



EUROPEAN INVESTMENT BANK

The Bank for European projects

UNECE / Ministry of Transport, Romania

Workshop on High Speed Rail in Central and
Eastern Europe – Timisoara, 13 September 2012

Financing Infrastructure Projects in a Challenging Environment

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Vienna*





- ❖ The European Investment Bank (EIB) – *Loans*
- ❖ Combined EU/EIB structural support – *Grants + Loans*
- ❖ JASPERS for Infrastructure Major Projects – *Advice*
- ❖ Private Sector – *PPPs, Project Bonds*





Demand for Infrastructure – Macroeconomic View

- ❖ Is there a gap in infrastructure availability for countries in the EU ?
- ❖ What is the pattern of the trend in the share of infrastructure investment ?
- ❖ Do current economic restrictions make «catching up» more difficult ?





Demand for Infrastructure – Macroeconomic View

- ❖ Is there a gap in infrastructure availability across countries in the EU - **yes, certainly as regards higher speed railways**



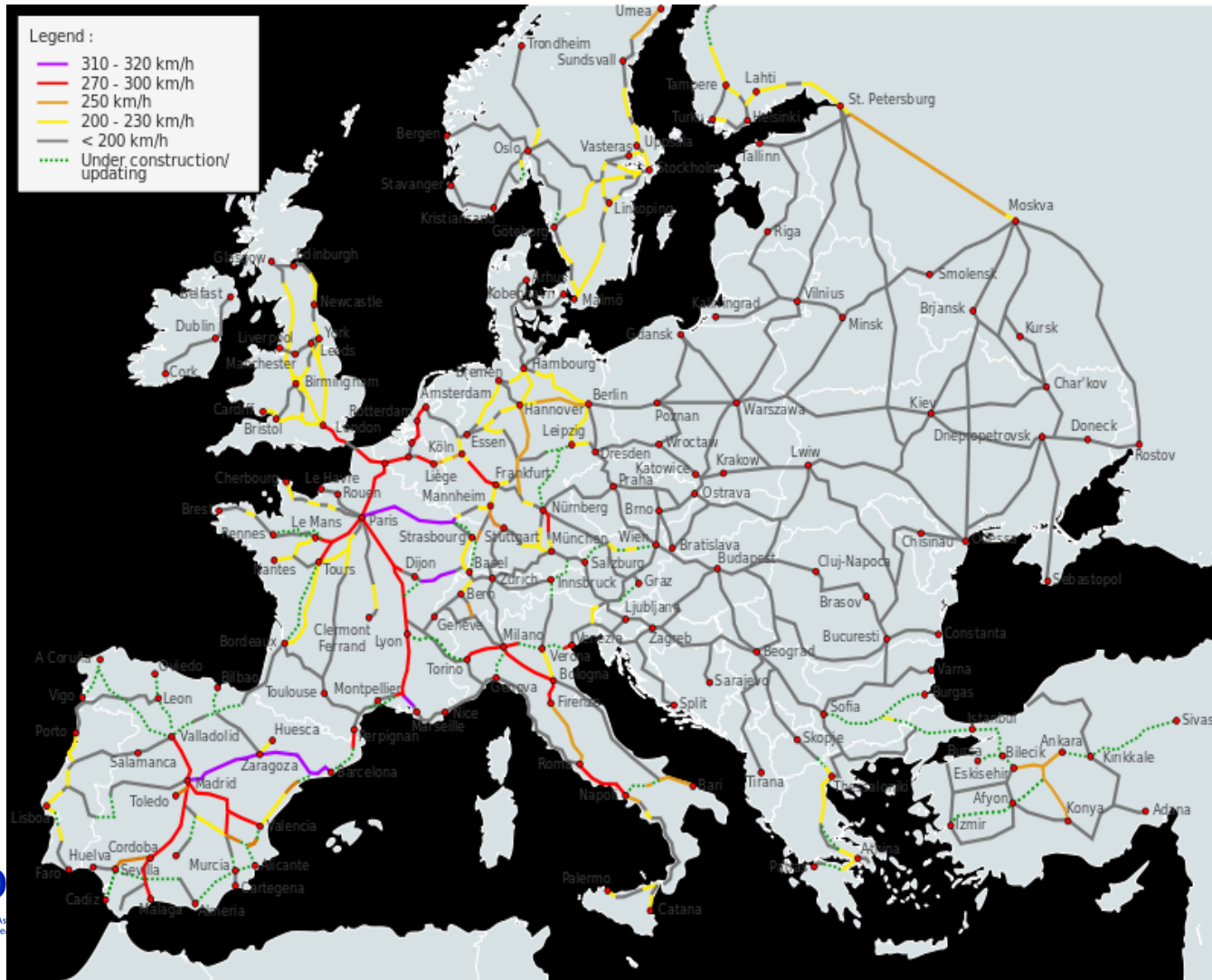
Map of Railteam «high-speed» network



....and of high speed network in Spain



Overview for rail network in Europe





Demand for Infrastructure – Macroeconomic View

- ❖ Is there a gap in infrastructure availability across countries in the EU - **overall the infrastructure investment share of GDP is higher in the new member states, indicating a catching up effect**

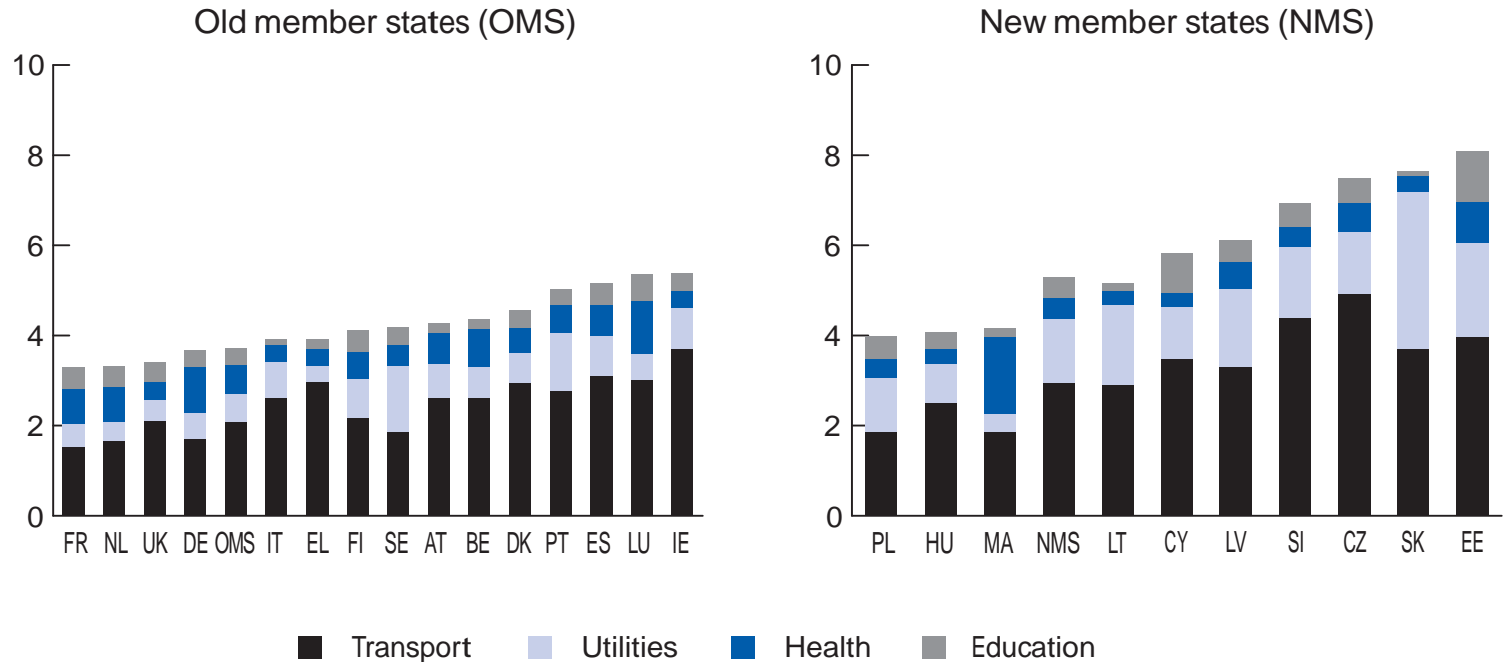


Infrastructure Investments across Europe



Figure 1. Composition of infrastructure finance across sectors of activity

2006-2009 average, in percent of GDP



Source: Eurostat, Projectware, EIB/EPEC, R. Wagenvoort, C. de Nicola, A. Kappeler in EIB Papers Vol 15, No.1, 2010





Demand for Infrastructure – Macroeconomic View

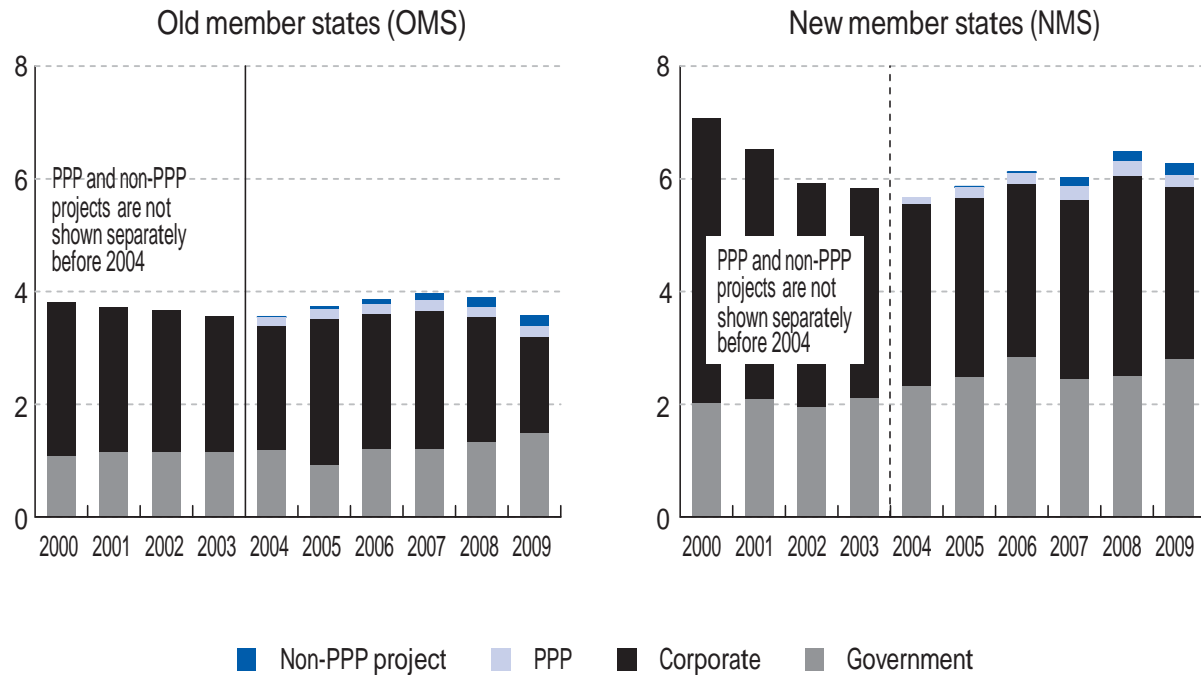
- ❖ What is the pattern of the trend in share of infrastructure investment – **it tends to follow the business cycle, but government investment is generally more stable (in new m.s. also role of structural funds)**



Trends in infrastructure investments



Figure 2. Evolution of infrastructure finance by institutional sector
In percent of GDP



Source: Eurostat, Projectware, EIB/EPEC, R. Wagenvoort, C. de Nicola, A. Kappeler in EIB Papers, Vol15, No. 1, 2010





Demand for Infrastructure – Macroeconomic View

- ❖ Do the current economic difficulties make «catching up» harder – **yes, especially as regards private sector involvement**

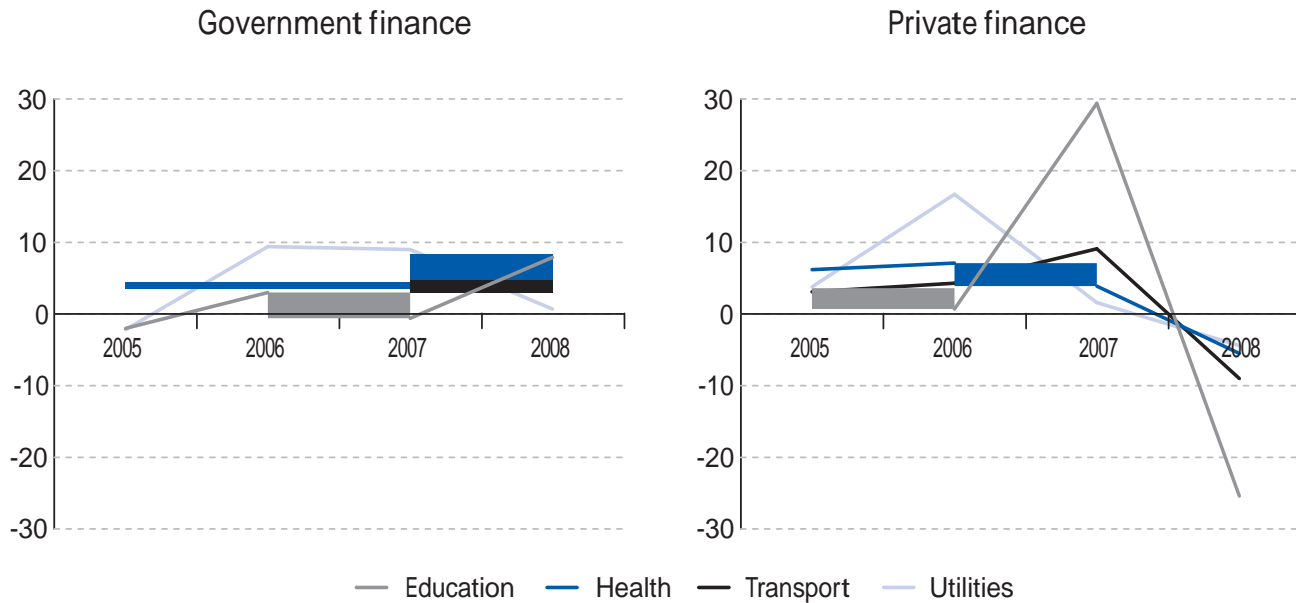


Effects of crisis on infrastructure investments



Figure 3. Crisis impact on infrastructure finance, by sector of activity

Annual growth rate of inflation-adjusted infrastructure finance, in percent



Source: Eurostat, Projectware, EIB/EPEC, R. Wagenvoort, C. de Nicola, A. Kappeler, EIB Papers, Vol. 15, No. 1 2010



Project Bonds - what are they ?



- ❖ Objective: to increase debt financing for large scale infrastructure projects in the target areas of transport, energy and broadband
- ❖ Means: the EIB, supported by the EU, would provide credit enhancement to project companies raising senior debt in the form of bonds
- ❖ Rationale: present squeeze in financial markets makes conventional monoline guarantees hard to come by





- ❖ Based on capacity to separate the debt of a project company into senior and subordinated tranches
- ❖ Senior tranches would be of interest to institutional investors seeking safe long-term bonds
- ❖ Subordinated loans can be delivered by combination of EIB/EU
- ❖ Key factor is EIB's knowledge of sectors and capacity to deliver appropriate structuring



- High transport infrastructure needs identified to be financed from the next multi-annual financial framework for structural funds 2014-2020
- Will also assist in implementation of the new Connecting Europe Facility of 40 bn EUR, of which 10 bn EUR would come from earmarked allocations under the Cohesion funds.

Project bonds – the caveats:



- ----- but: it's early days, negotiations on this facility are still on-going, in particular on the exact nature of EIB's due diligence and subsequent project monitoring

AND

- The present financial and economic crisis is proving to be an added difficulty in mobilising private funds





- Legislation approved by European Parliament and Council in October 2011
- Implementation of a pilot phase to start in second half of 2012 following agreement of EIB's governing bodies
- Idea of pilot is to test concept using 230 M EUR reallocated from the current structural funds 2007-2013 period
- Transport projects will receive some 200 M EUR with considerable leverage.



A recall of EIB's project financing criteria



Projects should be:

- ❖ Technically sound
- ❖ Economically justified
- ❖ Environmentally acceptable, and
- ❖ Financeable in a sustainable way (investment and operations)

Applies to strategic projects as well as to incremental investments



Case Study of a High Speed Line - PBKL



- ❖ The PBKAL network is the first international high speed passenger rail network in Europe, and consists of four cross-border sub-projects, each involving two or more national railways:-
 - the West Branch: Paris - Brussels via Lille (SNCF and SNCB);
 - the London Branch: London - Lille - Paris via the Channel Tunnel (London & Continental Railways, SNCF and SNCB);
 - the North Branch: Brussels - Amsterdam via Antwerp (SNCB and NS);
 - the East Branch: Brussels - Köln via Liege (SNCB and DB).
- ❖ Both the TGV Nord in France and the TGV Belge West Branch have been the objects of EIB loans.





Main characteristics:

- High Population densities
- High Average Income levels
- High intrinsic mobility

Case Study of a High Speed Line – Map





Case Study of a High Speed Line – EIB project

- ❖ The TGV Belge Phase 2 will complete Belgian elements of the PBKAL high speed rail network. The North Branch will run for 87.6 km from Brussels via Antwerp to the Dutch Border, where it will join a new high speed line to Amsterdam. The East Branch will run for 146 km from Brussels via Liège to the German Border, where it will join an upgraded line to Köln.
- ❖ The current EIB project, Tranche 1 of the above Phase II, comprises the upgrading and construction of 49.7 km of high speed lines between Brussels and Antwerp (North Branch) and 104.1 km of line between Brussels and Liège (East Branch) for international (TGV) and domestic (STAR 21) services. Tranche 2 will include completion of these branches to the Dutch and German borders.

Case Study of a High Speed Line – Market Structure



High speed rail is most competitive on city centre to city centre journeys of 300 - 800 km, corresponding to on-train times of 1 - 3 hours. Beyond these distances high speed rail can attract some traffic, but the majority of travellers tend to use air. The potential market for the TGV Belge has therefore been divided into three geographical zones:

- **the 'Core' market** : high speed rail trips of around 1 hour between Brussels/Antwerp and Rotterdam/Amsterdam, and between Brussels/Liege and Köln/Frankfurt. Considerable numbers of passengers use existing rail services, and could be expected to transfer to the new service. The TGV could attract a large share of trips currently made by air, plus some car travel. It should also generate a considerable amount of additional traffic;
- **the 'Secondary' market** : trips of up to 3 hours, between Paris/London and Rotterdam/Amsterdam and Frankfurt/Köln. TGV journey times between city centres are comparable with air. Rail will attract some air traffic if service quality is good, and some road traffic provided prices are competitive. Leisure trips may be generated if tariffs are significantly lower than air.
- **'Other' traffic** : trips of over 3 hours, such as from beyond Paris/London, or to beyond Frankfurt. Rail no longer competes directly with air or car. High speed rail might attract a small share of long distance traffic if the journey can be made without large numbers of interchanges.



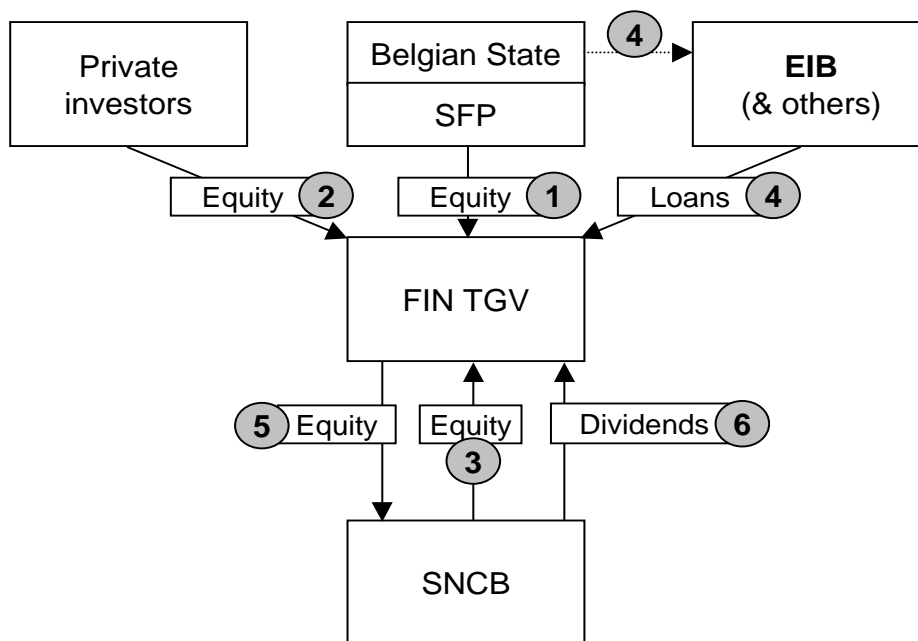
Case Study of a High Speed Line Demand Forecast by EIB in 1997 - close to actuals



Millions of passengers per year	1998	2000	2005	2010	2015
North Branch					
Without project	2.9	3.1	3.2	3.2	3.3
Tranche 1 (to Antwerp only)			3.5	3.9	4.1
Tranche 2, plus NL investment (to Amsterdam)			4.5	5.5	5.9
East Branch					
Without project	2.0	2.1	2.1	2.1	2.1
Tranche 1 (to Liège only)			2.5	2.8	2.9
Tranche 2, plus D investment (to Köln)			2.7	3.3	3.4



Interesting financial structure – but ultimately guaranteed by state companies (SNCB and BE)



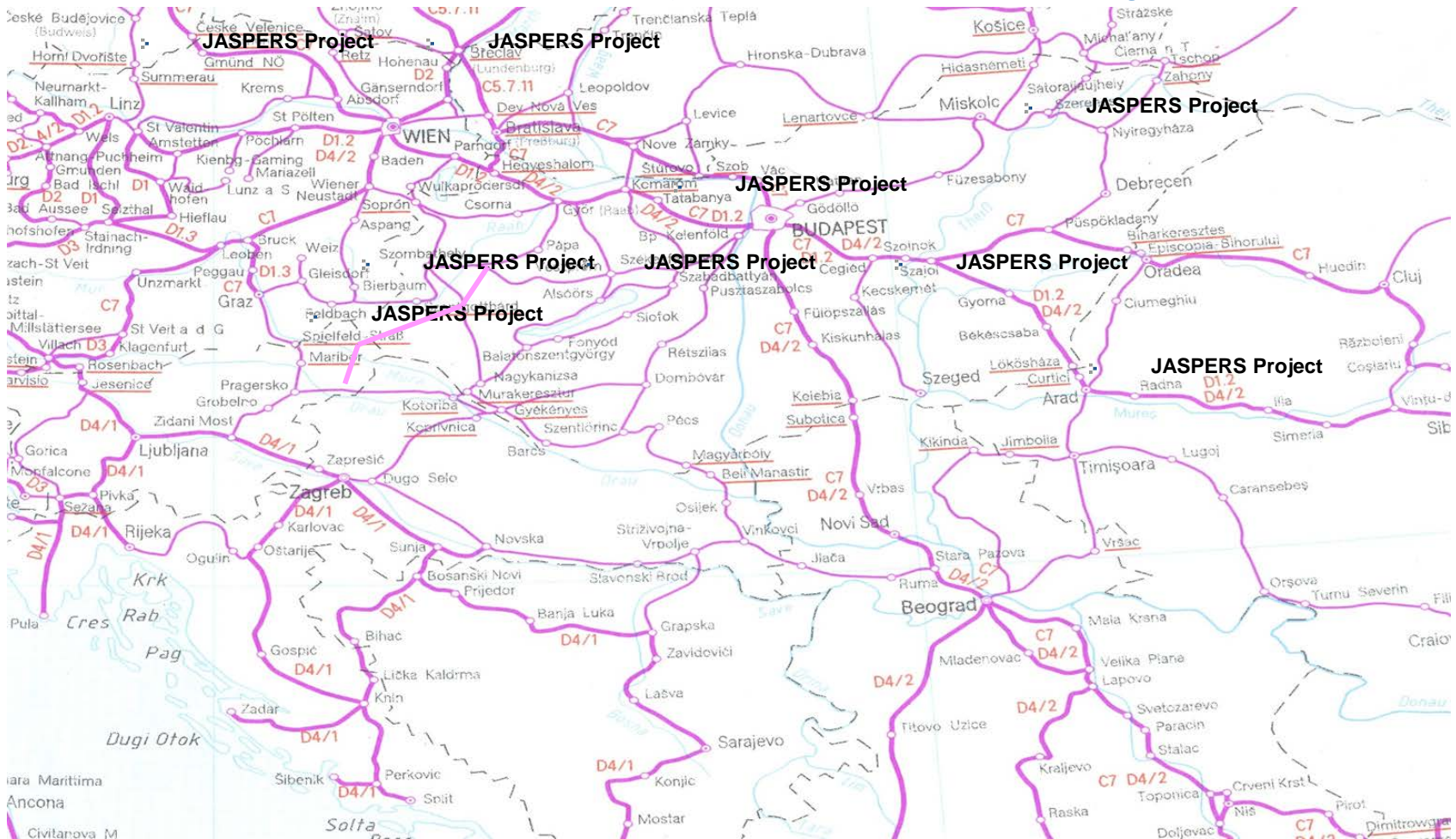
Fin TGV raises some EUR 3.1 bn in funds through two means : equity and loans.

Equity : The Belgian State, via the Société Fédérale de Participation (SFP), invests EUR 744 m in Fin TGV (arrow n°1), next to private investors and SNCB (both EUR 248 m, arrows n° 2 and 3). No private investors had committed yet at the time of Fin TGV's creation.

Loans : Fin TGV raises some EUR 1.8 bn in debt guaranteed by the Kingdom of Belgium (arrow n°4).

Fin TGV underwrites new preferential non-voting shares of the SNCB (arrow n°5) for a total of EUR 3.1 bn, which in return pays an annual dividend to Fin TGV (arrow n°6).

JASPERS-advised railway projects in the region



JASPERS-advised railway projects in the region (with action completion notes)



- ❖ Modernisation of the link Sopron-Szombathely-Szentgotthard (HU)
- ❖ Budapest – Szekesfehervar modernisation (HU)
- ❖ Zahony freight terminal (HU)
- ❖ Modernisation Simeria-Sigisoara and Curtici-Arad (Corridor IV) (RO)
- ❖ Breclav station modernisation (CZ)
- ❖ Satov-Znojmo electrification (CZ)

- ❖ Szajol-Lököshaza modernisation (under preparation) (HU)
- ❖ Pragersko-Hodos modernisation (under preparation) (SI)





- ❖ Renewal of substructure
- ❖ Partial realignments (curve straightening)
- ❖ Double tracking (if justified by capacity requirements)
- ❖ Electrification/Renewal of power supply
- ❖ Renewal of signalling (ETCS)
- ❖ Reconstruction/modernisation of buildings (stations, platforms)



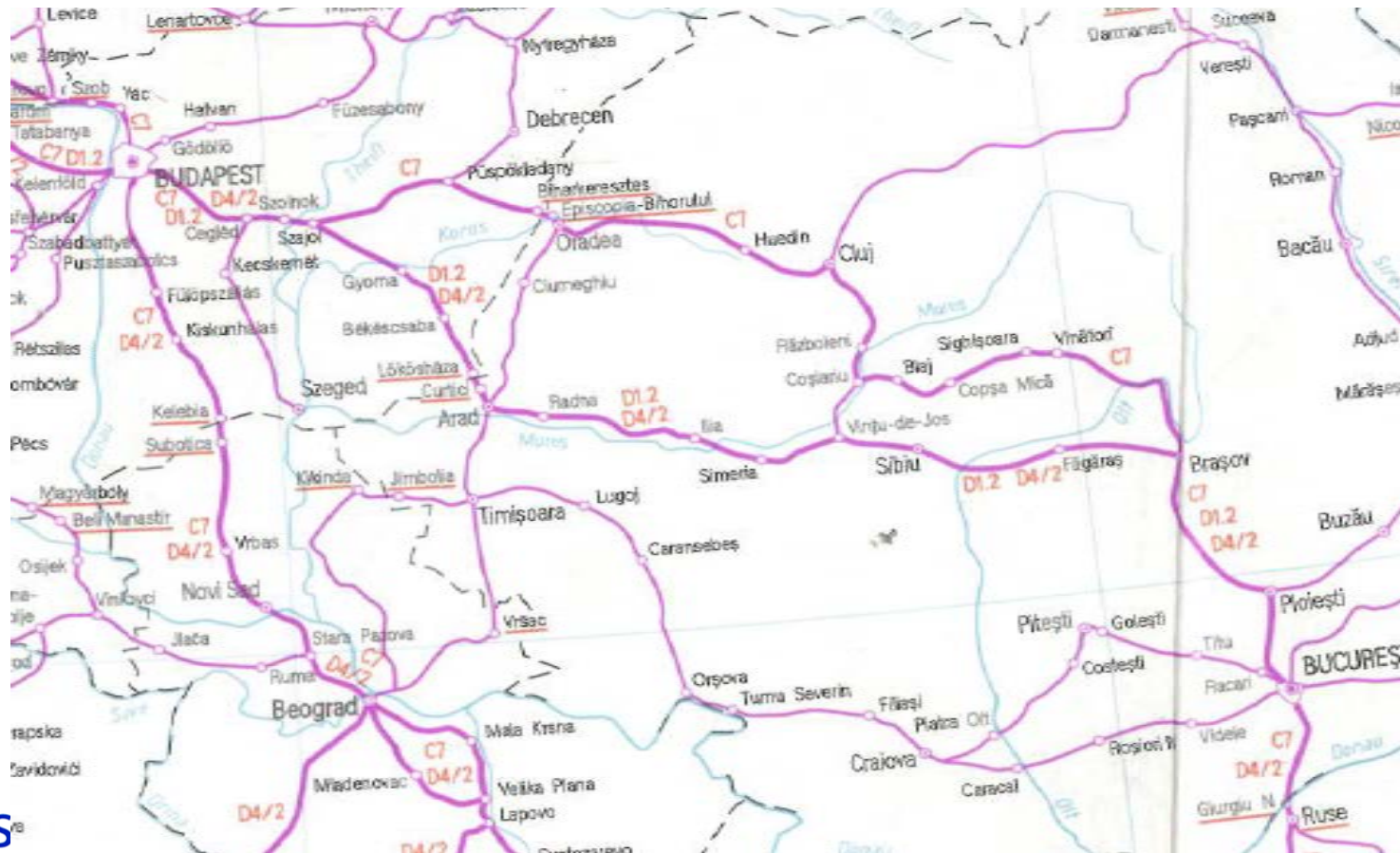
Recent Bank-financed High Speed Rail Projects



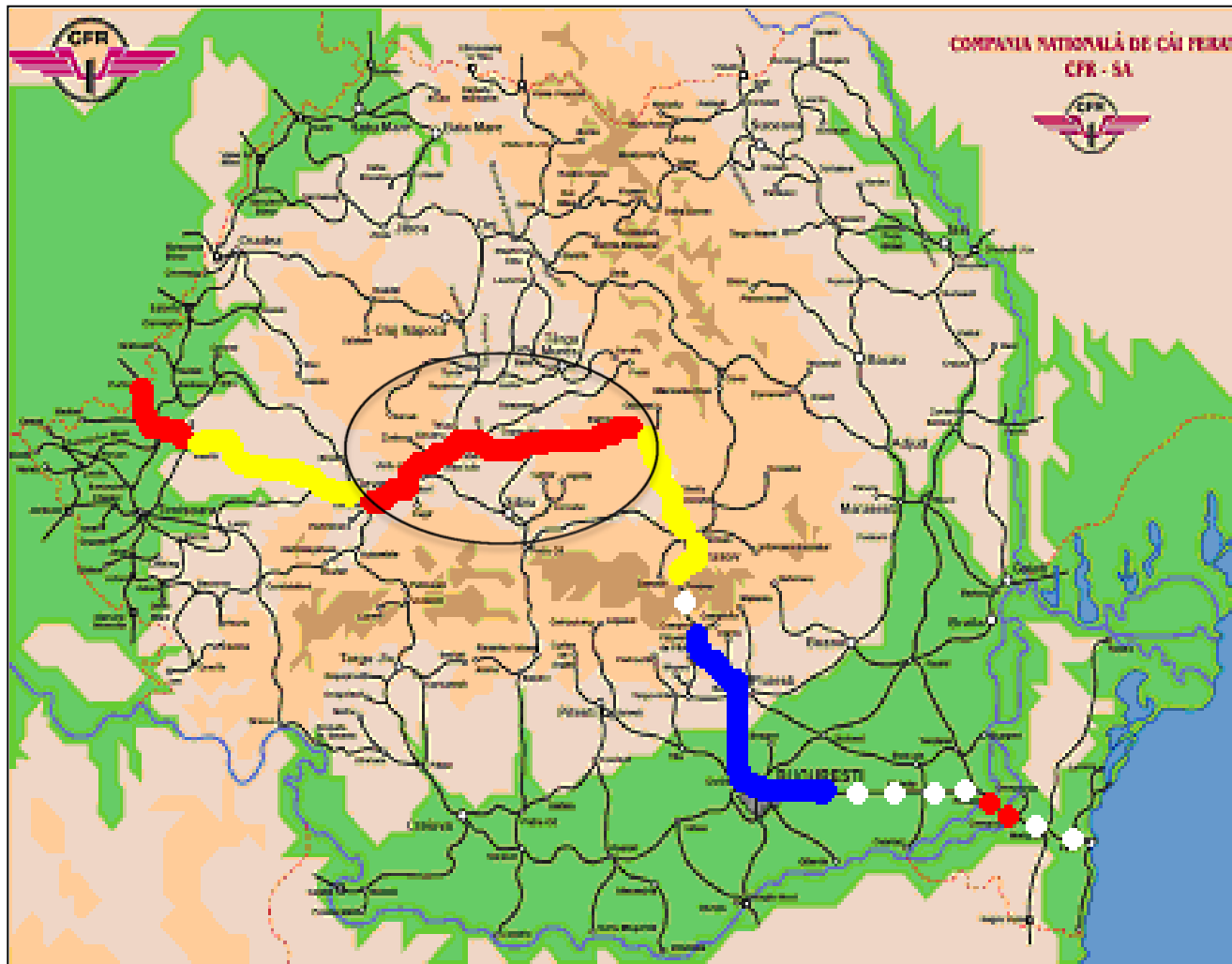
High-speed railway projects financed by EIB 2010-2012				
Country	Name of Project	Short Description	Cost M EUR	Loan M EUR
France	CONTOURNEMENT NIMES-MONTPPELLIER	Construction of freight and passenger rail bypass	1,571	307
	LGV EST PHASE II	Construction of second phase of "LGV Est" high-speed rail line between Nancy/Metz and Strasbourg	2,563	80
	LGV BRETAGNE - PAYS DE LA LOIRE	Construction and maintenance of double-track high-speed rail line between Rennes and Nantes	3,148	553
	LGV SUD EUROPE ATLANTIQUE	Construction of high-speed rail line from south of Tours to north of Bordeaux	7,078	1,186
France; Belgium; United Kingdom	EUROSTAR ROLLING STOCK	Purchase of ten high-speed passenger train sets for use on TEN-T network	614	272
Spain	AVE Y VASCA	Construction of high-speed rail line between Vitoria-Bilbao-San Sebastián (TEN-T corridor 3 connecting to France)	4,500	500
	INSTALACIONES AVE ALBACETE- ALICANTE	Signalling and telecommunications equipment for high speed rail line between Albacete and Alicante	220	78
	CONEXION AVE ATOCHA - CHAMARTIN	Construction of 2-track tunnel to connect Madrid-Valladolid high-speed rail line to rest of network	1,154	575
	AVE MADRID VALENCIA	Construction of new high-speed rail line between Madrid and Valencia and refurbishment of Valencia station	5,712	1,300
	AVE MADRID - ALICANTE	Construction of high-speed rail line between Madrid and Alicante (priority TEN)	4,259	900
	AVE VALLADOLID - BURGOS	Construction of high-speed rail line between Valladolid and Burgos (priority TEN)	1,310	475
	Austria	OEBB UNTERINNTAL	Construction of section of high-speed line on Brenner railway axis	2,474
Turkey	ISTANBUL-ANKARA RAILWAY TRANCHE B	Construction of electrified high-speed line between Ankara and Istanbul	3,648	400
Poland	PKP INTERCITY HIGH SPEED ROLLING STOCK	Acquisition of 20 electrical multiple unit trainsets for use on Gdansk-Warsaw plus depot	481	224
Italy	TAV V - LINEA MILANO-NAPOLI (TEN)	Completion of Milan-Naples high-speed high capacity rail line	19,561	1,300
TOTAL			58,294	9,149



Some more details from our region.....



Romania Corridor IV – what JASPERS advised on....



Legend	Projects	Programme/ Status
█	Border-km 614 Simeria-Coslariu Coslariu-Sighisoara Danube Bridges	SOPT 2007-2013
█	Km-614 – Simeria Sighisoara – Brasov Brasov - Predeal	SOPT 2014-2020
.....	Predeal – Campina Fundulea – Fetesti Fetesti – Constanta	Currently under construction – ISPA or other sources
█	Campina – Bucuresti	Completed



Modernisation of sections Simeria-Coslariu-Sighisoara

Simeria-Coslariu 69 km

Coslariu-Sighisoara 90 km

Maximum speed for passenger trains 160 km/h

Maximum speed for freight trains 120 km/h

Clearance UIC – B.

Maximum axle load 25 t

Maximum gradient 12,5 %

Minimum length of sidings 750 m

Distance between axis in open line 4,2 m for new, 4 m for existing lines.

Distance between track axis in stations Min. 4.75 m - regularly 5.00 m.

Platforms between tracks Min. distance 10.85 m.

Height of platforms in stations 55₁ cm as a rule/ +38 cm as exception₂

Level crossings Four automatic half barriers + CCTV

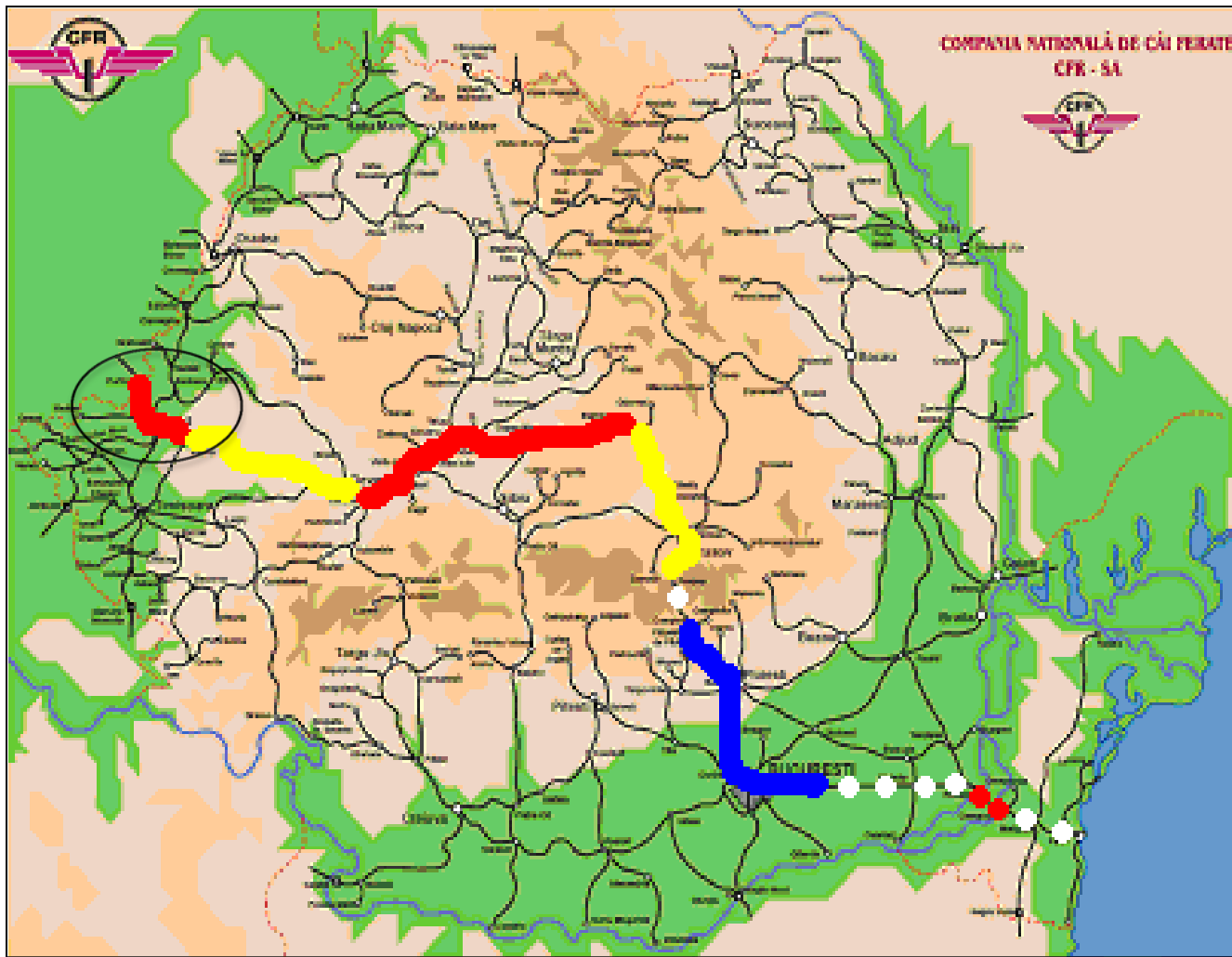


Modernisation of sections Simeria-Coslariu-Sighisoara



	Simeria-Coslariu	Coslariu-Sighisoara
Total cost	796 M EUR	1124 M EUR
EU grant	531 M EUR	751 M EUR
JASPERS ACN	21 Dec 2010	17 Oct 2011
EC Decision	19 Mar 2012	tba

Romania Corridor IV – what JASPERS advised on....



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█	Border-km 614 Simeria-Coslariu Coslariu-Sighisoara Danube Bridges	SOPT 2007-2013
█	Km-614 – Simeria Sighisoara – Brasov Brasov - Predeal	SOPT 2014-2020
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█	Campina – Bucuresti	Completed

Joint Assistance to Support Projects in European Regions



Modernisation of sections Border-Curtici-Arad-km 614

Border-Curtici-Arad-km 614 41 km

(doubling and electrification of track near border)

Maximum speed for passenger trains 160 km/h

Maximum speed for freight trains 120 km/h

Clearance UIC – B.

Maximum axle load 25 t

Maximum gradient 12,5 %

Minimum length of sidings 750 m

Distance between axis in open line 4,2 m for new, 4 m for existing lines.

Distance between track axis in stations Min. 4.75 m - regularly 5.00 m.

Platforms between tracks Min. distance 10.85 m.

Height of platforms in stations 55₁ cm as a rule/ +38 cm as exception₂

Level crossings Four automatic half barriers + CCTV



Modernisation of sections Border-Curtici-Arad-km 614



	Border-Curtici-Arad- km 614
Total cost	282 M EUR
EU grant	240 M EUR
JASPERS ACN	1 Dec 2010
EC Decision	20 Mar 2012

CONCLUSIONS



- ❖ Much is progressing in the region....
- ❖ Priorities essentially are set according to TEN criteria
- ❖ Economic and financial criteria, however, do remain relevant and are the key to longer term sustainability
- ❖ A strategic approach to transport will be emphasized in the new programming period 2014-2020
- ❖ New strategic options e.g. as regards new links, or higher speed services, need to receive due consideration
- ❖and much remains to be done





Many thanks for your kind attention !

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