Network Statement 2020
Network access and usage conditions of BLS Netz AG for the timetable year 2020

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Operating points / route database
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### Overview of changes

#### Sections in the Network Statement 2020 (Version 1.0) which have been changed from the Network Statement 2019

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Section</th>
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</table>
| **General**         | ▪ Adapted to the new timetable year  
▪ Various structural and editorial changes made to the entire Network Statement to make it easier to understand and align it with the common structure of RailNetEurope, among other reasons  
▪ New numbering of appendices. See clarifications in Section 1.5  
▪ The content of the former Chapter 7, “Provision of data”, is now governed by Appendix 2.9  
▪ The content of the former Chapter 8, “Power supply ex catenary”, is now governed by Appendix 2.7.13 |
| **1 General information** | ▪ 1.2 The NWS shall also apply mutatis mutandis to applicants without RU status, where applicable  
▪ 1.4.2 Additional changes made to requirements  
▪ 1.6.2 New provisions added on the NWS update  
▪ 1.8 The address list is now published in the OneStopShop |
| **2 Access conditions** | ▪ 2.3.1.2 Vehicles instead of coaches/wagons  
▪ 2.6 Now provides additional details about I-50026, including measures if inspection is missed  
▪ 2.7 Specifies the roles involved in vehicle approval  
▪ 2.7 Technical Track Access unit (TNZ) accompanying authorisation  
▪ 2.7.1.1 Update to minimum software versions  
▪ 2.7.1.3 New section: travelling without adequate train control equipment  
▪ 2.7.1.4 Providing the data required for universal care and maintenance of the train control system within a maximum of seven days, pursuant to the Implementing Provisions to the Railways Ordinance. Previously in Section 3.3.3.2  
▪ 2.7.8 Provisions added on electric and electromagnetic rail brakes  
▪ 2.7.10 Aerodynamics completely revised  
▪ 2.7.14 New section: Movement type. Previously governed by Chapter 7  
▪ 2.7.15 New section: emergency brake overrides and lavatory systems  
▪ 2.10 New section with content from the former Section 3.4.8 “Service vehicles” |
| **3 Infrastructure** | ▪ 3.3.2.3 RADN added as a source  
▪ 3.3.3.2 Section has been completely revised  
▪ 3.4.1 New and revised appendices on specialised infrastructure  
▪ 3.4.2 Removal of notification of the intervention sites by RU for steam train journeys. Renamed to “Environmental restrictions”  
▪ 3.4.3 Reference to I-50062 in connection with chlorine as a main substance  
▪ 3.5.2 Intervals changed for the timetable year 2020. These are now listed in the NWS appendix 3.5.2  
▪ 3.6 Entire section revised  
▪ 3.7 New section on third party service facilities  
▪ 3.8 Section updated |
| **4 Capacity allocation** | ▪ 4.1.5 The provisions of the RFI apply to the route from Stabio to the border  
▪ 4.2.2.1 “Circumstances for which train path studies are appropriate” paragraph removed  
▪ 4.2.2.2 Ordering aids changed  
▪ 4.2.2.2 and 4.3.1 harmonised date for the provisional train path allocation: 1 July 2019  
▪ 4.2.5 Test run requirements are now in this section |
### Network Statement 2020: Overview of changes

List of the most important changes in updated (amended) versions of the Network Statement 2020

<table>
<thead>
<tr>
<th>Version</th>
<th>Change no.</th>
<th>Date</th>
<th>New (section, content)</th>
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<tbody>
<tr>
<td>2.0</td>
<td>1</td>
<td>2.12.2019</td>
<td>3.7 Link to the European Rail Facilities Portal</td>
</tr>
<tr>
<td>2.0</td>
<td>2</td>
<td>2.12.2019</td>
<td>Glossary: more detailed explanation of “SMS-EVU”</td>
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1 GENERAL INFORMATION

1.1 Introduction
This Network Statement (NWS) is published by the Infrastructure Division of BLS Netz AG for its own network.

The BLS Netz AG track network covers around 11% of Switzerland’s normal-gauge network.
SBB AG (around 80% of the normal-gauge network) and Schweizerische Südostbahn AG (approximately 3.5% of the normal-gauge network) also publish a NWS for their networks. A detailed map is available online.

Train paths (basic and ancillary services) on these three track networks are allocated by the independent train path allocation body Trasse Schweiz AG (trasse.ch), which also ensures that timetables are designed without discrimination. Chapter 4 explains the processes for ordering and allocating timetabled train paths (basic and ancillary services), as well as for the upstream and downstream steps associated with the allocation procedure, and highlights the relevant binding specifications.

1.2 Objectives
The NWS contains the access and usage conditions that apply to the track network (within the meaning of Article 10 Paragraph 1(d) of the Rail Network Access Ordinance (RailNAO) and EU Directive 2012/34) and forms part of the Network Access Agreement between the infrastructure manager and the railway undertaking.

It may also be used as a tool for requesting network access and managing traffic on the SBB track network. Therefore, the term “applicants” is used below where applicable to both railway undertakings and third parties.

1.3 Legal framework.
This NWS complies with the current legal framework in accordance with Railway Reform 2.2. Legislative changes will be added to the NWS as updates. Changes will also be listed in the overview of changes. In its Overland Transport Agreement with the European Union, Switzerland undertakes to apply legal provisions that are equal to those listed in Annex 1 of the agreement. 2 COTIF and CUI are applicable in Switzerland. The applicable Swiss laws and ordinances are published in the Swiss Certified Compilation of Federal Legislation (SR), and are also available online at www.admin.ch

Below is a list of the most important international and national legislation
**1.3.1 International legislation (excerpt)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Full title</th>
</tr>
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<tbody>
<tr>
<td>SR 0.742.403.1 – COTIF</td>
<td>Convention concerning International Carriage by Rail (COTIF)</td>
</tr>
<tr>
<td>Code</td>
<td>Full title</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SR 0.742.403.1 – Appendix E – CUI</td>
<td>Uniform Rules concerning the Contract of Use of Infrastructure in International Rail Traffic (CUI – Appendix E to the Convention concerning International Carriage by Rail) [COTIF; SR, 0.742.403.1]</td>
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</table>

Table 1 – International legislation
### 1.3.2 National legislation (excerpt)

<table>
<thead>
<tr>
<th>Code</th>
<th>Abbr.</th>
<th>Full title</th>
</tr>
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<tr>
<td>SR 0.742.403.1</td>
<td>COTIF</td>
<td>Convention concerning International Carriage by Rail (COTIF).</td>
</tr>
<tr>
<td>SR 0.742.403.1</td>
<td>CUI</td>
<td>Uniform Rules concerning the Contract of Use of Infrastructure in International Rail Traffic (CUI – Appendix E to the Convention concerning International Carriage by Rail) (COTIF; SR, 0.742.403.1).</td>
</tr>
<tr>
<td>SR 0.740.72</td>
<td>LVA</td>
<td>Agreement of 21 June 1999 between the Swiss Confederation and the European Community regarding the transport of goods and passengers by rail and road (including Annexes and Final Act).</td>
</tr>
<tr>
<td>SR 742.101</td>
<td>EBG</td>
<td>Railways Act.</td>
</tr>
<tr>
<td>SR 742.122</td>
<td>NZV</td>
<td>Track Access Ordinance.</td>
</tr>
<tr>
<td>SR 742.122.4</td>
<td>NZV-BAV</td>
<td>BAV Ordinance on the Track Access Ordinance.</td>
</tr>
<tr>
<td>SR 742.101.4</td>
<td>–</td>
<td>Conduct of business regulation of the Railways Arbitration Commission.</td>
</tr>
<tr>
<td>SR 742.141.1</td>
<td>EBV</td>
<td>Railways Ordinance.</td>
</tr>
<tr>
<td>SR 742.141.11</td>
<td>AB-EBV</td>
<td>Implementing Provisions for the Railways Ordinance.</td>
</tr>
<tr>
<td>SR 742.144.1</td>
<td>VLE</td>
<td>Ordinance on Railway Noise Abatement.</td>
</tr>
<tr>
<td>SR 742.173.001</td>
<td>FDV</td>
<td>Swiss Train Loading and Running Regulations (R 300.1–15).</td>
</tr>
<tr>
<td>SR 742.412</td>
<td>RSD</td>
<td>Ordinance on the Carriage of Dangerous Goods by Rail.</td>
</tr>
<tr>
<td>SR 742.411</td>
<td>GüTV</td>
<td>Ordinance on the Carriage of Goods.</td>
</tr>
<tr>
<td>SR 745.11</td>
<td>VPB</td>
<td>Ordinance on Passenger Transport.</td>
</tr>
<tr>
<td>SR 745.13</td>
<td>FPV</td>
<td>Timetables Ordinance.</td>
</tr>
<tr>
<td>SR 151.31</td>
<td>BehiV</td>
<td>Federal Ordinance on the Elimination of Discrimination against People with Disabilities.</td>
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</table>

Table 2 – National legislation
1.4 Legal status

1.4.1 General remarks

Article 10 Paragraph 1(d) of the Swiss Rail Network Access Ordinance (RailNAO) requires infrastructure managers to publish the conditions of network access.

Art. 10 The infrastructure manager’s obligations

1 The infrastructure manager is to ensure non-discriminatory access to its network, by:
   a. applying the same rules both to itself and to third parties when allocating train paths and setting train path prices;
   b. treating third parties equally under the same conditions when allocating train paths and setting train path prices;
   c. not applying technical conditions which have no basis in current legislation or regulations;
   d. publishing the basic conditions for network access, where not detailed in this regulation, and by publishing the most important technical features of the track section, such as profile (gradient), curve radii, length of the passing tracks, platform lengths, route class and safety equipment;
   e. offering additional services (Art. 22) where this is possible with the existing infrastructure and available staff.

2 The BAV will specify the type and nature of the publications.

Within Switzerland, SBB, BLS Netz AG, SOB and trasse.ch base this publication on the structure of the Network Statement established in the EU in accordance with Article 27 of EU Directive 2012/34, for the purpose of harmonisation. Further information on the structure can be found under section 1.5.

1.4.2 Liability

All the conditions governing the use of railway infrastructures that are published in this NWS are subject to subsequent legislative changes. Insofar as additional requirements are introduced after publication of the NWS within the context of amendments to Swiss laws and ordinances, compliance with these requirements is mandatory. BLS Infrastructure accepts no liability for the consequences of failure to comply with subsequent amendments to legislation and provisions.

BLS is conscious of the need to ensure that the information in this NWS is correct. It shall not be liable for any direct or indirect damage arising from obvious defects or printing errors in this NWS and in other documents. Furthermore, it rejects all responsibility for the contents of any external websites to which this publication links. Where the contents of linked pages contradict those of this NWS, the latter shall have priority. This reservation does not apply to links on the official publication pages for Swiss laws and ordinances.

This NWS is published in German and English language versions. In the event of differences between language versions, the German version shall be legally binding.
1.4.3 Appeals procedure

1.4.3.1 BLS Netz AG (with the exception of chapter 4)
Complaints relating to the content of this Network Statement should be directed to the following contact point:
BLS Netz AG
Betrieb Trassen
Bahnhofstrasse 12
Postfach 48
CH-3700 Spiez
Phone +41 58 327 40 39
E-mail: netzzugang@bls.ch

1.4.3.2 Trasse Schweiz AG (chapter 4)
Complaints relating to the content of chapter 4 should be directed to trasse.ch. The contact details are provided in the list of addresses in section 1.8.

1.4.3.3 Railways Arbitration Commission
Disputes relating to the granting of track access and the associated conditions are subject to claims to the Railways Arbitration Commission (SKE). The Commission’s decisions are subject to judicial review (Art. 29 LVA, Art. 40a bls EBG, Art. 25 NZV). For contact details, see section 1.8.4 Link

Art. 40a bis Tasks

1 The SKE will settle disputes about the granting of track access, about track access agreements and about how the charges for use of the infrastructure are calculated.

2 It has the authority to initiate investigations if there is any suspicion either that track access is being prevented or that it is not being granted in a non-discriminatory manner.

3 It determines the action to be taken and has powers to enforce such action.

4 Infrastructure managers, rail companies with track access and third parties involved in track access must provide the SKE with all the information required for its investigations and must submit the necessary documents. The right to refuse to provide information is governed by Article 16 of the Administrative Procedure Act dated 20 December 1968.

According to Art. 33f of the Administrative Court Act (VGG) decisions by the SKE can be referred to the Federal Administrative Court in St. Gallen

1.5 Network Statement structure
The structure of the NWS corresponds to the structure that was devised and adopted by the working group Network Statement and Corridor Information Document of RailNetEurope (RNE). This common structure is available at www.rne.eu/network-statements/
Its goal is to enable readers across Europe to find the information they require for network access more easily in a uniform format.

- Chapter 1 contains general information on the NWS and points of contact.
- Chapter 2 covers network access and usage conditions.
- Chapter 3 describes the properties of the track network, including capacity restrictions.
- Chapter 4 illustrates the capacity allocation procedure used by trasse.ch.
Chapter 5 describes the services of the infrastructure managers.
Chapter 6 contains information on pricing and fees.

1.6 Validity period and updates

1.6.1 Validity period
This NWS is valid for the ordering and execution of transport operations in the timetable year 2020 from 15 December 2019 to 12 December 2020.

1.6.2 Updating process
The NWS is kept up to date. Information on new and amended versions is provided in accordance with the provisions of the Network Access Agreement.

1.7 Publication
This Network Statement 2020 is available as a .pdf file 1 on the BLS Netz AG website free of charge. Copies of regulations and more detailed BLS documentation can be obtained for a fee.

Picture 2 – Homepage BLS

1 All Portable Document Format (PDF) files can be viewed and printed using Acrobat®Reader®. The program Acrobat®Reader® can be downloaded free of charge at www.adobe.com.
1.8 Contact addresses
The section below lists contacts from whom further information can be obtained.

For questions about chapter 4 of the NWS, please make direct contact with
Trasse Schweiz AG
Schwarztorstrasse 31
P.O. Box
3001 Bern
Switzerland Tel: +41 79 928 01 63
info@trasse.ch
www.trasse.ch

1.8.1 SBB Infrastructure / BLS Netz AG / SOB Infrastructure

Detailed information on all matters relating to network access and usage can be obtained from the contact persons shown in the list at www.sbb.ch/kontakt-onestopshop, which is always kept up to date.

For general questions about the NWS, please contact

SBB Infrastructure
System Tasks and Network Access
Hilfikerstrasse 3
3000 Bern 65
Switzerland
Tel: +41 79 732 67 73
info.nzvp@sbb.ch

For questions about chapter 4 of the NWS, please make direct contact with
Trasse Schweiz AG
Schwarztorstrasse 31
P.O. Box
3001 Bern
Switzerland
Tel: +41 79 928 01 63
info@trasse.ch
www.trasse.ch

1.9 Rail freight corridors
A total of eleven rail freight corridors (RFCs) run through Europe, on the basis of EU Regulation 913/2010. The following goals are set for these corridors:

▪ Improving cooperation between the infrastructure managers of the countries involved in the areas of capacity allocation, development of interoperable systems and infrastructure expansions and renovations.

▪ Achieving balance between freight and passenger trains along the rail freight corridors in order to meet the freight train capacity and punctuality requirements.

▪ Promoting intermodal traffic by incorporating terminals into the rail freight corridors.
Switzerland is connected to corridors 1 and 2.

RFC 1 Rhine-Alpine: Zeebrugge/Antwerpen/Vlissingen/Rotterdam/Amsterdam–Köln–Mannheim–Basel–Gotthard/Lötschberg–Genova
For further information, visit www.corridor-rhine-alpine.eu

RFC 2 North Sea-Mediterranean: Glasgow/Edinburgh/Dunkerque/Zeebrugge/Rotterdam/Amsterdam–Metz–Basel/Marseille
For further information, visit www.rfc-northsea-med.eu

Where train paths are ordered on the rail freight corridors, dedicated OneStopShops have been available for use since 2013 www.rne.eu/organisation/oss-c-oss/

1.10 RailNetEurope – international collaboration between infrastructure managers
RNE was established in January 2004, when representatives of infrastructure managers and train path allocation bodies created a joint European association with the aim of simplifying their international operating activities. This was achieved by developing harmonised business processes, templates, manuals, guidelines and tools, and making solutions available not just to the infrastructure managers involved but also to applicants.

SBB Infrastructure, BLS Netz AG and trasse.ch are members of RNE.
You can find further information at www.rne.eu/organisation/rne-approach-structure

1.10.1 OneStop Shop (OSS)
The members of RNE created an international network of OneStopShops to support applicants in matters relating to network access and cross-border train path orders. In Switzerland, trasse.ch is responsible for all national and international train path requests, apart from train paths on rail freight corridors (see section 1.9).

1.10.2 RNE IT Tools
The Path Coordination System (RNE PCS) is an international train path coordination tool for applicants, infrastructure managers, train path allocation bodies and rail freight corridors. It is free to use, and user accounts can be requested at pcs.rne.eu.

The Charging Information System (RNE CIS) is a free tool for estimating the costs associated with using European rail infrastructure. It can be accessed at cis.rne.eu no registration is required. This system should not be confused with the Cargo Information System provided by SBB Infrastructure (CIS Infra).

The Train Information System (RNE TIS) (formerly EUROPTIRAILS) summarises information on international trains in one place. The relevant data is supplied to RNE TIS by the infrastructure managers. A free user account can be requested at tis.rne.eu.
2 TRACK ACCESS CONDITIONS

2.1 Introduction
Chapter 2 of the NWS sets out the requirements for accessing the SBB track network for national and cross-border traffic.

2.2 General access requirements
The legal bases for network access and operations as a railway undertaking are the Swiss Railways Act (EBG), SR 742.101, the Ordinance on the Construction and Operation of the Railways (Railways Ordinance, RailO), SR 742.141.1, the Rail Network Access Ordinance (RailNAO), SR 742.122, and the FOT Ordinance to the Rail Network Access Ordinance (RNAO-FOT), SR 742.122.4.

In order for a Swiss railway undertaking to be able to operate on the SBB track network, a network access permit, safety certification and a network access agreement with the infrastructure manager are required at the administrative level.

The network access permit and safety certification are issued by the Federal Office of Transport (FOT). The FOT guideline on requesting network access permits, safety certificates and safety authorisations describes the necessary steps.

The RU shall be responsible for checking the technical compatibility of the rolling stock with the routes to be used. The procedure is described in the OneStopShop.

Network access is granted to foreign railway undertakings on the basis of the applicable international agreements. For instance, on routes close to borders, simplified conditions in accordance with Annex 1 of the FOT guideline on requesting network access permits, safety certificates and safety authorisations may be used.

The contact points are indicated in the list of addresses.

![Diagram](figure1)

Figure 1 – Procedure for obtaining network access
2.2.1 Conditions for applying for capacity
The requirements for train path requests are set out in chapter 4.

2.2.2 Access authorisation
Subject to statutory considerations and other provisions mentioned in this document, any company is entitled to request network access.

2.2.3 Track access permit
The network access permit is issued by the FOT on the basis of Articles 8c and 8d EBG.
Among other things, it certifies that the railway undertaking possesses the required knowledge for safe and reliable rail operation, is financially fit and reliable, and complies with the applicable labour regulations. The network access permit is valid for a maximum of ten years and can be renewed.
In the case of foreign railway undertakings, Article 9 RailNAO stipulates that foreign network access permits may be recognised on journeys for routes close to borders even in the absence of an intergovernmental agreement.

2.2.4 Safety certification, Art. 8e EBG
The safety certificate is issued by the FOT in accordance with Art. 8e of the Railways Act. The RU shall be responsible for checking the technical compatibility of the rolling stock with the routes to be used. The procedure is described in the OneStopShop.

Art. 8e Issue and renewal of safety certification
1 Safety certification is issued by the BAV.
2 Safety certification includes approving the railway company’s safety management system and approving the precautions it has taken to ensure that operations on the relevant routes are carried out safely. In particular, the company must prove that:
   a. its employees possess the relevant qualifications to ensure safe operations;
   b. the rolling stock meets the requirements for safe operations.
3 Safety certification is issued for five years at most. It can be renewed.
4 Where an agreement has been reached with other countries about mutual recognition, then safety certification issued by these countries will also apply within Switzerland.

2.2.5 Solvency (insurance), Art. 5 NZV
Article 5 of the Track Access Ordinance (NZV) describes the solvency-related requirements as follows:

Art. 5 Solvency
(Art. 8d para. 1b EBG)
1 The railway company will be regarded as solvent if statements made by it indicate that it will be able to meet its financial obligations for at least one year.
2 If this solvency requirement cannot be met, but financial restructuring is in progress, the BAV can issue provisional approval valid for at most six months.
3 The details required in respect of solvency are set out in the Annex.

Art. 5a Insurance cover (Art. 8d para. 1b EBG)
1 Insurance cover will be regarded as adequate if the company can show that it is insured against the consequences of its liability up to a sum of CHF 100 million per incident or can offer securities to the same value.
2.3 Agreement Types
The General Terms and Conditions for the Use of Railway Infrastructure (AGB-ISB) form an integral part of the track access agreement. For capacity allocation, the provisions of Swiss Train Paths Ltd. set out in chapter 4 apply.

2.3.1 Track access agreement, Art. 15 – 17 NZV
Provisions concerning the track access agreement are covered in articles 15-17 of the Track Access Ordinance (NZV).

If all the requirements set out in section 2.2 are satisfied, a track access agreement may be signed. If the BAV is unable to issue permits by the time requested, the track access agreement will be concluded subject to permits actually being granted. This agreement governs the general aspects of collaboration between the IM and the RU. It must be produced in written form and in duplicate in an official Swiss language or in English, and must contain the following constituent parts:

- the General Terms and Conditions for the Use of Railway Infrastructure (AGB-ISB)
- the IM’s list of infrastructure services
- the IM’s Network Statement
- details of the allocation of the requested basic and ancillary services
- the applicant’s train path request or details of services order.

By concluding a track access agreement, the RU is not bound to place train path orders. The template for such an agreement can be found via Link 6. Swiss Train Paths Ltd., the body responsible for the impartial allocation of train paths (chapter 4), also receives a copy of each track access agreement.

2.3.1.1 Accounting code (Debicode)
Railway undertakings are identified via an accounting code for the purpose of purchasing and billing for services. This code is issued to the railway undertaking by the infrastructure manager.

The RU must comply with the following rules in its use of the accounting code (if already issued):

- The accounting code issued must be used every time a train path is ordered
- Train paths (train numbers) must be ordered with a single accounting code for the entire Swiss section of the route.

2.3.1.2 Agreements with third-party orderers (Applicants)
According to Article 9a Paragraph 4 EBG,

4 A request for track access along a train path in a specific location and for a specific length of time can be made by any company interested in putting on rail traffic. At least one month before commencing operations, the company must submit a track access permit or commission a
railway undertaking to put on the rail traffic. The railway undertaking putting on the traffic must submit a safety certificate by the time it commences traffic operations at the latest.

2.3.1.3 Framework Agreements
applicants and infrastructure managers may conclude framework agreements in accordance with Article 12b RailNAO; see also section 4.4.4.

2.4 Operational rules

2.4.1 Train service regulations
The FOT publishes the train service regulations on the basis of Article 11a RailO. These apply to all railway undertakings that use Swiss railway infrastructure and comprise the safety rules for all railway journeys.

The regulations can be accessed at bav.admin.ch – Rechtliches – Fahrdienstvorschriften (FDV) (in German/French/Italian).

Article 11a RailO also states that on routes close to borders, the FOT may deem the train service regulations of the neighbouring country to be applicable. For example, for Italian railway undertakings operating from and to Chiasso (Viaggiatori and Smistamento station sections), the regulations published in the applicable directory of the Italian infrastructure manager RFI (Fascicolo di Linea 25) shall apply.  

Picture 3 – Scheduling and operational control centre Spiez
2.4.2 Operating rules, Art. 12 EBV

The provisions concerning operating rules are set out in article 12 of the Railways Ordinance (EBV) as follows.

1. The operating rules required for operation and maintenance are issued by the railway undertakings, which shall ensure that they are applicable in practice and user-friendly.

2. These rules must be submitted to the BAV in good time – usually three months before planned implementation. Operating rules deviating from the Train Loading and Running Regulations issued by the BAV on the basis of Art. 17 para 3 EBG must be submitted to the BAV for approval at least three months before planned implementation. The instructions on the function, operation and maintenance of a facility or vehicle should together make up an appropriate operation manual.

3. The railway undertakings shall ensure that the necessary documents are available to users.

4. The network user is bound by those operating regulations containing rules relating to the route being used and concerning:
   a. the implementation of public law obligations;
   b. the braking ratio required for a certain speed (including stop brake) and the permitted thrust and shear forces;
   c. the use of combustion-based motive power units in tunnels;
   d. the loading gauge to be maintained;
   e. the permitted axle load and load per metre;
   f. the operation of vehicles with large wheel bases and of overlength trains;
   g. the maximum current drain from the overhead power lines;
   h. the official language to be used;
   i. electromagnetic compatibility.

5. The BAV is responsible for ensuring that the operating regulations are as uniform as possible for performing rail operations.

RUs with an allocated accounting code can obtain all mandatory operating rules issued by BLS Netz AG for a fee from the contact point listed in section 1.8.1.1 Supplementary instructions on operating rules will be sent to the relevant RUs by post.

Members of the Swiss Public Transport Association (VöV) should contact:

**VÖV UTP**

Verband öffentlicher Verkehr VöV
Dählhölzliweg 12
CH-3000 Bern 6
Telefon: +41 31 359 23 23
E-mail: RTE@voiev.ch
RTE-Webshop: www.rte.voev.ch

2.4.3 Technical / operational recommendations, Art. 12a EBV

The provisions concerning technical/operational recommendations are set out in article 12a of the Railways Ordinance (EBV) as follows.

**Technical/operational recommendations for infrastructure use are issued by the infrastructure manager. These recommendations help minimise operational disruptions and draw network users’ attention to possible damage events. They contain, in particular, tips regarding:**

a. motive power on steep gradients or long inclines

b. ideal train lengths, draw-hook loads, driving characteristics, derailment safety;
2.5 Special consignments/heavy loads

The provisions concerning special consignments SC can be found in the following documents:

- UIC Leaflet 502, Annex 1 (www.uic.org)
- The Infrastructure Implementing Provisions for the FDV and associated provisions (AB-FDV Infrastructure), I-30111.

For the transportation of heavy loads (details required include, in particular, axle arrangement and axle loads) not covered by the provisions of UIC leaflet 700, a case-specific processing time applies. This shall be agreed/decided upon on a case-by-case basis depending on the type of heavy goods transport. We kindly request that you contact us well in advance.

For more information, please contact BLS Netz AG at the contact point listed in section 1.8.1.3.

Special consignments only run as freight trains and are recorded in the CIS, with the exception of test runs and measuring trips (spec. train numbers; no CIS) BLS Netz AG reserves the right to commission the RU for special consignments.

BLS Netz AG subdivides special consignments as follows:

- Special consignments that do not foul the gauge (SC no fouling)
- Special out-of-gauge consignments (SC fouling)
- Special out-of-gauge consignments according to simplified notification procedure under R I-50089
- Special laterally out-of-gauge consignments (SC with lat. fouling)

Within ordering procedures BV1 to BV4a train path requests are only accepted for the following SCs:

- SC no fouling
- SC with fouling as per R I-50089 without notification

The other SCs must be ordered within the scope of the remaining capacity in the current timetable as per section 4.3.2.

2.6 Dangerous goods

The RSD Ordinance (Ordinance on the transportation of dangerous goods with railways and cableways/SR 742.412), I-50026 (I-B provisions on the transportation of dangerous goods and other liquids classed as an aquatic hazard) and I-50062 (Restrictions on the transportation of dangerous goods with chlorine as a main substance) apply to the carriage of dangerous goods.

Parked full train loads of dangerous goods must be inspected according to specification I-50026 and reported to the network management. Should the railway undertaking fail to conduct the required inspection for full train loads of dangerous goods, it shall be sent a single reminder by the infrastructure manager via e-mail. If there is still no inspection within the grace period specified by the infrastructure manager, the latter may commission the inspection at the expense of the railway undertaking.
### Recommended operational measures for short platforms

#### Background
An RU will always react quicker to changing market needs faster than any necessary infrastructure adjustments can be made. Furthermore, IMs will not be able to implement the defined platform length everywhere and to the required deadlines. It is therefore possible for planned trains to be longer than the existing platform length. Without appropriate (structural or operational) countermeasures, there is a potential risk to passengers.

If no structural measures (temporary platform adjustments) can be implemented within a reasonable deadline, it is up to the RU to implement operational measures. This should be taken into account at the planning stage.

The operating rules are designed to regulate the handling of unexpected situations for which no plans can be made in advance.

#### Recommended operational measures
The IM has undertaken a one-time assessment of the safety and effectiveness of possible operational measures. The IM recommends implementing the operational measures below where necessary and possible.

Operational measures A to L are considered safe.

Measures M to R are considered insufficient. However, insufficient measures can be logically combined to produce further safe operational measures. (For example, reserving an occupied but conductorless composition [M] is recommended, as long as an automated announcement is also made on the train [N].)

<table>
<thead>
<tr>
<th>Operational measures</th>
<th>Residual risk/comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A ²) <strong>Locking</strong> individual empty coaches on conductorless and conductor-staffed trains</td>
<td></td>
</tr>
<tr>
<td>B ²) <strong>Locking</strong> individual occupied coaches on conductor-staffed trains</td>
<td>Possible errors can be prevented by staff</td>
</tr>
<tr>
<td>C ³) <strong>No stop</strong></td>
<td></td>
</tr>
<tr>
<td>D ³) <strong>Reserving empty compositions on conductor-staffed trains</strong> (train marked accordingly)</td>
<td>Technical fault; staff can forget to perform action</td>
</tr>
<tr>
<td>E ²) <strong>Locking</strong> individual occupied coaches on conductorless trains</td>
<td>An escape route must be available at all times. This must be in the platform area.</td>
</tr>
<tr>
<td>F ³) <strong>Active directing of passengers on the platform</strong> by staff with special mandate</td>
<td>Staff must also prevent passengers from leaving the train</td>
</tr>
<tr>
<td>G ³) <strong>Reserving empty compositions on conductorless trains</strong> (train marked accordingly)</td>
<td>Technical fault; staff can forget to perform action</td>
</tr>
<tr>
<td>H ³) <strong>Reserving occupied compositions on conductor-staffed trains</strong> (train marked accordingly)</td>
<td>Technical fault; staff can forget to perform action</td>
</tr>
<tr>
<td>I ⁴) <strong>Situation regulated with fixed stopping-point markings</strong></td>
<td>Observance of the stopping point tolerance: 5m</td>
</tr>
<tr>
<td>J ⁴) <strong>Construction measures (fencing)</strong> in the train alighting area at eye level</td>
<td>Overriding regulations must still be adhered to (e.g. clearance profile)</td>
</tr>
<tr>
<td>K ⁴) <strong>“Pick-up only stop”. Publication in all timetable documentation and customer information systems for conductorless and conductor-staffed trains</strong></td>
<td>Low risk of non-observance by passengers (habit, tact) Aimed at avoiding alighting outside the platform area</td>
</tr>
<tr>
<td>L ⁴) <strong>Restricted stop: communication to passengers in advance</strong></td>
<td>Unofficial stop, e.g. for schoolchildren only</td>
</tr>
<tr>
<td>Operational measures</td>
<td>Residual risk/comments</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>M 3)</strong> Reserving occupied compositions on conductorless trains (train marked accordingly)</td>
<td>Technical fault; staff can forget to perform action</td>
</tr>
<tr>
<td><strong>N</strong> Automated audio announcement on train: &quot;Please take care when alighting&quot; or &quot;Please alight from the front/back of the train&quot;. (Multilingual, depending on the region)</td>
<td>Technical fault; provision of information on board; passengers disregard instructions (&quot;surfeit of information&quot;) Support with visual displays where possible</td>
</tr>
<tr>
<td><strong>O</strong> Dynamic automated signage on train: &quot;Please take care when alighting&quot;, &quot;Please alight from the front/back of the train&quot;. (Multilingual, depending on the region)</td>
<td>Technical fault; provision of information on board; passengers disregard instructions (&quot;surfeit of information&quot;)</td>
</tr>
<tr>
<td><strong>P</strong> Poster displays in stations/on trains</td>
<td>Insufficient attention paid/implementation -&gt; supplementary measure only (raising awareness)</td>
</tr>
<tr>
<td><strong>Q</strong> Audio announcement on train by train staff (specific mandate): &quot;Please take care when alighting&quot; or &quot;Please alight from the front/back of the train&quot;. (Multilingual, depending on the region)</td>
<td>Staff can forget to perform action; technical fault; provision of information on board; passengers disregard instructions (&quot;surfeit of information&quot;)</td>
</tr>
<tr>
<td><strong>R</strong> Passive directing of customers on the platform by staff as a secondary mandate</td>
<td>Distraction by other tasks; staff must also prevent passengers from leaving the train</td>
</tr>
</tbody>
</table>

Table 3 – Operational measures in the event of inadequate usable platform length

The IM considers other operational measures as insufficient and advises against implementing these. The RU is responsible for adhering to track access conditions.

<table>
<thead>
<tr>
<th>Footnote</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>According to the BAV, the needs of passengers with slightly reduced mobility (e.g. older passengers) can be taken into account to assess the safety of operations. A step with a maximum height of approximately 230-300 mm is currently considered state of the art. Access points with steps larger than 300 mm do not reflect the level of safety required and should therefore be avoided.</td>
</tr>
<tr>
<td>2)</td>
<td>Locking individual doors, coaches or parts of trains (compositions) mechanically prevents passengers from boarding or alighting outside the desired areas.</td>
</tr>
<tr>
<td>3)</td>
<td>Reserving individual compositions mechanically prevents passengers from boarding or alighting outside the desired areas (as long as rolling stock is equipped to do this).</td>
</tr>
<tr>
<td>4)</td>
<td>Implemented by the IM where possible.</td>
</tr>
</tbody>
</table>
2.7 Vehicle approvals and technical requirements

Area of validity
The technical requirements listed in this section apply in principle to the entire SBB track network. Further requirements for particular infrastructure facilities (e.g. fire protection requirements in specific tunnels) are set out in the annexes to section 3.4.1.

Accreditation body
The FOT is responsible for accepting rolling stock (obtaining the necessary operating permit/type acceptance). The legal bases are set out in the Swiss Railways Act, Swiss Railways Ordinance and Implementing Provisions to the Railways Ordinance (IP-RailO). The FOT publishes guidelines for the accreditation of railway vehicles and for the accreditation of historic railway vehicles.

Support
Inspection of the technical network access conditions as per this section by the Technical Network Access (TNZ) department of SBB Infrastructure is part of the FOT's accreditation procedure and a strict requirement for access to SBB’s track network.

The main focus of the investigative work is on making certain that the vehicles and BLS Infrastructure's equipment and systems are mutually compatible in order to ensure their safe and reliable interaction. The TNZ specifies, in consultation with the applicant (RU, vehicle manufacturer, independent testing body), those infrastructure requirements for which evidence of compliance must be provided and checks whether the conditions have been met and the relevant evidence has been furnished (particularly in the case of uniquely Swiss requirements, so-called national technical rules). The TNZ issues non-objection certificates (similar to a report) for each aspect as its formal comment on the evidence submitted and as confirmation of compliance with the infrastructure requirements (proof of compatibility):

- Provisional non-objection certificates (for test runs)
- Definitive non-objection certificates (for commercial journeys)

TNZ also supports the interested railway undertakings/vehicle keepers and manufacturers in matters relating to network access, i.e. from creation of the requirements specification through to acceptance of traffic on the BLS NETZ AG track network. TNZ is authorised to attend the test journeys carried out by the railway undertakings on the BLS NETZ AG Infrastructure track network at any time. It thus makes an important contribution to ensuring safe circulation of traffic on the BLS NETZ AG track network and preventing operational disruptions.

The following technical and operational requirements must be met:

2.7.1 Train control equipment

2.7.1.1 Minimum on-board equipment with trackside signalling
Vehicles that want to travel on the BLS Infrastructure network (excluding ETCS Level 2 routes) must be equipped with at least ETM-S (SIGNUM system) or ETM-M (SIGNUM and ZUB system). Each vehicle for which a type approval or operating licence is requested must be equipped with an ETCS train control system according to Baseline 3 or must at a minimum be ready for straightforward retrofitting.

The signal positions (warning and stop signals) and speed monitoring shall be transmitted to the vehicle from the Eurobalise/Euroloop via the following transmission paths:

- Packet 44 to the ETM antenna of the ETM-S (SIGNUM system) or to the ETM antenna of the ETM-M or ZUB 262 (SIGNUM and ZUB system) (ETCS Level 0)
- ETCS telegram to the ETCS antenna of a vehicle equipped with an ETCS system according to Baseline 3 (ETCS Level 1 Limited Supervision)
The systems must have at least the following software versions:
ETM-M: Version 1.00
ETM-S: Version 1.00
ZUB 262 ct (DAZ-Variante): Version 14 *
ZUB 262 ct (MVB-Variante): Version 14 *
ZUB 262 (light-Variante): Version 15
ETCS Baseline 3: BL 3.4.0
* The transitional provision communicated by the FOT shall apply.

2.7.1.2 Minimum equipment with cab-signalling
Vehicles must be fitted with an approved and functioning on-board ETCS system in order to travel on routes equipped with ETCS Level 2 (cab signalling).

2.7.1.3 Driving without adequate train control equipment
As a general rule, all leading vehicles must be equipped with the Automatic Train Protection that is present on the infrastructure being driven on. If this is not possible (e.g. driving with historic rolling stock or test runs at overspeed), an exception permit must be obtained from the FOT, which has published a corresponding guideline.

The statement must be submitted to the infrastructure manager in order to process the exception permit. The infrastructure manager will do this within ten working days.

2.7.1.4 Universal system maintenance
The infrastructure manager defines the details that are required for the universal care and maintenance of the train control systems in accordance with IP-RailO. The railway undertaking shall provide the information to the infrastructure manager upon request (e.g. log files from on-board units), promptly and free of charge (within a maximum of seven days) and the infrastructure manager is to treat this information as confidential.

2.7.2 Wheel / track interaction
Wheel/track interaction is based on the limiting conditions and limit values set out in the AB-EBV. An inspection is to be conducted taking into account the relevant Swiss legal provisions/specialities and in accordance with CEN standard EN 14363 (Testing for the acceptance of running characteristics of railway vehicles – Testing of running behaviour and stationary tests).

The following serve as guidelines and benchmarks:
- Adherence to the limiting conditions and limit values set out in the AB-EBV
- Internationally recognised standards (EN 14363, EN 15663, UIC 518, UIC 645)
- The Swiss track network with its many very small curve radii 250 m ≤ R < 400 m (test range 4 in accordance with EN 14363 and UIC 518)
- Specific lines with a significant number of extremely small curve radii R < 250 m in accordance with R I-50127 (test range 5, not covered by EN 14363 or UIC 518)
- Ensuring that points on tight curves can be traversed safely and without undue strain on the track and maintaining the minimum buffer overlap in accordance with R I-50007
- Minimum technically traversable radius (curve radius) in accordance with R I-50007
- Specific SBB / BLS regulations (R I-50007, R I-50064)

2.7.3 Interface between load limits of vehicles and infrastructure
In accordance with EN 15528 and R I-50064 (technical specification for effecting the interface between load limits of vehicles and infrastructure in line with the EU standard EN 15528),
the line category is determined by the maximum wheelset load and the mass per unit of length. The line category of an entire train is always determined based on the vehicle in the train that has the highest load, i.e. that is in the highest-numbered line category. Compatibility is ensured if the vehicle’s line category (or payload limit for freight wagons) is the same as or lower than the line’s own category, taking account of the maximum permitted speed.

2.7.4 Pantograph / overhead line interaction
Pantographs require component approval from the BAV in accordance with the BAV Guideline on the Acceptance of Railway Vehicles.

The following serve as guidelines and benchmarks:

- Adherence to the limiting conditions and limit values set out in the AB-EBV
- Adherence to the force criteria in accordance with EN 50367
- Adherence to the contact wire uplift criteria in accordance with EN 50119
- Adherence to the pantograph requirements in accordance with EN 50206
- Infrastructural requirements governing the interaction between pantographs and overhead lines in accordance with R l-50088
- Verification of pantograph gauges (see also section 3.3.2.1)
- Optimised pantograph horns
- BLS Infrastructure’s many different overhead power line systems (compliance will be demonstrated over several reference sections of track depending on the intended employment)
- Specific SBB regulations (R l-50088)

2.7.5 Flange lubrication (“Spurkranzschmierung”)
All rolling stock in use on the BLS network must have flange lubrication (“Spurkranzschmierung”). Detailed requirements governing the lubricants to be used (especially with regard to their environmental impact), the required quantities and frequency of lubrication can be found in the Swiss Public Transport Association’s Technical Rail Regulation 49410.

2.7.6 Electrical requirements for motive power units
In order to guarantee safe and reliable interaction of motive power units with infrastructure installations and systems, the following conditions must be met and the corresponding proof submitted with the type acceptance for the motive power units:

2.7.6.1 Requirements for input admittance
In order to reliably prevent the line-side converters of motive power unit converters, including the associated line-side converter controller, from generating network resonances and thus possibly rendering the traction current supply network unstable, the input admittance frequency response must be passive for any values above a defined threshold frequency. The corresponding requirements for input admittance of motive power unit converters and the specifications for motive power unit frequency response measurements are set out in SBB Regulation R l-20005. This regulation is a binding operating rule within the meaning of Art. 12 para.4g EBV.

2.7.6.2 Requirements for power limitation
In order to prevent failures arising from under- or overproduction in the case of special configurations of the traction power supply network, motive power units must be equipped with a frequency-dependent power limitation function in accordance with SBB Regulation l-55068.

In order to prevent a power outage in the event of a weak power grid, e.g. where there are long supply bypasses or special circumstances such as failure of a substation, motive power units must
be equipped with a voltage-dependent power or current limitation function in accordance with SBB Regulation I-50069.

The regulations are binding operating rules within the meaning of Art. 12 para. 4g EBV for vehicles accepted for operation as from 1 January 2011. For older motive power units, the aim is for these functions to be added within the context of general software updates.

Current versions of these documents can be obtained from the relevant contact point as per section 1.8.1.3.

2.7.6.3 Compatibility with track-release systems

Adherence to EN 50238 will ensure the compatibility of all rolling stock with track-release systems. This standard is divided into three sections: process (EN 50238-1, formerly EN 50238), parasitic currents (CLC/TS 50238-2) and magnetic interference (TS 50238-3).

The use of eddy current braking systems or other braking systems that are not dependent on wheel-rail adhesion is not permitted on the rail network of BLS Netz AG Infrastructure for normal or emergency braking processes. Exceptions include:

- Electromagnetic brakes, which may be used for emergency braking. This also includes rapid brake applications initiated by the driver.
- The use of eddy current brakes which affect the infrastructure is only possible following additional local inspections or a route upgrade. Route-specific compatibility with track-release systems must be assured (unsuitable axle counters can be permanently damaged or destroyed) and the permanent way upgraded accordingly.

More detailed documents exist for BLS Netz AG which set out specific Swiss characteristics supplementing the provisions of CLC/TS 50238-x. These are:

- SBB Regulation J78 on parasitic currents and
- SBB Regulation J84 on magnet interference.

All rolling stock with electronic equipment on board (and in particular static convertors with output of 500 W or higher) must be able to prove compliance for all parts of that equipment with EN 50238, R I-50097 and R I-50098. Depending on the vehicle and the operational concept, proof of compliance obtained abroad on a 15 kV/16.7 Hz system (and, as necessary, 25 kV/50 Hz for certain of SBB Infrastructure’s cross-border routes) may also be presented for EN 50238 parts. Details of any CLC/TS 50238 parts that are not yet complete are contained in in R I-50097 und R I-50098.

2.7.7 Communication devices

Approved GSM-R devices equipped with Swiss GSM-R SIM cards may be used in Switzerland

2.7.8 Brakes

The electric or electrodynamic brakes may explicitly also be used for rapid brake application on the SBB Infrastructure track network. Where electric brakes are used, it must be ensured if they fail that rapid braking is continued automatically and reliably (e.g. failure of the external power supply).

The use of eddy-current brakes or other brake systems that operate independently of the friction between the wheel and the rail is not permitted on the SBB Infrastructure track network for service and emergency brakes.

Exceptions

- Electromagnetic rail brakes may be used for emergency braking. This also includes rapid brakes that are triggered either by reducing the pressure of the main brake pipe in accordance with UIC leaflet 541-06 (with the corresponding speed thresholds) and/or via direct manual operation.
• The use of eddy current brakes which act on the infrastructure is only possible following additional local inspections or a route upgrade. Route-specific compatibility with track-release systems must be demonstrated (axle systems which are not intended for this purpose could suffer permanent damage) and the permanent way must be approved for their use.

2.7.9 Sanding (greater adhesion)
Equipment which automatically dispenses sand if the driver initiates emergency or rapid braking is not permitted and must be deactivated for rail operations within Switzerland. Sanding by single traction units of up to four axles, including multiple unit control, is not permitted on SBB Infrastructure’s rail network when travelling at less than 40 km/h. (Exceptions are emergencies in order, for example, to avoid passing a signal at danger or to prevent a collision)

2.7.10 Aerodynamics
In order to ensure safe operation when affected by side winds, the standard vehicle wind characteristic curves in accordance with DB Netz AG’s Guideline (RiL) 80704 (section 807.0413) must be adhered to when travelling at every speed over 140 km/h to the vehicle’s maximum speed. As far as is known today, this guideline covers all parts of the SBB network which are critical as regards side wind, in particular the Mattstetten–Rothrist high-speed line (NBS). A special risk assessment should be submitted if the standard wind characteristic curves cannot be adhered to.

2.7.11 Negotiating curves at high speed
For negotiating curves at speeds above the R series (tilting trains, passive tilt mechanisms), a route-specific licence for the higher speed is required for each route travelled in addition to the general vehicle licence (operating permit with R series licence). Further details on licensing requirements and procedures can be found in Document R I-20019.

2.7.12 Intervention (rescue/rerail of trains)
Before commercial commissioning of newly registered vehicle types, Intervention (Infrastruktur Betrieb, Intervention Frutigen, kommando.LBS@bls.ch) has to be informed with technical documentations in accordance with R I-50131 (Operational intervention requirements governing the registration of new rail vehicles) for the purpose of towing. If necessary RU (or the manufacturer) instructs the necessary specific vehicle information.

2.7.13 Energy measurement (with energy measurement systems)
The specifications concerning energy measurement systems for calculating actual power consumption according to RailNAO are defined in Annex 2.7.13 to the NWS. If the railway undertaking renounces the use of energy measurement systems for measuring power consumption, invoices will be based on the flat-rate fees published in the List of Services.

2.7.14 Requesting a new vehicle type
Before a new vehicle or one that has undergone technical modifications is introduced on the SBB Infrastructure network, a vehicle type must be assigned to it. This is used as the basis for the driving time calculations for train path planning and other operational systems, as well as for train path price calculation. The driving dynamics values must be submitted to SBB Infrastructure for this purpose. For further information, please contact zlr@sbb.ch.

2.7.15 Emergency brake neutralisation and toilet systems
Prevention of stopping in the event of emergencies in tunnels and channels and on bridges (e.g. emergency brake neutralisation), as well as closed toilet systems, are not
generally required. However, they are compulsory for some specific infrastructure according to section 3.4.1.

2.7.16 Use of measuring vehicles by the RU
Measuring vehicles, such as commercially operated vehicles fitted with an On-Board Monitoring (OBM) system, which are used by RUs on the BLS network and which measure and record data about the permanent way, may only operate after consultation with BLS Infrastructure and after signing a confidentiality agreement (incl. stating the purpose of such measuring). The contact address can be found in the address list. The data gathered should be used in accordance with the provisions set out in Point 3.3. Otherwise, permanent way measuring systems installed in the vehicle must be switched off.

2.8 Staff acceptance
The BAV is responsible for approving staff. The provisions contained in Regulations (EU) No. 1158/2010 and No. 1169/2010 apply. All application documents must be submitted to the FOT.

2.9 Data provision
The railway undertakings must provide the infrastructure manager with train data in order to facilitate the provision of various infrastructure services (including timetable planning, train control, customer information and intervention) for a properly functioning railway system, as well as to ensure that train path prices are calculated fairly (basic price by wear and rail power consumption). The associated provisions are defined in Annex 2.9 to the NWS.

2.10 Service vehicles
Owing to their use on work sites (construction service), certain railway vehicles are classed as “rail-bound construction and maintenance machines” (for construction, maintenance and inspection of the trackbed, substructures, engineering works and overhead contact line systems, self-driving or towed) in accordance with Article 57 of the Railways Ordinance and the FOT directive on the approval of rolling stock as service vehicles. These include, according to Art. 57.1 of the Implementing Provisions to the Railways Ordinance (Definition and categorisation of service vehicles):

- [1] Rail-bound vehicles (or machines) according to EN 14033
- [2] Road/rail vehicles (or machines) according to EN 15746
- [3] Demountable machines according to EN 15955
- [4] Trailers according to EN 15954

The following are classed as working equipment (not service vehicles):
- [5] Portable machines and trolleys according to EN 13977

For the area of application “Driving and working on railway infrastructures”, service vehicles [1]–[4] also require an operating licence from the BAV as a prerequisite to use on the SBB Infrastructure track network. Here, simplifications to conventional railway vehicles are possible under certain circumstances in accordance with Art. 57.2 of the Implementing Provisions to the Railways Ordinance.

In addition to the FOT operating licence, road/rail vehicles [2], demountable machines [3] and trailers [4] require a work permit from BLS Netz AG in accordance with Regulation I-40036 (work permits for service vehicles). The use of unbraked service vehicles is
prohibited regardless of the gradient. This applies in particular to trailers [4], which may only be used with automatic brakes.

Service vehicles which cannot meet the technical network access conditions (infrastructure requirements) (e.g. road/rail vehicles), or for which the infrastructure requirements have not been fully examined, are classed as special vehicles under the train service regulations (TSR) (see I-30111, Chapter 4.2, Clause 4 as a supplement to TSR R 300.4, Clauses 2.2.4 and 2.3.7) and are subject to specific conditions of use. If service vehicles are used for commercial shunting and train operations in centralised areas, the same infrastructure requirements must be met as for conventional railway vehicles.
3 INFRASTRUCTURE

3.1 Introduction

Chapter 3 of the NWS describes the infrastructure of the BLS Netz AG track network.

The BLS Netz AG, SBB and SOB Infrastructure track networks are organised in accordance with the valid train-path allocation regulations (Art. 17 IP-RailO).

According to Art. 62 EBG and in analogy to EU practice, infrastructure is defined as meaning all resources (including staff and installations) that need to be available and in working order for train services to operate. This primarily includes the infrastructure capacity (train paths) and installations that facilitate access to the rail system such as platforms, including their access routes. The term “infrastructure” covers both capacity management and operations.

Power supply installations are also part of infrastructure.

Picture 4 – Railway station Goppenstein

3.1.1 Change of use process safety

BLS Infrastructure reserves the right to initiate a change of use process safety (NAeP), i. e. a risk assessment of safety-relevant concerns, questions and elements²: This is carried out as standard on the basis of a new service request (request/order for a new train path by an RU/applicant) or other triggering criteria in order to identify any newly emerging safety shortfalls (e.g. insufficient platform lengths, missing departure blocking devices, missing stop boards, insufficient flank protection measures, etc. RUs are requested by BLS Infrastructure to always complete a “Basic information on the RU” form. To simplify the form-filling process, the most common vehicle types used in passenger traffic are preselected in a vehicle matrix The following criteria are applied (list not necessarily conclusive):

Passenger trains:
The NAeP focuses primarily on systematic changes to or increases in the frequency of the service offer or on extensive changes to the rolling stock to be used in the medium term (planning horizon ≤ 6 years). BLS Infrastructure thus requires detailed basic information at an early stage. This includes rolling stock lengths and types, cycles and information on train personnel as well as forwarding. As previously, the NAeP is also used for individual scheduled or special extra trains, e.g. during peak hours, to which additional coaches/modules are attached or which operate during at least one timetable year with different rolling stock. Other major trigger criteria are changes in stops, stations with new train turn-arounds and new crossing points/overtaking points.

Freight trains:
If system/catalogue paths or shunting processes at stations are fundamentally modified or routes/service points have freight paths (re)assigned to them. If the NAeP is conducted, the RU should expect to receive a response in no less than thirty days.

If safety-relevant infrastructure measures are identified, SBB Infrastructure clarifies whether the RU can compensate for these through organisational measures. If not, SBB Infrastructure reserves the right to only approve the service request after relevant infrastructure upgrades have been implemented or to reject it on the grounds of insufficient project funds.

The majority of the safety-relevant infrastructure elements are based on the Implementing Provisions for the Railways Ordinance (AB-EBV), with which all RUs and IMs are obliged to comply.

3.1.2 Exceptional use of infrastructure
The RU shall notify the IM of the exceptional use of infrastructure (e.g. major events, exceptionally high frequency of services, a large number of visitors/private individuals near the track, etc.) as early as possible so that the necessary safety measures may be organised.
3.2 Extent of networks

3.2.1 Border crossings / adjoining networks
BLS Netz AG does not border on any foreign infrastructures, and in Switzerland borders mostly on the infrastructure of Swiss Federal Railways (SBB) AG. Below is a list of the bordering networks (IMs):

<table>
<thead>
<tr>
<th>Station (proprietary boundary)</th>
<th>Bordering network (standard gauge)</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bern</td>
<td>SBB</td>
<td><a href="http://www.sbb.ch">www.sbb.ch</a></td>
</tr>
<tr>
<td>Brig (Brig Lötschberg)</td>
<td>SBB</td>
<td><a href="http://www.sbb.ch">www.sbb.ch</a></td>
</tr>
<tr>
<td>Burgdorf</td>
<td>SBB</td>
<td><a href="http://www.sbb.ch">www.sbb.ch</a></td>
</tr>
<tr>
<td>Ins</td>
<td>ASM</td>
<td><a href="http://www.asmobil.ch">www.asmobil.ch</a></td>
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<tr>
<td>Ins</td>
<td>TPF</td>
<td><a href="http://www.tpf.ch">www.tpf.ch</a></td>
</tr>
<tr>
<td>Interlaken Ost</td>
<td>BOB</td>
<td><a href="http://www.jungfrau.ch">www.jungfrau.ch</a></td>
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<tr>
<td>Interlaken Ost</td>
<td>ZB</td>
<td><a href="http://www.zentralbahn.ch">www.zentralbahn.ch</a></td>
</tr>
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<td>SBB</td>
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<td>SBB</td>
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<td>SBB</td>
<td><a href="http://www.sbb.ch">www.sbb.ch</a></td>
</tr>
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<td>SBB</td>
<td><a href="http://www.sbb.ch">www.sbb.ch</a></td>
</tr>
<tr>
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<td>SBB</td>
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<td>SBB</td>
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<tr>
<td>Solothurn West</td>
<td>SBB</td>
<td><a href="http://www.sbb.ch">www.sbb.ch</a></td>
</tr>
<tr>
<td>Thun (Thun Abzweigung)</td>
<td>SBB</td>
<td><a href="http://www.sbb.ch">www.sbb.ch</a></td>
</tr>
<tr>
<td>Thun (Thun Schadau)</td>
<td>SBB</td>
<td><a href="http://www.sbb.ch">www.sbb.ch</a></td>
</tr>
<tr>
<td>Visp (St. German)</td>
<td>SBB</td>
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</tr>
<tr>
<td>Wolhusen</td>
<td>SBB</td>
<td><a href="http://www.sbb.ch">www.sbb.ch</a></td>
</tr>
<tr>
<td>Zweisimmen</td>
<td>MOB</td>
<td><a href="http://www.mob.ch">www.mob.ch</a></td>
</tr>
</tbody>
</table>

Table 4 – Adjoining networks

3.2.2 More detailed information
More detailed information on the scope of infrastructure can be found in the following documents:


3.3 Network description
BLS Netz AG maintains a standard gauge track network of around 420 km. The network stretches from Lake Neuchâtel to Brig and from the Jura via Emmental into the Lucerne hinterland. The main corridor runs from Thun to Brig through the 34.6 km-long Lötschberg base tunnel and the 14.6 km-long Lötschberg summit tunnel. The network also covers the following routes: Spiez – Interlaken Ost, Spiez – Zweisimmen, Thun – Burgdorf, Burgdorf – Langnau, Burgdorf – Solothurn, Solothurn – Moutier, Moutier – Lengnau, Langenthal – Wolhusen, Ramsei – Sumiswald-Grünen, Bern – Belp –
3.3.1 Geographical description

3.3.1.1 Track typologies
There are no separate tracks for passenger and freight services. The transit route from Thun via Kandersteg to Brig is double-track throughout. The route through the Lötschberg base tunnel is also double-track, with the exception of a 20 kilometre-long single-track section. The rest of the BLS Netz AG network is generally single-track with double-track sections. Detailed information on the BLS network can be found in the Appendices.

3.3.1.2 Track gauge / curve radii
The track gauge is 1,435mm. Curve radii are designed to be as minimal as possible:
- Main track: Rmin = 150m
- Shunting track: Rmin = 135m
- Siding track: Rmin = 80m or 35m

The minimum radius that interoperable vehicles must be able to traverse in accordance with the TSI is Rmin = 150m. However, this is not sufficient for unrestricted operation on BLS Infrastructure’s rail network. If rail vehicles are also to be able to travel on shunting track and older rail systems without any restrictions, the curve radius requirements in accordance with I-50007 must also be met.

Industrial and private sidings are governed by separate rules. Details of deviations on specific routes are provided in the route database. See also UIC leaflet 502-2 “Exceptional consignments – Outline procedure”

3.3.1.3 Stations
Details of BLS Netz AG stations can be found in the database of operating points in Appendix 7.9.

3.3.2 Technical data
You will find technical data on the BLS network and Terms of Use in Regulations R I-30111 (AB FDV), R I-30121 (Local Train and Shunting Movement Regulations) and R I-30131 (RADN), which can be obtained from the Swiss Public Transport Association (www.voev.ch), or from the Swiss Association of Road and Transport Professionals (www.vss.ch), and in the route database in Link 4. A diagrammatic map with numbers marking the various modules forms part of the BAV’s track access guideline (German).

3.3.2.1 Loading gauge
Unlimited-use vehicles:
- Upper area: max. EBV O1 (including UIC G1)
- Lower area: in accordance with UIC Leaflet 505-1
- Calculation rules (calculation of vehicle construction gauge) associated with the reference line: in accordance with UIC Leaflet 505-1

Vehicles designed for use on specific routes (especially double-deck cars):
- Upper area: max. EBV O2
- Lower area: in accordance with UIC Leaflet 505-1
- Calculation rules (calculation of vehicle construction gauge): in accordance with UIC Leaflet 505-1 (for vehicles running exclusively in Switzerland: in accordance with EBV special regulation).

Please note: the calculation of vehicle construction gauge in accordance with EN 15273-2 (with Austria variant for CH) corresponds to the vehicle construction gauge calculation in UIC 505-1.
Intermodal transport:
- Route code for the Gotthard corridor: C60/384 – P60/384 – NT50/375
- Route code for the Basel – Lötschberg – Brig – Domodossola (SIM) corridor: C80/405 – P80/405 – NT70/396

Pantographs:
- Pan head width 1450 mm, insulated end horns, envelope: in accordance with UIC Leaflet 608
- Profile certification for pantographs in accordance with EN 15273-2, UIC 505-1
- Exception for historic vehicles: pan head with 1320 mm authorised.

Technical aspects of track access with regard to the loading gauge are described in detail in Regulation R I-20030 (Technical Aspects of Track Access: The Vehicle Clearance Line – The Impact of the Loading Gauge on Vehicles and their Loads). Details of restrictions to specific routes are provided under Link 4 (route database).

3.3.2.2 Route classes
The standard route category is D4. All further information can be found in the route database and in chapter 5.1 section 4.2 of I-30111

3.3.2.3 Inclines and gradients
The gradient columns in I-30131 RADN list the critical descents and ascents for each route section.
Chapter 5.3 section 3 of I-30111 lists the routes with steep descents – classified as category A or B – on which special provisions according to the train service regulations apply.

3.3.2.4 Maximum authorised speed
The maximum speed depends on the route section and the brake ratio of the train. It can be found in I-30111, or in the DMI for ETCS Level 2 routes. The scope for operational speed restrictions, e.g. due to transportation of dangerous goods, remains reserved.

3.3.2.5 Maximum train lengths
The maximum train lengths are specified in chapter 5.1 sections 6.1 and 6.2 of I-30111.

3.3.2.6 Power supply
The power system is 15 kV/16.7 Hz; voltage and frequency tolerances comply with European standard EN 50163.

3.3.3 Signalling systems and en route communications

3.3.3.1 Signalling systems
On the BLS Infrastructure network, the L and N signal systems are used for train journeys with trackside signalling.

The ETCS Level 2 system is used with cab signalling.

SIM trains should abide by signals for piggyback trains on the Frutigen – Kandersteg – Brig – SBB – Domodossola routes.

3.3.3.2 Train assignment system
BLS Netz AG has used the Rail Control System (RCS) for train assignment since 2009
3.3.3.3 Route communications
A diagram of en route communications on the BLS Netz AG network can be found in Appendix 7.6 (line connection).

3.3.3.3.1 Coverage
The current status of the GSM-R train radio provision is published in the SBB Telecom rollout plan.

3.3.3.3.2 Recording voice communications
Voice communications during train traffic management on the BLS Netz AG network are recorded. These recordings allow reconstruction of the chain of communication related to an incident leading to an accident or a dangerous situation.

3.3.3.4 Train control systems

3.3.3.4.1 Trackside signalling
On the BLS network, the Automatic Train Protection systems SIGNUM and ZUB or ETCS Level 1 LS are used with trackside signalling.

The signal positions (warning and stop signals) and speed monitoring shall be transmitted to the vehicle from the Eurobalise/Euroloop via the following transmission paths:

- Packet 44 to the ETM antenna of the ETM-S (SIGNUM system) or to the ETM antenna of the ETM-M or ZUB 262 (SIGNUM and ZUB system) (ETCS Level 0)
- ETCS telegram to the ETCS antenna of a vehicle equipped with an ETCS system according to Baseline 3 (ETCS Level 1 Limited Supervision)

3.4 Traffic restrictions
All running restrictions in force on BLS's infrastructure as set out in the local regulations on general and shunting movements (R I-30121) are reserved. The key points are as follows.

3.4.1 Specialised infrastructure
No restriction on use has been imposed under Art. 24 of EU Directive 2001/14.

3.4.1.1 SIM (Simplon-Inter-Modal)
The SIM corridor includes the Basel – Lötschberg – Domodossola route and permits the carriage of loads with a maximum clearance profile of P80/405 – C80/405 – NT70/396.

More detailed information, including accepted SIM routes, can be found in R I-30111(AB-FDV) section 5.1.

3.4.2 Environmental restrictions
Vehicles must be compatible with environmental protection requirements.

3.4.3 Dangerous goods
For restrictions in stations and at operating points, see I-30121.
3.4.4 **Tunnel restrictions**
Steam locomotives may not use the Frutigen – Kandersteg – Brig (Lötschberg tunnel), Frutigen – Visp (Lötschberg base tunnel), Oberdorf – Gänsgrenz (Weissenstein tunnel) and Grenchen Nord – Moutier (Grenchenberg tunnel) routes.

Diesel power may only be used on the Frutigen – Kandersteg – Brig (Lötschberg tunnel), Frutigen – Visp (Lötschberg base tunnel), Oberdorf – Gänsgrenz (Weissenstein tunnel) and Grenchen Nord – Moutier (Grenchenberg tunnel) routes with an assisting electric locomotive.

Exception: the use of diesel motive power is authorised for motive power units normally used for shunting services, for Infrastructure maintenance service vehicles, for assistance services and for Infrastructure test runs.

Other exceptions and restrictions can be found in [R I-30121](#) (Local Train and Shunting Movement Regulations).

3.4.5 **Bridge restrictions**
Running restrictions on bridges can be found in [R I-30121](#).

3.4.6 **Lavatory systems**
Only vehicles with controlled emission toilet systems are permitted on routes with specific track access conditions (Rail 2000 route Mattstetten-Rothrist, GBT, LBT), see also [Link](#).

3.5 **Availability of Infrastructure**

3.5.1 **Route opening times**
Article 6 RailNAO-FOT specifies the following:

1. *The normal operating hours for a route shall be deemed to be the time period between the first and last passenger train listed in the official timetable publication.*

2. *From Monday to Friday, routes suitable for freight operations should generally be open from 4.00 a.m. onwards.*

3. *The routes specified in Appendix 4 (BL: Thun – Brig) shall in principle be open 24 hours a day.*

The legally defined route opening times (see above) will only be announced after train path allocation for the 2016/2017 timetable and will be published online as of November 2016 ([www.onestop-shop.ch](http://www.onestop-shop.ch)).

3.5.2 **Capacity restrictions**
BLS Infrastructure bundles several maintenance activities together within one interval. Detailed information on capacity limitations is provided in good time in accordance with the FOT guidelines on route closures according to Art. 11b of the Rail Network Access Ordinance (Rail-NAO).

3.5.3 **Fixed maintenance windows**
Engineering periods for maintenance on LBS (Frutigen – Ferden – Visp)
The following engineering periods are planned throughout the timetable period:

- **Sunday nights:** complete closure, 21.45-05.45
- **Monday nights:** integrated single-track operation, 20.45-05.00
- **Tuesday to Friday/Saturday 2 weeks in January and two weeks in December, 21.00-05.00**
- **LBT Lötschberg Base Tunnel**
  4 Nights Saturday/Sunday + Monday/Tuesday – Wednesday/Thursday complete closure 23:45 – 05:00 (rail milling)
Engineering periods for SIM maintenance (Frutigen – Kandersteg – Brig)
- Saturday nights: complete closure for SIM trains, 20.00-06.00

Precise times of engineering periods will be communicated to the RU in accordance with the process described in section 4.5 below (regular mailing of the rail replacement [BES] list).

For usage restrictions due to infrastructure upgrades, maintenance and expansion, see section 4.5. Specific usage restrictions may arise due to conditions imposed by planning approval ordinances issued by the relevant licensing authority.

3.6 Service facilities
This section describes locations and details of the service facilities operated by BLS Netz AG.

3.6.1 Passenger stations
A list of all stations open for passenger services can be found in the database of operating points (Appendix 7.9).

Platform lengths at passenger stations are also listed in Appendix 7.9.

The RU is obliged to use only rolling stock that is compatible with stations (in terms of platform height). Train length should not exceed the length of the platform. Vehicles on which the doors can be locked from a central point away from the platform are also acceptable.

If the RU does operate inappropriate formations, it is responsible for meeting the additional requirements necessary to maintain the required standard of passenger safety and comfort at its own expense. The RU is also responsible for bearing any costs for required measures even if, at the time that train paths were allocated / ordered, exceptions were agreed with regard to restrictions because of platform height or length.

Recommended operational measures in the event of inadequate usable platform length can be found in section 2.4.4.1.

BLS Netz AG is not liable for damages if the formations concerned are incompatible with a particular station. The state of the installations at the time of train path allocation shall prevail.

3.6.2 Cargo handling and terminals for combined traffic
A map of loading platform facilities is published at www.railway.tools.

3.6.3 Marshalling yards
The BLS Netz AG doesn’t operate marshalling yards

3.6.4 Sidings and systems for preparation, supply and disposal
Some sidings have systems that fall under the ancillary services that are to be offered without discrimination according to Article 22 RailNAO. These include preliminary braking systems, the provision of water and power to passenger trains (pre-heating/pre-cooling) and the disposal of waste, sewage and used water. The precise locations of these facilities can be obtained from the relevant point of contact shown in the list of addresses.

Where trains or wagons are stabled with dangerous goods, the provisions of section 2.6 must be complied with.

3.6.5 Maintenance facilities
BLS Infrastruktur, does not operate their own maintenance facilities.
3.6.6 Wayside train monitoring systems
BLS NETZ AG Infrastructure has installed various wayside train monitoring systems (WTMS) across its network that are used to monitor the technical condition of rolling stock and loading (see ZKE handbook (I-50099 and I-30111, section 9.11). In the event that intervention thresholds are exceeded, BLS NETZ AG Operations will intervene as per BLS NETZ AG’s operating regulations.

Wayside train monitoring systems consist of various sensor and surveillance systems, reliably detecting technical problems on trains and facilitating the necessary response (e.g. halting trains or reducing speeds) by providing immediate, location-independent data analysis. A dense and comprehensive network of static track-mounted measuring equipment checks relevant physical characteristics of trains as they pass at scheduled section speed. Response stations are fitted with the necessary reporting systems. The following measuring systems are distributed throughout the BLS NETZ AG network to enhance safety:

- Clearance profile and antenna detectors
  Detects clearance infringements and gauge limits being exceeded and the aerials of vehicles on piggyback trains coming into contact with the catenary.

- Fire and chemical detectors
  Detects fire gases and escaping hydrocarbons or hazardous materials.

- Wheel load check points
  Detect load displacement, overloading and serious wheel defects.

- Hot axle box and blocked brake detectors
  Report the temperature of axle bearings, wheel rims and brake discs, making it possible to prevent derailments as a result of axle and wheel failures.

- Dragging equipment detection
  Detects dragging parts of vehicles and loads.

- Uplift measurement
  Detects impermissible upward force of the current collector.

SBB’s train monitoring facility (IZ-ZKE) in Erstfeld coordinates operations for SBB and BLS in an alarm situation.

3.6.7 Inland port facilities
Hafenbahn Schweiz AG operates port facilities in Basel Kleinhüningen and Birsfelden. You can find more detailed information on the website of Hafenbahn Schweiz AG.

3.6.8 Relief facilities
BLS Netz AG has a fire-fighting and rescue train in Frutigen. These trains are also authorised to travel on foreign networks in order to provide assistance.

3.6.9 Refuelling facilities
For information on the services and conditions of access for tank facilities, please contact the centre of excellence for fuel tank facilities (KPZ TTA): kpz-tta@sbb.ch
3.7 Service facilities

In Switzerland, in accordance with Art. 6 of the Freight Transport Ordinance (GüTV), access to intermodal transshipment facilities, port installations and sidings jointly financed by the federal government must be granted without discrimination. For their part, third-party providers of service facilities in EU member states are, in accordance with EU Implementation Order 2017/2177, also obliged to provide their services without discrimination. RNE has created a corresponding document which is similar to the common structure of the NWS and enables third-party providers to present and publish the access, usage and allocation conditions.

The template is divided into six sections:

1. General information
2. Services offered
3. Detailed description of the facility
4. Fees
5. Access conditions
6. Capacity allocation

The RNE document template can be accessed at rne.eu/network-statements. Search term: Common Template for Service Facilities. The European Rail Facilities Portal is available either as an alternative or as a supplementary way of publicising these services.

3.8 Information on future upgrades

- BLS Netz AG is expanding its network to cater for Bern and Central Switzerland S-Bahn services (new double-track sections, station renovations, crossing places, platform lengthening, signalling upgrades, etc.).
- Adaptations to comply with the provisions of the Swiss Equal Opportunities for People with Disabilities Act (“BehiG”)

Detailed information about individual construction projects can be found on the BLS Netz AG website under "Building projects".

The BAV published information on the further development of its ETCS strategy on 14 November 2014 (Link in German).
4 CAPACITY ALLOCATION

4.1 Introduction

4.1.1 Purpose of these provisions
This 4th chapter, compiled by Trasse Schweiz AG (trasse.ch), explains the processes and provisions for ordering and allocating timetabled train paths (basic and ancillary services), as well as the steps which need to be taken before and after the allocation procedure, and cites the relevant regulations. These are mandatory and apply to all applicants.

Ordering and allocating catalogued corridor train paths is carried out in accordance with the procedures and provisions for freight traffic corridors Rhine–Alpine or North Sea–Mediterranean. Details can be found in chapter 4 of the relevant corridor information documents, published on the corresponding websites of the corridor organisations (www.corridor-rhine-alpine.eu, www.rfc2.eu).

4.1.2 Legal basis
The definitive legal requirements for ordering and allocating train paths and ancillary services can be found in the Railways Act (EBG; especially Articles 9a and 9b), in the Rail Network Access Ordinance (NZV; particularly section 4) and in the Federal Office of Transport’s Ordinance to the Rail Network Access Ordinance (NZV-BAV). This list is by no means exhaustive.

The deadlines for ordering train paths and ancillary services are defined and published by the Federal Office of Transport (BAV) for the coming two-year timetable period.

4.1.3 The requirement to order train paths
The SBB (cf. Section 1.1), BLS and SOB rail networks may only be used if the appropriate train paths have been ordered and allocated. In order to ensure coordination with other rail traffic movements, this also applies to the infrastructure managers themselves if they are intending to use their own networks for their own operations (e. g. special service vehicles) or have their own needs to use parts of the network (e. g. the need to park vehicles in marshalling yards).

The requirement for train paths to be ordered is irrespective of the frequency and regularity of the intended network usage. Both regular-service train paths (for regular movements) and special train paths (for one-off movements) must be ordered.

4.1.4 Permits and documents required for train path orders
It is not absolutely essential for a track access permit (see section 2.2.3), a safety certificate (see section 2.2.4) and a track access agreement (section 2.3.2) to have been issued before a train path is applied for and allocated. At least one month before commencing operations, the applicant must either submit a track access permit or instruct a railway company to carry out the rail movements. The safety certificate must have been issued at the very latest by the time rail operations commence (Art. 9a para. 4 EBG).

Applicants who, at the time they apply for a train path, have not yet concluded a track access agreement with the relevant infrastructure manager are requested by trasse.ch to confirm in writing within five (5) working days that they acknowledge and accept the network access conditions set out in this Network Statement, especially the prices (chapter 6). Without this written confirmation, trasse.ch will not process the train path request.

If an applicant is not able to use a train path which has been definitively ordered and firmly allocated because the track access permit, the safety certificate or the track access agreement have not been issued in time or because the name of the rail company instructed to carry out the rail movements on the applicant’s behalf is not known, then the applicant will be liable to pay compensation as laid down in the infrastructure managers’ current service provision catalogues.
4.1.5 **Geographical areas to which these provisions apply**
In addition to the networks listed in section 1.1 – and on the basis of treaties or bilateral agreements between the infrastructure managers and subject to the relevant foreign legislation – these provisions apply to the routes between the border in the Simplon tunnel and Domodossola, from Pino-Confin to Luino, from Les Verrières-Frontière to Pontarlier and from Boncourt to Delle. However, these provisions do not apply to the SBB routes from Vallorbe to the border in the Mont d’Or tunnel, from Le Locle-Col-des-Roches to the border in the Col-desRoches tunnel and from La Plaine to the border. The SNCF Réseau conditions apply to these three cases. The provisions of the RFI apply to the route from Stabio to the border. For more information on train paths for cross-border routes, please see section 4.2.4.

4.2 **Process description**

4.2.1 **Overview**
Train paths can be ordered for the annual or current timetables. Figure 2 is a simplified pictorial representation of the individual phases of the train path order process and shows the sections of this chapter in which each phase is explained.

![Figure 2 – Phases of the train path order process.](image)

4.2.2 **Train path requests/orders**

4.2.2.1 **Train path studies**

**Explanatory notes**
Train path studies (timetable studies) enable applicants to examine the feasibility of new or amended service and production concepts, using an iterative process to develop them further with a view to ordering train paths for the annual or current timetables.

Requests for train path studies must be submitted to the relevant infrastructure manager via the NeTS-AVIS ordering tool or order form for train path studies (see list of addresses for contact address).

**Binding nature of train path studies**
Responses to the results of train path studies in no way constitute binding approvals for the allocation of timetabled train paths, and do not exempt the applicant from submitting train path requests in accordance with the normal ordering procedure.

**Optional monitoring of the study by trasse.ch**
In order to ensure an absence of discrimination, those requesting studies can demand that the study process be observed by trasse.ch. If they disagree with the methods used to carry out the study, the requestors can also contact trasse.ch once the studies are complete (for the relevant contact address, see the list of addresses).
4.2.2.2 Annual timetable

Requests for train paths and provisional allocation

Train paths (basic services) for the annual timetable are to be ordered from trasse.ch no later than 8 April 2019 using the NeTS-AVIS ordering tool (for international train paths, see section 4.2.4). The planning data in the NeTS-AVIS ordering tool will be partially available to applicants from 28 February 2019 in order to assist with applications.

The applicant shall ensure that its train path requests are submitted on time and in the correct format, using the prescribed ordering tool. trasse.ch cannot complete this task on behalf of the applicant under any circumstances; it can also not add any missing information or correct any incorrect details. However, trasse.ch can offer assistance with operating the ordering tool to new or inexperienced applicants, as long as they register their interest at least one month before submitting the train path requests.

If requests are incomplete or not plausible, trasse.ch will set a deadline of five (5) working days to amend or correct insufficient, missing or impermissible details. If the applicant does not meet this demand, trasse.ch will not process the train path request. If the necessary details only reach trasse.ch after the deadline, the relevant request will be processed with a lower priority than other requests submitted in full and on time.

Variant requests, i.e. applications with two or more implementation options, are not permitted because they take up unnecessary planning time and tie up track capacity. In the event of a variant request, therefore, trasse.ch will grant the party making the request a grace period of five (5) working days to decide on one order variant and withdraw the other(s). If the applicant fails to comply with this request in good time, trasse.ch will not consider the variant request.

If, by the train path request deadline, too little is still known about certain requirements for train paths to be allocated in the normal way (e.g. locomotive and tractor-hauled freight trains), it is recommended that these train paths are ordered subsequently. However, retrospectively orders are assigned a lower priority than requests submitted on time.

Applicants will receive a provisional allocation of train paths for national and for cross-border routes from trasse.ch on 1 July 2019. This gives the applicant a binding train path offer, and thus the assurance of being able to develop its production concepts. Each provisional allocation is made subject to the feasibility of the ancillary services ordered. In the event of outstanding conflicts, train paths will only be allocated once these have been resolved, but as soon as possible.

Requesting and allocating ancillary services

For the annual timetable ordered ancillary services, in particular capacities for stabling trains and using loading sidings/facilities must be ordered no later than 21 June 2019 using the “Ancillary Services Order Form”. trasse.ch will definitively allocate these additional services on 19 August 2019. In the event of outstanding conflicts, train paths will only be allocated once these have been resolved, but as soon as possible.

Formation groups in marshalling yards influence train path allocation for the related basic service. For this reason, requests to use formation groups in marshalling yards in the annual timetable must be submitted by 8 April 2019 using the NeTS-AVIS ordering tool together with requests for the basic services.

The customer service team at trasse.ch will be on hand to provide advice and support to applicants if anything is unclear (see the list of addresses for the contact address).
Submission of train path requests after the normal train path allocation deadline
Train paths for the annual timetable can still be requested after the normal deadline has passed. However, requests of this kind will be allocated a lower priority than those submitted on time and, irrespective of the type of traffic, will be processed on a first come, first served basis.

Definitive train path orders and allocation
The train paths requested (basic services) must have been definitively ordered by 12 August 2019. trasse.ch will definitively allocate the basic services on 19 August 2019.

Catalogued corridor train paths for freight traffic
Ordering and allocating catalogued corridor train paths is done in accordance with the procedures and provisions for freight traffic corridor Rhine-Alpine or North Sea-Mediterranean (www.corridor-rhine-alpine.eu, www.rfc2.eu).

4.2.2.3 Current timetable

Ordering train paths
Train paths and ancillary services can also be ordered at short notice for the current timetable year. However, orders submitted during the current timetable are given a lower priority than those ordered and allocated for the annual timetable, and can only take up remaining capacity. They will be allocated on a first come, first served basis, regardless of the traffic type involved.

Train paths for the current timetable year are to be requested using the NeTS-AVIS ordering tool (for international train path requests, see section 4.2.4). Infrastructure managers are bound to their offer for five (5) working days. If the offer is not accepted within this period, it will be deemed to have been refused by the applicant.

Catalogued corridor train paths for freight traffic
Ordering and allocating catalogued corridor train paths is done in accordance with the procedures and provisions for freight traffic corridor Rhine-Alpine or North Sea-Mediterranean (www.corridor-rhine-alpine.eu, www.rfc2.eu).

4.2.3 Train path catalogues

4.2.3.1 National train path catalogue
For freight traffic on the north-south Gotthard and Lötschberg-Simplon corridors, train path catalogues – as defined in EU Directive 2012/34 (Art. 40 para. 5 and Annex VII, section 4) – are available as an ordering aid when submitting train path requests and for service planning.

Annual timetable process
The train path catalogues will be posted from the middle of January on the trasse.ch website (keyword: Services/Usage of train paths «Path catalogue Gotthard/Lötschberg») and will show the train paths available for transalpine freight traffic in the forthcoming annual timetable. The times specified in the train path catalogues for border stops and shift changes should be taken into account when requesting train paths. Orders for border stops that exceed the guideline times are possible but will put an excessive strain on the capacity of the nodal point.

Remaining capacity in the current timetable
The train path catalogues published on the trasse.ch website (keyword: Services/Usage of train paths «Remaining capacity Gotthard/Lötschberg») show the remaining capacity available in the current timetable. They are to be used as a planning aid for train path orders in the current
timetable. Updates are usually published at the annual timetable update intervals coordinated internationally in each case.

4.2.3.2 Catalogued train paths for freight traffic corridors
The OSSs for the freight traffic corridors Rhine-Alpine and North Sea-Mediterranean publish the catalogued corridor train paths in the Path Coordination System (PCS) ordering tool. Unlike catalogued national train paths, catalogued corridor train paths cannot be varied, i.e. train path requests must adhere strictly to the published train path parameters. The choice of proposed operating points for the catalogued corridor train paths (known as Flex-PaPs) specially designated for this purpose is the only exception. These can be reduced by the applicant if they are not required.

Further details can be found in the relevant corridor information documents published on the corresponding websites of the corridor organisations (www.corridor-rhine-alpine.eu, www.rfc2.eu).

4.2.4 Train paths for cross-border services (does not apply to catalogued corridor train paths)
Ordering formalities
Train paths for cross-border services (except for catalogued corridor train paths) can either be applied for from the relevant national train path allocation bodies or from the OSS network operated by the infrastructure managers and independent train path allocation bodies affiliated to RailNetEurope (RNE). The OSS network allows applicants to use the PCS ordering tool to submit their harmonised requests for the entire international route to a single train path allocation body affiliated to the network. Details of the train path request and allocation procedures for cross-border traffic can be found in the “Procedures for International Train Path Requests” guideline (see www.rne.eu; keyword Timetabling).

When crossing over to networks operated by non-Swiss infrastructure managers, orders should be submitted as detailed on the trasse.ch website (Search term: “regulations at border stations” for services/usage of train paths).

Note
Formal allocation of train paths takes place in accordance with the relevant national provisions.

4.2.5 Information required for train path requests and orders
Annual and current timetables
Compulsory fields as specified in the ordering tools:
- Applicant’s name
- Cross-border services: name(s) of the foreign partner applicants
- Name of the RU instructed to carry out the rail movement (if already known, cf. section 4.1.4)
- Accounting code (if available, cf. section 2.3.2.1)
- Train number (if known) or train path catalogue number
- Traffic period (days and periods of travel)
- Traffic type/train category
- Departure point of the requested train path including departure time; if not the same as the train run, plus the departure station including departure time
- Destination point of the requested train path including arrival time; if not the same as the train run, plus the destination station including arrival time
- Border crossings, including requested handover time(s)
- Routing (at least 1 operating point per transit country for international services)
Intermediate stops, including details of time required (with additional information about, for example, change of system, removal of a wagon group, increase/decrease in motive power, change of locomotive crew, etc.)

Train characteristics:
- Formation, diesel/electric locomotive(s) (including type), wagon/coach type
- Gross weight
- Train length including locomotives
- Loading gauge for intermodal train paths
- Train and brake sequence (with braked weight percentage)
- Top speed

Further information on nationally requested train paths for cross-border train journeys: from train ... (incl. train relation “from/to”) / for train ... (incl. train relation “from/to”)

Additional information for train paths for light engine trains: from train … (incl. train relation)/ for train … (incl. train relation)

- ETCS
- SMS-RU (the RU responsible for the safety management system)

Ancillary services (sidings and formation groups in marshalling yards)
Compulsory fields as specified in the ordering tools and order forms.
- Applicant’s name
- Accounting code (if available, cf. section 2.3.2.1)
- Name of the RU instructed to carry out the rail movement (if already known, cf. section 4.1.4)
- Train number (if known)
- Traffic data
- Operating point
- Arrival time at operating point
- Departure time from operating point
- Composition (motive power unit[s], diesel/electric, number of wagons/coaches, type, length in metres)
- Special platform requirements (details of platform number or loading platform including time period from … to …)

Special regulations for test runs
For test runs that are not performed in accordance with the existing specifications, the special regulations of SBB Infrastructure (I-30023), BLS Netz AG or SOB Infrastructure and the implementing provisions for test runs according to R 300.6 section 6.1 of the train service regulations apply. The central points of contact are shown in the list of addresses.

4.2.6 Charges to train path requests and orders
The details supplied when requesting or ordering train paths (see section 4.2.5) are binding. Any subsequent change to these details must be made using the ordering tool and must be in the form of a cancellation and a new order. However, excluded are changes that have no impact on the train path allocation and therefore do not require cancellation and reordering.

Train paths may not be sold nor transferred to another company (Art. 9a para. 5 EBG). The contract under which a RU is instructed to carry out the rail movement on behalf of another company does not count as trading in train paths.
The conditions shown in the relevant corridor information documents (www.corridor-rhine-alpine.eu/www.rfc2.eu) apply to catalogued freight traffic corridor train paths Rhine-Alpine or North Sea-Mediterranean.

4.3 **Deadlines**

4.3.1 **Annual timetable**
Path assignment is normally coordinated with the timetabling process for passenger services. The BAV specifies the deadlines for the submission of train path requests, the allocation procedure and the timetabling procedure. The following deadlines apply specifically to the 2020 timetable:

- 08.04.2019 Application deadline for normal path allocation
- 21.06.2019 Deadline for ordering ancillary services
- 01.07.2019 Provisional path allocation by trasse.ch
- 12.08.2019 Deadline for definitive train path orders
- 19.08.2019 Definitive train path allocation (incl. ancillary services) by trasse.ch
- 15.12.2019 The timetable changes

The dates for the provisional allocation of train paths may vary in the event of outstanding conflicts (see also section 4.2.2.2).

4.3.2 **Current timetable**
Art. 11 para. 3 NZV states that the final deadline for train path requests is:
- 17:00 on the day before execution of single, irregular movements by RUs which have already booked other train paths on a route within the same timetable period;
- 30 days before the train is first due to run in all other cases.

4.3.2.1 **Exceptions**
For measuring trips, test runs and trips on special vehicles (e. g. Diplory) the minimum order deadline is five (5) working days.

**Order deadlines for special consignments (SC)**
- SC that do not foul the gauge Vmax ≥ 80 km/h: as per section 4.3.2
- SC that do not foul the gauge Vmax < 80 km/h: 4 days
- SC out-of-gauge Vmax ≥ 80 km/h with no other conditions of carriage *: as per section 4.3.2
- SC out-of-gauge and other conditions of carriage * or Vmax < 80 km/h: 4 days
- SC out-of-gauge as per l-50089 without notification: as per section 4.3.2
- SC out-of-gauge as per l-50089 with notification: 4 days
- SC out-of-gauge laterally: 10 days

* other conditions of carriage as per l-30111 5.1.

Changes at short notice (e. g. load shifting, missing transport plan) can only be processed for SC with order deadline as per section 4.3.2.

4.3.2.2 **Catalogued corridor train paths for freight traffic**
4.4 Allocation process

4.4.1 Coordination process

4.4.1.1 Principles

Ban on improper orders of empty slots

As a basic principle, any party making a request can determine its desired train path freely and without any restrictions. It must therefore be able to purchase the train paths required to implement its production plans or expected customer orders in good time even if it has not yet concluded any contracts with its end customers at this point in time. However, orders submitted with the sole intention of impeding a competitor and/or securing a better starting position in the path allocation process in respect of competing path orders (particularly to circumvent the applicable order of priority) are not permitted. If trasse.ch suspects empty orders of this kind that represent an abuse of rights and lack an underlying business plan, it may request that the ordering party provide additional information and documentation to demonstrate the credibility of the actual or planned traffic. If this documentation or information is not submitted in the requisite quality or at all, the path request may be completely or partially rejected.

Multiple orders for the same transport task

If it is suspected that multiple orders are being placed for traffic runs with the same transport task (e.g. in the case of ongoing tenders), trasse.ch will request information on the background to the order (customer, business plan). trasse.ch thereby takes applicants’ need for confidentiality vis-à-vis competitors into account as far as possible.

In the case of multiple orders that are communicated transparently to the applicants involved, trasse.ch aims to superimpose both requests in identical train paths. If this succeeds, the train path will be allocated to the applicant who can provide evidence of transport. If none of the applicants can provide evidence of transport by the allocation deadline, they will all receive a conditional allocation.

If the applicants involved insist on confidentiality vis-à-vis their competitors, or if the attempt to combine the various requests on a single train path fails, all requests involved, without limitation, remain in the normal process.

Obligation to participate in the coordination process

trasse.ch aims to approve as many train path requests as possible. If it receives requests for simultaneous, mutually incompatible train paths, it will instigate coordination procedures based on the NZV-BAV and (in the same vein) Art. 46 of EU Directive 2012/34. The ordering parties affected are obliged to participate in these procedures, in particular by taking part in conflict resolution negotiations and submitting the information and documentation requested by trasse.ch. If an ordering party fails to comply with its participation obligation either in whole or in part and, in so doing, hinders or prevents the performance of the coordination procedure, then it shall bear the adverse consequences. This may extend to its path request being partially or completely rejected.

Ancillary services

There is a distinction between ancillary services that are essential for the provision of a basic service and ancillary services with no direct connection to a basic service. In the case of conflicts where no mutually acceptable solution can be reached, a higher degree of flexibility is expected from those ordering ancillary services with no direct connection to a basic service.
Catalogued corridor train paths for freight traffic

4.4.1.2 Annual timetable
As part of the coordination procedure, ordering parties will, where possible, be offered alternative paths that differ from those originally requested. In the interests of optimising the use of infrastructural capacity, trasse.ch may request that each ordering party be flexible, for both passenger and freight traffic, so that additional path requests can be implemented. However, the connections along an agreed public transport and freight transport chain must be guaranteed. In the case of high-frequency passenger traffic, this applies to connections between trains running at a frequency of up to and including every half hour. In the case of trains that increase frequency from half-hourly services, the degree of flexibility expected goes above and beyond guaranteeing connections.

If in the coordination process no agreement can be reached in the coordination process, train paths will be allocated based on the terms of the EBG, the NZV and the NZV-BAV according to the following procedures:

1. Train path allocation conflict resolution on the basis of the network usage plan (NNP)
   Train paths are allocated on the basis of the NNP 2019. However, no rights or obligations can be derived from the NNP for individual transport companies, since the plan only safeguards capacity for particular types of traffic and not for individual companies.

2. Prioritisation
   If it is not possible to offer applicants any alternatives, even with the expected flexibility, or if no mutually acceptable solution to the order conflict can be reached, trasse.ch will perform the allocation in accordance with the legal requirements, giving priority to the requests which do not restrict the number and quality of train paths safeguarded in the NNP for either its own or other types of traffic.

   If the number of train path applications submitted for a particular type of traffic exceeds the provision in the NNP or if there are train path request order conflicts for which no mutually acceptable solution can be found, the following order of priority will be applied:
   a. Order conflicts involving passenger services only
      1. Requests made on the basis of a framework agreement (Art. 12c para. 2 (a) NZV).
      2. Requests for high-frequency passenger services.
      3. Trains which yield a higher contribution margin for each train path request in question.
   b. Order conflicts that do not exclusively involve train paths for passenger services.
      Requests made on the basis of a framework agreement (Art. 12c para. 2 (a) NZV).
      1. Freight trains for which, for technical reasons, in particular the critical clearance gauge, no alternatives can be offered. The onus of proof lies with the company submitting the application.
      2. Requests made on the basis of agreed transport chains for freight transport for which a year-round request is made but no possible alternatives exist. This applies to trains for which a year-round request exists, where these trains are part of connection systems in domestic wagonload freight including the express network or postal and parcel services.
      3. Requests for trains which run more than once during the timetable year, depending on how frequently they will run. The requests are divided into the following three categories, in decreasing order of priority:
         ▪ Trains which operate on an average of \( \geq 5 \) day per week each year,
         ▪ Trains which operate on an average of \( \geq 3 \) to \( < 5 \) days per week each year,
         ▪ Trains which operate on an average of \( 1 \) to \( < 3 \) days per week each year.
The number of requested train path days is taken as a measurement variable. Within each category, the requests are considered to be of equal importance. If seasonal train services reach a yearly average of less than one day of operation per week, they are compared with the actual number of days of travel ordered per timetable year.

If the order of priority described in a or b does not produce a result and if the conflicts cannot be resolved, trasse.ch will conduct a bidding process.

In the case of order conflicts relating to free capacity (remaining capacity not safeguarded by the NNP), priority is given to high-frequency passenger services (Art. 9b para 4 EBG). If the order conflict cannot be resolved on this basis, trasse.ch will conduct a bidding process.

3. Bidding process
The object of the bidding process is the individual train path for which more than one allocation request has been submitted.

trasse.ch will simultaneously inform all applicants involved of its intention to conduct a bidding process. Applicants will be requested to submit a bid by a specified deadline (date and time). The period for the submission of the bid will be four (4) working days, unless those involved in the bidding process agree on a different time limit.

If a passenger services application is involved in the bidding process, the bid must at least be equal to the contribution margin defined in Art. 20 NZV for the passenger services application for the train path in respect of which the conflict has arisen.

The train path will be awarded to the highest bidder without any further negotiations. trasse.ch will ensure that the amount to be paid is a maximum of CHF 1000 more than the second-highest bid.

If two or more identical bids are submitted, the bidding process will be continued until one bid emerges as the winner.

4. Allocations of vacant capacities
Once the conflict of the ordinary timetable procedure has been resolved (this concerns all requests for the annual timetable received up to the second Monday in April), trasse.ch can also allocate secured but vacant capacities for one type of transport to other types in the NNP.

Allocations for standard passenger services which require the vacant capacity of another type of transport need to be approved by the Swiss Federal Office of Transport (FOT) (Article 12, Paragraph 3 RailNAO). Within the meaning of this provision, passenger services are deemed to be standard if they are published in timetables and are scheduled to run between two places at the same times for at least ten (10) days a year.

4.4.1.3 Ancillary services
The applicant may specify a desired track when ordering. However, there is no entitlement to use a specific track.

A coordination process is also conducted in the event of conflicts which arise when ancillary services are ordered. If no agreement can be reached in the coordination process, ancillary services will be allocated according to the following procedure:

1. Orders for ancillary services that are essential for the provision of basic services are given priority over those that have no direct connection to basic services. In the case of orders for ancillary services with a direct connection to basic services, the ancillary services are given the same priority as the associated basic service.
2. Ancillary services which have no direct connection to a basic service are allocated in the following order:
   A. Ancillary services for requirements, for which, for technical reasons, no alternatives can be offered.
   B. Ancillary services for requirements which are used repeatedly during the timetable year, depending on the frequency of the registered requirements. The assessment is carried out in a similar way to the procedure for train path conflicts in the annual timetable.

If the order of priority described above fails to resolve an order conflict and the ancillary service cannot therefore be allocated to an ordering party, trasse.ch will conduct a bidding process. The ancillary service will be allocated to whichever applicant submits the highest bid. The winner will pay a maximum of CHF 1,000 more than the second-highest bid. trasse.ch will invoice the successful applicant directly. The bid price must also be paid even if the ancillary service allocated as a result of the bidding process is not used or is subsequently relinquished.

In the event of complex conflict situations involving multiple applicants and/or variable allocation possibilities, trasse.ch will determine the precise procedure and communicate this to the parties involved.

**Detailed regulations for standing time conflicts in freight services**
The train standing time is the time period from the train’s arrival until the start of its onward journey, during which it uses up track capacity at the hub stations. If there is insufficient capacity at a hub station to cover the requested standing times, the standing time conflicts are coordinated with the aim of finding alternative solutions under commercially acceptable conditions for all the requested services (train paths plus additional services). If no agreement can be reached, the capacity shall be allocated according to the duration of the requested standing time in the station where the conflict has occurred. The request with the shortest stopover time is the first to be taken into consideration. In the case of cross-border trains with train path and standing time conflicts, once coordination is complete, the allocation decisions for first the train paths and then the standing times are made at the border stations. trasse.ch oversees the details of the process and informs the affected applicants in the event of a conflict.

**Detailed regulations for resolution of conflicts in locomotive stabling**
As a basic principle, there is no entitlement to a specific siding. trasse.ch allocates the sidings so as to achieve the highest possible degree of capacity utilisation of the facility.

Conflicts between siding capacity orders for locomotives are coordinated in a first step. If no agreement can be reached, the following order of priority applies:
1. Locomotives in productive use;
2. Reserve locomotives;
3. Repair locomotives and other stabling requirements not directly connected to basic services.

If this order of priority does not produce a conclusive result and if the remaining conflicts cannot be resolved, trasse.ch will conduct a bidding process. If siding capacity is available for a locomotive category, but not in a sufficient quantity/quality, trasse.ch will ask all ordering parties within this category to take part in a bidding process. Bids are to be submitted for each order item. The available capacity will be allocated according to the value of the submitted bids. trasse.ch will ensure that the amount to be paid is a maximum of CHF 1000 more than the highest bid for which no allocation is granted.

**4.4.1.4 Current timetable**
Allocations for standard passenger services which require the vacant capacity of another type of transport need to be approved by the Swiss Federal Office of Transport (FOT) (Art. 12, para. 3
NZV). Within the meaning of this provision, passenger services are deemed to be standard if they are published in timetables and are scheduled to run between two places at the same times for at least ten (10) days a year.

If a train path ordered for the current in-year period conflicts with train paths which have already been allocated, the infrastructure manager will, where possible, offer alternatives. If there are no adequate alternatives or if the ordering party does not accept the alternatives offered, the infrastructure manager will consult trasse.ch. Depending on the nature of the conflict, trasse.ch will invite the affected applicant and the infrastructure manager to a conflict resolution meeting which trasse.ch will chair. In the event of a conflict, in-year train path orders will be exclusively allocated by trasse.ch; this includes rejecting applications. Orders following an offer of a train path must be received by the infrastructure at least three (3) working days before the date on which the service is to run.

For reasons of time, train path orders which affect immediate operations will be directly handled, allocated and, as appropriate, rejected by the operational services of the infrastructure manager. This affects train path orders submitted later than 8:00 on the day before the service is to be run (weekends, i.e. Saturdays and Sundays, and public holidays as per the NeTS calendar do not count as the day before or as working days). The last possible order deadline for receipt of an order by the operational services of the infrastructure manager is 90 minutes before the train's departure time. The infrastructure managers reserve the right to claim the time needed to process orders that are more complex than usual. The infrastructure managers will inform trasse.ch of any orders it has rejected. trasse.ch will subsequently check whether the order was correctly handled and whether the decision to reject it was taken without discriminating against the applicant and was well founded.

4.4.2 Arbitration in the event of a dispute over train path allocation
The SKE is responsible for dealing with complaints about track access. If it is suspected that track access is being prevented or granted in a discriminatory manner, the SKE is also authorised to instigate investigations.


4.4.3 Congested routes
In the event that trasse.ch is unable to grant train path requests because of a lack of capacity on a route, or if there are reliable indications that this will be the case, the route is deemed to be congested. In such circumstances, trasse.ch is entitled in accordance with Art. 12a para. 3 NZV to cancel train paths already allocated to optional trains, and not to offer these any longer, insofar as this results in better capacity utilisation on the route in question. trasse.ch can also withdraw train paths and allocate them to another applicant if the train path on the congested route is being used to a lesser extent than as may be specified in the published track access conditions (Art. 12 para. 4 NZV).

trasse.ch will work together with the relevant infrastructure manager(s) to conduct a capacity analysis to determine the reasons for the bottleneck which has led to the route being deemed congested. Depending on the cause and the likely duration of the capacity shortage, trasse.ch will highlight possible short- to medium-term relief measures. It will submit the capacity analysis to the Federal Office of Transport, which, on request, can declare the highlighted measures as binding.

The above provisions apply to both lines and nodal points and to both basic and ancillary services.

At the time of printing, no routes have been declared as congested for the 2020 timetable year.
4.4.4 Framework agreements on capacity allocation
Applicants and IM may conclude framework agreements in accordance with Art. 12b NZV.

4.5 Train path allocation in the event of temporary capacity restrictions

Art. 11b NZV and the Federal Office of Transport guideline “Line closures in accordance with Art. 11b NZV” govern the arrangements made by infrastructure managers in the event of capacity restrictions. According to these regulations, the infrastructure manager must announce temporary capacity restrictions for construction and maintenance work no later than two months prior to the train path application deadline. Under certain conditions, the regulations also allow for notification at shorter notice.

The infrastructure managers will plan maintenance and upgrade work as part of the network timetable production process. In principle, the applicants will be informed at the earliest possible moment. The applicants’ interests will be incorporated into this planning process and taken into account as far as possible.

Not all temporary capacity restrictions are included in the NNP, since these are sometimes only planned after the deadline for ordering train paths has passed. Art. 10 NZV-BAV governs the procedure which applies in the event that the number of train paths for each type of traffic safeguarded in the NNP for the standard hour can no longer be implemented during the capacity restriction.

In the event of temporary capacity restrictions which are not taken into account in the NNP, efforts will be made to reach an amicable solution with the applicants concerned. If no mutually acceptable solution can be found, the train paths will, as far as possible, be allocated to the types of traffic on the basis of the NNP. This means that, in a first step and for the duration of the capacity restriction, train path requests which exceed the safeguarded scope for each traffic type in the time without the capacity restriction and place demands on the remaining capacity will not be considered.

If the restricted capacity is still insufficient for the allocation of train paths in accordance with the NNP specifications, the infrastructure manager can, for the duration of the capacity restriction only, adjust the planned number of train paths and their quality for each type of traffic for the affected route and for the diversion routes considered. Train paths will be allocated in accordance with the provisions of section 4.4.1.2 of this Network Statement.

If, at the time of the train path allocation in the annual timetable process in accordance with section 4.3.1, temporary capacity restrictions have been announced, but it has not yet been possible to make definitive plans for the specific impact on the individual train paths, applicants will be allocated train paths subject to appropriate conditions.

Applicants will be notified in writing of planned maintenance and upgrade work affecting train paths which have already been allocated.

4.6 Non-usage of definitively allocated train paths

If definitively allocated train paths are cancelled, this must be done using the corresponding ordering tool. The precise requirements and conditions for the non-usage of definitively allocated train paths (basic and ancillary services) can be found in the relevant provisions (in particular the list of services) of the infrastructure managers. Different provisions may apply to the congested routes as per section 4.4.3 for both definitively and provisionally allocated train paths.
Non-usage of train paths for cross-border services must be coordinated with the relevant non-Swiss partner railway company. When cancelling, the agreements made with partner companies must be quoted in the ordering tool under “Details” (e. g. “Project is not being implemented” or “Train paths on the non-Swiss routes have been cancelled by the partner applicant”).

The provisions applicable to freight traffic corridors take precedence over national provisions in the event of non-usage of allocated catalogued corridor train paths Rhine-Alpine or North Sea-Mediterranean the national provisions (www.corridor-rhine-alpine.eu, www.rfc2.eu).

4.7 Special consignments and dangerous goods

4.7.1 Special consignments
The provisions for special consignments (SC) can be found in section 2.5. The order deadline for the train path can be found in sections 4.3.2. The ordering railway company must supply the necessary information together with the train path order. The infrastructure transport agreement drawn up must be available when the train path request is made, and the SC number provided.

4.7.2 Dangerous goods
The provisions for the carriage of dangerous goods can be found in section 2.6. The order must include the RID risk category for the freight to be transported.

4.8 Special measures to be taken in the event of disruption
Art. 14 NZV applies in the event of disruptions to operations. Infrastructure managers are authorized to issue instructions to RUs. Both the infrastructure managers and the RUs have an obligation to inform each other and to provide mutual assistance in the form of personnel and materials in order to resolve the disruption and restore the public transport service.
If the disruption is expected to close the line for several days, the IM shall draw up an emergency timetable in consultation with the RU concerned and publish it. If the line closure is expected to last longer than three (3) days, trasse.ch will calculate the share of overall freight traffic on the closed line and the diversion route that is attributable to the RU. It will allocate train paths on the diversion route to each RU based on their share of overall traffic on the closed line and the diversion route. In doing so, it may revoke paths in passenger and freight traffic that it has already allocated if this helps to optimise capacity utilisation.

4.9 Allocation of capacity for service facilities
trasse.ch allocates basic services (Art. 21 NZV) and ancillary services (Art. 22 NZV). However, services according to Art. 23 NZV do not fall within trasse.ch’s sphere of responsibility and can be purchased from the respective providers at freely negotiable prices.

For further details, see sections 4.2–4.4.
5 SERVICES

5.1 Introduction
The EU member states offer services according to Annex 2 of Directive 2012/34/EU in the form of a minimum access package, additional services and ancillary services. In contrast, the services, basic services and ancillary services defined in the Rail Network Access Ordinance are used in Switzerland. For this reason, the contents of this chapter are not directly comparable with those of Network Statements from other countries. Further information can be found in the joint List of Services of the infrastructure managers. This chapter largely dispenses with the citing of legal texts. Instead, a link to the corresponding article ensures access to up-to-date and complete definitions at all times.

5.2 Basic services (in accordance with RailNAO)
The basic services are based on the provisions of Article 21 RailNAO.

They comprise train path use (at the quality specified), including train operating services, power supply ex catenary, safe and punctual operations, including the telecommunication and IT services required for these operations, use of tracks by trains in unchanged formation for freight operations and, for passenger services, the provision of a platform and access to public facilities.

5.3 Access to service facilities and supply services

5.3.1 Access to service facilities
The access conditions described in this section refer to the locations of service facilities given in section 3.6.

5.3.1.1 Passenger stations
According to RailNAO, the use of a platform in stations of arrival or departure and access to public facilities for passengers constitute a basic service.

5.3.1.2 Cargo handling and terminals for combined traffic
The use of loading sidings and facilities is an ancillary service according to RailNAO.

5.3.1.3 Marshalling yards

5.3.1.4 Sidings and systems for preparation, supply and disposal
The stabling of wagons and the use of any preliminary braking systems present, the provision of water and power to passenger trains (pre-heating/pre-cooling), and the disposal of waste, sewage and used water are ancillary services according to RailNAO. Further information can be found under section 2.4 of the List of Services.

5.3.1.5 Maintenance facilities
BLS Infrastruktur do not operate their own maintenance facilities.

5.3.1.6 Wayside train monitoring facilities
The types of train monitoring systems used on the BLS track network, as described in section 3.6.6, serve to monitor the status of a train during its journey and do not constitute an actual service that can be obtained.
5.3.1.7 Inland port facilities
More detailed information on the available services can be found on the website of Hafenbahn Schweiz AG.

5.3.1.8 Relief facilities
BLS Infrastructure’s fire-fighting and rescue trains provide additional services alongside their core tasks. For further information, contact netzzugang@bls.ch

5.3.1.9 Refuelling facilities

5.3.2 Supply of services in service facilities

5.3.2.1 Shunting
Shunting in service facilities is not described separately in this section. Applicants can obtain relevant information directly from the contact persons responsible for sections 5.3.1.1–5.3.1.9.

5.3.2.2 Other services
No data at present.

5.4 Ancillary services (Art. 22 NZV)

1 The infrastructure manager defines the prices of the following ancillary services without discrimination, insofar as these can be provided with the existing infrastructure and available personnel, and publishes these (Art. 10):

   a. Keeping paths available for optional trains;
   b. Track allocation in the event of a delay requested by the railway undertaking and not caused by scheduled traffic;
   c. Stabling of train compositions;
   d. Shunting routes;
   e. Provision of water and electricity to, and disposal of rubbish, sewage and waste water from, stationary passenger trains;
   f. Use of loading tracks and facilities;
   g. Shunting in marshalling yards;
   h. Keeping routes open outside of normal operating hours;
   i. Marshalling services if these are not provided in marshalling yards;
   j. Additional customer information services;
   k. Assistance for staff on board long-distance services to improve operations, in particular video surveillance on platforms.

2 The prices covered by paragraphs 1a-c and f are to be set as scarcity prices as a function of demand and investment value on a location-by-location basis. All other prices are to be set analogously in accordance with the principles laid out in Article 19. In addition, a pro rata element can be added for capital and amortisation costs in respect of assets used mainly in the provision of ancillary services.
Ancillary services must be ordered. For information on ancillary services which can be provided locally on an individual basis, contact the SBB/BLS onestopshop@sbb.ch. Ancillary service prices are published in the current list of infrastructure services.

5.4.1 Power supply
See list of services, section

5.4.2 Water supply
See List of Services, section 2.6

5.4.3 Exceptional loads, transport of dangerous goods
Exceptional consignments (with or without out-of-gauge load) require additional planning effort which is billed as an ancillary service. The relevant provisions are defined in section 2.14 of the List of Services.

5.5 Services (in accordance with RailNAO)
According to Article 23 RailNAO, the services may also be purchased by the railway undertaking at freely negotiable prices from undertakings other than the infrastructure manager. These do not fall under discrimination-free network access and comprise distribution services, luggage handling, fault intervention for non-critical defects, small-scale maintenance, large-scale maintenance, vehicle cleaning and telecommunications and information technology services that do not concern the train route itself.

5.5.1 Access to the telecommunications network
As part of a system task assigned by the federal government, SBB Infrastructure is responsible for planning, building and operating the GSM-R network in Switzerland and developing it further. For more information, please contact the relevant contact person shown in the list of addresses.

5.5.2 Provision of additional information
Another of SBB Infrastructure’s system tasks is to operate IT systems on behalf of the FOT for providing customers with information on all public transport in Switzerland. For more information, contact geschaeftsstelle.ski@sbb.ch.

5.5.3 Technical inspection of rolling stock
BLS Netz AG do not offer inspections of rolling stock.

5.5.4 Ticket sales channels
Ticket sales channels are operated by BLS Passenger Traffic.

5.5.5 Specialized heavy maintenance services
BLS Netz AG do not operate their own facilities for vehicle maintenance.
5.5.6 **Ordering regulations**
Railway undertakings that have a network access agreement with BLS Infrastructure will receive the necessary regulations and any amendments electronically.

5.5.7 **Responsibility for movable equipment at stations**
The allocation of responsibility between RUs and IMs for the movable equipment needed for train operation is set out in the following list. RUs are obliged to purchase, maintain and hold in stock all the materials for which they assume responsibility according to the list below.

IMs place the movable equipment for which they assume responsibility at the disposal of all RUs, without discrimination and in the required quantity.

<table>
<thead>
<tr>
<th></th>
<th>Brake bars</th>
<th>RU</th>
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<tr>
<td>1</td>
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</table>
6 Charges

The EU member states offer services according to Annex 2 of Directive 2012/34/EU in the form of a minimum access package, additional services and ancillary services. In contrast, the services, basic services and ancillary services defined in the Rail Network Access Ordinance are used in Switzerland.

For this reason, the contents of this chapter are not directly comparable with those of Network Statements from other countries.

This chapter largely dispenses with the citing of legal texts. Instead, a link to the corresponding article ensures access to up-to-date and complete definitions at all times.

Detailed information on the fees described in this chapter in principle can be found in the List of Services of the infrastructure managers.

6.1 Charging principles

Art. 9c EBG defines the right to remuneration as follows:

1 The licensed railway undertaking is entitled to charge a fee for the use of its infrastructure.

2 The participating undertakings shall set out the detailed arrangements regarding access rights and fees in an agreement. If the participants fail to reach a consensus, a decision will be made by the SKE (Art. 40a).

3 The fee payable shall be determined without discrimination and must cover at least the usual marginal costs accrued in respect of a modern railway line; these marginal costs are defined for each line category by the BAV. It shall take into account, in particular, the different costs within the network, the environmental impact of the rolling stock and demand aspects. In the case of regular passenger services, the fee will comprise the marginal costs defined by the BAV for the relevant line category and the revenue share from the service defined by the franchising authority.

4 The BAV defines the basis for calculation of charges and arranges for their publication. In defining the basis for calculation, the BAV ensures that comparable routes are subject to uniform levels of train path pricing and that optimal use is made of rail capacity.

According to Art. 18 RailNAO, the charges for use of the infrastructure are called the “train-path price”.

This is made up of the basic and ancillary services. The services that do not fall under network access make up a third price element.
6.1.1 Basic services (in accordance with RailNAO)
The basic services are divided into the basic price, the contribution margin and the electricity price.

6.1.1.1 Basic price
The basic price must cover marginal infrastructure costs.

Various incentives and product-related factors (e.g. wear, demand for a train path, quality of a train path, stopping surcharges, environmental impact, ETCS, traction equipment, cancellation fees) can result in a variable price per train. The provisions on all variable elements of the basic price are defined in Art. 19 and 19a ff RailNAO.

The calculation of the basic price by wear is based on the categorisation of individual vehicles of the train into drive types according to their wear. The data on drive type and weight according to section 2.9 of this NWS is required for billing. In the case of unknown vehicles or those that have not been priced, standard values are used for billing.

6.1.1.2 Contribution margin
The provisions on the contribution margin are set out in Art. 20 RailNAO.

6.1.1.3 Electricity price
Art. 20a RailNAO defines the provisions for the electricity price. Further important provisions on the installation, registration and use of energy measurement systems for billing according to the actual power consumption can be found in section 2.7.14 of this NWS.

6.1.2 Ancillary services (in accordance with RailNAO)
The provisions on the ancillary services are defined in Art. 22 RailNAO. The ancillary services include ordered and agreed services and services required at short notice that can be provided subject to the resources (staff and vehicles) and capacity (installations) being available.
They include route setting for shunting runs, shunting in marshalling yards according to Appendix 3 to RailNAO-FOT, the stabling of rail vehicles, static water and power supplies, use of the route outside published opening times, etc.

6.2 Charging system
Billing is carried out via the joint train-path sales system of the infrastructure managers SBB Infrastructure, Sensetalbahn AG, Hafenbahn Schweiz AG, BLS Netz AG and SOB AG using the I-Prix system. Services are allocated using the accounting code.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Passenger services</th>
<th>Freight services</th>
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</thead>
<tbody>
<tr>
<td>Composition</td>
<td>1) Mostly passenger wagons or 2) historic rolling stock (P/F) not used commercially</td>
<td>1) Mostly freight wagons</td>
</tr>
<tr>
<td>Train category/train number</td>
<td>Empty stock train-chartered train</td>
<td>Freight train</td>
</tr>
<tr>
<td>Data acquisition</td>
<td>FOS</td>
<td>CIS-Infra</td>
</tr>
<tr>
<td>RID</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

- Mostly = number of metres
- Definition of historic rolling stock as per Guideline – Acceptance of Historic Railway Vehicles (in German language) section 3

Trains with RID must run as freight trains recorded in CIS-Infra.

6.3 Tariffs
The currently valid prices of basic and ancillary services are shown in the List of Services. The prices of other services are defined by the respective providers. Services offered by SBB Infrastructure at marshalling yards are published in the OneStopShop.

6.4 Financial penalties and incentives

6.4.1 Non-usage/cancellation fees and charges
If a train path is cancelled, the procedure set out in section 1.3 of the List of Services shall apply.

6.4.2 Reduction fee for framework agreements
There is no information on discounts for framework agreements at this time.

6.4.3 ECTS discounts
Section 1.2.4 of the List of Services defines the situations in which a discount may be offered for installed ETCS vehicle equipment.

6.5 Use of standard values
Missing or incorrect data as per Annex 2.9 to the NWS may result in use of the standard values defined in the List of Services when calculating the basic price by wear and/or the power consumption.

6.6 Changes to charges
We reserve the right to make changes to the statutory services and charges. The applicable prices are defined in the Infrastructure List of Services, which shall be updated in accordance with the legal framework where necessary.
6.7 Billing agreements

See List of Services, section 4.2 Invoicing.
**Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>AB-EBV</td>
<td>Implementing Provisions for the Railways Ordinance</td>
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<tr>
<td>AB-FDV</td>
<td>Implementing Provisions for the Train Loading and Running Regulations</td>
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<tr>
<td>ADFV</td>
<td>Grants Ordinance</td>
</tr>
<tr>
<td>AGB-ISB</td>
<td>General Terms and Conditions for the Use of Railway Infrastructure</td>
</tr>
<tr>
<td>AVIS</td>
<td>SBB’s job management and information system</td>
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<tr>
<td>BAV</td>
<td>The Swiss Federal Office of Transport (part of UVEK)</td>
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<tr>
<td>RNAA</td>
<td>Federal Act on Railway Noise Abatement Measures</td>
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<td>BLS</td>
<td>BLS AG/BLS Netz AG</td>
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<td>CBT</td>
<td>Ceneri base tunnel</td>
</tr>
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<td>CCS</td>
<td>Control-Command and Signalling (EU) 2016/919</td>
</tr>
<tr>
<td>CEN</td>
<td>The European Committee for Standardisation</td>
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<tr>
<td>CH</td>
<td>Switzerland (Confoederatio Helvetica)</td>
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<tr>
<td>CIS</td>
<td>Cargo Information System</td>
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<tr>
<td>CLC</td>
<td>CENELEC – The European Committee for Electrotechnical Standardisation</td>
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<tr>
<td>COTIF</td>
<td>Convention concerning International Carriage by Rail</td>
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<tr>
<td>CPID</td>
<td>Consumption Point ID</td>
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<td>CUI</td>
<td>Uniform Rules concerning the Contract of Use of Infrastructure in International Rail Traffic</td>
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<td>DB</td>
<td>Deutsche Bahn AG</td>
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<td>EBG</td>
<td>Railways Act</td>
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<td>EC</td>
<td>European Communities</td>
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<td>EMS</td>
<td>Energy measurement system</td>
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<td>European standard</td>
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<td>ERA</td>
<td>European Railway Agency</td>
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<td>ERTMS</td>
<td>European Rail Traffic Management System</td>
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<td>ETCS (Level 1 LS)</td>
<td>European Train Control System (Level 1 Limited Supervision)</td>
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<td>ETM</td>
<td>European Transmission Module</td>
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<td>EU</td>
<td>European Union</td>
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<tr>
<td>EVN</td>
<td>European Vehicle Number. The 12-digit number registered in the national register of vehicles (Art. 5i RailO) according to UIC leaflet 438-3, also called the TSI number.</td>
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<tr>
<td>RU</td>
<td>Railway undertaking</td>
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<tr>
<td>FTH/FAG</td>
<td>Form, type and hazard</td>
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<tr>
<td>FDV</td>
<td>Train Loading and Running Regulations</td>
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<td>FPV</td>
<td>Timetables Ordinance</td>
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<td>FOS</td>
<td>Formation Service</td>
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<td>GBS</td>
<td>Gotthard base route</td>
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<td>GBT</td>
<td>Gotthard base tunnel</td>
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<tr>
<td>GSM-R</td>
<td>Global System for Mobile Communication – Railway</td>
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<td>HBS / HBSAG</td>
<td>Hafenbahn Schweiz AG</td>
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<td>IM</td>
<td>Infrastructure manager</td>
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<td>LBS</td>
<td>Lötschberg base tunnel route</td>
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<td>Abbreviation</td>
<td>Meaning</td>
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<td>LBT</td>
<td>Lötschberg base tunnel</td>
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<td>LVA</td>
<td>Overland Transport Agreement</td>
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<td>NAeP</td>
<td>Change of use process, safety</td>
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<td>NEAT</td>
<td>New transalpine rail routes</td>
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<td>NUC</td>
<td>Network usage concept</td>
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<tr>
<td>NUP</td>
<td>Network usage plan</td>
</tr>
<tr>
<td>NNTR</td>
<td>Notified National Technical Rules</td>
</tr>
<tr>
<td>OSS</td>
<td>One Stop Shop</td>
</tr>
<tr>
<td>RADN</td>
<td>Block tables</td>
</tr>
<tr>
<td>RID</td>
<td>The European Agreements Concerning the International Carriage of Dangerous Goods by Rail (Règlement concernant le transport international ferroviaire de marchandises dangereuses).</td>
</tr>
<tr>
<td>RNE</td>
<td>RailNetEurope</td>
</tr>
<tr>
<td>RNE CIS</td>
<td>Charging Information System</td>
</tr>
<tr>
<td>RNE PCS</td>
<td>Path Coordination System</td>
</tr>
<tr>
<td>RNE TIS</td>
<td>Train Information System</td>
</tr>
<tr>
<td>ROLA</td>
<td>Piggyback service</td>
</tr>
<tr>
<td>RSD</td>
<td>Ordinance on the Carriage of Dangerous Goods by rail and cableway</td>
</tr>
<tr>
<td>RTE</td>
<td>Swiss Public Transport Association (VöV) compilation of technical rail regulations</td>
</tr>
<tr>
<td>SBB</td>
<td>Swiss Federal Railways</td>
</tr>
<tr>
<td>SiBe</td>
<td>Safety certification</td>
</tr>
<tr>
<td>SIM</td>
<td>Simplon Inter-Modal</td>
</tr>
<tr>
<td>SKE</td>
<td>Railways Arbitration Commission</td>
</tr>
<tr>
<td>SOB</td>
<td>Schweizerische Südostbahn AG</td>
</tr>
<tr>
<td>STB</td>
<td>Sensetalbahn AG, subsidiary of SBB AG</td>
</tr>
<tr>
<td>TNZ</td>
<td>SBB Infrastructure’s Technical Track Access unit</td>
</tr>
<tr>
<td>trasse.ch</td>
<td>Swiss Train Paths Ltd.</td>
</tr>
<tr>
<td>TSI</td>
<td>Technical Specifications for Interoperability</td>
</tr>
<tr>
<td>UIC</td>
<td>International Union of Railways</td>
</tr>
<tr>
<td>UVEK</td>
<td>Swiss Federal Department of the Environment, Transport, Energy and Communications</td>
</tr>
<tr>
<td>VL</td>
<td>Connecting line</td>
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<tr>
<td>VLE</td>
<td>Ordinance on Railway Noise Abatement</td>
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<td>VöV</td>
<td>Swiss Public Transport Association</td>
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<td>VPB</td>
<td>Ordinance on Passenger Transport</td>
</tr>
<tr>
<td>VSS</td>
<td>Swiss Association of Road and Transport Professionals</td>
</tr>
<tr>
<td>WTMS</td>
<td>Wayside train monitoring system</td>
</tr>
<tr>
<td>ZIS</td>
<td>Train information system</td>
</tr>
<tr>
<td>ZL</td>
<td>Train length</td>
</tr>
<tr>
<td>ZUB</td>
<td>Automatic Train Protection system from Siemens (ZUB 121, ZUB 262)</td>
</tr>
<tr>
<td>Glossary Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Applicant</td>
<td>An RU, an international consortium of RUs or any other company which is interested in carrying out rail traffic operations.</td>
</tr>
<tr>
<td>Notified Body NoBo</td>
<td>Body responsible for carrying out inspections and issuing certificates in conjunction with evaluations of compliance (Link).</td>
</tr>
<tr>
<td>Designated Body DeBo</td>
<td>Checks compliance with Notified National Technical Rules as per EU directives 2008/57/EC and 2011/217/EU.</td>
</tr>
<tr>
<td>Order conflict/train path conflict</td>
<td>Situation in which two or more mutually conflicting train paths cannot be allocated.</td>
</tr>
<tr>
<td>Railway undertaking (RU)</td>
<td>Public or private company whose main purpose is to provide rail services to transport passengers and/or freight, for which it must also secure the necessary motive power.</td>
</tr>
<tr>
<td>EuroSIGNUM</td>
<td>SIGNUM information in Eurobalises based on ERTMS/ETCS language packet 44 (NID_XUSER=2).</td>
</tr>
<tr>
<td>EuroZUB</td>
<td>ZUB information in Eurobalises based on ERTMS/ETCS packet 44 (NID_XUSER=2).</td>
</tr>
<tr>
<td>Timetables Ordinance</td>
<td>The Timetables Ordinance (FPV) regulates the process of creating, publishing and changing the timetable of public transport services for passengers.</td>
</tr>
<tr>
<td>Movement type</td>
<td>The movement type is a grouping element for several vehicle types that do not differ with respect to their physical characteristics. Movement types are only assigned by the infrastructure manager.</td>
</tr>
<tr>
<td>Vehicle type</td>
<td>The vehicle type describes the sort of vehicle.</td>
</tr>
<tr>
<td>Basic service</td>
<td>The definition of a basic service is derived from Art. 21 NZV and is described in more detail in the infrastructure managers’ lists of infrastructure services.</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>All fixed systems and installations required to provide rail transport service, such as tracks, trackside equipment, train protection systems and stations. “Infrastructure” as defined by the EBG also includes the operation of these systems.</td>
</tr>
<tr>
<td>Conflict resolution negotiations</td>
<td>Process to alleviate an order conflict. The train path allocation body and the relevant infrastructure manager work together with the applicant involved in the conflict to find reasonable alternative train paths.</td>
</tr>
<tr>
<td>Catalogued corridor train paths</td>
<td>Train paths established in advance on a rail freight corridor in accordance with EU Regulation 913/2010. Catalogued corridor train paths are offered for the entire length of the corridor or for specified sections of corridor for cross-border rail traffic. As regards annual timetable requests, catalogued corridor train paths are published eleven months before a timetable change. As regards the interim timetable, residual capacity is published two months before a timetable change. Catalogued corridor train paths are reserved exclusively for cross-border rail traffic.</td>
</tr>
<tr>
<td>Corridor OSS</td>
<td>A common point of contact established for a rail freight corridor by the infrastructure managers and the train path allocation bodies, to which applicants can submit orders for catalogued corridor train paths (incl. feeder train paths). The corridor OSS provides details of the</td>
</tr>
</tbody>
</table>
train path allocation and of the conditions for using the network and allocates the catalogued corridor train paths in the name of and on behalf of the infrastructure manager and the train path allocation body concerned.

Gotthard base route
ETCS Level 2 route Rynächt–Gotthard Base Tunnel–Pollegio

Gotthard panoramic route
Erstfeld–Göschnfen–Gotthard Summit Tunnel–Airolo–Bodio

NeTS-AVIS
Network-wide track management system ordering tool.

NeTS-PLAN
Network-wide track management system planning tool.

Track access
Track access is the opening of the railway network to third-party providers without discrimination. These providers are called network users.

Term | Definition
--- | ---
Track access permit | The track access permit enables rail companies to run services on foreign rail infrastructure. In Switzerland, such permits are issued by the BAV once reliability and financial performance criteria have been met.

Track access agreement | The track access agreement, as defined in Art. 9b para. 2 EBG governs the content of collaboration between an infrastructure manager and a network user.

Change of use process, safety (NAeP) | Risk assessment of safety-related concerns, questions and aspects by SBB Infrastructure. This is carried out as standard on the basis of a new RU service request in the planning horizon of ≤ 6 years in order to identify any newly emerging safety shortfalls (see section 3.2.1 for detailed description).

Path Coordination System | Planning and ordering tool for cross-border freight and passenger train paths.

Framework agreement in accordance with Art. 12b NZV | The infrastructure manager and the companies interested in putting on rail traffic (Art. 9a para. 4 EBG) may conclude a framework agreement on track access specifying the characteristics of the train paths to be allocated. A framework is generally concluded for two timetable periods but for no longer than ten years. It may not grant any exclusive rights of use. It may be terminated by the infrastructure operator in order to improve usage of the relevant track. The agreement may specify compensation payments for cases such as this.

Rail 2000 route | Route sections Mattstetten–Rothrist (previously called NBS) and Wanzwil–Solothurn (previously called ABS). Equipped with ETCS Level 2

Safety certification | Safety certification is awarded by the BAV subject to the provision of a safety management system (SMS) by the network user. It recognises that the network user has fulfilled the relevant safety requirements to run services on a defined route, particularly those involving its staff, the rolling stock used and internal organisation.
SMS-RU

To be able to distinguish the RU responsible for the safety management system from the ordering party. On the day of the transport, the SMS-RU must be in possession of valid safety certification. If the SMS-RU does not have a separate track access agreement with the IM, the ordering party is responsible for passing the SMS-RU’s control centre contact details (email and telephone number) to the IM.

In the event of train monitoring system alerts and safety checks by the IMs or the FOT regarding access to the network, the SMS-RU’s control centre will be informed.

Train path

A train path is defined as the basic service, i.e. the travel “slot” reserved for a train on the rail network defined in terms of place and time, as well as the associated ancillary services.

Train path request

“Train path requests” are applications for train path registrations submitted each second Monday in April for both the annual timetable and the interim timetable.

Interim timetable

Changes to the annual timetable arising from train path orders that are submitted after the deadline for definitive train path ordering.

Ancillary services

Services provided by infrastructure managers that can be applied for by an applicant in addition to the straightforward use of a train path. These include train stabling, shunting in marshalling yards, etc.
### 1.1 Neigungstabelle (Steigungen in \(^{0/00}\))

#### 1.1.1 Thun – LBS – Visp

<table>
<thead>
<tr>
<th>Streckenabschnitt</th>
<th>Steigung in (^{0/00})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thun – Gwatt</td>
<td>8.4</td>
</tr>
<tr>
<td>Gwatt – Spiez</td>
<td>15.2</td>
</tr>
<tr>
<td>Spiez – Frutigen</td>
<td>16.2</td>
</tr>
<tr>
<td>Frutigen – Visp</td>
<td>7.8</td>
</tr>
<tr>
<td>Visp – Frutigen</td>
<td>8.5</td>
</tr>
<tr>
<td>Frutigen-Spiez</td>
<td>0.8</td>
</tr>
<tr>
<td>Spiez – Thun</td>
<td>4.7</td>
</tr>
</tbody>
</table>

#### 1.1.2 Frutigen – Kandersteg – Brig

<table>
<thead>
<tr>
<th>Streckenabschnitt</th>
<th>Steigung in (^{0/00})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frutigen – Kandersteg</td>
<td>27.4</td>
</tr>
<tr>
<td>Kandersteg – Goppenstein</td>
<td>14.5</td>
</tr>
<tr>
<td>Brig – Laiden</td>
<td>22.4</td>
</tr>
<tr>
<td>Laiden – Hohten</td>
<td>24.3</td>
</tr>
<tr>
<td>Hohten – Goppenstein</td>
<td>27.2</td>
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<tr>
<td>Goppenstein – Kandersteg</td>
<td>4.1</td>
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</table>

#### 1.1.3 Spiez – Interlaken Ost

<table>
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<tr>
<th>Streckenabschnitt</th>
<th>Steigung in (^{0/00})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiez – Interlaken Ost – Spiez</td>
<td>9.7</td>
</tr>
<tr>
<td>Interlaken Ost – Spiez</td>
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</tbody>
</table>

#### 1.1.4 Spiez – Zweisimmen

<table>
<thead>
<tr>
<th>Streckenabschnitt</th>
<th>Steigung in (^{0/00})</th>
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</thead>
<tbody>
<tr>
<td>Spiez – Wimmis</td>
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<tr>
<td>Wimmis – Erlenbach</td>
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<tr>
<td>Erlenbach – Oberwil</td>
<td>23.8</td>
</tr>
<tr>
<td>Oberwil – Weissenbach</td>
<td>18.7</td>
</tr>
<tr>
<td>Weissenbach – Zweisimmen</td>
<td>25.2</td>
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<tr>
<td>Boltigen – Oberwil</td>
<td>15.3</td>
</tr>
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<td>Oberwil – Spiez</td>
<td>5.5</td>
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</table>

#### 1.1.5 Solothurn – Moutier

<table>
<thead>
<tr>
<th>Streckenabschnitt</th>
<th>Steigung in (^{0/00})</th>
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</thead>
<tbody>
<tr>
<td>Solothurn – Moutier – Solothurn</td>
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<tr>
<td>Moutier – Gänserbrunnen</td>
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<tr>
<td>Solothurn – Gänserbrunnen</td>
<td>18.2</td>
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<tr>
<td>Gänserbrunnen – Oberdorf</td>
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### 1.1.6 Solothurn – Burgdorf

<table>
<thead>
<tr>
<th>Streckenabschnitt</th>
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<tbody>
<tr>
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<tr>
<td>Burgdorf – Solothurn</td>
<td>5.6</td>
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### 1.1.7 Burgdorf – Langnau i.E.

<table>
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<tr>
<th>Streckenabschnitt</th>
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<th>Steigung in %/00</th>
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<tbody>
<tr>
<td>Burgdorf – Hasle-Rüegsau</td>
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<td></td>
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<tr>
<td>Hasle-Rüegsau – Ramsei</td>
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<td></td>
</tr>
<tr>
<td>Ramsei – Langnau i.E.</td>
<td>11.9</td>
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### 1.1.8 Hasle-Rüegsau – Thun

<table>
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<tbody>
<tr>
<td>Hasle-Rüegsau – Konolfingen</td>
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<td>Brenzikofen – Thun</td>
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<tr>
<td>Thun – Heimberg</td>
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<tr>
<td>Heimberg – Konolfingen</td>
<td>20.2</td>
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<tr>
<td>Konolfingen – Biglen</td>
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### 1.1.9 Ramsei – Sumiswald-Grünen

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### 1.1.10 Langenthal – Wolhusen

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<tbody>
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### 1.1.11 Bern – Belp – Thun

<table>
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<tr>
<td>Holligen – Weissenbühl</td>
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<td>Weissenbühl – Kehrsatz</td>
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<td>Kehrsatz – Belp</td>
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<td>Thun – Uetendorf</td>
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<td>Uetendorf – Seftigen</td>
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<td>Seftigen – Belp</td>
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<td>Belp – Kehrsatz</td>
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<td>Kehrsatz – Holligen</td>
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### 1.1.12 Bern – Schwarzenburg

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<td>Holligen – König</td>
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<td>Gasel – Schwarzwasserbrücke</td>
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### 1.1.13 Bern – Kerzers – Neuchâtel

<table>
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<th>Streckenabschnitt</th>
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<td>Bern – Holligen (Gleis 100/200)</td>
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<tr>
<td>Kerzers – Rosshäusern</td>
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### 1.1.14 Moutier – Grenchen Nord – Lengnau

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<th>Streckenabschnitt</th>
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### Neigungstabellen Zufahrtsstrecken (SBB, RFI)

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<td>Basel – (SBB) – Thun – (SBB) – Basel</td>
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<tr>
<td>Basel SBB PB/RB – Tecknau – Olten</td>
<td>11</td>
</tr>
<tr>
<td>Olten – Bern via Burgdorf</td>
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</tr>
<tr>
<td>Olten – Wetzwil (NBS) – Bern</td>
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<tr>
<td>Bern – Thun</td>
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</tr>
<tr>
<td>Thun – Bern</td>
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<tr>
<td>Bern – Olten via Burgdorf</td>
<td>11</td>
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