supply chains – which depend on cost-efficient and reliable transport systems – coming under ever-increasing pressure. For the EU, more energy-efficient freight transport is vital, both to improve our environment and to make the economy more robust. The Commission's 2001 White Paper on transport policy [2] recommended that there should be a re-balancing of the transport modes, to shift part of the expected traffic increase from road to other modes.

Greater use of intermodality is one answer. Intermodality makes better use of existing infrastructure and resources, by integrating short-sea shipping, rail and inland waterways into the logistics chain. This gives users more options, and promotes a modal shift away from road transport.

The motorways of the sea initiative, put forward in the 2001 White Paper, has intermodality at its heart. Its aim is to foster integrated intermodal options, based on short-sea shipping, providing frequent, high-quality alternatives to road transport. In time, the goal is to develop a network of motorways of the sea between different European regions, each linked to rail lines and inland waterways. In this way, the vast transport potential of European seas and waterways can be more effectively used.

The motorways of the sea concept in TEN-T was made concrete in 2004 *(see page 52)*. The guidelines set three main objectives: concentrating freight flow on sea-based routes, increasing cohesion, and reducing road congestion through modal shift.

Future development of the networks

The trans-European transport networks are organic, evolving as the needs of Europe's citizens and enterprises change. Regular reviews of progress in completing projects already identified, and evaluations of potential changes or additional projects, are essential.

The Commission established, in late 2004, a new high-level group, chaired by former Commission Vice-President Loyola de Palacio, in order to examine the connections between the TEN-T priority axes and neighbouring countries.

Whilst the 10 new Member States which joined on 1 May 2004 are integrated in the TEN-T guidelines, the EU is set to expand further. Bulgaria and Romania are due to join in 2007, Croatia and Turkey are close to beginning membership negotiations, and the other western Balkan States are expected to follow the former Yugoslav Republic of Macedonia in applying for membership. Moreover, links with the countries around the Mediterranean, with Russia, Ukraine, Belarus, and Moldova and with Armenia, Azerbaijan and Georgia are being enhanced through the EU's neighbourhood policy.

These developing relationships need to be underpinned with reliable, efficient transport links, particularly for freight. The de Palacio group is expected to put forward, in autumn 2005, a limited set of major transnational transport axes, as well as to identify the most important projects to connect the EU better with neighbouring countries. The group will also look at measures to increase technical and administrative interoperability, the use of new technologies, and safety and security issues; without effective solutions to the existing problems, bottlenecks at border crossings will remain, even if the infrastructure is upgraded.

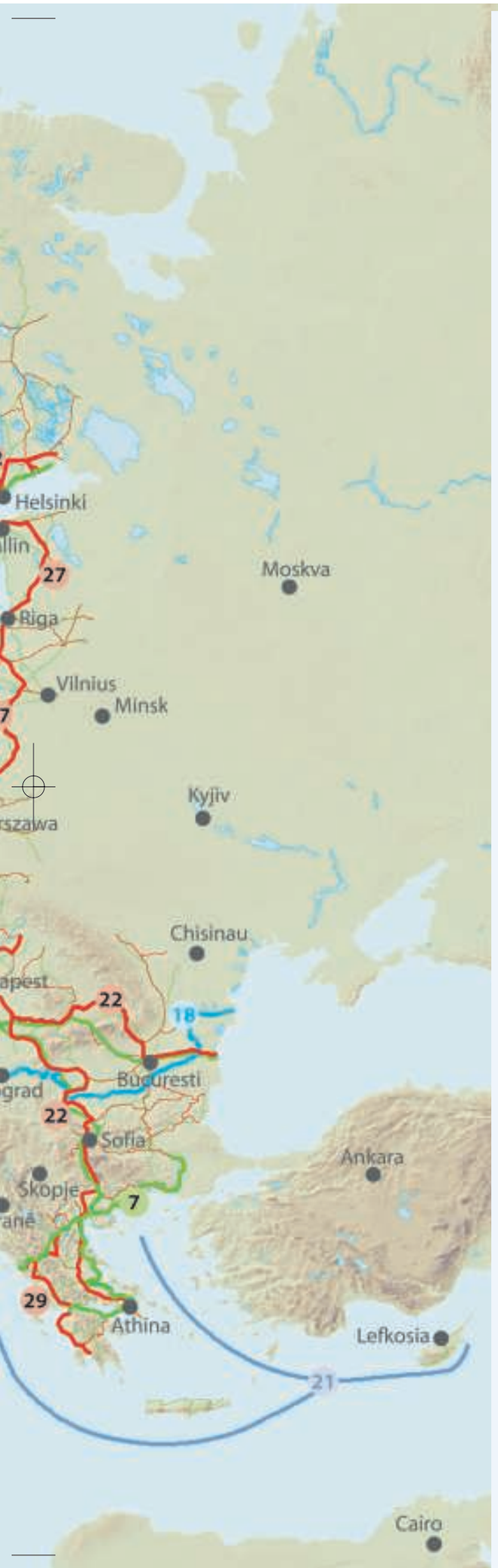
[2] *White Paper, 'European Transport policy for 2010: time to decide', COM(2001) 370 final.*

T509677in 22/09/05 8:40 Page 11

The 30 priority axes and projects in detail


Reykjavik
15
Oslo
Helsinki
Tallin
Stockholm
Riga
Vilnius
København
Dublin
London
Amsterdam
Berlin
Warszawa
Praha
Bratislava
Wien
Budapest
Paris
Bern
Ljubljana
Zagreb
Beograd
Sarajevo
Sofia
Skopje
Tirane
Roma
Madrid
Lisboa
Rabat
Al Jaza'ir
Tunis
Valetta
Tripoli

T509677in 22/09/05 8:40 Page 13



Trans-European transport network (TEN-T)
Priority axes and projects

1. Railway axis Berlin–Verona/Milan–Bologna–Naples–Messina–Palermo
2. High-speed railway axis Paris–Brussels–Cologne–Amsterdam–London
3. High-speed railway axis of south-west Europe
4. High-speed railway axis east
5. Betuwe line
6. Railway axis Lyons–Trieste–Divača/ Koper–Divača–Ljubljana–Budapest–Ukrainian border
7. Motorway axis Igoumenitsa/Patras–Athens–Sofia–Budapest
8. Multimodal axis Portugal/Spain–rest of Europe
9. Railway axis Cork–Dublin–Belfast–Stranraer
10. Malpensa airport
11. Øresund fixed link
12. Nordic triangle railway/road axis
13. United Kingdom/Ireland/Benelux road axis
14. West coast main line
15. Galileo
16. Freight railway axis Sines/Algeciras-Madrid-Paris
17. Railway axis Paris–Strasbourg–Stuttgart–Vienna–Bratislava
18. Rhine/Meuse–Main–Danube inland waterway axis
19. High-speed rail interoperability on the Iberian peninsula
20. Fehmarn belt railway axis
21. Motorways of the sea
22. Railway axis Athens–Sofia–Budapest–Vienna–Prague–Nuremberg/Dresden
23. Railway axis Gdansk–Warsaw–Brno/Bratislava–Vienna
24. Railway axis Lyons/Genoa–Basle–Duisburg–Rotterdam/Antwerp
25. Motorway axis Gdansk–Brno/Bratislava–Vienna
26. Railway/road axis Ireland/United Kingdom/continental Europe
27. 'Rail Baltica' axis Warsaw–Kaunas–Riga–Tallinn–Helsinki
28. 'Eurocaprail' on the Brussels–Luxembourg–Strasbourg railway axis
29. Railway axis of the Ionian/Adriatic intermodal corridor
30. Inland waterway Seine–Scheldt

Priority axes and projects

- Road
- Rail
- Inland waterway
- Motorway of the Sea
- Airport project
- Port project

Trans-European transport network

- Rail
- Road
- Inland waterway

Priority project numbers

- 13 Road project
- 6 Railway project
- 8 Multimodal project
- 30 Inland waterway project
- 21 Motorway of the sea
- 10 Airport
- 15 Galileo

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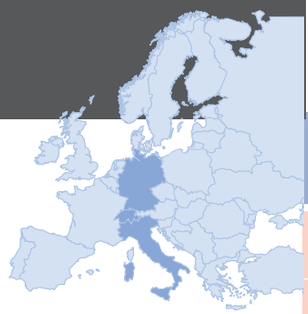
Cartography: Energy and Transport DG, 26/10/2004

T509677in 22/09/05 8:40 Page 14



Railway axis Berlin–Verona/Milan–Bologna–Naples–Messina–Palermo

Major improvements to this route, centred on the new transalpine Brenner base tunnel, will enable both people and goods to travel much more quickly between northern Europe and Italy, through the Alps.

What is the axis?

The axis will streamline rail journeys along one of Europe's major transport routes, between Germany and Italy, across the Alps. Increased rail freight capacity in particular will contribute to sustainable development.

A mixture of upgrades of existing track and new sections will increase speeds and capacity along the route Berlin–Nuremberg–Munich–Innsbruck–Verona–Florence–Rome–Naples, and onwards to the Messina Straits where a new road/rail bridge will connect Sicily to the Italian mainland.

Between Austria and Italy, a new 56 km rail tunnel – the so-called Brenner base tunnel – will be built, considerably increasing the speed of the Alpine crossing and the line's freight capacity.

What are its expected benefits?

Improvements will cut journey times significantly – by as much as two and a half hours between Berlin and Munich, for example. The additional capacity and improved quality of service will attract new rail traffic, helping to reduce road congestion along this key corridor by shifting freight and passengers to the railway. This is especially important in the ecologically sensitive Alpine region, where heavy road traffic has serious environmental impacts.

In Italy, faster rail travel along these busy routes is expected to contribute to the transfer of long-distance freight from the roads to rail, while 30 % growth in passenger traffic on the railway will half the number of flights between Milan and Rome. Better connections to the peripheral regions of southern Italy and Sicily will help improve the flow of goods and people.

Rail

Priority section		Other priority axes	
in preparation		Motorway of the sea	
under construction		Road	
completed		Rail	
		Inland waterway	
		Airport	

T509677in 22/09/05 8:40 Page 15

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Halle/Leipzig-Nuremberg	Rail (new/upgrade)	340	1996-2015	6 959	1 112.2	41
Nuremberg-Munich	Rail (new/upgrade)	171	2000-06	3 331	2 746.3	179.5
Munich-Kufstein	Rail (depending on completion of Brenner Tunnel)	97	2010-15	1 500	0	0
Kufstein-Innsbruck [2]	Rail (new)	73	1999-2012 (2009)	2 900	320	57.9
Brenner Tunnel cross-border section	Rail (tunnel)	56	2007-15	5 400	26	12.2
Verona-Naples	Rail (new)	628	1970-2007	14 329	7 292	8
Milan-Bologna	Rail (new)	200	2000-08 (2006)	6 508	1 735	1
Rail/road bridge over the Strait of Messina-Palermo [3]	Rail/road bridge (new), rail upgrade	3.3 + 230	2005-15	4 684.3	0	0
TOTAL		**1 798.3**		**45 611.3**	**13 231.5**	**308.7** [4]

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.

[2] The Wörgl–Innsbruck subsection will only be completed by 2012, as recent traffic forecasts have not identified an earlier need. Upgrading of the Kufstein–Wörgl subsection (13 km) will be started after completion of the Brenner base tunnel and not finalised before 2018.

[3] Costs given concern the rail/road bridge only. Costs for upgrading of the Messina–Palermo section are not included.

[4] Note that the total TEN-T contribution includes EUR 9.1 million, which has been allocated for infrastructure improvements in general and therefore cannot be associated with a specific section of the axis..

Projects that were part of the original list of 14 priority projects (1996):

Berlin Lehrter Bahnhof/Berlin-Ludwigsfelde	Rail (new)	25.42	1994-2006	3 348	2 148.3	68.7
Berlin-Halle/Leipzig	Rail (upgrade)	187	1991-2005	1 594	1 564	34.6
Fortezza-Verona	Rail (upgrade)	190	1992-2015	2 500	n.a.	71.7

What is its current status?

Speeds of up to 200 km/h are already being achieved on the upgraded line between Berlin and Halle/Leipzig, while work continues on the sections between Halle/Leipzig and Nuremberg. Further upgrading of the Munich–Kufstein section is currently scheduled between 2010 and 2015. In Austria, work to bring the Wörgl–Innsbruck section up to four tracks has started.

Technical studies for the Brenner base tunnel are due to be completed in 2006. Brenner base tunnel SE was established at the end of 2004 (the first firm with the new legal status of European company – *Societas Europeae*, SE) to manage the works on the tunnel, with a target completion date around 2015.

In Italy, between the southern end of the tunnel and Verona, the 190 km railway line has been partially upgraded with new tunnels and bypasses.

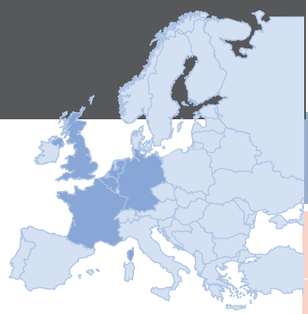
The Munich–Verona corridor has received EUR 200 million in EU support over the last 10 years.

Between Verona, Bologna and Florence approximately 200 km of high-speed line is under construction, to come into service by 2007, while the linked section from Milan to Bologna will be completed in 2008 (rather than 2006, the delay being due to environmental impact issues). The 430 km high-speed line between Florence and Naples will be operational by the end of 2007.

A mixed rail/road bridge covering the 3.3 km over the Messina Straits is due to be completed by 2015. On the mainland, the bridge will connect to a new section of the Salerno–Reggio Calabria motorway (A3), and to the existing 400 km Naples–Reggio Calabria railway line, which will be upgraded to increase speed and capacity. On the island, the 230 km railway line between Messina and Palermo will be substantially upgraded or rebuilt.

On 20 July 2005, the European Commission designated Mr Karel van Miert as European coordinator for priority axis No 1.

T509677in 22/09/05 8:40 Page 16



High-speed railway axis Paris–Brussels–Cologne–Amsterdam–London

The new high-speed railway network is already providing a real, competitive alternative to air travel between these major cities. When all sections are fully completed, passengers will benefit from quicker and easier links between the major population centres at the heart of Europe.

What is the axis?

Linking a number of capitals and other major cities, Europe's first cross-border high-speed rail project was launched in 1989 with the signature of an agreement between France, Belgium, Germany, the Netherlands and the United Kingdom. It will dramatically reduce rail journey times between these countries, providing travellers with a competitive alternative to air transport.

What are its expected benefits?

The PBKAL network will be reserved for passenger traffic, offering substantial reductions in journey times between the five countries and attracting passengers away from air travel and the roads. It will also provide improved connections between some of Europe's key airports – Brussels, Frankfurt, Cologne/Bonn, Paris Charles de Gaulle and Amsterdam Schiphol. This will make a significant contribution to the promotion of intermodal air–rail journeys, in line with Community transport policy objectives.

The high-speed Brussels–Paris line, in full service since 1997, now serves more than six million passengers a year, having attracted very large numbers from road and air, with some flights being taken out of service as a result.

What is its current status?

Construction of the Dutch line began in 2000, through a public–private partnership. The southern part, from Rotterdam to the Belgian border, is scheduled for completion in 2006, and the northern section – from Amsterdam to Rotterdam – in 2007.

In Germany, a 175 km long dedicated passenger line opened in July 2002, linking Cologne and Frankfurt in an hour and a quarter at a speed of 300 km/h. A new 250 km/h twin-track section from Düren to Cologne has been operational since 2003. Upgrading from the Belgian border to Düren will be completed by 2007.

In the United Kingdom, the 113 km Channel Tunnel rail link (CTRL) to London is under construction. Section 1 (from the Channel Tunnel to the outskirts of London) opened at the end of September 2003. Section 2 (Southfleet to London St Pancras) is due to be completed by early 2007.

In Belgium, the line from Brussels to the French border came into operation in 1997, with high-speed services now operating to Paris, and through the Channel Tunnel to London. Since 2002, Liège has been connected to Leuven by high-speed line. Upgrading of the Brussels–Leuven line is expected to be finished in 2006, and the high-speed line from Liège to the German border by the end of 2006.

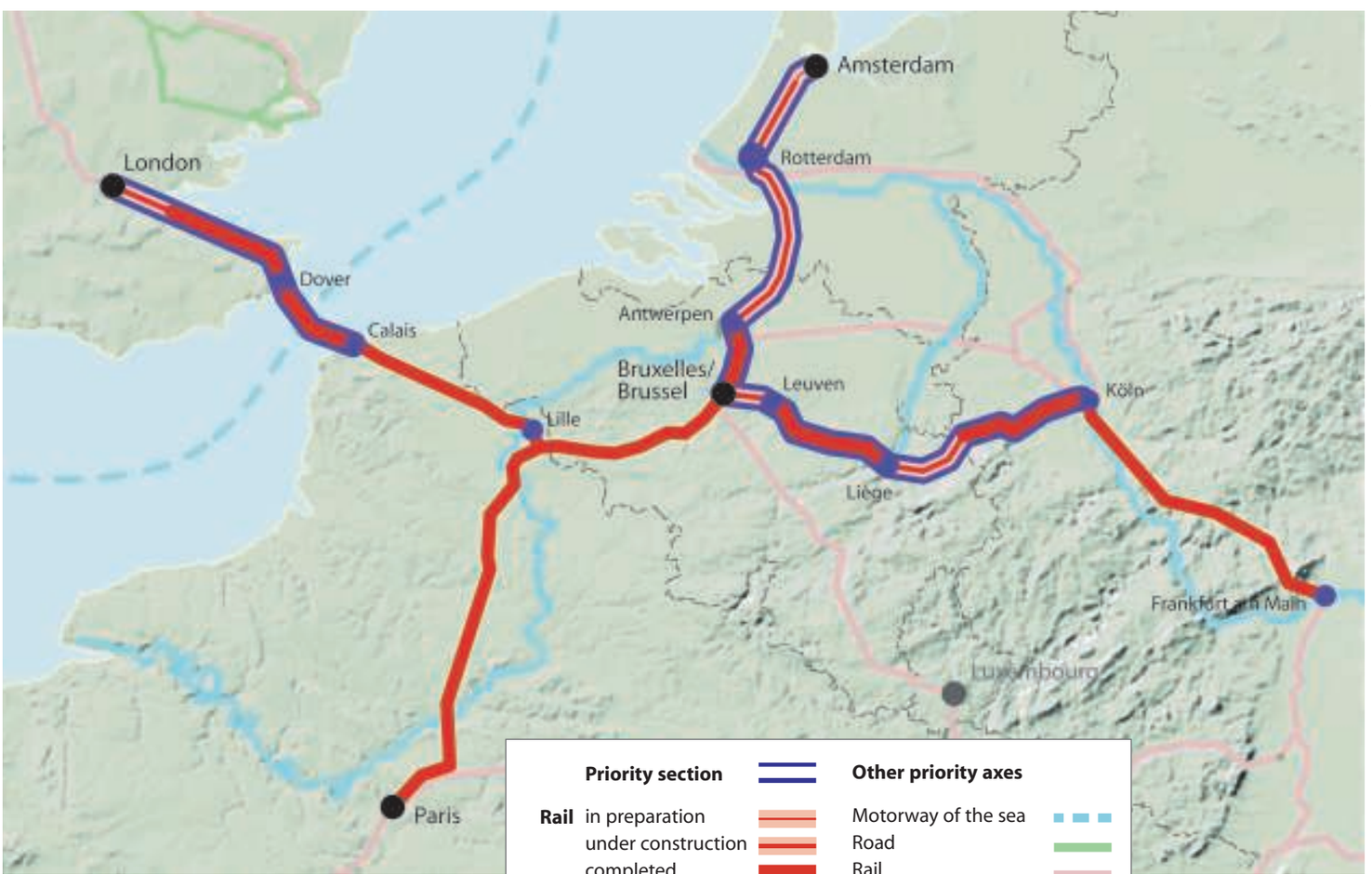
Upgrading of the Brussels–Antwerp line is almost complete. Nevertheless, some relatively small additional projects are planned (Zaventem (Brussels airport)–Mechelen) which will slightly reduce journey time, and will be completed by 2010. The high-speed line from Antwerp to the Dutch border, including a new tunnel beneath the city of Antwerp, should be finished in 2006. Although commercial services will start in 2007, trainsets equipped with European train control systems (ETCSs) will only be available in 2012.

The French sections linking Paris, Lille and Calais and the Channel Tunnel are complete, and have been in service since 1993.

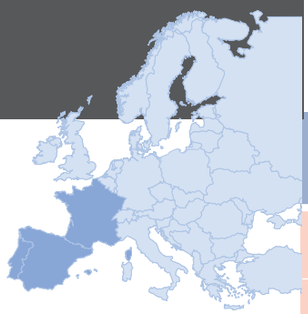
T509677in 22/09/05 8:40 Page 17

Priority section	Type of work/status	Distance (km)	Timetable	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Channel Tunnel–London	Rail (new)	113	1999–2007	8 011	7 080	255.9
Brussels–Liège–Cologne	Rail (new)	210	1996–2007	2 734	2 062	78.2
Brussels–Rotterdam–Amsterdam	Rail (new)	187	1998–2007	6 319	5 635	81.3
Amsterdam station			2008–14	270	0	0
Rotterdam station			2006–10	123	0	0
TOTAL		**510**		**17 457**	**14 777**	**731.4** [1]
Projects that were part of the original list of 14 priority projects (1996)						
Lille–Brussels	Rail (new)		1992–2006	1 423	1 341	0 [1]
Cologne–Frankfurt	Rail (new)		1990–2004	6 015	6 015	148.8

[1] Note that the total TEN-T contribution includes EUR 316 million, which has been allocated to the Netherlands and Belgian sections (e.g. Lille–Brussels) in general, and cannot be associated with a specific section of the axis.



T509677in 22/09/05 8:40 Page 18



High-speed railway axis of south-west Europe

Three new high-speed lines will link major cities on the Iberian peninsula with the French high-speed network, bringing the Spanish capital to within four hours of the French border. The new lines will slash current journey times by as much as 60 %, providing significant new competition to both air and road transport on key routes.

What is the axis?

Three new high-speed railway lines will establish connections between major cities on the Iberian peninsula, and link them with the French high-speed network. New high-speed railway lines (built to standard European gauge in Spain and Portugal) will link Lisbon and Porto to Madrid. From Madrid, two branches – Atlantic and Mediterranean – will connect to the French high-speed rail network.

The Lisbon–Porto line will link to a Portuguese/Spanish cross-border connection from Aveiro to Salamanca, as well as to a direct Lisbon–Madrid line. The Atlantic branch connects Madrid–Vitoria–Irún/Hendaye–Dax–Bordeaux–Tours, joining the existing Paris–Tours high-speed line. The Mediterranean branch links Madrid–Zaragoza–Barcelona–Figueras–Perpignan–Montpellier–Nîmes, connecting to the existing Paris–Lyons–Marseille/Nîmes high-speed line.

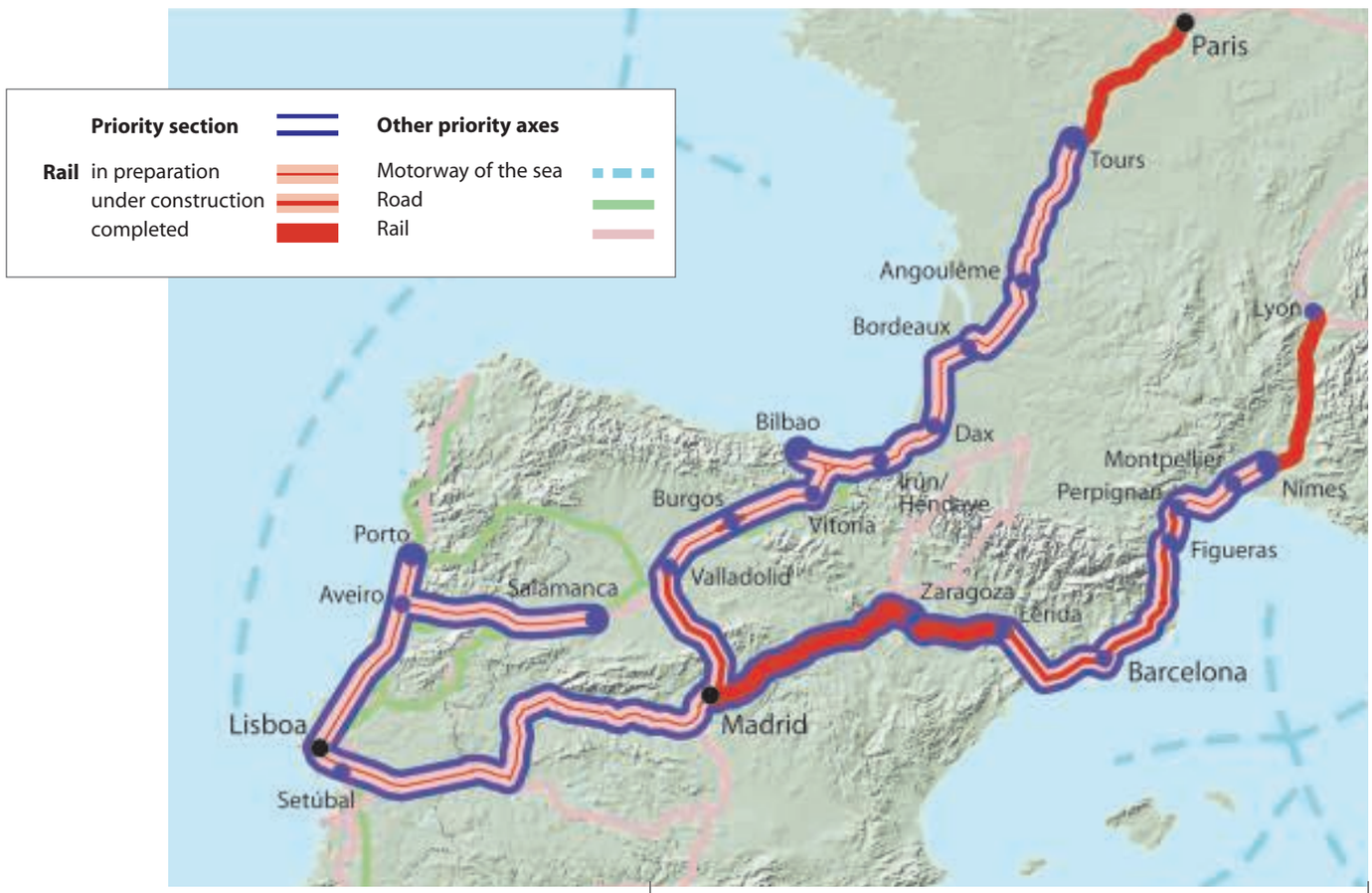
What are its expected benefits?

For rail passengers, the completion of the lines will lead to noticeable capacity increases (e.g. 400 % for Madrid–Barcelona) and reductions in travelling time: Madrid–Barcelona (from 6 hours and 50 minutes to 2 hours and 25 minutes) or Lisbon–Madrid (10 hours and 40 minutes to 2 hours and 45 minutes).

The new high-speed lines will release substantial capacity for freight transport on existing conventional lines, complementing priority axes No 8 and No 19.

Moreover, the cross-border French–Spanish sections will be combined passenger and freight lines. Significant additional trans-Pyrenean freight capacity – up to 25 million tonnes per year on each branch – will be created in the long term.

Improved transport links will provide a substantial boost to economic development across the Iberian peninsula, in particular allowing through traffic from France without gauge changes.



T509677in 22/09/05 8:40 Page 19

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Lisbon/Porto–Madrid [2]	New line	670	2006–11	11 355	24	11
Madrid–Barcelona–Figueras–Perpignan	New line, including new cross-border 8 km tunnel	895	1998–2009 (2005/08)	10 064	5 853	82
Perpignan–Montpellier	New line	140	2006–09 (2015)	2 200	0	7
Montpellier–Nîmes	New/upgraded line	80	2006–15 (2010)	1 130	0	0
Madrid–Vitoria–Irún/Hendaye	New line	652	2002–10	8 581	1 475	42
Irún/Hendaye–Dax	Upgraded line	85	2006–15 (2010)	100	0	0
Dax–Bordeaux	New line	130	2010–20	2 400	0	0
Bordeaux–Tours	New line	304	2008–15	3 900	0	0
TOTAL		**2 956**		**39 730**	**7 352**	**142**

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.

[2] Including Lisbon–Porto (2013), Lisbon–Madrid (2010) and Aveiro–Salamanca (2015).

What is its current status?

Construction started in 1998 on the Madrid–Barcelona line, with the Madrid–Zaragoza–Lérida section (445 km) opened in 2003. The Lérida–Barcelona section was scheduled to open in 2005, but works were delayed due to discussions on the route into central Barcelona. Work on the Barcelona–Perpignan line has also started and it will be operational by 2009. The Figueras–Perpignan cross-border section, including an 8.2 km twin-tube tunnel, will be financed by a PPP scheme and operated by the 'Euroferro' concession.

Improvements and capacity enhancement on the Perpignan–Montpellier section are due for completion by 2009, as France has notified at the beginning of 2005 its intention to upgrade the existing line to coincide with the Figueras–Perpignan line coming into operation. France, however, has not confirmed the date of 2015 for the completion of the new line between these two cities. Work on the Montpellier–Nîmes section (70 km of new passenger/freight line) is due to start in 2006 and be completed by 2010. However, France notified in 2005 that the completion date would be delayed until 2015.

On the Atlantic branch, works on the Madrid–Valladolid–Burgos section, including the twin-tube tunnel at Guadarrama, are under way. Design studies are ongoing for the rest of the Spanish sections, including the Basque triangle (Bilbao–Vitoria–San Sebastian), with the aim of completing all the Spanish sections by 2010.

The critical link is the Irún/Hendaye–Dax cross-border section, which should be completed by 2010, but France notified in 2005 that the completion date has been put back to 2015. French and Spanish railway infrastructure managers plan to set up a European group of economic interest (EGEI) to undertake common studies.

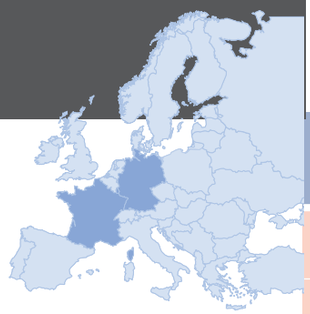
On the French side, work is less advanced. Preliminary studies for Dax–Bordeaux are in preparation. Preliminary studies on the Tours–Bordeaux line are under way, with a public enquiry for the Bordeaux–Angoulême section opened in early 2005. Completion of this line is expected in 2015.

Detailed design studies are under way for the Lisbon–Porto and Lisbon–Madrid lines. Spain and Portugal have created an EGEI to prepare the cross-border sections. Starting construction in 2006 is an important goal for connecting Lisbon and Madrid by 2010. Future operation of these lines will be managed by a joint commission.

In Spain, in addition to support from TEN-T funds, development work is also receiving substantial support from the Cohesion Fund.

On 20 July 2005, the European Commission designated Mr Etienne Davignon as European coordinator for priority axis No 3.

T509677in 22/09/05 8:40 Page 20



High-speed railway axis east

The new high-speed railway link between Germany and France will benefit European citizens from west and east alike, speeding up journey times and providing a more environment-friendly alternative to air travel on key routes.

What is the axis?

The project aims to interconnect the high-speed rail networks of France and Germany, as well as to improve the railway link between France and Luxembourg. Its three parts are a new 300 km long high-speed, passenger-only rail line from Paris to Baudrecourt (near Metz) with a commercial speed of 320 km/h; upgrading of the Saarbrücken–Mannheim section (on the Paris–Metz–Frankfurt–Berlin railway corridor, the improvement of which is subject to a bilateral ministerial agreement concluded in 1992), for 200 km/h running; and upgrading of the Metz–Luxembourg line.

The Paris–Baudrecourt section is the first phase of the French 'TGV Est' project which will link Paris with Strasbourg and, via Kehl/Appenweier, with the German high-speed rail network. The second phase of this project (Baudrecourt–Strasbourg) is also part of the Paris–Stuttgart–Munich–Vienna–Bratislava *(see axis No 17)* and Strasbourg–Luxembourg–Brussels *(see axis No 28)* projects.

What are its expected benefits?

The mixture of building new lines and upgrading existing ones will greatly improve transports link for passengers between France, Germany and Luxembourg. The project forms the first stage of an east–west corridor linking Europe's major economic centres with the new Member States of central and eastern Europe.

Completion of the French part of this priority project (i.e. the first phase of the 'TGV Est' project) will cut journey times from Paris to Strasbourg to 2 hours and 20 minutes, from Paris to Metz and Nancy to 1 hour and 30 minutes, from Paris to Reims to 45 minutes and from Paris to Luxembourg to 2 hours and 15 minutes.

The new line will help to shift traffic from road and air transport to rail, and should boost economic and regional development.

What is its current status?

In France, construction of the new high-speed line between Vaires and Baudrecourt started in January 2002. Track-laying works started in October 2004. At that time, ground works for the new line had been fully completed, and about 70 % of the bridges and tunnels were in place. Infrastructure works should be completed in summer 2006, allowing test runs to start towards the end of 2006, and the new line to open in summer 2007.

The 'TGV Est' project includes the construction of three new railway stations of which Champagne–Ardenne and Meuse form part of the first phase, i.e. priority axis No 4 (the third station – Lorraine – belongs to priority axis No 17).

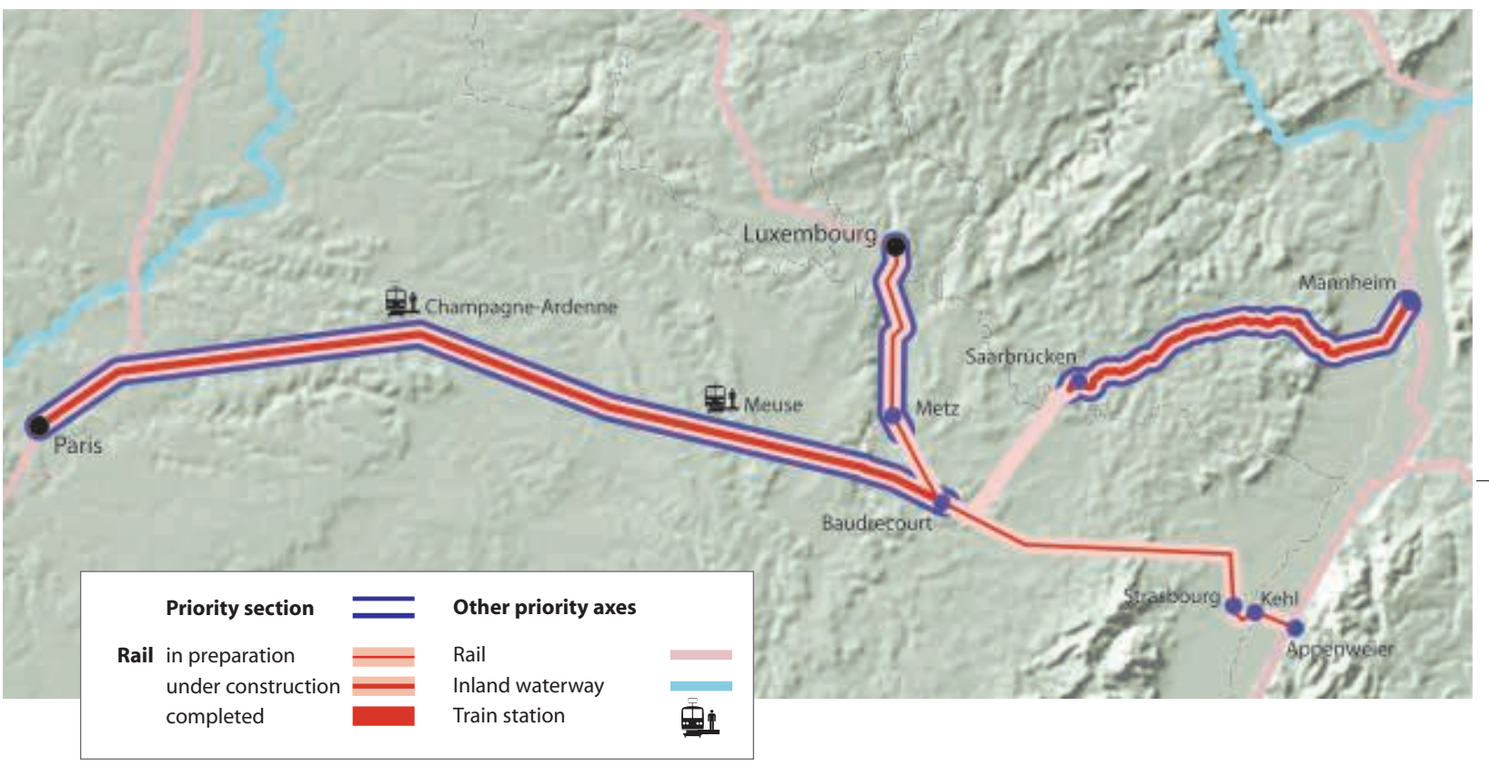
Plans for the connection between the new Paris–Baudrecourt line and the existing line to Luxembourg received government approval in April 2002, and it will be completed and opened for operation together with the new line.

In Germany, upgrading work on the Saarbrücken–Mannheim section, to allow the use of 200 km/h tilting trains, is planned to be finished by 2007.

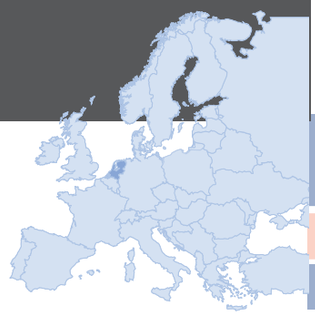
The French and German railways are working together to equip this corridor with the European rail traffic management system (ERTMS), allowing German and French trains to operate on each others' tracks with a single European train control system, the ETCS.

T509677in 22/09/05 8:40 Page 21

Priority section	Type of work/status	Distance (km)	Timetable	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Paris–Baudrecourt; Metz–Luxembourg	New line and upgrade	365	2002–07	4 034	1 358	212.9
Saarbrücken–Mannheim	Upgrade	145	2003–07	339	176	18.5
TOTAL		**510**		**4 373**	**1 534**	**231.4**



T509677in 22/09/05 8:40 Page 22



Betuwe line

A dedicated freight railway line across the Netherlands will provide easier and more environment-friendly transport options into the port of Rotterdam, helping to consolidate its position as one of Europe's key transport and distribution hubs.

What is the axis?

To facilitate the movement of maritime freight into the heart of Europe, a new 160 km railway is being built across the Netherlands, linking the busy port of Rotterdam to the existing German rail network at the Dutch/German border.

Around three quarters of the Betuwe line will be newly constructed, while the remaining section linking Maasvlakte to Kijfhoek will be upgraded. Work on this section, known as the port railway line, entails doubling the existing single track and electrifying the line, as well as the construction of a rail bridge and tunnel.

The main section of the Betuwe line requires the construction of a new 112 km line from Kijfhoek to the Dutch/German border near Zevenaar. For much of the route, it will run alongside the existing A15 motorway, hence this section is known as the A15 line.

What are its expected benefits?

Among the project's many benefits, it will increase the transport options for freight companies wishing to move goods across the Netherlands. Dependence on existing constrained road and inland waterway networks often causes congestion along key routes.

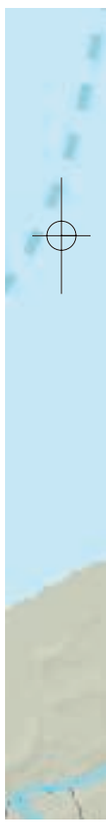
The line will also improve freight links between the Netherlands and the rest of Europe, boosting Rotterdam's development as a major centre for transport, distribution and production. The line has been designed to move up to 74 million tonnes of freight a year, although initially it is only expected to attract half this amount.

By moving freight off the roads, the scheme will also deliver benefits to road users and to the environment. The shift from road to rail will be particularly significant along the route of the A15 line.

What is its current status?

Work to upgrade the port railway line started in 1997. The Dintelhaven rail bridge was completed in 1999 and the Botlek tunnel – the first ever bored Dutch rail tunnel – in 2002. The whole line will be fully upgraded, electrified and installed with the latest safety equipment. In 2004, this section was opened officially and is now in full use.

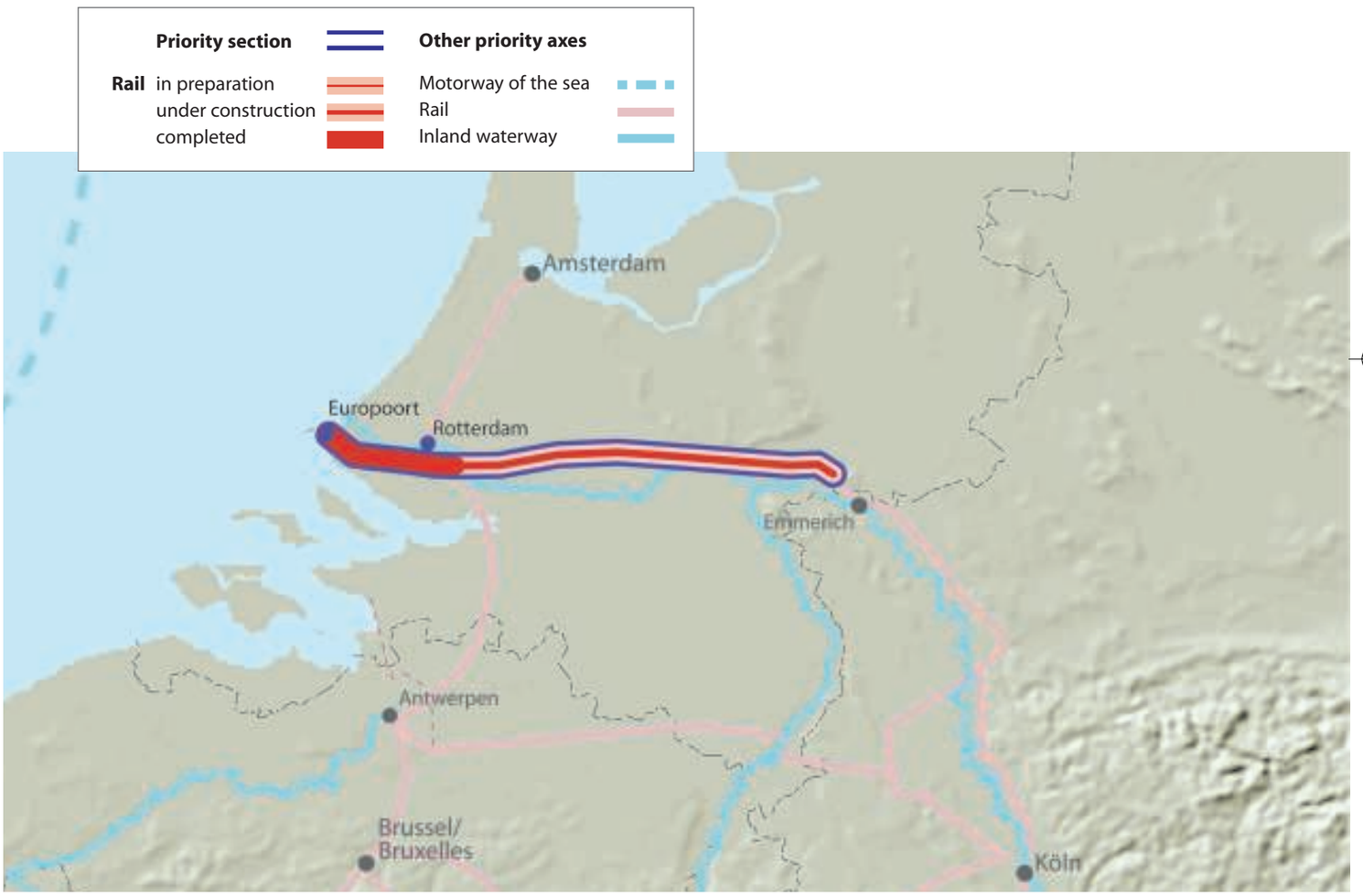
Construction of embankments, tunnels and bridges for the A15 line began in 1998. Almost all of the substructure is now finished and works on the superstructure commenced in 2003. Track-laying started at the end of 2003, together with electrification and safety equipment installation. The whole line is expected to be complete by 2006.



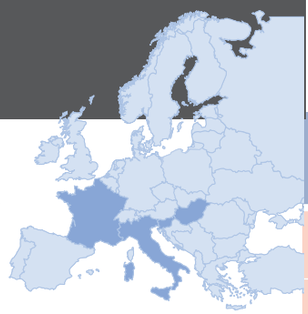
T509677in 22/09/05 8:40 Page 23

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Betuwe line	Rail (upgrade)	160	1998–2006 (2007)	4 685	4 130	135
TOTAL		**160**		**4 685**	**4 130**	**135**

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.



T509677in 22/09/05 8:40 Page 24



Railway axis Lyons–Trieste–Divača/ Koper–Divača–Ljubljana– Budapest–Ukrainian border

A new transalpine base tunnel will increase capacity on the congested Franco–Italian crossings and make rail competitive with air and road travel on these high-density passenger and freight routes. The extension of the axis to Slovenia and Hungary makes it one of the key east–west routes in the TEN-T.

What is the axis?

This axis with a total length of more than 1 400 km up to the Ukrainian border includes about 750 km of new high-speed lines – including a base tunnel of about 52 km under the Alps – designed for speeds of 250–300 km/h (plus sections of upgraded lines, mainly in Slovenia and Hungary). The new axis will be used by both passengers and freight. It will link the French and Italian high-speed networks.

What are its expected benefits?

The project will bring major reductions in travelling time for both passenger and freight services. Between Milan and Paris the travel time for passengers will decrease from six and a half hours to just over three and a half hours. Capacity will be more than doubled on the entire axis, more than ample for future needs. Greater capacity, and improved service quality is expected to enhance the competitive position of rail and increase its market share on this corridor, in particular for freight traffic.

A pilot shuttle service for lorry transport (rolling road) is currently operating. In the long term, this could take some 15 000 trucks off the roads every week. Once the axis is completed, the capacity will be over 40 million tonnes of freight per year. It will play a significant role in reducing the number of trucks crossing the Alps.

The new axis will also free capacity on existing, saturated railway lines, helping indirectly to improve freight, and local and urban passenger services.

What is its current status?

For the Lyons–Montmélian section, traditional financing is foreseen, and the project is currently in an intermediate study phase.

The French–Italian intergovernmental commission coordinating the international section is considering several possibilities for the financing of the project, including a private–public partnership scheme. France is also looking at a specific financing structure from the dividends of toll motorways.

TAV, a subsidiary of FS (Italian State railways), is managing the development of the Italian high-speed network, in particular of the Turin–Padua section. For the Italian sections, the State will provide 40 % of the funds with the remainder in bank loans. Financing has already been secured for the Turin–Milan, and Padua–Venice sections, whilst a law of December 2001 provides for the completion of the whole Turin–Trieste axis.

The new Venice–Trieste line is at an advanced stage of study. A feasibility study for the cross-border Venice–Trieste–Ljubljana section was completed in 2000, while a technical study for the Ronchi–Trieste section is currently under way.

The studies showed a need for in-depth studies of the alignment, particularly in view of the geological problems in a karst region, which could inflate the construction costs. Nonetheless, the project is included in both governments' infrastructure plans.

Preliminary designs and preliminary investment plans have been prepared for the Divača–Koper section, with detailed design to be completed in 2006, allowing work to be completed by the end of 2012.

The Ljubljana–Hodoš (Hungarian border) section requires modernisation of signalling and safety devices, and upgrading of the line. Preliminary design work is under way, with work due to get started by the end of 2006.

In 2001, the new Hungarian–Slovenian rail line (Hodoš–Zalalövő) was opened for traffic. Reconstruction of the Zalalövő–Zalaegerszeg–Boba line was started in 2002 and will be finished in 2007. As part of these works, the European train control system (ETCS) that has been put into operation on the rail connection between the border and Zalalövő (in Slovenia) will be extended further into Hungary.

On 20 July 2005, the European Commission designated Ms Loyola de Palacio as European coordinator for priority axis No 6.

T509677in 22/09/05 8:40 Page 25

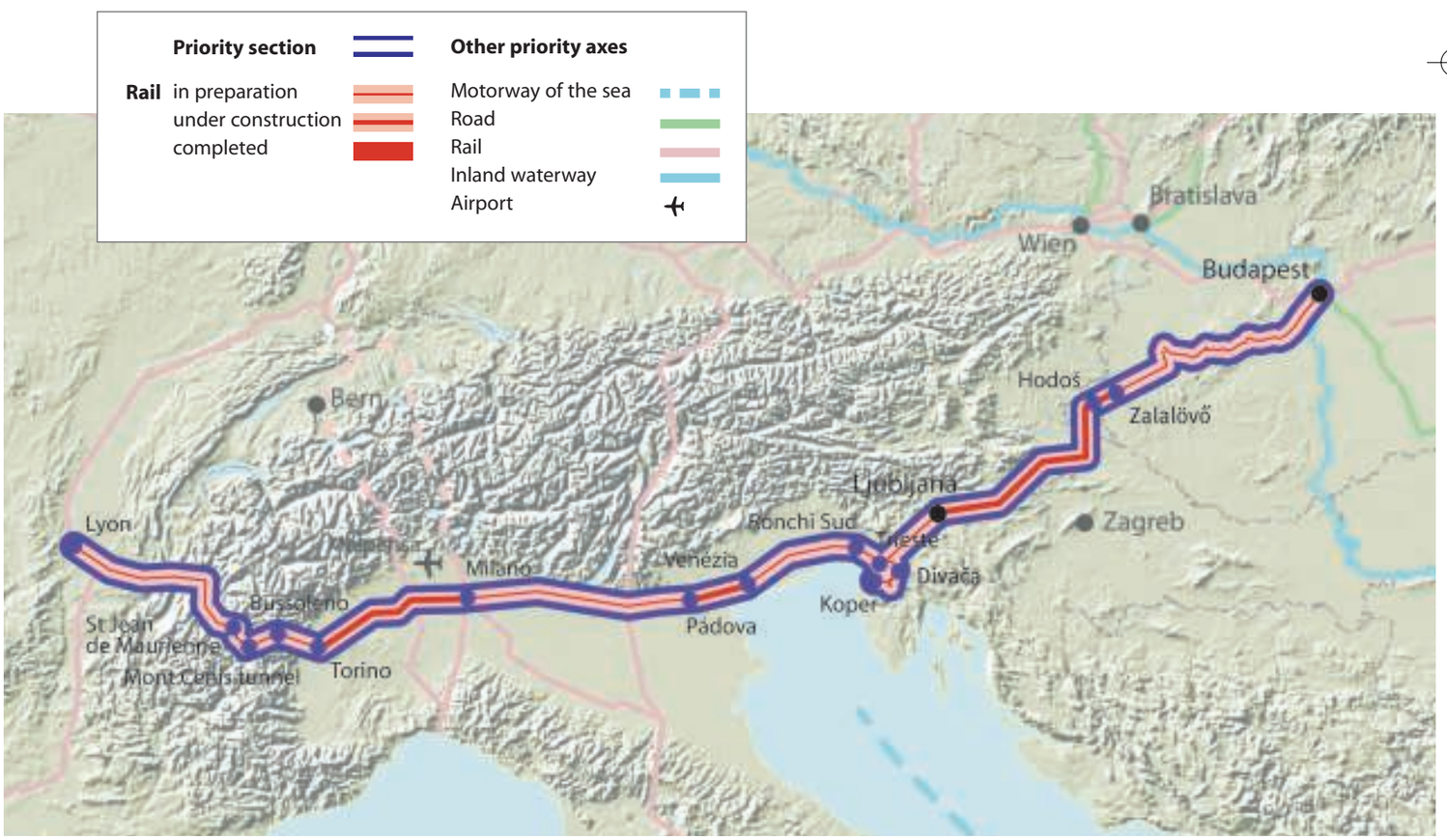
Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Lyons–St-Jean-de-Maurienne	Rail (new)	140	2007–15	6 250	0	3.2
Mont Cenis Tunnel (including access)	Rail (new tunnel)	70	2004–18 (2017)	6 700	200	117.6
Bussoleno–Turin	Rail (new)	47	2002–11	2 375	0	0
Turin–Venice	Rail (new)	384	2002–11 (2010)	14 994	1 700	0
Venice–Ronchi Sud-Trieste–Divača	Rail (new)	178	2008–15	6 200 [2]	0	3.6
Koper–Divača–Ljubljana	Rail (upgrade and new track)	135	2006–12	376 [3]	5	5.5
Ljubljana–Budapest	Rail (upgrade)	528	2000–15	760	19	3.5
TOTAL		**1 482**		**37 655**	**1 924**	**295.4** [4]

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.

[2] The costs for the Trieste–Divača section are not included as no decision on the alignment has yet been taken.

[3] The costs given only cover the Koper–Divača section.

[4] Note that the total TEN-T contribution includes EUR 162 million, which has been allocated for infrastructure improvements in general and therefore cannot be associated with a specific section of the axis.



T509677in 22/09/05 8:40 Page 26

Motorway axis Igoumenitsa/Patras–Athens–Sofia–Budapest

This motorway project will provide significant improvements to the road network of south-eastern Europe, by linking the main cities of the region, and connecting the ports of Patras, Igoumenitsa, Athens (Piraeus), Thessaloniki and Constanta to the heart of the enlarged European Union.

What is the axis?

The initial plan for this axis involved the construction of two new motorways across Greece. The first runs from west to east, and for much of its 780 km – including the branch to Ormenio – follows the route of the *Via Egnatia*, dating from the second century BC. This new four-lane motorway will link the port of Igoumenitsa with Kipi on the Greek–Turkish border. The second road is an upgrade of the current 800-kilometre *Pathe* road, which runs from southern Greece to the north, linking Patras to Promahon on the Greek–Bulgarian border via Athens and Thessaloniki.

The *Pathe* motorway – with four lanes for its entire length in Greece, and six near Athens and Thessaloniki – will be extended to complete the missing links on one of the most important road axes in the south-eastern countries of the enlarged EU.

Extensions to this axis were agreed in 2004, adding links north from Greece into neighbouring countries and from there into central Europe.

The first branch of these extensions runs from the Greek–Bulgarian border at Promahon to Sofia along pan-European corridor IV, linking Sofia to Thessaloniki.

A second branch of the *Pathe* axis leads from the outskirts of Thessaloniki to Evzoni on the Greece–former Yugoslav Republic of Macedonia border and then north to Skopje. This branch forms the last section of pan-European corridor X, connecting Skopje to Thessaloniki.

Two branches will join at Nadlac on the Hungarian–Romanian border. One runs in the direction of the port of Constanta, via Bucharest, while the other runs south to Sofia and on towards Thessaloniki and Athens.

These sections will complete a route on which the future Member States (Bulgaria and Romania) have already made considerable investments through the ISPA programme.

What are its expected benefits?

Journey times by car will be drastically cut by the construction of the roads. It will directly benefit 70 % of the population living in the cities along the Pathe/Via Egnatia routes, accelerating economic and regional development. And for freight on longer distance journeys, the new roads will improve links to central Europe and the rest of the EU, and provide more reliable transport for the whole region.

With enhanced links to five ports, eight airports and nine other major roads, the scheme will boost tourism and trade in the region. The upgrade of the roads to motorway standard is also expected to reduce road accidents along these axes significantly. The project will also provide considerably faster connections between neighbouring countries in the region – Greece, Albania, the former Yugoslav Republic of Macedonia, Bulgaria, Romania and Turkey.

Considerable efforts have been made at design stage to minimise the environmental impacts of construction, and the Greek government has also taken steps to attract private investment in the schemes.

What is its current status?

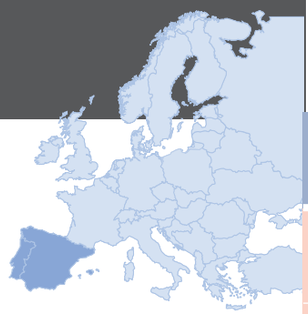
The Greek sections of both the Via Egnatia and Pathe motorways are largely completed. The remaining sections of the extended Pathe motorway are either complete or on the way to being completed by 2008, although the Thessaloniki–Sofia stretch will not be wholly in use until 2010.

T509677in 22/09/05 8:40 Page 27

Priority section	Type of work/status	Distance (km)	Timetable	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Via Egnatia	New road	780	1996–2006	4 600	3 100	27
Pathe	New road	800	1996–2008	8 389	4 654	90.6
Sofia–Kulata–Greek –Bulgarian border	Upgrading motorway	160	2003–10	675	0	0
Nadlac–Sibiu motorway (branch towards Bucharest and Constanta)	Upgrading/ new motorway	316	2004–07	1 879	0	0
TOTAL		**2 056**		**15 543**	**7 754**	**148.5** (1)

(1) Note that the total TEN-T contribution includes EUR 30.9 million, which has been allocated for infrastructure improvements in general and therefore cannot be associated with a specific section of the axis.

T509677in 22/09/05 8:40 Page 28



Multimodal axis Portugal/ Spain–rest of Europe

Major improvements in the road, rail, air and maritime infrastructures in the Iberian peninsula will make passenger and freight journeys within and between Spain and Portugal quicker and more efficient. And it will also improve connections with the rest of the EU, bringing the citizens and firms of these two Member States closer to the heart of Europe.

What is the axis?

The project will reinforce three multimodal corridors linking Portugal and Spain, helping to connect the two countries with the rest of Europe. It includes sub-projects to improve routes across the Spanish–Portuguese border, linking Spanish cities such as Valladolid, Seville, Vigo and La Coruña, with Portugal's principal sea and airports, and its large urban centres – Porto and Lisbon in particular. As part of wider infrastructure investments, it complements existing rail, road, maritime and air routes in the west of the Iberian peninsula, and will link the main Portuguese and Spanish sections of the trans-European transport network. The project also includes the construction of Lisbon's new airport at Ota.

Overall, the axis involves the construction of 2 265 km of new motorways, upgrading of 1 067 km of conventional rail lines, and upgrading of Atlantic ports and airports. The total costs of the work will be around EUR 12.8 billion.

What are its expected benefits?

The project is an important contribution to continuing efforts to improve links between the centre of the EU and its peripheral regions, and will strengthen the Iberian peninsula's position as a western European gateway.

Specifically, it will facilitate links between the peninsula and western and south-western France. Road freight currently accounts for 97 % of land trade flows between these two regions. This project will bring major improvements, significantly reducing journey times and increasing safety, especially for international traffic. By increasing the capacity of the railways, it will increase rail's share of intra-Community freight transport along these corridors, contributing to environmental sustainability. Directly and indirectly, the project will also stimulate job-creation in the regions affected. The project will also benefit from the additional capacity for freight transport freed up after the completion of high-speed passenger lines *(see axis No 3)*.

What is its current status?

In the Portuguese section – in addition to studies concerning improvements in all modes – much electrification, track doubling and other upgrading work has already been carried out on the main railway lines. The Lisbon–Porto–Vigo–La Coruña motorway has been completed and the Lisbon–Faro–Seville motorway opened to traffic in 2002. The modernisation of Faro airport is close to completion, while the modernisation of Porto's airport is also at a very advanced stage. Within the next few years, construction is likely to start on Lisbon's new Ota airport.

In the Spanish section, in addition to the completed motorway links between Lisbon and La Coruña and Lisbon and Seville, two connections from Lisbon/Porto to Valladolid are at a very advanced stage of construction. The Valladolid–Benavente–Verin section of the northern motorway is completed, as well as the Valladolid–Salamanca section of the eastern connection. The remaining section from Salamanca to Fuentes de Oñoro should be operational by 2008. For the rail sections in Spain, upgrading works between Pontevedra and La Coruña, and from Fuentes de Oñoro to Medina del Campo, are under way. Other sections of the two rail corridors are being studied.

Up to 2004, Community support from the TEN-T budget amounted to EUR 43 million. Various sections have also received substantial support from the Cohesion Fund, and obtained loans from the EIB.

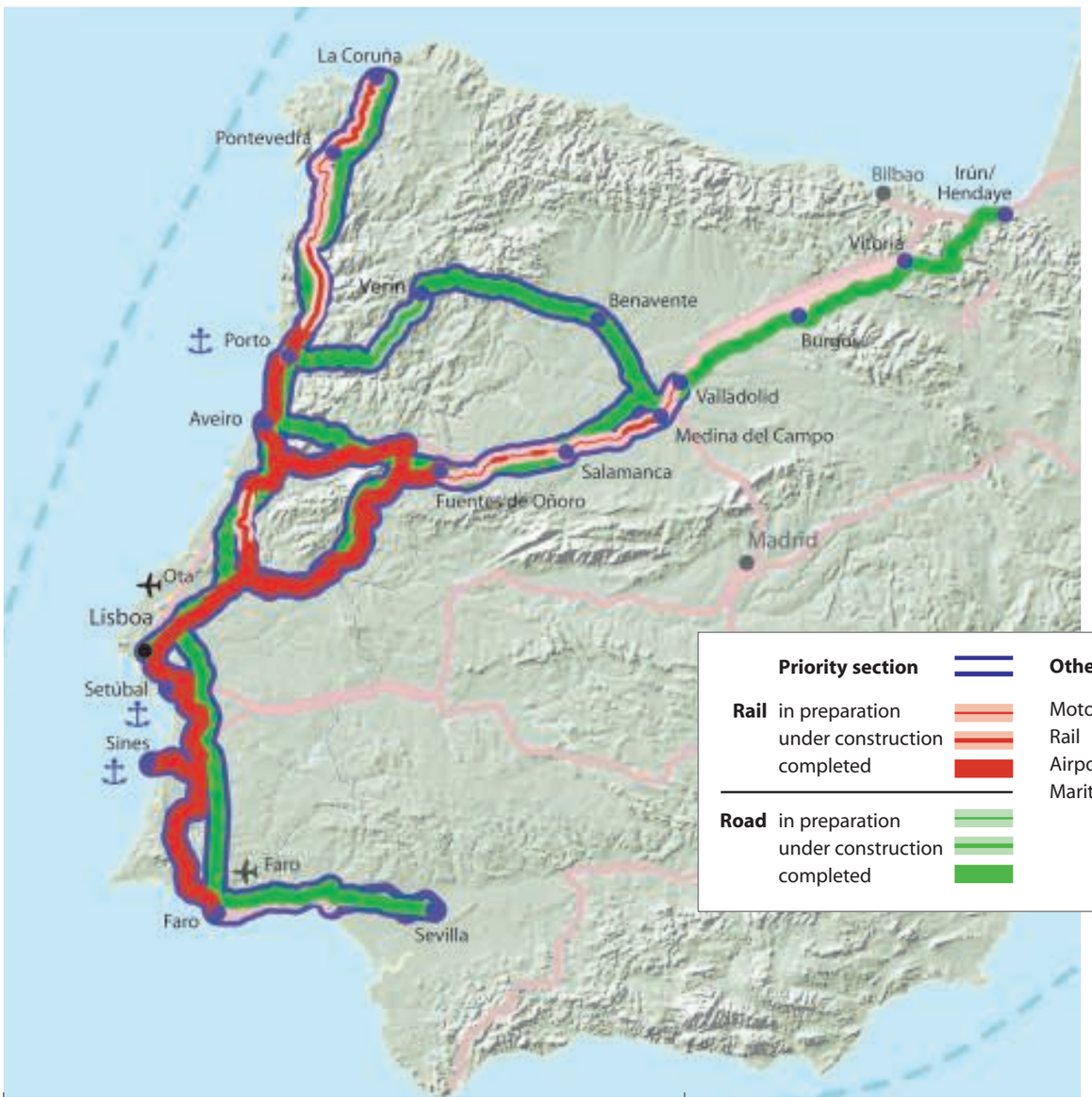
T509677in 22/09/05 8:40 Page 29

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Railway						
La Coruña-Lisbon-Sines	upgrade	367	2000-09 (2010)	2 727	874	16
Lisbon-Valladolid	upgrade	400	1999-2015 (2010) [2]	1 917	841	5
Lisbon-Faro	upgrade	300	2000-06 (2004)	1 001	780	1
Motorway						
Lisbon-Valladolid	new	1 214	1996-2010	1 518	1 336	6
La Coruña-Lisbon	new	598	2000-05 (2003)	2 365	2 097	1
Seville-Lisbon	new	453	1998-2001	754	754	0
Airports						
new Lisbon Airport	new		2006-15	2 550	0	3
TOTAL				**12 832**	**6 682**	**43** [3]

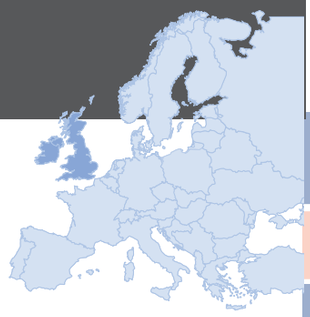
[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.

[2] The delay in the implementation of the Lisbon–Valladolid section is due to environmental procedures.

[3] Note that the total TEN-T contribution includes EUR 11 million, which has been allocated to the Spanish and Portuguese sections in general and cannot be associated with a specific section of the axis.



T509677in 22/09/05 8:40 Page 30



Railway axis Cork–Dublin–Belfast–Stranraer

Significant improvements to the main north–south railway line on the island of Ireland have cut journey times and are helping to reduce road congestion in and around the island's major cities.

What is the axis?

The existing rail link between Ireland's three largest cities – Cork and Dublin in the Republic, and Belfast in Northern Ireland – has been substantially upgraded under this project. Furthermore, improved connections to the rest of Europe will be realised via the ferry link between Larne and Stranraer (in Scotland). The 502 km route upgrading serves both freight and 160 km/h passenger services. Improvements on the Londonderry–Belfast line add an additional connection to the main rail link. With this axis substantially completed in 2001, further investments in both rail and road have been planned to develop higher capacity connections between Dublin and both Northern Ireland and Ireland, and to set up a driver information system to improve traffic management *(see axis No 26)*.

What are its expected benefits?

The scheme was designed to increase the speed and frequency of both passenger and freight services, contributing to the shift of traffic from the roads, especially for cross-border trips. With journey times reduced to 1 hour and 40 minutes and nine departures per day in each direction, the rail service between Dublin and Belfast has already proved popular. Additional improvements adopted in 2004 (part of axis No 26) will help increase the speed and frequency of passenger and freight services further. It is estimated that an additional 30 minutes will be saved on journeys between Dublin and Cork and 15 minutes between Dublin and Belfast. Furthermore, upgrading the Bleach Green–Whitehead section of the line in Northern Ireland to modern standards will remove speed restrictions, leading to a further reduction in passenger journey times.

What is its current status?

The Cork–Dublin line was completed in 1996, and the Dublin–Belfast section in August 1999. A new fast rail service between Dublin and Belfast was launched in October 1997 and is now well established. In Northern Ireland, on the Belfast–Londonderry route, the Antrim–Bleach Green section was reopened in June 2001, following the relaying of 21 km of track and 3 km of twin-tracking.

While the rest of the project was completed in 2001, the Belfast–Larne section of the scheme has not yet been upgraded, but preliminary work has commenced on the Bleach Green–Whitehead section with the support of TEN-T funding as part of axis No 26. Major works started in spring 2005 and are scheduled for completion by the end of the year.

The total cost of upgrading the axis was nearly EUR 360 million, and the project has benefited substantially from support from the Structural Funds.

T509677in 22/09/05 8:40 Page 31

Priority section	Type of work/status	Distance (km)	Timetable	Total cost (million EUR)	Investment up to 31.12.2001 (million EUR)	TEN-T contribution, including studies, up to 31.12.2001 (million EUR)
Cork–Dublin–Belfast–Stranraer	Rail (upgrade)	502	1989–2001	357	357	14.1
TOTAL		**502**		**357**	**357**	**14.1**

T509677in 22/09/05 8:40 Page 32

Malpensa airport

Major investment has brought substantially increased capacity to meet rapid traffic growth relief, developing a much more efficient international hub in the northern Italian city of Milan.

What is the project?

The existing international airport has been developed into a modern hub, with increased runway capacity, a brand new passenger terminal (Terminal 1), a new control tower, new aircraft parking areas (apron), and a new cargo centre.

What are its expected benefits?

Strategically located in Italy's Lombardy region, the airport, opened in 1998, now employs some 19 000 people, and is linked by rail to central Milan. Currently, 86 major carriers link Malpensa with 176 destinations worldwide. Traffic continues to grow strongly, and in 2004, the airport handled 18.5 million passengers and 347 000 tonnes of freight.

Malpensa has become a primary gateway for international and intercontinental traffic in southern Europe, raising northern Italy's strategic position.

What is its current status?

While the TEN-T priority project was completed in 2001, development at Malpensa is continuing.

A new aircraft-maintenance hangar has been built, and the apron now has space for up to 117 parked aircraft. The baggage handling system is capable of 100 % hold-baggage screening, and airport security and safety have been enhanced.

A third module for Terminal 1 is planned, and the new cargo city can process more than 600 000 tonnes of freight. A new hotel will be built, starting in 2006.

Further investment on a logistics park in the cargo area, more car-parking facilities, and improved airport access (road and rail) are planned.

A third runway, which would reduce environmental and noise impact on nearby communities, is currently being studied.

The total cost amounts to EUR 1 344 million, including State grants (18.5 % of the total), and loans from the European Investment Bank and other financial institutions (23.1 %). Between 1995 and 2001, the EU provided EUR 26.8 million from the TEN-T budget in the form of interest rebates. A further EUR 1.6 million has been provided for the logistics park.

Priority section	Type of work/status	Distance (km)	Timetable	Total cost (million EUR)	Investment up to 31.12.2001 (million EUR)	TEN-T contribution, including studies, up to 31.12.2001 (million EUR)
Malpensa Airport (Milan, Italy)	Extension and new facilities	n.a.	1995–2001	1 344	1 344	26.8
TOTAL				**1 344**	**1 344**	**26.8**

T509677in 22/09/05 8:40 Page 33

Øresund fixed link

The Øresund bridge has become a powerful symbol, and has supported significant economic development in one of Europe's most productive and prosperous regions.

What is the axis?

The Øresund bridge has created a direct road and rail link across the straits between Copenhagen in Denmark and Malmö in Sweden, with a four-lane motorway running above a double-track railway. The new fixed link consists of a 4 km tunnel under the sea, a 4 km-long artificial island, and a 7.5 km bridge – the world's longest cable-stayed bridge for road and heavy rail – plus new access routes.

What are its expected benefits?

The fixed link has transformed road and rail travel between Sweden and Denmark, allowing the Copenhagen and Skåne areas to develop as a single, cross-border region.

The region is expected to benefit considerably from improved passenger and freight connections with the surrounding Baltic countries and with European transport networks. In particular, the Øresund link extends the St-Petersburg–Helsinki–Stockholm–Copenhagen corridor.

What is its current status?

The Øresund link went into service on schedule in July 2000, and in its second year of operation, road traffic across the link increased by 20 %. There is already evidence that this improved access to markets and to skilled personnel is encouraging major companies to relocate to the region, and assisting the growth of high-tech firms such as those in the Medicon Valley region north of Copenhagen.

TEN-T support in the period, 1995–2000, was nearly EUR 193 million.

Priority section	Type of work/status	Distance (km)	Timetable	Total cost (million EUR)	TEN-T contribution, including studies, up to 31.12.2000 (million EUR)
Øresund fixed link	Tunnel, island and bridge	15.5	Completed 2000	2 740	127
Danish access routes	New motorway and railway	27	Completed 1999	946	44.2
Swedish access routes	New motorway and railway	10	Completed 2001	472	21.5
TOTAL		**52.5**		**4 158**	**192.7**

T509677in 22/09/05 8:40 Page 34

Nordic triangle railway/road axis

Better rail, road and maritime infrastructure across the Nordic countries will help to overcome their remoteness from other regions of the EU.

What is the axis?

The multimodal Nordic triangle scheme is upgrading road, rail and maritime infrastructures in Sweden and Finland to improve freight and passenger transport between the Øresund fixed link, which is part of the Nordic triangle *(see axis No 11)*, Stockholm, Oslo, Turku, Helsinki and the Finnish–Russian border.

Upgrading rail lines should make it possible to reach speeds of 160 km/h and even, on some sections, more than 200 km/h. The distances covered by this project connecting Malmö, Stockholm, Oslo, Turku, Helsinki and the Finnish–Russian border are immense: totalling nearly 1 900 km of road and 2 000 km of rail track.

What are its expected benefits?

In conjunction with a parallel Russian improvement project, the upgrading of the Finnish rail corridor to 200 km/h will cut journey times between Helsinki and St Petersburg by nearly 50 %, to just three hours. Similar upgrading work has already improved journey times on the Turku–Helsinki section, attracting increased numbers of passengers. Progressive upgrading to motorway standards of the two-lane E18 road from Turku via Helsinki to the Russian border near Hamina (Vaalimaa) in the south-east will similarly reduce journey times – in particular, by relieving congestion around Turku and Helsinki and elsewhere along the route. In Sweden, rail journeys from Stockholm to Malmö will be cut to less than four hours and between Gothenburg and Oslo, where tilting trains will be used, from four hours to two hours and 20 minutes.

Improvements to roads in Sweden and Finland, as well as to the ferry link across the gulf of Bothnia, will significantly boost safety standards along these routes.

What is its current status?

Upgrading of the main Turku–Helsinki rail line, as well as urban lines from Helsinki to Leppävaara and Tikkurila, was completed in 2001. East of Helsinki, towards the Finnish–Russian border, work will mostly be completed by 2010. Additional track between the main line in Luumäki and the border at Vainikkala will be laid by 2015 – one year later than indicated in the guidelines. Work on the E18 motorway has focused on the stretch west of Helsinki. The last section here is due for completion by 2009, when activity will switch to the east of Helsinki. The whole motorway between Turku and the Russian border will be completed by 2015.

The main rail line from Malmö to Stockholm has been upgraded to 200 km/h as far as Norrköping, with new lines (up to 300 km/h) in the busiest sections. The Stockholm–Oslo line has been upgraded to the Norwegian border. Most of the Swedish west coast mainline from Malmö to Gothenburg has been expanded to double track, mainly along a new route. A new 17 km double-track tunnel is under construction at Hallandsås Ridge, to be completed in 2011. Double-tracking to permit speeds of up to 200 km/h is also under way on the rail line between Gothenburg and the Norwegian border.

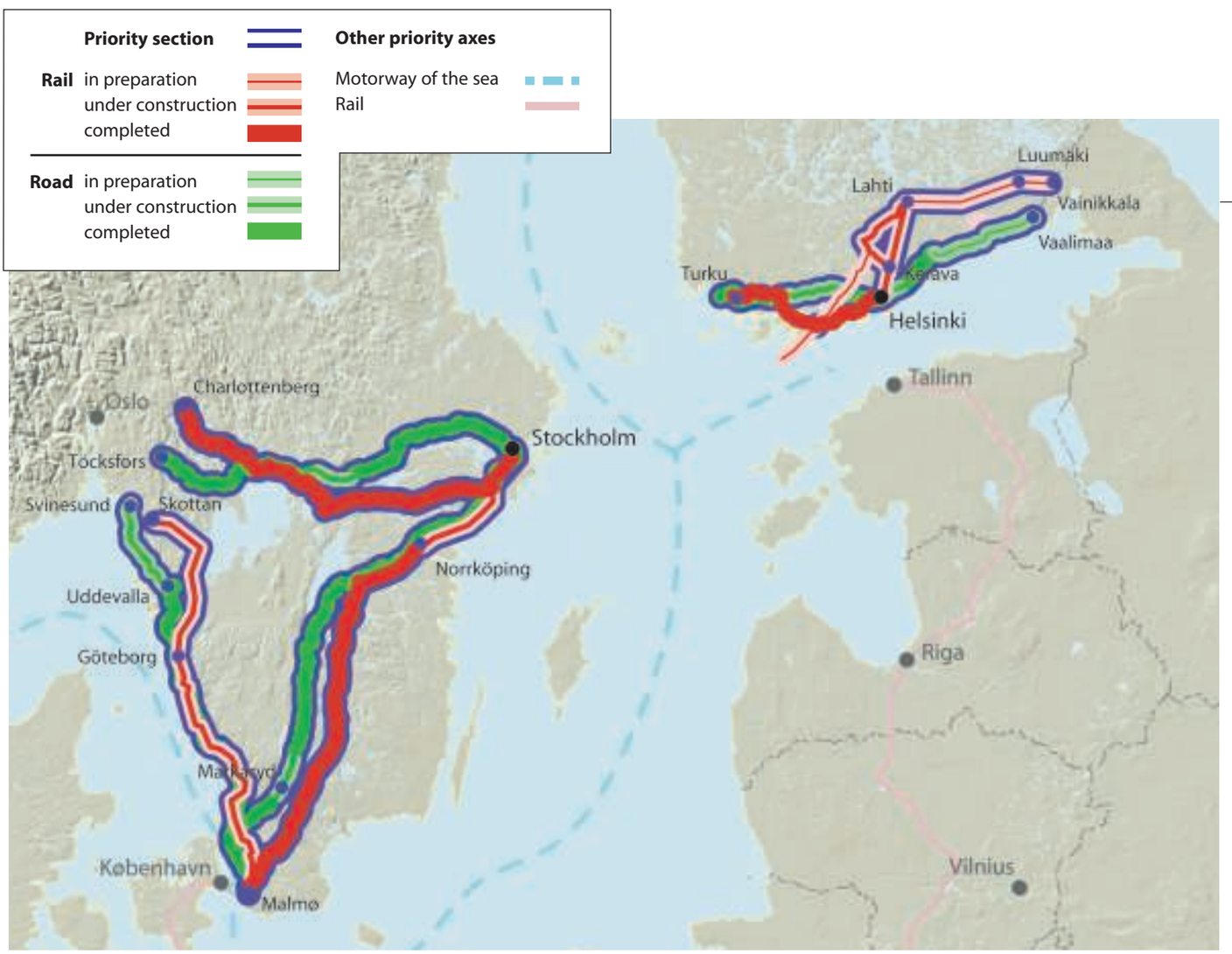
The E4, E6 and E18 roads in Sweden have now largely been upgraded to motorway standard. The remaining sections include a new 21 km bypass around Markaryd, which is under construction, as well as a new construction north of Uddevalla to the Norwegian border at Svinesund. A new underground passenger rail link – Citytunneln – is planned in Malmö. Work started in 2004 and the link will come into use by the end of 2009. Also a new underground passenger rail link – Citybanan – is under construction in Stockholm, to be completed by 2011.

T509677in 22/09/05 8:40 Page 35

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Road and rail projects in Sweden	Road/rail (upgrade)	1 550 (road) 1 450 (rail)	1996–2015	8 102	2 336	60.4
Helsinki–Turku motorway	Road (upgrade)	167	1995–2009 (2010)	618	249	3.7
Kerava–Lahti (railway)	Rail (new)	78	2002–06	331	222	0
Helsinki–Vaalimaa motorway	Road (upgrade)	181	1995–2015	700	168	6.8
Helsinki–Vainikkala railway	Rail (upgrade)	470	1996–2015 (2014)	1 154	247	16.5
TOTAL		**1 898 (road)** **1 998 (rail)**		**10 905**	**3 222**	**214** [2]

(1) In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.

(2) Note that the total TEN-T contribution includes EUR 126.6 million, which has been allocated to the Swedish and Finnish sections in general and cannot be associated with a specific section of the axis.



T509677in 22/09/05 8:40 Page 36

United Kingdom/Ireland/ Benelux road axis

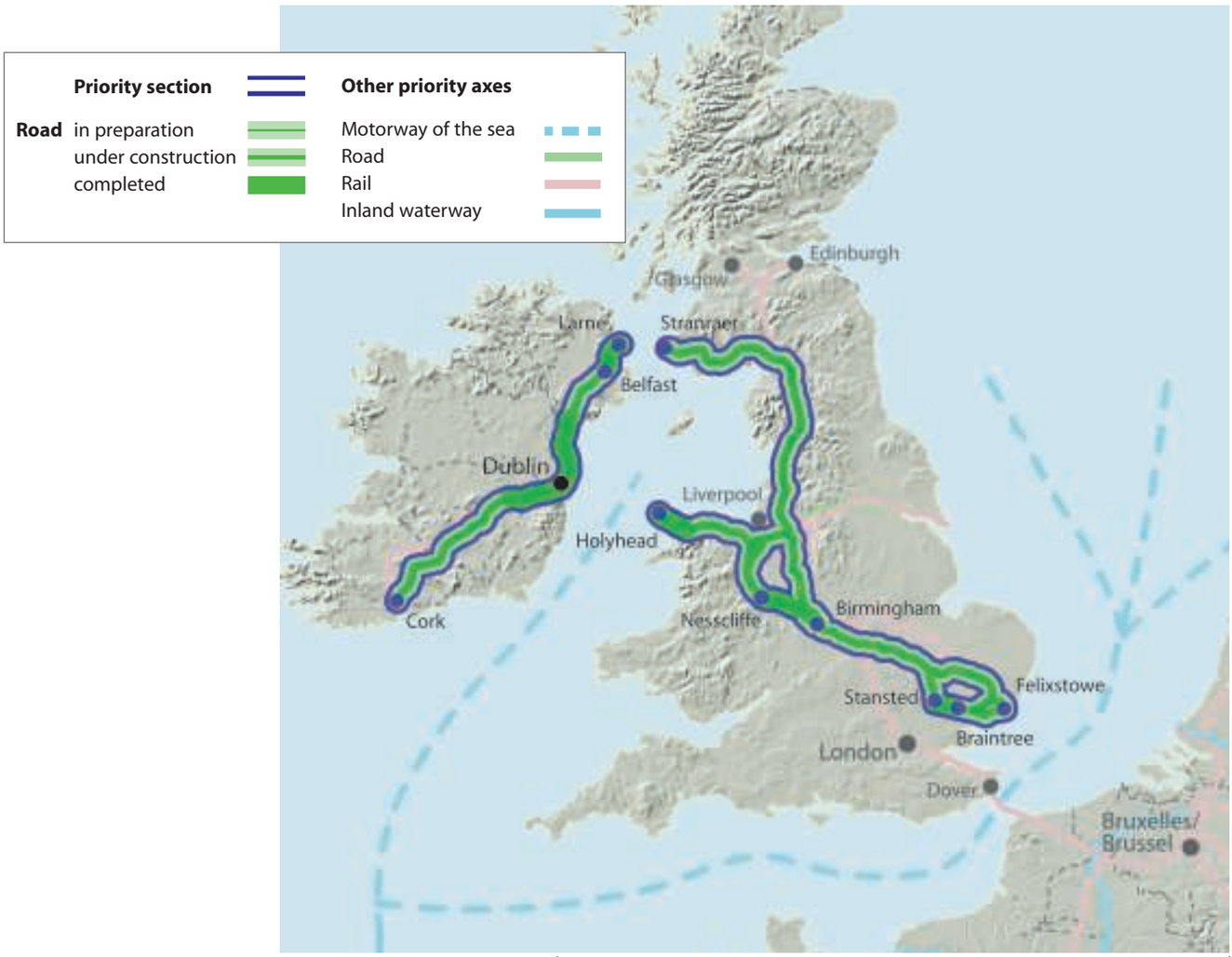
Roads across the island of Ireland and in Scotland, Wales and England are being upgraded to give significant capacity increases and to allow much faster journey times between Ireland, the United Kingdom and mainland Europe.

What is the axis?

This axis will improve road transport between Cork, Dublin and Belfast, complementing the development of Ireland's main east-coast rail line *(see axis No 9)*. It will also provide upgraded links to mainland Europe via ferry links to Scotland and Wales, the A14 and M6 roads across England, and the North Sea ferry ports of Felixstowe and Harwich. The 1 500 km route includes both the construction of new roads, mainly in Ireland, and the upgrading of existing roads to motorway, expressway, dual-carriageway and high-quality single-carriageway standards, appropriate to traffic density.

What are its expected benefits?

The axis will significantly shorten journey times for passengers and freight between Ireland, the United Kingdom and the ports of Belgium and the Netherlands. Individual upgrading schemes are being introduced to target the most significant congestion, safety and environmental issues along the length of the road link. These schemes, when taken together, will lead to shortened journey times, a reduction in the number of bottlenecks, fewer accidents and a reduced impact upon the environment.



T509677in 22/09/05 8:40 Page 37

Priority section	Type of work/status	Distance (km)	Timetable (1)	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Ireland section	road	360	1996–2010	3 173	1 441	24.4
UK section	road	1 150	1986–2013 (2010)	1 349	850	23.9
TOTAL		**1 510**		**4 522**	**2 291**	**48.3**

(1) In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.

What is its current status?

Significant construction is being undertaken in England. Recent improvements include the A120 Stansted–Braintree, the A5 Nesscliffe bypass and a new private-sector toll road around Birmingham. Other schemes planned include works to the M6 and to the A14.

In Wales, the dualling of the A55 trunk road to the port of Holyhead was completed in 2001. The main focus now is on increasing capacity in north-east Wales, with a series of schemes in the Welsh Assembly Government's trunk-road programme. The first of these, to upgrade the A494/A550 from Deeside Park to Drome Corner, was completed at the end of 2004.

In Scotland, continuing improvements to the A75 in Dumfries and Galloway will include a number of guaranteed overtaking opportunities for vehicles. The current programme includes major improvement schemes at a further six points on the route.

In Northern Ireland, work on the A1 Loughbrickland–Beech Hill scheme commenced in March 2004. The A8 dualling scheme was completed and officially opened in July 2004 and it is anticipated that three further improvement/widening schemes in Northern Ireland will commence on site from 2006, namely the M1 Westlink, the M2 widening and the A1 Beech Hill–Cloghogue schemes.

The cross-border A1/N1 Newry–Dundalk scheme started in March 2005, and should be completed in 2007. The TEN-T budget has provided some EUR 7 million for this link.

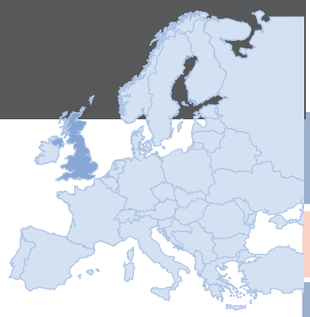
Some proposed schemes on this route are still being examined and priorities have not yet been finalised, which may lead to delays in the completion of the project.

In Ireland, construction of the M1 Dundalk western bypass started in 2004 (completion expected in 2006). The M1 Dunleer–Dundalk scheme opened to traffic in 2001 and the M1 Cloghran–Lissenhall, Lissenhall–Balbriggan, and the Drogheda bypass schemes were opened to traffic in 2003, thus providing a continuous motorway from Whitehall in Dublin to south of Dundalk (72 km).

As regards the southern leg (Dublin–Cork), the upgrade of the N7 from Rathcoole to the Naas bypass is under way with completion expected in 2006, the M8 Fermoy–Watergrasshill scheme is under construction with expected completion in 2007, the M7 Monasterevin bypass and N8 Cashel bypass were opened to traffic in 2004 (the Cashel bypass received TEN-T support of EUR 1.8 million), and the N8 Watergrasshill bypass was completed in 2003. Planning and design for the remaining schemes are well advanced – planning and design costs are being assisted with TEN-T funding of EUR 24 million.

In Ireland there are now 170 km of motorway in place between Dundalk at the north of the M1 and the south of Portlaoise on the M7.

T509677in 22/09/05 8:40 Page 38



West coast main line

Increasing and rationalising the capacity on the route, one of Europe's busiest rail lines, will allow higher speeds for both passenger and freight services, and will strengthen cross-border connections and facilitate trade for the EU's north-western regions.

What is the axis?

The west coast main line (WCML) is the most important trunk route in the United Kingdom's rail network with some 2 000 train movements every day. It links London and the south-east with England's largest conurbations (Birmingham and Manchester), as well as with Liverpool, North Wales, the North-West, Cumbria and Scotland, covering a distance of 850 km. The route is the core national long-distance freight route and 43 % of all UK rail freight traffic uses the WCML for some or all of its journey. There are also significant commuting flows on the route around London, Manchester, Glasgow and Birmingham.

The WCML project will modernise the line, renewing and enhancing the infrastructure to provide improved journey times, greater capacity for trains, and better and more resilient performance of track, signalling and other assets.

In London, the upgraded line will connect with the Channel Tunnel rail link *(see axis No 2)* to provide a high-speed service, for freight and passengers, from Scotland to mainland Europe.

What are its expected benefits?

The project will cut passenger and freight journey times between Ireland, Scotland, the north of England and France, Belgium, the Netherlands and Germany. Improved speed and convenience are expected to attract new users on these international routes, helping to shift traffic from the roads.

What is its current status?

Work began in 1994, and extensive renewal and enhancement works have already been completed. For example, re-signalling and re-modelling at London's Euston Station, Willesden and in the Stoke-on-Trent area have all been completed, along with line-speed upgrades between Euston and Crewe. The overall cost of the work being carried out by the Strategic Rail Authority and its successor Network Rail totals EUR 10.8 billion (GBP 7.6 billion).

Improvements already delivered include doubling the frequency of trains between London and Manchester and reducing journey times by around 30 minutes, along with other journey-time reductions to key destinations in north-west England. Pendolino tilting trains are now operational, taking full advantage of the 201 km/h (125 mph) running speed.

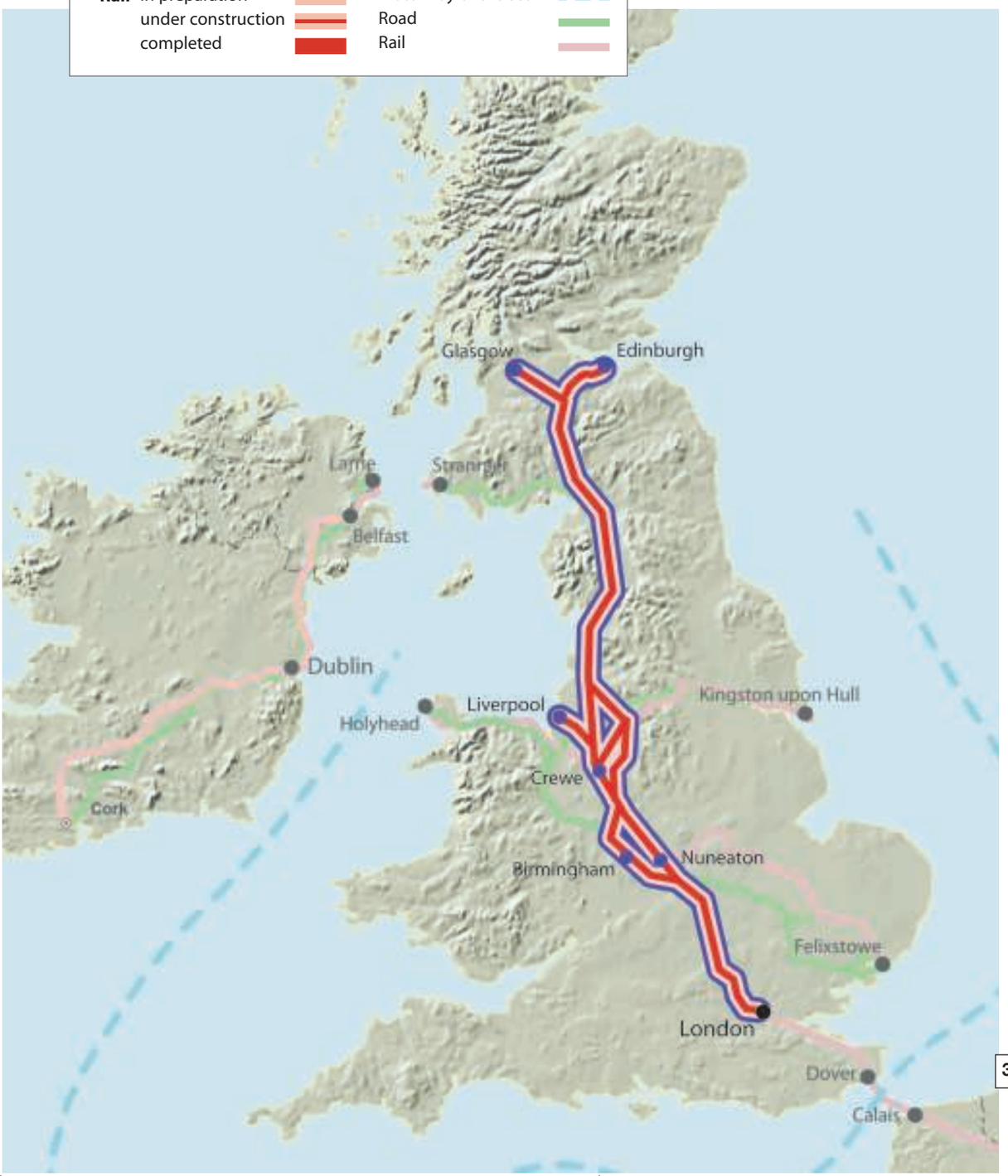
Additional work is planned, including improvements to line speeds along the northern section of the route through to Preston, Liverpool and Glasgow which are due to be completed by December 2005. Further important work along the southern section of the line is also planned up to 2008 to increase capacity in the Trent Valley and at Rugby.

The culmination of this work will bring two-hour London–Manchester journey times, with a frequency of up to three trains an hour and a London–Glasgow time of around 4 hours and 15 minutes by 2008. It will also provide the capacity for increased freight traffic and for the expansion of both long-distance and regional passenger services.

T509677in 22/09/05 8:40 Page 39

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
West coast main line	Rail (upgrade)	850	1994–2008 (2007)	10 866	9 680	77.8
TOTAL		**850**		**10 866**	**9 680**	**77.8**

[1] In brackets, completion date listed in the 2004 Guidelines, if different from the date notified in 2005 by the Member State.



T509677in 22/09/05 8:40 Page 40

Galileo

European satellite navigation technology will bring low-cost positioning and timing services of unparalleled accuracy and reliability to all sectors of society.

What is the project?

Galileo is a European initiative to create a global satellite navigation system offering precise positioning and timing services for commercial and personal users anywhere in the world, using small and inexpensive receivers. When fully deployed, the system will consist of a constellation of 30 satellites, together with associated infrastructure on the ground. It also allows for innovative applications and services to be developed. Although capable of operating autonomously, Galileo has been designed to be compatible and interoperable with both the US global positioning system (GPS) and Russian Glonass systems.

Galileo will provide the EU with an essential tool not only for the development of transport but also for agricultural or fishing policies, for science, for justice and home affairs, and so on.

Several international agreements have already been signed (with China, Israel, the United States, Ukraine) and others are under negotiation (with India, South Korea, Argentina, Morocco, Russia, Canada, etc.) in order to ensure a truly global dimension to the project.

What are its expected benefits?

Galileo will make Europe independent in this strategically important technological field. Cost–benefit analyses showed that the global market for satellite navigation amounted to EUR 20 billion in 2003 and could reach as much as EUR 275 billion by 2020. In Europe alone, this market could be responsible for the creation of some 140 000 new jobs.

Many new promising applications are already emerging, especially in the field of transport. The Galileo system is designed to respond to the specific needs of each transport mode, including aviation, maritime, road and rail transport. Even pedestrians will benefit. Moreover, Galileo will also benefit other professional and personal activities, from civil engineering, social and emergency services to agriculture and fisheries, banking and finance, environmental protection and civil protection.

From the users' perspective, Galileo will offer the advantages of high reliability and unprecedented accuracy. It will allow goods, vehicles and people to be located with approximately 10 times greater accuracy than GPS – to within a few metres. Unlike GPS, continuity of the signal will also be guaranteed.

Galileo has been designed specifically for civilian use worldwide, and will provide both a freely accessible open service, and other signals restricted to specific groups for commercial, safety-of-life or government applications.

T509677in 22/09/05 8:40 Page 41

Priority section	Type of work/status	Distance (km)	Timetable (1)	Total cost as of end 2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Galileo	Development and deployment	n.a.	2001–10 (2008)	3 400	450
TOTAL				**3 400**	**450**

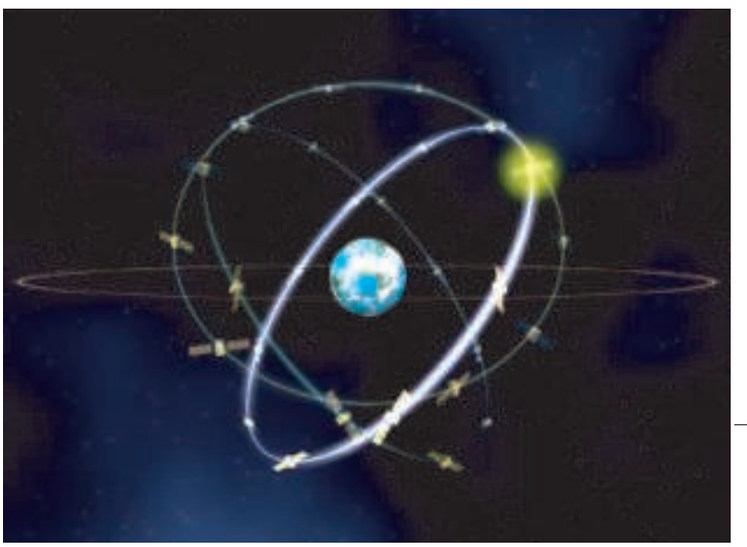
(1) In brackets, completion date listed in the 2004 guidelines, if different from the one known as of mid-2005.

What is its current status?

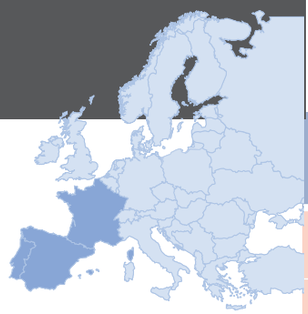
The Galileo joint undertaking is managing the technical work of the development phase (in-orbit technological validation), preparing the market for Galileo applications and services, and is responsible for selecting the future commercial operator of the system.

The European Union and the European Space Agency (ESA) are co-financing the EUR 1.1 billion development phase. The Community contribution (EUR 680 million up to 2006) comes from the TEN-T programme. A further EUR 100 million from the sixth research framework programme is contributing to the development of receiver technology and applications.

Deployment and commercial exploitation of Galileo will be through a public–private partnership scheme in the form of a concession, with two thirds of the deployment costs financed by the concessionaire. The development phase is proceeding, with the first satellite scheduled to be placed in orbit in December 2005. At the same time, minimum ground infrastructure to enable the necessary adjustments prior to the deployment of the entire satellite system will be set up. Initial service provision is foreseen by 2008, leading to full operational capability by November 2010. This two-year delay with regard to the date listed in the 2004 guidelines is due to the fact that political decisions to fully launch the programme had taken more time than expected.



T509677in 22/09/05 8:40 Page 42



Freight railway axis Sines/Algeciras-Madrid-Paris

A high-capacity line, including a new trans-Pyrenean crossing, linking the Sines and Algeciras container terminal ports with the Spanish and French rail networks will significantly increase rail's share of international freight on this crowded route, improving connections between southern and northern Europe.

What is the axis?

The project aims to develop a high-capacity freight railway axis linking the ports of Algeciras in southern Spain and Sines in south-western Portugal with the centre of the EU. The scheme involves the construction of a new high-capacity rail link across the Pyrenees, connecting the French and Spanish networks. The route, intended for freight, will be built to European gauge, facilitating inter-connection, and will include the construction of a long-distance tunnel. Several routes are under consideration.

Moreover, the twin-track freight line from Sines to Badajoz and twin-track passenger and freight line from Algeciras to Bobadilla will create a new link between southern Spain/Portugal and both Madrid and Lisbon. It complements existing rail, road, maritime and air routes in the western Iberian peninsula, and will link to the main Portuguese and Spanish sections of the trans-European transport network.

What are its expected benefits?

The new Sines–Badajoz and Algeciras–Bobadilla lines are critical for the development of the ports of Sines and Algeciras and will foster traffic between Lisbon, Setúbal, Sines and Algeciras, and central Spain and the rest of Europe. Its construction to new higher speed standards, and using dual-gauge sleepers, will enable full interoperability in the future between the Portuguese and Spanish freight networks and the rest of the trans-European rail network. Directly and indirectly, the project will stimulate job creation in the regions concerned.

The new high-capacity rail link across the Pyrenees will complete a major European trade route linking Portugal and Spain with the rest of Europe. By 2001, annual freight traffic from the Iberian peninsula to the rest of Europe had reached 200 million tonnes. Of this, 53 % was carried by road and only 4 % by rail, with the remainder by short-sea shipping. Road traffic was growing at an astonishing rate of more than 10 % per year, with 18 000 heavy goods vehicles crossing the Pyrenees every day. By 2020, overall traffic flows are expected to more than double and road traffic to increase by 100 million tonnes, or 17 000 additional trucks crossing the Pyrenees every day, giving a total of over six million heavy vehicles per year more than today.

In the medium term, completion of the 'high-speed south-western railway axis' *(see axis No 3)* and improvements to the existing lines and terminals at Hendaye and Irún, as well as the development of short-sea shipping, will provide alternatives to road freight. However, in the long term, additional rail-freight capacity will be needed. The construction of this new line will enable rail to achieve a 30 % share of the land transport market in the Pyrenees – although still less than its share of 35–40 % across the Alps.

What is its current status?

Detailed studies are under way on the Sines–Badajoz and Algeciras–Bobadilla rail links, with works expected to start in 2006.

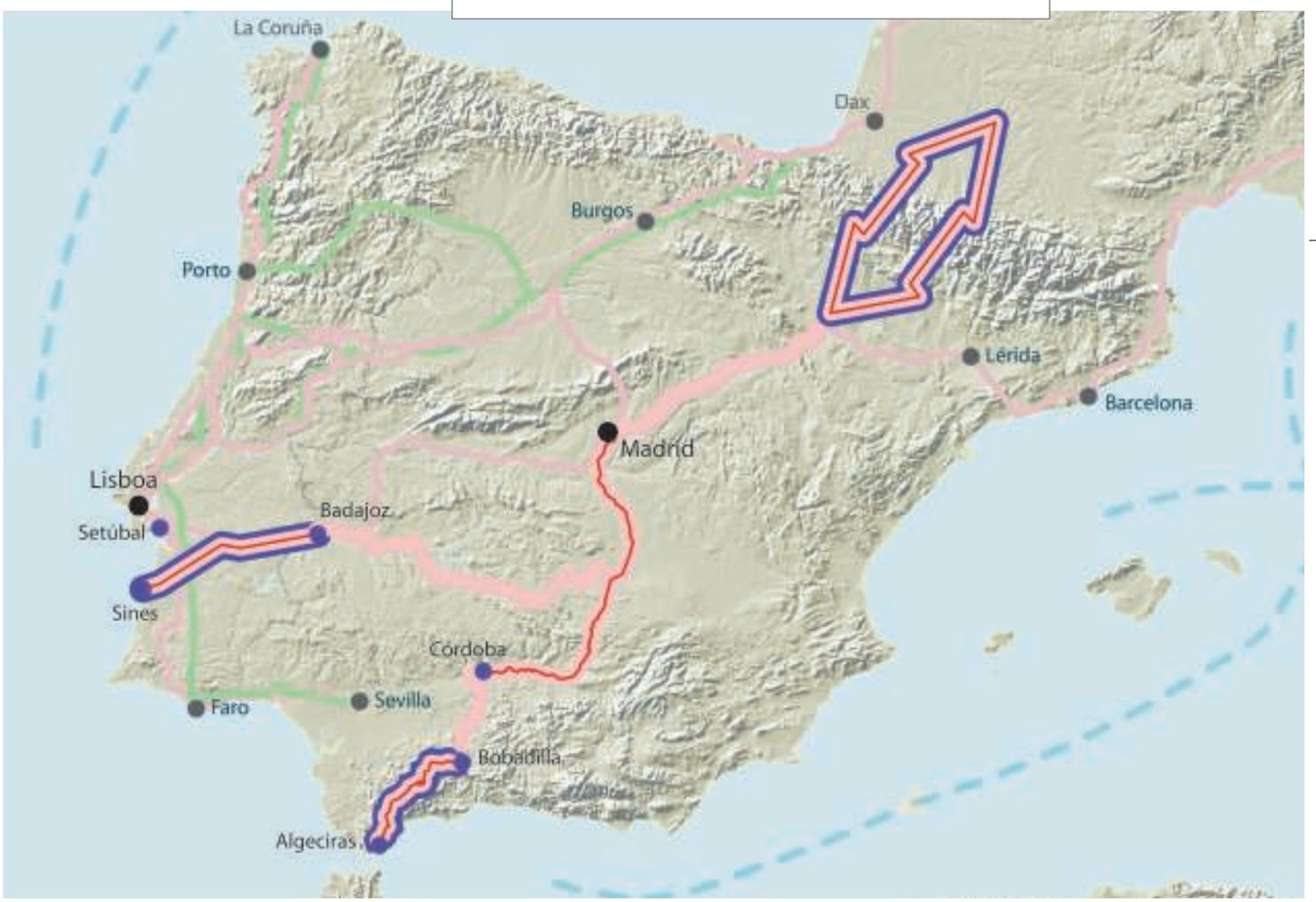
For the trans-Pyrenean link, initial studies and detailed cross-border surveys have been carried out by the neighbouring regions (Aragón, Aquitaine, Midi-Pyrénées) working together through the TCP (Traversée Centrale des Pyrénées) organisation.

The Spanish and French governments have been monitoring traffic flows through the Pyrenees, and the rail link is discussed at the regular summits regarding regional cooperation in the Pyrenees area.

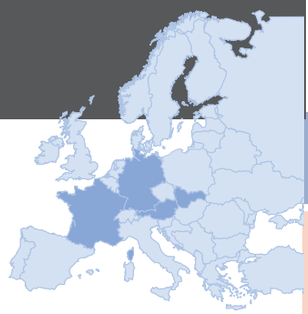
A report on traffic forecasts will soon be completed, and this will be followed by a modelling exercise on prospective traffic flows. In addition, studies of how various routes would mesh with the existing networks will be carried out, before a short list of routes – each of which would then be evaluated for environmental impact – is drawn up.

T509677in 22/09/05 8:40 Page 43

Priority section	Type of work/status	Distance (km)	Timetable	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Trans-Pyrenean rail link	New line (including long-distance tunnel)	150	2013–20	5 000	0	0
Sines–Badajoz rail link	New line	200	2006–10	700	0	0
Algeciras–Bobadilla rail link	New line	176	2006–10	360	0	0
TOTAL		**526**		**6 060**	**0**	**0**



T509677in 22/09/05 8:40 Page 44



Railway axis Paris–Strasbourg–Stuttgart–Vienna–Bratislava

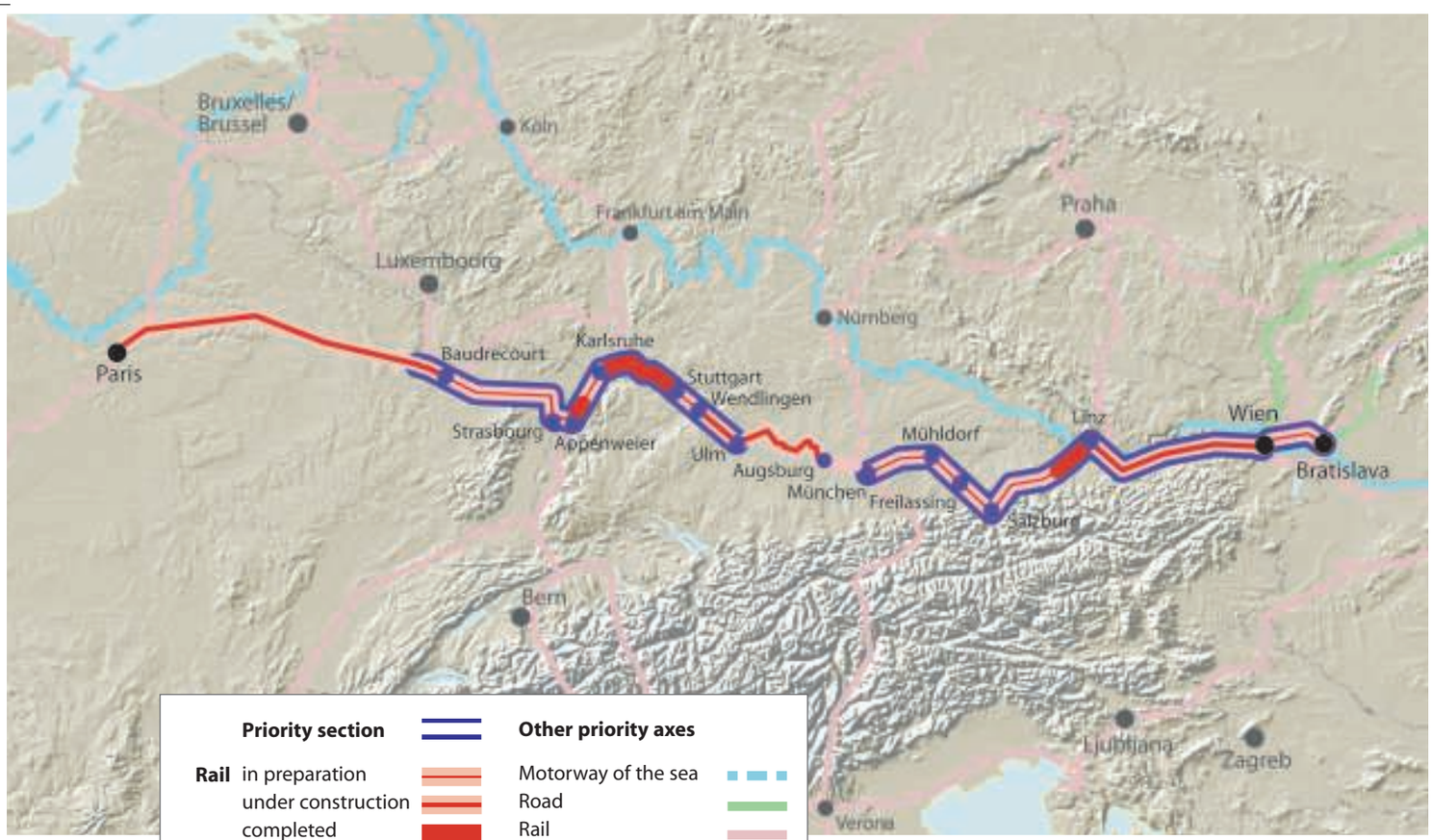
European citizens from west and east alike will benefit from new high-speed railway services on a route crossing heavily populated areas in the core of Europe. Freight operators will benefit from rail services on one of the most congested road axes.

What is the axis?

The western end overlaps with the high-speed train east *(see axis No 4)* and the eastern part with the Athens–Prague–Nuremberg rail line *(see axis No 22)*. New and upgraded high-speed lines will run all the way from Paris to Vienna, including in particular the construction of a second track on the Kehl bridge over the Rhine to improve interconnection between the French and German networks. Further east, existing lines – to be used for freight – will be upgraded, while major works will improve the connection between Vienna and Bratislava, both north and south of the Danube.

What are its expected benefits?

The project will provide a continuous rail axis for both passengers and freight from Paris to Bratislava. The development of this axis will contribute to the success of EU enlargement by better connecting the new Member States, and by providing alternatives to road for intra-EU traffic. Today, over half of the rail-freight traffic on several sections of the route is between Member States, and volumes will grow further following enlargement. This project will improve access to and from the many conurbations along its route.



T509677in 22/09/05 8:40 Page 45

Priority section	Type of work/status	Distance (km)	Timetable (1)	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Baudrecourt–Strasbourg–Stuttgart, with the Kehl bridge as cross-border section	New line and upgrade	265	2010–15	1 450	0	0
Stuttgart–Ulm	New line	91	2006–12	1 266		16.4
Munich–Salzburg cross-border section	Upgrade/electrification	141	2002–15	461	46.2	1
Salzburg–Vienna	Upgrade	315	1990–2012	6 600	2 334	63.7
Vienna–Bratislava cross-border section (2)	Upgrade	70	2004–12 (2010)	300	15.7	0
TOTAL		**882**		**10 077**	**2 395.9**	**81.1**

(1) In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.

(2) The completion date for the northern alignment via Marchegg is not yet decided. The southern alignment via Vienna airport should be finished in 2012.

What is its current status?

Works on all the domestic sections are scheduled in the national transport plans of the countries concerned. For the 104 km-long Baudrecourt–Vendenheim (suburb of Strasbourg) section in France, final technical studies should be completed in 2008, and completion of the line for 2015. Réseau Ferré de France (RFF) and Deutsche Bahn (DB) have set up a working group to coordinate planning for works on the Rhine bridge. It is not yet clear whether the bridge can be upgraded to twin-track, or if it needs to be completely rebuilt. The bridge, and the linked section to Appenweier (at 200 km/h) are planned to be finished by 2010. In Germany, design studies are under way on most of the other sections.

The Wendlingen–Ulm section of the Stuttgart–Ulm line is in the planning phase, with co-financing from the TEN-T budget. For the Stuttgart–Wendlingen section, the authorities have not yet decided on whether to upgrade the existing line, or to build a new line which would also connect with Stuttgart airport.

A critical link in Germany is the Munich–Mühldorf–Freilassing (Austrian border) section. Upgrading to twin-track and electrification works, giving a speed of 160 km/h, are scheduled to be finished in 2015, but delays could occur due to a lack of government funding. Substantial improvement of the Vienna–Bratislava link is of major concern for the two cities and their airports.

The regions and cities involved have established a framework for cooperation, to assess the opportunities for local development and economic integration ('Magistrale for Europe'). So far, the Community has contributed EUR 315 million to priority axes No 4 and No 17, with another EUR 66 million planned in 2005–06.

On 20 July 2005, the European Commission designated Mr Péter Balázs as European coordinator for priority axis No 17.

T509677in 22/09/05 8:40 Page 46

Rhine/Meuse–Main–Danube inland waterway axis

Removing bottlenecks on the Rhine–Main–Danube corridor will improve its navigability, favouring the transfer of freight traffic on this increasingly congested route from road to waterways.

What is the axis?

The Rhine–Main–Danube axis is a major freight route connecting the North Sea (port of Rotterdam) to the Black Sea (in particular the port of Constanta). Several sections pose navigability problems since the draught is less than 2.8 metres at some times of year. To give access to vessels of up to 3 000 tonnes, a minimum draught of 2.5 metres is required along the entire length of the waterway.

Construction work on various stretches of the Danube – in Germany, Austria, Slovakia, Hungary, Romania and Bulgaria – should ensure the minimum draught at all, or most, times of year. In particular, work should clear the major bottleneck on the Straubing–Vilshofen section in Germany, which has the most restricted draught on the entire route. This project also includes work on one of the main branches of the Rhine, the River Meuse, to ensure a 3.5 metre draught giving access into Belgium for vessels of up to 6 000 tonnes.

What are its expected benefits?

The project will improve the competitiveness of the waterway in relation to other modes of transport on this multimodal east–west route, in order to encourage the transfer of freight transport away from roads. This modal shift is particularly vital along the Danube corridor, which is increasingly congested due to sharp increases in the volume of traffic, which are expected to continue.

Some five billion tonne-kilometres of freight could be transferred to waterways each year, in the long term, by increasing the link's overall capacity by around 30 %. Improvements in inland waterway navigability will benefit operators by significantly reducing transport costs per tonne of freight, in the order of 20–30 %. It will integrate the networks of several of the new Member States into the TEN-T, and will also be instrumental in improving economic and social cohesion by creating jobs.

What is its current status?

In most of the countries concerned, the necessary construction projects are included in national transport infrastructure development plans. Cost-effectiveness studies and environmental impact analyses for the various sections are in progress or have been completed, as have studies to analyse the flood risk resulting from the changes to the river. The option being prepared by Germany for the Vilshofen–Straubing section will improve navigability, but will not guarantee a draught of 2.5 metres throughout the whole year. More extensive improvements are still under consideration.

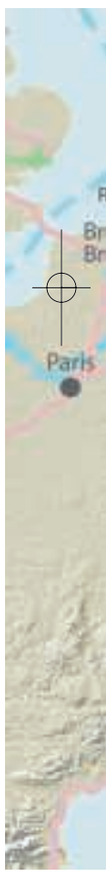
In Austria, the environmental impact assessment for the work should be completed in 2006. Hungary has launched a study (with TEN-T funding), which should be completed in late 2006. And the Hungarian and Slovak authorities aim to establish joint guidelines for work on the common section of the Danube.

Romania has implemented some works to improve navigability and has asked for technical assistance from the EU to prepare a comprehensive study for the project in its territory, with 75 % of the costs financed by the ISPA (pre-accession structural assistance) fund.

Works on the river Meuse in the Netherlands will start in 2005, and on the lock at Lanaken in Belgium, north of Liège, in 2006.

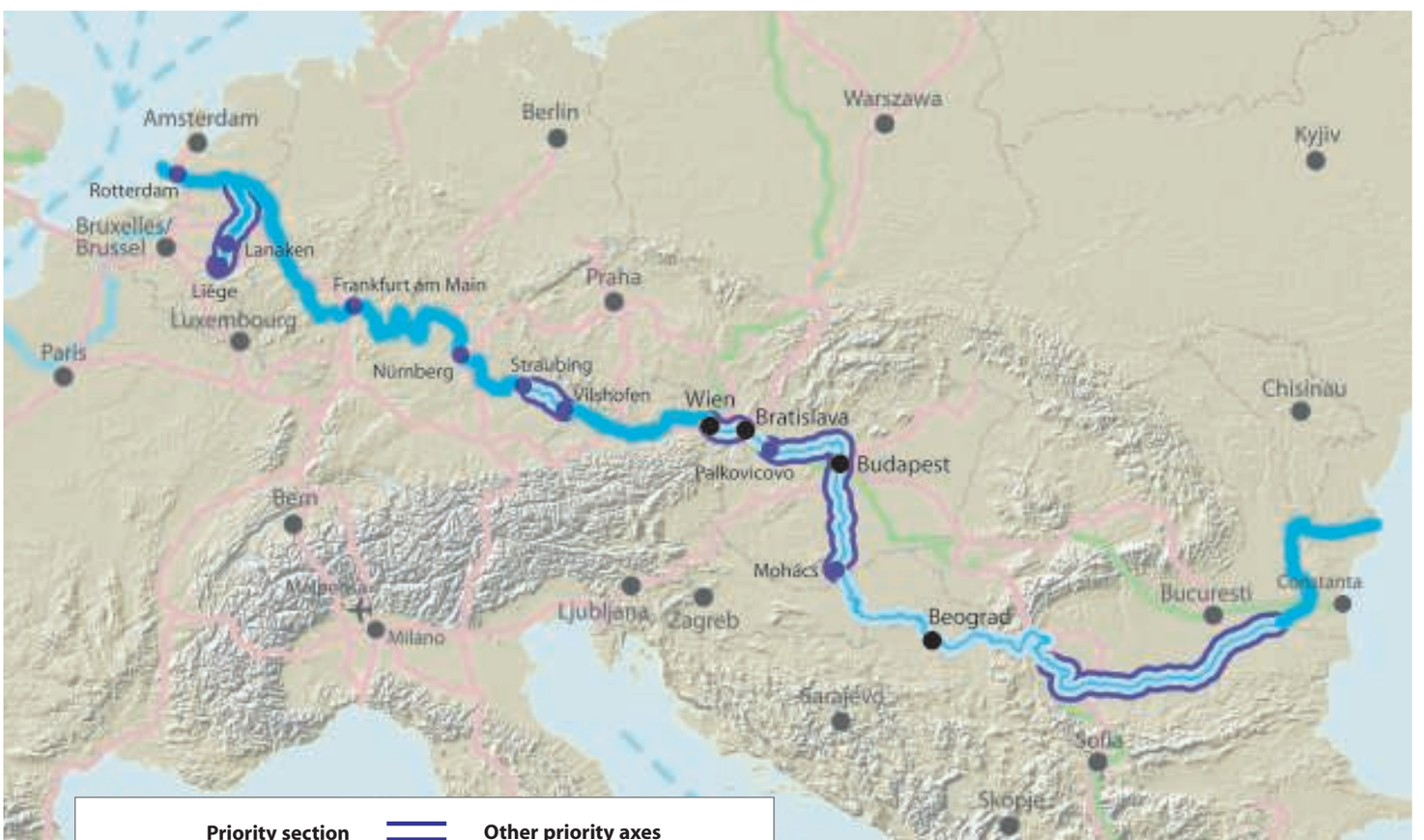
In addition to the infrastructure projects, optimising transport conditions also requires improved management of inland waterway traffic. River information services (RIS) will be deployed to provide common, harmonised information services. These will support traffic and transport management for inland navigation, and create interfaces with other modes of transport. These services will support modal shift to more environment-friendly transport modes on the corridor.

Currently, under TEN-T, Member States are developing a master plan (due by end-2006) for the coordinated technological, financial and physical deployment of the EU directive on RIS on the European inland-waterway system in coming years.

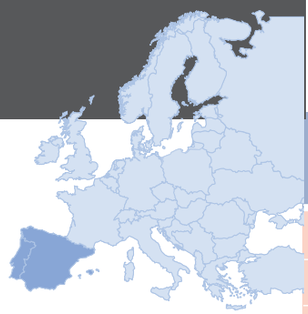


T509677in 22/09/05 8:40 Page 47

Priority section	Type of work/status	Distance (km)	Timetable	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Rhine–Meuse	Improve navigability	140	2005–19	428	0	0
Lanaken lock	New lock	n.a.	2006–11	76	1.1	1
Vilshofen–Straubing	Improve navigability	70	2008–13	128	0	0
Vienna–Bratislava	Improve navigability	47	2006–15	180	2	0
Palkovicovo–Mohács	Improve navigability	358	2007–14	300	0.6	1.1
Bottlenecks in Romania and Bulgaria	Improve navigability	927 (26 in Bulgaria)	2002–11	777	140	0
TOTAL		**1 542**		**1 889**	**143.7**	**2.1**



T509677in 22/09/05 8:40 Page 48



High-speed rail interoperability on the Iberian peninsula

New construction and technologies will make it possible to integrate Spain and Portugal into a fully interoperable trans-European high-speed rail network.

What is the axis?

The difference in gauges between the rail networks of the Iberian peninsula and the rest of the European Union remains a major obstacle to the efficient operation of Europe's rail transport system. This project involves the construction of new lines and the installation of dual-gauge sleepers, third rails or axle-gauge changeover stations on the Spanish and Portuguese high-speed rail networks, in order to make them fully interoperable with the rest of the trans-European rail network.

The project aims to provide access to the biggest cities of Spain and Portugal by high-speed train and will target five corridors: Madrid–Andalusia, north-east, Madrid–Levante/Mediterranean, north/north-west corridor, including Vigo–Porto, and Extremadura. The project will be implemented according to Directive 96/48/EC on interoperability, and will incorporate the ERTMS.

What are its expected benefits?

Prioritising interoperability on the high-speed rail network will help to channel investment by the countries concerned towards technologies that ensure interoperability, progressively reducing the additional costs imposed by gauge differences.

By significantly enhancing their rail links, interoperability will improve communications between Spain and Portugal and the rest of Europe. On the routes served by the high-speed network, it should help rail to win market shares from both air and road transport on congested routes. The construction of new lines will free capacity on existing slower lines for more freight traffic. Significant benefits will be seen in travel times, and in freeing up significant freight-transport capacity on conventional lines.

What is its current status?

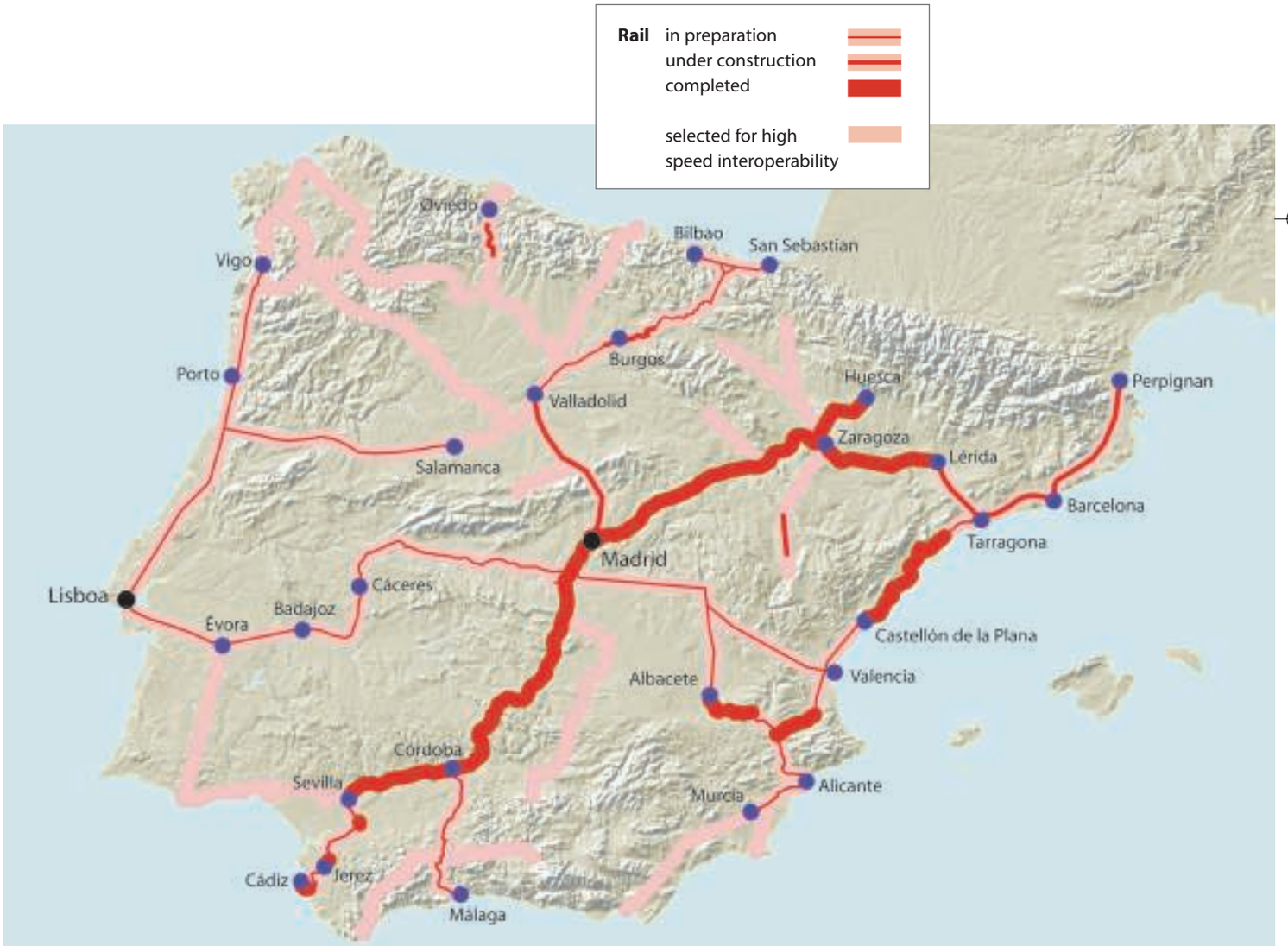
The sections of this axis complement those of the 'high-speed south-western railway axis' *(see axis No 3)*, where several new high-speed lines are already operating at European gauge – Madrid–Seville, Madrid–Zaragoza–Lérida – or are under construction – Lérida–Barcelona–Perpignan, Cordoba–Malaga, Jerez–Cadiz, and Pajares (Asturias–León). Additional projects are at an advanced stage in planning, such as the Vigo–Porto link. However, it should be noted that overall implementation of the axis has been significantly delayed for both administrative reasons and lack of finance.

T509677in 22/09/05 8:40 Page 49

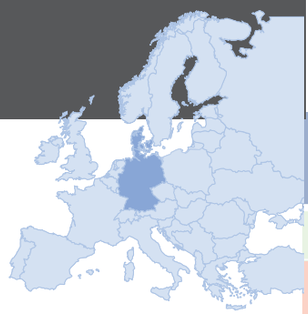
Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Madrid–Andalusia	New line	1 019	2001–20 (2010)	5 115	1 507	0
North-east corridor	New line	589	2001–20 (2010)	3 191	300	0
Madrid–Levante and Mediterranean	New line	1 347	2001–20 (2010)	11 183	542	27
North/north-west corridor including Vigo–Porto	New line	1 314	2001–20 (2010)	2 824	136	0
Extremadura	New line	418	2001–20 (2010)	0 [2]	0	0
TOTAL		**4 687**		**22 313**	**2 485**	**27**

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.

[2] The cost of the Extramadura section is included in axis No 3, and therefore not included here.



T509677in 22/09/05 8:40 Page 50



Fehmarn belt railway axis

The Baltic Sea region will gain a significant boost to both passenger and freight traffic when this landmark project opens. This link follows the Great Belt and Øresund crossings in transforming Denmark's transport infrastructure and that of the wider region.

What is the axis?

This axis is an extension of the Øresund crossing *(see axis No 11)* and the Nordic triangle road and rail links *(see axis No 12)* and is a key component in the main north–south route connecting central Europe and the Nordic countries. It involves constructing either a bridge or a tunnel to form a fixed road and rail link spanning the 19 km-wide Fehmarn Strait between Germany and Denmark. It will substitute for the ferry link between Rødby (Denmark) and Puttgarden (Germany). Completion of this link will also require improvements to domestic road and rail links in both Denmark and Germany.

What are its expected benefits?

The Fehmarn crossing is a key element in the completion of the main north–south route connecting central Europe and the Nordic countries. Once completed, it will attract passenger and freight traffic estimated at 3.3 million vehicles and 30 400 to 35 100 trains a year, helping to relieve congestion on the Great Belt route across Denmark, in particular on the rail network.

Currently, less than 20 % of goods transported between Scandinavia and mainland Europe are carried via the Fehmarn Belt (by ferry) between Denmark and Germany. Once the fixed link is built, the proportion of goods transported via the Fehmarn Belt route is expected to quadruple to approximately 15 to 17 million tonnes of freight per year, of which some 8 to 11 million tonnes would be carried by rail. The project is expected to stimulate economic development in the Baltic Sea regions of Denmark and Germany, especially in the cross-border areas close to the link.

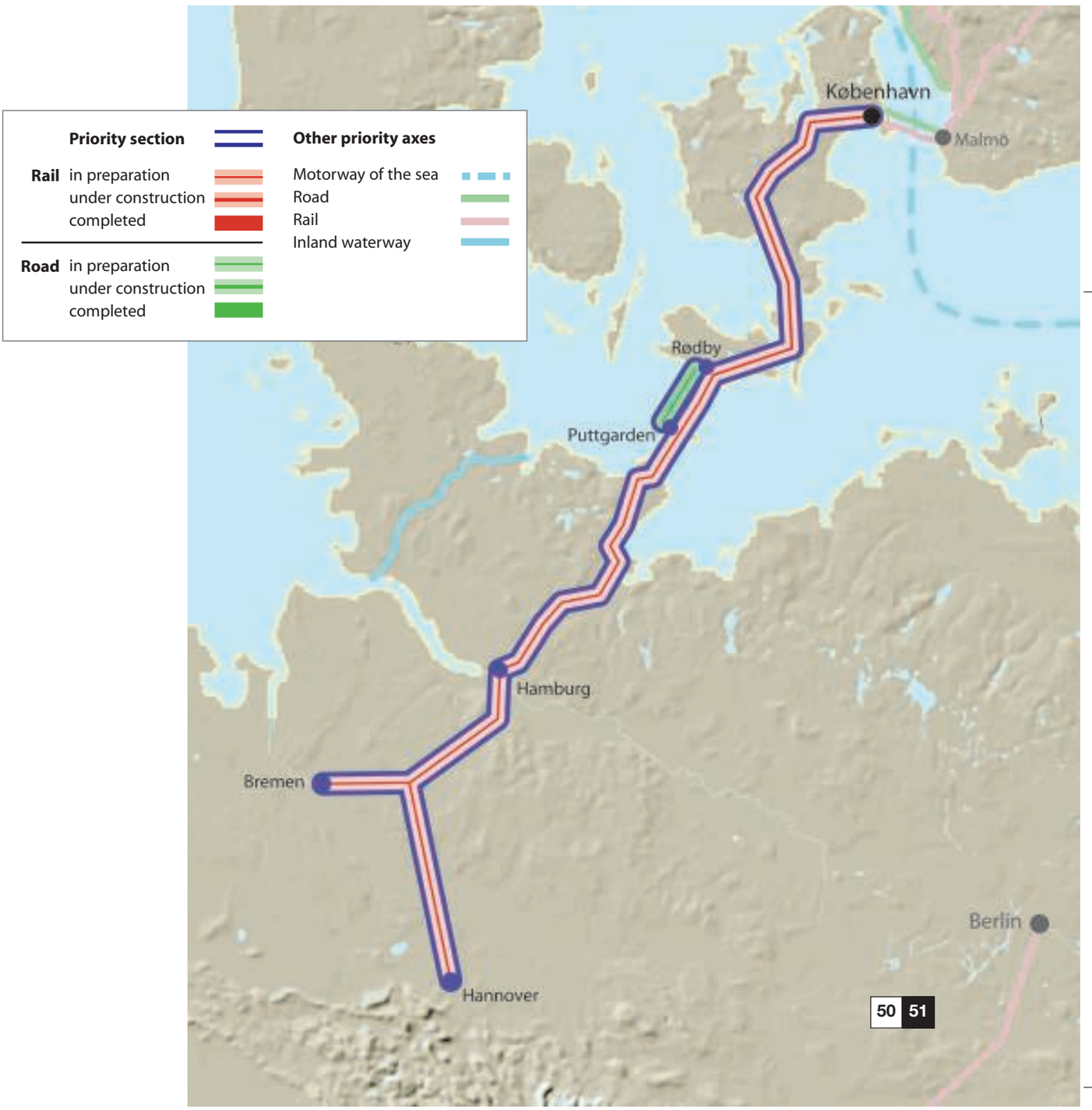
What is its current status?

A series of joint Danish–German studies was completed before 2002. The project is included in German and Danish transport infrastructure development plans. An 'enquiry of commercial interest' (ECI) was completed in June 2002, to determine the extent to which the private sector could supplement public financing of the link. Further studies, based on the results of the ECI have (re)examined traffic, revenue, economic and financial forecasts, as well as technical aspects of the project. The total cost will depend on the technical solution adopted (bridge or tunnel), on which a decision has yet to be taken. Further work is ongoing to clarify a number of key issues, including financing and environmental questions, although it is planned that the link should be opened to traffic in 2015. Meanwhile, Denmark has started studies to increase the rail capacity of the Copenhagen–Ringsted section.

T509677in 22/09/05 8:40 Page 51

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Fehmarn Belt	Fixed rail–road link	19	2007–15 (2014)	4 000		11.5
Danish access railway from Øresund	Upgrade/electrification	185	2006–15	675	4	3.8
German access railway from Hamburg	Upgrade/electrification	130	2007–14 (2015)	1 092		4.1
Hannover–Hamburg/ Bremen railway	Upgrade	114	2010–15	1 284	0	
TOTAL		**448**		**7 051**	**4**	**19.4**

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.



T509677in 22/09/05 8:40 Page 52

Motorways of the sea

Regular, high-capacity ferry routes between key ports in the EU have the potential to improve the efficiency and reliability of freight transport, providing viable alternatives for congested land routes on roads. In particular, motorways of the sea will help bypass the bottlenecks created by such geographical features as mountain ranges.

What is the axis?

Four motorways of the sea corridors have been identified for support across the EU. On these corridors, projects will help to concentrate flows of freight on sea routes, with the aim of reducing road congestion and/or improving access to peripheral and island regions and Member States. The network will include facilities and infrastructure concerning at least two ports in two different Member States, primarily of use for freight transport, although motorways of the sea should not exclude combined transport of persons and goods.

The projects may also include activities with wider benefits not linked to specific ports, such as ice breaking, dredging, information systems. However, such projects have to demonstrate that they relate to the network and fulfil the general objectives of motorways of the sea: modal shift and/or cohesion.

The types of project which may receive Community support are as follows:

- infrastructures: port infrastructures, infrastructures for direct land–sea access, inland waterway and canal infrastructures; and
- facilities: electronic logistics management systems, safety, security, administrative and customs facilities, facilities for ice-breaking and dredging operations.

What are its expected benefits?

Motorways of the sea projects will contribute to modal shift and/or cohesion. Whilst the effects of a given project must be measured in the context of that corridor, and therefore no overall objectives for the EU have been set, the effects of a given project should be substantial.

In respect of modal shift, the benefits should be evaluated against the proportion of road freight in a given corridor to be shifted by 2010. That shift should amount at least to the expected average annual increase of road freight. The types of goods targeted (e.g. dangerous goods) should also be taken into account.

Motorways of the sea will bring benefits in economic and social cohesion to the countries concerned, in terms of accessibility, reduction in transport cost and time, distribution and production, improvement of quality, creation of employment and access to new markets are of particular importance.

What is its current status?

Four corridors have been agreed, on which motorways of the sea projects will be implemented up to 2010:

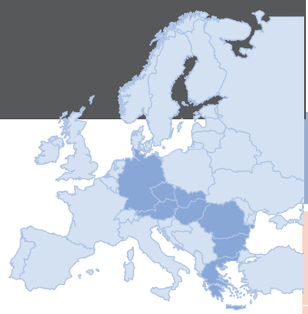
- ***motorway of the Baltic Sea*** (linking the Baltic Sea Member States with Member States in central and western Europe, including the route through the North Sea/Baltic Sea canal);
- ***motorway of the sea of western Europe*** (leading from Portugal and Spain via the Atlantic Arc to the North Sea and the Irish Sea);
- ***motorway of the sea of south-east Europe*** (connecting the Adriatic Sea to the Ionian Sea and the eastern Mediterranean, including Cyprus);
- ***motorway of the sea of south-west Europe*** (western Mediterranean, connecting Spain, France, Italy and including Malta and linking with the motorway of the sea of south-east Europe and including links to the Black Sea).

By early 2007, the Commission will draw up an initial list of specific projects of common interest, making the concept of the motorways of the sea more concrete.

T509677in 22/09/05 8:40 Page 53

Motorway of the sea

T509677in 22/09/05 8:40 Page 54



Railway axis Athens–Sofia–Budapest–Vienna–Prague–Nuremberg/Dresden

This railway line forms the backbone of the railway network of eastern Europe, connecting the ports of Athens (Piraeus), Thessaloniki and Constanta to the heart of the enlarged EU. Together with a second rail axis (No 23) it will allow connections between the Baltic Sea, the Aegean Sea and the Black Sea.

What is the axis?

The project connects the eastern Member States of the enlarged EU through a major railway axis. The sections involved will complement sections which have already been upgraded with funding from the ISPA programme. Completing them will improve connectivity between all the networks on the basis of common standards (TER and ERTMS, electrified, twin-track, with maximum speeds of 160–200 km/h). At its eastern end, the axis has one branch to the Black Sea port of Constanta and another to Thessaloniki/Athens. Following the accession of Romania and Bulgaria, this axis will be the only connection from south-eastern Europe (and Greece) to the heart of the EU which runs wholly in EU territory. An additional branch from Prague to Linz will improve north–south connections in the area, and will prepare for a future extension of the EU to the countries of south-east Europe.

What are its expected benefits?

The line will foster traffic and trade within a huge region of Europe. It will also provide the Greek network with important connections. The project will increase rail capacity, especially for freight, and reduce rail journey times and costs significantly for both freight and passenger trains. On the central sections of the route, the share of inter-Member State traffic is expected to increase from 25 % to 50 %.

What is its current status?

The Thessaloniki–Kulata–Sofia line has been rebuilt and electrified, and operates with speeds up to 120 km/h. Further improvements to increase speeds, double the track and introduce ETCS signalling systems are planned.

The 280 km Sofia–Vidin section is electrified, but two thirds is single track, and speeds are below 100 km/h. A feasibility study for upgrading this section, with ISPA financial assistance, is under way.

A second Danube bridge – Vidin–Calafat – between Bulgaria and Romania, expected to be completed by 2008, is a key project for Bulgaria and for this axis. Upgrading works on the Calafat–Craiova line in Romania will also be required.

The main Romanian branch – Curtici–Brasov–Bucharest–Constanta – is electrified twin-track, in good condition but with relatively low speeds. An ISPA-funded feasibility study for upgrading to 160 km/h on the Curtici–Simeria (180 km) section has been made, and a similar study for the Simeria–Brasov (300 km) section is under way. Delays in finalising the studies may lead to a delay in completing the Curtici–Brasov section.

The Vienna–Budapest line now operates at speeds of 140–160 km/h. Some upgrading works are envisaged.

In the Czech Republic, upgrading on the Břeclav–Brno–Prague line is almost completed, and a tilting train will soon start operating. Upgrading on the Prague–Plzeň–Cheb (German border, towards Nuremberg) section is ongoing. European rail traffic management signalling systems will be installed to improve interoperability.

In Germany, upgrading and electrification, by 2015, of the Nuremberg–Czech border section will ensure higher speeds. However, financial uncertainties may lead to a delay in the completion of this section.

Upgrading on the Prague–Linz line will start in 2005. Currently only a small section south of Prague to Benesov (42 km) is electrified and twin-track.

Agreements between Germany, the Czech Republic and Austria, for upgrading to higher speeds and the use of tilting trains, will lead to reduction in journey times: for Nuremberg–Prague to 3 hours and 20 minutes, Berlin–Prague to 3 hours and Prague–Vienna to 3.5 hours.

T509677in 22/09/05 8:40 Page 55

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Greek/Bulgarian border–Kulata–Sofia –Vidin/Calafat	Rail (upgrade and new line)	420	2006–15	4 277	0	0
Curtici–Brasov	Rail (new)	480	2006–13 (2010)	2 678	0	0
Budapest–Vienna	Rail (upgrade)	260	2006–10	300	0	0
Břeclav–Prague–Nuremberg	Rail (upgrade) and ERTMS	690	2005–16 (2010)	2 315	0	0
Prague–Linz	Rail (upgrade)	250	2005–17 (2016)	1 555	0	0
TOTAL		**2 100**		**11 125**	**0**	**0**

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.

T509677in 22/09/05 8:40 Page 56

Railway axis Gdansk–Warsaw–Brno/ Bratislava–Vienna

The modernisation of this rail line will allow faster journeys for both passengers and freight transport services. The development of attractive rail services from the Baltic Sea along a new north–south axis provides a unique opportunity to remove traffic from the existing saturated north–south axes from the North Sea.

What is the axis?

This axis mainly involves modernisation and upgrading of the rail route, part of pan-European transport corridor VI, identified at the Crete and Helsinki conferences. The existing line ('E65 line') – although it is electrified and twin-track – is close to saturation with yearly traffic of four million passengers and five million tonnes of freight. Works for the project include straightening the alignment, replacing the power supply and installing new signalling and communication systems. These will all aim at allowing increased speeds, of 160 km/h for passenger trains, and 120 km/h for freight trains. The plans also include the construction of an access link to the port of Gdansk, since a new container and ferry terminal (with an expected annual capacity of one million 20-foot equivalent units and 1.5 million passengers) are due to be added to the port. Overall, the capacity of the line will increase by 20 %.

What are its expected benefits?

This line is of particular interest from the European point of view since the route carries a high share of international transport (48 million tonnes of international traffic in transit in 2000). The project will significantly reduce journey times and costs for both freight and passenger trains, on a route crossing highly-populated, industrialised areas with strongly increasing transport demand. Travel time from Gdansk to Warsaw will be reduced from 3 hours and 30 minutes to 2 hours and 40 minutes, and the cost of transporting freight will be cut by 15 %. The works will reinforce the attractiveness of rail and make it possible to increase its traffic share to 25 %, thus reversing the current trend of declining rail share in Poland. The project also contributes to a wider strategy to attract new economic activities along the axis, and promote modal shift on long-distance traffic, while serving the mobility needs of regional passengers, and complements two other priority axes in the TEN-T *(see axis No 25 and axis No 27)*.

What is its current status?

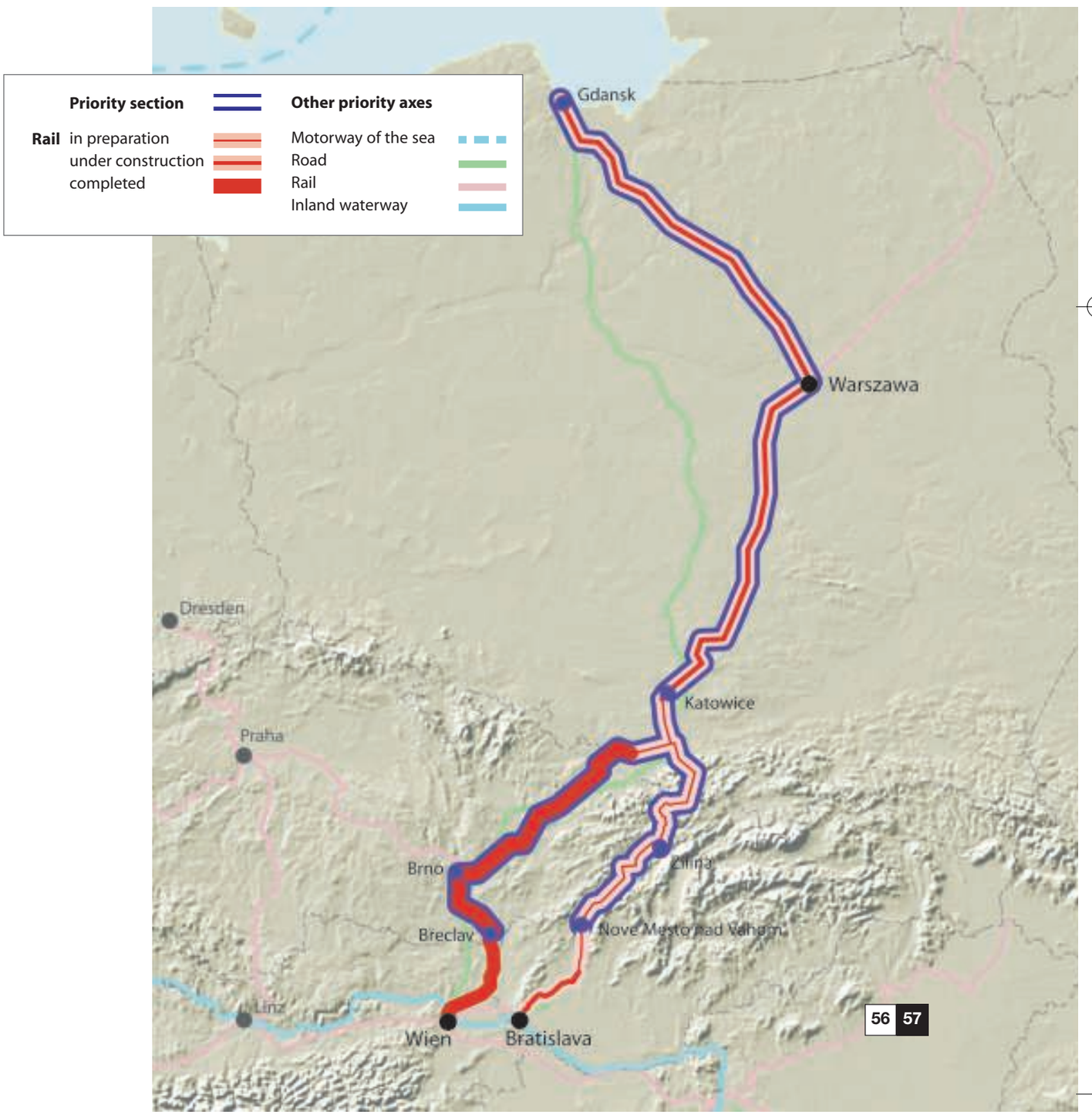
The rail projects on the axis are included in the respective national development plans of the Czech Republic, Poland and Slovakia. Preliminary economic studies have already been completed. Design studies have started and formal (environmental) impact assessments are expected to be completed by the end of 2005.

In Poland, currently only 220 km of the central trunk rail lines are operating to international standards. All the Polish sections of this axis are planned to be upgraded to the AGC/AGTC parameters by 2013, which means that the project will be completed two years ahead of schedule. The first phase of this upgrading will begin in 2005 on the Gdansk–Warsaw (320 km) section.

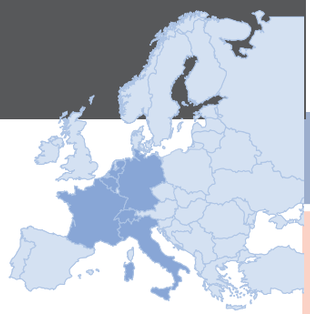
T509677in 22/09/05 8:40 Page 57

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Gdansk–Warsaw–Katowice	Rail (upgrade)	722	2005–13 (2015)	2 351	0	0
Katowice–Břeclav	Rail (upgrade)	304	2007–10	1 581	850	0
Katowice–Zilina–Nove Mesto n. V.	Rail (upgrade)	265	2006–15 (2010)	1 556	1.5	0
TOTAL		**1 291**		**5 488**	**851.5**	**0**

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.



T509677in 22/09/05 8:40 Page 58



Railway axis Lyons/Genoa–Basle–Duisburg–Rotterdam/Antwerp

Developing a rail axis through Europe's economic core from the North Sea to the Mediterranean will help rebalance the modal split in one of the most densely populated and industrialised areas in Europe. While also important for passenger transport, the long-term goal is the development of a rail-freight corridor with dedicated rail-freight lines.

What is the axis?

This axis is of major importance for north–south traffic, linking the ports of Rotterdam and Antwerp with that of Genoa. The focus is on the Rotterdam–Genoa link, but there is also a western branch linking Mulhouse–Dijon–Lyons. Work includes the construction of new high-speed lines (300 km/h) in France (southern and eastern branches of the 'TGV Rhin-Rhône'), and in Germany (Karlsruhe–Basle and Frankfurt airport–Mannheim). Existing lines will be upgraded to enhance their freight capacity, including connecting the Betuwe line *(see axis No 5)* to the German network, the line from Lyons to Müllheim, and the lines from the port of Genoa to the rail crossings of Switzerland. Furthermore, a new dedicated freight line (the 'Iron Rhine') will be built from Antwerp port to the German network. All the sections concern lines with between two and four tracks.

What are its expected benefits?

The project will help promote a significant modal shift for both freight and passengers. The different sections will remove several billion tonne-kilometres of freight from the roads every year, and hundreds of millions of passenger-kilometres from the road and air. It will contribute to improving air–rail passenger inter-modality and rail–sea freight intermodality, by linking to airports and several of Europe's biggest sea ports.

What is its current status?

All the domestic sections have been incorporated in the respective national plans. Moreover, an Association of Chambers of Commerce for the Genoa–Rotterdam railway axis has been set up to promote the axis for rail freight. The transport ministries of Italy, Switzerland, Germany and the Netherlands have set up a specific working group with the same aim.

The 'Iron Rhine' line is the subject of a trilateral agreement between Germany, the Netherlands and Belgium. In addition, Belgium and the Netherlands have agreed specific arrangements for the section crossing Dutch territory, covering both specifications and the sharing of costs.

Upgrading work from the Dutch–German border to Duisburg will link up with the Betuwe line (to Rotterdam). Upgrades on the Duisburg–Emmerich section will be finalised in 2015.

The Rhine–Rhône high-speed line in France comprises three branches totalling 425 km, of which two are part of this priority axis. The 189 km eastern branch (Dijon–Mulhouse) is the more advanced with work due to be carried out between 2006 and 2011. Preliminary studies for the southern branch (Dijon–Mâcon–Lyons) are currently under way, in particular examining the potential for a mixed passenger-freight line.

A working group is studying options for the Rhine crossing on the Müllheim–Mulhouse section. The Basle–Karlsruhe section will be upgraded from two to four tracks for high-speed running, and should be finished in 2015.

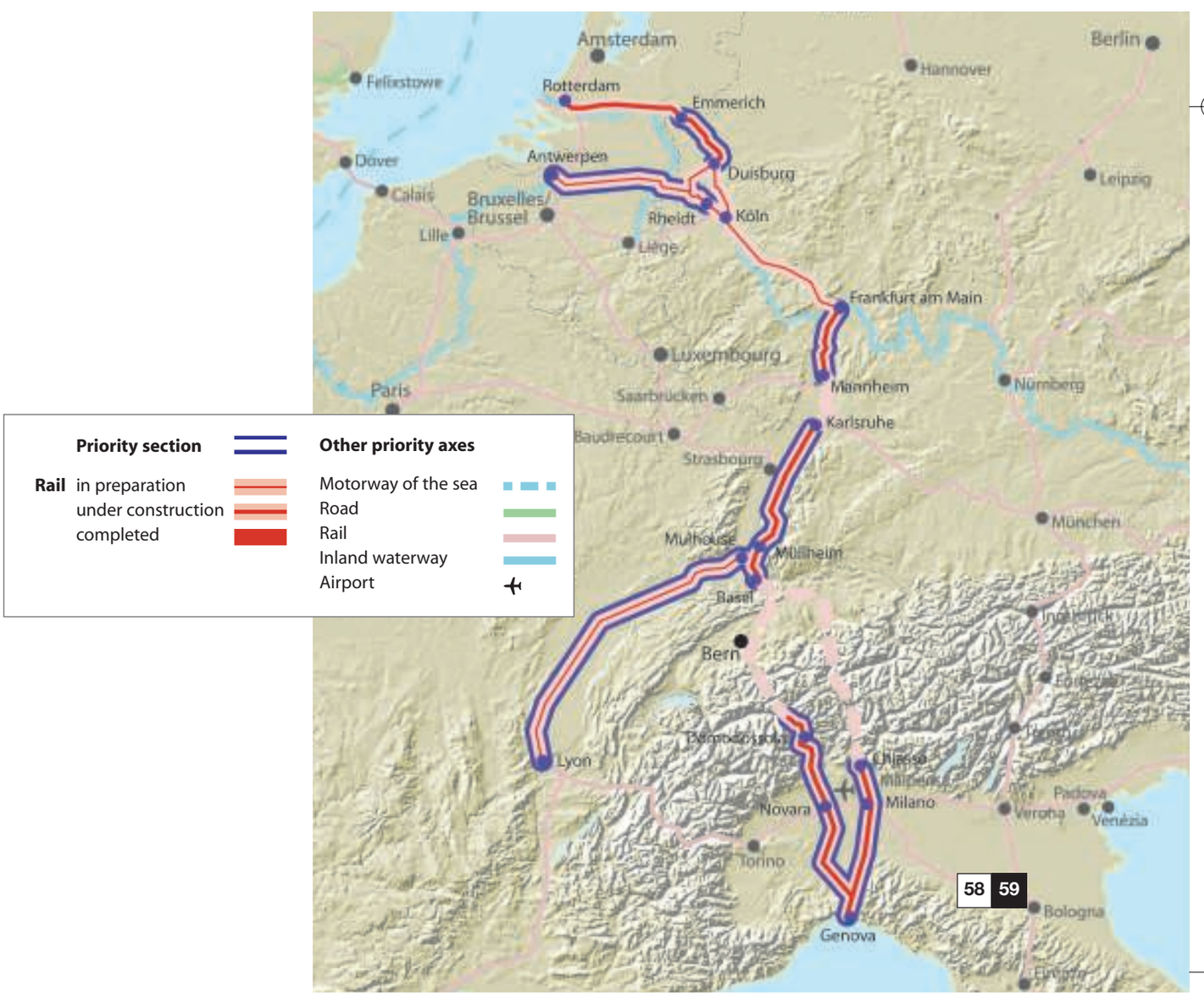
Access lines to Switzerland have already been agreed in the EU–Switzerland transport agreement. The new Gotthard base tunnel (on the eastern branch to Milan) is planned to be finished in 2013. The Lötschberg base tunnel (on the western branch) is due to open in 2007, and will increase transit capacity from 55 to 110 trains a day. Initially, capacity limitations on the Italian side will restrict traffic to 90 trains per day. Capacity increases are planned through the upgrading of existing lines and the construction of a new line between Genoa and the south of Milan, due to be finished by 2013.

T509677in 22/09/05 8:40 Page 59

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Lyons–Mulhouse–Müllheim, with Mulhouse–Müllheim as cross-border section	New line/upgrading bridge	389	2006–18	4 580	1.5	0
Genoa–Milan/Novara –Swiss border	New line/upgrading	297	2005–13	10 313	0	0
Basle–Karlsruhe	Upgrading/new line	193	1987–2015	4 256	1 448	18.5
Frankfurt–Mannheim	New line	75	2010–15 (2012)[2]	1 771	0	0
Duisburg–Emmerich	Upgrading	73	1997–2015 (2009) [2]	1 254	61.4	0
'Iron Rhine' (Rheidt–Antwerp)	Upgrading	214	2004–10	550	0	0
TOTAL		**1 241**		**22 724**	**1 510.9**	**18.5**

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.

[2] Delayed due to general budget reductions for transport infrastructure in Germany.



T509677in 22/09/05 8:40 Page 60

Motorway axis Gdansk–Brno/Bratislava–Vienna

The construction of this motorway will act as a catalyst for economic development in key areas of new Member States and, by offering a new route from the Baltic Sea to central Europe, provides a long-term alternative to the existing saturated north–south axes from the North Sea.

What is the axis?

This axis involves the construction of a new motorway, with two lanes in both directions, from Gdansk to Vienna through Lodz in Poland and Brno in the Czech Republic. On some sections between Katowice and Brno/Zilina, existing roads will be upgraded. The project includes the construction of an access link to the port of Gdansk, where a new container and ferry terminal (with an expected annual capacity of one million 20-foot equivalent units and 1.5 million passengers) is planned. The route is part of pan-European transport corridor VI, identified at the Crete and Helsinki conferences.

What are its expected benefits?

The route is of particular interest from the European point of view since it already carries a high share of international transport (48 million tonnes of international traffic in transit in 2000). Poland has one of the least developed motorway networks of the new Member States. Therefore, the existing road infrastructure has limitations for lorries with European standard weights and dimensions. Building this motorway will allow the improvement of road safety, reduced congestion and thereby facilitate trade. Cost–benefit analyses have shown a very high rate of return. Moreover, this project contributes to a wider strategy to attract new economic activities along the axis, which will also be assisted by the parallel railway project *(see axis No 23)*.

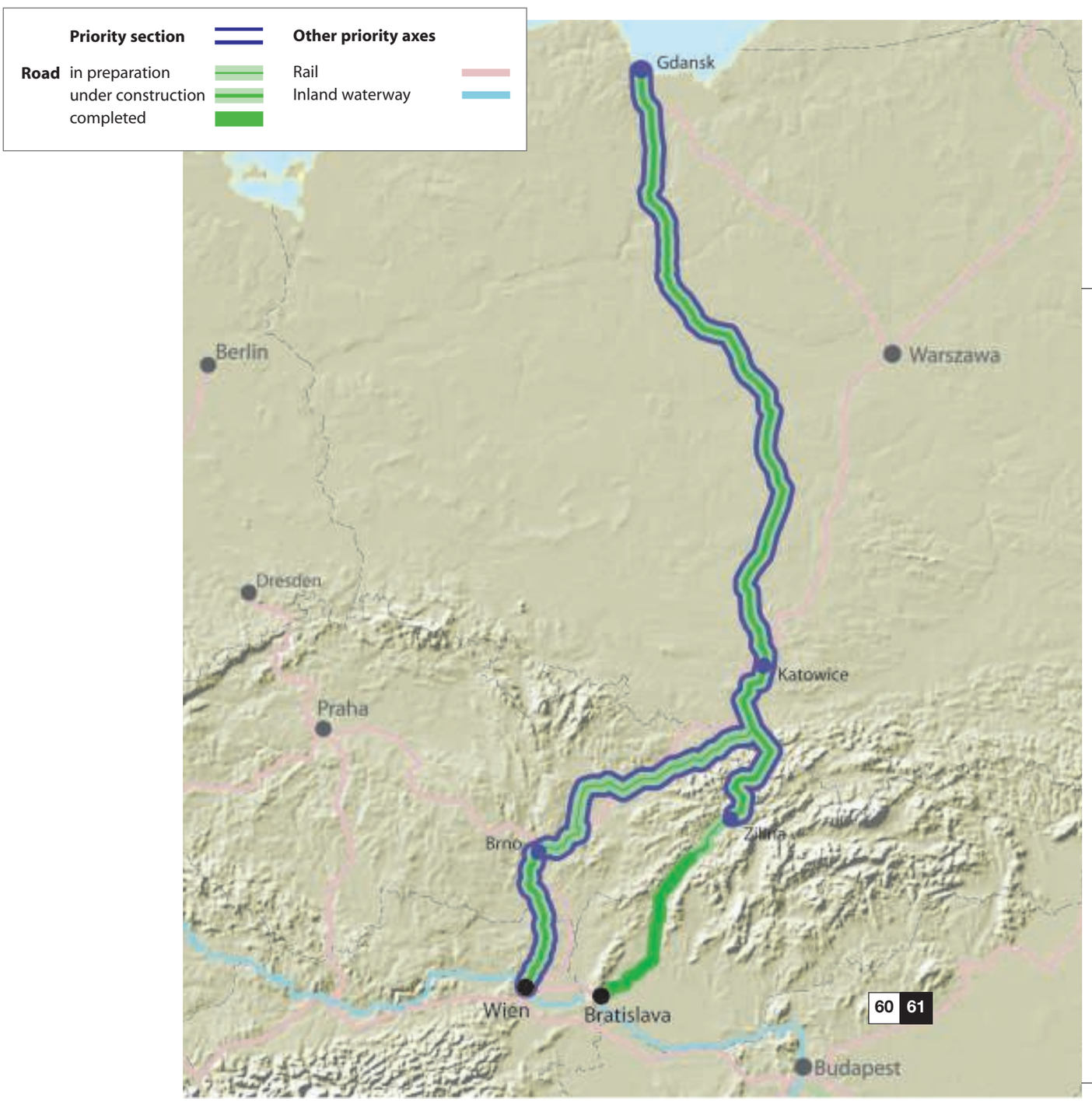
What is its current status?

The motorway projects are included in the respective national development plans of the four Member States. Formal (environmental) impact assessments have been completed for most of the sections. Works have already started on some sections. The completion date for works in the Polish section will be a year later than anticipated in the 2004 guidelines. The alignment of the section from Brno to the Czech–Austrian border is not yet decided, due to its crossing a Natura 2000 area in the Czech Republic. This could delay the end date to 2013, although the guidelines scheduled it for 2009. The cross-border section between Vienna and Brno is likely to be set up as a public–private partnership (PPP), extending the existing PPP in operation in the Austrian section.

T509677in 22/09/05 8:40 Page 61

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Gdansk–Katowice motorway	Road (new)	508	2005–11 (2010)	2 754	0	1
Katowice–Brno/ Zilina motorway cross-border section	Road (upgrade and new)	421	2004–10	4 380	14	3.8
Brno–Vienna motorway cross-border section	Road (new)	109.5	2003–13 (2009)	643	7	0
TOTAL		**1 038.5**		**7 777**	**21**	**4.8**

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.



T509677in 22/09/05 8:40 Page 62

Railway/road axis Ireland/United Kingdom/continental Europe

Improving road and rail links will reduce journey times between Ireland, the United Kingdom and the heart of mainland Europe, contributing to better accessibility to all regions of the EU, and also improving network reliability and safety conditions.

What is the axis?

These projects follow on from improvements in the main north–south rail line in Ireland *(see axis No 9)* and in the Ireland–United Kingdom–Benelux road links *(see axis No 13)*. Both have helped to considerably reduce passenger and freight journey times between Ireland, the United Kingdom and the European mainland. But further improvements in capacity in both rail and road are now required to cope with the development in traffic, and to improve links with the rest of the EU further.

In Ireland, further modernisation is needed to increase the frequency, reliability and safety of rail services. Investment is needed to complete the upgrading of the major inter-urban motorways north and south from Dublin, linking the three principal cities on the island, and to set up a driver information system to improve traffic management.

In the United Kingdom, the major projects relate to modernising the Felixstowe–Nuneaton and Crewe–Holyhead railway lines. These links to two major ports will increase the capacity of west–east freight movements across the United Kingdom to almost triple current levels. These two lines intersect the United Kingdom's main north–south line, the west coast main line *(see axis No 14)*. Improvements to road and railway links between Liverpool and Hull – major ports on the west and east coasts – are also included, and will be of particular importance for freight transport.

In addition to these two elements, the project also provides a useful opportunity to use the Crewe–Holyhead line for development work on the European rail traffic management system (ERTMS).

What are its expected benefits?

The new Irish rail projects will help further increase the speed and frequency of passenger and freight services. In particular, an estimated 30-minute saving on Dublin–Cork and 15-minute saving on Dublin–Belfast journeys will make rail more attractive. Road projects, particularly the development of a driver information system, will make the network more efficient, improving both traffic flow and safety. Investment on the Dublin border (northern) route will bring journey-time savings of 24 minutes, and savings of 58 minutes on the Dublin–Cork route.

Modernisation of the Felixstowe–Nuneaton and Crewe–Holyhead rail links contributes to the development of rail-based freight transport and rail–sea intermodality. This cross-country route will help maintain and develop growth in the intermodal market for deep-sea containers by rail. Felixstowe is Europe's fourth largest container port, and this line will connect with key container shipment terminals across the United Kingdom. The line will help relieve the constrained southern end of the west coast main line, and enable new deep-sea container traffic to be accommodated on the railway. The Liverpool–Hull link will significantly shorten journey times for passengers and freight between Ireland and the Benelux ports, contributing to the economic and social cohesion of one of Europe's peripheral regions. ERTMS development work in the Crewe–Holyhead line will make a useful contribution to the national ERTMS implementation plan.

What is its current status?

The most mature projects are included in the UK and Irish national infrastructure development plans. Significant investment in rolling stock will ensure optimum use of the new rail capacity created.

Significant improvements on the Felixstowe–Nuneaton rail line have already been achieved on the spur via London during the first phase of the project (which has received EUR 5 million in financial assistance from TEN-T). Capacity improvements, in particular to the tunnel at Ipswich station, have enabled larger 2.9 m high containers to be transferred from Felixstowe. Further work will focus on improvements on a cross-country route from Felixstowe.

Work on the Crewe–Holyhead route will relate to UK development work on the ERTMS, and is dependent on the outcome of tests on the Cambrian line between England and Wales.

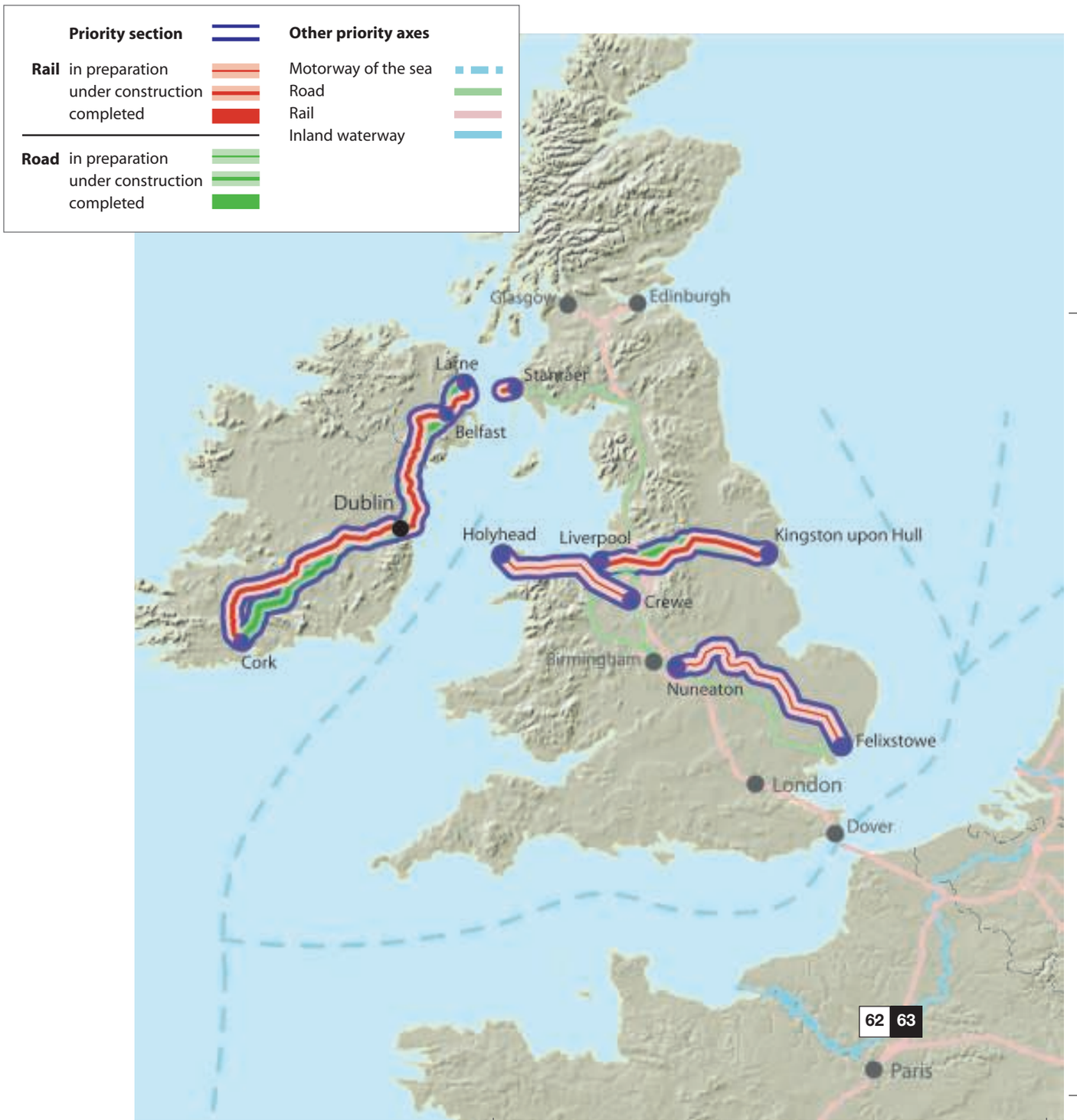
However, financial uncertainties may lead to delays in the completion of the rail projects.

The road corridor linking the ports of Liverpool and Hull is an established route carrying significant volumes of traffic all along its length. Recent work has focused on improving parts of the route at or near Hull. Further improvements to the corridor are currently in planning. Some proposed schemes on the route are still being examined and not yet decided, so completion may be delayed.

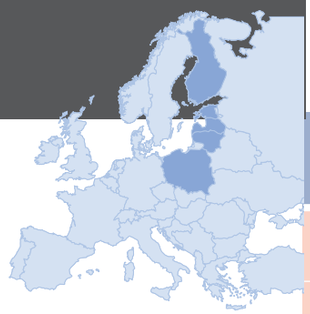
T509677in 22/09/05 8:40 Page 63

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Ireland	Road/rail modernisation	400	1995–2010	2 544	2 075	11.5
Hull–Liverpool	Rail modernisation	190	2003–20 (2015)	1 750	10	0
Felixstowe–Nuneaton	Rail modernisation	265	2007–14 (2011)	300	0	0
Crewe–Holyhead	Rail modernisation	180	2009–12 (2008)	120	0	0
TOTAL		**1 035**		**4 714**	**2 085**	**11.5**

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.



T509677in 22/09/05 8:40 Page 64



‘Rail Baltica’ axis Warsaw–Kaunas–Riga–Tallinn–Helsinki

Upgrading and renewing the north–south rail network in Estonia, Latvia, Lithuania and Poland, including making it more interoperable with the rest of the European network, will help make rail a more attractive option in the region.

What is the axis?

The Baltic countries currently make little use of rail for international traffic in the north–south direction. The existing network, built according to Russian standards, is slow, and is not interoperable with the Polish and German networks. Near the border between Lithuania and Poland, for example, there are considerable delays for passenger and freight trains. On some sections, speed is limited to 40–60 km/h.

The three Baltic countries already have a recently renewed north–south road axis, the so-called Via Baltica, which provides an improved road link with central and southern Europe. To boost European integration further, technical options for developing the rail network on the same north–south axis now need to be examined.

What are its expected benefits?

Better rail traffic conditions on this north–south route will help improve the three Baltic countries’ links through Poland with the heart of Europe, thus helping to integrate these countries in the enlarged Union. For freight traffic, the project will help increase the capacity of the rail network and improve intermodal transport potential, thus boosting trade with other European countries. For passengers, improving services and cutting journey times to central and southern Europe will bring an appreciable reduction in the volume of road traffic to Poland and Germany. This will improve transport sustainability and help the free movement of citizens and goods in the enlarged European Union.

What is its current status?

A feasibility study will be launched by the Commission on behalf of the countries concerned (Poland, Lithuania, Latvia, Estonia and Finland) towards the end of 2005. This study (to be financed by the Cohesion Fund), will analyse traffic demand, technical solutions and possible alignments for new lines. Further estimates of traffic loads and, more specifically, of the potential shift from road to rail still need to be confirmed by more detailed analysis.

Implementing the project will, moreover, depend on the closest possible coordination between the three Baltic countries, and with Poland, as the Rail Baltica line connects with the important rail link running from Berlin via Warsaw towards Minsk and Moscow. At present, the three Baltic countries still have to settle on the technical options and the alignment on the Riga–Tallinn route. The technical choices, which will determine how much investment is needed, need to take account of the expected profitability of the rail link. Particular focus will have to be given to finding long-term solutions: notably, constructing a modern European standard line.

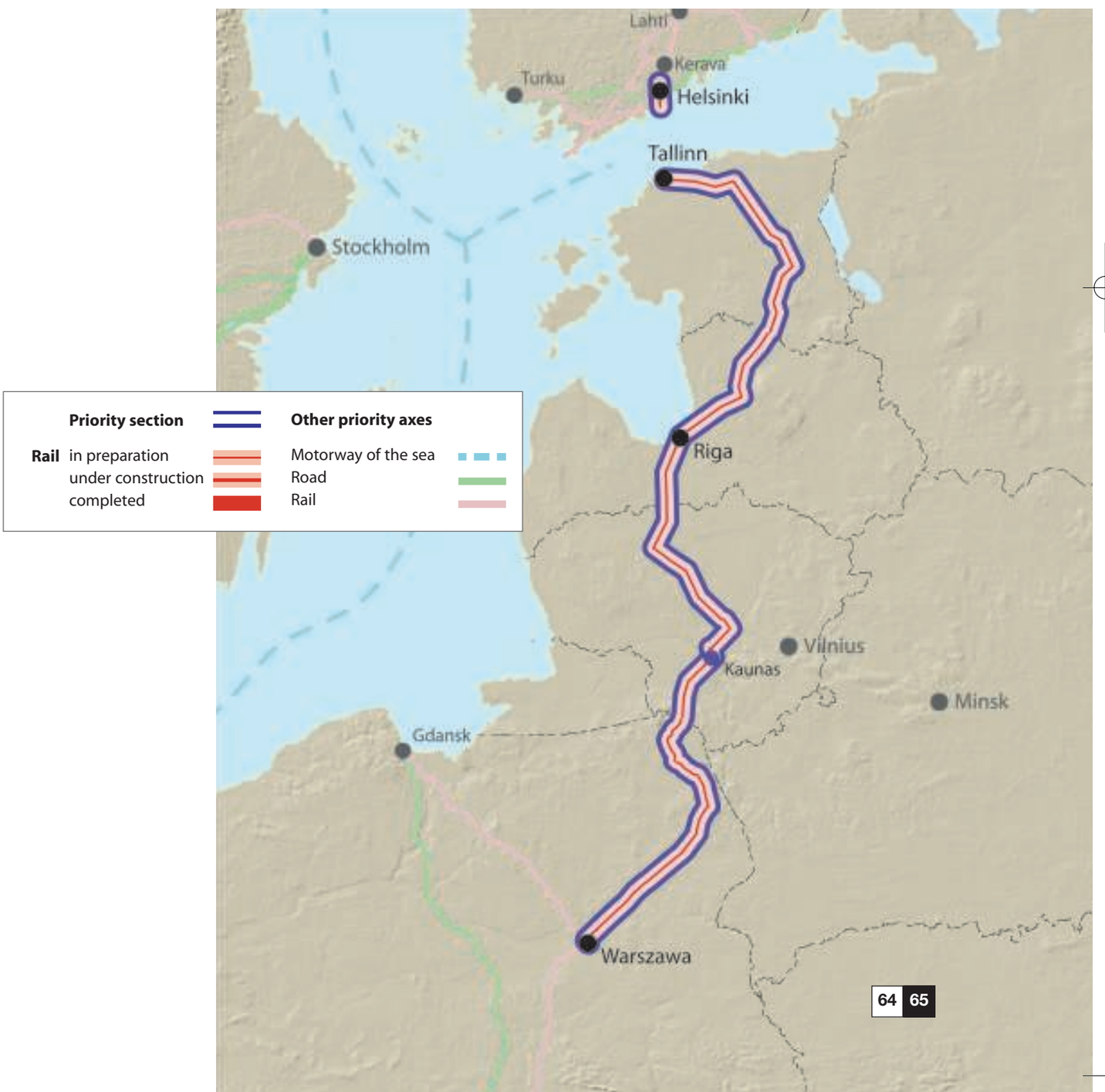
On 20 July 2005, the European Commission designated Mr Pavel Telicka as European coordinator for priority axis No 27.

T509677in 22/09/05 8:40 Page 65

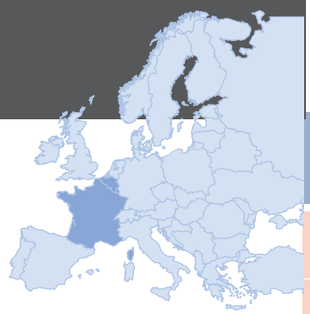
Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Warsaw–Kaunas	Reconstruction / new construction	437	2004–10	300 [2]	0	0
Kaunas–Riga	Modernisation / new construction	283	2010–14	850	0	0
Riga–Tallinn	Modernisation / new construction	470	2010–2018 (2016)	1 500	0	0
TOTAL		**1 190**		**2 650**	**0**	**0**

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.

[2] The costs for the Polish section are not included here.



T509677in 22/09/05 8:40 Page 66



‘Eurocaprail’ on the Brussels–Luxembourg–Strasbourg railway axis

This axis adds a valuable north–south link to the rail network in north-western Europe, forging better links for both freight and passengers between the Netherlands–London and south-western Germany, via Luxembourg and Brussels.

What is the axis?

The axis adds an important link to the European rail network. It will join existing infrastructure to improve north–south links through better connections between the North Sea and Italy, via Belgium, Luxembourg, eastern France and Switzerland.

Works will include linking the Brussels international airport axis and the Brussels–Antwerp–Amsterdam high-speed line *(see axis No 2)* via a new tunnel between Brussels Schuman and Josaphat. In Brussels, the creation of an additional twin-track line between Brussels Schuman and the Brussels North–South junction (for high-speed connections to London, France and the Dutch Randstad region) will create more direct traffic flows. The construction of a new line between Bettembourg (Luxembourg) and links with the TGV-Est *(see axis No 4)* and the Paris–Stuttgart–Vienna–Bratislava line *(see axis No 17)* will provide high-speed connections to and from the south and east. The upgrades will also facilitate the daily commuting of some 30 000 Belgians from southern Wallonia to their work in Luxembourg.

What are its expected benefits?

Apart from improving intra-Community cohesion, one of the main objectives of this axis is to improve connections between the EU’s three main administrative centres and thereby also improve the efficiency and productivity of the EU.

In addition, by improving this key link in the TEN-T, upgrading this axis will increase the profitability and competitiveness of rail on the route, and relieve road traffic on the adjacent motorways. This will make a significant contribution to sustainable development and protecting the environment in areas of natural beauty such as the Ardennes.

Once complete, there will be significant savings in journey times. Following the completion of the second section of the TGV-Est (Baudrecourt–Strasbourg), Luxembourg–Strasbourg journeys will be reduced to 1 hour and 25 minutes (over 2 hours today). The major international objective is to achieve travel times between Brussels and Luxembourg of one and a half hours and Brussels and Strasbourg of three hours in combination with the TGV-Est. In total, completing the project will represent a saving of 2.5 million hours per year, of which more than 2 million would be accounted for by international traffic.

What is its current status?

A joint Belgian–Luxembourgish working group is examining the economic interest of this project. The Belgian railways are studying the feasibility of creating a private–public partnership structure to speed up the realisation of the project.

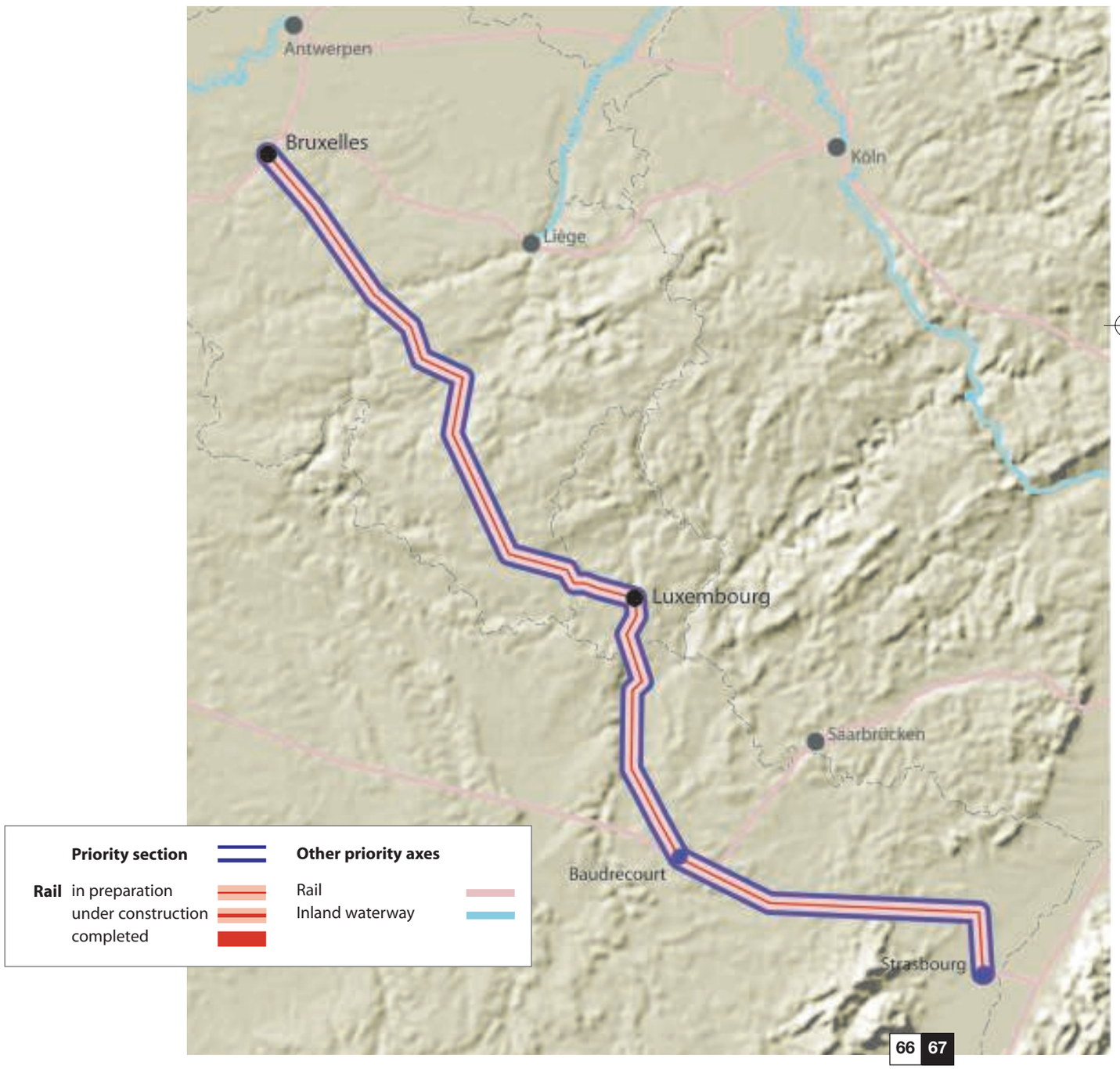
Investment to upgrade the rail line between Luxembourg and the Belgian border is planned from 2009 to 2012, and could be extended into 2013.

The 104 km Baudrecourt–Strasbourg section in France *(see axes No 4 and 17)* is currently at an advanced stage in planning, due to be completed in 2008. The line is expected to be opened in 2015.

T509677in 22/09/05 8:40 Page 67

Priority section	Type of work/status	Distance (km)	Timetable [1]	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Brussels–Luxembourg border	Rail (upgrade)	176	2007–12	1 245	0	0
Luxembourg–French border	Rail (upgrade)	18	2009–13 (2012)	164	0	0
TOTAL		**194**		**1 409**	**0**	**0**

[1] In brackets, completion date listed in the 2004 guidelines, if different from the date notified in 2005 by the Member State.



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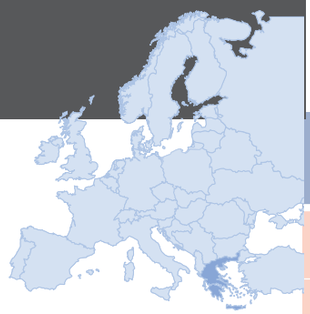

Railway axis of the Ionian/ Adriatic intermodal corridor

These two interlinked rail routes will lead to huge increases in capacity for intermodal links between sea and rail transport, by connecting the major ports in Greece with each other, and with main rail routes to the rest of Europe.

What is the axis?

These new rail links are founded on Greece's geographical position at the crossroads between Europe, Africa and Asia. And with Greece linked through three of the 10 pan-European corridors (corridors IV, IX and X) to Dresden, St Petersburg and Salzburg respectively, there is huge potential to link Europe with the rest of the world.

The first rail line, linked to existing infrastructure, will create a high quality and environment-friendly land-transport 'bridge' between the port of Igoumenitsa (on the Adriatic) and Thessaloniki (end point of railway corridor X), Volos (motorway of the sea towards Asia and the Middle East), Alexandroupoli (end point of corridor IX), and Piraeus (the major hub of the eastern Mediterranean).

The second line will connect the four Greek ports of the Adriatic–Ionian corridor (Patras, Igoumenitsa, Kalamata and Astakos). This will allow these ports to develop complementary services, and balanced traffic flows through greater use of intermodality (maritime–rail links). This line will also provide a direct rail connection of the Igoumenitsa terminal with the port of Piraeus and the Athens railway hub at Thriasion, through the existing Patras–Río–Corinth–Athens line.

What are its expected benefits?

This axis will complete a major part of the missing railway infrastructure in northern Greece, allowing the operation of the so-called Egnatia railway axis. Connections between the rail networks of south-eastern Europe (Greece, the former Yugoslav Republic of Macedonia, Bulgaria, and Turkey) will become much easier and more efficient.

These routes will significantly increase the capacity of the rail network for efficiently accommodating intra-EU and international transport flows towards central European markets, which are currently served by road and long-distance maritime transport. Improved intermodal operation along the Adriatic–Ionian corridor will create significant time and cost savings for cargo transit as well as encouraging the use of sustainable modes of transport.

Greece, at the periphery of the EU, will be better connected with the rest of Europe. Also, the Río–Antirío–Ioannina line crosses the Epirus and western Greece regions, two of the poorest regions in the EU, and so will reduce isolation and assist economic development.

Improved interconnection between the major ports of the Adriatic–Ionian corridor with the Greek Aegean ports, will also strengthen the implementation of motorways of the sea schemes in the eastern Mediterranean *(see axis 21)*.

What is its current status?

The lines are included in the Greek national master-plan study on the creation of a national network of intermodal freight transport centres. Funding amounting to 40 % of the estimated costs has been secured from the regional development programmes (PEP). The rest of the cost will be covered by the private sector through PPPs. Most of the technical studies for the lines are now being assigned to contractors.

A memorandum of understanding was signed in June 2004 for establishing intermodal transport operations (involving the Ionian–Adriatic corridor) with south-eastern Europe and the eastern Mediterranean. This route will form part of more extensive transport links in the wider Balkans area, and promote trade flows between this region and the EU.

T509677in 22/09/05 8:40 Page 69

Priority section	Type of work/status	Distance (km)	Timetable	Total cost as of end 2004 (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Kozani–Kalambaka–Igoumenitsa	New rail	317	2006–12	1 395	0	0
Ioannina–Antirío–Río–Kalamata	New rail	475	2009–14	1 094	0	0
TOTAL		**792**		**2 489**	**0**	**0**

T509677in 22/09/05 8:40 Page 70

Inland waterway Seine-Scheldt

Improving the link between the Seine and Scheldt rivers will connect the Paris region and the Seine basin with the entire Benelux inland waterway network.

What is the axis?

The link between the Seine and Scheldt rivers forms part of a vital transport route in a highly-developed economic and industrial region, connecting in particular the ports of Le Havre, Rouen, Dunkirk, Antwerp and Rotterdam. However, one obstacle to promoting inland waterway transport between Benelux and the Paris region is the bottleneck to the north of Paris, between Compiègne and the Dunkirk–Scheldt canal.

Navigability on that section is at the lower end of international standards, with access restricted to vessels of no more than 400 to 750 tonnes on some stretches. The project centres on the construction of a large-gauge canal, running for about 100 km, allowing the passage of barges carrying up to 4 400 tonnes. The route selected is clear of valleys and inhabited areas, thus limiting the impact of the project on the natural environment.

Belgium also plans to improve navigability on the axis north of this bottleneck to give access to vessels of up to 4 400 tonnes. The length of this section is 80 km. These works will ensure full accessibility between the inland waterway basins of northern France and the Benelux countries.

What are its expected benefits?

The axis will not only facilitate transit traffic and alleviate road-transport congestion but will also benefit the adjacent regions, where transport platforms could be developed. Numerous jobs could be created, perhaps 8 000 over five years according to estimates.

These estimates suggest that removing the French bottleneck could help free up 15 million tonnes of freight in the first year of operation thereafter. Going from a maximum gauge of 750 tonnes to 4 400 tonnes could reduce the transport costs from EUR 30–40 per 1 000 tonne-kilometres to a cost of between EUR 10 and 15 per 1 000 tonne-kilometres once work is completed on French territory. The positive impact on the environment and the population, through improved diversification of modes of transport, would also be considerable.

What is its current status?

Preliminary studies on the new section of canal in France (North Seine Canal, linking Compiègne with Cambrai) were launched in 2004, under the direction of the French Inland Waterways Authority. Government approval to build the canal is expected to be granted in 2007.

The French government is developing an innovative financing model for the project – through a transport infrastructure fund managed by AFITF, the Financing Agency for transport infrastructure, which was set up on 1 January 2005. The agency is managing an investment programme totalling EUR 7.5 billion for the period 2005-12, or almost EUR 1 billion per year. The agency's funds are essentially drawn from the dividends of the companies which hold motorway concessions. These currently amount to EUR 250-300 million per year, and are growing, given the age of the motorway network and that the companies' debts are close to being paid off. Additional funds will come from the government.

In Belgium, work on the project has already started with the building of a second lock at Evergem on the Ghent Ring Canal (2001-07), and the heightening of the lifting door on the lock at Sint-Baafs-Vijve (2004).

Two bridges were raised in spring of 2005. In the period 2005-07 some studies are still to be done to obtain planning permission by 2008, allowing the remainder of the project to be completed.

T509677in 22/09/05 8:40 Page 71

Priority section	Type of work/status	Distance (km)	Timetable	Total cost (million EUR)	Investment up to 31.12.2004 (million EUR)	TEN-T contribution, including studies, up to 31.12.2004 (million EUR)
Deulemont–Ghent	Improve navigability	80	2001–16	324	23	0
Compiègne–Cambrai	New canal	105	2007–16	2 170	0	3
TOTAL		**185**		**2 494**	**23**	**3**

T509677in 22/09/05 8:40 Page 72

Further information

- Further information about the ***trans-European transport network*** (TEN-T) is available at: http://europa.eu.int/comm/ten/transport/index_en.htm
- The White Paper, ***'European transport policy for 2010: time to decide'*** can be downloaded from: http://europa.eu.int/comm/energy_transport/en/lb_en.html
- Information on EU policies concerning ***all modes of transport*** may be accessed from: http://europa.eu.int/comm/transport/index_en.html
- Details of the ***Marco Polo*** programme supporting intermodal freight transport can be found at: http://europa.eu.int/comm/transport/marcopolo/index_en.htm
- ***Statistics on European transport*** are available at: http://europa.eu.int/comm/dgs/energy_transport/figures/index_en.htm
- Results and news of ***transport research*** projects funded under the EU's R & D framework programme are available at: http://europa.eu.int/comm/transport/extra/web/index.cfm

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