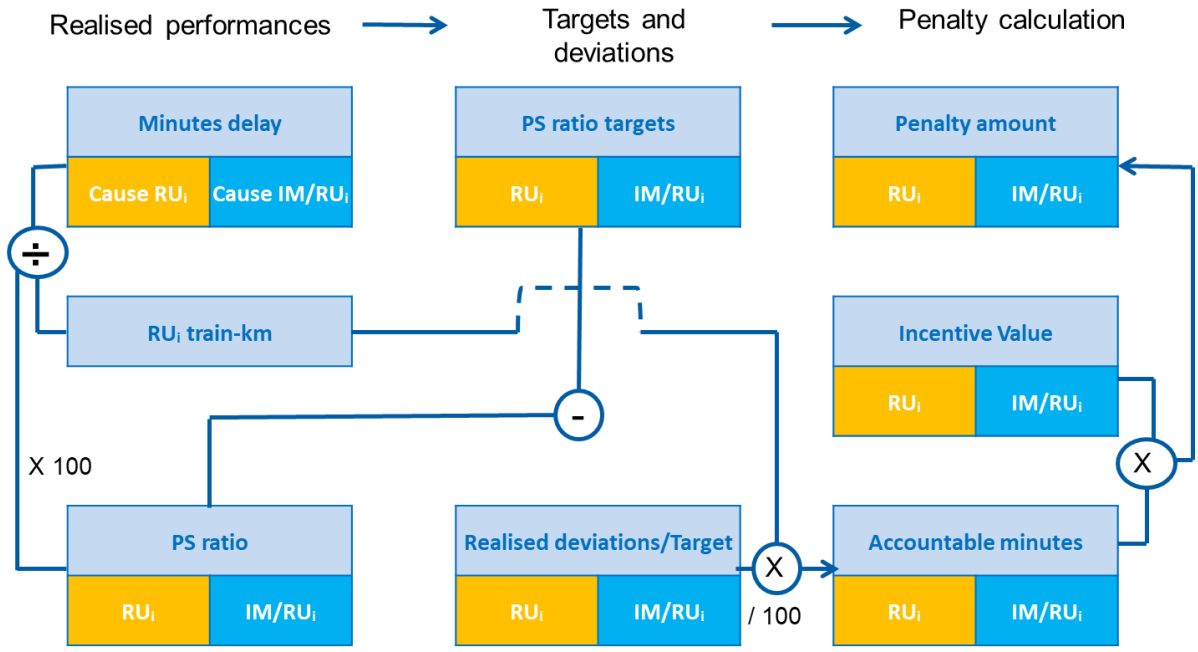
Description of the model



1. Realised performances

1.1 Minutes delay

1.1.1 Recording

The "minutes delay" refer to the minutes that were caused:

- by the railway undertaking (RU) to the first **loaded train** impacted by the incident for which the RU is responsible listed in the incident report– this first train may be the train that caused the incident or the first train impacted by the incident if it was caused by a train running empty;
- by the infrastructure manager (IM) to the first **loaded train** impacted by the incident for which the IM is responsible listed in the incident report. Minutes of delay caused by a train running empty are not counted; in this case, the minutes caused to the next loaded train are taken into account.

This does not include the minutes of delay caused to other trains included in the incident report.

The "minutes delay" are counted as follows:

- Minutes delay RU(i) = the total of all minutes of delay attributed to the RU(i) as recorded in the reports attributable to the RU(i) during the measurement year.
- Minutes delay IM/RU(i) = the total of all minutes of delay attributed to the IM as recorded in the reports attributable to the IM(i) during the measurement year.

1.1.2 Capping the number of minutes delay

There is a cap on the minutes of delay RU(i) and IM/RU(i) per report. The following rules apply.

- In a first step, determination by sector of the median number of minutes delay per report associated with first trains for each year (y-1), (y-2) and (y-3);

- In a second stage, based on the medians of each year (from y-1 to y-3), as calculated by the above method, the median of the sector is determined which serves to cap the number of minutes taken into account for each report in the measurement year.

1.1.3 Capped number of minutes delay

The capped minutes of delay resulting from points 1.1.1 and 1.1.2 above.

1.2 Performance Scheme ratio

The "Performance Scheme ratio (PS ratio)" is calculated according to the following formulas:

$$\textit{PS ratio RU(i)} = \frac{\textit{Capped minutes delay RU(i) for year (y)}}{\textit{Effective train-km RU(i) during year (y) / 100}}$$

$$\textit{PS ratio IM(i)} = \frac{\textit{Capped minutes delay IM/RU(i) for year (y)}}{\textit{Effective train-km by RU(i) during year (y) / 100}}$$

The effective train kilometres (train-km) are based on all trains of the RU(i) which have operated on the Belgian rail network.

2. Targets and deviations

2.1 Target PS ratio

The PS ratio targets for the year (y) are set for each railway undertaking separately, taking into account its performance in year (y-1) compared to the average PS ratio target for the sector in year (y-1). In this way, a situation is avoided in which undertakings that outperform the sector average in (y-1) must achieve an improvement in year (y) of the same magnitude as their sector peers that performed worse in (y-1).

2.1.1 Calculation of the PS ratio (y-1) based on individual performances (y-1)

Reference basis: minutes delay

The "minutes delay reference basis" is calculated as follows:

- Reference basis for minutes delay RU(i) for year (y-1) = the total of the capped minutes delay of the RU(i) for year (y-1)
- Reference basis for minutes delay IM/RU(i) for year (y-1) = the total of the capped minutes delay of the IM/RU(i) for year (y-1)

Reference basis: effective train-km

The "effective train-km reference basis" is calculated as follows:

Reference basis trkm RU(i) for year (y-1) = the sum of the effective trkm of RU(i) of year (y-1) / 100

Calculation of PS ratio (y-1)

The PS ratio (y-1) is calculated according to the following formulas:

$$\textit{PS ratio RU(i) (y-1)} = \frac{\textit{the minutes delay reference basis RU(i) for year (y-1)}}{\textit{the effective train-km reference basis RU(i) for year (y-1)}}$$

$$\textit{PS ratio IM/RU(i) (y-1)} = \frac{\textit{the minutes delay reference basis IM/RU(i) for year (y-1)}}{\textit{the effective train-km reference basis RU(i) for year (y-1)}}$$

2.1.2 Calculation of the average PS ratio (y-1) based on sector performances

Three sectors are defined:

- Passenger public service (PPS): domestic passenger transport, fulfilling a public service obligation
- Passenger commercial service (PC): domestic passenger transport, which does not fulfil a public service obligation
- Freight (F): freight transport

The "average PS ratio of the sector (z) (y-1)" is calculated according to the following formulas:

$$\textit{Average PS ratio RU of the sector (z) for year (y-1)} = \frac{\textit{Sum of the PS ratios RU(i) for year (y-1) of all RUs within the sector (z)}}{\textit{Number of RUs within the sector (z)}}$$

$$\textit{Average PS ratio IM/RU of the sector (z) for year (y-1)} = \frac{\textit{Sum of the PS ratios IM/RU(i) for year (y-1) of all RUs within the Sector (z)}}{\textit{Number of RUs within the sector(z)}}$$

2.1.3 Target PS ratio

Target PS ratio RU(i) for year (y)

The "Target PS ratio RU(i) for year (y)" is determined on the basis of the performance (y-1) of RU(i) compared to the average performance of the year (y-1) of the sector (z) to which RU(i) belongs:

	If	Then
Case 1	The PS ratio RU(i) of the year (y-1) is lower than the average PS ratio RU of the sector (z) of the RU(i) for the year (y-1); synonymous – in the year (y-1) – with performance of the RU(i) that is above the average performance of the sector (z) to which it belongs.	Target PS ratio RU(i) for year (y) = Average PS ratio RU of sector (z) oof RU(i) for year (y-1)
Case 2	The PS ratio RU(i) of the year (y-1) is higher than the average PS ratio RU of the sector (z) of the RU(i) for the year (y-1); synonymous – in the year (y-1) – with performance of the RU(i) that is below the average performance of the sector (z) to which it belongs.	Target PS ratio RU(i) for year (y) = PS ratio RU(i) of the year (y-1)

Target PS ratio IM/RU(i) for the year (y)

The "Target PS ratio IM/RU(i) for the year (y)" is determined on the basis of the performance (y-1) of the IM/RU(i) compared to the average performance of the year (y-1) of the sector (z) to which RU(i) belongs:

	If	Then
Case 1	The PS ratio IM(i) of the year (y-1) is lower than the average PS ratio IM/RU of the sector (z) of the RU(i) for the year (y-1); synonymous – in the year (y-1) – with performance of the IM relative to the RU(i) that is higher than its average performance compared with all RUs that belong to the same sector (z) as the RU(i).	Target PS ratio RU(i) for year (y) = Average PS ratio IM/RU of the sector (z) of RU(i) for year (y-1)
Case 2	The PS ratio IM(i) of the year (y-1) is higher than the average PS ratio IM/RU of the sector (z) of the RU(i) for the year (y-1); synonymous – in the year (y-1) – with performance of the IM relative to the RU(i) that is lower than its average performance compared with all RUs that belong to the same sector (z) as the RU(i).	Target PS ratio IM/RU(i) for year (y) = PS ratio IM/RU(i) for year (y-1)

Target PS ratio of new RUs:

If a new railway undertaking joins the Belgian railway network during the year, it is subject to the PS rules as of 1 January of the following year. The target PS ratio for this new RU is then calculated using a modified formula because full-year figures are missing. The objectives are therefore set as follows:

For RU(i):

Target PS ratio RU(i) for year (y) = Average PS ratio RU of sector (z) of RU(i) for year (y-1)

For IM/RU(i):

Target PS ratio IM/RU(i) for year (y) = Average PS ratio IM/RU of sector (z) of RU(i) for year (y-1)

2.2 Realised deviations / Target

2.2.1 Calculation of the "PS ratio deviation"

The “PS ratio deviation” indicates the extent to which the undertaking’s or the infrastructure manager’s performance deviates from their target.

- *PS ratio deviation RU(i) for year (y) =*
  PS ratio RU(i) for year (y) - Target PS ratio RU(i) for year (y)

- *PS ratio deviation IM/RU(i) for year (y) =*
  PS ratio IM/RU(i) for year (y) - Target PS ratio IM/RU(i) for year (y)

A penalty should be calculated only if the "PS ratio deviation" is positive, since a positive "PS ratio deviation" occurs only when the railway undertaking or the infrastructure manager has not achieved its target. If the railway undertaking or infrastructure manager does meet its target (PS ratio deviation ≤ 0), the "PS ratio deviation" is reduced to 0 and no penalty is calculated for the party concerned.

2.2.2 Maximum amount of "PS ratio deviation"

The maximum variation of the "PS ratio deviation" from the "target PS ratio" is determined by sector as follows:

- Passengers Public Service (PPS): 30%
- Passengers Commercial Service (PC): 50%
- Freight (F): 60%

- *Maximum deviation from the PS ratio of the RU(i) for the year (y) = Target PS ratio RU(i) for the year (y) multiplied by the maximum variation percentage of the sector to which the RU(i) belongs.*
- *Maximum deviation from the PS ratio of the IM/RU(i) for the year (y) = Target PS ratio IM/RU(i) for the year (y) multiplied by the maximum variation percentage of the sector to which the RU(i) belongs.*

For example, if the "PS ratio deviation" of an RU belonging to sector "F" deviates more than 60% from its "target PS ratio," the value of its "PS ratio deviation" will be capped at 60% of its "target PS ratio."

3. Penalty calculation

The penalty for each party is calculated by multiplying the "accountable minutes" (see point 3.1) by the "value incentive" (see point 3.2). This calculation may be capped in accordance with point 4 of this document.

3.1 Accountable minutes

The “accountable minutes” are calculated according to the following formulas:

- *Accountable minutes RU(i) for year (y) =*
  PS ratio deviation RU(i) for year (y) x effective train-km by RU(i) during year (y) / 100

- *Accountable minutes IM/RU(i) for year (y) =*
  PS ratio deviation IM/RU(i) for year (y) x effective train-km by RU(i) during year (y) / 100

3.2 Value incentive

The PS uses a value incentive broken down by sector and by party involved (IM or RU), namely:

- Value incentive IM for year (y) per sector (z)
- Value incentive RU per year (y) per sector (z)

A total of 6 value incentives per minute have been determined, 3 for the IM and 3 for the RU (1 per sector).

The "value incentive" is calculated according to the formulas below:

$$\text{Value incentive RU of the sector (z) for year (y)} = \frac{\text{Sum of maximum amounts RU(i)}^{1} \text{ of all RUs of the sector (z) for the year (y)}}{\text{Sum of the "maximum PS ratio deviations" of the RU(i)}^{2} \text{ of sector (z) for year (y) x effective trkm of the RU(i) of sector (z) during year (y) / 100}}$$

$$\text{Value incentive IM of the sector (z) for year (y)} = \frac{\text{Maximum amount of the IM}^{5} \text{ of the sector (z) for the year (y)}}{\text{Sum of the "maximum PS ratio deviations" of the IM/RU(i)}^{3} \text{ of sector (z) for year (y) x effective trkm of the RU(i) of sector (z) during year (y) / 100}}$$

3.3 Penalty amount

The “Penalty amount” is calculated according to the following formulas:

- *Penalty RU(i) for year (y) =*
  Accountable minutes RU(i) for year (y) x Penalty per minute RU of sector (z) to which RU(i)belongs for year (y)
- *Penalty IM/RU(i) for year (y) =*
  Accountable minutes IM/RU/(i) for year (y) x Penalty per minute IM of the sector (z) to which RU(i) belongs for year (y)

If Penalty IM/RU(i) > Penalty RU(i) → Penalty IM/RU(i) - Penalty RU(i) = Amount for year (y) that IM pays to RU(i) (limited to the maximum amount IM/RU(i)[4])

[1] See point 4 of this appendix.

[2] The "maximum PS ratio deviation" is calculated for each railway undertaking by multiplying its target by the coefficients established for each sector in point 2.2.2.

[3] The "maximum PS ratio deviation" is calculated for the IM/RU(i) report by multiplying the target of the IM relative to that RU by the coefficients established for each sector in point 2.2.2.

[4] See point 4 of this appendix.

If Penalty RU(i) > Penalty IM/RU(i) → Penalty RU(i) - Penalty IM/RU(i) = Amount for year (y) that RU(i) pays to IM (limited to the maximum amount RU(i) [5])

If IM/RU(i) and RU(i) both meet their targets, no penalty is due.

4. Determination of the maximum amount

The "maximum amount" that the IM must pay to the RU or the RU to the IM is capped. It is also the financial risk that each undertaking bears in the Performance Scheme.

The "maximum amount" is calculated according to the following formulas:

- *Maximum amount IM for year (y)= 0.40% of total user charges in year (y-1)*
- *Maximum amount IM/RU(i) for year (y) = 0.40% of total user charges in year (y-1) of sector (z) to which RU(i) belongs x allocation key RU(i)*
- *Maximum amount RU(i) for year (y)= 0.40% of total user charges in year (y-1) of sector (z) to which RU(i) belongs x allocation key RU(i)*

Where "allocation key RU(i)"= train-km RU(i) of sector (z) during year (y) / train-km all RUs of sector (z) during year (y)

5. Stepwise introduction of financial leverage

The performance scheme is accompanied by a system of degressive discounts for the years 2023 and 2024. The table below lists the discount applied to the penalty calculated according to the conditions described above:

Year	Discount on the financial conditions
2023	50%
2024	25%

This will limit the impact on undertakings of unforeseen effects with major financial consequences.

[5] See point 4 of this appendix.