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Multi-annual contracts for rail infrastructure quality

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ANNEX 1

Financial contributions provided by Member States for infrastructure operation, maintenance, renewals and construction (in m euro, 2006)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
AT	8.65	8.4	12.98	14.8	13.2	13.2	15.9	12.8	16.3	15.4	16.3
BE	1241.11	1209.58	1221.3	1252.8	1297.5	1322.6	1392.7	1508.1	1135.5	287.9	1807.6
CZ								7.97	15.58	20.7	17.24
DE	3864	2922	2830	3513	3452	3937	4345	4334	3402	3316	3211
DK	0	0	161.14	117.13	176.42	193.23	207.78	198.58	238.59	297.07	310.68
EE								0	0	0	0
EL	253.33	260.98	388.92	412.53	337.01	507.12	447.23	523.4	329	256.9	274.5
ES	464.71	0	311.63	281.3	265.1	292.3	298.4	304.7	315.2	0	0
FI	328	319.15	344.64	355.7	327.9	281.9	330.6	405.7	477.1	430.6	379.5
FR	2666.12	2461.63	2460.63	2477.45	2725.31	3923	3962	2574	4319	4890	4801
HU	49.58	63.48	72.14	78.92	83.54	87.52	95.48	109.97	91.5	105.15	166.1
IE	15.94	45.94	42.05	32.38	195.9	208.5	264	303.4	163.3	310.3	320
IT	3189.51	4172.64	2476.27	2439.3	3176.21	3615.2	4078.3	3933.8	2664.6	3005.6	n.a.
LT								0	3.42	3.97	0
LU	-0.12	-0.12	90.54	112.3	133.84	162.32	177.6	200.7	207.2	192.8	260.3
LV								0	8.68	0	0
NL	1359.05	0.61	1340.25	1693.2	1973.9	2612.6	2865	3232.3	2850	2686.9	2603.2
PL								0	0	0	0
PT	0	0	0	0	0	0	0	0	0	0	0
SE	1081.01	853.92	931.95	754.98	807.1	807.83	843.94	953.58	1121.42	1229.35	1415.35
SI								38.42	70.38	100.46	104.28
SK								0	0.02	0	0
UK	0	0	0	0	10.21	17.61	52.21	64.47	30.24	52.3	0
EU-25	10607.3	9332.73	14793.4	15073.9	16125.2	18740.4	19732.7	18714.9	17466	17209.4	13888.5*
EU-15	10607.3	9332.73	14793.4	15073.9	16125.2	18740.4	19732.7	18558.5	17276.5	16979.1	13600.8*
EU-10	0	0	0	0	0	0	0	156.36	189.58	230.28	287.62

Source: European Commission, German Transport Ministry, data for Hungary for the years 1996-2002 provided by the railway undertaking MAV ZRt.

ANNEX 2

Investments in maintenance, renewals and new construction of rail infrastructure (2005-2010)

2a. Total investments in m EUR

	Investments (in m EUR) in								
	maintenance			Renewals			new construction		
	2005	2006	Forecast 2007- 2010*	2005	2006	Forecast 2007- 2010*	2005	2006	Forecast 2007- 2010*
AT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
BE	275	285	1120	279	367	1745	648	535	3484
BG	75	75	240	41	40	200	n.a.	n.a.	90
CZ	241	242	1006	515	471	3572	83	83	333
DE**	1520	1710	6400	3780	3980	14770	1130	1190	4410
DK	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
EE	10	10	40	15	15	80	0	0	65
EL	5	3	15	147	143	1142	289	312	3073
ES	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FI	117	121	490	178	175	600	108	67	550
FR	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
HU**	96	153	358	73	117	293	60	95	307
IE	66	67	321	65	68	204	0	0	580
IT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
LT	72	73	300	68	51	466	-	-	28
LU	49	48	192	30	44	273	29	67	511
LV	41	54	n.a.	29	29	206	9	2	n.a.
NL	1118	1237	5000	n.a.	n.a.	n.a.	1479	1288	n.a.
PL	n.a.	130	7	n.a.	Investments in renewals and new construction for 2006: 226, for 2007-2010: 3259				
PT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
RO	428	405	1200	28	51	2179	0	0	400
SE	360	372	1441	173	176	774	788	817	4409
SI	61	63	2028	Included in maintenance	Included in maintenance	3111	0	0	6788
SK	0.37	0.36	1.73	0.73	0.45	10	5.48	7.94	40.12
UK**	1838	1702	4642	4102	4103	12603	626	577	6660

* Total value of investment over four years

** Data for DE refers exclusively to DB AG and for HU to MAV Zrt. Data for UK refers to 12-month periods starting in June of the respective year, the 2007-2010 forecast covers time period of three years starting from June 2007

2b. Investments in EUR per km of lines

	Investments (in EUR per km of lines) in								
	maintenance			Renewals			new construction		
	2005	2006	Forecast 2007-2010*	2005	2006	Forecast 2007-2010*	2005	2006	Forecast 2007-2010*
AT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
BE	78571	81429	320000	79714	104857	498571	185143	152857	995429
BG	17606	17606	56338	9624	9390	46948	n.a.	n.a.	21127
CZ	25143	25227	104866	53694	49036	372158	8680	8680	34719
DE**	44546	50114	187562	110779	116640	432859	26205	34875	129242
DK	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
EE	10592	10903	41745	15576	15576	83074	0	0	67497
EL	2005	1375	6114	58629	57023	455241	115345	124352	1224990
ES	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FI	19814	20491	82981	30144	29636	101609	18290	11346	93141
FR	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
HU**	12420	19930	46633	9445	15240	38166	7763	12375	39985
IE	28977	29270	140385	28566	29720	89161	0	0	253496
IT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
LT	40632	41196	169300	38375	28781	262980	-	-	15801
LU	179273	173091	698182	110909	159273	993454	105454	244727	1858545
LV	18189	23803	n.a.	12847	12988	90789	4130	749	n.a.
NL	402738	445605	1801153	n.a.	n.a.	n.a.	532781	463977	n.a.
PL	n.a.	5849	315	n.a.	Investments in renewals and new construction for 2006: 10223 per km of lines; investments in renewals and new construction for 2007-2010: 147078 per km of lines				
PT	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
RO	39638	37537	111224	2641	4689	201977	0	0	37075
SE	32270	33345	129168	15507	15776	69380	70635	73234	395213
SI	49398	51139	1650122	Included in maintenance	Included in maintenance	2531326	0	0	5523190
SK	102	99	473	200	124	2734	1498	2170	10967
UK**	116366	107756	293890	259702	259766	797911	39633	36531	421652

Table 2a and 2b: Member States distinguished between the three categories of investments in infrastructure (maintenance, renewals and new construction) on the basis of its own definitions.

Source: RMMS Questionnaires filled in by Member States in May/June 2007, railway undertakings DB, MAV Zrt and SNCB

ANNEX 3

A) MAIN ELEMENTS TO BE AGREED IN A MULTI-ANNUAL CONTRACT

A multiannual contract is an agreement between the State and the infrastructure manager, concluded for a period of at least three years. By laying down mutual responsibilities in a comprehensive way, multiannual contracts make it possible to move away from a conflictual, command-control oriented system, towards a contractual relationship between the State and the infrastructure manager. Existing multiannual contracts typically regulate the following aspects of this relationship::

- The scope of the contract as regards infrastructure and service facilities. It should cover all aspects of infrastructure development, including maintenance and renewal of the infrastructure already in operation. Construction of new infrastructure should be included for information purposes, bearing in mind that this activity is normally financed and implemented under financial and contractual terms which are separate from multiannual contracts.
- Multiannual contracts have to set out user-oriented infrastructure performance targets, in the form of indicators and quality criteria.
- The contract has to designate an independent body (which in most cases will be the regulatory body) to monitor its implementation. This body must be allowed access to information on the network and be able to request all other necessary information from both contracting parties.
- The financial plan agreed in the multiannual contract should also set out the different sources of finance, on an annual basis for the entire duration of the contract. Once again, such a plan has to be consistent with the infrastructure manager's business plan. Often the revenues collected from the users will not be sufficient to cover all costs, and so the State may have to provide additional transfers. Loans are another possible source of finance. A finance plan should cover income and expenditures where the State has certain obligations to balance cash flows for all the activities of the infrastructure manager over a reasonable period of time¹.
- The contract lays down minimum reporting obligations for the infrastructure manager in terms of content and frequency of reporting, covering:
 - train performance and customer satisfaction,
 - network capacity,
 - asset management,
 - activity volumes,

¹ Article 6 of 2001/14/EC also includes all other activities of the infrastructure manager, which can be renting of shops, car parks, real estate sales or operation of trains.

- safety levels and environmental protection.
- The multiannual contract has to specify that the infrastructure manager is obliged to keep an infrastructure register, containing information on the capacity, condition and capability of the assets. The register should contain up-to-date information on the purchase date and purchase value of assets, date and type of maintenance activities undertaken, the predicted year of end-of-life and any irregularities or faults that have occurred in relation to the asset. Updating the infrastructure register can also involve subcontractors carrying out maintenance and renewal works.
- The multiannual contract should specify its duration². Contract duration should be synchronised with the infrastructure manager's business plan, concession or license, and the charging framework set by the State. The contract is agreed on the basis of a given framework of user charges and extending over the entire duration of the contract. Whenever the State decides to change this framework under a current contract, this will have to be reflected in the multiannual contract.
- The contract should stipulate termination clauses, i.e. the conditions under which the State may decide on early termination, to be applied as a last resort consequence of a serious breach of obligations. Contract duration and early termination provisions have to be drawn up in such a way that, if targets are not achieved on parts of the network, only a part of the network can or will have to be passed on to another infrastructure manager
- Multiannual contracts should also stipulate the rules for dealing with disruption of operations, and for the provision of information to and from the users³.
- The contract should also stipulate what is required from each party and what remedial measures have to be taken if either of the parties fails to meet its contractual obligations.
- Maintenance and renewal works are more expensive when they have been neglected and postponed in previous years, as has been the case in several European rail networks. Therefore, the State and the infrastructure manager should also agree on the existing backlog at the start of the contract and lay down obligations and compensatory arrangements for dealing with this backlog. The necessary additional funds should be allocated separately, either under the multiannual contract or as part of a separate agreement concluded at the same time

B) POTENTIAL ADVANTAGES OF MULTI ANNUAL CONTRACTS

By creating a stable and predictable longer-term framework for infrastructure development, multiannual contracts may present the following advantages:

Independence of infrastructure managers

² According to directive 2001/14/EC, article 6, the duration of a contract should be at least 3 years.

³ It can be expected that the Technical Specification on Interoperability on the Telematics applications for freight, and the planned specification on applications for passengers will facilitate the provision of this information.

Infrastructure management should be independent from discretionary state intervention within an agreed regulatory and contractual framework. Multiannual contracts ensure such independence; it enhances business orientation and the application of commercial management principles.

Financial stability of the infrastructure managers

A contractual approach reinforces the financial stability of the infrastructure manager. Only when financing from the various sources - mainly revenues from services and state transfers - is commensurate with the tasks of the infrastructure managers can the various financing decisions be assessed and informed decisions taken.

Transparency of financial transfers from the State to the infrastructure managers

Financing of infrastructure has to be transparent to taxpayers and other stakeholders, such as railway undertakings and shippers. The public is entitled to be informed about the use of any transfer of State money and it expects infrastructure managers to be accountable for spending this money properly.

Cost-efficiency

Multiannual contracts increase the cost efficiency and cost effectiveness of infrastructure provision in relation to a given output. The contract makes it possible to set incentives and reward good performance, when measures do not have an effect until some years later. What is more, infrastructure development is long-term in nature, so fundamental changes to financial decisions cannot be made every year. Life cycle costing is generally recommended for taking investment decisions and, manifestly, long-term contracts are much more suitable for life-cycle costing. Long-term contracts make it possible to exploit the potential of cost reductions that are fixed in the short term and, as a result, cannot be varied. With market volumes for the supply of railway equipment and maintenance works easier to predict, industry can adjust its capacity more smoothly to demand and thus deliver at lower cost.

Predictability in terms of charges

Business models, not just those of infrastructure managers, but also those of railway undertakings and shippers, need a long-term basis, and they rely on being able to predict the costs and charges of infrastructure provision. On average, infrastructure charges account for about 15 to 20 % of the costs of the transport service, while profit margins in the service price are in the range of only 1 to 2 %. Clearly, with abrupt increases in charges, such business models are in danger, and rail cannot compete with other forms of transport.

Service quality

The quality of the infrastructure service must be predictable. Multiannual contracts make it possible to schedule maintenance work and increase the availability and reliability of the infrastructure, thus reducing the bottlenecks which affect rail performance.

Greater responsiveness to customers' needs

Infrastructure services need to be firmly user- and demand-oriented. Network development and maintenance has to attract the most profitable service market segments. Because of the high fixed costs of rail, the only way the infrastructure manager can improve its financial

position is by attracting new services. Due to the long-term nature of infrastructure provision, the measures have to be linked to demand forecasts, i.e. the actual business plans of the shippers, the railway undertakings and the infrastructure managers. The tasks of the infrastructure manager should relate to future demand for the different parts of the network, as set out in its business plan.

Social benefits

Last but not least, a stable financial outlook and business environment will increase staff satisfaction and security of employment. Social peace will in turn increase the reliability of the rail system.

ANNEX 4

State of Implementation of Multi-annual contracts

Country	Existence of MCA (multi annual financing agreement between IM and the State)		Year of implementation and duration (years)	Role of Regulatory Body ⁴	Costs coverage		Maintenance practices	Presence of performance indicators in the MCA	Payment to IM depend upon performance indicators
					State	Charges			
Austria	Yes	Contract for finance and services between the Federation and OBB Infrastruktur Betriebs AG	2003 / 6 years	I / M	Direct contribution from Federal budget for operations and maintenance for the part not covered by charges. Subsidies are required in order to allow the IM to reach financial equilibrium.	Infrastructure charges cover operation and maintenance costs. 27% of total cost is covered by charges. N.B. The construction of new infrastructure is responsibility of OBB Infrastruktur Bau AG, which is a company set up within OBB Holding and which is different from the IM (OBB Infrastruktur Betriebs AG)	In house: the IM (OBB Infrastruktur Betriebs AG) is a part of the OBB AG Holding	Yes	Rationalization of work flow and staff (technical standards), Reliability availability and operational quality of infrastructure quality of maintenance, reductions of speed, network size)
Belgium	Yes	"Contrat de gestion" (Management Contract) Infrabel	2005 / 2 years	I / M	All renewal costs and investment costs and part of maintenance costs are financed by public budget.	Charges cover only part of maintenance costs (the difference between infrastructure maintenance and renewals costs and the State contributions, which are about 600 million euro per year). 20% of total IM expenditures are covered by charges.	Daily maintenance on tracks switches signalling crossings: in house Heavy maintenance and renewals: combination	Partly	Infrabel has to maintain the capacity of all its lines at the same level as in the beginning of its management contract (27/05/2005) and has to conclude SLAs with the RUs with an option of varying the tariffs according to the acquired level of quality (i.e. punctuality, ...)
Bulgaria	Yes	Long-term agreements between the company (SRIC) and the State	2002 / 5 years	W	The State participates in the financing of activities related to the construction, maintenance, development and operation of railway infrastructure, including also in the creation, keeping and maintenance of structures and material means for execution of defensive-mobilization undertakings in the country.	65% of total costs are covered by charges.	n.a.	Yes	Operating speed, capacity, network size

⁴ I = Independent from MoT
W = within MoT
M = the RB is in charge of monitoring IM commitments
A = the RB has an arbitrary task in the relationships between the IM and The State

Country	Existence of MCA (multi annual financing agreement between IM and the State)		Year of implementation and duration (years)	Role of Regulatory Body ⁴	Costs coverage		Maintenance practices	Presence of performance indicators in the MCA	Payment to IM depend upon performance indicators
					State	Charges			
Ireland	Yes	-	n.a.	No regulatory body has been established or notified to the European Commission	100% of infrastructure costs are covered by the State. There is an ongoing financial flow for maintenance. New investments are also financed by EU Cohesion/Structural Funds	-	n.a.	Yes	Safety related performance indicators
Italy	Yes	"Contratto di Programma" RFI - Ministry of Infrastructures	2001 / 5 years	W / A	New investments (included in the RFI's PPI), maintenance and renewals costs are covered by public subsidies.	Infrastructure charges aim only at covering the traffic management costs and salary costs. Only 16% of total IM expenditures are covered by charges.	Daily maintenance on tracks switches signalling and crossings: in house Heavy maintenance tracks: combination Renewal track and superstructure: competitive tendering	No	The financing scheme of infrastructure maintenance includes an objective of cost effectiveness meaning; for the same level of expenses rising levels of reliability, availability and safety of infrastructure services
Romania	Yes	Performance contract between CFR and the the Ministry of Transport, Constructions and Tourism	2004 / 4 years		Renewals and investment costs are covered by public budget.	Charges cover 52% of total infrastructure expenditures. They full recover traffic management, maintenance and salary costs.	n.a.	Yes	Technical speed, punctuality, productivity
UK	Yes	All expenditure is covered by the multi-year arrangements ("binding arrangement"), but not through a direct contract with the State	2005 / 5 years	I / M / A	Network Rail or the train operators are responsible for carrying out the investment in new infrastructure. According to The Ten Year Transport Plan, the Government provide substantial financial support, reflecting the social, environmental and economic benefits that cannot be paid for through fares and charges.	Track charges cover the total cost of the infrastructure (traffic management, maintenance, renewals and part of investment costs)	Daily maintenance on tracks: in house Daily maintenance on switches, signalling and crossing: in house + competitive tendering Heavy maintenance on tracks: in house Renewals and superstructure: in house + competitive tendering	Yes	Targets relating to punctuality of trains related to their timetabled arrival at the end of the journey. It is also monitored for the efficiency of its spending on network enhancements
Denmark	Yes	BS Framework agreement with the Ministry of Transport for maintenance and new investment	2007 / 14 years	I	State contributions (with an annual agreed budget) and infrastructure charges cover investment costs and all infrastructure costs. Charges cover 66% of total infrastructure costs.		n.a.	Yes	Available speed, capacity, network size, punctuality, technical standards (traction, ERTMS)
Germany	under negotiations	Infrastructure investments are handled by means of 120 financing agreements between German Government	-	W / A / M	Investments in new infrastructure, upgrading and major replacements of infrastructure are financed by interest free loans or grants (from the State budget) and own	Infrastructure charges cover the costs of network operation, maintenance, administration and the remaining costs connected to infrastructure investment after State contributions. 60% of total expenditures is covered	Daily maintenance on tracks switches signalling and crossings: combination Heavy maintenance on tracks:	n.a.	n.a.

Country	Existence of MCA (multi annual financing agreement between IM and the State)		Year of implementation and duration (years)	Role of Regulatory Body ⁴	Costs coverage		Maintenance practices	Presence of performance indicators in the MCA	Payment to IM depend upon performance indicators
					State	Charges			
		and DB. Each has specific provisions and a distinctive character.			capital from DB AG.	by charges.	combination Renewal track and superstructure: combination		
Spain	Yes	Framework Contract ADIF - State 2007-2010. In financial terms, the Contract assures 7.281 Mill.€ to State network in 2007-2010, of which maintenance and operation: 3.439 Mill.€	2007 / 3 years	W / A / M	The State covers part of the total infrastructure costs via the Contract Program (infrastructure, renewal, maintenance and operation costs). Investments in new lines (in charge of GIF) are financed by State funds, EU structural funds and loans.	The charging system is based on 4 different categories: access charges, capacity reserve charge, circulation charge, traffic charge. From ADIF's presentation to EU workshops it is clear that charges do not reflect IM costs. From the RailImplement Country Report, it is assessed that the charges level is fixed as a proxy to marginal cost.	In house (centralised management of maintenance; execution of works by 7 internal Departments) Source: ADIF web site	Yes	Economic indicators, punctuality, quality of service, quality of track, accidents
Poland	Yes (signed in 2006 - to be verified)	Subsidy Contract between Infrastructure Manager (PKP Polskie Linie Kolejowe S.A.) and the State (Ministry of Transport and Construction). The Subsidy Contract is in fact a "multi-annual rail maintenance financing contract"	2006 / 3 years	W + I (UOKK) / M	PKP is subsidised by the government for part of renewals and investments.	Charges cover total financial costs, total maintenance costs, part of renewals, part of investment costs and part of external costs. 81% of total infrastructure expenditures is covered by charges.	Daily maintenance on tracks, switches, signalling and crossings: combination Heavy maintenance: combination Renewals of tracks and superstructure: competitive tendering + outsourcing	No	n.a.
Czech Republic	No	-	-	W / M	Renewals, investments and noise costs are covered by public budget.	Infrastructure charges cover only a part of the total costs: they cover traffic management costs and maintenance. Charges cover 60% of total expenditures.	n.a.	Partly	Rationalisation of work flow and staff, network size, quality of maintenance, ERTMS, technical standards
Estonia	No	-	-	I (Estonian Competition Board) and W (Railway Inspectorate) I also has monitoring roles (M)	No State support	Charges cover 100% of total expenditures. They cover total financial costs, total maintenance and management costs, total renewals and total investment costs.	n.a.	n.a.	n.a.
Finland	No	There is a long term planning but the decision on the budget for infrastructure building, operation and maintenance is on a	-	W + I	The State pays traffic management costs and investments	Charges cover part of maintenance and renewals. The contribution from charges to total costs coverage is between 12 and 16%.	The infrastructure construction and maintenance is carried out by a competitive bidding procedure. In most cases, the State-owned VR-track Ltd	n.a.	n.a.

Country	Existence of MCA (multi annual financing agreement between IM and the State)		Year of implementation and duration (years)	Role of Regulatory Body ⁴	Costs coverage		Maintenance practices	Presence of performance indicators in the MCA	Payment to IM depend upon performance indicators
					State	Charges			
		yearly basis					has won the competitive bidding procedure.		
France	Yes	-	2007 / 4 years	I / M	Costs for the railway infrastructure are covered by the French government, local authorities and infrastructure charges. Rail infrastructure charges shall cover slightly more than a half of the total RFF costs (63% of total expenditures, except the financial charges which are covered by the State through recapitalization).		n.a.	n.a.	n.a.
Hungary	Under Negotiation	-	-	I / A	Public budget finances investments and external costs.	80% of total expenditures is covered by charges. They fully cover renewals, maintenance and traffic management costs, plus part of financial costs.	Daily maintenance in house and outsourced Heavy maintenance outsourced and competitive tendering	Yes	Speed, safety, axle load, reliability, number of disturbances, number of delayed trains
Latvia	No (public financing only for larger international investments)	-	-	W / A	State budget and EC pay part of investment costs.	In Latvia, the charging formula is based on the “Total Cost recovery” approach, so that charges should cover the cost of railway infrastructure maintenance, the amount of replacement investment, the taxes payable by Infrastructure Manager and also include mark-ups. 100% of total infrastructure expenditure is covered by charges.	n.a.	n.a.	Security indicators, operating speed, capacity, punctuality, technical standards, axle load
Netherlands	Yes ⁵	Rolling Plan: a 10 years business plan that ProRail has to provide every year, as requested by the concession governing the relationships between ProRail and the State.	2006 / 10 years	W / M	The 10 years plan indicates the integral amount of public contributions for renewals, investments, salary costs of the IM and external costs.	Charges cover 20% of total expenditures. Part of traffic management costs and the full cost of maintenance is covered by charges.	Daily maintenance on tracks signalling crossing and switches is outsourced For heavy maintenance and renewals competitive tendering is adopted	Yes	IM in absence of a multi- annual agreement has to deliver a certain performance with respect to (the output of) maintenance and renewal. Certain KPI's on reliability and availability of the infrastructure are used. For network extension normal project goals are adhered to: scope, time and money.

⁵ The IM has positively answered to the questionnaire indicating the presence of a MAC with the State for rail maintenance financing. In principle, financing is agreed on annual basis. The MOT specifies: “there is a multi-annual budget (first year fixed budget, consecutive years indicative budgets from a legal point of view) and a multi-annual agreement (concession based on public law) till 2020 based on performance indicators and budget. There is not a multi-annual contract based on private law. The annual subsidy is based on an annual management /business plan according to the multi-annual budget and performance agreement. Although the budget from t+2 onwards is indicative the government has limited possibilities to impose unilaterally substantial (say >10%) changes (decreases) in the budget. If the government would do so the Infrastructure Manager has a legal case for compensation of damages that he might have due to unexpected changes.”

Country	Existence of MCA (multi annual financing agreement between IM and the State)		Year of implementation and duration (years)	Role of Regulatory Body ⁴	Costs coverage		Maintenance practices	Presence of performance indicators in the MCA	Payment to IM depend upon performance indicators
					State	Charges			
Slovakia	Under negotiations	-	-	W	The infrastructure costs are covered by SZR incomes, State subsidies and EU programmes and loans. For new investments there is a State financed investment planning. Maintenance and operation are directly financed by the State budget.	Charges accounts only for 25% of total infrastructure costs Charges for the use of railway infrastructure in domestic passenger and freight traffic includes the infrastructure costs relating to the provision of control, organization of transport services on railway infrastructure, maintenance and operation of a railway infrastructure according to special regulations.	Daily maintenance on tracks: in house Daily maintenance on switches, signalling and crossing: in house Heavy maintenance on tracks: combination Renewals and superstructure: combination	Yes	Percentage of fulfillment of yearly timetable - punctuality
Slovenia	No	-	-	W / M	The State budget finances part of operation and maintenance and total investment costs.	Charges finance partly: traffic management costs, renewals and maintenance. 13% of total costs are covered by charges.	n.a.	n.a.	n.a.
Sweden	No	The government does not give any commitment beyond a year, although there is a long-term (up to 15 years) expenditure plan. Agreement 2005-2015 allocates 117 billion€ for new investment in the railway sector	-	W	Banverket is financed through a rolling three year budget plan, which is reviewed every year. The budget and the investment plan has to be approved by the Swedish Parliament. The overall amount coming from the State budget is fixed. Such budget covers: the remaining part of maintenance costs (not covered by charges), the full cost of renewals, investments and salaries.	Charges cover part of traffic management costs and part of maintenance costs. 5% of total expenditures is recovered by charges.	n.a.	n.a.	n.a.
Portugal	No	-	-	I / M	Renewals, investment costs, external costs and salaries are covered by public budget.	Part of maintenance and part of traffic management costs is covered by charges. Only 20% of total IM expenditures is covered by charges.	Daily maintenance on tracks: in house + outsourcing Daily maintenance on switches, signalling and crossing: outsourced Heavy maintenance on tracks: outsourced + competitive tendering Renewals and superstructure: competitive tendering	n.a.	n.a.

Country	Existence of MCA (multi annual financing agreement between IM and the State)		Year of implementation and duration (years)	Role of Regulatory Body ⁴	Costs coverage		Maintenance practices	Presence of performance indicators in the MCA	Payment to IM depend upon performance indicators
					State	Charges			
Greece	No	-	-	No special regulatory bodies exist	State contributions cover the difference between revenues from passengers and freight services and total costs. The State covers the costs of infrastructure investment programmes, maintenance, operating costs not covered by fares revenue, deficits (from State budget or by means of providing guarantees for loans), as well as providing compensation related to concessionary fares, public service obligations and any State-intervention with regards to the level of fares.	Data on charges level are not available.	n.a.	n.a.	n.a.
Luxembourg ⁶	No.	Contrat de gestion de l'infrastructure (22 November 1999)	1999 / 9 years	W / M	Investments on the infrastructure are financed by the State through the "Fonds du Rail" as stated by the law dated 10 May 1995, modified on 28 March 1997. From the income statement, we can also deduce that CFL received €176.3 million in 2003 and €154.9 million in 2002 from the Fonds du Rail for the management of the infrastructure.	The charges received by the Infrastructure Manager for the minimal services are equal to the direct costs related to infrastructure use and include a minimal charge for the scarcities of the capacities. The charging system is very detailed and developed in Luxembourg. The charging structure takes into consideration the key cost components to proxy marginal costs.	Daily maintenance on tracks: in house + combination Daily maintenance on switches, signalling and crossing: in house Heavy maintenance track: competitive tendering - in house - combination Renewals of tracks and superstructure: competitive tendering - in house - combination	n.a.	n.a.
Lithuania	No	Multi annual IM business plan (3 years) but no multi annual contract with the State for maintenance financing	-	W / M	State budget and EU fund cover investment costs.	100% of total infrastructure costs is covered by charges	n.a.	n.a.	n.a.
Switzerland	Yes	Performance agreement (bilateral contract between the Swiss Confederation and the Swiss Railways SBB)	1999 / 4 years	W / M	Funding for new investments by the government. SBB decides on the use of the contributions (weighting up additional maintenance expenses or earlier renewal expenditures). The	Part of costs for operation and maintenance are covered by charges. Charges cover 25% of total infrastructure expenditures.	n.a.	Yes	Security indicators (accidents), Number of level crossings on network, Minutes of delay caused by IM, Network availability

⁶ In the questionnaire filled in for the survey, the IM has stated that a multi-annual contract was already in place. The Ecorys Study had shown that Luxembourg actually did not have a multi-annual contract yet. There is a multi-annual concession for the IM; however, this does not cover multi-annual financial commitments for maintenance.

Country	Existence of MCA (multi annual financing agreement between IM and the State)		Year of implementation and duration (years)	Role of Regulatory Body ⁴	Costs coverage		Maintenance practices	Presence of performance indicators in the MCA	Payment to IM depend upon performance indicators
					State	Charges			
					State pays the infrastructure costs not covered by track access charges.				(%available/planned trainkm), Productivity (CHF/train-km)
Norway	No	Although starting from 2002 there is a national transport plan for 10 years, this plan is not binding for the parliament. The actual amount for the railway infrastructure is decided on an annual basis by the Parliament	-	W / A / M	The Norwegian Parliament determines the annual funding of the Railways sector through the national budget. Long-term planning of rail transport is provided through the Norsk Transportplan (the Norwegian Transport Plan). The IM operates, maintains and develops the national railway network through public funding.	Only 0,82% of infrastructure costs is covered by charges.	Daily maintenance on tracks signalling crossing and switches: in house For heavy maintenance and renewals: competitive tendering and outsourcing is adopted	n.a.	n.a.

ANNEX 5

A) Links between costs and infrastructure quality

The Infracost project⁷ found that cost drivers of infrastructure maintenance are known, but infrastructure managers do not systematically apply them. Life cycle cost strategies are often neglected despite their vast potential to make a contribution to a competitive rail mode. Disruption and downtime costs are rarely considered in the calculation of maintenance cost.

Infracost explored the relationship between various quality aspects, the physical condition of infrastructure and the resulting costs. A cost optimised quality of infrastructure is an appealing, yet still uncharted terrain:

- Infrastructure quality parameters are hardly standardised in Europe. Aggregated indices are monitored over time in several railways. For now, due to non-existing harmonised definitions, a fully-fledged benchmark cannot be established.
- There is no evidence that low life cycle costs coincide with poor quality parameters. Higher costs are not simply justified by higher quality.
- There is no evidence that low life cycle costs coincide with poor quality parameters. Higher costs are not simply justified by higher quality.
- RAMS aspects of railway infrastructure are more easily accessible for bench-marking. Again, there is no clear evidence that railways with high cost figures turn out superior reliability and availability.
- Quality and safety go hand in hand. Investing in modern, high-quality infrastructure improves safety. For Europe, additional safety gains may depend on a careful value-for-money analysis in order to deploy available financial resources more efficiently.
- Although there is still a lot of fruitful work to be done in analysing cost mechanisms of asset ages, asset conditions and reliability, one fundamental thing seems to be clear.

Quality differences do **not** explain cost differences. If quality is handled in the right way, it does sometimes even come at lower costs. The analysis of the network operating costs shows that centralised, automated train control centres have significantly higher productivity and lower operating costs.

B) Monitoring and measuring infrastructure quality

Technological development on the measuring infrastructure condition has considerably developed over recent years. Instead of finding and fixing through inspection, the modern maintenance management relies on predicting and preventing defects through measuring. These strategies have fundamentally changed the skills and number of staff required. Low skill labour is replaced with less and higher skilled staff. The previously high risk exposure

⁷ See <http://www.promain.org/images/publications/ProMain.pdf>

when inspecting track is consequently reduced, work executing is systematically measured and verified.⁸

A significant part of quality monitoring is done through devices mounted on regular services trains, instead of dedicated measuring trains. As a result, train operators collect data, which then can be translated into infrastructure maintenance programmes. Vice versa, track side measurement devices are now able to detect deficient wheels and suspensions. To exploit the mutual benefits of such advance strategies, train operators and infrastructure managers have to introduce arrangement to their contracts. Rather than inspecting and replacing equipment at fixed intervals, infrastructure managers are in a position to take planned preventative interventions based on actual condition.

⁸ Network Rail at EIM conference of 2005

ANNEX 6

National Case studies⁹

Case study: Poland has one of the largest rail networks in the EU. The Polish state contributed only very small amounts to the costs of rail infrastructure maintenance and renewal between 2003 and 2006. Consequently, the infrastructure manager's charges were among the highest in Europe, whereas he could only apply the most urgent maintenance measures. In the meanwhile, 30% of the network are in very poor condition, and on 10% of it speed restrictions have to be applied. This led the state to change legislation and conclude a multi-annual contract as of early 2007. However, its financial volume does not account for the maintenance backlog built up over the years.

Case Study England and Scotland: The state agrees with the national infrastructure manager the charging system for the same period of time as the multi-annual contracts. Besides, the concession for the infrastructure manager and his business plan form two more pillars. The duration ('control period') of all of these agreements, which are synchronised, is at least four years. Their preparation takes more than two years, involving extensive public stakeholder consultation and bargaining. The underlying reason is to combine financial stability with long term infrastructure quality in order to serve user demand. The regulatory body monitors the performance of the infrastructure manager, based on high level output specifications and quarterly traffic data. The regulatory body plays an important role, not only in the preparation of the said agreements, but also in monitoring and arbitrating between the state and the infrastructure manager when planning diverges from execution. The infrastructure manager has to respect detailed reporting obligations, also towards the general public, whereas most continental infrastructure managers consider that as interference in business confidentiality. The multi-annual contract also provides financial incentives for the management in case the infrastructure manager meets objectives or even performs better than planned. After years of neglect after privatisation, the British infrastructure manager has succeeded in turning around the situation in 2004: Since then, expenditures have been dropping, while infrastructure quality has been increasing.

⁹ Source: Presentations and conclusions of stakeholder workshop on 31 May 2006 at http://ec.europa.eu/transport/rail/rb/rb_mac_en.htm