



Track Access Charging – The calculation of the direct costs of the rail service in accordance with Article 31 of Directive 34/2012/EC

– on the example of Kosovo’s Infrakos

Skopje, 21 March 2014



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Infrastructure charging

- The European Commission's policy of **separating railway infrastructure from operations** and opening up operations to new entry has given rise to the **need for explicit methods of charging for the use of rail infrastructure**. The European Commission sees open access as an important way of **improving the efficiency and marketing of rail transport** and, hence, of increasing the role of the railways in the European 'Common Transport Policy' (CEC, 1996).
- A typical list of objectives (ECMT, 1998) would be:
 - promoting **efficient use** of the infrastructure
 - promoting **efficient investment** in and development of the infrastructure
 - **recovering the costs** of providing the infrastructure, including **adequate funding for investment**.
 - promoting **efficiency of operators**, for instance through facilitating competition
 - harmonisation of the terms of **competition** between modes
- The proposals on railway infrastructure charging emerging from the 1998 railways package were enshrined in Directive 2001/14, on allocation of railway infrastructure capacity and levying of charges (CEC, 2001)
- Latest legislation: DIRECTIVE 2012/34/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 21 November 2012 establishing a single European railway area (recast) - SECTION 2 Infrastructure and services charges**

Legal basis (Extracts)



Article 7 (DIRECTIVE 2001/14/EC)
Principles of charging

- Without prejudice to paragraphs 4 or 5 or to Article 8, the charges for the **minimum access package and track access to service facilities** shall be set at the cost that is **directly incurred** as a result of operating the train service.
- To avoid undesirable disproportionate fluctuations, the charges referred to in paragraphs 3, 4 and 5 may be averaged over a reasonable spread of train services and times. Nevertheless, the relative magnitudes of the infrastructure charges shall be related to the costs attributable to the services.

Article 31 (Directive 2012/34/EU)
Principles of charging

- Without prejudice to paragraph 4 or 5 of this Article or to Article 32, the charges for the **minimum access package and for access to infrastructure connecting service facilities** shall be set at the cost that is **directly incurred** as a result of operating the train service.

Before 16 June 2015, the Commission shall adopt measures setting out the modalities for the calculation of the cost that is directly incurred as a result of operating the train. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 62(3).

Legal basis (2)

Article 63 (Kosovo Law on Railways)
Infrastructure costs and accounts

- Managers of railway infrastructure of common use including operators of rail service facilities shall **establish a methodology for apportioning costs** to the different services offered, and to types of vehicles based on the best available understanding of costs causation and shall define the **principles for charging**. This methodology shall be updated from time to time to match the best international practices.

Article 64
Charging principles (Kosovo Law on Railways)

- The manager of an infrastructure of common use shall be able to **justify the infrastructure charges**, and shall comply with the methodology and the rules.
- The infrastructure charges shall be set at the cost that is **directly incurred** as a result of operating the train services and maintaining the railway infrastructure.
- The infrastructure charges may include an additional part which **reflects the scarcity of capacity** of the identifiable segment of the infrastructure during periods of congestion.
- The infrastructure charges may be modified to take account of the **cost of the environmental effects** caused by the operation of the train.




Legal basis (3)

Article 65 (Kosovo Law on Railways)
Direct costs related to infrastructure maintenance



- Direct costs related to infrastructure maintenance shall be evaluated and considered when setting the charging principles and the levels for access charges.
- A Sub-legal act prepared on the basis of principles laid down in EU Directive 2001/14 and on the proposal for a new directive establishing a single European railway area of September 2010 shall precise the elements to be considered as costs directly incurred as a result of operating a train service and for infrastructure maintenance.

ADMINISTRATIVE INSTRUCTION NO. 02/2013 ON DETAILING THE DIRECT COSTS RELATED TO INFRASTRUCTURE MAINTENANCE AND OPERATION OF TRAIN SERVICES (Kosovo)

Article 3 Direct costing system
The infrastructure manager shall establish a separate direct costing system for his railway infrastructure comprising the following costing organisation:
Direct cost categories
Direct cost centres

Article 4 Major direct cost categories

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Infrastructure charging in Europe examples and conclusion

- Infrastructure charging **cannot be separated from financing** the railway system.
- The charging system is an instrument to achieve strategic goals and goals differ from country to country.
- Level of track access charges has a **direct influence on the competitiveness** of the railway sector vis-à-vis other transport sectors.
- The user should at least pay for short-term marginal or direct costs.
- Introduction of improved cost accounting requires **sophisticated modelling** and the understanding of the cost interdependencies across the business
- Simplification and stabilisation of charging structures:** Track access charges need to be transparent and understandable.
- They should be **sustainable** and not changed too often.
- A suitable cost accounting system is essential, but **no guarantee** for a suitable access charging system
- At the same time, it should be taken into account that even **advanced cost accounting methods** cannot solve the **economic problems** related to the typical network – cost structures that are characterised by high levels of fixed and common costs.

Country	Infrastructure manager	Main charging principle
Belgium	Infrabel	Full costs after subsidies
France	RFF	Marginal costs with mark-ups
Germany	DB Netz	Full costs after subsidies
Great Britain	Network Rail	Marginal costs with mark-ups
Hungary	MAV Co (ZRT)	Full costs after subsidies
Latvia	LDZ	Full costs

What are direct costs?

... the charges for the **minimum access package** and for access to infrastructure connecting **service facilities** shall be set at the cost that is directly incurred as a result of operating the train service (Article 31.3 - Directive 2012/34/EU)

What does that mean?

Costs related to **infrastructure wear and tear** (maintenance of line) and operation of trains (signalling, dispatching, path allocation, ...), excluding

- Network wide overhead costs, including salaries and pensions
- Interest payable on capital
- Depreciation of information, communication or telecommunication equipment
- Costs related to real estate management, in particular acquisition, selling, dismantling, decontamination, re-cultivation or renting of land or other fixed assets
- Social services, schools, kindergartens, restaurants
- Costs related to acts of god, accidents, service disruptions

Charges of INFRAKOS products/services

Minimum Access Package [5.2]	Track Access to Service Facilities and Supply of Services [5.3]	Additional services [5.4]	Ancillary Services [5.5]
Direct costs	Direct costs	Full costs	Market price

Definition: Directive 2013/32/EU ANNEX II SERVICES TO BE SUPPLIED TO THE RAILWAY UNDERTAKINGS (referred to in Article 12)

Minimum access package [5.2]

Minimum access package of services provided by INFRAKOS comprises all elements of minimum access package of services defined in Art. 52.4.1 of the Law (identical with Appendix II of Directive 2012/34/EC) :

- handling of requests for infrastructure capacity;
- the right to utilise capacity which is granted;
- use of running track points and junctions;
- train control including signalling, regulation, despatching and the communication
- and provision of information on train movement;
- all other information required to implement or operate the service for which capacity has been granted.

Track access to services facilities and supply of services [5.3]

Track access to service facilities and supply of services defined in in Art. 52.4.2 of the Law (identical with Appendix II of Directive 2012/34/EC) comprises:

- use of electrical supply equipment for traction current;
- refuelling facilities;
- passenger stations, their buildings and other facilities;
- freight terminals;
- marshalling yards;
- train formation facilities;
 - storage sidings;
 - maintenance and other technical facilities.

Allocation of direct costs (cost centre approach)

Cost categories

- What type of cost has to be imputed?

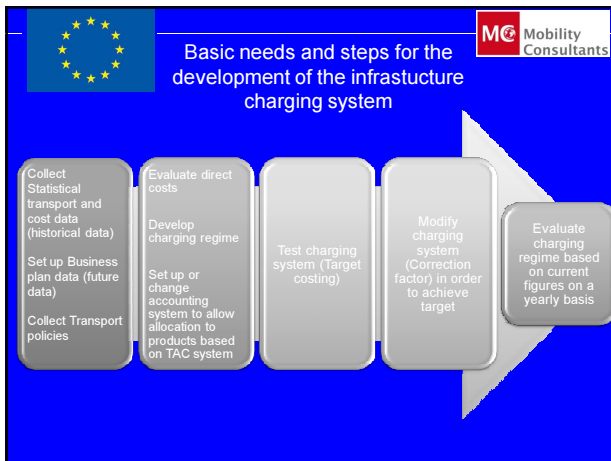
Cost centres

- Where have the costs (categories) occurred?

Product/Service

- To which product/service have the costs to be allocated (attributed)?

Allocation table		examples of services/products	average 2010 - 2012
COST CENTER - A	Costs for railway lines maintenance	Exchange of rails in the railway lines Maintenance of the machines for track maintenance Depreciation of assets of the railway lines	Railway Line 10 Furze - Kocore - F. Elect with length of 64,1 km F. East - West Railway Pirana - Pula and Bayern - Magure with length of 60,1 km allocation based on track length
COST CENTER - B	Costs of traffic operations	Prepare of timetable Other Operational expenditures Salary of the executive staff	
COST CENTER - C	Maintenance costs of signaling telecommunication and energetic equipment	Maintenance of signaling station equipment Maintenance of cables and other telecommunication equipments Depreciation of assets of the signaling and telecom buildings	
COST CENTER - D	Direct costs related to passenger services	Maintenance of the station buildings Depreciation of assets of the station buildings Repairation of the other assets within the stations	



Factors of influence

Statistics and Forecasts

- Transport data
- Transport forecasts
- Financial data
- Financial forecasts
- Available data and their possibility of allocation to products
- Financial support from Government
- Business development and marketing
- Productivity improvement programmes

Kosovo transport policy

- National Programme for Infrastructure (Art. 14 Law)
- Financial support to achieve the above mentioned ideas (Art. 15 Law)
- Participation in the granting of concessions and private public partnership for railway modernization and development (Art. 16)
- Other general objectives such as
 - contribute to environmental protection,
 - support the KOSOVO export and import industry in its aim to stay competitive at a world-wide level (not only EU-level!),
 - avoid discrimination of rail infrastructure against road infrastructure
 - change to modal split from road to rail

EU transport policy

- Directive 2001/14/EC
- Recast (Directive 2012/34/EU)
- Green Books

Example: transparent costs-by-cause principle with environmental incentives - Formula

$$TACp = (Mkmp + Okm + QIT) * km * Lco * Tco * QIN + Mto * Gt + ASF$$

$$TACf = (Mkmf + Okm + QIT) * km * Lco * Tco * QIN + Mto * Gt + ASF$$

Example: transparent costs-by-cause principle with environmental incentives

$$IUCp = (Mkmp + Okm + QIT) * km * Lco * Tco * QIN + Mto * Gt + ASF$$

$$IUCf = (Mkmf + Okm + QIT) * km * Lco * Tco * QIN + Mto * Gt + ASF$$

Access charge category	Reason	Basis
(Mkmp) Maintenance fee passenger (based on trainkm)	Usage-dependent fee component. Train km. Incentive to higher productivity of wagons, promotes maximal use of operational parameters such as weight and length of trains. discourages the transport of empty wagons	Direct maintenance costs (Mkmp + specific passenger infrastructure maintenance)
(Mkmf) Maintenance fee freight (based on trainkm)	Usage-dependent fee component. Train km. Incentive to higher productivity of wagons, promotes maximal use of operational parameters such as weight and length of trains. discourages the transport of empty wagons	Direct maintenance costs
(Mto) Maintenance fee (based on gross tonnekm - gross traction unit weight + gross weight of wagon rake)	To cover the costs for maintenance and renewal of the infrastructure, which arise from wear and tear. The operation of heavy trains result in increased wear and tear, which is therefore more expensive (evaluated in LCC analysis)	Direct maintenance costs
(Okm) Operation fee - operations, capacity allocation, ... (based on trainkm)	Shows optimisation and efficiency in administration and operation	Direct operation costs
(ASF) Additional Service fee	Special service cause additional work and respectively higher costs, furthermore fixed timetables allow optimised maintenance	Average working hours for additional services
(Lco) Line Coefficient	Shows traffic congestion, importance and quality of line (30.4 Recast - reflect the scarcity of capacity)	Type of line (main line, regional lines) based on technical-value/km
(Tco) Type of train Coefficient	Speed of trains is a major factor for increased maintenance (revaluated in LCC analysis)	Train speed (-80 km/h Freight/Regio, -120 km/h Regioexpress, -200 km/h InterCity)

Example: transparent costs-by-cause principle with environmental incentives

$$IUCp = (Mkmp + Okm + QIT) * km * Lco * Tco * QIN + Mto * Gt + ASF$$

$$IUCf = (Mkmf + Okm + QIT) * km * Lco * Tco * QIN + Mto * Gt + ASF$$

Access charge category	Reason	Basis
(QIN) Quality Incentive Coefficient Noise (based on locomotive, DMU, etc.)	Incentive for using new rolling stock (30.5 a. 62.3 Recast - Any such modification of infrastructure charges to take account of the cost of noise effects shall support the retrofitting of wagons with the most economically viable low-noise braking technology available)	Technical Specification Interoperability (TSI), Vehicle Register
(QIT) Quality Incentive Traction (based on locomotive, DMU, etc.)	Incentive for using traction with less wear and tear Traction unit reduction for traction unit Category A Traction unit supplement for traction unit Category C (according to ÖBB charging regime)	Traction units are classified according to the wear and tear they place on the track infrastructure

TAC Kosovo 2014 (Network statement)

Calculation	formula/description	value	unit
1 Mkmp		1,25	EUR/km
2 Mkmf		1,60	EUR/km
3 Mto		0,57	EUR/tonneskm
4 Okm		1,54	EUR/km
5 QIT	QIT Category A = 0 EUR/km QIT Category B = 0 EUR/km QIT Category C = 0,1 EUR/km		
6 Lco	Lco Main line = 1,00 Multiplier Lco Regional line = 0,32 Multiplier		
7 Tco	Tco Freight trains (less than 1000 gross weight) = 1,20 Multiplier Tco Freight trains (more than 1000 gross weight) = 1,00 Multiplier Tco Passenger trains <= 80 km/h = 1,20 Multiplier Tco Passenger trains > 80 km/h = 1,30 Multiplier Tco Passenger trains > 120 km/h = 1,00 Multiplier		
8 QIN	not introduced = 1,00 Multiplier		
9 ASF	ASF for loco paths = 1,20 EUR ASF Special timetable = 1,10 EUR		

	value	unit
Gt	64	km
Mkmp	1.500	tonnes
Mto	1,25	EUR
Mkmf	0,57	EUR
Okm	1,54	EUR
QIT Category B	0,00	EUR
Lco Main line	1,00	Multiplier
Tco Freight trains (less than 1000 gross weight)	1,00	Multiplier
QIN	0,00	EUR
IUC for total trains	1.033,84	EUR
IUC for train/km	16,13	EUR

$$TACp = (Mkmp + Okm + QIT) * km * Lco * Tco * QIN + Mto * Gt + ASF$$

$$TACf = (Mkmf + Okm + QIT) * km * Lco * Tco * QIN + Mto * Gt + ASF$$



Thank you.