



HEATCO Workshop

Brussels 31 April 2006

STATUS OF 

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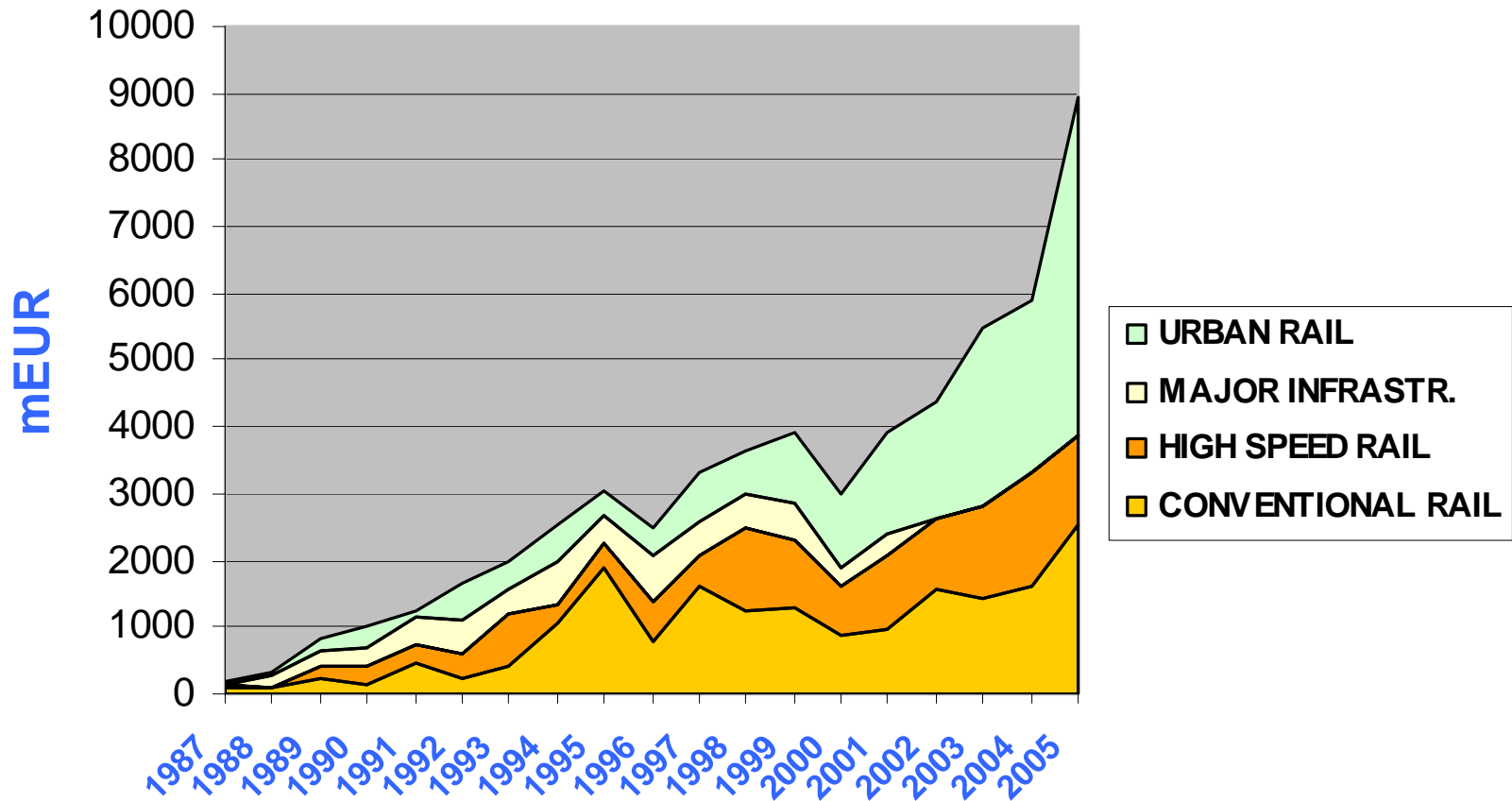
Main Objective of Railpag

- ◆ Provide a common framework for the appraisal of railway projects
- ◆ Guidelines for “weak” promoters
- ◆ New regulatory framework for the sector:
 - ◆ Stakeholder analysis
- ◆ Steering Committee with the EC, WB, EBRD, railway industry

More international projects – need for a harmonised approach



EIB loans to rail sector





Getting the basis right

- ◆ Reference scenario

- ◆ Multimodal vision
 - ◆ Demand analysis
 - ◆ Tariffs

- ◆ Specific issues to railways such as:
 - ◆ Interoperability
 - ◆ Network effects
 - ◆ Research needs identified



Where are we....

- ◆ First step in the right direction – approval of the Guidelines
- ◆ Web-site (www.railpag.com)
- ◆ Consultant to help us manage and update the site
- ◆ Dissemination strategy



Dissemination strategy

- ◆ Web-site - establishing links with relevant web sites
- ◆ Sending out the Guidelines to interested parties incl. promoters
- ◆ Presentations of RAILPAG to events, conferences
 - ◆ TEN-T Committee; 3rd International Rail Forum
- ◆ Specific seminars/workshops with rail professionals (TAIEX)
 - ◆ Vilnius, Rome



Still needed....

- ◆ Input from the users concerning the methodology
- ◆ CBA and financial analysis
- ◆ More case-studies (CBA and illustrating the SE matrix)
- ◆ Research on specific issues



Case study

High-speed rail link between an international airport and the central station of the main city, A, served by the airport.

It provides continuity to the next city (B) and represents a shortcut of 15 km for passenger trains between A and B.

The existing line will be still used for other regional services and freight trains.



ECONOMIC EVALUATION

	NPV	Rate 5.00%	Year 1	2	3	4	5	6	65
INVESTMENT & MAINTENANCE; million €									
Rail infrastructure									
Cost to Rail manager	94,63		0,00	0,00	36,04	36,04	36,04	0,00	12,50
Investment; project economic cost	75,71		0,00	0,00	28,83	28,83	28,83	0,00	10,00
VAT revenue to National gov't	18,93		0,00	0,00	7,21	7,21	7,21	0,00	2,50
Residual value of total project (50% end of period)	14,08		0,00	0,00	0,00	0,00	0,00	0,00	335,75
Cost to Rail operator (concessionnaire)	661,22		146,25	146,25	146,25	146,25	146,25	0,00	62,50
Investment; project economic cost	528,98		117,00	117,00	117,00	117,00	117,00	0,00	50,00
VAT revenue to National gov't	132,24		29,25	29,25	29,25	29,25	29,25	0,00	12,50
Total investment: financial cost	741,77		146,25	146,25	182,29	182,29	182,29	0,00	-260,75
Total investment cost (econ)	590,60		117,00	117,00	145,83	145,83	145,83	0,00	-275,75
VAT revenue to National government	151,17		29,25	29,25	36,46	36,46	36,46	0,00	15,00
Maintenance cost to Rail manager									
Normal maintenance costs (economic)	16,04		0,00	0,00	0,00	0,00	0,00	1,08	1,08
VAT revenue to National gov't	12,83		0,00	0,00	0,00	0,00	0,00	0,87	0,87
VAT revenue to National gov't	3,21		0,00	0,00	0,00	0,00	0,00	0,22	0,22
Maintenance cost to Rail operator (conc.)	108,46		0,00	0,00	0,00	0,00	0,00	7,31	7,31
Normal maintenance costs (economic)	86,76		0,00	0,00	0,00	0,00	0,00	5,85	5,85
VAT revenue to National gov't	21,69		0,00	0,00	0,00	0,00	0,00	1,46	1,46
Rolling stock									
Cost to Rail manager	82,04		0,00	0,00	0,00	0,00	0,00	63,00	15,84
Investment; project economic cost	65,10		0,00	0,00	0,00	0,00	0,00	50,40	0,00
VAT revenue to National gov't	16,28		0,00	0,00	0,00	0,00	0,00	12,60	0,00
Residual value of train sets	0,66		0,00	0,00	0,00	0,00	0,00	0,00	15,84
Total financial cost	948,31		146,25	146,25	182,29	182,29	182,29	71,39	-236,52
Total economic cost	754,63		117,00	117,00	145,83	145,83	145,83	57,12	-284,88
VAT revenue to National government	192,34		29,25	29,25	36,46	36,46	36,46	14,28	16,68



BENEFITS; million €

USER SERVICE

Train users

Existing long-distance traffic

Travel time savings

138,32

0,00

0,00

0,00

0,00

0,00

5,8

24,9

Diverted traffic from bus

Airport-A

Fare paym. difference

-256,76

0,00

0,00

0,00

0,00

0,00

-14,5

-26,1

Travel time saving

374,14

0,00

0,00

0,00

0,00

0,00

17,3

56,1

Comfort & reliability

59,86

0,00

0,00

0,00

0,00

0,00

2,8

9,0

Airport-B

Fare paym. difference

-70,73

0,00

0,00

0,00

0,00

0,00

-4,0

-7,2

Travel time saving

118,10

0,00

0,00

0,00

0,00

0,00

5,5

17,7

Comfort & reliability

13,61

0,00

0,00

0,00

0,00

0,00

0,6

2,0

Total

Fare paym. difference

-327,49

0,00

0,00

0,00

0,00

0,00

-18,5

-33,3

Travel time saving

492,24

0,00

0,00

0,00

0,00

0,00

22,8

73,8

Comfort & reliability

73,47

0,00

0,00

0,00

0,00

0,00

3,4

11,0

Diverted traffic from cars

Fare

-349,57

0,00

0,00

0,00

0,00

0,00

-9,0

-86,4

Travel time saving

80,57

0,00

0,00

0,00

0,00

0,00

1,6

27,2

Operating costs saving (excl. petrol taxes)

244,70

0,00

0,00

0,00

0,00

0,00

6,3

60,5

Petrol taxes

81,57

0,00

0,00

0,00

0,00

0,00

2,1

20,2

Safety improvements (external)

91,35

0,00

0,00

0,00

0,00

0,00

2,4

22,6

Total

Additional revenue for train operator

1026,12

0,00

0,00

0,00

0,00

0,00

47,3

155,2

Loss of revenue for bus operator

349,06

0,00

0,00

0,00

0,00

0,00

19,7

35,5

Reduction in petrol taxes

81,57

0,00

0,00

0,00

0,00

0,00

2,1

20,2

Service providers

Long-distance train operator

Reduction in operating costs

29,23

0,00

0,00

0,00

0,00

0,00

2,0

2,0

Rail operator (concessionnaire)

Operating costs

409,38

0,00

0,00

0,00

0,00

0,00

21,2

48,6

Sales costs

21,31

0,00

0,00

0,00

0,00

0,00

1,0

3,2

Bus operator reduction in operating costs

349,06

0,00

0,00

0,00

0,00

0,00

19,7

35,5

External effects

External effects rail; emissions global

-17,66

0,00

0,00

0,00

0,00

0,00

-0,9

-2,1

External effects rail; emissions local

-9,63

0,00

0,00

0,00

0,00

0,00

-0,5

-1,1

External effects road; reduced emissions global

126,68

0,00

0,00

0,00

0,00

0,00

5,4

21,4

External effects road; reduced emissions local

87,85

0,00

0,00

0,00

0,00

0,00

3,2

17,5

Total economic benefits	1255,50	0,0	0,0	0,0	0,0	0,0	48,8	241,4
Economic benefits-costs	500,87	-117,00	-117,00	-145,83	-145,83	-145,83	-8,3	526,3

ERR = 7.7%



Figure 3. *Basic SE matrix*

SE MATRIX		STAKEHOLDERS						
		USERS	TRANSPORT SERVICE OPERATORS	INSURANCE COMPANIES	CONTRACTORS & SUPPLIERS	INFRASTRUCTURE MANAGERS	NON USERS	GOVERNMENT
EFFETS	USER SERVICE							
	OPERATION							
	ASSETS							
	EXTERNAL EFFECTS							



Figure 5. Cells most often used in the appraisal of rail

SE MATRIX		CELL CLASSIFICATION																					
		STAKEHOLDERS																		NON USERS (external)		GOVERNMENT	
		USERS		TRANSPORT SERVICE OPERATORS				CONTRACTORS & SUPPLIERS				INFRASTRUCTURE MANAGERS											
		RAIL LINES	ALTERNATIVE MODES	RAIL		Other modes		Infrastructure	Superstructure	Rolling stock	Electricity & signaling	Rail manager 1	Rail manager 2	Other modes									
Pass	Freight	Pass	Freight	Rail operator 1	Rail operator 2	Other modes	Infrastructure	Superstructure	Rolling stock	Electricity & signaling	Rail manager 1	Rail manager 2	Other modes	LOCAL	REGIONAL	LOCAL	REGIONAL	NATIONAL	EU				
EFFECTS		Pass	Freight	Pass	Freight	Rail operator 1	Rail operator 2	Other modes	Infrastructure	Superstructure	Rolling stock	Electricity & signaling	Rail manager 1	Rail manager 2	Other modes	LOCAL	REGIONAL	LOCAL	REGIONAL	NATIONAL	EU		
USER SERVICE	Fares	●	●	●	●	●	●	●											●	●	●		
	Travel time	●	●	●	●																		
	Reliability of service	●	●	●	●																		
	Comfort	●	●																				
	Convenience	●	●																				
	Safety / accidents (economic / financial)	●	●	●	●				●					●				●	●	●	●		
	Consumer surplus (new traffic)	●	●	●	●																		
OPERATION	DIRECT	Fees				●	●						●	●						●			
		Vehicle operating costs				●	●		●														
		Operating personnel				●	●		●														
		Facilities operations				●	●		●														
	INDIRECT	Overhead management -HQ				●	●		●					●	●					●	●		
		Subsidies				●	●		●											●	●		
Taxes				●	●		●												●	●			
ASSETS	INVESTMENT	Land value				●	●						●	●					●	●			
		Infrastructure				●	●		●				●	●					●	●			
		Superstructure				●	●		●				●	●					●	●			
		Stations & terminals				●	●		●				●	●					●	●			
		Garage & repair facilities				●	●		●				●	●					●	●			
		Rolling stock (vehicles)				●	●		●				●	●					●	●			
		Residual value				●	●		●					●	●					●	●		
	MAINTENANCE (ROUTINE)	Taxes				●	●		●					●	●					●	●		
		Infrastructure & Superstructure				●	●		●				●	●						●	●		
		Rolling stock				●	●		●				●	●						●	●		
EXTERNAL EFFECTS	NETWORK EFFECTS (not included above)		●	●		●	●						●	●					●	●			
	ENVIRONMENTAL	Noise & vibrations																	●	●			
		Air pollution																	●	●			
		Climate change																	●	●			
		Use of space																	●	●			
TERRITORIAL DEVELOPMENT																		●	●				



	Existing rail users	Road to rail users	Bus to rail users	Rail concess.	Long-dist rail oper.	Bus operator	Rail manager	Local non user	Global non user	National gvt	ECONOMIC VALUE
USER SERVICE											
Travel time	138.3	80.6	492.2								711.1
Safety		91.4									91.4
Comfort & reliability			73.5								73.5
OPERATION											0.0
Track charges				0.0			0.0				0.0
Rail operating costs				-430.7	29.2						-401.5
Bus operating costs						349.1					349.1
Road operating costs		244.7									244.7
Fares	0.0	-349.6	-327.5	1026.1	0.0	-349.1					0.0
Petrol taxes		81.6								-81.6	0.0
ASSETS											0.0
Infrastructure				-529.0			-75.7				-604.7
Residual value							14.1				14.1
Taxes				-153.9			-38.4			192.3	0.0
Infrastructure maintenance				-86.8			-12.8				-99.6
Rolling stock				-65.1							-65.1
Residual value				0.7							0.7
Emissions rail								-9.6	-17.7		-27.3
Construction impacts											
Emissions road								87.9	126.7		214.5
ECONOMIC PROFITABILITY	138.3	148.6	238.2	-238.7	29.2	0.0	-112.9	78.2	109.0	110.8	500.9
							Discount 5.0%			ERR= 7.7%	



RAILPAG: Web site based tool

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