

# **Trans European Transport Networks - the Problems of Delivery**

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# Overview






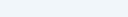
- Transport infrastructure as a tool of integration
- TENs a critical part of EU Transport Policy
- Progress slow leading to need for review
- Much of the emphasis in EU on identifying the Community interest in new links: competitiveness and cohesion.
- At regional or local level high-level improvements can have mixed impacts
- Wider economic benefits of high level transport infrastructure improvements elusive
- Issues for policy making and appraisal

# TENs development

- Essen projects 1994
  - 14 high level projects – all in advanced state o planning
  - Political nature of choice – modes and countries covered
- Consolidation, development and TINA
  - More strategic phase – need to extend to Central and Eastern European countries, including links to Russia
  - Networks (2001): 75200 km of roads, 78000 km of railways, 330 airports, 270 international seaports, 200 inland ports + Galileo satellite navigation system.
- Lack of completion, need for renewal
  - 2003 only 2/14 Essen projects complete, only 5/14 expected complete by 2007 (Van Miert Group)
  - But 16 more priority projects added + ‘Motorways of the Sea’
- The funding gap
  - Cost ~ €600bn
  - EU funds €23.2bn + EIB €6.6bn

## 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	Priority project numbers
 Road	 13 Road project
 Rail	 6 Railway project
 Inland waterway	 8 Multimodal project
 Motorway of the Sea	 30 Inland waterway project
 Airport project	 21 Motorway of the sea
 Port project	 10 Airport
<b>Trans-European transport network</b>	 15 Galileo
 Rail	
 Road	
 Inland waterway	

# Van Miert Recommendations

- Van Miert High Level Group (2003)
- Carry out priority projects by 2020
- Cost
  - Priority projects: €235 billion (0.16% of GDP), total cost of network: > €600 billion,
  - Member States invest < 1% GDP in transport infrastructure and only one-third of this TENs
  - EU share in funding TENs only about €20 billion 2000-2006.
  - Need to develop the financing capacity of EIB
  - Conflict between investment needs and constraints on public expenditure
- Organisational problems
  - Cross-border projects held up through difficulty of coordination
  - Guaranteeing funding for priority projects

# Guidelines for action 2007-13

- Priority to **the 30 projects of European interest**, located in Member States and regions eligible under the Convergence objective. Other projects supported where strong case in terms of contribution to growth and competitiveness. Cross-border links merit special attention.
- Complementary investment in **secondary connections** important in context of an integrated regional transport and communications strategy to ensure that regions benefit from opportunities created by the major networks.
- Support for **rail infrastructure** should seek to ensure greater access and enhance the creation of an EU-wide interoperable network.
- Promoting environmentally sustainable **transport networks**.
- Attention should be paid to improving the **connectivity** of landlocked territories to the Trans-European network (TEN-T). In particular, harbours and airports should be connected to their hinterland.
- More attention should be paid to developing the “**motorways of the sea**” and to short-sea shipping as a viable alternative to long-distance road and rail transport.
- Also links beyond the EU to neighbouring states via 5 key corridors





# Policy conflicts in TENs

- Lack of clarity in responsibility
  - TENs an EU concept but responsibility for decisions with member states, local/regional government or private sector
  - only matters on which cross-border agreement is needed (i.e. the strictly international elements of the TENs) should be resolved at EU level.
  - need for institutional structures to enable multi-level decision-making and their policing
- EU level transport policy addresses two fundamental concerns
  - development of a world class competitive economy (Lisbon Agenda)
  - increased cohesion within and between the member states
- National level takes decisions and coordinates funding
- Problems
  - Horizontal conflicts with other policy areas
  - Vertical conflicts through policy refraction



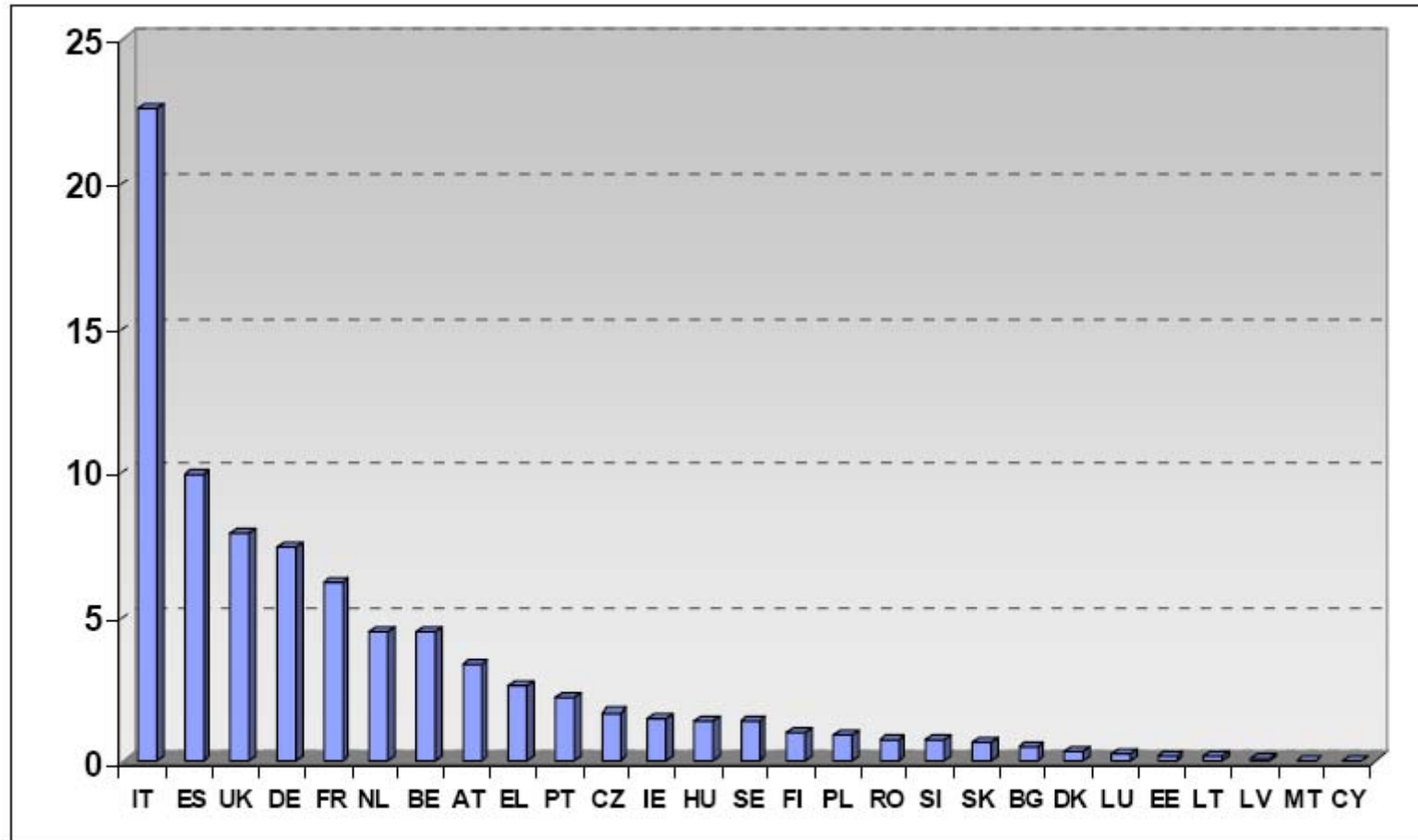
# Appraising TENs Projects

- EU-wide issues: added value to the EU of the network and of any link.
  - Integration effect in terms of contribution to economic growth
  - Cohesion impact
    - Redistribution and the ‘two-way road’ effect
    - Empirical evidence:
      - increase in welfare from completion of the TENs typically < 4 per cent of regional GDP
      - only 1/10 change in relative accessibility
      - can be negative
    - Regions may campaign for projects which harm them
    - EU may be promoting projects which ultimately promote economic divergence
    - The policy structure fails to establish a clear dialogue between the different levels of government to reduce asymmetric information problem

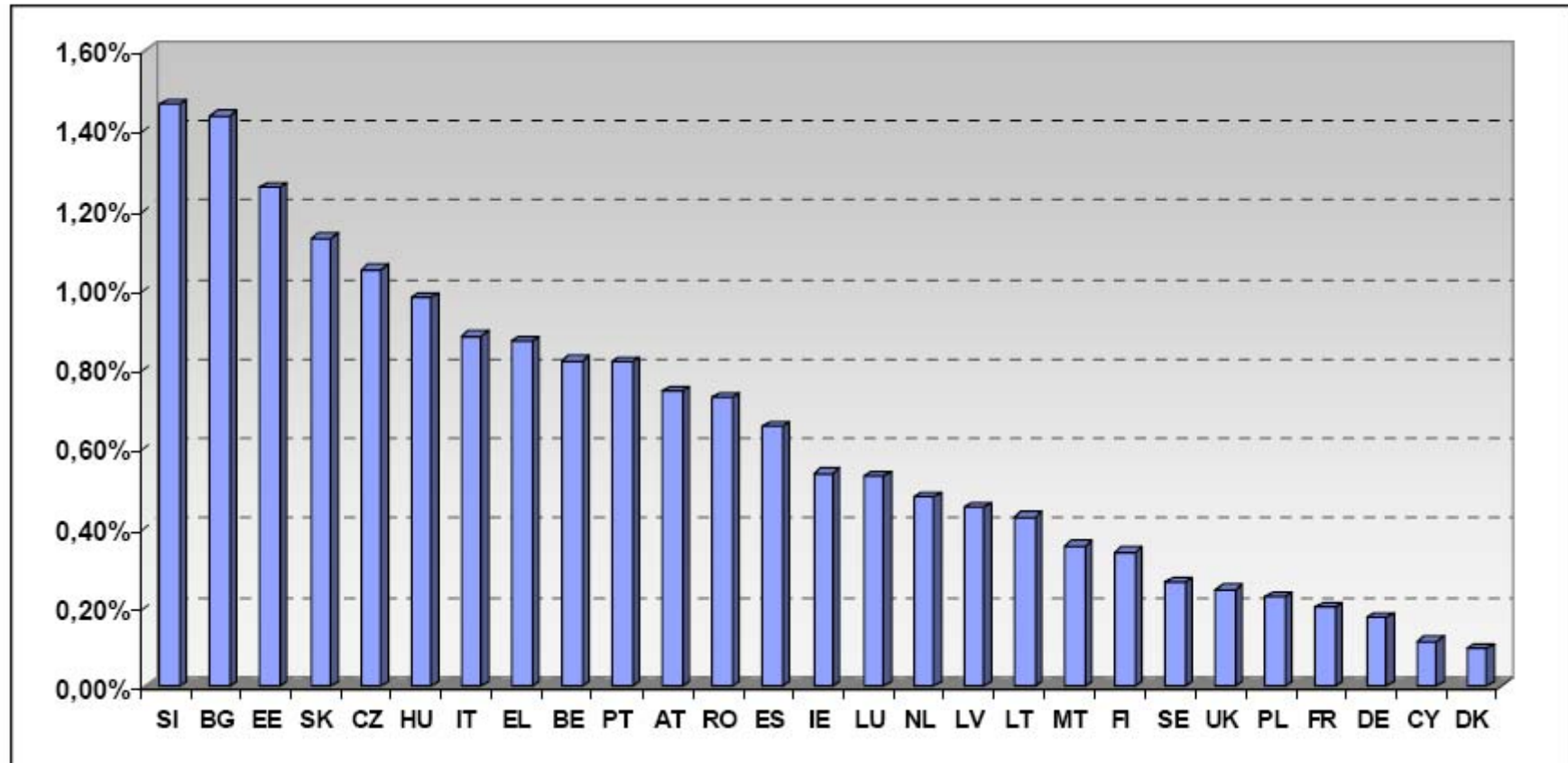
# Evaluation of 2000-06 period

- Effectiveness
  - Predictability combined with flexibility
  - Value attached to not losing the funding was key factor in on-time implementation
  - 2004 Revision acted as additional performance incentive.
  - But tendency of mature projects with high national commitment to self-select, frequently projects would have proceeded anyway and may exclude cross-border projects
- Lack of effectiveness
  - Encouraging public-private partnerships.
  - Instability of the management procedures affected the effectiveness, efficiency and relevance of the programme.
  - Minimising the administrative burden and the need to demand accountability and transparency were controversial.
- Streamlining procedures
  - More emphasis on indicators which make it possible to evaluate impacts ex post.
  - Challenge for individual projects whose full benefit depends on completion of other projects, and often on the full implementation of the complete TEN-T project of which they are part.

# Investments in TEN-T, EU-27 per country, 2002/03, €bn

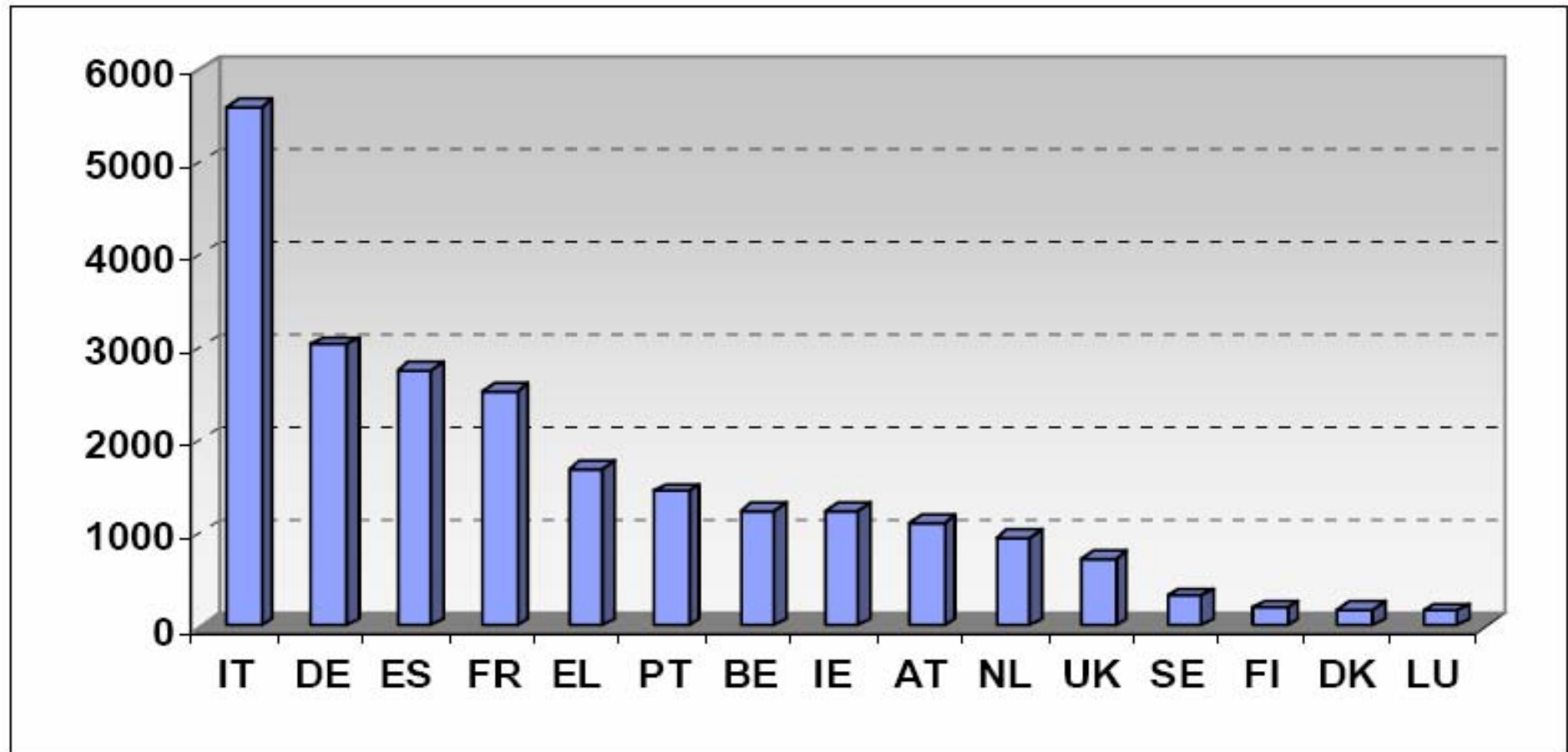


# Investments in TEN-T, EU-27 per country, 2002/03, av. % GDP

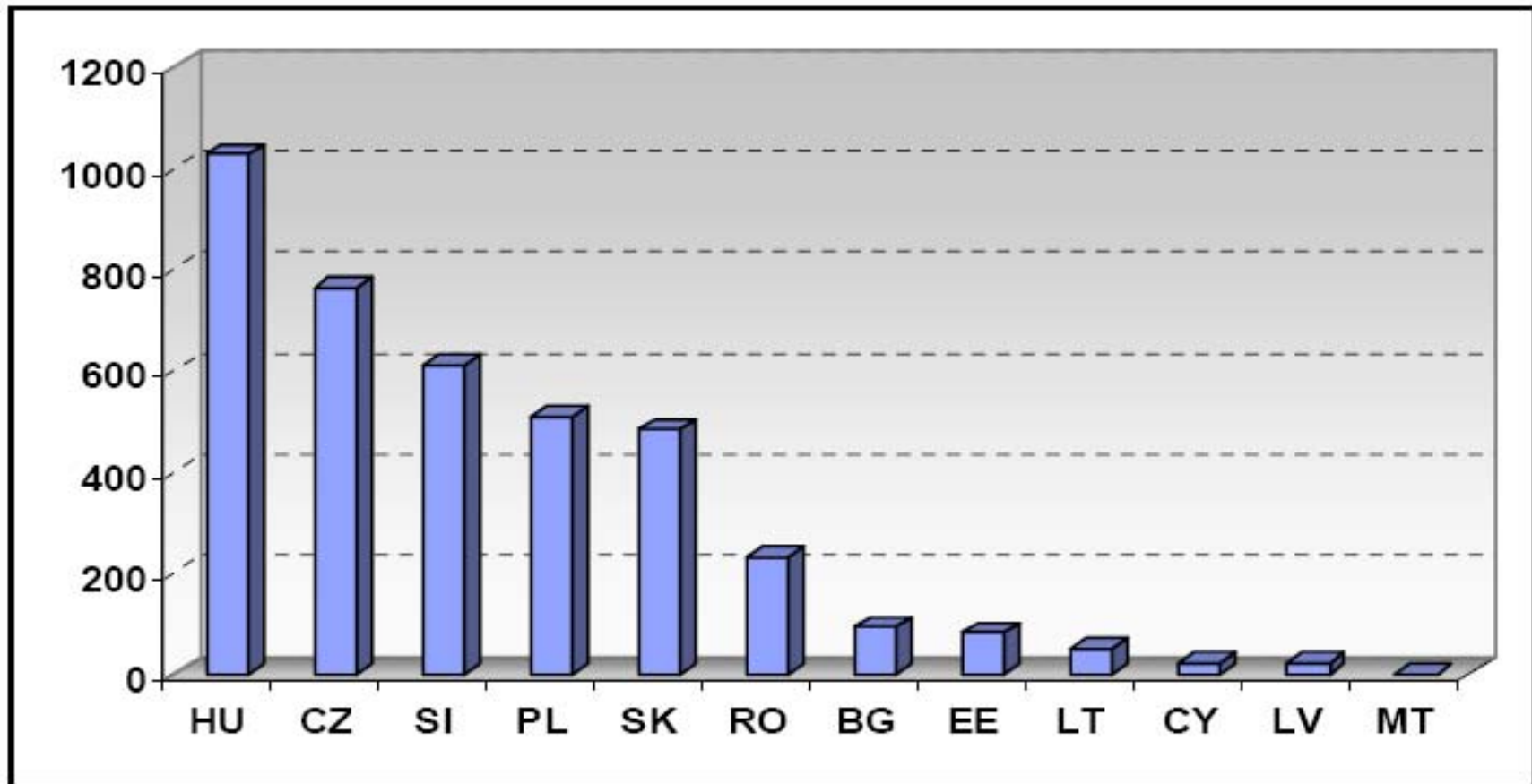




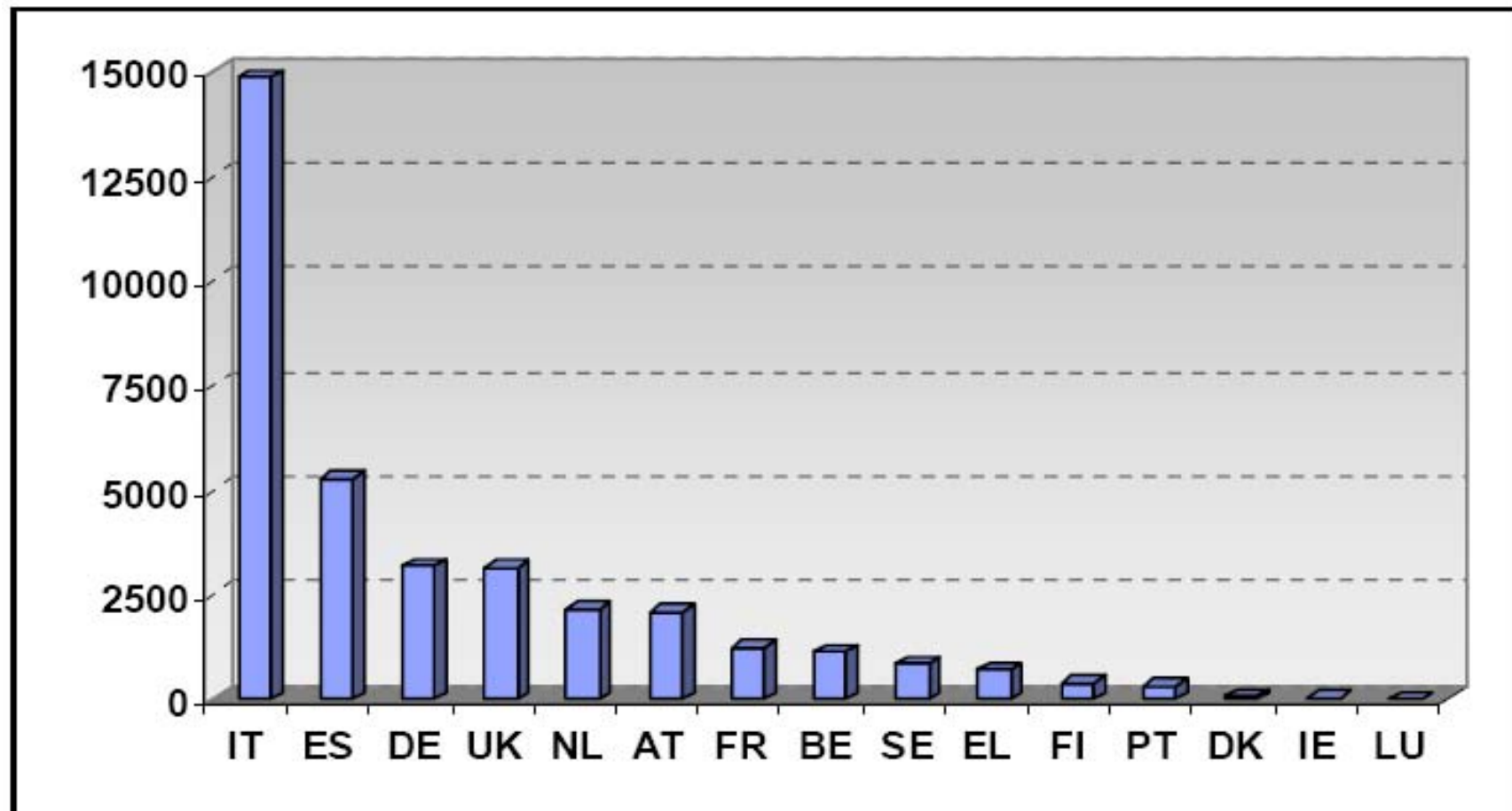
## Investment in TEN-T road network, EU-15 per country, 2002/03, €mn



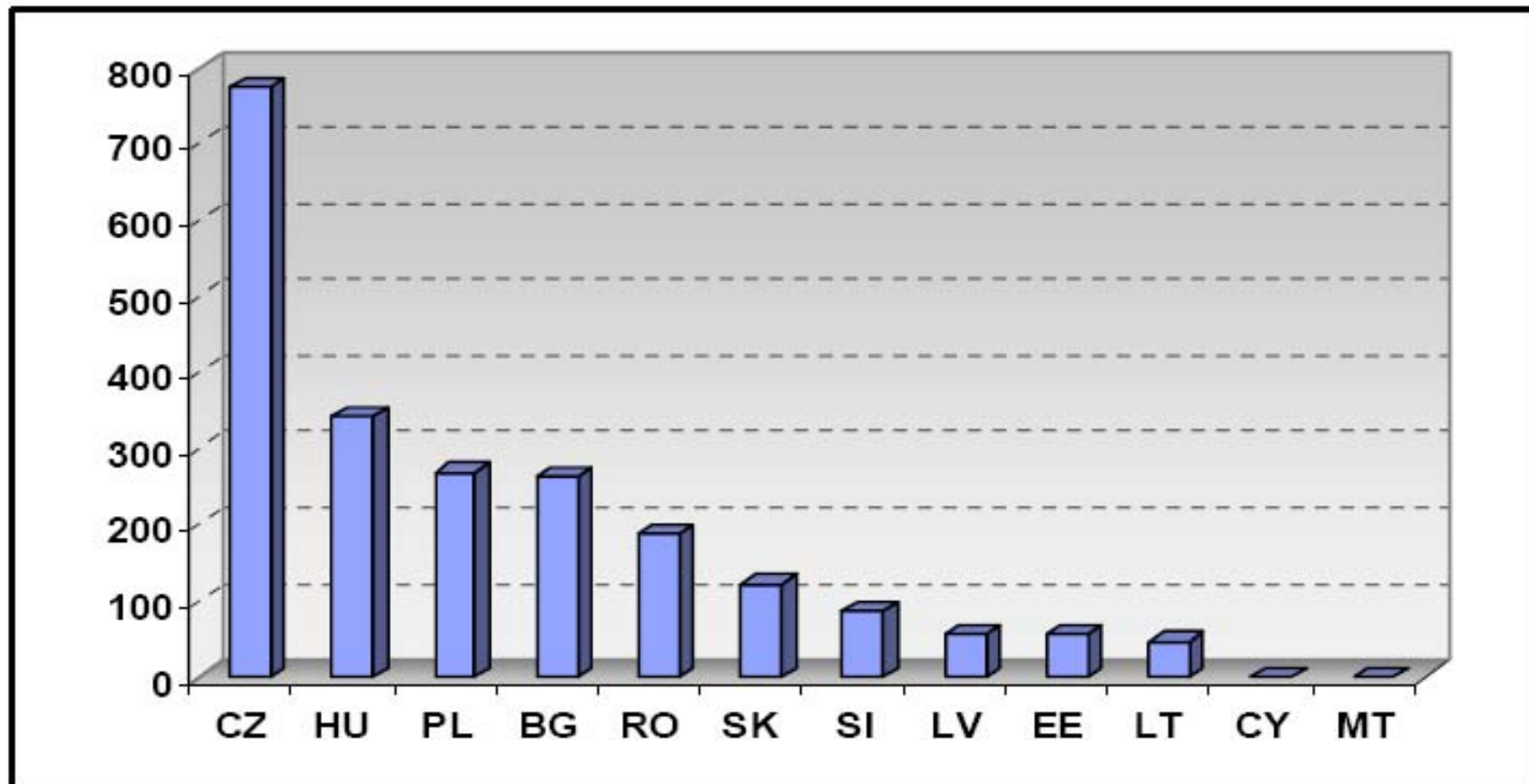
# Investments in TEN-T road network, EU-10 and EU-2 per country, 2002/03, €mn



# Investment in TEN-T rail network, EU-15 per country, 2002/03, €mn

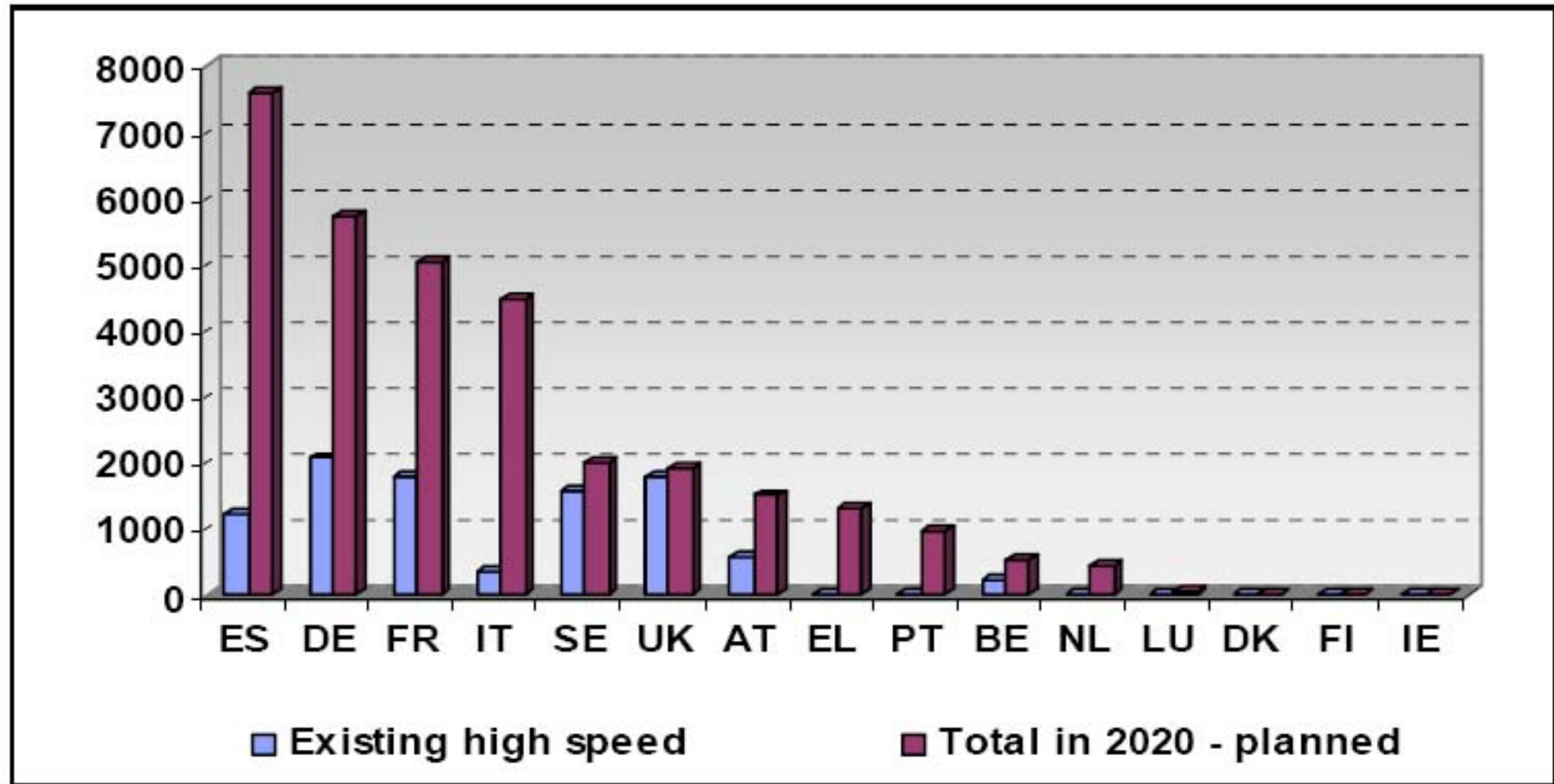


## Investments in TEN-T rail network, EU-10 and EU-2 per country, 2002/03, €mn

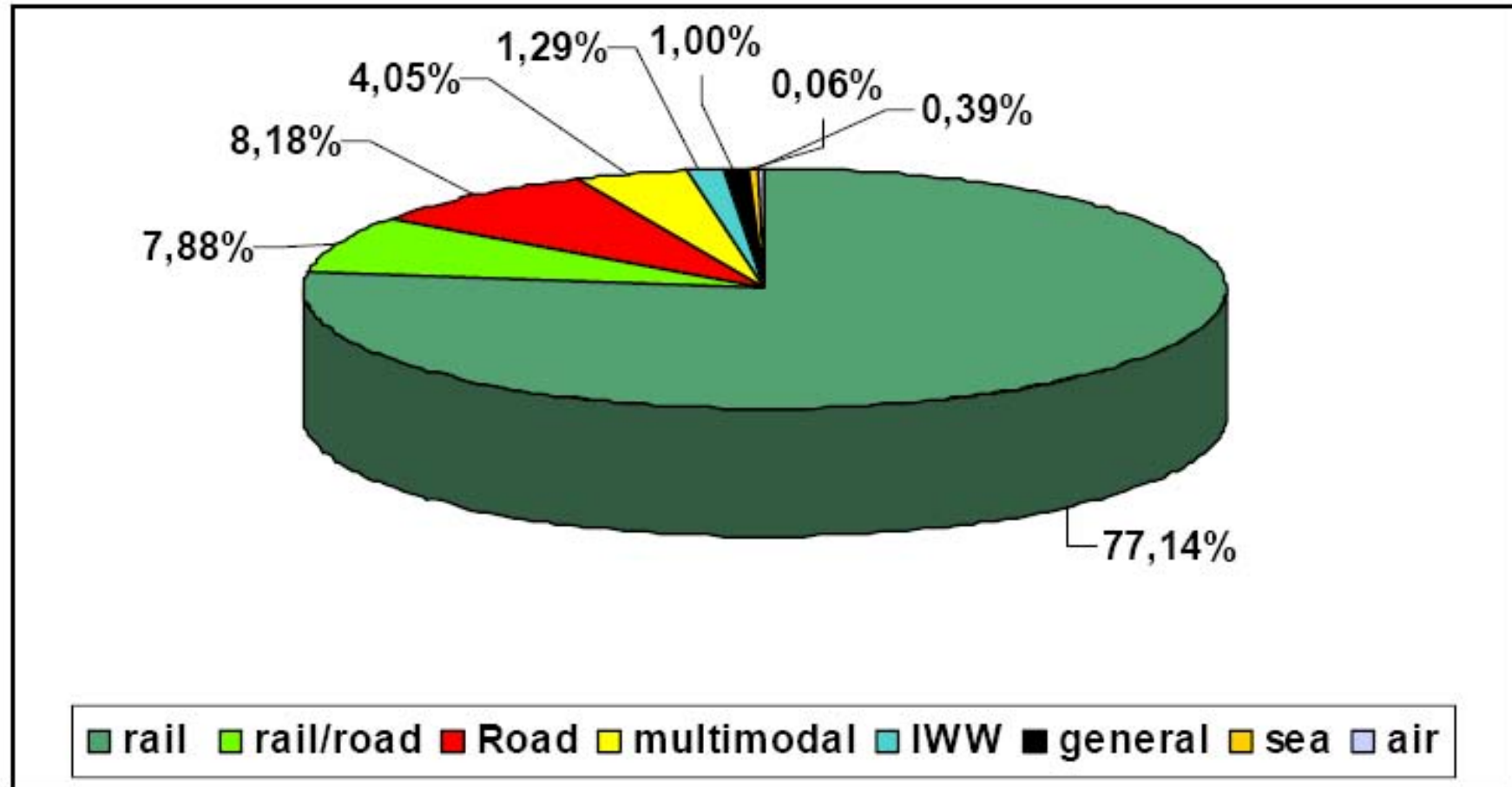




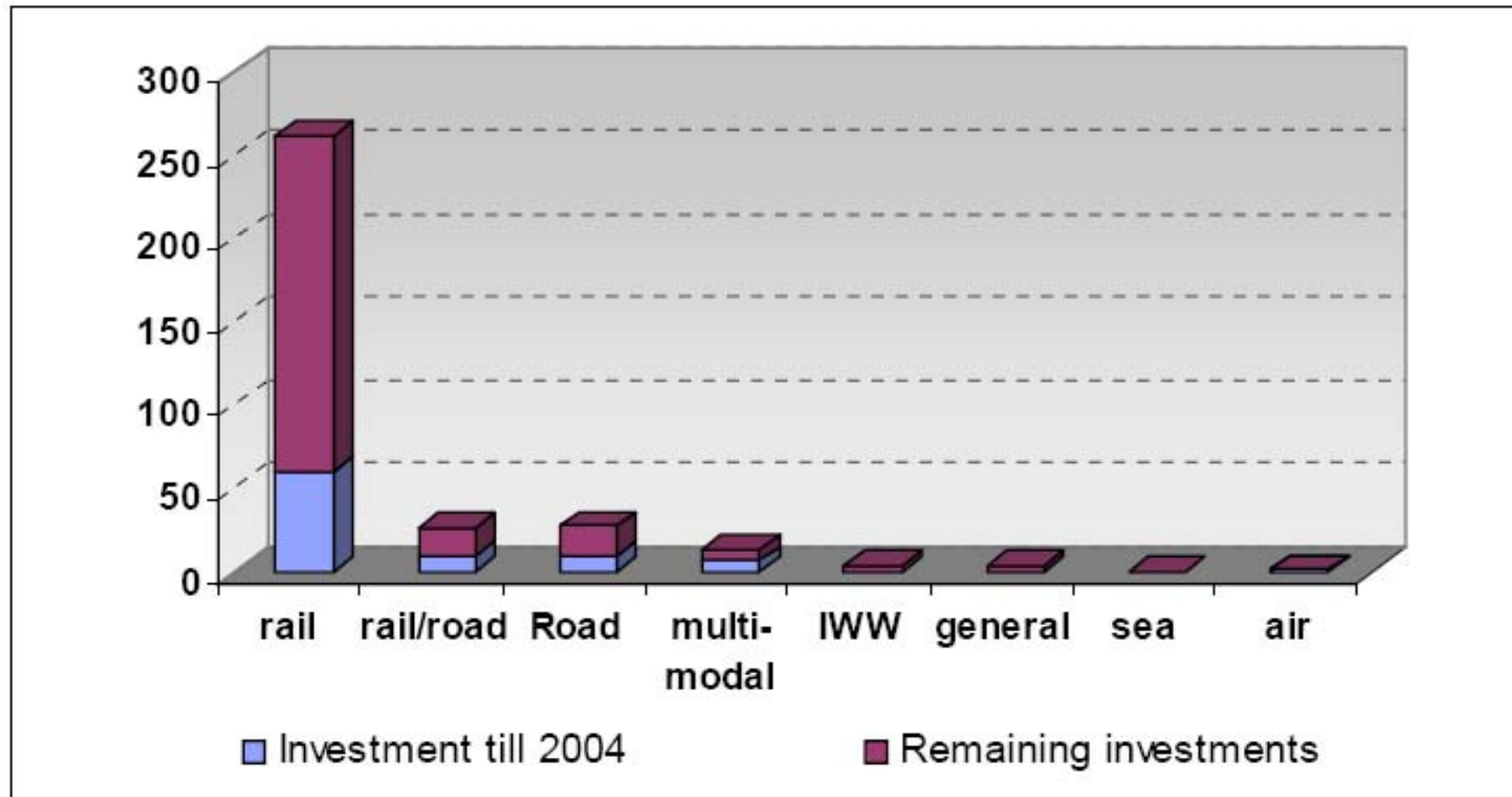
## Development of TEN-T HSR lines, EU-15, 2003-20 per country, km



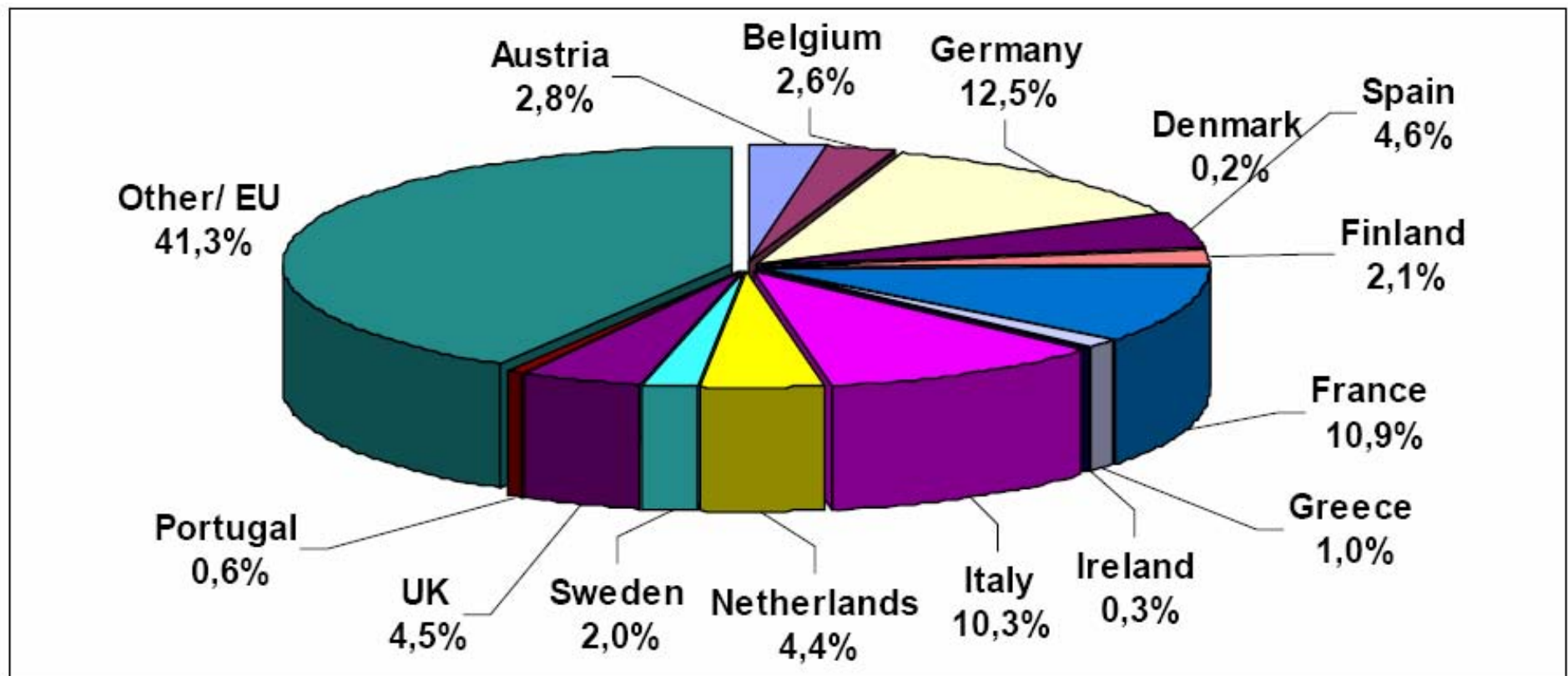
# Modal split of investments in priority projects, EU-27, 2004–20



# Investments in priority projects per mode – effected till 2004 and remaining

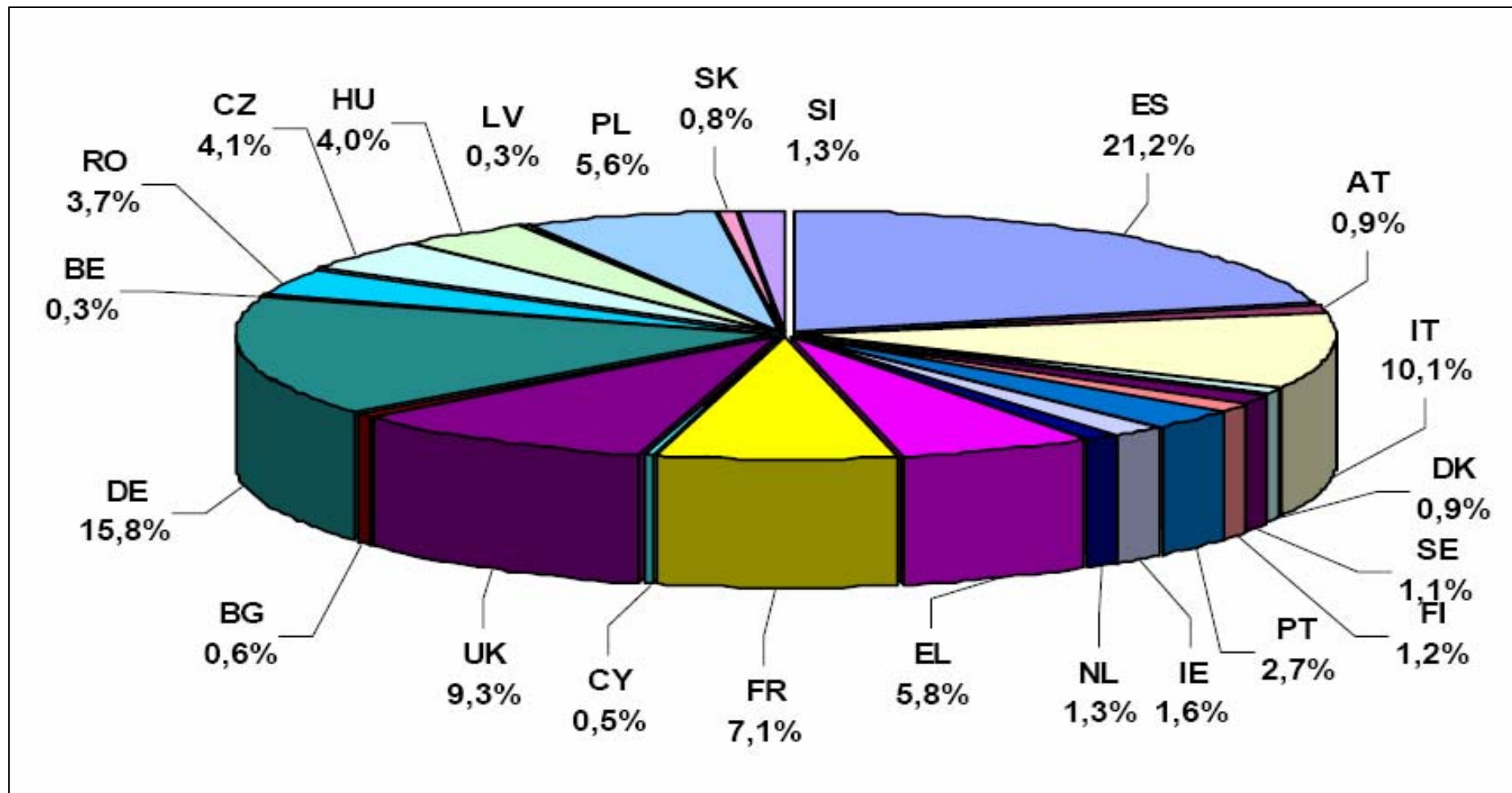


# Distribution of TEN-T budget support by country, 2002-03





# Distribution of EIB loans by country, 2000-03



# Reasons why implementation lagging

- Budget
  - EU contribution (2000-06) around €20 billion (5 to 6% of the investments needed)
  - EIB has lent around EUR 50 billion in the same period.
  - Member States need to find majority of funding - in 2003 Member States put €15 to €20 billion into TEN-T projects, <0.3% GDP
  - Lack of success in implementation of infrastructure charging
- Difficulty of coordination
  - Projects, especially cross-border projects, face difficulty of coordinating timetables, financial planning and administrative procedures.
  - Countries define programming priorities
  - Countries more inclined to invest in connections to European core than in missing links towards more peripheral countries.
- Poor project preparation
  - Projects not fully developed by promoters before application for TEN-T budget.
  - Environmental aspects of projects not always sufficient
  - Risk assessment needs improvement
- Non-optimal institutional setting
  - More attention needed to institutional and organizational setting of a project (e.g. (de)regulation, market access)

# Critical factors for implementation

- Financial resources
  - TEN-T budget for 2007-2013 is around € 8 billion
  - Cohesion Fund for 2007-2013 estimated around € 54 billion - around half of this (€ 27 billion) will be spent on priority projects.
  - EIB loans around € 6-8 billion per year, around € 42-56 billion over the period.
  - Scope for PPP unknown,
- Budget needed is around €126 billion in 2007-2013
  - Financing gap - € 91 billion needs to be financed by Member States (through EIB loans, national budgets or potential PPPs). Assuming rate of expenditure from 2000-06 maintained remaining gap of €12-26 billion
- Prioritisation
  - Administrative and organizational capacity limited makes it important to prioritise
  - Distinction between priority axes/projects and other TEN-T projects needs to be clearer
  - Need to focus Community activity on reducing bottlenecks on major trans-European routes to complement national projects
  - Focus investment on cross-border sections, which often do not have priority from a national point of view
- Coordination
  - To encourage cooperation with users and operators of TEN-T projects,
  - To promote projects amongst private investors and financial institutions

# Regulatory and policy conflicts

- Vertical conflicts
  - Nested principal agent problem
  - Defining objectives and targets
  - Monitoring effort
- Horizontal conflicts
  - Jurisdictional boundaries
  - Inconsistency with market areas, especially labour markets, and transport flows
  - Liberalisation and rent-seeking
  - Efficiency in a multi-agency world



# Regulatory and policy conflicts

- Regulatory capture and double asymmetry
- Transactions costs and regulatory competition (rent capture)
- Tax competition analogies
  - Tax, standards and public goods provision
  - The ‘race to the bottom’ problem
  - Tax competition and transit traffic
  - Competitive tolling and the ‘beggar my neighbour’ problem
  - Redistribution between residents and non-residents: relative mobility of factors of production

# Measuring wider economic effects

- Summary of effects
  - Impact on competition in the affected regions,
  - Impact on the ability to gain benefits from the change in market power through agglomeration,
  - Impact on linkages, particularly backward linkages such as the labour market.
- Results
  - Large changes in accessibility may lead to only small changes in GDP/welfare in large networks
  - Ambiguity over relative influence of road and rail
  - Wider benefits may be additional 10-20% (SACTRA) or as high as 30-40% (Elhorst et al.) of direct benefits
  - Possibly higher than earlier theoretical studies had suggested
  - But impacts not always positive
  - Distribution of impacts critical

# Local impacts

- Spillover issues
  - May be more difficult to identify than global
  - Depend on local connectivity
  - Introduction of competition between station locations
- Objective and performance issues
  - Need for services not to abandon existing communities
  - Conflict between metropolitan needs for fast links and areas in-between for connectivity
  - Dealing with by-passed locations
  - Border 'shadow' areas

# Some conclusions

- Lack of clarity in responsibilities
  - TENs an EU concept
  - Decisions rest with lower levels or private sector
- Models of policy
  - Intergovernmental/state-centric model
    - only cross-border elements resolved at EU level.
  - Federal/multi-level governance model
    - functions assigned to level where most efficiently administered
    - needs institutional structures for decision-making and policing
- EU transport policy has two fundamental concerns
  - Contribution to development of competitive economy (Lisbon Agenda)
  - Increased cohesion within and between the member states
- Main problem areas
  - Horizontal conflicts between policy authorities
  - Vertical conflicts through policy refraction