Autorità di Regolazione dei Trasporti

Annex A to Decision No 120/2018 of 29 November 2018

Regulatory measures on "Methodologies and criteria to ensure the efficient management of regional rail transport services"

Contents

Definitions

For the purpose of these regulatory measures, the following definitions shall apply:

a) *Authority (ART):* Transport Regulation Authority;
b) *Awarding entity (AE):* public body or delegated entity, that is entrusted with the responsibility of concluding a public service contract with a railway undertaking, along with the management, monitoring, verification and control thereof;
c) *Economic and Financial Plan (EFP*)*:* management planning document attached to the Public Service Contract that includes the time development of economic, capital and financial data and indicators, over the duration of the service contract;
d) *Efficient Cost: efficient operating cost per train*km net of costs for charging and infrastructure access* estimated by the Authority by the econometric methodology described in Annex 1. The efficient cost, that is calculated based on actual cost data broken down by nature, is a parameter to identify the cost-efficiency targets used by the AE for all the methods of contract awarding;
e) *Infrastructure Manager (IM):* entity entrusted with the construction, management and maintenance of the railway infrastructure, including traffic management, control-command and signalling. The tasks of the IM for a network or part of a network may be assigned to different entities, subject to the constraints provided for under the applicable EU legislation and Legislative Decree No 112 of 15 July 2015;
f) *Isolated networks:* networks that are functionally separate from the remaining rail system and are intended for territorial passenger services;
g) *Key Performance Indicator (KPI):* indicator that monitors the development of a business process and provides a benchmark to identify effectiveness and efficiency targets;
h) *Network:* railway infrastructure that is managed by an Infrastructure Manager (IM);
i) *Organisational unit*: grouping of corporate bodies (including persons and activities) of an undertaking (generally known as “Directorate”, “Division” or “Area”), which is assigned with a set of functions and carries out activities aimed at achieving the business targets of the RU.
j) *Plan for Achievement of Regulatory Targets (PART):* planning document attached to the EFP, that is drawn up by the AE and agreed with the RU*,* in case of direct/inhouse awarding, including the effectiveness and efficiency targets (indicators, targets and associated expected performance, time horizons of reference for monitoring and verification of target levels, and context-related factors) and the actions to improve the performance of the Railway undertaking, as provided for herein;
k) *Public Service contract (PSC):* legally binding act confirming the agreement between the Awarding entity and the railway undertaking to entrust to that railway undertaking the management and operation of public passenger transport services subject to PSOs;
l) *Public service obligations (PSO):* obligation as defined by a competent authority in order to ensure the performance of public passenger transport services in the general interest that an operator, if it were considering its own commercial interests, would not assume or would not assume to the same extent or under the same conditions without reward (Regulation (EC) No 1370/2007, Article 2 (e));
m) *Railway line (line):* railway infrastructure connecting at least two locations;
n) *Railway undertaking (RU):* undertaking or group of undertakings providing public passenger transport services by rail and related ancillary and support services on the basis of a public service contract;
o) *Regional services:* transport services the main purpose of which is to meet the transport needs of one or more regions, including a cross-border region;

p) *Regulatory period:* five-year standard period of duration of a public service contract, in which the effectiveness and efficiency targets referred to in the PART and/or in the EFP are set, and at the end of which the economic-financial equilibrium and the target achievement are verified;
q) *Route:* part of railway infrastructure.

Measure 1 – Subject, purpose and scope

1. This regulatory act defines methodologies, criteria and procedures to be applied by awarding entities (AE) to pursue efficiency targets in the management of regional rail transport services, including through regulatory accounting measures aimed at the cost accounting preparation by railway undertakings (RUs) and at the accounting separation of their activities under public service obligations (PSOs) from other activities, as well as of the activities concerning different PSCs.
2. The methodologies, criteria and procedures referred to in the following Measures are aimed at ensuring efficient management, transparency, absence of cross-subsidisation and accessibility of the relevant information, including to ensure adequate remuneration and compensation.
3. The Measures contained herein shall apply to regional rail passenger transport services that are subject to PSOs, and are operated by RUs on the national or interconnected railway network, and are covered by PSCs in accordance with any methods provided for by the law. As for the operation services on an isolated network, only the measures under Title II shall apply.
4. The Measures shall be applied by the AEs, in respect of the methodologies and criteria to define the efficiency targets and of the PSCs' content (including in terms of reporting obligations by the RU), and by the RUs holding the PSC, in respect of regulatory accounting and accounting separation.
5. The Measures referred to in Title I concerning methodologies, criteria and procedures to pursue efficient management shall apply to the PSCs awarded with a tender procedure for which, in the case of open tendering, the tender notice is published after the date of entry into force of this Decision, and, in the case of restricted tendering, letters of invitation are sent after this date. With regard to direct or in-house awarding, the measures shall apply to PSCs for which the decision approving the awarding is published after the date of entry into force of this Decision. The Measures shall also apply to PSCs that are already concluded on the date of entry into force of this Decision in the following three cases:
   a) where, as part of the (annual, three-year or five-year) mid-term review of the operating results, a review is carried out, if provided for by law or by contract, two years after the entry into force of these Measures, due to a deviation of the net result provided for in the Economic and Financial Plan (EFP) and the final net result that is equal to or above ± 5 % of the operating revenue reported in the EFP [(Net Result EFP – Final net result)/Operating Revenue EFP ≥ ± 5 %];
   b) where, after a two-year period following the entry into force of this Decision, the conditions for the conclusion of an addendum are met, as required by the PSC;
   c) after five years from the date of entry into force of this Decision, if the cases referred to in paragraphs (a) and (b) have not occurred, where the PSC, among the prerequisites for the contract revision, provides for the compliance with regulatory or administrative provisions or with requirements by competent entities or authorities that entail new requirements for service operation.
6. The Measures referred to in Title II concerning regulatory accounting and accounting separation shall apply as of the date of entry into force of this regulatory act, which corresponds to the publication date of the relevant Decision.

Title I - Methodologies, criteria and procedures for efficient management

Measure 2 - Criteria and procedures for pursuing efficiency in the award of regional rail passenger services

1. The management of services as awarded in accordance with the procedures laid down by law (competitive tendering, direct and in-house award), which is divided into regulatory periods of up to 5 years, meets efficiency criteria that are satisfied during the awarding phase of the service and/or throughout the duration of the PSC, pursuant to Regulation (EC) No 1370/2007, as amended by Regulation (EU) No 2338/2016 and Article 48 (6) (a) and (b) of Decree-Law No 50 of 24 April 2017.
2. The regulatory periods start from the first year of validity of the PSC or from that of its revision.
3. The EFP attached to the PSCs that have been awarded pursuant to the procedures provided for by the law, extends over the years of duration of the awarding, taking into account the gradual improvement in effectiveness and efficiency, as defined during the awarding phase of the PSC in the case of competitive tendering, or, in the case of direct or in-house awards, in a planning document that is attached to the PSC and to the EFP, i.e. the Plan for Achievement of Regulatory Targets (PART) to be drawn up for each regulatory period in accordance with the accounting criteria laid down in Title II.
4. In the case of <u>direct and in-house awards:</u>
   a) for the purpose of drawing up the PART and EFP that are attached to the PSC to be awarded, and in case of the EFP's revision or update, the AE requests the Authority to provide the following relevant parameters, which shall be made available within 15 days of receipt of the request, unless suspended up to a maximum of 60 days:
      i) percentage value of the efficiency improvement of the operating cost, which is determined based on the methodology set out in Annex 1, to be taken as a benchmark, by taking into account all context-related factors, for setting the efficiency targets;
      ii) mean, minimum and maximum values of the indicators included in Tables A and B of Annex 2, as referred to the last five financial years, where available, for the relevant PSC and for the set of PSCs which are considered in the Authority's database, to be taken as benchmarks for setting the targets related to effectiveness and efficiency.
   b) in order to improve the management efficiency and effectiveness, the PART identifies for the first regulatory period and for the following years throughout the whole duration of the contracted service:
      i) a set of efficiency and effectiveness indicators (KPIs) corresponding to at least those referred to in Annex 2 – including the efficient operating cost indicator, as determined based on the methodology set out in Annex 1 – that are consistent with the characteristics of the awarded service, are aimed at measuring the performance in the different management areas and any planned investments;
      ii) the target levels (targets) of the indicators referred to in paragraph (i) above;
      iii) the indicators referred to in paragraph (i) set out in Tables A and B of Annex 2, which are wholly or partly attributable to the RU's liability, based on grounds which also consider the predefined risk allocation between AE and RU under the PSC, as described in the PART;
      iv) the context-related factors referred to in paragraph 8 that affect the achievement of the aforementioned targets, specifying the reasons for the choice also in terms of modes and extent;
      v) the planned investments for rolling stock and infrastructure, including under contractual agreements with the IM, that impact on the services provided to users;
      vi) the time horizons of reference for achievement and monitoring of the targets referred to under the points above.

c) the AE includes in the PSC appropriate provisions aimed at making the RU liable for the achievement of the target level that is predetermined for the indicators referred to under point (b) (iii);

d) the compensation to cover the PSOs in the EFP attached to the PSC is determined in accordance with the criteria laid down in Article 13 of Decision No 49/2015, as amended, and in compliance with the regulatory accounting criteria laid down in Title II.

5. In the case of contracts with a tendering procedure:
   a) the AE requests to the Authority in due time for publication of the tender notice the following relevant parameters pertaining to the existing PSC, taking into account all context-related factors; these shall be provided within 15 days of receipt of the request, unless suspended up to a maximum of 60 days:
      i) percentage value of the efficiency improvement of the operating cost, which is determined based on the methodology set out in Annex 1, to be taken as a reference for setting the efficiency targets;
      ii) mean, minimum and maximum values of the indicators included in Tables A and B of Annex 2, referred to the last five financial years, where available, for the relevant PSC and for the set of PSCs considered in the Authority's database, to be taken as benchmarks for setting the targets related to effectiveness and efficiency.
   b) in order to improve the efficiency and effectiveness of management, the AE shall prepare a simulated EFP as a basis for the assessment of the offers received (simulated EFP) and determines the contract basis and the adjudicating criteria, by taking as a reference, *inter alia,* the efficient operating cost (referred to in Annex 1), the values of the existing contract, and the context-related factors affecting the management performance referred to in point 8 below, including in terms of modes and extent;
   c) the compensation to cover the PSOs contained in the simulated EFP is determined in accordance with Measure 12 of ART decision no. 49/2015, as amended, and in compliance with the regulatory accounting criteria laid down in Title II.
6. With regard to the values referred to under paragraphs 4 and 5, the Authority involves the AE through appropriate forms of participation to ensure both a transparent procedure and the EA's acquaintance of the elements that are useful to carry out the activities under its responsibility.
7. Prior to the conclusion of the PSC to be awarded directly or in house, its updating or revision, or publication of the tender documents in the case of competitive tendering, the AE transmits the PART referred to in paragraph 4 and/or the EFP referred to in paragraphs 4 and 5, taking into account the deadline for allowing the Authority to provide comments within 45 days of their receipt.
8. For all contract awarding (competitive tendering, direct and in-house award), in order to identify the targets, the AE shall, *inter alia*, take into account the planned investments for rolling stock and infrastructure, including in the context of contractual agreements with the IM, and the following context-related factors, considering the regulations laid down in Decision no. 48/2017:
   a) territorial, socio-economic and time-related characteristics of demand;
   b) territorial characteristics of supply within each mobility area of reference for the services to be awarded;
   c) infrastructure characteristics, in particular with regard to the type of network electrification system, its tortuosity and gradient;
   d) characteristics of existing rolling stock, such as age and percentage of renovated material (revamping);
   e) characteristics of the service to be awarded, such as commercial speed, average line length, share of train-km outside the regional borders, percentage of trains at peak hours, density of stations and, for the quality delivered, both deviation from scheduled time and regularity.

Measure 3 - Reporting obligations in public service contracts

1. By taking into account the provisions on the minimum content of PSCs under Measure 17 of Decision no. 49/2015, as amended, the AE shall regulate in the PSC, timing and modes of transmission of the regulatory accounting formats referred to in Annex 3 and of the Reports referred to in paragraphs 10 and 11 of Measure 4 by the RU and the related penalties in case of non-compliance.
2. In order to determine the timing referred to in paragraph 1 above, account is taken of the provisions in paragraph 9 of Measure 4 below.

Title II — Regulatory Accounting Standards

Measure 4 - Cost accounting and accounting separation obligations of RUs

1. The RU shall adopt the regulatory accounts formats (economic accounts, balance sheets, technical sheets and matrices) referred to in Annex 3 and allocate, in accordance with the criteria set out below, the economic and capital components, consistently with the operating budget, to each passenger service contract which is subject to public service obligations (PSO). Should the RU hold more than one PSC, the regulatory accounting statements must be provided by differentiating between regional PSO services, national PSO and other activities.
2. The regulatory accounting formats shall differentiate, in any case, between the provision of regional rail passenger transport subject to PSO and the remaining activities.
3. If the RU manages the services concerned on an isolated rail network, including jointly with those on an interconnected network, the economic and capital components of the network shall be set out in an appropriate manner, by using the relevant regulatory accounting formats.
4. For regulatory accounting purposes, the economic and capital components of the service management concerning each PSC may:
   a) directly and exclusively pertain to the cost centre represented by the PSC itself;
   b) refer to more PSCs; in this case they should be allocated based on specific drivers.
5. The RU shall provide for direct and exclusive allocation to the economic and capital components that, based on documentary evidence, may be objectively and exclusively allocated to the relevant PSC.
6. For the economic and capital components pertaining to a set of PSCs, the allocation to each of them shall be carried out in an objective and analytical manner, based on drivers chosen for their suitability to measure resource consumption or asset allocation under a specific PSC. Drivers used to enhance internal business transactions (transfer prices) shall be updated each year and be enough structured so as to adequately reflect the actual characteristics of the activities that are subject to internal transactions. The drivers used are described in every methodological and quantitative detail in the explanatory notes of the regulatory accounts.
7. The economic components (including indirect costs linked to the central structure) and capital components that are attributable to the organisational units of the RU, as well as those that are not otherwise attributable to the different PSCs based on relevant and objective drivers, are allocated to the cost centres in proportion to the amounts that were previously allocated both directly and pro-quota.
8. Each of the PSC may be generally attributed only the economic and capital components that, on a management accounting basis, belong to the ordinary production process.
9. Every year the RU completes the regulatory accounting and technical data formats for the previous year, referred to under Annex 3. This shall be made electronically within 60 days of the financial statements' approval, by using the formats made available online by the Authority.
10. An explanatory report to be transmitted together with the formats filled in according to Annex 3, in the manner described above, supplements the regulatory accounting requirements.
11. The regulatory accounting formats and the explanatory report shall be accompanied by a certificate of an audit firm or a statutory auditor, that is independent from the contracting RU and is identified pursuant to paragraph 12, to attest that the formats comply with the criteria laid down herein. The documents referred to in this paragraph shall be sent both to the Authority within the time limit under paragraph 9, to feed the Authority's database and to allow its monitoring, and to the AE holding the PSC.
12. The audit firm or statutory auditor shall be identified by the RU on its own responsibility and at its own expense for a maximum of three years, on the basis of appropriate professional skills and independence

requirements, also in respect of the entity certifying the RU's financial statements. For PSCs with a value of less than EUR 7,5 million a year, the entity responsible for certifying the regulatory accounts of the relevant RU can be the same as the one that certifies the financial statements.

Measure 5 – Technical reporting obligations of the IM

1. The railway infrastructure manager (IM) whose network is used for the provision of regional rail passenger services that are characterised by PSO shall properly note for each PSC the technical data referred to in Table 7 of Annex 3, and make them available to the RU and AE, as provided for in the network statement, where available, or in other documents drawn up by the IM. These data shall be also sent to the Authority on an annual basis, by completing the online formats referred to in Annex 3, that will be made available by the Authority every year between April and May, and that generally refers to the preceding financial year, with a time limit for its completion of no less than 30 days.
2. For the above-mentioned purpose, the IM shall adjust its procedures to collect the relevant information when capacity is requested, and by ensuring appropriate supervision in the operational management.
3. With regard to each PSC, in the invoicing to the RU the IM provides separate evidence of the access charges to railway infrastructure, service facilities and rail-related services, as well as to ancillary and additional services as defined, for networks other than those referred to in Article 1 (2) of Legislative Decree No 112 of 15 July 2015, Article 13 (9) and (11) of the same Legislative Decree, by specifying the reference period.

Annex 1 - Methodology applied by the Authority to define efficiency targets

In line with the analyses carried out by the Authority in the motorway sector (Decision no. 70/2015 and Decision no. 119/2017), the efficiency targets for the management of regional rail transport services subject to PSOs are defined based on the Stochastic Frontier Analysis (SFA). The operating cost function[1] is identified as follows:

$$C = f(y, p_l, p_m, p_o, H)$$

where:

1. ***C*** = **operating production cost**, net of the cost for charging and access to infrastructure and penalties. This variable is calculated as the sum of the following cost items:
    - cost of labour: cost of operating staff (driving, crew and shunting) and other employees;
    - cost of ordinary maintenance: cost of staff assigned to ordinary maintenance + cost of internal and external ordinary maintenance;
    - other operating costs: traction costs (electricity and fuel) + cost of acquisition of other services from third parties (excluding lease of rolling stock and maintenance) + other operating costs;
2. ***y*** = **output** measured in terms of (total) train-km travelled per year;
3. $\mathbf{P}_j$ (j = l, m, o) = **input production prices** including:
    - p_l, i.e. labour costs calculated as total annual wages (except the cost of maintenance staff) divided by the number of employees (measured in terms of corresponding full-time equivalent resources);
    - p_m, i.e. ratio of maintenance cost to number of train hours per year;
    - p_o, i.e. price of other factors given as the ratio of other operating costs divided by the number of train hours per year.
4. ***H*** = carrier including a set of **control variables**, such as:
    - number of coaches (sum of units composing trains);
    - commercial speed (km/h) in traffic;
    - % of electrified lines in served area;
    - train-km outside the region/total movements of train-km;
    - average age of fleet;
    - percentage of renewed material (revamping);
    - average age of fleet corrected for renewal;
    - percentage of trains in peak hours (number of trains in peak hours/number of daily trains);
    - average route length (train-km travelled/number of train movements);

[1] Based on literature review (e.g. Wheat, P. and Smith, A.S., 2015. Do the usual results of railway to scale and density in the case of heterogeneity in outputs? A hedonic cost function approach. J*ournal of Transport Economics and Policy* (JTEP), 49 (1), pp. 35-57), it was decided to limit the application of the SFA to the calculation of the efficiency of operating costs alone. In fact, capital costs (in the form of investments) show a highly erratic trend (with sudden changes in connection with the purchase of rolling stock). Since it was necessary to obtain efficiency rates to be applied to the costs within the perimeter of the service contract, covered by consideration, only the depreciation charges for the RU's self-financed rolling stock should be considered; on the other hand, by estimating the total costs only on the basis of the depreciation for self-financed rolling stock, a railway undertaking could have been considered more efficient simply because the rolling stock was wholly or partially financed from sources other than the public sector.

- timetable deviation due to railway undertaking only (delay time/travelling time (min));
- train regularity due to railway undertakings only (number of train movements/number of trains planned);
- density of stations (number of total stations /network length);
- % of trains-km movements on electrified network (annual train-km movements only on electrified network/annual train-km movements);
- network tortuosity (km of network length with curves having a radius of less than 300 m);
- network gradient (km of network length with a gradient higher than 25 ‰ (km)).

In addition, the following dichotomic variables have been included: '*incumbent*' to consider the peculiarities related to being a single historical undertaking; *"out"* and "*in*" to take account of the "internal transactions" in the case of neighbouring territorial directorates of the same railway undertaking serving more than one service contract (the first is related to the PSC that "yields" production, the second to the PSC that "receives" production). Further variables were tested, e.g. km of network length used for service production, Herfindahl-Hirschman Index applied to rolling stock, % of electric/total rolling stock, density of regional resident population and regional GDP per inhabitant. These variables were not used in the estimates, due, *inter alia,* to the lack of homogeneous data and the high correlation with other variables in the specifications, but they might be included in the analyses that will be carried out when updating the dataset.

All the estimates were replicated by adding time dummies in order to capture any cyclical events.

The variables listed above have been included by iteration so as to not have highly correlated variables in the same regression and to better identify the cost function of the sector.

As for the functional form, the Cobb-Douglas function was adopted[2], with the following expression[3]:

$$\ln\left(\frac{C}{P_L}\right) = B_0 + B_Y \ln Y + B_m \ln\left(\frac{P_m}{P_L}\right) + B_o \ln\left(\frac{P_o}{P_L}\right) + \gamma_2 H + u + v$$

with *v* = error term and u = company inefficiency.

With regard to the methodology used, the time invariant model (Pitt and Lee, 1981)[4] and the true random effect (TRE) model (Greene, 2005)[5] were applied. By the latter model, it is further possible to separate the time-varying inefficiency from the time-constant unobserved heterogeneity.

The distance of a service contract from efficiency was calculated as the average of the values derived from time invariant and true random effect models.

[2]The Cobb Douglas function, unlike the Translogarithmic, is simpler and avoids the issue of multicollinearity with the increasing variables used (typical of Translog specification). Moreover, since the purpose of this Decision is not to assess the optimal size of the service, the implementation of a more comprehensive model such as the Translogarithmic was not considered as appropriate.

[3]The monetary variables were divided by the cost of labour to ensure the homogeneous linear constraint. In addition, all variables were standardised by the median and, where possible and/or useful for the interpretation of coefficients, transformed into a natural logarithm. Monetary values were discounted to 2011, by applying the Harmonised Index of Consumer Prices (HICP).

[4]PITT, M.M. and Lee, L.F., 1981. The measurement and sources of technical ineffectiveness in the Indonesian weaving industry. *Journal of development economics*, 9 (1), pp. 43-64

[5]GREENE, W., 2005. Re-considering heterogeneity in panel data estimators of the stochastic frontier model. *Journal of Econometrics,* 126 (2), pp. 269-303.

Annex 2- Minimum Set of Indicators (KPI)

Table A - Operating efficiency indicator

OPERATING EFFICIENCY INDICATOR		
Name	**Unit**	**Notes**
Operating cost per train-km	Operating costs/train-km	Operating costs include staff costs, cost of maintenance, traction cost, acquisition cost of services from third parties, other operating costs. Infrastructure access costs, penalties and contractual premiums and rolling stock leasing costs are excluded.

Tables B — Effectiveness and efficiency indicators

EFFICIENCY - COSTS		
Name	**Unit**	**Notes**
Operating cost per seat-km	Operating costs/seat-km	Operating costs include staff costs, cost of maintenance, traction cost, acquisition cost of services from third parties, other operating costs. Infrastructure access costs, penalties and contractual premiums and rolling stock leasing costs are excluded.
Operating cost per passenger-kilometre	operating costs/pax-km	
Maintenance cost per train service hours	Maintenance costs/train service hours	Maintenance costs include maintenance staff.
Maintenance costs per train-km	Maintenance costs/train-km	
Maintenance costs per operating costs	maintenance costs/operating costs	

EFFICIENCY - REVENUES		
Name	**Unit**	**Notes**
Revenue from traffic per train km	traffic revenue/train-km	The revenues to be reported are the yearly final figures in euro of the proceeds from the sale of travel tickets, except VAT.
Revenue from traffic per seat-km	traffic revenue/seat-km	
Revenue from traffic per passenger-km	traffic revenue/pax-km	
Total revenue per train-km	total revenue/train-km	Total revenues derive from the sum of service contract fees, revenue from traffic and others.
Total revenue per seat-km	total revenue/seat-km	
Total revenue per passenger-kilometer	total revenue/pax-km	
Coverage Ratio	traffic revenue/operating costs	

PRODUCTIVITY		
Name	**Unit**	**Notes**
Total costs of labour by total staff number	total cost of labour/no. total staff	Total cost of labour is given by the sum of labour costs of operating staff, maintenance staff and other staff. Total staff is given by the sum of operating staff, maintenance staff and other staff. Staff is measured in FTE units.
Train-km by operating staff number	train-km/no. operating staff	
Train-kilometers by total staff number	Train-km/no. total staff	

EFFECTIVENESS		
Name	**Unit**	**Notes**
Punctuality (RU's accountability only)	no. of trains running on time/number of train movements	Number of trains with delay of less than 5 minutes (RU's accountability only) in relation to the number of actually running trains
Deviation from schedule (RU's accountability only)	delay time/travel time	Time is expressed in minutes
Train regularity (RU's accountability only)	no. train movements/no. trains planned	Number of trains actually running in the reference year in relation to the number of scheduled trains.

Table C — Monitoring indicators

MONITORING		
Name	**Unit**	**Notes**
Use of Service	Pass-km/(demand to be served in the mobility area where the award is located)	An appropriate measure of the demand to be served in the mobility area where the award is located, is given by "potential demand" as identified in accordance with the methodology laid down in Article 48/2017. In the absence of this information, the denominator will be the number of residents in the autonomous Region/ Province of reference.
Adequacy of Service	Seat-km/(demand to be served in the mobility area where the award is located)	
Commercial speed (theoretical)	Annual train- km planned/annual train running hours based on operating schedule	Commercial speed of trains calculated on the travelling time provided for in the operating schedule.
Commercial speed (actual)	total annual train-km/actual train running hours	Commercial speed actually achieved by train movements, inclusive of the time deviations from operating schedule.
INVESTMENT		
DEGREE OF COMPLIANCE (%)		
Renewal of rolling stock (purchase of new rolling stock and/or extra-ordinary maintenance activities of *revamping* and *restyling*) - RMR	(value of RMR investments made/value of RMR investments planned) * 100	"Degree of compliance" refers to the investment plan or group of plans concerning the same type, in terms of technical specifications of the rolling stock and of timing of implementation of the investments, as described in the construction timetable referred to in the "Investment Plan" (annexed to the PSC). Investment "value" refers to the value in euro (EUR).
Use of new information technology for production processes -ICT	(value of ICT investments made/value of ICT investments planned) * 100	
Modernisation or construction of maintenance facilities-INF	(value of INF investments made in INF/value of planned INF investments) * 100	

Annex 3- Accounting reporting schemes

Table 1 - Profit and loss account for PSO rail services (and reconciliation with financial statement)

PROFIT AND LOSS ACCOUNT FOR RAIL TRANSPORT SERVICES - RECONCILIATION WITH FINANCIAL STATEMENT							
RAILWAY UNDERTAKING			Regional Rail Passenger Transport subject to PSO	National Rail Passenger Transport subject to PSO	OTHER (please specify in the notes)	Other activities of the undertaking: 1) Passenger rail transport in a liberalised market 2) Freight transport 3) Other liberalised commercial activities	TOTAL
REFERENCE YEAR							
1.1	Revenue from traffic						
1.2	Revenue from fees of Local Public Transport Service Contract						
1.3	Other revenue (except financial income)						
1	Total REVENUE						
2.1	Costs of raw material, consumables and freight						
2.2	Costs for third party services						
2.3	Costs for use of third party assets						
2.4	Cost of staff						
2.5	Cost for infrastructure management						
2.6	Management costs						
2.7	Other charges						
2	Total COSTS						
3 = 1-2	Gross operating profit (EBITDA)						
4.1	Depreciation of tangible fixed assets						
4.2	Depreciation of intangible fixed assets						
4.3	Impairment						
4.4	Provisions (for risks ...)						
4	Total non-cash costs						
5 = 3-4	Net operating income (EBIT)						
6.1	Financial income (+)						
6.2	Financial charges (-)						
6	Total financial management						
7 = 5+6	Earnings before tax						
8	Taxes						
9 = 7-8	Operating profit/loss						

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Table 2 - Balance sheet for PSO rail services (and reconciliation with financial statement)

BALANCE SHEET FOR RAIL TRANSPORT SERVICES - RECONCILIATION WITH FINANCIAL STATEMENT								
RAILWAY UNDERTAKING			Regional Rail Passenger Transport subject to PSO	National Rail Passenger Transport subject to PSO	OTHER (please specify in the notes)	Other activities of the undertaking: 1) Passenger rail transport in a liberalised market 2) Freight transport 3) Other liberalised commercial activities	TOTAL	NOTES
REFERENCE YEAR								
	ASSETS							
1.1	**Tangible fixed assets**							
1.2	**Intangible fixed assets**							
1.3	**Financial fixed assets**							
1.4	**Other (please specify in the notes)**							
1	**Total NON-CURRENT assets**							
2.1	**Current assets**							
2.2	**Cash and equivalents**							
2.3	**Other (please specify)**							
2	**Total CURRENT assets**							
3	**Accruals and pre-payments**							
4 = 1+2+3	**Total ASSETS**							
	LIABILITIES							
5.1	**Owners' equity**							
5.1.1	*equity*							
5.1.2	*legal and statutory reserves*							
5.1.3	*other reserves*							
5.1.4	*total profit/loss*							
5.2	**Provisions for risks and charges**							
5.3	**Employees' benefits (TFR)**							
5.4	**Long- and medium-term borrowings**							
5.4.1	*bonds payable*							
5.4.2	*borrowings and other medium- and long-term liabilities*							
5.5	**Other** *(please specify in the notes)*							
5	**Total NON-CURRENT liabilities**							
6.1	**Current liabilities**							
6.1.1	*trade payables*							
6.1.2	*tax and social security payables*							
6.2	**Short-term borrowings**							
6.3	**Other** *(please specify in the notes)*							
6	**Total CURRENT liabilities**							
7	**Accruals and deferred income**							
8 = 5+6+7	**Total LIABILITIES**							

Autorità di Regolazione dei Trasporti

Table 3 - Profit and loss account for PSC (on all types of network)

PSC		AWARDING ENTITY	

PROFIT AND LOSS ACCOUNT PSC - SCHEME FOR PASSENGER TRANSPORT SERVICES ON RAILWAY NETWORK

RAILWAY UNDERTAKING			Passenger rail transport subject to PUBLIC SERVICE OBLIGATIONS					TOTAL	NOTES
			SERVICES ON INTERCONNECTED NETWORK		SERVICES ON ISOLATED NETWORK		OTHER (pease specify in the notes)		
REFERENCE YEAR			Direct	Indirect	Direct	Indirect			
1.1	**Revenue from traffic**	X							
1.1.1	*single tickets*	X							
1.1.2	*daily, multi-day and weekly tickets*	X							
1.1.3	*monthly and annual subscriptions*	X							
1.1.4	*compensation for reduced tariffs*	X							
1.1.5	*additional revenue (penalties…)*	X							
1.1.6	*other (please specify in the notes)*								
1.2	**Revenues from fees of Local Public Transport Service Contract**	X							
1.2.1	*transport services (including collective agreement contributions)*	X							
1.2.2	*infrastructure management*	X							
1.2.3	*charges for consultation, verification and monitoring of service levels (art. 2, para 461,*								
1.2.4	*mandatory (safety adjustments…)*								
1.2.5	*other (please specify in the notes)*								
1.3	**Other revenue (except financial income)**	X							
1.3.1	*rentals of immovable properties to third parties for commercial purposes*								
1.3.2	*rental of advertising space to third parties*								
1.3.3	*marketing activities (exhibitions, gadget sales, books …)*								
1.3.4	*atypical commercial operation (tourist services, historical routes …)*								
1.3.5	*sale/rental of rolling stock to third parties*								
1.3.6	*other commercial activities included in the PSC (parking management…)*								
1.3.7	*other (please specify in the notes)*								
1	**Total REVENUE**								
2.1	**Costs of raw materias, consumables and goods**								
2.1.1	*motor fuel*	X							
2.1.2	*spare parts and other material for rolling stock maintenance/repair used in the PSC*								
2.1.3	*other (please specify in the notes)*								
2.2	**Costs for third-party services**	X							
2.2.1	*charges/tolls for use of rail infrastructure (net of any penalties)*	X							
2.2.2	*rail electric traction*	X							
2.2.3	*stabling/parking*								
2.2.4	*oursourced maintenance/repair of rolling stock used in the PSC*	X							
2.2.5	*insurance policies (third-party motor liability, third-party liability, fire and theft…)*								
2.2.6	*bus replacement service*								
2.2.7	*other services (plase specify in the notes)*								
2.3	**Costs for use of third party assets**								
2.3.1	*rental of immovable properties*								
2.3.2	*rental/leasing of rolling stock*								
2.3.3	*other assets (please specify in the notes)*								
2.4	**Cost of staff**	X							
2.4.1	*drivers, train crew, staff assigned to rolling stock movement*	X							
2.4.2	*staff assigned to rolling stock deposit and maintenance*	X							
2.4.3	*administrative staff*	X							
2.4.4	*staff assigned to infrastructure (management, maintenance …)*	X							
2.4.5	*other (please specify in the notes)*								
2.5	**Infrastructure management costs (other than 2.4.4)**	X							
2.6	**Management costs**	X							
2.6.1	*Board of Directors, Board of Auditors, Auditor*	X							
2.6.2	*executives (including independent body for performance appraisal)*	X							
2.6.3	*professional advice (law firms…)*								
2.6.4	*other (please specify in the notes)*								
2.7	**Other charges (other than items A.1 e A.2)**								
2	**Total COSTS**								
3 = 1-2	**Gross operating profit (EBITDA)**								
4.1	**Depreciation of tangible fixed assets**								
4.1.1	*self-financed rolling stock*								
4.1.2	*self-financed depots*								
4.1.3	*other assets instrumental to the self-financed transport service*								
4.1.4	*capitalised maintenance (rolling stock revamping, cyclical maintenance)*								
4.1.5	*other (please specify in the notes)*								
4.2	**Depreciation of intangible fixed assets**								
4.3	**Impairment**								
4.4	**Provisions**								
4.4.1	*risks*								
4.4.2	*deferred expenses (cyclical maintenance, collective agreement adjustments, …)*								
4.4.3	*other (please specify in the Notes)*								
4	**Total non-cash costs**								
5 = 3-4	**Net operating income (EBIT)**								
6.1	**Financial income (+)**	X							
6.2	**Financial charges (-)**	X							
6	**Total financial management**								
7 = 5+6	**PSC Performance**								

NB: **All operating costs referred to under item 2 (...) shown in the table shall be net of capitalized costs.**

X = information already requested by the Local Public Transport Monitoring Unit of the Ministry of Infrastructure and Transport.

	Other information						
A.1	Refunds/compensation paid to users						
A.2	Penalties imposed by the Awarding Entity						
A.3	Depreciation of not self-financed rolling stock						
A.4	Depreciation of tangible fixed assets not self-financed workshop/depot materials						
A.5	Depreciation of not self-financed rail infrastructure network						
A.6	Depreciation of other not self-financed infrastructure elements (stations, stops,…)						

Table 4 - Balance Sheet for PSC (on all types of network)

PSC		AWARDING ENTITY				
BALANCE SHEET PSC - SCHEME FOR LOCAL PUBLIC TRANSPORT SERVICES ON RAILWAY NETWORK						
RAILWAY UNDERTAKING		**Passenger rail transport subject to PUBLIC SERVICE OBLIGATIONS**			**TOTAL**	**NOTES**
REFERENCE YEAR		**SERVICES ON INTER-CONNECTED NETWORK**	**SERVICES ON ISOLATED NETWORK**	**OTHER (please specify in the notes)**		
	ASSETS					
1.1	**Tangible fixed assets**					
1.1.1	*rolling stock*					
1.1.2	*depots*					
1.1.3	*rail infrastructure network*					
1.1.4	*other infrastructure elements (stations, stops,…)*					
1.2	**Intangible fixed assets**					
1.2.1	*patents, licences and trademarks*					
1.2.2	*goodwill*					
1.3	**Financial fixed assets**					
1.3.1	*shareholdings*					
1.3.2	*medium- and long-term receivables*					
1.3.3	*investments*					
1.4	**Other** *(please specify in the notes)*					
1	**Total NON-CURRENT assets**					
2.1	**Currrent assets**					
2.1.1	*inventories (raw material, consumables …)*					
2.1.2	*trade receivables*					
2.1.3	*tax and social security receivables*					
2.1.4	*short-term financial assets*					
2.2	**Cash and equivalents**					
2.3	**Other (please specify)**					
2	**Total CURRENT assets**					
3	**Accruals and prepayments**					
4 = 1+2+3	**Total ASSETS**					
	LIABILITIES					
5.1	**Owners' equity**					
5.2	**Provisions for risks and charges**					
5.3	**Employees' benefits (TFR)**					
5.4	**Long- and medium-term borrowings**					
5.4.1	*bonds payable*					
5.4.2	*borrowings and other medium- and long-term liabilities*					
5.5	**Other** *(please specify in the notes)*					
5	**Total NON-CURRENT liabilities**					
6.1	**Current liabilities**					
6.1.1	*trade payables*					
6.1.2	*tax and social security payables*					
6.2	**Short-term borrowings**					
6.3	**Other** *(please specify in the notes)*					
6	**Total CURRENT liabilities**					
7	**Accruals and deferred income**					
8 = 5+6+7	**Total LIABILITIES**					
	Other information					
B.1	Self-financed Net Invested Capital					
B.2	WACC (%)					
B.3	**Return on capital**					
B.4	Grants for expenditure on plant and equipment for rolling stock					
B.5	Grants for expenditure on infrastructure					
B.6	Capital increase for plant upgrading					
B.7	Fixed assets of not self-financed rolling stock					
B.8	Fixed assets warehouse/depot materials					
B.9	Not self-financed rail infrastructure network					
B.10	Other not self-financed infrastructure elements (stations, stops, …)					

Table 5 - RU Technical Sheet (on all types of network)

AWARDING ENTITY			PSC	
RAILWAY UNDERTAKING			YEAR	
Technical data concerning regional rail services			**UM**	**Key**
General information on PSC		date of conclusion of PSC	-	date of conclusion of the PSC in force in the year of reference
		date of expiry of PSC	-	date of expiry of the PSC (if the PSC has been extended, please include the extended deadline)
		type of PSC	0/1	[0 = net cost; 1 = gross cost] please indicate 0 if the PSC is "net cost", i.e. when it is a service concession; 1 if the PSC is "gross cost", i.e. when it is a service contract.
		awarding procedure	0/1	[0 = direct or in-house award; 1 = award with tendering procedure] please indicate 0 if it is a direct award; 1 if it is an award with tendering procedure
technical data on input	**Staff**	staff of operating services	no.	number of annual average FTE (full time equivalent) employees assigned to driving, train crew and rolling stock movement
		staff of maintenance services	no.	number of annual average FTE (full time equivalent) employees assigned to maintenance, control and cleaning
		other staff	no.	number of annual average FTE (full time equivalent) employees assigned to administration, purchasing, marketing and other (ICT ...)
		no. of staff recruited with a public transport workers' contract	no.	percentage of staff recruited with a public transport workers' contract as expressed in the range 0-1 (e.g. if 50% of the staff is contracted with a public transport workers' contract, indicate 0.5); consider staff in terms of annual average FTE.
		time of ordinary and extraordinary maintenance	hours	total annual hours for ordinary and extraordinary maintenance by in-house staff
technical data on input	**Rolling stock**	ordinary material - electric - locomotive	no.	quantity of rolling stock, as defined in the "RU technical sheet rolling stock" (Table 8)
		average age: ordinary material - electric - locomotive	years	average age, expressed with two decimal places, of vehicles of the same type (age = number of months divided by 12; any fraction of a month counts as a whole month)
		ordinary material - diesel - locomotive	no.	ditto
		average age: ordinary material - diesel - locomotive	years	ditto
		ordinary material - dual power-set - locomotive	no.	ditto
		average age: ordinary material - dual power-set - locomotive	years	ditto
		ordinary material - driving van trailer (DVT)	no.	ditto
		average age: ordinary material - driving van trailer (DVT)	years	ditto
		ordinary material - trailer	no.	ditto
		average age: ordinary material - trailer	years	ditto
		lightweight material - electric - railcar	no.	idem
		average age: lightweight material - electric - railcar	years	ditto
		lightweight material - diesel - railcar	no.	ditto
		average age: lightweight material - diesel - railcar	years	ditto
		lightweight material - dual power-set - railcar	no.	ditto
		average age: lightweight material - dual power-set - railcar	years	ditto
		lightweight material - electric - motor coach	no.	ditto
		average age: lightweight material - electric - motor coach	years	ditto
		lightweight material - diesel - motor coach	no.	ditto
		average age: lightweight material - diesel - motor coach	years	ditto
		lightweight material - dual power-set - motor coach	no.	ditto
		averge age: lightweight material - dual power-set - motor coach	years	ditto
		lightweight material - trailer	no.	ditto
		average age: lightweight material - trailer	years	ditto
		non-existing/existing revamped rolling stock	0/1	[0: non-existing; 1: existing] (only "revamping", no cyclical maintenance)
		non-existing/existing rolling stock purchased with public funds	0/1	[0: non-existing; 1: existing]
		non-existing/existing vehicle maintenance workshops	0/1	[0: non-existing; 1: existing]

Table 5 - RU Technical Sheet (on all types of network) (continued)

technical data on output	national or interconnected network	seats	no.	annual total number of seats supplied
		seat-km	seat-km	annual total number of seat-km supplied
		total scheduled trains	no.	number of annually scheduled trains
		total actual trains	no.	number of actual train movements in the year of reference
		scheduled train-km	train-km	annual total train-km scheduled
		scheduled train-km (on electrified network only)	train-km	annual total train-km scheduled on electrified network
		actual train-km	train-km	total actual train-km in the year of reference
		actual train-km (on electrified network only)	train-km	total actual train-km on electrified network in the year of reference
		actual bus-km	bus-km	rail replacement bus services in the year of reference
		passengers	no.	number of passengers carried in the year of reference
		season ticket or travel card holders	*no.*	number of passengers holding season tickets or travel cards carried in the year of reference
		passenger-km	pax-km	total passenger-km carried in the year of reference
		hours of train service	h	total annual service hours of actual train movements
		actual commercial speed	km/h	average speed in the year of reference, calculated as the ratio of actual train-km to train service hours
		total cancelled trains (any cause)	no.	total number of cancelled trains, in the year of reference, of any cause
		cancelled production of service (any cause)	train-km	total cancelled train-km, in the year of reference, of any cause
		total delays > 5 minutes	minutes	total delays of all trains arriving at destination, minus a 5-minute/train allowance (eg: train delay of 4 minutes counts 0, train delay of 6 minutes counts 1, train delay of 12 minutes counts 7)
		total delayed trains (any cause)	no.	total number of delayed trains, in the year of reference, of any cause
		late production of service (any cause)	train-km	total delayed train-km, in the year of reference, of any cause
		trains scheduled on an average day (winter)	no.	number of trains scheduled on a working Wednesday, winter time
		trains scheduled on an average day (summer)	no.	number of trains scheduled on a working Wednesday, summer time
		trains scheduled in peak hours	no.	number of scheduled trains running at least half an hour in commuting time slots (6-9 a.m. or 5-8 p.m.) on a working Monday, winter time
technical data on output	isolated network	seats	no.	annual total number of seats supplied
		seat-km	seat-km	annual total number of seat-km supplied
		total scheduled trains	no.	number of annual scheduled trains
		total actual trains	no.	number of actual train movements in the year of reference
		scheduled train-km	train-km	annual total train-km scheduled
		scheduled train-km (on electrified network only)	train-km	annual total train-km scheduled on electrified network
		actual train-km	train-km	total actual train-km in the year of reference
		actual train-km (on electrified network only)	train-km	total actual train-km on electrified network in the year of reference
		actual bus-km	bus-km	rail replacement bus services in the year of reference
		passengers	no.	number of passengers carried in the year of reference
		season ticket or travel card holders	*no.*	number of passengers holding season tickets or travel cards carried in the year of reference
		passenger-km	pax-km	total passenger-km carried in the year of reference
		hours of train service	h	total annual service hours of actual train movements
		actual commercial speed	km/h	average speed in the year of reference, calculated as the ratio of actual train-km to train service hours
		total cancelled trains (any cause)	no.	total number of cancelled trains, in the year of reference, of any cause
		cancelled service production (any cause)	train-km	total cancelled train-km, in the year of reference, of any cause
		total delays > 5 minutes	minutes	total delays of all trains arriving at destination, minus a 5-minute/train allowance (eg: train delay of 4 minutes counts 0, train delay of 6 minutes counts 1, train delay of 12 minutes counts 7)
		total delayed trains (any cause)	no.	total number of delayed trains, in the year of reference, of any cause
		late production of service (any cause)	train-km	total delayed train-km, in the year of reference, of any cause
		trains scheduled on an average day (winter)	no.	number of trains scheduled on a working Wednesday, winter time
		trains scheduled on an average day (summer)	no.	number of trains scheduled on a working Wednesday, summer time
		trains scheduled in peak hours	no.	number of scheduled trains running at least half an hour in commuting time slots (6-9 a.m. or 5-8 p.m.) on a working Monday, winter time

Table 6 - RU Technical sheet Rolling Stock

Type of rolling stock	can travel individually	carries passengers	with locomotive function	with blocked composition
ordinary material - electric - locomotive	yes	no	yes	no
ordinary material - diesel - locomotive	yes	no	yes	no
ordinary material - dual power-set - locomo	yes	no	yes	no
ordinary material - driving van trailer	no	yes	no	no
ordinary material - trailer	no	yes	no	no
lightweight material - electric - railcar	yes	yes	yes	no
lightweight material - diesel - railcar	yes	yes	yes	no
lightwight material - dual power-set - railcar	yes	yes	yes	no
lightweight material - electric - motor coach	no	yes	yes	yes
lightweight material - diesel - motor coach	no	yes	yes	yes
lightweight material - dual power-set - moto	no	yes	yes	yes
lightweight material - trailer	no	yes	no	yes

Please enclose list of rolling stock — List of composition of rolling stock pertaining to the PSC with relevant characteristics, age and year of revamping (if any)

Table 7 - IM Technical sheet network data

AWARDING ENTITY			PSC	
INFRASTRUCTURE MANAGER			YEAR	
Technical data of network and regional rail services concerned			**UM**	**Key**
Network data		interconnected network	km	extension of interconnected railway line managed by the IM
		isolated network	km	extension of isolated railway line managed by the IM
General data on railway network used for regional transport services		total network	km	total extension of railway line used for production of regional transport service
		electrified national network	*km*	extension of electrified national railway line used for production of regional transport service
		non electrified national network	*km*	extension of non-electrified national railway line used for production of regional transport service
		electrified interconnected network	*km*	extension of electrified interconnected regional railway line used for production of regional transport service
		non-electrified interconnected railway	*km*	extension of non-electrified interconnected regional railway line used for production of transport service
		electrified isolated network	*km*	extension of electrified isolated regional railway line used for production of transport service
		non-electrified isolated network	*km*	extension of non-electrified isolated regional railway line used for production of transport service
		served stations	no.	total number of served stations
		stations on national network	*no.*	number of stations served on national network
		stations on interconnected network	*no.*	number of stations served on interconnected network
		stations on isolated network	*no.*	number of stations served on isolated network
		true line length with curves of less than 300 meters radius (national network)	km	for single-track lines: sum of true lenghts of curves of less than 300 m radius; for double-track lines: sum of true lengths of curves with less than 300 m radius on only one of the two tracks
		true line length with a slope gradient of more than 25‰ (national network)	km	for single-track lines: sum of true lenghts with a slope gradient of more than 25‰; for double-track lines: sum of true lenghts with a slope gradient of more than 25‰ on only one of the two tracks
		true line length with curve of less than 300 m radius (interconnected network)	km	for single-track lines: sum of true lengths of curves of less than 300 m radius; for double-track lines: sum of true lengths of curves of less than 300 m radius on only one of the two tracks
		true line length with a slope gradient of more than 25‰(interconnected network)	km	for single-track lines: sum of true lenghts with a slope gradient of more than 25‰; for double-track lines: sum of true lenghts with a slope gradient of more than 25‰ on only one of the two tracks
		true line length with curves of less than 300 m radius (isolated network)	km	for single-track lines: sum of true lengths of curves of less than 300 m radius; for double-track lines: sum of true lengths of curves of less than 300 m radius on only one of the two tracks
		true line length with a slope gradient of more than 25‰(isolated network)	km	for single-track lines: sum of true lenghts with a slope gradient of more than 25‰; for double-track lines: sum of true lenghts with a slope gradient of more than 25‰ on only one of the two tracks
Data on quality of regional transport services operated on railway network	**national network**	**total cancelled trains (any cause)**	no.	total number of cancelled trains, in the year of reference, of any cause
		RU's accountability	*no.*	number of cancelled trains, in the year of reference, due to causes that can be attributed to the Railway Undertaking holding the regional transport service
		IM's accountability	*no.*	number of cancelled trains, in the year of reference, due to causes that can be attributed to the Infrastructure Manager
		force majeure or other RUs' accountability	*no.*	number of cancelled trains, in the year of reference, due to force majeure or accountability of another Railway Undertaking
		cancelled service production (any cause)	train-km	total cancelled train-km, in the year of reference, of any cause
		total delays > 5 minutes	minutes	total delays of all trains arriving at destination, minus a 5-minute/train allowance (eg: 4-minutes delay equals 0, 6-minutes delay equals 1, 12-minutes delay equals 7)
		total delayed trains (any cause)	no.	total number of delayed trains, in the year of reference, regardless of the cause
		RU's accountability	*no.*	number of delayed trains, in the year of reference, due to causes that can be attributed to the Railway Undertaking holding the transport service
		IM's accountability	*no.*	number of delayed trains, in the year of reference, due to causes that can be attributed to the Infrastructure Manager
		force majeure or other RUs' accountability	*no.*	number of delayed trains, in the year of reference, due to force majeure or accountability of another railway undertaking
		delayed service production (any cause)	train-km	total delayed trains, in the year of reference, of any cause
		RU's accountability	*train-km*	delayed train-km, in the year of reference, due to causes that can be attributed to the Railway Undertaking holding the transport service
		IM's accountability	*train-km*	delayed train-km, in the year of reference, due to causes that can be attributed to the Infrastructure Manager
		force majeure or other RUs' accountability	*train-km*	delayed train-km, in the year of reference, due to force majeure or accountability of another railway undertaking

Table 7 - IM Technical sheet network data (continued)

Data on quality of regional transport services operated on railway network	**interconnected network**	**total cancelled trains (any cause)**	no.	total number of cancelled trains, in the year of reference, of any cause
		RU's accountability	*no.*	number of cancelled trains, in the year of reference, due to causes that can be attributed to the Railway Undertaking holding the regional transport service
		IM's accountability	*no.*	number of cancelled trains, in the year of reference, due to causes that can be attributed to the Infratructure Manager
		force majeure or other RUs' accountability	*no.*	number of cancelled trains, in the year of reference, due to force majeure or accountability of another railway undertaking
		cancelled service production (any cause)	train-km	total cancelled train-km, in the year of reference, of any cause
		total delays > 5 minutes	minutes	total delays of all trains arriving at destination, minus a 5-minute/train allowance (eg: 4-minutes delay equals 0, 6-minutes delay equals 1, 12-minutes delay equals 7)
		total delayed trains (any cause)	no.	total number of delayed trains, in the year of reference, of any cause
		RU's accountability	*no.*	number of delayed trains, in the year of reference, due to causes that can be attributed to the railway undertaking
		IM's accountability	*no.*	number of delayed trains, in the year of reference, due to causes that can be attributed to the Railway Undertaking holding the regional transport service
		force majeure or other Rus' accountability	*no.*	number of delayed trains, in the year of reference, due to force majeure or accountability of another railway undertaking
		delayed service production (any cause)	train-km	total delayed train-km, in the year of reference, of any cause
		RU's accountability	*train-km*	delayed train-km, in the year of reference, due to causes that can be attributed to the Railway Undertaking holding the transport
		IM's accountability	*train-km*	delayed train-km, in the year of reference, due to causes that can be attributed to the Infrastructure Manager
		force majeure or other RUs' accountability	*train-km*	delayed train-km, in the year of reference, due to force majeure or accountability of another railway undertaking
Data on quality of regional transport services operated on railway network	**isolated network**	**total cancelled train (any cause)**	no.	total number of cancelled trains, in the year of reference, of any cause
		RU's accountability	*no.*	number of cancelled trains, in the year of reference, due to causes that can be attributed to the Railway Undertaking holding the regional transport service
		IM's accountability	*no.*	number of cancelled trains, in the year of reference, due to causes that can be attributed to the Infrastructure Manager
		force majeure or other RUs' accountability	*no.*	number of cancelled trains, in the year of reference, due to force majeure or accountability of another railway undertaking
		cancelled service production (any cause)	train-km	total cancelled train-km, in the year of reference, of any cause
		total delays > 5 minutes	minutes	total delays of all trains arriving at destination, minus a 5-minute/train allowance (eg: 4-minutes delay equals 0, 6-minutes delay equals 1, 12-minutes delay equals 7)
		total delayed trains (any cause)	no.	total number of delayed trains, in the year of reference, of any cause
		RU's accountability	*no.*	number of delayed trains, in the year of reference, due to causes that can be attributed to the railway undertaking
		IM's accountability	*no.*	number of delayed trains, in the year of reference, due to causes that can be attributed to the Railway Undertaking holding the regional transport service
		force majeure or other RUs' accountability	*no.*	number of delayed trains, in the year of reference, due to force majeure or accountability of another railway undertaking
		delayed service production (any cause)	train-km	total delayed train-km, in the year of reference, of any cause
		RU's accountability	*train-km*	delayed train-km, in the year of reference, due to causes that can be attributed to the Railway Undertaking holding the transport
		IM's accountability	*train-km*	delayed train-km, in the year of reference, due to causes that can be attributed to the Infrastructure Manager
		force majeure or other RUs' accountability	*train-km*	delayed train-km, in the year of reference, due to force majeure or accountability of another railway undertaking
Data on performance	**national network**	**annual average speed**	km/h	commercial train speed calculated on the travel times provided for in the operating schedule
	inter-connected network	**annual average speed**	km/h	commercial train speed calculated on the travel times provided for in the operating schedule
	isolated network	**annual average speed**	km/h	commercial train speed calculated on the travel times provided for in the operating schedule

Table 8 - Matrices of internal transactions by activity (monetary values)

Internal transactions - i activity	PSC1	PSC2	PSC3	PSC4	PSC5	PSC6	PSC7	…	PSCJ	…	PSCN
SC1	X^i_{11}	X^i_{12}	X^i_{13}	X^i_{14}	X^i_{15}	X^i_{16}	X^i_{17}	$X^i_{1,.}$	X^i_{1J}	$X^i_{1,.}$	X^i_{1N}
PSC2	X^i_{21}	X^i_{22}	X^i_{23}	X^i_{24}	X^i_{25}	X^i_{26}	X^i_{27}	$X^i_{2,.}$	X^i_{2J}	$X^i_{2,.}$	X^i_{2N}
PSC3	X^i_{31}	X^i_{32}	X^i_{33}	X^i_{34}	X^i_{35}	X^i_{36}	X^i_{37}	$X^i_{3,.}$	X^i_{3J}	$X^i_{3,.}$	X^i_{3N}
PSC4	X^i_{41}	X^i_{42}	X^i_{43}	X^i_{44}	X^i_{45}	X^i_{46}	X^i_{47}	$X^i_{4,.}$	X^i_{4J}	$X^i_{4,.}$	X^i_{4N}
PSC5	X^i_{51}	X^i_{52}	X^i_{53}	X^i_{54}	X^i_{55}	X^i_{56}	X^i_{57}	$X^i_{5,.}$	X^i_{5J}	$X^i_{5,.}$	X^i_{5N}
PSC6	X^i_{61}	X^i_{62}	X^i_{63}	X^i_{64}	X^i_{65}	X^i_{66}	X^i_{67}	$X^i_{6,.}$	X^i_{6J}	$X^i_{6,.}$	X^i_{6N}
PSC7	X^i_{71}	X^i_{72}	X^i_{73}	X^i_{74}	X^i_{75}	X^i_{76}	X^i_{77}	$X^i_{7,.}$	X^i_{7J}	$X^i_{7,.}$	X^i_{7N}
…	$X^i_{.,1}$	$X^i_{.,2}$	$X^i_{.,3}$	$X^i_{.,4}$	$X^i_{.,5}$	$X^i_{.,6}$	$X^i_{.,7}$	$X^i_{.,.}$	$X^i_{.,J}$	$X^i_{.,.}$	$X^i_{.,N}$
_amounts	X^i_{J1}	X^i_{J2}	X^i_{J3}	X^i_{J4}	X^i_{J5}	X^i_{J6}	X^i_{J7}	$X_{J,.}$	X^i_{JJ}	$X^i_{J,.}$	X^i_{JN}
…	$X^i_{.,1}$	$X^i_{.,2}$	$X^i_{.,3}$	$X^i_{.,4}$	$X^i_{.,5}$	$X^i_{.,6}$	$X^i_{.,7}$	$Xi_{.,.}$	$X^i_{.,J}$	$X^i_{.,.}$	$X^i_{.,N}$
PSCN	X^i_{N1}	X^i_{N2}	X^i_{N3}	X^i_{N4}	X^i_{N5}	X^i_{N6}	X^i_{N7}	$X^i_{N,.}$	X^i_{NJ}	$X^i_{N,.}$	X^i_{NN}

Legend:

Internal transactions – i activity	**i**-th activity carried out for multiple service contracts (e.g. rental of rolling stock, maintenance services, operating staff,…)
M	number of activities for which internal transactions were recorded in the year concerned; for i=1, 2, ..., M-1, M
PSC j	service contract for j-th regional passenger rail transport; for j= 1, 2,…, N-1, N
N	number of service contracts
$\mathbf{X_{11}}$	value attributed to the i-th activity for PSC1 with resources of PSC1
$\mathbf{X_{12}}$	value attributed to the i-th activity for PSCJ with resources of PSC2

Table 9 - Matrices of internal transactions by activity (quantity)

Internal transactions - i activity	PSC1	PSC2	PSC3	PSC4	PSC5	PSC6	PSC7	…	PSCJ	…	PSCN
PSC1		X^i_{12}	X^i_{13}	X^i_{14}	X^i_{15}	X^i_{16}	X^i_{17}	$X^i_{1,.}$	X^i_{1J}	$X^i_{1,.}$	X^i_{1N}
PSC2	X^i_{21}		X^i_{23}	X^i_{24}	X^i_{25}	X^i_{26}	X^i_{27}	$X^i_{2,.}$	X^i_{2J}	$X^i_{2,.}$	X^i_{2N}
PSC3	X^i_{31}	X^i_{32}		X^i_{34}	X^i_{35}	X^i_{36}	X^i_{37}	$X^i_{3,.}$	X^i_{3J}	$X^i_{3,.}$	X^i_{3N}
PSC4	X^i_{41}	X^i_{42}	X^i_{43}		X^i_{45}	X^i_{46}	X^i_{47}	$X^i_{4,.}$	X^i_{4J}	$X^i_{4,.}$	X^i_{4N}
PSC5	X^i_{51}	X^i_{52}	X^i_{53}	X^i_{54}		X^i_{56}	X^i_{57}	$X^i_{5,.}$	X^i_{5J}	$X^i_{5,.}$	X^i_{5N}
PSC6	X^i_{61}	X^i_{62}	X^i_{63}	X^i_{64}	X^i_{65}		X^i_{67}	$X^i_{6,.}$	X^i_{6J}	$X^i_{6,.}$	X^i_{6N}
PSC7	X^i_{71}	X^i_{72}	X^i_{73}	X^i_{74}	X^i_{75}	X^i_{76}		$X^i_{7,.}$	X^i_{7J}	$X^i_{7,.}$	X^i_{7N}
…	$X^i_{.,1}$	$X^i_{.,2}$	$X^i_{.,3}$	$X^i_{.,4}$	$X^i_{.,5}$	$X^i_{.,6}$	$X^i_{.,7}$		$X^i_{.,J}$	$X^i_{.,.}$	$X^i_{.,N}$
PSCJ	X^i_{J1}	X^i_{J2}	X^i_{J3}	X^i_{J4}	X^i_{J5}	X^i_{J6}	X^i_{J7}	$X_{J,.}$		$X^i_{J,.}$	X^i_{JN}
…	$X^i_{.,1}$	$X^i_{.,2}$	$X^i_{.,3}$	$X^i_{.,4}$	$X^i_{.,5}$	$X^i_{.,6}$	$X^i_{.,7}$	$Xi_{.,.}$	$X^i_{.,J}$		$X^i_{.,N}$
PSCN	X^i_{N1}	X^i_{N2}	X^i_{N3}	X^i_{N4}	X^i_{N5}	X^i_{N6}	X^i_{N7}	$X^i_{N,.}$	X^i_{NJ}	$X^i_{N,.}$	

Legend:

Internal transactions – i activity	**i**-th activity carried out for multiple service contracts (e.g. rental of rolling stock, maintenance services, operating staff,…)
M	number of activities for which internal transactions were recorded in the year concerned; for i=1, 2, ..., M-1, M
PSC j	service contract for j-th regional passenger rail transport; for j= 1, 2, …, N-1, N
N	number of service contracts
X_{11}	value attributed to the i-th activity for PSC1 with resources of PSC1
X_{12}	value attributed to the i-th activity for PSCJ with resources of PSC2