UIC PASSENGER DEPARTMENT

Report & Guidelines on the Classification of Railway Stations

January 2025

SMGG
Station Managers Global Group

UIC
INTERNATIONAL UNION
OF RAILWAYS

Index

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1. Introduction: purpose, justification, opportunities

The Station Managers Global Group (SMGG), a sector within UIC Global Passenger Forum, is dedicated to provide station managers worldwide with better and efficient experiences in managing passenger railway stations. The group aims to facilitate the exchange of best practices between stakeholders and experts from around the world, organise events, launch studies, and enhance standardisation for improved interoperability. The SMGG is responsible for numerous new projects relating to stations.

Through the group, UIC, and its members are working to broaden the scope of railway station activities to offer greater added value for customers and cities.

To raise awareness of the ins and outs of station profitability, both in terms of experience and management, the SMGG members made the decision to restructure the entire sector by creating plenary sessions, a Steering Committee and the following four technical working groups:

- WG1: Station and Urban Design
- WG2: Facility Management and Operation
- WG3: Retail and Commercial Affairs
- WG4: Small Stations

These working groups allow their members to work together on a day-to-day basis, as well as enhance collaboration with other UIC technical departments such as Sustainability, Safety, Security, and Rail System (both infrastructure and rolling stock). The main goal of this sector is to promote train stations as intermodal hubs, enhance the sustainability of station buildings (with a focus on energy consumption), drive the digital transformation of stations and the commercial use of data, **and prioritize a customer-oriented experience**.

In addition to the four technical working groups, a specialised Station Categorisation Project Group (SCPG) was established in January 2023. This was motivated by a growing need to identify a station's functional role, for the better management and planning of assets, investment, and maintenance, and for further customer and stakeholder engagement.

The aim of the SCPG was to assemble the maximum possible quantity of data regarding the different station classification systems used by the contributing members. By collecting different data and analysing important components, the project aimed to disseminate a set of common criteria for different railway companies.

The justification for creating this project group was to exchange best practices for classifying railway stations around the world and allow contributors to supplement their classifications with additional criteria, according to their needs. Specifically, the working group focused on the innovative components of the various classifications, such as assessments regarding services and proximity to points of interest, or new transport modes to and from railway stations (e.g. cycling paths, bike parking, shared and electric mobility systems), as well as geographic information systems used for managing and updating data.

Serving as the final deliverable of the project, this white paper contains general guidelines and benchmarks to improve the SMGG station managers' approach to classifying stations. In this paper, more detailed guidelines based on feedback from different infrastructure managers have been proposed.

2. Current UIC classification standards: strengths and weaknesses

IRS 10180 “Classification of Rail Passenger Stations”, published in 2019, provides a potential international classification of railway stations, proposing a simple and shared classification methodology.

This methodology is an excellent starting point, as it describes components for analysis to define the level of importance of the stations.

Drafting a list of supplementary points stemmed from the desire to further improve the methodology through the input from the working group, incorporating never-before-used indicators.

Some of the aspects that have guided this review (which will be further developed in the following sections), is the importance of evaluating railway stations in the best possible way to consider local factors, thus highlighting the new functional role of the stations, as placed where services are offered and not just as mobility nodes.

By referring to the capacity of stations to serve residents, employees, tourists, and hold points of interest, it is possible to define the specific characteristics of the station’s surroundings.

Further aspects evaluated by the working group were the specific different types of railway services, in addition to the number of trains, as well as the accessibility levels of the stations, the multimodality, sustainability and shared mobility level that describe different ways of reaching the station.

The evaluation of these parameters can have a significant impact on the different station classifications while also allowing a more complete picture of the weaknesses and strengths of the railway to be built. This approach can be understood as a sort of “gap analysis” aimed at identifying and prioritising station improvement work and reclassifying them.

For this reason, a new station classification was developed with a view to providing railway companies with a flexible system capable of adapting to various functions, such as maintenance, investment, fare setting and contract negotiation, and relationships with stakeholders, as well as new development and business opportunities.

The current IRS 10180 is clear, quantifiable, and includes 5 categories:

- Daily number of passengers using a train in the station
- Daily number of trains stopping in a station to have passengers boarding or alighting
- Number of platform edges
- Station size
- Intermodality

A more detailed classification calculation method is given in Appendix 1.

Thanks to the commitment of multiple contributors, different strengths and weaknesses of the current IRS were identified and summarised in Table 1. This was important for several reasons. First, in order to understand the way that infrastructure managers enhance the overall passenger experience (e.g. grouping stations together based on accessibility, amenities, or services offered, making it easier for passengers to navigate and find the facilities they need, and so on).

Focusing on passenger volumes can help to identify potential resources in terms of staffing, maintenance, and infrastructure upgrades to ensure smooth operations. Identifying weaknesses in station classification helps prioritise investment in areas with the most need (e.g. upgrading outdated facilities, enhancing safety measures, or improving accessibility for passengers with additional needs), as targeted investment can lead to significant improvements in station quality. Categorising railway stations based on their strengths allows operators to tailor services and amenities to different market segments. It is also essential for long-term strategic planning, enabling infrastructure and station managers to anticipate future needs, adapt to changing demographics and travel patterns, and remain competitive.

Table 1: Strengths and weaknesses of IRS 10180 "Classification of Rail Passenger Stations"

Strengths	Weaknesses
Based on objective criteria which are not subject to interpretation, with a simple methodology (score and weighting)	The system dedicated to describing stations is only based on transport and the station building and does not consider other criteria important in different countries. Moreover, the criterion weighting/thresholds will vary from company to company.
The classification is unique and can be applied to all countries	Some countries use different classifications for different purposes
Daily passenger numbers are considered	Types of passengers/non-passengers is not considered (e.g. leisure, business, commuters, etc.)
Daily train numbers are considered, but not their typology	Types of trains (high-speed, intercities) are not considered
Station size is considered (even if it is difficult to estimate)	Staffing is not considered
Number of platforms is considered	Accessibility of the platforms is not considered
Can be used for both existing and newly built stations	The data can only be estimated for new stations/the categories are not always relevant for new/renewed stations
Can be updated	Not all of the partners can update this classification regularly
Intermodality indicator is present	Airport connections, as well as new modalities (shared, electric, cycling) are not considered
The existing IRS 10180 analyses the station as a pure rail asset with intermodality enhancement.	Certain aspects important for different companies were not considered (location, revenue, accessibility, local context, etc.)

The working group was created with the aim of collecting a variety of experiences from around the world. There were 16 participants in the working group, spread over 4 continents, as shown in Figure 1.

These participants represented different railway infrastructure contexts and points of view in terms of asset classification, meaning that the profiles were heterogeneous which allowed the subject to be dealt with accurately and exhaustively. The experts involved were station specialists, station managers, advisors, international development managers, and urban and mobility planners.

The brainstorming phase lasted for approximately one year and consisted of one remote meeting per month with all of the partners in order to analyse the individual classifications of the national stations, with experiences, particularities, classification uses, the critical aspects and those potentially to be developed being shared.

In addition, bilateral interviews were conducted, with the aim of analysing the characteristics of the specific classifications to be included in a comparative analysis in detail, using the results from all of the participants.

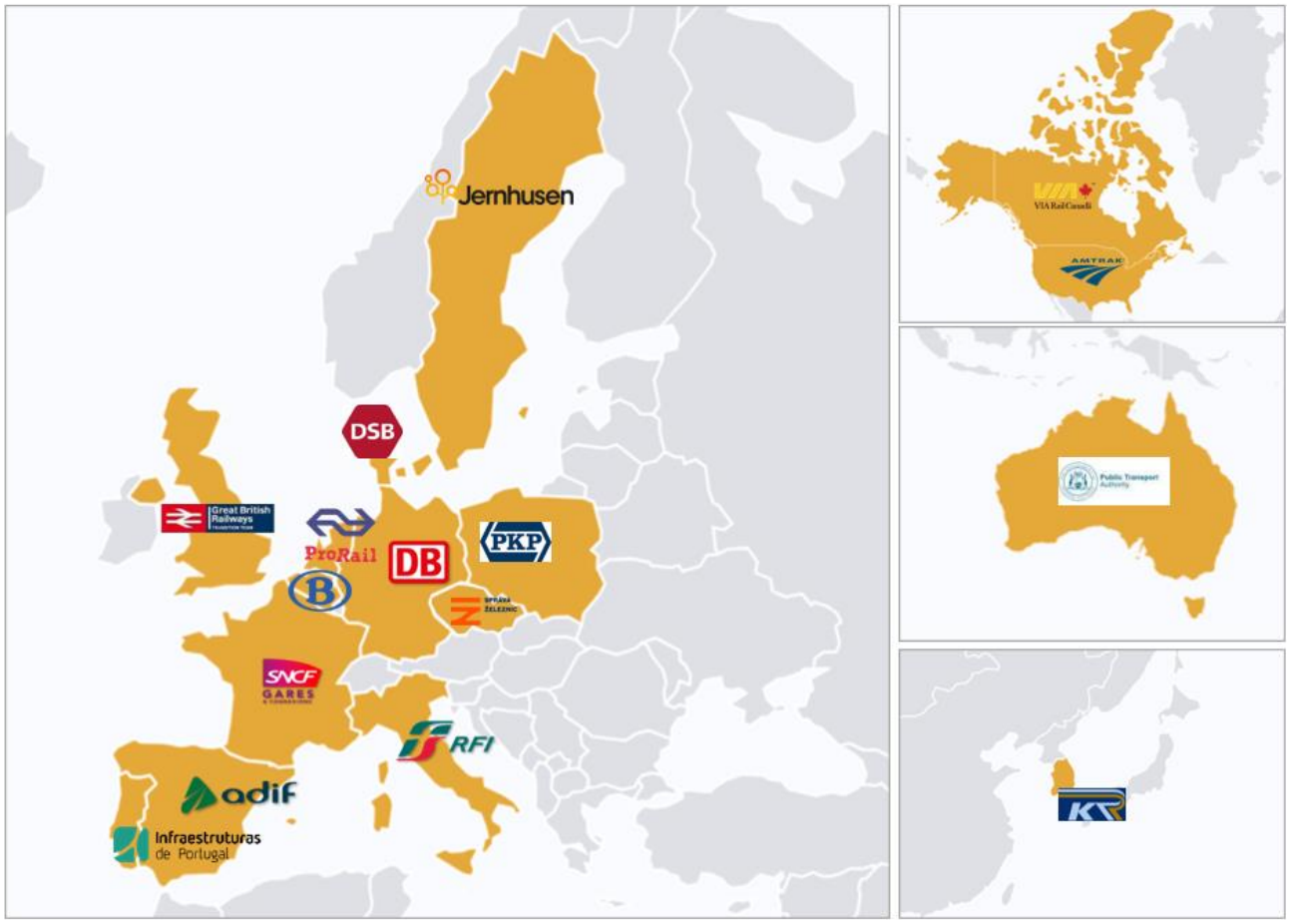

Figure 1: Map of the contributors

3. Classification: methodologies, criteria, indicators and scope of application

This section summarises the classification criteria and indicators for an in depth understanding of how the classes are decided upon in practice. The information was collected through submissions from each participant, and/or individual interviews. They were collected in 2023 and have been potentially modified or adjusted after this date.

The information gathered was first compiled in the form of an ID sheet for each partner, which was composed of:

- Company name
- Purpose of the classification
- Number of categories
- Names of categories
- Indicators and criteria for each category
- Number of stations falling into each category

To keep the body of the white paper concise, this section only comprises a table on the number of categories and indicators used by each partner, and figures on the number of stations which fall into each category, which were all extracted from the ID sheets. For the extended tables giving the indicators and criteria in detail, please see Appendix 2.

The tables and figures for each partner are listed in alphabetical order, as described later in this section. Note: Jernhusen does not have an official classification model, hence a description of their methodology not being present.

Station classification can be roughly divided into two approaches. The first is to carry out an "IF-THEN" flowchart to determine whether a station meets a certain criterion for a specific certain category (Figure 2). In this case, the most important or most fundamental indicators come first, then secondary indicators are used for further detail. This methodology can take both qualitative and descriptive indicators, for example types of service offered (long distance/commuter/high-speed) or station location (urban/suburban/rural), into consideration. The categories can also be descriptive.

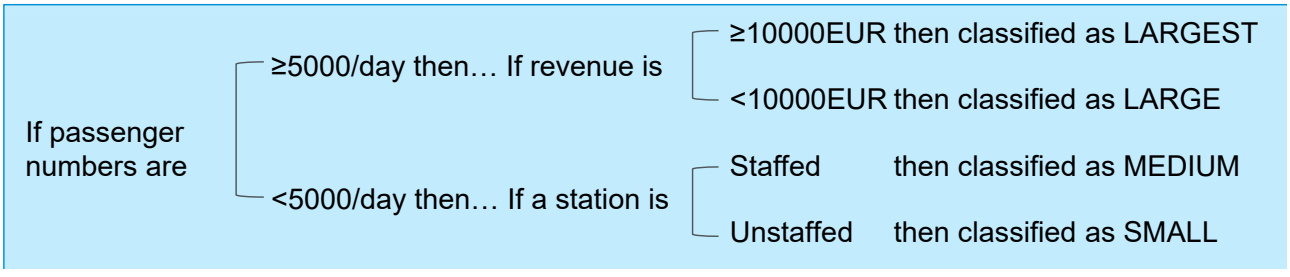

Figure 2: Example of an IF-THEN flowchart for classification

The other way is to have categories based on a calculated score (Figure 3). Each indicator has a point according to its value (e.g. number of passengers), and its own weighting according to its relative importance. Multiplying points and weightings gives a score for the indicator in question, and final score for a station is obtained by adding up scores for all indicators. Nominally scaled indicators cannot be included, as they are difficult to quantitatively score. Among the partners, ADIF, IP, RFI and VIA Rail had their own formulas.

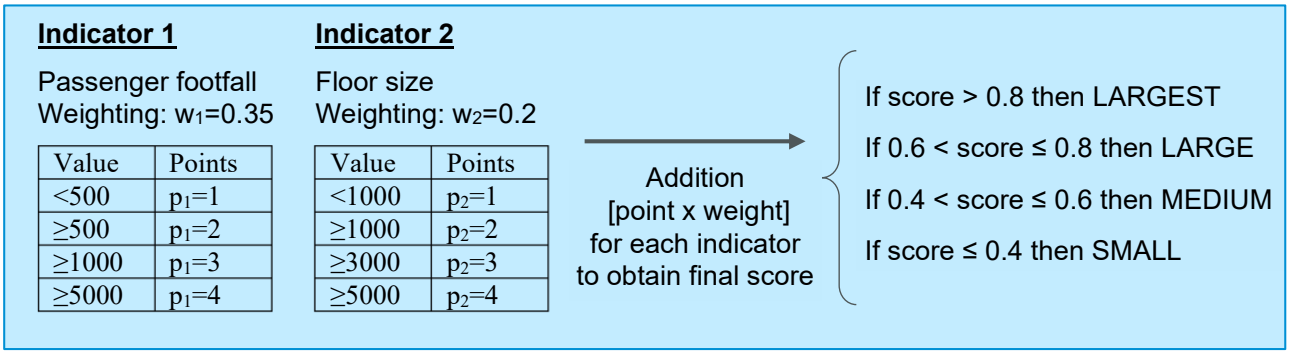

Figure 3: Example of score-based classification

As shown in Table 2, the most used indicator for the partners is passenger footfall, with the number of trains and lines served, and types of service offered also being popular indicators. When the classification aims to manage station assets, physical station characteristics, such as floor size, and the provision of escalators, elevators, and automatic ticket gates are also important. Other indicators include contextual information such as the location and surrounding population, and revenue coming from fareboxes and leaseholders. When the station has a special role, such as a public service obligation, this puts the station into a category dedicated to its role.

Table 2: Classification criteria and indicators (for symbols see footnote below the table)

Company	Number of categories	Passenger			Train/ line/ connection				Physical station features									Location and surroundings				Other				
		Passenger footfall	Main travel purpose	Commuter share	Number of trains	Number of lines	Types of service offered	Connection with other modes of transports	Station floor size	Location and surroundings	Station building presence	Staff presence	Back-end staff office	Station amenities	Vertical accessibility	Automatic ticket gates	Number of platforms	Platform roof coverage	Location	Catchment areas	Population	Points of interest	Revenue	Ownership/partnership	Public service obligation	Importance level	Operational function
ADIF (Spain)	6	✓[1]			✓			✓	✓								✓								✓		
Amtrak (USA)	4[#]	✓					✓[2]																	✓[2]			
DB (Germany)	7	✓		✓	✓	✓	✓												✓		✓						
DSB (Denmark)	4	✓																									
GBRTT/ Network Rail (UK)	6 8*	✓					✓[3]					✓											✓[5]				
IP (Portugal)	4	✓					✓	✓																		✓	
KNR (Korea)	3						✓																				
NMBS-SNCB (Belgium)	4	✓	✓					✓											✓								
ProRail/NS (Netherlands)	5	✓[4]							✓						✓			✓									
PTA (Australia)	4[+]					✓				✓		✓		✓	✓	✓											
RFI (Italy)	6	✓			✓		✓	✓	✓					✓	✓		✓		✓	✓	✓	✓					
SNCF (France)	6	✓[1]				✓	✓					✓							✓								
VIA Rail (Canada)	5	✓						✓					✓										✓[6]				✓
SZ CZ (Czechia)	5	✓			✓			✓	✓		✓						✓										

[#]: Category "Thruway" (stops for connecting bus services) not included
*: Includes subcategories
[+]: Category "Stations identified to be demolished" not included
✓: Criteria used
1: Different types of travel considered (e.g. high-speed, long distance, commuting, etc.)
2: Used independently for additional/supplemental categories
3: Used for subcategories
4: On working days only
5: Farebox revenue
6: Leaseholder revenue

The number of stations in each category is depicted in Figure 4. While category nomenclature differs between partners, they are commonly ordered by either the number of passengers or the physical complexity of the station.

Figure 4 shows the categories in order from large to small, with virtually all of the partners seeing the largest proportion of their stations falling into the small-size category. While an individual station is deemed more important as it sees larger numbers of passengers and trains, small stations cannot be neglected due to there being a significant number of them.

ADIF (Spain)
1497 stations with 6 classes

Category	Stations	%
Category 1	10	1%
Category 2	23	2%
Category 3	65	4%
Category 4	164	11%
Category 5	748	50%
Category 6	487	33%

Amtrak (USA)
524 stations with 4 classes

Category	Stations	%
Large	47	9%
Medium	156	30%
Caretaker	190	36%
Shelter	131	25%

DB (Germany)
5384 stations with 7 classes

Category	Stations	%
Metropolitan	18	0%
Major city junction	90	2%
Regional junction	318	6%
Urban S-bahn	401	7%
Suburban S-bahn	553	10%
Regional feeder	1240	23%
Rural feeder	2764	51%

DSB (Denmark)
289 stations with 4 classes

Category	Stations	%
Largest	2	1%
Large	24	8%
Medium sized	79	27%
Small	184	64%

GBRTT/Network Rail (UK)
2465 stations with 6 classes

Category	Stations	%
National hub	25	1%
Regional Interchange	66	3%
Important feeder	275	11%
Medium staffed	302	12%
Small staffed	605	25%
Small unstaffed	1192	48%

IP (Portugal)
461 stations with 4 classes

Category	Stations	%
Category A	21	5%
Category B	49	11%
Category C	139	30%
Category D	252	55%

KNR (Korea)
690 stations with 3 classes

Category	Stations	%
Highspeed	20	3%
Conventional/Commuter	343	50%
Not categorized	327	47%

NMBS-SNCB (Belgium)
555 stations with 4 classes

Category	Stations	%
Large International	4	1%
Large	16	3%
Medium	80	14%
Small	455	82%

ProRail/NS (Netherlands)
398 stations with 5 classes

Category	Stations	%
Kathedraal	7	2%
Mega	22	6%
Plus	25	6%
Basis	229	58%
Halte	115	29%

PTA (Australia)
75 stations with 4 classes

Category	Stations	%
Highly complex	5	7%
Complex	23	31%
Intermediate	21	28%
Basic	26	35%

RFI (Italy)
2219 stations with 6 classes

Category	Stations	%
Main Hub	25	1%
Hub	54	2%
Major	120	5%
Plus	254	11%
Local Plus	557	25%
Local	1209	54%

SNCF (France)
2991 stations with 6 classes

Category	Stations	%
Hub	23	1%
LGV	18	1%
City	138	5%
Proximity	914	31%
Halts	1519	51%
IDF	379	13%

VIA Rail (Canada)
114 stations with 5 classes

Category	Stations	%
Important national hubs	3	3%
National hub/large	6	5%
Medium sized regional	10	9%
Small	28	25%
Lowerst ridership	67	59%

SZ CZ (Czechia)
2608 stations 5 with classes

Category	Stations	%
Category A	1	0%
Category B	18	1%
Category C	147	6%
Category D	599	23%
Category E	1843	71%

Figure 4: Number of stations in each category

Scope of application

Analysis of the various classification systems employed by the partners revealed common elements in their methodologies, particularly concerning the data used for this. However, significant differences in approach were also identified, which can be attributed not only to the differences in railway context, such as the number of stations managed, but also to the varying applications of the classifications themselves.

Examining the different classification models and their underlying reasoning highlighted a primary need: to establish a system capable of justifying investment, a common objective for 50% of the partners. Additionally, half of the partners emphasised the necessity of using the classifications to standardise station services or to strengthen business models.

A smaller percentage of the contributors (approximately 30%) seek to use classifications to standardise charging and fare systems. Fewer partners again employ these classifications for developing a «station as a service» concept, evaluating station performance, or defining work for asset management or intermodality.

These differing objectives significantly influence the data collected and the resulting outcomes in terms of classification, to better illustrate the reasons behind the differences in classification methodologies between infrastructure managers and how their specific approaches satisfy their needs. For instance, DB's methodology is strongly oriented towards defining minimum service standards for the various station types, while RFI's approach focuses on economic and fare aspects as well as guiding future development and investment strategies. SNCF has two different classifications, with one focusing on marketing, and the other on financial aspects.

4. Guidelines

These recommendations were compiled during the working group's meetings and represent shared partner guidelines for drafting effective national station classification systems. These are as follows:

1. **Adopt a unified classification system**: It is recommended that each infrastructure or station manager adopts a single, versatile station classification system, that can be adapted to various different purposes.

2. **Have a classification based on station numbers**: Analysing the relationship between the number of stations and the number of classes, it is advised that partners managing fewer than 1,000 stations use three classes, while those managing more than 1,000 stations should implement 6 classes.

   Note: The number of stations is inversely proportional to the importance of the cluster, with fewer stations in the leading category and more stations in "less critical" clusters.

3. **Expand on classification indicators - passengers, railway services, context, intermodality and station characteristics**: To enhance station classification, more comprehensive indicators should be used to reflect a modern vision of stations as both transport nodes and service hubs within an integrated, multimodal mobility framework. Classification should not only consider passenger volume, railway services, intermodality, and station facilities but also context-specific factors, such as potential demand, resident and commuter accessibility, and proximity to key destinations, such as universities, hospitals, and tourist spots. The local context should be assessed, including demand and access to points of interest, along with the different services on offer, prioritising high-speed and long-distance connections. Sustainable, multimodal infrastructure, such as cycling paths, and electric and shared mobility options, should also taken into account. Station features, including building size and accessibility (including lifts and facilities for those with reduced mobility) are also crucial elements for classification.

4. **Use GISTools**: Most partners use technological tools to support data management, with more advanced systems including Geographic Information System (GIS) tools to map transport and local information being used to effectively manage this complex data. Although creating databases can be costly in the initial phase, it allows the entire process of defining and updating station classifications to be managed in an optimised manner. Other technologies, such as building information modelling (BIM) and digital twins, can benefit from the results.

5. **Update recommendations**: Regular updates of the station classification are essential as railway networks continuously evolve, with stations frequently opening, closing, or changing status. Technological progress has enabled databases to be updated annually, allowing for passenger counts, service details, and other relevant data to be collected in a timely manner. However, to prevent a continuous fluctuation in the rankings, it is recommended that classification updates be conducted over a longer timeframe, approximately every three years.

6. **Classify newly opened stations**: It is also important to define the classification of newly opened stations, ideally using operational models, demand estimations, and other technical, infrastructure, and contextual factors considered during the project phase.

7. **Use a standardised nomenclature for classes**: Despite variations in the number of stations and classes existing between different infrastructure managers, a standardised nomenclature for class names should be adopted to facilitate communication and comparison across different station networks. The names assigned to the different classes should clearly differentiate the relevance of the stations without conveying a negative connotation for those in "less critical" clusters.

5. Conclusion

In this document, the Station Categorisation Project Group has compiled case studies from 15 partners detailing the development and use of their own station classification methodologies. These methodologies are designed to facilitate effective station management, enhance passenger and customer services, and maintain or strengthen any competitive advantage. In many aspects, these approaches are more detailed that IRS 10180 “Classification of Rail Passenger Stations”, which, while straightforward and easy to use, lacks certain specific and comprehensive information.

Identifying the strengths and weaknesses within various station classification systems will enable infrastructure or station managers to deliver improved services, increase operational efficiency, and address the evolving needs of the passengers and communities served by the railway network. This process also enhances communication with stakeholders, including with passengers, local communities, government agencies, and private partners, by fostering transparency, trust, and collaboration, all of which are essential for promoting positive change and innovation within the rail industry.

Although indicators such as passenger footfall, types of train services offered, and intermodality are commonly used for station classification, there is no universal methodology applicable to all contexts. The appropriate approach varies depending on factors such as the business environment, the number of stations to be classified, and the specific objectives of the process, and the desired level of detail, therefore there is no singular, simple solution.

Nevertheless, common models and recommendations have been derived from the working group’s collective experience, which are outlined in section 4. These insights can serve as valuable guidance when seeking to improve existing methodologies or when developing and implementing new ones.

Effective station classification relies heavily on accurate and up-to-date data concerning passenger flows, station assets, and the surrounding context. Ongoing data collection and the use of analytical tools, such as Geographic Information Systems (GIS), are highly beneficial for facilitating and refining station classification processes.

Appendix 1 – UIC classification calculation method

Table 3: Summarised calculation method

	K = 1	K = 2	K = 3	K = 4	K = 5	Value
1 - Attendance	[persons/ day]	[persons/ day]	[persons/ day]	[persons/ day]	[persons/ day]	
Total number of passengers catching a train in the station per day	A < 400	400 ≤ A < 7 500	7 500 ≤ A < 20 000	20 000 ≤ A < 200 000	A > 200 000	0,3
2 - Number of trains (T)	[trains/day]	[trains/day]				
Number of trains	T < 30	30 ≤ T < 250	250 ≤ T < 750	750 ≤ T < 2 500	T > 2 500	0,2
3 - Platform edges (P)						
Number of platform edges	P = 1	P = 2	2 < P ≤ 5	5 < P ≤ 10	P > 10	0,1
4 - Railway station size (S)	[sq metres]	[sq metres]	[sq metres]	[sq metres]	[sq metres]	
Calculated surface	S < 1 000	1 000 ≤ S < 5 000	5 000 ≤ S < 40 000	40 000 ≤ S < 200 000	S > 200 000	0,2
5 - Intermodality (I)						
Intermodal modes	I ≤ 2	2 < I ≤ 6	6 < I ≤ 10	10 < I ≤ 15	I > 15	0,2

Appendix 2 – Detailed indicators and criteria

A.2.1 - Administrador de Infraestructuras Ferroviarias (Spain)

Table 4: ADIF detailed calculation method

Main purpose(s)		Fix fees and costs of the different services offered to railway undertakings		
Number of categories		6		
Criteria	**Indicators**	**Description**	**Calculation**	**Factor**
	PASSENGERS (V)	Number of daily long distance/ intercity passengers	K_1=1 if V < 150 K_1=2 if 150 ≤ V < 750 K_1=3 if 750 ≤ V < 2,000 K_1=4 if 2000 ≤ V < 10,000 K_1=5 if V ≥ 10,000	P_1=0.3
		Number of total passengers	K_1=1 if V < 400 K_1=2 if 400 ≤ V < 7,500 K_1=3 if 7500 ≤ V < 20,000 K_1=4 if 20000 ≤ V < 100,000 K_1=5 if V ≥ 100,000	
	TRAINS (T)	Number of trains per day	K_2=1 if T < 25 K_2=2 if 25 ≤ T < 85 K_2=3 if 85 ≤ T < 190 K_2=4 if 190 ≤ T < 500 K_2=5 if T ≥ 500	P_2=0.25
	SIZE (S)	Floor size in square meters	K_3=1 if S < 2500 K_3=2 if 2500 ≤ S < 5,000 K_3=3 if 5000 ≤ S < 10,000 K_3=4 if 10000 ≤ S < 50,000 K_3=5 if S ≥ 50,000	P_3=0.25
	INTERMODALITY (I)	Number of connecting modes	K_4=1 if I < 3, without information K_4=2 if I ≥ 3, without information K_4=3 if I ≤ 4, with information K_4=4 if I > 4, with information K_4=5 if I > 4, with information and connector	P_4=0.1
	PLATFORMS (U)	Number of platforms	K_5=1 if K_5=2 if line type is B and U ≥ 3 K_5=3 if line type is A and U ≥ 2 K_5=4 if located in provincial capital or in C.A. and U ≥ 2 K_5=5 if line type is A and located in provincial capital or in C.A.	P_5=0.1
Formula		Value for classification (C) is calculated by: $C = \sum_{i=1}^{5}(K_i + P_i)$		
Category	Category 1	Stations with intercity services	C > 4	10 stations
	Category 2		3 < C ≤ 4	23 stations
	Category 3		2 < C ≤ 3	65 stations
	Category 4		1.3 ≤ C ≤ 2	164 stations
	Category 5	Stations with mixed services	C < 1.3	748 stations
	Category 6	Public service obligation stations with only one RU		487 stations

ADIF uses a formula, which is composed of five criteria (number of passengers, number of trains, station size, intermodality and number of platforms), incorporated with factors applicable to each criterion. Five out of six categories are based on the formula. The remaining one, Category 6, is defined as being for public service obligation stations, regardless of the aforementioned formula.

A.2.2 - AMTRAK (United States of America)

Table 5: AMTRAK detailed calculation method

Main purpose(s)	Formalise internal design criteria Provide a standardised and consistent customer experience	
Number of categories	5	
Category	**Criteria** PASSENGERS Annual ridership	**Number of stations**
Large	≥ 400,000	47 stations
Medium	≥ 100,000	156 stations
Caretaker	≥ 20,000	190 stations
Shelter	Basic service	131 stations
Thruway	Basic service by bus	≥ 500 stations

Amtrak stations are classified with respect to the number of annual passengers. “Thruway” is a bus service, provided either by Amtrak or contracted motorcoach operators, between Amtrak stations and destinations not served by rail. There are also qualitative classifications based on types of trains served and station ownership:

- LD=Long distance trains, SS=State supported trains, CC=Commuters, TW=Thruway buses
- Owned by Amtrak, Owned by third-party

A.2.3 - Deutsche Bahn (Germany)

Table 6: DB detailed calculation method

Main purpose(s)	Make a distinction between market and customer needs Specify minimum requirements for services levels and facilities		
Number of categories	7		
Category	**Criteria**		**Number of stations**
	LINES Number of lines served	Specific criteria for subcategorisation	
Metropolitan station	≥ 8 ICE lines	-	18 stations
Major city junction station	≥ 4 lines	Classified as a major city junction station if: Located in metropolis, big city, or regiopole, AND ≥ 2,600 LD stops/year & ≥ 3,000 LD pass/day, OR ≥ 20,000 passengers/day, OR ≥ 20% share of total commuters	90 stations
Regional junction station			318 stations
Urban S-bahn station	≥ 2-3 S-bahn per hour	Classified as an urban S-bahn station if: ≥ 1000 pass/day & ≥ 15,000 stops/year & ≥ 10,000 residents within 800m radius, OR ≥ 100,000 stops/year, OR ≥ 1000 pass/day & 20,000 stops/year & 20% change	401 stations
Suburban S-bahn station			553 stations
Regional feeder station	< 4 lines	Classified as a regional feeder station if: ≥ 1000 pass/day & < 15min to national hub, OR ≥ 80% share of commuters leaving city, OR ≥ 100% share of commuters arriving, OR Station inside of a big city	1240 stations
Rural feeder station			2764 stations

*LD= long distance

DB has four broad station categories: metropolitan stations, junction stations, S-bahn stations and feeder stations. They are all classified with respect to the number of lines served, although different types of services are considered for the different broad categories. For each of them, except for metropolitan stations, specific subclassification criteria are applied, including the number of train stops, number of passengers, share of commuters, and station location.

In addition, tourist stations are separately identified as being at airports OR on tourist islands OR with important or many points of interest in the surrounding area OR with many accommodation options in the area OR with multiple long-distance traffic arrivals.

A.2.4 - Danish State Railways (Denmark)

Table 7: DSB detailed calculation method

Main purpose(s)	Evaluate if investments in commercial activities are financially viable Analyse the need for station equipment and prioritise commercial investment	
Number of categories	4	
Category	Criteria PASSENGERS Number of daily passengers	Number of stations
Largest station	100,000 or more	2 stations
Large station	10,000 – 100,000	24 stations
Medium sized station	3,000 – 10,000	79 stations
Small station	Less than 3,000	184 stations

DSB employs the number of passengers as the sole criterion. In addition to this, DSB has a "TOP 100 stations", which refers to the 100 largest stations in terms of the number of passengers, and is used by DSB Real Estate as part of the DSB Station Strategy to prioritise building restoration investment.

A.2.5 - GBRTT/Network Rail (United Kingdom)

Table 8: GBRTT/Network Rail detailed calculation method

Main purpose(s)	Set minimum capacities/amenities for each category including security Support a charging model between lessor and lessee			
Number of categories	6			
Category	Criteria PASSENGERS Number of trips per year	REVENUE Revenue per year	STAFF Staff availability	Number of stations
A: National hub	Over 2 million trips	Over 20 million GBP	-	25 stations
B: Regional interchange	Over 2 million trips	Over 20 million GBP	-	66 stations
C: Important feeder	0.5-2 million trips	2-20 million GBP	-	275 stations
D: Medium staffed	0.25-0.5 million trips	1-2 million GBP	Staffed	302 stations
E: Small staffed	Under 0.25 million trips	Under 1 million GBP	Staffed	675 stations
F: Small unstaffed	Under 0.25 million trips	Under 1 million GBP	Unstaffed	1192 stations

The number of trips per year and revenue per year are two criteria that GBRTT/Network Rail uses for classifying their stations. Here, revenue refers to income from ticket sales. For medium/small stations, staffing is also a criterion.

There are subcategories for C: Important feeder and F: Small unstaffed stations as follows:

- C: Important feeder is divided into C1 for mainline stations and C2 for suburban stations
- F: Small unstaffed is divided into F1 for stations with 100,000 or more trips per annum and F2 for few than 100,000

A.2.6 - Infraestruturas de Portugal (Portugal)

Table 9: IP detailed calculation method

Main purpose(s)	Overview of the state of network, adjust services, and the availability of infrastructure Pricing of infrastructure, spaces for billing railway undertakings		
Number of categories	4		
Criterion	**Indicators**	**Description**	**Factor**
	PASSENGER (V_{ic1})	Number of passengers	61%
	TYPE (V_{ic2})	Rail services offered: urban, regional, interregional, intercity, alfa, international	13%
	INTERMODALITY (V_{ic3})	Level of intermodality	13%
	IMPORTANCE (V_{ic4})	Importance of the station: national, regional, tourism, patrimonial, architecture, rail history	13%
Formula	Value for classification (V_i) is calculated using: $V_i = (V_{ic1} \times 0.61) + (V_{ic2} \times 0.13) + (V_{ic3} \times 0.13) + (V_{ic4} \times 0.13)$		
Category	Category A	$V_i \geq 60$	21 stations
	Category B	$40 \leq V_i < 60$	49 stations
	Category C	$10 \leq V_i < 40$	139 stations
	Category D	$V_i < 10$	252 stations

At IP, a formula is used to calculate the classification comprising quantitative variables, such as the number of passengers, and nominal variables, such as types of rail services offered and the importance level of each station. Detailed threshold values for each criterion are not given. With a factor of 61%, the number of passengers is the most important criteria when classifying IP's stations.

A.2.7 - Korea National Railway (Korea)

Table 10: KNR detailed calculation method

Main purpose (s)	Facilitate financing through the classification of stations Build stations to meet passenger demand Apply construction standards according to train types	
Number of categories	3	
Category	**Criteria** TYPE Type of services offered	**Number of stations**
High-speed rail	High-speed rail stations, linking major cities	20 stations
Conventional	Conventional rail stations, linking major/mid-sized cities	343 stations
Commuter	Commuter rail stations, linking downtown and suburbs	
Not categorised	-	327 stations

KNR employs the types of services offered as the sole criterion for classifying its stations and does not incorporate quantitative indicators such as numbers of passengers or trains.

Note: not all of the stations fall into one of the three categories: nearly half of their stations, e.g. smaller stations with secondary rail services, are not classified.

A.2.8 - NMBS/SNCB (Belgium)

Table 11: NMBS/SNCB detailed calculation method

Main purpose (s)	Benchmark levels of the services and infrastructure provided to customers Also used for billing B2B railway undertakings	
Number of categories	4	
Category	Criteria PASSENGER Number of passengers	Number of stations
Large – international	4 large stations served by international trains	4 stations
Large	Top 16 stations	16 stations
Medium	Top 80 stations	80 stations
Small	Other stations	455 stations

NMBS/SNCB uses a ranking-based classification method. The 20 largest stations in terms of the number of passengers are large stations, and the next 80 stations are medium stations. Large and medium stations therefore constitute the top 100 stations.

In addition, there are several additional categories based on:

- Degree of intermodality: Stations with 2 or more lines/stations with an underground or tram or 5 or more bus lines/other
- Location of stations: Urban/suburban/rural
- Passenger movement characteristics: Departure/mixed/destination/tourist

A.2.9 - Prorail/Nederlandse Spoorwegen (The Netherlands)

Table 12: Prorail/NS detailed calculation method

Main purpose(s)	-	
Number of categories	5	
Category	Criteria PASSENGERS Number of passengers per working day	Number of stations
Cathedral (Kathedraal)	Above 75,000	7 stations
Mega	25,000-75,000	22 stations
Plus	10,000-25,000	25 stations
Base (Basis)	1000-10,000	229 stations
Stop (Halte)	Max 1000	115 stations

While the number of passengers per working day is the sole criteria for classifying stations at Prorail/ NS, this may be adjusted in terms of the following:

- A “Stop” station will be classified as a “Base” if it has escalators/elevators
- A station will be classified as a “Stop” if its traveller space is less than 2000 square meters
- A station will be classified as a “Stop” if less than 20% of the station is covered/sheltered

A.2.10 - Public Transport Authority (Western Australia)

Table 13: PTA detailed calculation method

Main purpose(s)	Estimate operational cost, budgeting, insurance coverage, cost projection						
Number of categories	4						
Category	**Criteria**						**Number of stations**
	LOCATION Location and surroundings	ACCESSIBILITY Availability of vertical transports	STAFF Staff presence	GATES Equipped with gates	AMENITY Station amenities	LINES Connecting lines	
Basic	Mostly ground level	No	No	No	No	No	26 stations
Intermediate	Mainly ground level	Limited	No/yes	No	No	No	21 stations
Complex	Elevated or below ground level	Lift or escalators available	Yes	Yes	No	No	23 stations
Highly complex	-	Numerous lifts and escalators available	Yes	Yes	Yes	Yes	5 stations

PTA's station classification relies mainly on each station's physical assets and service provision, rather than quantitative indicators.

Note: PTA's categories are in basic-to-complex order, while most of other partners have it the other way around. There is one additional category, which is "Stations identified to be demolished," which is not listed here as it is not based on station features and services. Currently only one station falls into this category.

A.2.11 - Rete Ferroviaria Italiana (Italy)

Table 14: RFI detailed calculation method

Main purpose(s)	Identify stations' functional role and usage within the network to better direct funding Manage asset conditions Plan, manage, set standards for maintenance Plan and schedule renewals Prioritise customer improvements Identify the variety of station products that exist within our national station network Set a common language for stakeholder engagement		
Number of categories	6		
Criteria	**Macroindicators**	**Description**	**Microindicators**
	PASSENGER	Number of passengers	Number of passengers per year
	TRAIN/TYPE	Number of trains by types of service offered	Number of local - regional trains Number of local - regional fast trains Number of EC/IC/Frecciabianca trains Number of high-speed trains

	Area	Local context	People live/work within 15min-walking distance People live/work within 20min-driving distance Number of universities Number of high schools Number of hospitals/beds Number of hotels Number of museums and cultural heritage points Number of points of interest (e.g. stadiums, theme parks, shopping centres)
	INTERMODALITY	Intermodality level	Number of metro stations Number of non-RFI train stations Number of tram stations Number of bus stations Car parking size Electric and shared mobility services Number of bike stalls Length of cycle paths
	FEATURES	Station characteristics	Number of pedestrian over/underpasses Number of lifts Number of tracks Number of platforms with new standard H55 Number of escalators Building footprint size Platform footprint size Number of ramps Sala BLU (Passenger assistance office) Sala BLU network
Formula	Each microindicator has a score of 1 to 5. Two-level formula structure: ▪ Five micro-level formulas give subscores for each macroindicator, calculated by microindicator ▪ A macro-level formula gives final score, calculated via five subscores Each micro/macroindicator has a specific predefined weighting.		
Category	Main hub		25 stations
	Hub		54 stations
	Major		120 stations
	Plus		254 stations
	Local plus		557 stations
	Local		1209 stations

RFI has as many as 31 microindicators to classify their stations, with assistance of an extensive GIS and survey data. Microindicators are combined to comprise 5 macroindicators, which gives a final score.

Additional information, called TAGs, is used to further identify station characteristics in detail. This includes main interchanges such as stations serving airports or ports, and local specificities which describes land-use surrounding the stations.

A.2.12 - Société Nationale des Chemins de fer Français (France)

Table 15: SNCF detailed calculation method

Main purpose(s)	Marketing segmentation					
Number of categories	6					
Category	**Criteria**					**Number of stations**
	PASSENGER	LINE	TYPE	LOCATION	STAFF	
	Number of passengers	Number of RU offers, connection to network	Type of services offered	Station location	Staff presence	
Hubs	Passengers ≥ 6 million/year, mixed carrier offer, connected to several networks					23 stations
High-speed rail (LGV) stations	Built on LGV, located in the city outskirts					18 stations
City stations	Located in the city centre and: Multi RU, 0.5-6 million annual national passengers or >0.1 million annual international passengers, or stations with seasonal national traffic, or Single RU, >1.5 million annual passengers or with long distance traffic					138 stations
Proximity stations	<1.5 million annual passengers, regional trains only, meets needs for everyday life, staffed					914 stations
Stops	Unstaffed stations					1519 stations
Ile-de-France stations	Stations in the Ile-de-France region					379 stations

SNCF has 6 categories in its station classification framework, mainly based on the types of services offered, number of passengers, and station location. LGV stations are further divided into two subcategories at the annual passenger threshold of 1.5 million. Stops are subcategorised as to whether they have a building open to the public or not. Ile-de-France stations are also subcategorised into mass transit, regional network and proximity stations.

A.2.13 - VIA Rail (Canada)

Table 16: VIA Rail detailed calculation method

Main purpose (s)	Define customer and operations service levels Define investment prioritisation and levels to attain specific service levels Define an ownership strategy Improve standardisation for a more efficient operation			
Number of categories	5			
Criteria	**Indicator**	**Description**	**Points**	**Weighting**
	PASSENGER	Number of annual passengers	[Corridor stations] 0 – 40,000 → 10 40,000 – 135,000 → 20 135,000 – 1 million → 40 1 million+ → 55 [Non-corridor stations] 0 – 4,000 → 10 4,000 – 15,000 → 20 15,000 – 200,000 → 40 200,000+ → 55	55%
	OPERATION	Train and line operation	Yes → 10 No → 0	10%
	REVENUE	Leaseholder revenue	0 – 50,000 CAD → 0 50,000 – 200,000 CAD → 5 200,000 – 2 million CAD → 15 2 million+ CAD → 20	20%
	INTERMODALITY	Number of interchange modes	1 → 1 2 or 3 → 2 4 → 3 5 or more → 4	8%
	OFFICE	VIA backend employee office	Yes → 8 No → 0	7%
Formula	Score is calculated with the sum of the points for each criterion			
Category	Important national hubs	Score ≥ 80		3 stations
	National hubs or large stations	Score 65 – 79		6 stations
	Medium sized regional stations	Score 35 – 64		10 stations
	Small stations	Score 20 – 35		28 stations
	Lowest ridership	Score 0 – 20		67 stations

VIA Rail's station classification is unique as it has backend employee offices as a criterion. Corridor stations, which are on the busy Ontario-Quebec corridor, have different passenger criteria from non-corridor stations, as the passenger volumes vary considerably.

A.2.14 - SZ CZ (Czechia)

Table 17: SZ CZ detailed calculation method

Main purpose (s)	Define customer and operation service levels (number of toilets, etc.) Define investment prioritisation Standardisation for more efficient operations			
Number of categories	5			
Criteria	**Indicator**	**Description**	**Points**	**Weighting**
	Passenger	Number of total passengers	K_a=1 if A < 400 K_a=2 if 400 ≤ A < 7,500 K_a=3 if 7,500 ≤ A < 20,000 K_a=4 if 20,000 ≤ A < 200,000 K_a=5 if A ≥ 200,000	30 %
	Number of stopping trains	Number of stopping trains per day	K_t=1 if T < 30 K_t=2 if 30 ≤ T < 250 K_t=3 if 250 ≤ T < 750 K_t=4 if 750 ≤ T < 2,500 K_t=5 if T ≥ 2,500	20 %
	Platform edges	Number of platform edges	K_p=1 if P=1 K_p=2 if P=2 K_p=3 if 2 < P ≤ 5 K_p=4 if 5 < P ≤ 10 K_p=5 if P > 10	10 %
	Station size	Floor size in square meters	K_s=1 if S < 1000 K_s=2 if 1000 ≤ S < 5,000 K_s=3 if 5,000 ≤ S < 40,000 K_s=4 if 40,000 ≤ S < 200,000 K_s=5 if S ≥ 200,000	20 %
	Intermodality	Number of connecting modes	K_i=1 if I ≤ 2 K_i=2 if 2 < I ≤ 6 K_i=3 if 6 < I ≤ 10 K_i=4 if 10 < I ≤ 15 K_i=5 if I > 15	20 %
Formula	C = k(A) × 0.3 + k(T) × 0.2 + k(P) × 0.1+ k(S) × 0.2 + k(I) × 0.2 Where: k(A) is the number of passengers criterion k(T) is the number of stopping trains criterion k(P) is the number of platform edges criterion k(S) is the size of the station criterion k(I) is the intermodality criterion			
Category	Category A	C > 4		1 station
	Category B	3 < C ≤ 4		18 stations
	Category C	2 < C ≤ 3		147 stations
	Category D	1.3 ≤ C ≤ 2		599 stations
	Category E	C < 1.3		1843 stations

SZ CZ uses IRS 10180 for classifying stops and stations with minor variations. The calculation is only carried out for active stops and stations (where passenger trains pass by or stop) and the reverse order is used (A – highest, E – lowest).

Problems are encountered when certain transport authorities (usually regions or regional transport organisers/German Verkehrsverbund equivalent) stop ordering line transport as part of a public service obligation, or when this order differs significantly between years (the number of train stops at the station). Most of these places are in locations with values at the limit of a criterion, which results in significant jumps in the ranking of individual categories.

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