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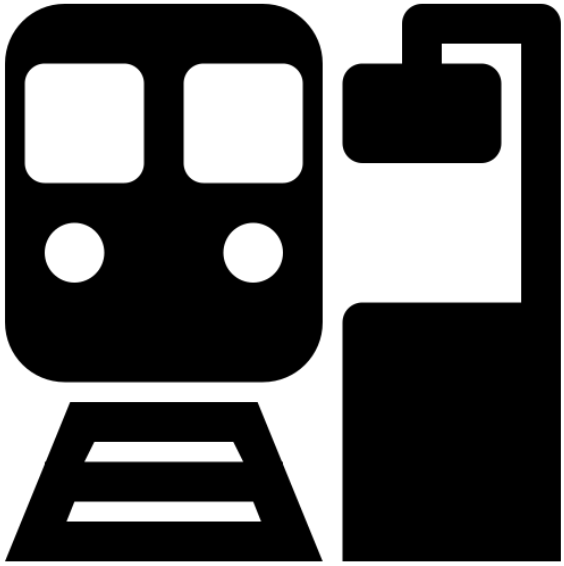

Passenger Stations Report

From the research on
Integration of Service Facilities into the capacity management process

DRAFT version 0.3

Versioning

Version	Responsible	Date	Description
0.0	Radovan Tegdeš	28 August 2025	First draft of chapters on Passenger Stations, based on interviews and desk research.
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Important notices

Disclaimer: This draft research report is a collection of evidence from railway stakeholders and independent desk research. FTE does not take any responsibility for the correctness and accuracy of the input provided by the stakeholders, especially in the conducted interviews. This document also does not represent an officially endorsed document by FTE statutory bodies, same as the indicated suggestions do not represent the opinion of all FTE members.

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Management summary

Service Facilities (hereafter “SF”) are currently not well integrated and aligned with the rail capacity management processes and thus pose many challenges that have so far not been sufficiently tackled by the railway sector, with most of the consequences of inaction falling on Railway Undertakings (RUs). This has been recognised by the European Commission (EC) and to a certain extent reflected in the Regulation (EU) 2026/1184 on the use of railway infrastructure capacity in the single European railway area; namely Article 31 (hereafter “Capacity Regulation”), and further by the establishment of a dedicated SERAF sub-group on Service Facilities, tasked with benchmarking the legal texts against real-world experience. The FTE members-initiated research to map the gaps and best practices, to support the sectoral standardisation which reflects the market needs. This document is a draft report from this research (research to be continued) with a focus on Passenger Stations (hereafter “stations”). The report highlights namely:

- Vague definition of "passenger station" in European law: the term appears in Directive 2012/34/EU but is not defined, and the components of a station are split between railway infrastructure and SF.
- Ownership and management models differ widely — Infrastructure Managers (IM), IM’s subsidiary, separate station manager, where the station management sits partially/outside the IM the RU faces additional alignment, in some cases a separate contract before trains may stop at the station and face potential uncertainty as to which obligations apply.

- Charging schemes for stations differ by country and the station categorisations are not comparable, leaving open what the stopping fee actually covers, which equipment should be charged at all.
- RU needs are largely absent from long-term planning: investment processes run far beyond the capacity planning horizon, requirements of RUs are considered on a voluntary basis, and there is no obligation on the IM (station manager) to answer a submitted requirement or to justify its rejection.
- The information needed to plan a service and prepare a capacity request — station track lengths, platform parameters, availability of sidings and of services — is in many states available only after a licence has been obtained or through personal contact with the IM, which is a significant barrier to market entry.
- Restrictions at stations are published on the same deadlines as those on the track but assessed only in the track dimension; there is no obligation to publish the unavailability of platforms, access routes or station services, and the alternative offer, which is what determines whether an RU can react, some has in some cases reached RUs as late as two weeks before the works.
- Capacity allocation is not aligned: the right to stop is granted before the station track occupation plan exists, the path, the station tracks and the associated facilities are allocated separately, occasionally it happens that stopping rights and sidings are withdrawn/not allocated after the path was already allocated.
- In operation, station track occupation plans serve as indicative documents only, platform changes reach passengers late or after the train has arrived, and passenger information systems are still operated manually to a considerable extent despite the data for digital solutions being available.
- Assistance for passengers with reduced mobility (PRM) substitutes for accessible infrastructure rather than complementing it; platform reconstructions are still carried out retaining the original insufficient height, and the coordination of assistance remains mostly a manual process.

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1. Aim of the research

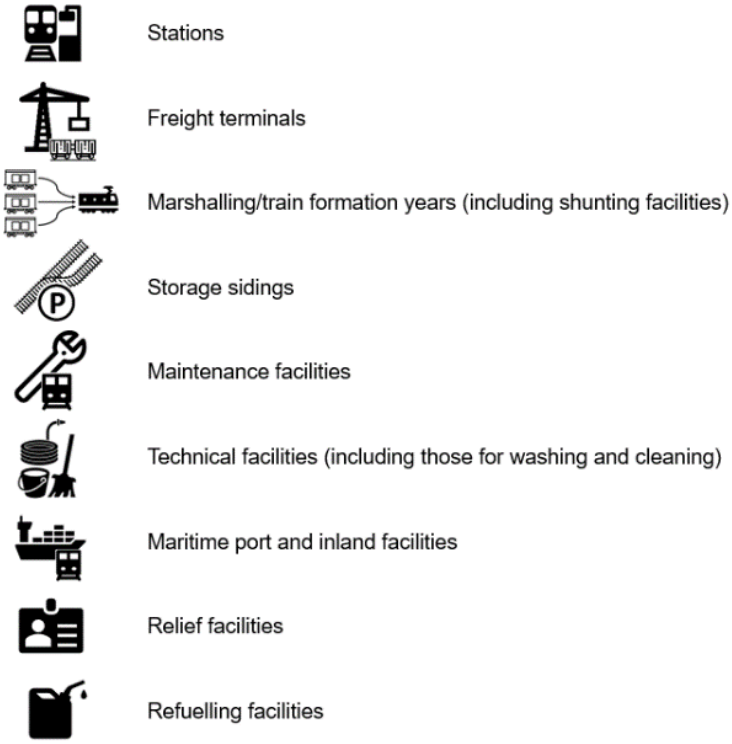
In the beginning of 2023, the FTE Working Groups Passenger and Freight encouraged the research on SF, since their coordination and integration into the capacity management processes is needed for the future in order to increase the quality of rail services and their competitiveness. SF are certainly inseparable elements from the production planning and rail transport operation.

The topic of SF is a very complex one and desires long-lasting research, followed by a higher EU-wise standardisation based on the detected best practices. Higher integration of SF into the capacity management is prescribed in the Capacity Regulation. Nevertheless, the level of detail in the regulation is very low, leaving high freedom to the sector to define its own standards. This FTE research aims to contribute to the envisaged standard definition by analysing SF from different angles, detecting market needs and providing suggestions.

The first published version of the report (v0.3) is based on the desk-research and several semi-structured interviews conducted with railway stakeholders (RUs, IMs). Due to the topic's complexity, only a selected sample of stakeholders were interviewed. Furthermore, the focus was on the “track side” planning and operations of stations. Commercial spaces were out of scope of the research. Additionally, FTE members requested to investigate the topic of PRM. The research aims to continue to cover other SF types. You can track updates on the research development on the FTE dedicated page: https://www.forumtraineurope.eu/services/capacity-activities/service-facilities

2. Types of SF

There are numerous types of SF (note also the alternative term rail-connected facilities), each with its own relevance for passenger and/or freight undertakings. Below are listed some of the most important SF as defined by the European Union in the Single European Railway Area (SERA) Directive:



This report focuses primarily on stations, specifically the allocation and operation of station tracks and platforms. Because stations often incorporate or are co-located with other SF types — such as sidings, relief facilities, and water refilling points — these are mentioned where relevant; however, the report does not provide detailed coverage of those SF types.
Many stations have mixed operational roles and are also important to freight RUs, which also rely on station capacity and traffic operations (e.g., drive-through) or use stations for crew changes and technical inspections. Nevertheless, freight-related operations are out of scope for this report.
Stations are key nodes in regional, long-distance, and international transport networks and serve as important hubs for railway operations and passengers.

3. Research report on Stations

3.1. Definitions and stakeholder relations

3.1.1. Definitions of Stations

These definitions are used in this report when referring to these terms:

- Passenger station — A designated facility where trains stop to allow passengers to board or disembark, and to change trains and/or modes of transport. Stations typically include multiple tracks to facilitate train crossings and overtaking. Key components commonly include platforms; connecting pathways such as underpasses or overpasses; waiting areas; ticketing services; and a range of passenger amenities intended to enhance travel experience. In addition, the area of most stations includes other SF (and associated services), e.g., sidings, water-refilling points, cleaning and servicing areas, and sanitary facilities.

- Commercial spaces — Areas within a station used for ticket offices, ticket machines, lounges, and other retail or service activities made available under rental/lease agreements and therefore charged separately. These spaces are out of scope for this report.

- Passenger stop — A basic facility, mostly located on open track sections, where trains stop to allow passengers to board or disembark, typically featuring one or two platforms. Passenger stops provide minimal services—generally a platform, shelter, and informational signage—and do not include traffic control functions.

However, European legislation does not define the terms in this way. The term “passenger station” is used in Directive 2012/34/EU, but it is not precisely defined. Annex II, point 2(a), states that RUs shall be granted access to “passenger stations, their buildings, and other facilities, including travel information display and suitable location for ticketing services.” The term passenger stop is not defined by EU legislation.

Additionally, most of the components typically found within a station (e.g., access pathways, railway tracks, signalling equipment, etc.) are listed as railway infrastructure in Annex I of the Directive; access to such infrastructure is part of the Minimum Access Package (MAP), not a SF.

In 2019, the European Court of Justice delivered a significant ruling. The core issue was whether Annex II to Directive 2012/34/EU should be interpreted to classify “passenger platforms” as part of the railway infrastructure within the scope of the Minimum Access Package, or as a SF. The ECJ ruled that passenger platforms are part of the MAP and not merely a component of passenger stations. Therefore, the use of passenger platforms is classified under “use of the railway infrastructure” as per point 1(c) of Annex II. This classification ensures that the use of these platforms falls within the scope of railway infrastructure access covered by the MAP.

The term “passenger station” is further specified or defined nationally in certain networks. For example, ŽSR defines a “passenger station” as a SF providing track access services for passenger transport, designated for the transport of people, travel luggage, and courier shipments. In addition to technical equipment, these stations offer facilities for passenger needs, including ticket offices, waiting rooms, luggage storage, information offices, and customer centres. They

also include train information systems (arrival and departure times, delays, platforms), platforms, equipment and facilities for passengers with reduced mobility (PRM) — as listed in the ŽSR Infomapa application — restaurants, buffets, newsstands, and sanitary facilities such as toilets, washrooms, and showers.

The divergence arising from vague legal definitions leads to different national understandings and definitions and creates practical difficulties that extend to charging principles (discussed in the following subchapter). These legal issues, raised by the Independent Regulators' Group – Rail (IRG-Rail) report "An overview of charges and charging principles for passenger stations in the IRG-Rail member states" (2024) and were also mentioned by stakeholders during research.

3.1.2. Charging and Ownership of Stations

Ownership

Stations are among the most complex SF in the railway system. They are not only the physical interface between the passenger and the train, but also a meeting point between multiple stakeholders — IMs, RUs, commercial operators, public authorities and, ultimately, the travelling public. Because of this multifaceted role, stations rarely fit neatly into the vertical-separation logic that governs the rest of the railway network. Ownership can be split between the IM, its subsidiaries, private developers, RUs or the state; operational responsibilities are frequently distributed across several entities; and the way costs are recovered from RUs varies significantly from country to country.

Definition of Stations - Ownership	
IM	The National IM acts as the sole responsible entity for the entire SF — covering allocation, management, maintenance and modernisation. In several countries (e.g. Slovakia) the formal legal owner is the State, but the IM (ŽSR) is legally mandated to exercise all ownership-related responsibilities, making the arrangement functionally equivalent to full IM ownership.[1]
IM + IM's subsidiary	National IM created its subsidiary (daughter company) – (as seen in France by SNCF R + SNCF G&C) to oversee station management, while IM still allocates station track capacity and manages the traffic.
IM + External Developer	Same principle as in the row above, but owner (or lessor) and manager is a 3rd party.
State	Uncommon arrangement, e.g. in Slovenia. The state is both the legal owner and the entity responsible for modernisation projects (carried out through the Slovenian Infrastructure Agency, a body of the Ministry of Transport). The IM is contracted only to maintain and operate the stations, without control over investment decisions.
IM + RU	Uncommon practice from the Netherlands[2]. While ProRail oversees the whole "track side" of operations, NS Stations (subsidiary of Nederlandse Spoorwegen (RU)) only operates the building and commercial spaces. There is no involvement of NS Stations, when applying for station capacity.

[1] Exceptions are car-loading ramps, and other minor facilities owned predominantly by RUs.
[2] Individual stations with this structure may be found on other networks. By number of stations, the Netherlands is chosen as the main example.

Although these ownership models differ significantly in their legal and organisational set-up, from the perspective of the RU - the end product is essentially the same: access to a station with services used by passengers and the RUs. What changes is not the service itself, but the number of entities involved in delivering it. Apart from sole IM ownership, every other model transfers part of the responsibility — for management, financing, modernisation or commercial operation — to an additional entity. This inevitably creates further organisational and legal layers that affect modernisation planning, coordination of Temporary Capacity Restrictions (TCRs), station-capacity allocation and day-to-day operations.

Where the station, or part of it, is not operated by the IM, the RU may need a second contract before it can serve passengers there. In France, use of the station requires a separate contract with the station manager, SNCF Gares & Connexions, alongside the contract for the train path. Czechia shows the same requirement arising within a single station:
At Brno hl.n., part of the station's SF is operated by Brno new station development a.s. Before using track capacity with passenger trains, an RU must therefore conclude a contract with that station manager, where it intends to use the services in the parts of the station which that company manages and operates. The requirement applies only where the RU requests the operation "NVC — boarding or alighting of passengers (commercial stop)" at that station.

The interviewed experts expressed diverging views on which model performs best. Two respondents found the model in Netherlands as a successful approach in vertical separation. A clear majority favours sole IM ownership, valuing above all the *single point of contact* it provides to RUs and the streamlined coordination it enables across allocation, operations and investment. Representatives of models in which responsibilities have been delegated — whether to a subsidiary or to an external developer — argue in turn that dedicated management structures and dedicated financing lead to measurable improvements in service quality, and that external developers bring additional private capital that would otherwise not flow into station infrastructure.

When weighing these arguments, most interviewees concluded that the added organisational complexity and the multiplication of contractual interfaces in delegated models are not consistently offset by the service-quality gains put forward as their justification. While such models can deliver excellent results in specific national contexts, the single-owner arrangement appears, on balance, to offer the most favourable trade-off between simplicity, predictability and quality of service — provided the IM is adequately funded to fulfil its responsibilities.

Charging

Regardless of the ownership model, the RU ultimately pays for the use of the station through one of two regulated channels: either as part of the **track access charge (TAC)** — where certain station components are considered part of the *MAP* — or as a separate **fee for the use of the station as a SF**. Both charges are regulated services, and both are subject to approval by the national Regulatory Body; either way, the RU pays for these services.

The fundamental divergence between IMs does not therefore lie in whether the RU pays, but in what the station manager is allowed to include as recoverable cost in the fee for stopping at the station. Even though platforms and station tracks are formally part of the MAP, RUs across all analysed networks still pay a distinct “stopping fee” component on top of the TAC. The scope of this stopping fee — and the methodology used to differentiate it between stations of different size, equipment or passenger volume — is where national practices diverge most visibly.

Stations – Charging Methodologies "stopping fee"	

Germany	• 7 Station Categories
	  ○ Different amount – each Regional Transport Authority
	  ○ Different amount – regional / long-distance train
	• Category determined by various ranking criteria

Austria	• 4 Station Categories • Based on installed equipment and available services

Slovenia	• 2 different set of classifications are mentioned in the NS
	  ○ 4 Station Categories
	  ○ Based on daily passenger volumes (by Slovenian law)
	
	  ○ 4 Station Categories
	  ○ Based on station equipment (used in the Charging principles)

Slovakia	• 3 Station Categories • Presumably differentiated by station equipment (unable to find the methodology)
Netherlands	• 5 Station Categories • Based on daily passenger volumes ○ Differentiated by 3 train categories (based on stopping pattern and number of seats in the train)
Czechia	• 5 Station Categories ○ Final charge is based on overall train weight; loaded

Our research also shows that, where network statements, regulatory body decisions or national law distinguish between stations and stops, they are nevertheless treated as the lowest charged value for stations.

The scope of what an IM may recover through the stopping fee has direct consequences for its ability to finance station operations and modernisation. Správa Železnic (SŽCZ) provides an illustrative example of a narrowly defined fee scope:

Czechia (SŽCZ) – "stopping fee"	
Included in the fee	**Not included in the fee**
Platforms (incl. roofing, lighting, benches, seats, luggage shelves, waste bins)	Indoor and outdoor station areas not serving passenger access to platforms
Crossings, underpasses, overpasses, foot-bridges, corridors, staircases and passenger access paths (incl. roofing and lighting)	Indoor and outdoor station areas not serving passenger access to platforms
Lifts, escalators, elevators and barrier-free access equipment	Parking areas and drop-off / pick-up zones
Boards with station names and train direction signs	Bicycle parking areas and equipment
	Fire and security protection equipment
	Sanitary facilities for passengers
	Information boards and equipment beyond basic orientation
	Luggage racks and related equipment
	Mobile lifting devices for barrier-free boarding
	Wi-Fi data transmission equipment
	Any other areas or equipment charged outside the minimum access package

The approach of excluding many station-related costs from the usage fee was flagged in the interviews as a source of **income unpredictability for the IM**, potentially resulting in a decline in service quality for RUs and passengers, and financial uncertainty for both investments and station maintenance.

ProRail applies a two-dimensional charging matrix for station stopping fee, combining the *volume of daily passengers* with the *stopping pattern of the train*:

Netherlands (ProRail) "stopping fee"			
Category	Passengers / day	Train stopping category	Criteria
Stop	<1000	A	Stops at all stations, or skips ≤ 15%
Basic	1000 – 10 000	B	Stops at ≥ 50% of stations, or part of a series where ≥ 90% of pattern traffic trains have ≤ 150 seats
Plus	10 000 – 25 000	C	No stopping-pattern conditions (typically long-distance / express)
Mega	25 000 – 75 000		
Cathedral	… 75 000		

DB InfraGO applies a **weighted ranking method** that scores each station on six parameters grouped into three segments:

- **Infrastructure (40 %):** number of platform edges, maximum platform length;
- **Traffic significance (40 %):** passengers per day, train stops per day;
- **Equipment (20 %):** step-free access, presence of service personnel.

Each parameter is graded on a fixed scale, multiplied by its weight and summed into a single score (max. 100), which assigns the station to one of **seven categories** — each linked to a defined service standard and price class. The value of each category differs according to the Regional Transport Authority the station is subject to. Additional variation for each category is whether the train is regional or long-distance service.

ÖBB-Infrastruktur Station Categorisation

Station Category	Description
Category D	Access to platform, guidance system, passenger train information
Category C	Category D services, acoustic and dynamic visual info, lift/escalator/security
Category B	Category C and D services, platform roof, rail replacement services
Category A	Services from Categories B, C, D, lift and escalator, InfoPoint with travel-specific info.

This approach offers clear differentiation in terms of the quality of service offered to RUs and passengers, allowing the IM to maintain and operate the station in a manner corresponding with the installed equipment.

In the model where the national IM solely owns the entire SF and all costs are consolidated into the track access charge, interviewed parties broadly considered this to be **best practice**, for several reasons:

- **Predictability in financing** for the IM;
- **Elimination of additional contracts and invoicing** for the RU;
- **Better coordination** of TCRs and investment planning;
- A **single point of contact** for all station-related matters.

A key aspect of these charging models is the classification of stations into categories, as seen with all researched IMs.

A detailed comparative analysis of how station usage is charged across Europe — covering the level of services offered, the components paid within the **MAP,** those charged separately as a **basic charge (BC) for stopping**, and those provided as **ancillary (non-regulated) services** — has been extensively summarised by **IRG-Rail i**n their report “An overview of charges and charging principles for stations in the IRG-Rail member states” (2024), which provides a very valuable reference for readers seeking a broader pan-European perspective.

3.2. Long-term Planning

3.2.1. Investment planning

For the purposes of this report, investment planning is understood as the process covering the period from raising a proposal for a station (its equipment — tracks, platforms, buildings, etc.) modernisation, through studies and consultations, up to the start of realisation or of the associated TCR.

The scale of this process should not be underestimated: the preparation of a complete station reconstruction can take up to 10 years, and sometimes longer, before the first works on site actually begin. This long horizon amplifies the importance of every structural weakness in the planning cycle, because decisions taken — or omitted — in the early phases will shape the network for decades.

Across the analysed networks, a broadly common practice has been observed. IMs initiate and prepare the project and, in the early phase, invite all Applicants to discuss and state their operational and commercial needs. It is nevertheless confirmed across all reviewed countries that the decisive word on the final shape of the project rests with the IM. However, several structural weaknesses characterise this process:

- **No binding timeline**. There are no fixed deadlines governing the phases of the project, which makes it difficult for Applicants to plan their own input.

- **No guarantee of inclusion**. Even when Applicants formulate clear needs, there is no formal assurance that these will be reflected in the final design. The degree to which market input is taken up varies from project to project and is, overall, assessed by RUs as unsatisfactory.

- **Unequal influence among Applicants.** Among the parties consulted, PSO Authorities hold the strongest position: they can secure the IM's commitment by ordering the corresponding operations, which effectively binds part of the project scope to their requirements. The common justification is that RUs cannot guarantee infrastructure demand over the long horizon required for investment, whereas PSO Authorities can. RUs therefore have a considerably weaker influence, and Open Access Operators in particular have virtually no structured opportunity to have their needs reflected in the final design.

- **Variable practice from project to project**. The extent to which market input is genuinely incorporated varies significantly across projects, depending on the IM's internal culture, the political weight of the affected corridor and the funding structure of the investment.

A further practical weakness lies in how the consultations themselves are organised. Investment planning meetings are typically held at most once a year, and in many cases they are appended to other recurring meetings — most commonly the timetable-planning sessions or discussions on TCRs. Only limited time can therefore be devoted to each agenda item. As a result, RUs cannot always send the most suitable experts (e.g. infrastructure specialists, station-design experts) and instead prioritise representation for the most immediate operational issues. This tends to reduce the quality and depth of the input the IM receives, and reinforces the perception among RUs that investment consultations are a formality rather than a genuine co-design exercise.

The scope and pace of station modernisations and capacity upgrades is ultimately limited by financing. IM budgets are predominantly dependent on state support; revenues from access and service charges paid by RUs are reportedly insufficient to cover them. Budgets are typically approved on a year-by-year basis, and the availability of EU funds is not always predictable, since their acquisition and allocation depend on an active role of the Member State.

Strategic network concepts

In environments where strategic, long-term processes for the development of rail transport are in place, investment planning becomes more stable and predictable. Such frameworks tie individual projects to multi-year, secured financing and are anchored in a target vision of the desired service offer — routing, journey times, connections and service frequency — from which both infrastructure projects and rolling-stock requirements are derived. Stations play a decisive role in this logic: parameters such as the number of station tracks and sidings, platform lengths, platform-edge configuration directly determine overall network capacity, achievable travel times and the ability to operate the intended service pattern reliably. A strategic concept therefore makes it substantially easier to align station equipment with the long-term operational target, rather than retrofitting stations to service concepts that emerge later. This inverts the usual logic: instead of consultations being a reactive exercise around a project already scoped by the IM, they become a structured dialogue around a shared long-term target.

How this can work in practice:

- Austria — Zielnetz 2040. A national long-term target network concept, developed and continuously refined together with RUs. The plan defines the desired service pattern and the associated infrastructure interventions, and is progressively specified in greater detail as time progresses, giving RUs visibility of the strategic direction well before individual projects reach the design stage.

Also without strategic concepts, the investment planning consultation can be improved. DB InfraGO publishes individual station projects on a dedicated public portal (https://bauprojekte.deutschebahn.com/), where RUs and the public can filter and follow the status of each project. To coordinate and inform RUs during the preparation phase, DB InfraGO also operates a dedicated IT tool, BID (Bau- und Informationsdialoge), which structures the exchange of information and consultation inputs between the IM and the market.

3.2.2. Passenger number submissions

Reliable passenger-flow data are a prerequisite for sound long-term planning of stations. They inform the dimensioning of platforms, underpasses, access routes and boarding halls. Without them, the IM cannot credibly size the infrastructure to the demand it will actually have to serve.

It is common practice across Europe that RUs are required to submit passenger-flow data — either measured counts or qualified estimates — to the IM. Two Network Statements set out this obligation particularly clearly:

- Germany (DB InfraGO). RUs must supply, once a year and no later than 30 June, free of charge, the results of passenger counts or qualified estimates of the number of boarding and alighting passengers, per day and per station, broken down into Monday–

Friday, Saturdays, and Sundays/public holidays, in a prescribed format submitted via a dedicated portal (www.dbinfrago.com/reisendenzahlen).
- Austria (ÖBB I). RUs must provide up-to-date, typical passenger frequencies per day and per station at least once a year with the timetable change, and/or on request from ÖBB I, free of charge. Submissions may be made either in detail or as a grading against predefined frequency classes listed in the annexes to the Network Statement, and are treated confidentially by the IM.

Variations observed in other countries

Beyond these two well-documented cases, the interviews revealed further variations in how passenger-flow information is collected and used:

- Poland. The Regulatory Body plays an active role in collecting passenger-flow data from RUs, rather than leaving the exercise entirely to the IM.
- Slovakia (ŽSR). ŽSR has, in past project-evaluation exercises, requested projected passenger figures for a ten-year horizon from RUs, to underpin long-term investment appraisals. The exercise has been ad hoc rather than a recurring annual obligation embedded in the Network Statement.

Taken together, these examples show that while the need for passenger-flow data is universally acknowledged, the degree of formalisation, the periodicity, the format and the responsible party may differ.

The consequence of inadequate data

The operational consequences of inadequate passenger-flow planning are illustrated by a recent case from Spain. Following a significant increase in additional capacity requests for TT 2024/2025, the Spanish Regulatory Body (Comisión Nacional de los Mercados y la Competencia — CNMC) declared four major stations congested: Madrid Puerta de Atocha–Almudena Grandes, Madrid Chamartín–Clara Campoamor, Barcelona Sants and Murcia del Carmen. Passenger growth combined with ongoing construction works had made it increasingly difficult to manage passenger crowds on platforms, access pathways and in station buildings.

The practical consequence set out in the CNMC's Resolution is that no additional station capacity is allocated on the high-speed network at these stations beyond what has already been assigned in the current timetable, until the adequacy conditions of the stations and their associated facilities are met. The Regulatory Body further concluded that ADIF and ADIF AV must explicitly incorporate, into their network-access conditions, the obligation to verify the adequacy of the affected SF each time infrastructure capacity is allocated for a new timetable.

The Spanish case demonstrates in concrete terms what happens when passenger-flow capacity of the station itself becomes the binding constraint on train path allocation: additional paths cannot be granted regardless of track capacity, coordination between RUs, the IM and the Regulatory Body intensifies, and formal procedures had to be introduced to govern how passenger flows are assessed as part of the capacity-allocation process.

3.2.3. Technical expectations for Stations

Stakeholders across the analysed networks consistently report insufficient station capacity, particularly at major nodes, and stress that this is not a station exclusive issue: station capacity has direct consequences for overall network capacity. This was explicitly recognised by SŽCZ

in its capacity-analysis work, which highlights that alongside line capacity and operational measures, the capacity of the stations themselves — their throats, track configuration and track lengths — has a significant impact on the total capacity of the infrastructure. They outline the advantage of investment projects is that they can bring a substantial increase in capacity, but in a long-term horizon.
Capacity-relevant interventions at the platform-and-track level typically include the extension of station-track lengths (including tracks needed for 740 m freight trains), the extension of platforms, and the construction of additional station tracks.

A structural constraint that repeatedly emerged in the interviews concerns level access to platforms. Stations relying on level crossings to reach the platforms cannot normally accommodate multiple trains at the same time, except where the station functions as an origin/destination facility and a train terminates on a dead-end track or stops in front of a path signal. In all other cases, once a train is standing at the platform, no other train can operate on the track section between the station building and that platform. An incoming train must either stop at the entrance signal and can proceed only after the first train has departed, or pass through on the track behind the stopped train. Both options increase energy consumption, reduce running speeds and complicate timetable construction, since these restrictions must be accounted for in the Timetable as a so-called “platform interval”.

At stations without full platform separation, the preferred long-term solution is therefore to build grade-separated access to the platforms — particularly on double-track lines and at junction stations. For branch-line stations with lower traffic and passenger volumes, fully separated level-access solutions may be disproportionately expensive; in such cases a single central access to the platform can be appropriate, ideally supplemented by crossing signals to enhance safety. Additional lower-cost measures include subdividing tracks by means of signals (or ETCS STOP markers) and connecting adjacent tracks via crossovers, both of which increase the number of trains that can be simultaneously handled.

Platform height is a further parameter with a direct impact on both accessibility and dwell times. Extensive measurements show that, compared to a platform 300 mm above rail level, boarding and alighting is approximately 15 % faster at a platform 550 mm above rail level. The higher platform also shortens boarding and alighting for PRM or orientation, as well as bicycle loading and unloading, and — with certain modern rolling stock — removes the need to extend a step at the door, further reducing door-cycle times.

In the area of station throats and junctions, the measures identified by SŽCZ as capacity-enhancing are:

- the addition of parallel switch connections, allowing simultaneous train movements;
- the use of narrow-angle (high-speed) switches, which increase pass-through speeds in the diverging direction and thereby shorten the time a single train occupies the throat;
    - and, as the most far-reaching intervention, the construction of switches or grade-separated crossings that deliver the required directional or line-side track arrangement.
- On double-track lines with dense traffic, and particularly at stations where passenger-service lines terminate, a track configuration should be pursued that ensures conflict-free entry of the terminating train and conflict-free departure of the outbound train with respect to trains running in the opposite direction on the same main track. This can typically be achieved by reconfiguring the main track layout and inserting one or more station tracks between the main station tracks.

Beyond the physical measures, several IMs have introduced structured channels for RUs to feed technical requirements into the development of the network. A notable example is the Infrastructure Requirements Database (Infrastruktur-Anforderungs-Datenbank, IADB) operated by ÖBB I: Access is free of charge to RUs licensed in Austria. RUs can submit requirements of any kind — from the operational need for a longer platform, through a shunting/siding track, to the installation of a passenger information board — upload supporting documents and track the status of each request. Submissions are assessed against timetable-related technical constraints as well as operational and strategic criteria, and the findings feed into the further operational development of the ÖBB I network. The IADB is a clear example of process improvement in RU–IM dialogue. It should nevertheless be noted that, however well-designed the tool, the final decision on whether and how to implement a requirement remains with the IM.

Interviewed experts consistently expressed the view that redesigning stations to resolve level-access constraints can have a greater positive impact on network capacity than upgrading open-track sections for higher speeds. Removing platform-access conflicts allows more trains to operate, and the associated investment projects are typically quicker to prepare and less costly than major line overhauls. Similarly, the installation of narrow-angle switches reduces occupation times, running times and traction energy consumption, allowing trains to arrive, pass through and depart more quickly — a compounding contribution to overall capacity.

For new and modernised stations, RUs expect full compliance with the Technical Specifications for Interoperability (TSI) as regards dimensions, with particular attention to platform heights (550 / 760 mm where applicable). RUs also observe that platform lengths are largely built to standardised dimensions, which — depending on the station — leaves them either underutilised or too short to accommodate longer trains as demand grows. The methodology for determining platform length should therefore not be predefined by standard values alone, but derived from the expected demand for train lengths on the services calling at the station, in line with the strategic-network-concept logic discussed in chapter 3.2.1.

Side note: The station environment also contributes decisively to passenger satisfaction. The availability of accompanying services (cafés, retail, waiting rooms), cleanliness, shading and greenery are fundamental elements at major stations. From the passenger perspective, these attributes are inseparable from the perception of the railway as a whole: passengers generally do not distinguish between the various market stakeholders, and the overall impression of the station shapes how the railway system is perceived by the public.

3.3. TCRs at Stations

TCRs at stations have the same level of impact on the RU's business as TCRs on open-track sections. They are, however, not as predominant in the market discussion, since the attention of the sector is directed at general TCR planning harmonisation.

Where a station TCR concerns the track infrastructure — station tracks, switches, overhead current supply — its consequences for the timetable are the same as those of a restriction on the open track. What distinguishes stations is that a considerably wider range of restrictions can occur there: alongside the track-side works, the restriction may affect platform length, passenger access pathways, lifts and escalators, or the auxiliary services located within the station area. Each of these produces effects that a line TCR does not.
Neither type of restriction can be assessed in isolation. A station TCR, a TCR on the adjacent open section, and the combination of the two determine together the timetable that can be

constructed and the quality of the service that the RU is able to offer. Harmonisation between them is therefore a precondition for a workable production concept, and its absence is felt by the RU regardless of which of the restrictions was individually well planned. The following subchapter sets out what a station TCR encompasses and how the process is currently organised.

3.3.1. Definition and Current Process

For the purposes of this report, a TCR at a station is understood as any temporary limitation of the station's usable capacity or equipment, whether or not it results in a timetable shift. On the track side these include:

- closure of one or more station tracks;
- speed restrictions on station tracks;
- switch maintenance;
- interlocking temporarily switched off;
- traction current supply switched off.

Alongside these, a station TCR may equally be caused by shortened or partially closed platforms, reduced platform width, restricted or closed passenger access pathways (underpasses, overpasses, footbridges, staircases), unavailability of lifts and escalators, and the temporary loss of the services located within the station area — siding tracks, water refilling points, cleaning facilities, pre-heating equipment, toilet emptying and similar.

Each of these carries a direct consequence for the economics of the train service:

- **Shortened platforms** force RUs to shorten the train and offer fewer seats, which reduces revenue on the affected services.
- **Reduced platform width** and restricted access and boarding areas limit the number of passengers that can safely be handled. RUs reported cases in which the number of tickets sold on the affected services had to be temporarily capped for this reason.
- **Restricted access** pathways and unavailable lifts or escalators affect the organisation of transport for PRM, which may require additional staff or equipment at the station.
- Unavailability of water refilling and other light-maintenance services necessitates the replanning of train turnarounds, which alters the operational economics of the whole rotation.
- The absence of siding capacity in or near the station alters the circulation of the trains, generates additional train runs and worsens the accessibility of the rolling stock for the train crews. Some RUs reported having to organise individual transport for their staff.

Legal perspective

Stakeholders have reported that "station track TCRs" are published in accordance with the deadlines and consultation criteria set out in Annex VII of the SERA Directive.

However, they have raised a concern that a problem arises where IMs whose subsidiaries have taken over stations are not required to follow the deadlines and criteria of Annex VII for restrictions beyond the track itself. Neither Annex VII nor Implementing Regulation (EU) 2017/2177 on access to SF and rail-related services establishes an obligation to publish the unavailability of the elements listed above. It requires only information on changes in technical characteristics and on TCRs of the SF which could have a major impact on its operation, including planned works — a threshold that potentially leaves the individual restrictions described above outside any explicit publication duty.

Uncertainty over the extent to which the publication and consultation obligations apply to subsidiaries of the IM or to external station operators was raised repeatedly in the interviews as a

question of legal certainty. RUs expect the rules to be applied unambiguously and identically regardless of the operational structure under which the station is managed.

Publication practice

IMs communicate station TCRs either through dedicated IT tools or, in a number of networks, through published spreadsheets. Together with the regular "line TCRs", both methods were reported as lacking the detail needed on the impact for the planned train path.

Station TCRs (affecting tracks) are published according to the same deadlines as restrictions on open-track sections, and the two are presented together in the same instruments.

SNCF Réseau states that TCR windows are constructed for track sections only and not for station zones; where capacity in the stations has to be aligned, this is done instead through case-by-case feasibility studies. The station is therefore not carried through the planning instruments in the same systematic way as the line.

One example of TCR publication in an IT tool is:

- **Austria** — ÖBB I:
  - **Web-BBP** — centralises infrastructure restrictions and construction projects across the network; licensed users can filter by date, time, region, line section and type of works

Across the networks examined, instruments of this kind are nevertheless regarded as an improvement on the spreadsheets they replaced rather than a change in kind. The RUs are still required to navigate through the individual TCRs and to establish, unaided, how they affect each of their services. Three weaknesses were reported in particular:

- The impact of the restriction is described only in general terms — for example as a percentage — without being assigned to the individual trains concerned.
- Where a published restriction is updated, its identifier is in some cases changed, which makes it difficult to follow how a single restriction has developed over time.
- Information on the restriction of individual station elements — platforms, access routes, lifts, the services located within the station area — is practically never communicated ahead of time.

RUs expect restrictions affecting platforms and station services to be published and consulted in the same manner as restrictions on the track, and not to be treated as a secondary category outside the established process.

Coordination of TCRs

For major projects — such as Stuttgart 21 in Germany or the reconstruction of the Žilina node in Slovakia — and for longer-lasting maintenance works, the coordination of TCRs between the open-track sections and the nodes is insufficient in many networks, and the possibilities for RUs to influence either the dates or the manner of realisation are almost none. For station TCRs of smaller scope — switch greasing, short maintenance — it has allegedly in some cases been possible to move the dates to periods of lower passenger demand or lower traffic volume.

Where the restrictions are not assessed together, the effects accumulate on the RU:
A major TCR lasting three years was already restricting the traffic on the line when the IM planned a 2nd TCR affecting the passage through a station on the same relation. Each was assessed on its own, and neither assessment showed a problem for the train concerned. In

combination, the station became the bottleneck: the train could no longer be run within the capacity left by the first TCR, and as no alternative solution was provided it had to be cancelled.

3.3.2. Operation During TCRs

Even where a TCR has been planned and communicated correctly, its execution leaves consequences that are borne by the RU and, ultimately, by the passenger.

Where the restriction is extensive, the RU is left with a limited set of responses, none of them neutral for the passenger. The train may be rerouted to a less attractive station than the one served in the annual timetable, or the service concept has to be revised as a whole. Frequently the train is terminated at an earlier station — necessarily one where the turnaround is technically and capacity-wise feasible, which is not always the station that would best suit the passenger flows — and the onward journey is covered by other trains or by rail replacement bus services.

The result in each case is a decline in service quality: additional transfers, replacement bus sections, and longer travel times, to which the reduced speeds through the node and the additional stops contribute further. Station TCRs also disrupt the established transfer connections and the line concept. Together these produce a noticeable fall in demand and the departure of part of the passengers to other modes of transport. RUs stressed that this effect does not end with the TCR: the return of the passengers who have left takes months after the TCR has been completed.

Where shortened platform length is the binding constraint, the shortened train runs overcrowded in peak periods, with a direct effect on passenger comfort and on the perceived quality of the service.

Service availability and Navigation

The possibility for RUs to influence the scope of services available at the station during construction works is generally limited. Provisional arrangements have occasionally been agreed — for example containers accommodating staff and ticket sales — but during extensive modernisations the services passengers normally expect, such as parking, level boarding and weather protection, are often unavailable for the duration of the works.

Responsibility for guiding passengers during the works is divided, and the division differs from network to network. The signage for rail replacement bus services is generally the responsibility of the RU, although in some countries it is provided by the IM.

One IM acknowledged that station TCRs — and in particular the transition between successive construction stages — require the walkways and their signage to be changed repeatedly. This is not always done precisely, which leads to confusion and inconvenience for passengers. Delays in the construction works and changes to the planned procedures were identified as contributing causes, and the problems are raised with the construction company responsible.

- **Austria** — at a number of stations the replacement bus stop has a fixed, permanently designated position, and the navigation from the platform to it is provided by permanent signage rather than by signs installed for the duration of each restriction.
- **Slovenia** — the guidance is provided by the RU. SŽ Potniški promet publishes, for every line, station and stop, a map marking the position of the replacement bus stop. These are available online to passengers via Google Maps.

TCRs have a direct impact on several connected services. Providers of catering and of sleeping- and couchette-car services depend, in their own planning, on information passed on to

them by the RUs from the coordination meetings. What matters to them is timely and sufficiently detailed information on the final routing and time positions of the trains, since the supply of the trains and the rostering of on-board staff are derived from it. This is particularly demanding in international operation, where also the rosters have to satisfy different national labour-law regimes.

At major nodes these Service Providers are not systematically part of the TCR information flow and are reached only indirectly, through the RU. Where the TCR affects their operations, they need to be notified, and an alternative agreed with them in dialogue. This affects only major nodes, typically with long-distance and international traffic.

Outlined by an example: A TCR caused a train that had to be supplied at the main station to be rerouted via a station on the outskirts, where there are neither access pathways for trolleys nor cargo lifts. No solution was found on the IM side. The supplying had to be carried out by a number of employees bringing the goods to the platform by hand, on top of the short dwell time available at that station.

A shortage of sidings capacity, and restrictions of the other SF located in the station area, complicate the operation considerably: it is not always possible to clean the sets, to stable them, or to supply the trains. The alternative sidings offered tend to be distant and poorly accessible for drivers and train crews, which forces changes to the rotations and increases the demands placed on staff. In extreme cases the movements require individual transport of employees to remote locations.

One workable solution was reported:
In one node, an unused freight terminal was temporarily brought back into use after proportionate adjustments to the infrastructure, which created the siding capacity needed for the duration of the restriction.

The case shows that where sufficient dialogue is in place and there is willingness on both sides to look for solutions, workable answers can be found even where the existing capacity does not suffice.

Where the traction current is switched off, RUs must haul the trains to the next station or move them out of the station with independent traction. This increases cost and requires additional rolling stock, which has to be brought to the station from other depots. For long freight trains passing through a major node, diesel haulage is expensive and, in some cases, not feasible at all.

3.4. Allocation of Train Path and Stations

3.4.1. Station description and information for RU planning

The information an RU needs in order to plan a service at a station is broadly the same everywhere: the dimensions of the tracks and platforms, the equipment installed, the services offered to passengers, and the conditions under which the station may be used. What differs markedly between networks is where this information is published, in what form, and to whom it is made available.

- **Slovenia** — Annex 2B to the Network Statement of SŽ-Infrastruktura gives, for each station, the useful lengths of the station tracks, the platform parameters and the type of interlocking installed. Annex 2C contains the track layout schemes of all stations,

including signals, platforms, switches and loading ramps. Unlike most other IMs, these schemes are published.

- **Austria** — ÖBB-Infrastruktur publishes a detailed description for each station (BSB), including detailed station plans, available to licensed RUs. The operational restrictions of individual stations are set out directly in the Network Statement. For Wien Hbf and Wien Meidling, for example, trainsets may not be positioned at the platforms without a traction unit; for terminating trains, readiness for departure or shunting must be reported to the responsible operating unit within 10 minutes in long-distance and 5 minutes in regional traffic, and the same applies to splitting and joining; planned turnarounds on platform tracks are permitted only with push-pull trainsets. Minimum operating times are also defined: the "departure time" is understood as the moment at which the trainset must begin to move, and the minimum dwell times at all stations and stops are to be taken into account already in the offer phase of planning, so that departures can be realised exactly on time. Minimum turnaround times are set by train length, from 4 minutes for a vehicle up to 30 m to at least 12 minutes for a trainset longer than 420 m, and times are likewise defined for shunting activities such as attaching a wagon, changing the traction unit or uncoupling.
- **Slovakia** — additional information on stations and lines is available in the ŽSR Infomapa application. The lengths of the individual station tracks and platforms can be displayed by selecting the technical equipment layer, clicking on the traffic point on the map and opening the information tab. The track layout schemes, including platform lengths and the arrangement of the station throats, are internal ŽSR documents available on request.
- **France** — the opening times of lines, stations and track accesses are specified in a reference document available to licensed RUs in the OLGA information system. Where a train path request is not compatible with the opening times, the RU may ask SNCF Réseau to alter them; a feasibility study and a cost estimate are then carried out, and if the request is accepted the service is quoted and invoiced.
- **Hungary** — VPE, the allocation body, publishes an open network map through which the track layout schemes of the individual stations can be opened. Where a TCR is in force, the affected tracks are listed in an accompanying table.

The minimum transfer times published in the ÖBB I Network Statement illustrate a parameter that, from 12 December 2027, will no longer be a matter of national or company practice. Implementing Regulation (EU) 2026/253 (TEL TSI) obliges each station manager, or IM, to establish a minimum transfer time for every station under its responsibility, together with values adapted to persons with reduced mobility and to passengers transporting a bicycle. These times must be published free of charge via the national access points, and once published they are binding in use: RUs, distributors and retailers must apply them when constructing a connection. The Regulation does not, however, harmonise how the figure is arrived at — the calculation of transfer times, including the adapted values, is left as an open point.

A second obligation applies to stations that form part of the same meta station. The meta station is a new concept introduced by the Regulation: a group of stations within one functional urban area, comprising at least one urban node of the TEN-T network, which can be reached from one another by urban transport services, and which may extend across a national border. Where two stations belong to the same meta station, the managers concerned must jointly establish a transfer time between them, so that a journey involving a change of station within the same city or agglomeration is planned on a common published basis rather than on assumptions.

Access to the information

Across the networks, the data needed to prepare an operation is not routinely available to RUs who do not yet hold a licence. For an RU considering entry this represents a real risk, since the decisive information — station track lengths (especially for calculating estimated shunting costs), availability of sidings, the range of services in the SF — is in many states accessible only after the licence has been obtained, or through personal contact with the IM. In practice, RUs often rely on feasibility studies evaluated by the IM even for elementary questions, such as whether a platform is long enough for the intended train length.

In many states, responsibility for the information on station infrastructure, including the services for passengers, lies with the regional branches of the IM. RUs therefore assemble what they need from a combination of sources and personal contacts. The data is scattered across documents and interfaces — annexes to the Network Statement, external tables, web portals — and the manner of access differs from open web tools to installed offline applications for which access is granted by the IM. It was also reported that some facility operators are not obliged to publish the facility description in any language other than the national one; in one case a translation was provided only as a gesture of goodwill towards customers.

At the time of the interviews in 2024, one IM had no list at all of the services available to passengers in its individual stations. The minimum range of information considered necessary for the travelling public covers: waiting rooms, shelters on the platforms, opening hours, toilets and PRM toilets, audio announcements, digital displays, ticket office and ticket machine, parking and PRM parking, electric vehicle charging, bicycle stands, luggage lockers, vending machines, the lost property office and catering facilities.

The level of information provided in the Rail Facility Portal (RFP) is assessed critically. It currently offers only very basic data on all SF, not just stations — the position on the map, the owner, the type of facility and in some cases a contact for the operator. As a consequence, RUs planning cross-border services rely on partner RUs and resolve the exchange of data multilaterally or individually, on the basis of information obtained from the individual IMs and station managers.

The information regarded as decisive for planning changes to existing services and for introducing new ones is: platform length and height, station track length, availability of pre-heating, the parameters and availability of sidings, the level of facilities for passengers, waste handling, and step-free accessibility including the availability of lifting platforms. RUs further note that visibility of the station track occupation plan during the current timetable would allow them to optimise transfer connections and to plan future services more effectively. Unique operational restrictions should in each case be clearly highlighted in the station information, so that mismatches between the planned operation and the actual capability of the facility are avoided.

3.4.2. Capacity requests and allocation for Train path and Stations

In the allocation of capacity in the form of train paths for the annual timetable, an exact station track occupation plan is as a rule not worked with until the allocation itself. What is verified is the length and the available number of tracks, not the specific tracks and platform edges. Once capacity has been allocated to the RU, at around X-4, the right to stop at the station is included, but the detailed occupation plan has not yet been drawn up. That plan is usually prepared by the regional organisational units of the IM, or by the station masters only after the path allocation.

One IM reported a closer arrangement: the employee responsible for constructing the station track occupation plan and the timetable constructor share a plan of both station tracks and paths and cooperate directly during construction.

In their capacity requests, RUs across the networks are able to indicate the connections between trains — the transfer links — and a preferred track or platform. This is typically possible only as a note entered in the system through which the capacity request is submitted.

Conflicts of capacity in stations are handled by analogy with conflicts between train paths, according to the prioritisation criteria and the formal dispute resolution mechanism.
Cases were nevertheless reported in which the right to stop at a station was withdrawn, or nearly withdrawn, from international trains after the train path had already been allocated — among others in France and Hungary.
In one of these cases no solution was found and the train had to pass through the station without stopping. In another, the conflict was resolved by withdrawing the stopping capacity from regional trains, the international train having strong political support.

RUs expressed an interest in integrated planning systems in which all the operational activities required within the station area — shunting movements, toilet emptying, cleaning and the rest — could be defined, and in which the train path, the station tracks and the associated SF would be allocated simultaneously.
IMs stressed a practical obstacle. At the moment the path is allocated, only a small number of RUs have their technology prepared in the necessary detail: the rolling stock rotations, the staff planning and the remaining elements. Without knowledge of the train circulation, it is not realistic to prepare an integrated offer. Some RUs acknowledged this and declared a willingness to plan the operational detail earlier, while pointing to the internal complexity and the division of responsibilities within their own organisations, which make changes of this kind difficult to introduce.

3.5. Operation and after-allocation processes

Waiting times are a fundamental document of traffic management. They define how long a connecting service is to wait at a station when the train it connects from is delayed, and so determine whether a transfer is protected or the passengers have to wait for the next service. In practice, the reliable securing of transfers depends above all on the operational communication between the train staff, the RU dispatcher and the IM's traffic controller.

Two networks illustrate how the underlying rules are set:

- **Austria** — ÖBB I defines a minimum transfer time: the average time passengers need to transfer from an arriving train to a connecting train on another platform at the same operating location. Only trains reachable within that time count as connecting trains. A longer minimum transfer time applies at locations with special local conditions, such as very long distances between platforms, and a shorter one where the transfer is on the same platform. The values are given in the annexes to the Network Statement.
- **Slovakia** — the rules are set on the RU side. The timetable manual "Waiting times and measures in case of delays of passenger trains", issued by Železničná spoločnosť Slovensko (ZSSK) and published by the IM, establishes uniform rules for handling delays and securing connections, and governs the procedures towards other RUs as well.

Under the Slovak arrangement, trains count as connecting where the interval between the scheduled arrival of the first and the scheduled departure of the second is equal to or longer than the transfer time set for that station; where the interval is insufficient, the timetable carries a mark indicating that no connection exists between the trains, and in the absence of that mark ŽSR accept the shorter transfer time as an exception — for instance where a longer interval could not be constructed because of saturation or a capacity restriction. Trains of the opposite direction on the same line, and trains of the same direction, line and category, do not count as connecting, even where their destination within the node differs.
The waiting time runs from the scheduled departure of the waiting train and depends on the train category and on the time remaining until the next service of the same line, with the individual transfer points, waiting times and departures from them listed in the document. Where a train is designated as waiting, any wait beyond 30 minutes is decided by the RU dispatcher according to the operational situation and the possibilities for alternative transport; where it is designated as not waiting, it departs on time regardless of the delay of the connection. For the last long-distance train of the day, a lower-category train in the opposite direction is also treated as connecting but waits only at the request of the regional dispatcher, who assesses the train manager's request and the number of passengers concerned. In justified cases the dispatchers of the RU and of the IM may agree deviations from the waiting times, in order to take account of passenger needs and to minimise the cumulation of delays; the responsibility here is mutual. The RU dispatcher may extend the waiting time or decide not to wait, according to the operational situation, the interval between trains and the number of transferring passengers — an extension being admissible only where the next train of the same direction and commercial category departs at an interval of 60 minutes or more. The accompanying staff inform the passengers about the wait or about the alternative transport arranged.

Some stakeholders report that the waiting times applied do not always reflect the time genuinely needed for passengers to transfer.

The station track occupation plan is a document issued by the station master or by the regional office of the IM, indicating which track is to be occupied by which train during the day. Stakeholders have raised concerns that these plans serve predominantly as indicative documents: the actual occupation of tracks and platforms follows the operational situation on the day. Changes of track or platform are not infrequently announced late — often only after the train has arrived — which results in sudden movements of passengers across the station. This was raised repeatedly in relation to Germany. RUs consider a platform change announced at least 20 minutes in advance to be a reasonable requirement, particularly at major nodes, where the Service Providers supplying the train with goods and materials also have to be able to reach it. They further call for a standardised TSI message for a platform or track change, so that they can inform passengers in time through their own communication channels as well.

It was reported that in one network the number of operational platform and track changes fell significantly after the introduction of automatic setting of train routes. This was explained by the fact that where traffic is controlled by an operating employee, the changes were not always sufficiently justified, and the track occupation plan was not respected with the necessary consistency. In networks such as ÖBB I and SBB, platform changes appear to be announced early and are transmitted through customer information tools; the research did not examine this further, but the indications are that it may be achievable only where the station has a fully digital interlocking or predictive train path selection — an expensive and long-term solution.

Administrative measures could improve the discipline without investment in the interlocking, but at the price of an increased burden on the traffic control staff.

Train announcements and passenger information

Visual and voice information for passengers is a key service in operational terms: it is what guides passengers towards their trains and allows them to orient themselves quickly when changing between services. The failure to adhere to the track occupation plan extends into this service. It was mentioned that the information displayed on the panels often does not correspond to the train that actually arrives at or departs from the platform, and that track changes reach the passengers far too late. It was further reported that the operation of passenger information systems is still carried out manually to some extent, whether or not an IT tool is available to support it.

Changes in the train formation should, in the view of RUs, be generated automatically from the train consist list and from the data held in the interlocking, and managed by the IM without manual input from the RUs. At present the chain is a manual one, and in international operation it is long: A change in train formation is communicated by the RU dispatcher in the country of departure to the partner dispatcher in the other country, on the basis of the dispatcher's own contact directories. That dispatcher then contacts the IM, the station announcers and the sales points and channels. The chain is demanding in process terms and inefficient.

SNCF Gares & Connexions requires RUs to supply the data needed for train announcements themselves, either by entering it manually into OCTAVE, the tool the station manager provides for RUs without their own information system, or by connecting their own system to that of the station manager through an API — a connection strongly advised above a volume of ten circulations per day, and one whose adaptation costs fall on the RU. From the RUs' perspective this is an unacceptable and duplicative solution. The alternative put forward is that IMs should build a fully autonomous IT solution which accepts inputs through the existing standardised interfaces, with such partial adjustments as are needed, and consolidates them without manual intervention.
The elements required for this are largely available already. The train formation, together with the category and number of each vehicle, is provided as a consist list before departure and can serve to prepare the announcements on formation and on the services available on board, provided a database of vehicle numbers with their equipment and categorisation exists. Delay information can be processed from real-time data, so that delays are updated continuously and across networks, drawing on TIS. The platform, or the allocated track, can be taken directly from the interlocking where it is digital, or entered manually into an IT tool by the traffic dispatchers.

Two instruments from Czechia illustrate what can improve the passengers' experience.
SŽCZ operates the TABULE application, through which passengers can follow the movement of trains at the individual stations in real time, including the track or platform from which each train departs. For a passenger, this is the practical answer to the two questions that matter on the day of travel — how late the train is, and which platform it will use — without dependence on the panels in the station.

České dráhy, an RU, publishes an overview (a map) of station accessibility with the services indicated by pictograms, alongside the location of the station and the arrivals and departures, the latter apparently drawn from the application described above. It also publishes orientation plans of the stations. Station layouts of this kind address a concern which passengers

frequently raise: navigating an unfamiliar station can be challenging, particularly under time pressure or when changing between services. SBB provides the station map within their mobile application for ticketing (extending the navigation to non-rail public transport stops).

3.5.1.PRM

PRM does not cover only wheelchair users. It includes passengers using walking frames or canes, and passengers with visual or hearing impairments. For all of these groups what matters is that the station and its spaces, and also the rolling stock, meet accessibility standards.

Under EU passenger rights law, assistance at stations and on board is to be provided free of charge where the passenger notifies the need in advance, the notification period being set at 24 hours before the assistance is required. The obligation is shared: the station manager or IM is responsible for assistance within the station, the RU for boarding, carriage and alighting, and the two must cooperate so that the passenger experiences a single service. How this is organised differs from country to country — some RUs seek to provide the assistance with their own means alone, others rely on cooperation with the IM, and others again outsource it to a third party.

- **France** — assistance is provided by the station manager, SNCF Gares & Connexions, through its Assist'enGare service. It can be requested from 90 days before the date of travel and no later than 24 hours before departure, and a valid ticket is a precondition — booking the assistance neither includes nor substitutes for the purchase of one. Where the assistance is booked, it is guaranteed on the train chosen; without a booking, the passenger is assisted wherever this is possible. Going beyond the arrangements found elsewhere, contact with the advisers is also available to deaf and hard-of-hearing passengers through a relay service, offered on working days in French Sign Language, Cued French and real-time speech transcription, and continuously as text transcription.
- **Slovakia** — ŽSR provides boarding ramps and guidance at certain stations, with the conditions and the equipment available published per station on its website; at Košice, for example, assistance is available continuously and is to be requested at least 30 minutes before the scheduled departure. The accompaniment is limited: ŽSR staff are expressly not trained in physical assistance such as pushing a wheelchair or lifting a passenger. The contact point for the journey itself is the RU, ZSSK, which requires the order at least 24 hours in advance and the passenger to be present 30 minutes before departure, and which sets technical limits on the wheelchair. An accepted order does not in itself guarantee carriage: the RU confirms after assessment.
- **Slovenia** — SŽ Potniški promet (RU) asks passengers to give notice at least 24 hours in advance, by telephone or e-mail, between 06:00 and 22:00. Outside that arrangement, assistance can be provided only within the means available at the time. Wheelchair and mobility-scooter users are carried on the InterCity Slovenia services, on certain international and EuroCity trains, and on the regional and local services operated with low-floor units.
- **Czechia** — the primary contact point is CENDIS, the seller of the OneTicket single rail fare ticket. Assistance is organised jointly by the staff of the RUs and of SŽCZ. It can be ordered directly with an RU, but where the journey involves several RUs, CENDIS arranges it on the passenger's behalf: on receipt of the order form it contacts the individual RUs and SŽCZ, and once the RUs have confirmed, informs the passenger whether the transport is possible.

The current coordination procedure is a lengthy, manual one. The PRM submits a request; the possibilities within the RU are then checked, together with the technical capacity and the staffing available to the IM, or the organisation is arranged indirectly through a third party; and only after all of this is the carriage confirmed to the passenger. There was agreement across the interviews that the process rests above all on individual communication — numerous e-mails and telephone calls between the parties involved — and that a unified IT support for it is missing.

Instruments for this do exist. The UIC PRM Assistance Booking Tool (PRM-ABT) was created to provide assistance services to international passengers by connecting some twenty national PRM call centres, and UIC has issued a specification for the electronic reservation of assistance for PRM and the exchange of messages between the parties. Stakeholders nevertheless report that within the network they continue to exchange the necessary information manually, with different departments and with the IM, by conventional means.

It emerged from the interviews that reconstruction works on platforms are still being carried out in which the original, insufficient height is retained. RUs consider that any works on a platform should carry an obligation on the IM to bring its height to the value required by the TSI. RUs compensate for the shortcomings of the infrastructure in the meantime by deploying vehicles equipped with lifting platforms or ramps. Investment both in the infrastructure and in the acquisition of specially equipped vehicles is costly, and the required standard is therefore expected to take several more years to reach.
One RU applies an approach that relies on its own means: on receiving an order for PRM assistance it deploys low-floor vehicles or coaches equipped with a lifting platform, and where such vehicles are not regularly rostered on the relation concerned, steps are taken to alter the train formation so that the carriage can be performed.
In one state, where the structural condition of the stop or station does not permit boarding, or where works are in progress and no other solution exists, the passenger is carried free of charge to a station at which boarding is possible, using a specially adapted road vehicle. The service is provided under a contract with the state.

Only through comprehensive adaptation of the infrastructure and the deployment of adequate rolling stock can a situation be reached in which the organisation of PRM transport requires no externalised assistance beyond the train staff. This is the principle of autonomous boarding: step-free access within the station, and a levelled boarding edge, so that the platform and the vehicle floor are at the same height. Every intervention in the form of assistance affects the dwell time of the train, and given the nature of the service it is not realistic to build these operations into the timetable without assistance for PRM generating delays that propagate to other trains. Until that situation is reached, the coordination of the transport between IMs, RUs and third-party assistance providers remains necessary.

4. Recommendations

4.1. Suggestions for detected issues

The preliminary suggestions for international standards are listed in this chapter. Note that some of them would require more discussion within the dedicated working groups and/or further research.

Definitions, Ownership and Charging	
Problem	**Suggestion**
"Passenger station" is used in Directive 2012/34/EU but not defined; national definitions diverge.	A harmonised European definition of passenger station, setting out explicitly which services and pieces of equipment the term encompasses.
Several SF coexist within one station without delimitation between them.	Each service defined unambiguously, together with its associated charging principles.
Ownership and management models differ widely: in some networks the station is managed by the IM, in others by a subsidiary of the holding, by a separate station manager, or private owner. Each split requires additional alignment between companies, and the obligations that apply differ with the model.	Arrangements that minimise the need for alignment between separate companies, whether by bringing the functions together — as Germany did in forming DB InfraGO from DB Netz and DB Station&Service — or by ensuring the obligations apply identically across the parties involved – establishment of single contact point.
Charging methodologies and station categorisations differ so widely that the stopping fee is not comparable between networks.	Transparency on what the stopping fee covers, and on which elements/services in the stations are charged separately.
It is unclear whether the publication and consultation obligations bind IM subsidiaries and external station operators. *Relating to TCR planning*	Unambiguous application of the rules regardless of the operational structure under which the station is managed.

Long-term planning	
Problem	**Suggestion**
Investment processes run 10 to 20 years before realisation, far beyond the Advanced Capacity Planning phase.	Structured consultation (IM-RUs) moments through the progression of the project, with the number and timing to be defined.
Infrastructure is not dimensioned in line with a defined future operating concept.	Member States to follow the practice of Austria and Switzerland, where all market actors and public administration participate in the vision of the future network, requirements for the future line concept are defined, and target timetables exist for the state after completion — so that throughput, station capacity, platform edge lengths and the number of sidings are dimensioned to future need. The target concept should serve as the minimum to be accommodated rather than as the design limit: infrastructure dimensioned exactly to a concept defined a decade earlier leaves no margin for growth or for a change of operating concept, and the station is congested as soon as demand departs from the assumption.
Not all affected parties are heard in investment planning.	All relevant stakeholders allowed to state their needs: the investor, RUs operating on the corridor, Service Providers at major nodes, and public representatives. For TEN-T projects the

	invitation to be published at EU level so that all licensed RUs may take part.
Coordination meetings are combined with other, more urgent meetings, so RUs may be represented by staff with less knowledge of the infrastructure concerned.	Dedicated coordination meetings, reflecting the stages of the project — intention, feasibility study, and project documentation with realisation, the last of these already being the TCR process.
Platform reconstructions are carried out retaining the original, insufficient height.	An obligation on the IM, whenever works are performed on a platform, to bring its height to the value required by the TSI.
Requests for platform extension remain without response from the IM over long periods.	A formal obligation to respond to submitted infrastructure requirements.
Passenger volumes in stations are collected across networks but not always annually, and often as ranges.	To maintain and, where necessary, strengthen the requirement for timely and sufficiently granular passenger number submissions, to enable station dimensioning and forecasting, while respecting the confidentiality of the data submitted (potentially through submission via the regulatory body)

Investment decisions taken today determine the operating conditions for decades.

- The IM must establish formalised moments of dialogue during project progression, rather than consulting RUs once the design is fixed.
- Stations on TEN-T corridors and on national double-track and multi-track lines should be addressed as a priority, since in many countries their technical characteristics are below the target standards, such as level access to platforms – directly affecting available capacity.
- The IM must ensure that all Applicants — EU-licensed RUs and non-RU Applicants alike, including those without a public service contract — are able to submit input. For stations on the TEN-T network and in urban nodes this should apply as a minimum, given their role in cross-border and international traffic.IT- tools for requesting station (infrastructure) upgrades, with formal reply evaluating the RU proposal, shall be adopted.

TCRs	
Problem	**Suggestion**
Only IMs are clearly legally bound to publish restrictions, which leaves legal uncertainty where a subsidiary, an external developer or a SF operator causes them.	An obligation to publish planned TCRs on every entity that causes them or affects capacity and causes economic impact on RUs and their customer under uniform rules irrespective of organisational structure.
TCRs affecting platforms and station services are treated as a secondary category outside the established process. (e.g. platform shortened)	Published and consulted in the same manner as TCRs on the open track section. Classification of station TCRs needs to be developed, so it can align with open-track TCRs in planning horizons mandated by legislation.

Information is shared through IT tools or spreadsheets, which lack the detail needed on the impact for the planned train path.	Easy to navigate solutions, with minimum content defined for the traffic impact description.
The TCR impact is described only in general terms, for example as a percentage.	Impact assigned to the individual affected trains.
The identifier of a TCR changes when it is updated.	A persistent ID code, valid for the entire duration of the restriction even where its details change.
Line and station restrictions are not cross-checked, so their impacts accumulate.	Coordinated planning of line and node restrictions, with TCR windows constructed for station zones and not only for track sections.
Service Providers are reached only indirectly, through the RU.	Direct notification and dialogue on alternatives where their operations are affected.

TCRs at stations affect the commercial product, and the RU needs to know early what can still be operated. Suggestions from a comprehensive point of view:

- The IM must treat the station and the adjacent line as one restriction for the purposes of assessment, since it is their combination that determines what can be operated.
- The IM must inform the RU of any change or unavailability even where no timetable shift occurs.
- The obligations for publication and consultation must apply identically where the station is managed by a subsidiary or an external operator.

SF Description	
Problem	**Suggestion**
Key parameters — station track lengths, availability of sidings, the range of services in SF — are in many states available only after a licence has been obtained or through personal contact with the IM. This is one of the more significant barriers to entry for new operators, and leads RUs to rely on feasibility studies and to face heightened uncertainty when preparing a service concept.	Up to date, complete and digitally available information provided publicly on a non-discriminatory basis, without a licence requirement.
Not all station managers publish information in a language other than the national one.	Availability as a minimum in the national language and in English, so that the information is usable by foreign RUs.
Data is scattered across annexes to the Network Statement, external tables and web portals, and held by regional branches of the IM.	Provision in a digital, human and machine-processable format, ideally in a single instrument on an interactive map base.
Minimal level of available information to be published	• platform heights and lengths; • useful lengths of the station tracks; • availability of pre-heating, water refilling and toilet emptying; • local operational restrictions, clearly highlighted; • services for passengers: waiting rooms, shelters, opening hours, toilets and PRM toilets, audio and visual

	information systems, ticket offices and machines, parking including PRM parking, electric vehicle charging, bicycle stands, luggage lockers, vending machines, lost property offices, catering facilities, lifting platforms for PRM and PRM accessibility.

Capacity Allocation	
Problem	**Suggestion**
At the moment the train path is allocated, the capacity to stop in the station is only "safeguarded". Track occupancy plan at the station is only constructed later.	Allocation of the path to reflect all technological activities together with the stopping capacity in the station.
Connecting trains, preferred track or platform and sometimes intended operational activities can be indicated only as a free-text note.	Structured provision for these in the capacity request tools.
RUs cannot see station track occupation during the planning process.	Track occupancy plan shall be available to RUs during construction and also after allocation.
Framework agreement consideration	A part of the agreement guaranteeing the RU the stopping right and the contractually agreed services in the station, in relation to the contracted train length, with sufficient scope for amendment where passenger demand or the service concept changes.

The procedural elements where the alignment between line capacity and stations with their facilities has to be reflected.

- Capacity conflicts at stations should continue to be resolved through the existing prioritisation criteria and dispute mechanism, resting on transparent and previously published rules, with managed dialogue between the RUs concerned as the primary instrument and socio-economic assessment applied only where no consensus is reached.
- The lack of capacity in a station or its facilities should not lead to the automatic rejection or cancellation of an allocated path.
- With the occupation plan visible from the capacity model onwards, both RUs and the IM would have sufficient advance sight to allocate harmonised line and station capacity in the annual timetable, and in the late and ad hoc requests that follow.

Operations	
Problem	**Suggestion**
In many stations the level of utilisation is such that any delay triggers a cascade of further delays, and the timetable contains no reserve in which delays can be recovered.	Capacity assessed and, where necessary, expanded so that the timetable carries usable reserve; see the long-term planning recommendations above.
Faced with insufficient capacity, timetable constructors on both the RU and the IM side resort to sharp turnarounds — a very short interval between arrival and the	Sector aligned minimum operating times introduced on the example of ÖBB I: a minimum dwell in the station, a minimum turnaround expressed in minutes according to train length,

subsequent departure in the same direction — and to shortening station dwell times.	and defined technological times for the other operational activities. Construction of paths without consideration of these times promotes timetable instability.
The waiting times applied do not always reflect the time genuinely needed for passengers to transfer.	Transfer times set from the actual walking distances and conditions at the station.
Track and platform changes are announced late, often only after the train has arrived.	A platform change announced at least 20 minutes in advance, and a standardised TSI message for a platform or track change so that RUs can inform passengers through their own channels.
Passenger information systems are still operated manually to some extent, and displays do not correspond to the train that arrives.	Automatic connection of the information system to and between the RU and IM traffic management systems and to the online information sources for passengers.

Additional suggestions:

- Real-time information on train movements and the allocated platform should be made available to passengers directly, as done through the TABULE application.

- Station orientation plans and the services available should be published, as done by České dráhy and SBB, so that passengers can navigate an unfamiliar station.

- Where the IM does not publish station information for passengers, RUs assemble the same information separately using the IM's data; a single path from the source to the passenger would remove that duplication.

PRM

The needs of a wheelchair user, a passenger with a visual impairment and a passenger using a cane are not the same, and no single measure serves all of them. What they have in common is that the station and its spaces must meet accessibility standards, and that where they do not, the gap has to be closed by assistance.

Three issues emerged. The first is the infrastructure itself: platform reconstructions are still carried out in which the original, insufficient height is retained, so that works which could have removed the barrier leave it in place. Any works on a platform should carry an obligation on the IM to bring its height to the value required by the TSI.

The second is that assistance is basically a substitute for accessible infrastructure rather than a service in its own way. Only comprehensive adaptation of the infrastructure, together with adequate rolling stock, produces a situation in which the transport of PRM requires no assistance beyond the train staff. Until that point is reached, coordination between IMs, RUs and third-party providers remains necessary, and assistance continues to affect the dwell time of the train in a way that cannot realistically be absorbed into the timetable.

The third is that this coordination is organised manually. The passenger submits a request, the possibilities within the RU are checked together with the technical capacity and staffing of the IM, or the arrangement is made through a third party, and only then is the transport confirmed to the passenger. European common digital standard (and IT tools) should support this

process, so that the request reaches the parties concerned automatically and they can see and communicate the state of the arrangements.

4.2. Suggestions for further research

Here is a list of problems that can be tackled in the future:

- **Freight in passenger stations** — freight trains pass through passenger nodes and have operational needs there. This research addressed passenger operations only.
- **Methodology for charging** — which equipment and facilities of the station should be reflected in the charge, and which elements could instead be subsidised by the state or the municipality.
- **The basis for differentiating the stopping charge** — whether the stopping of different train categories should be reflected by category, distinguishing regional from long-distance services, or by the number of seats offered.
- **Calculation of passenger transfer times** - common method for deriving them from the physical conditions of the station
- **Evaluating station capacity** — the interaction between the configuration of the station throats, track lengths and platform access, and its effect on the capacity of the network as a whole.
- **Harmonisation of TCRs at stations** — the categorisation proposed in chapter 4.1 requires additional work in European working groups before it is usable in practice.
- **The timeframe for coordination meetings during investment projects** — this cannot be defined simply, since projects differ in complexity and in the duration of the construction and administrative processes involved. It requires deeper consultation with experts in those fields.
- **Use of existing IT interfaces for PRM assistance** — whether the standardised interfaces already in place could carry the assistance request and its confirmations, rather than a new tool being built for the purpose.
- **Commercial spaces** — retail, catering and other commercial areas within stations were out of scope, although they form part of the station's economics.

5. Annexes

5.1. Interviews

The railway stakeholders were interviewed to gather the necessary input and experience. The table below shows the number of interviews conducted per stakeholder type.

Topic	RU Freight	RU Passenger + Service providers	IM	SFO	PSO Authority
Stations	0	13	5	1	1

5.2. References

- Správa železnic, s. o. *Návrh plánu na zmírnění nebo odstranění přetížení dráhy*, in Czech - link
- Správa železnic, *Management kapacity dráhy*, in Czech - link
- Správa železnic, *Prohlášení o dráze 2026*, in Czech - link
- SŽ-Infrastruktura, *Network Statement 2026* - link
- SŽ-Infrastruktura, Network Statement portal - link
- DB InfraGO, *INB 2026 Anlage 7.3.2.1.4.1*, in German - link
- DB InfraGO, *Entgeltmatrix 2026*, in German - link
- ÖBB-Infrastruktur, *Network Statement 2026* - link
- ÖBB-Infrastruktur, IADB (Infrastructure Requirements Database) - link
- SNCF Réseau, *Network Statement* - link
- CNMC (2024), *STP/DTSP/063/24 – Modificación DR Flujos Viajeros Capacidad Estaciones*, in Spanish - link
- Independent Regulators' Group – Rail (2024), *An overview of charges and charging principles for passenger stations in the IRG-Rail member states* - link
- Republic of Slovenia (2009), *Pravilnik o opremljenosti železniških postaj in postajališč*
- Slovenske železnice, Locations of Rail Replacement Bus Stops - link
- ŽSR, *Infomapa*, in Slovak - link
- ŽSR, *Čakacie časy*, in Slovak - link
- VPE, *Vágányzárak – K2 Térkép*, in Hungarian - link
- SNCF Gares & Connexions, *DRG 2024, Annexe A6 – Référentiel sur l'information collective dynamique des voyageurs en gare*, version December 2023, §§4.3.1 and 4.7
- SNCF Gares & Connexions, Assistance service at stations - link
- CENDIS, *Asistence – OneTicket*, in Czech - link
- Správa železnic, *TABULE* - link
- České dráhy, Station Information – Olomouc hl.n. - link

5.3. Table of abbreviations

ADIF	Administrador de Infraestructuras Ferroviarias (Spanish IM)
ADIF AV	Administrador de Infraestructuras Ferroviarias Alta Velocidad (Spanish IM for high-speed lines)
API	Application Programming Interface
ATT	Annual Timetable
BC	Basic Charge
BID	Bau- und Informationsdialoge (Construction and Information Dialogues DB)
BSB	Betriebsstellenbeschreibung (Station description and categorisation ÖBB)
CENDIS	Centrum dopravních informačních systémů Ministerstva dopravy ČR (Czech national transport information systems centre)
CNMC	Comisión Nacional de los Mercados y la Competencia (Spanish regulatory body)
DB	Deutsche Bahn (German national railway company)
DB InfraGO	DB InfraGO AG (German IM)
DB Netz	DB Netz AG (former German IM)
DB Station&Service	DB Station&Service AG (former German station manager)

DRG	Document de Référence des Gares (Passenger Stations Statement of SNCF Gares & Connexions)
EC	European Commission
ECJ	European Court of Justice
ETCS	European Train Control System
EU	European Union
FTE	Forum Train Europe
IADB	Infrastructure Requirements Database
IM	Infrastructure Manager
IRG-Rail	Independent Regulators' Group – Rail
MAP	Minimum Access Package
NS	Network Statement
NS Stations	Station management subsidiary of Nederlandse Spoorwegen in the Netherlands
NVC	Boarding or alighting of passengers (commercial stop)
OCTAVE	Passenger information tool of SNCF Gares & Connexions
OLGA	Information system of SNCF Réseau
ÖBB	Österreichische Bundesbahnen (Austrian national railway company)
ÖBB-Infrastruktur	ÖBB-Infrastruktur AG (Austrian IM)
PRM	Passengers with Reduced Mobility
PRM-ABT	PRM Assistance Booking Tool
PSO	Public Service Obligation
RFP	Rail Facility Portal
RNE	RailNetEurope
RU	Railway Undertaking
SBB	Schweizerische Bundesbahnen (Swiss federal railways)
SERA	Single European Railway Area
SERAF	Single European Railway Area Forum
SF	Service Facility
SFO	SF Operator
SNCF	Société Nationale des Chemins de fer Français
SNCF Gares & Connexions	French station manager
SNCF Réseau	French IM
SŽ	Slovenske železnice (Slovenian national railway company)
SŽ-Infrastruktura	Slovenian IM
SŽ Potniški promet	Slovenian national RU
SŽCZ	Správa železnic (Czech IM)
TABULE	real-time passenger information application of SŽCZ
TAC	Track Access Charge
TCR	Temporary Capacity Restriction
TEN-T	Trans-European Transport Network
TIS	Train Information System
TSI	Technical Specification for Interoperability
TT	Timetable
UIC	International Union of Railways
VPE	Vasúti Pályakapacitás-elosztó Kft. (Hungarian allocation body)

Web-BBP	Web-Baubetriebsplan (web-based construction planning system of ÖBB-Infrastruktur)
ZSSK	Železničná spoločnosť Slovensko (Slovak national RU)
ŽSR	Železnice Slovenskej republiky (Slovak IM)