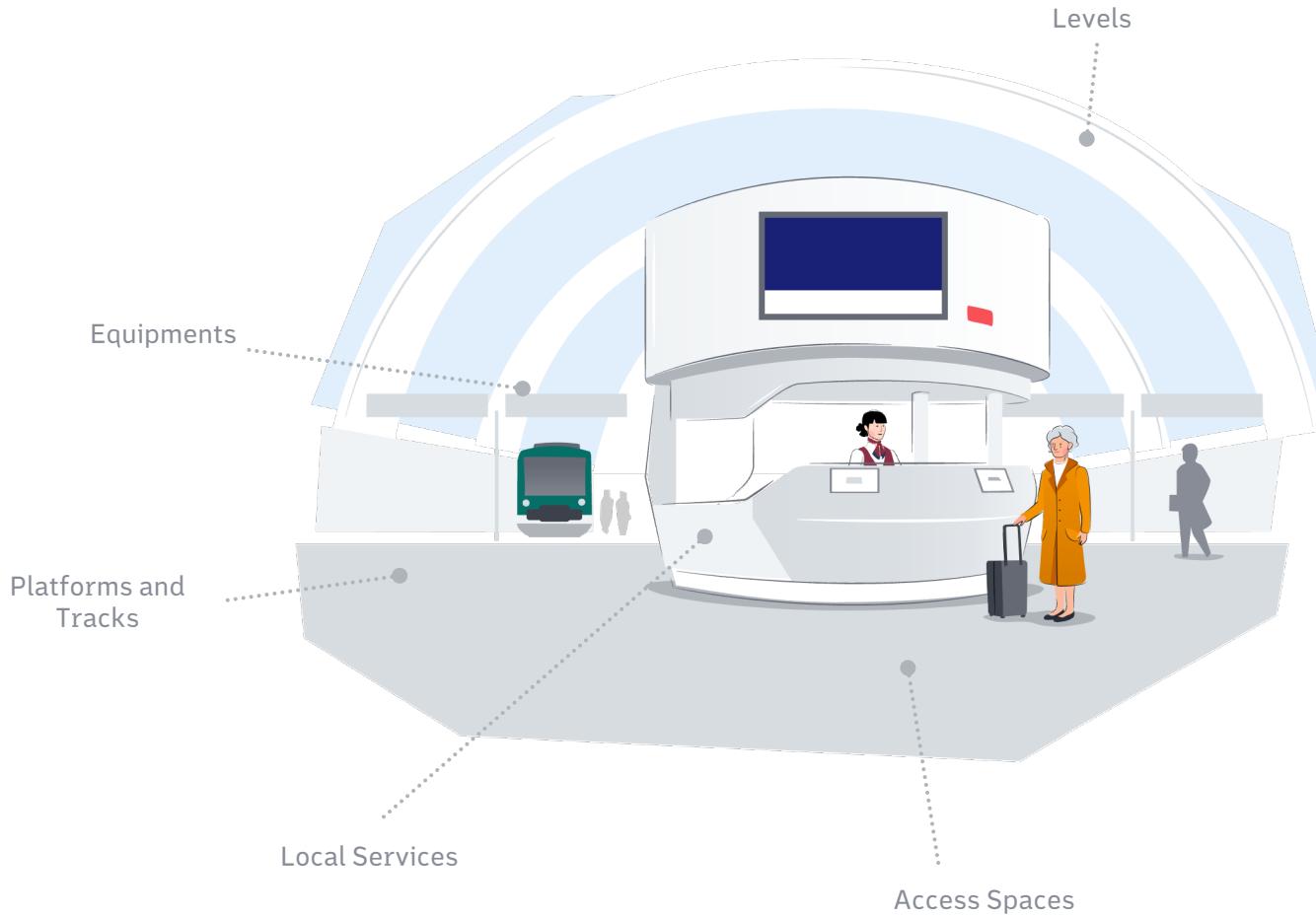




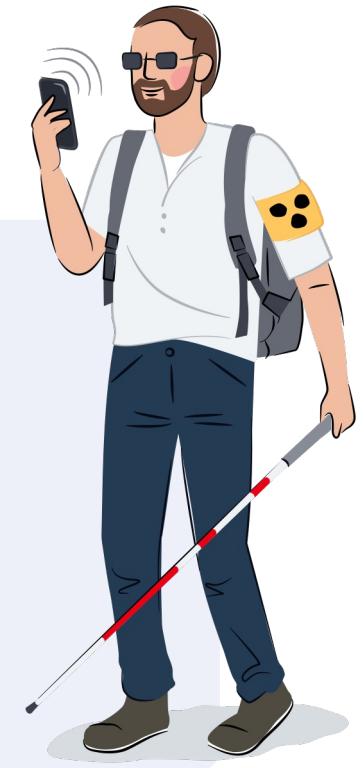
DB InfraGO's OpenStation

NeTEx and SIRI for railway stations



A new API for station data

- Focus: Accessibility information
- Based on European Standards (NeTEx, SIRI)
- Open Data, Open License



We have to and want to publish data

EU Regulation 2017/1926 **MMTIS**

Mandates publication of timetable and infrastructure data for the entire transportation sector

EU Regulation 2014/1300 TSI PRM

Mandates publication of accessibility data for “heavy metal” railway sector (“Inventory of Assets”)



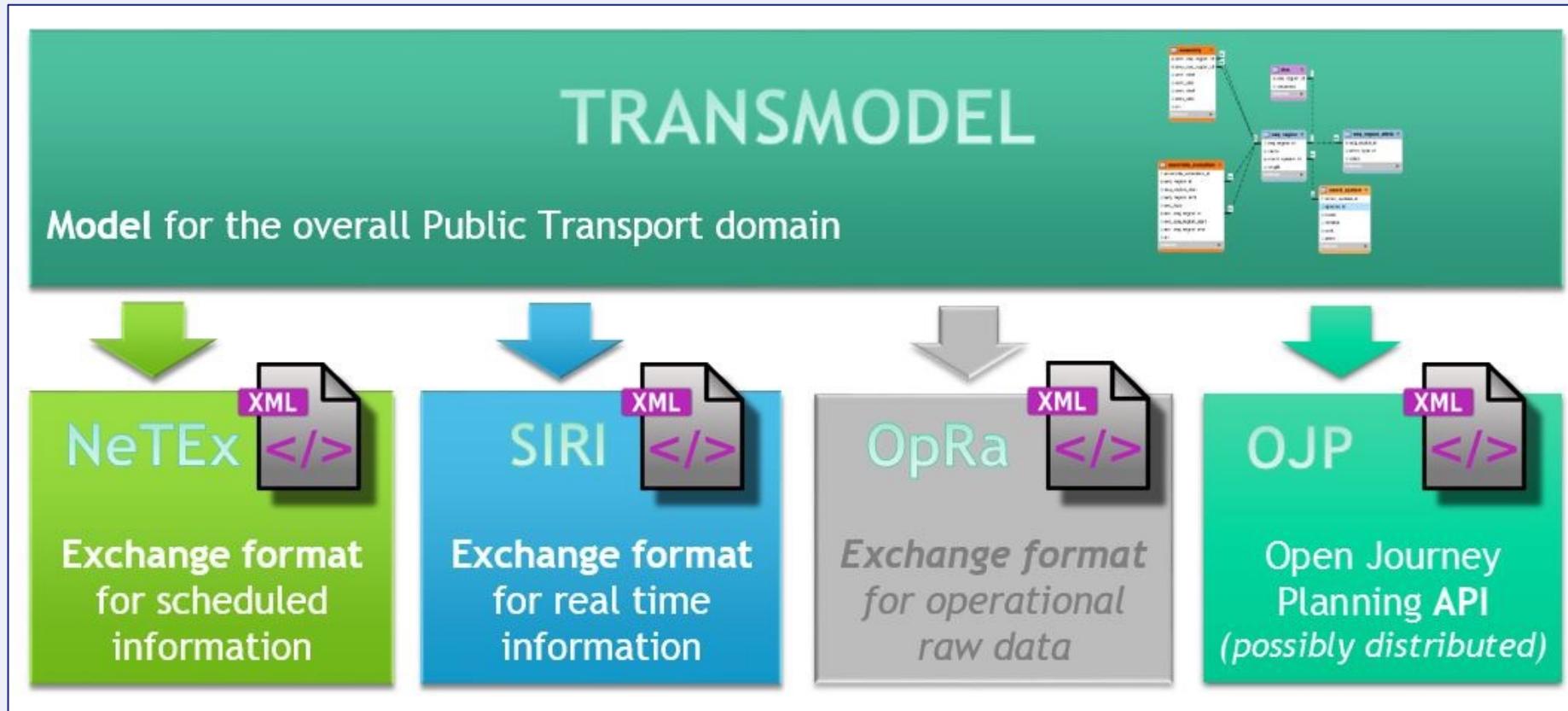
Usage of European Standards NeTEx + SIRI

For the common good - DB InfraGO

We want to enable new use cases and create transparency on the state of our infrastructure

For the common good - DB InfraGO

We want to enable new use cases and create transparency on the state of our infrastructure

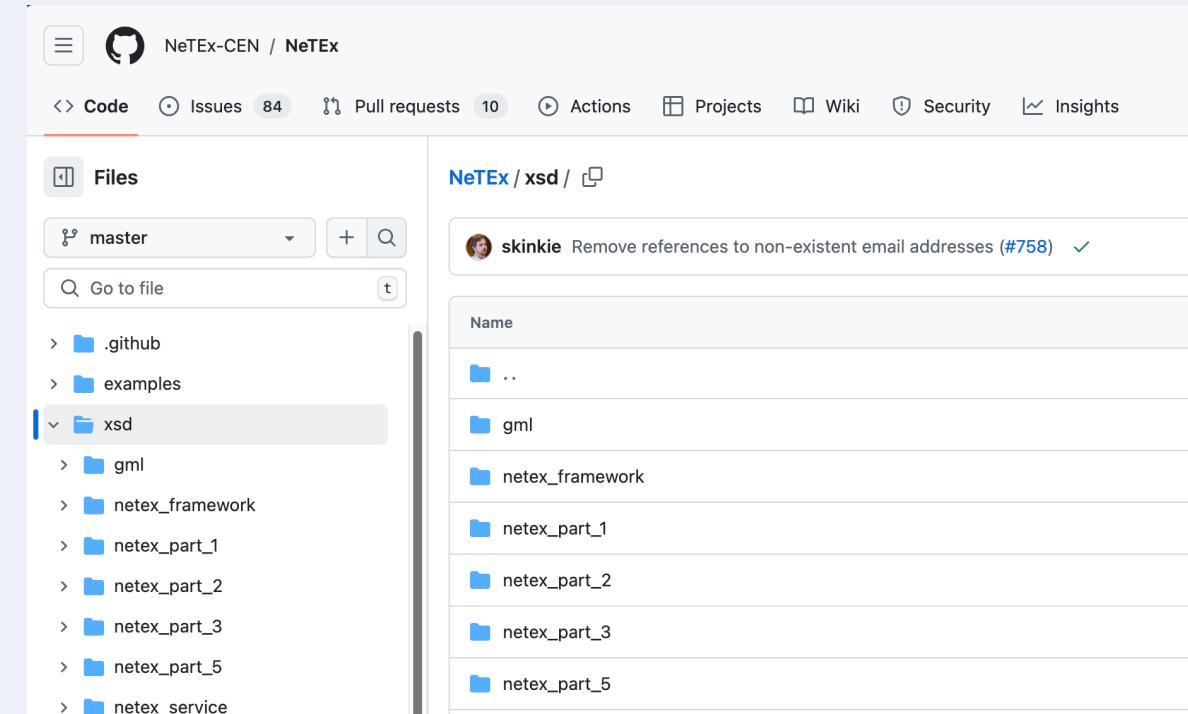


<https://data4pt.org/>

NeTEx

Static/Planned data

NeTEx Part	Description
Part 1	Network topology
Part 2	Scheduled timetables
Part 3	Fare information
Part 4 (Profile)	EPIP – Passenger information profile
Part 5	„Alternative modes“
Part 6 (Profile)	EPIAP – Passenger accessibility information profile



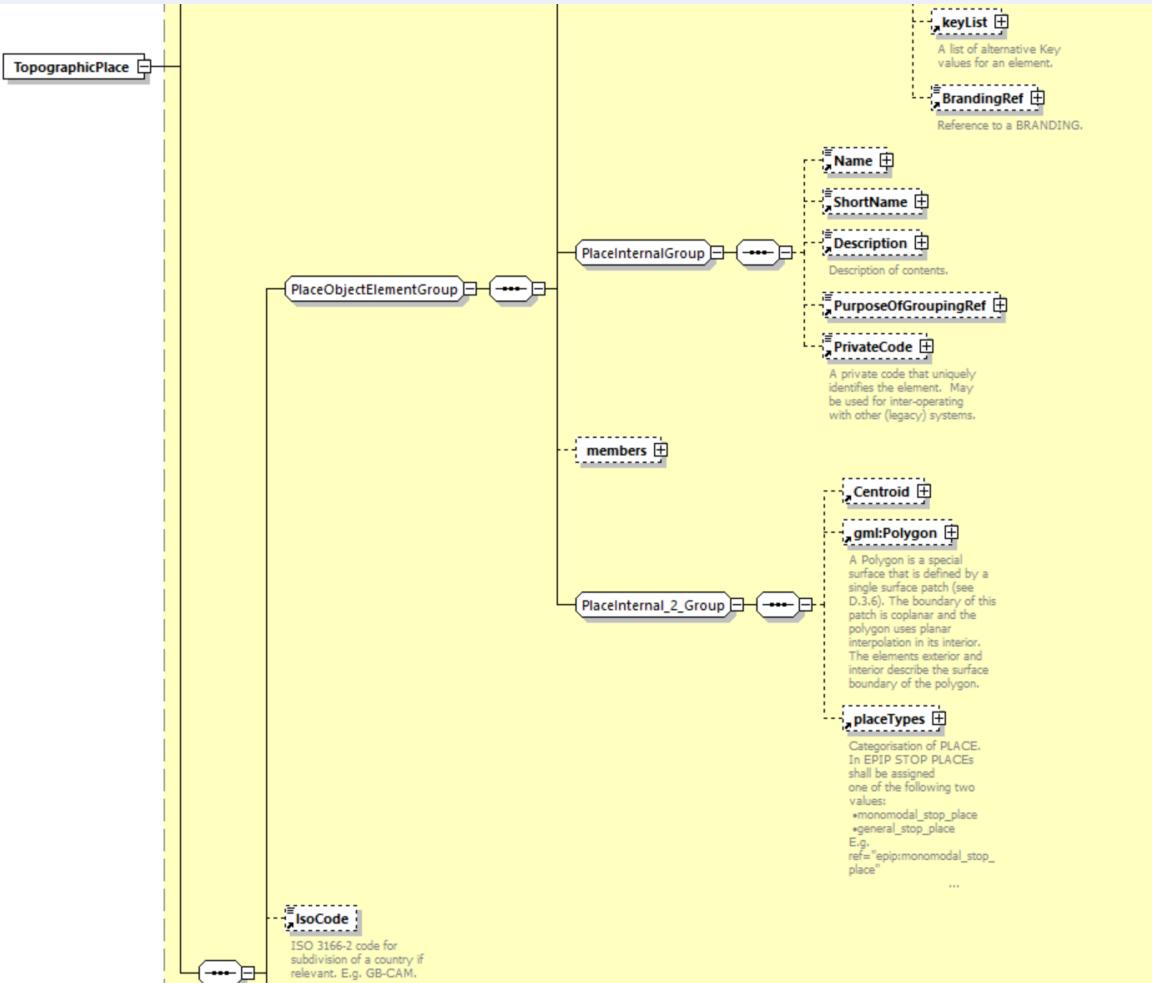
```
● ● ●
1  <xsd:element name="TopographicPlace" substitutionGroup="Place">
2      <xsd:annotation>
3          <xsd:documentation>A town, city, village, suburb, quarter or other name settlement within a country. Provides a Gazetteer of Transport related place names.</xsd:documentation>
4      </xsd:annotation>
5      <xsd:complexType>
6          <xsd:complexContent>
7              <xsd:restriction base="TopographicPlace_VersionStructure">
8                  <xsd:sequence>
9                      <xsd:sequence>
10                         <xsd:group ref="EntityInVersionGroup" minOccurs="0"/>
11                     </xsd:sequence>
12                     <xsd:sequence>
13                         <xsd:group ref="DataManagedObjectGroup"/>
14                     </xsd:sequence>
15                     <xsd:sequence>
16                         <xsd:group ref="GroupOfEntitiesGroup"/>
17                     </xsd:sequence>
18                     <xsd:sequence>
19                         <xsd:group ref="GroupOfPointsGroup"/>
20                     </xsd:sequence>
21                     <xsd:sequence>
22                         <xsd:group ref="ZoneGroup"/>
23                     </xsd:sequence>
24                     <xsd:group ref="PlaceGroup"/>
25                     <xsd:sequence>
26                         <xsd:group ref="TopographicDescriptiveGroup"/>
27                         <xsd:group ref="TopographicRelationGroup"/>
28                     </xsd:sequence>
29                     </xsd:sequence>
30                 <xsd:attribute name="id" type="TopographicPlaceIdType">
31                     <xsd:annotation>
32                         <xsd:documentation>Identifier of TOPOGRAPHIC PLACE.</xsd:documentation>
33                     </xsd:annotation>
34                 </xsd:attribute>
35             </xsd:restriction>
36         </xsd:complexContent>
37     </xsd:complexType>
```

```
● ● ●
1 <xsd:group name="TopographicDescriptiveGroup">
2     <xsd:annotation>
3         <xsd:documentation>Elements of a TOPOGRAPHIC PLACE DESCRIPTOR.</xsd:documentation>
4     </xsd:annotation>
5     <xsd:sequence>
6         <xsd:element name="IsoCode" type="SubdivisionIdType" minOccurs="0">
7             <xsd:annotation>
8                 <xsd:documentation>ISO 3166-2 code for subdivision of a country if relevant. E.g. GB-CAM.</xsd:documentation>
9             </xsd:annotation>
10            </xsd:element>
11            <xsd:element name="Descriptor" type="TopographicPlaceDescriptor_VersionedChildStructure">
12                <xsd:annotation>
13                    <xsd:documentation>Structured text descriptor of TOPOGRAPHIC PLACE.</xsd:documentation>
14                </xsd:annotation>
15            </xsd:element>
16            <!-- [...] -->
17            <xsd:element name="TopographicPlaceType" type="TopographicPlaceTypeEnumeration" minOccurs="0">
18                <xsd:annotation>
19                    <xsd:documentation>Classification of the TOPOGRAPHIC PLACE as a settlement. Enumerated value.</xsd:documentation>
20                </xsd:annotation>
21            </xsd:element>
22            <xsd:element name="PostCode" type="xsd:normalizedString" minOccurs="0">
23                <xsd:annotation>
24                    <xsd:documentation>Post code or partial post code associated with area. v1.1</xsd:documentation>
25                </xsd:annotation>
26            </xsd:element>
27        </xsd:sequence>
28    </xsd:group>
```

NeTEx

Schema definitions

TimeZone
TimingLink
TimingLinkRef
timingLinks
TimingPoint
TimingPointRef
timingPoints
TimingPointStatus
To
ToDate
ToJourneyRef
TopographicPlace
TopographicPlaceRef
topographicPlaces
TopographicPlaceType
TopographicPlaceView
ToPointRef
TotalCapacity
Train
TrainBlockPart
TrainBlockPartRef
TrainBlockRef
TrainComponent
TrainComponentRef
TrainElement
TrainNumber



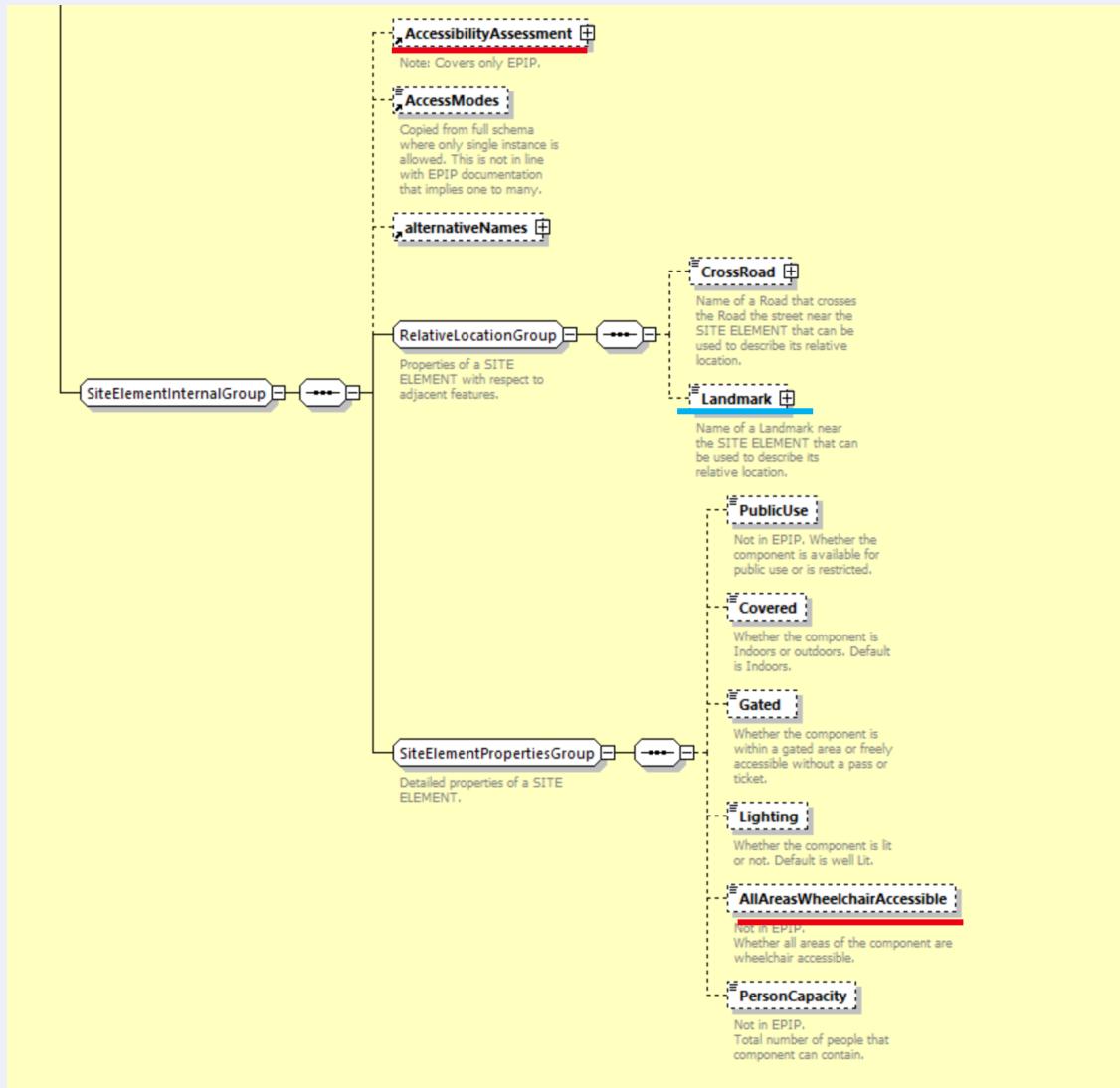
element IsoCode

diagram	
namespace	http://www.netex.org.uk/netex
type	xsd:string
properties	content simple
used by	complexType TopographicPlace_VersionStructure
source	<code><xsd:element name="IsoCode" type="xsd:string"/></code>

https://data4pt.org/NeTEx/GraphicKit/Documentation_of_reduced_XSD.html



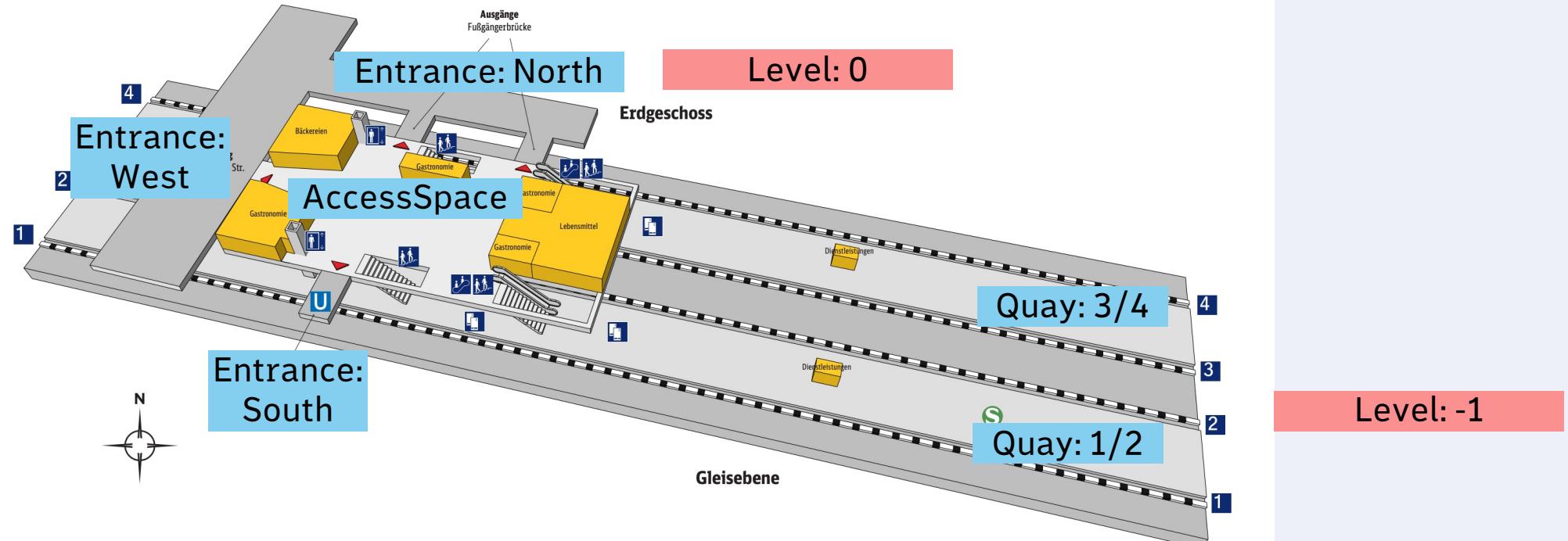
```
1 <TopographicPlace id="de:12000000" version="any">
2   <Name>Brandenburg</Name>
3   <IsoCode>DE-BB</IsoCode>
4 </TopographicPlace>
5
6 <TopographicPlace id="de:12054000" version="any">
7   <Name>Potsdam</Name>
8 </TopographicPlace>
```



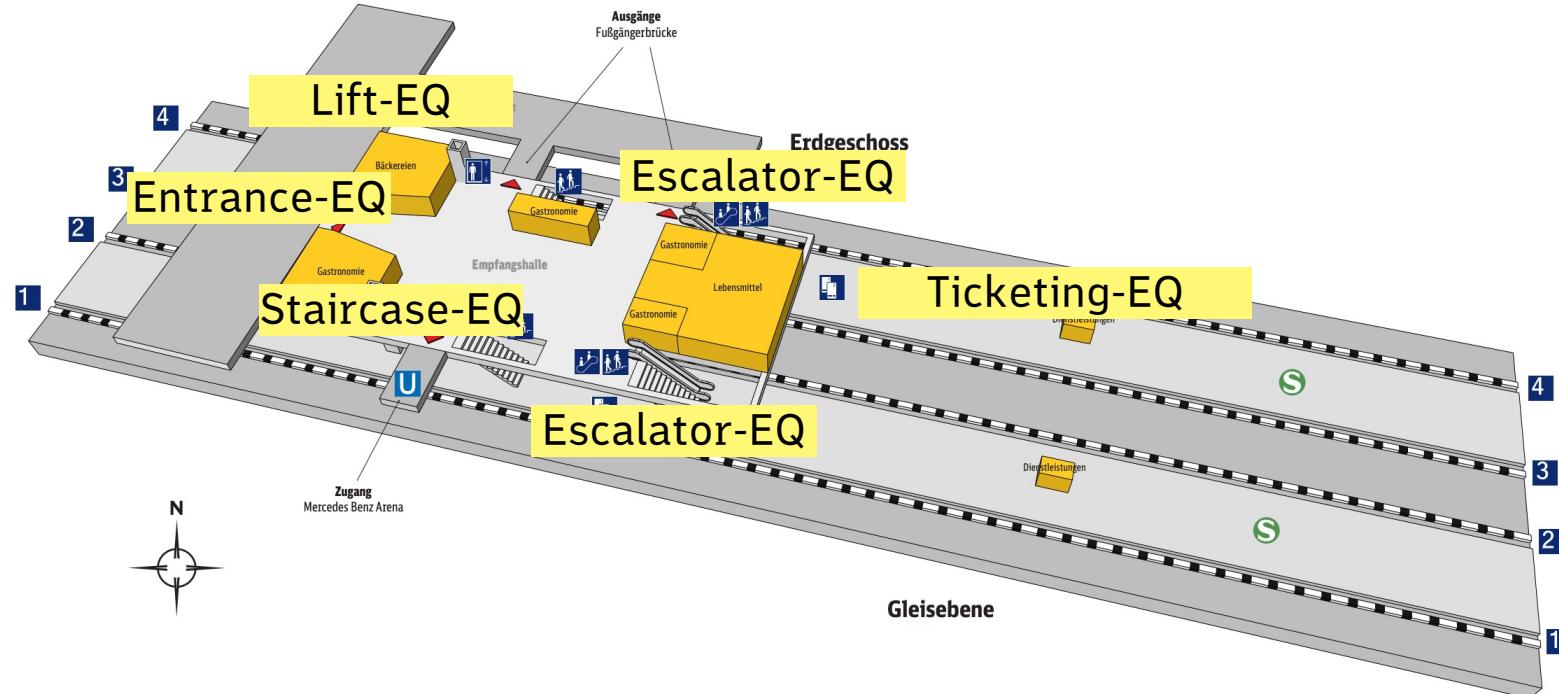
S-Bahnhof Berlin Warschauer Straße

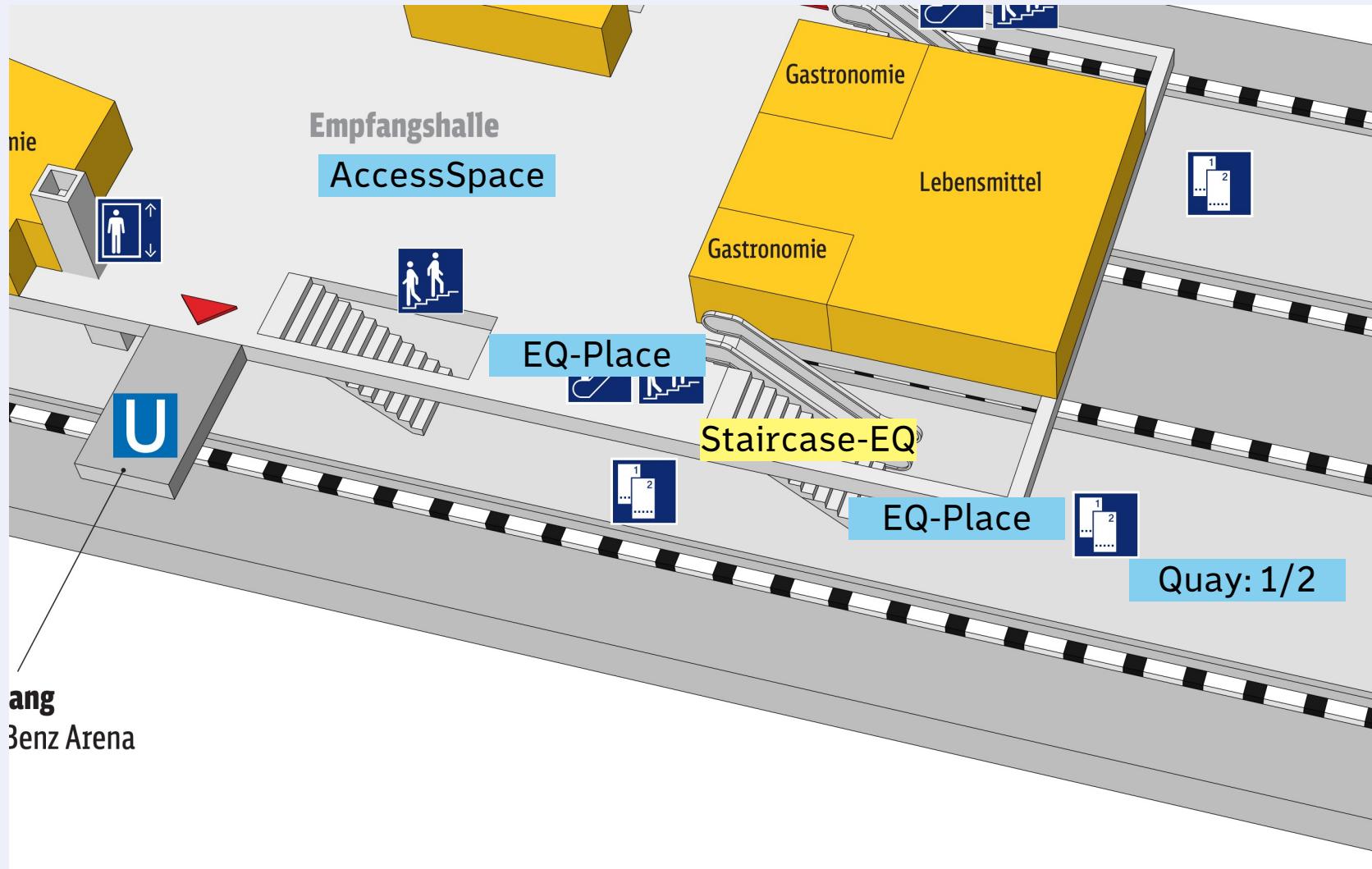
StopPlace (multimodal): S+U Warschauer Straße

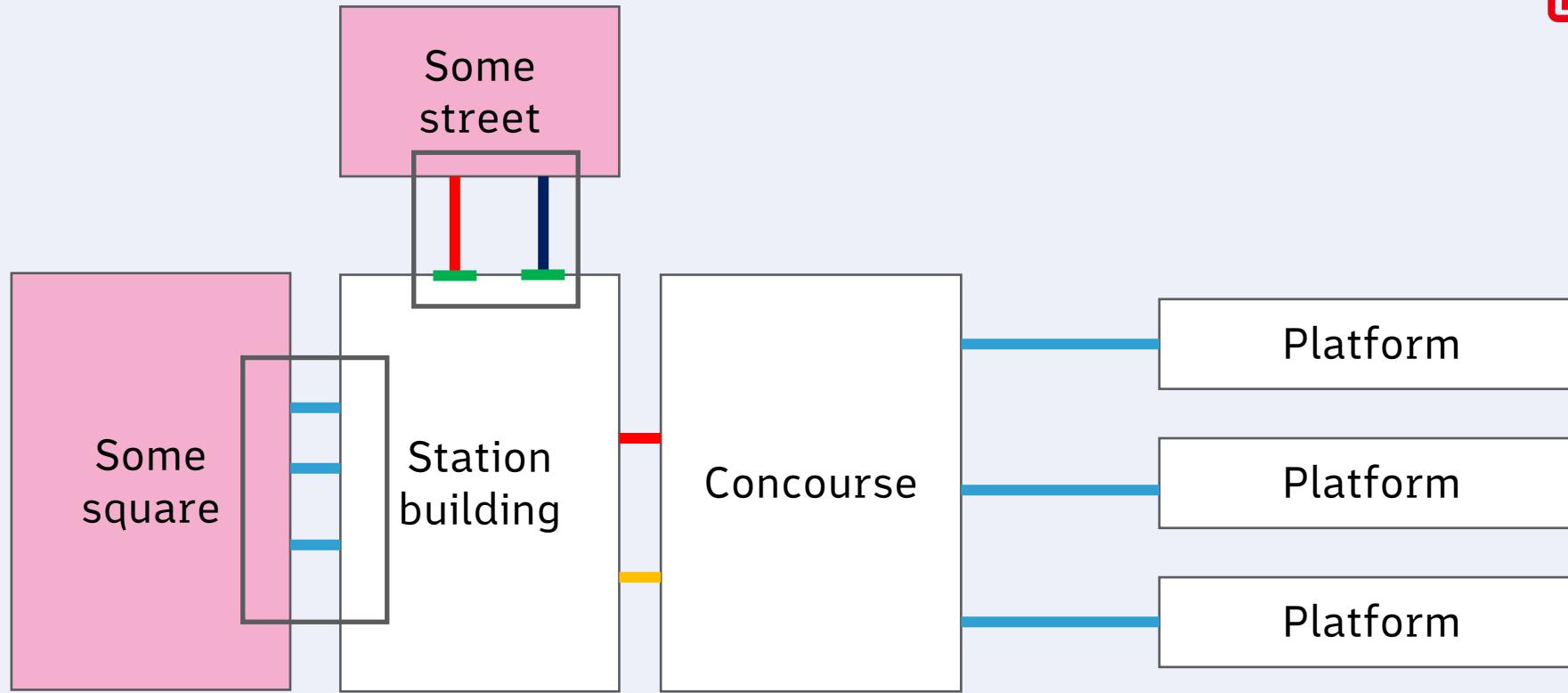
StopPlace (monomodal): S Warschauer Straße



S-Bahnhof Berlin Warschauer Straße

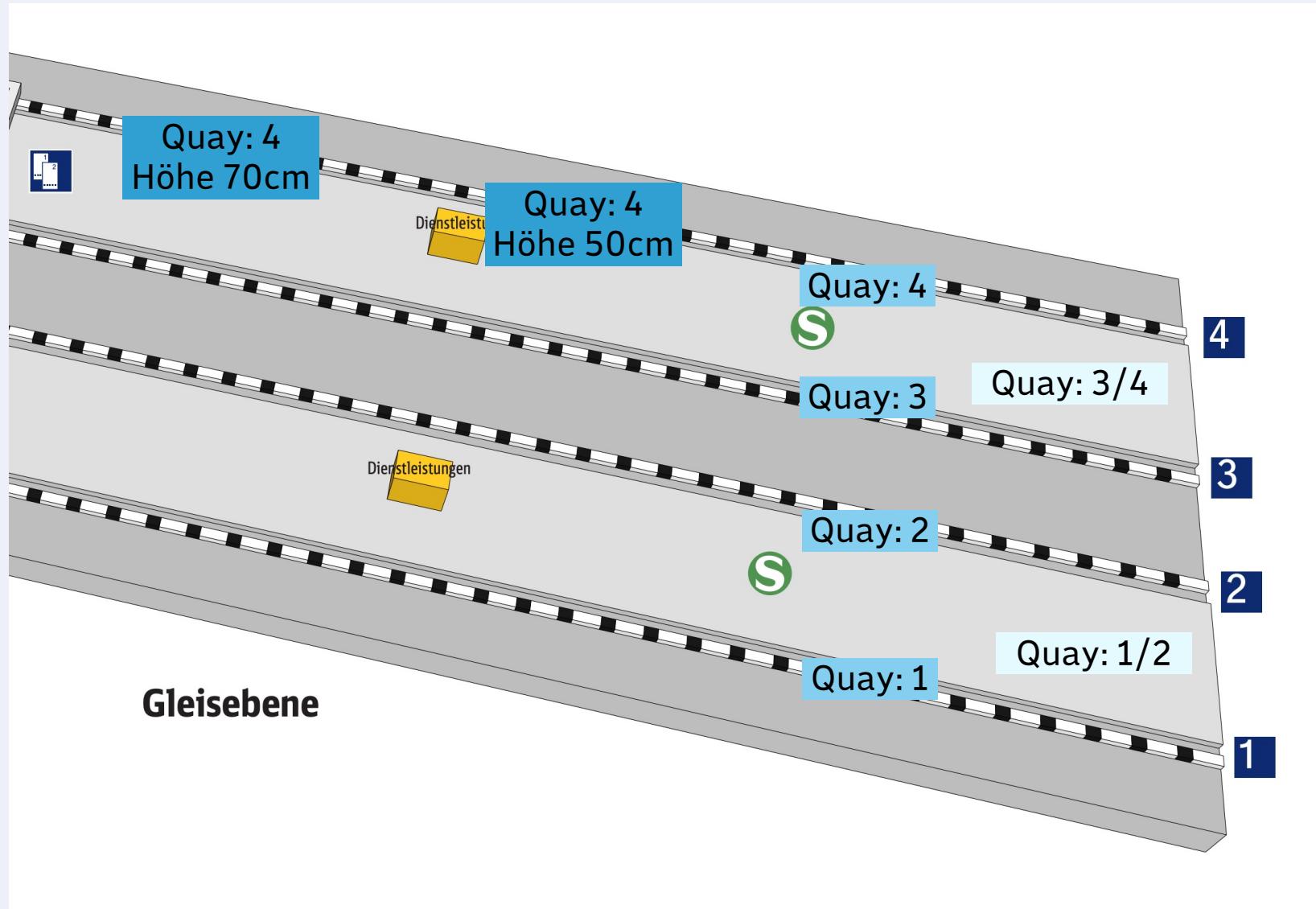






At-grade passing
Staircase
Lift
Ramp
Door

Entrance
External area
Public station area



Our new API: NeTEx

```
● ● ●
1  <?xml version="1.0"?>
2  <PublicationDelivery xmlns:ns3="http://www.siri.org.uk/siri" xmlns:ns2="http://www.opengis.net/gml/3.2" xmlns="http://www.netex.org.uk/netex">
3    <PublicationTimestamp>2024-09-04T17:25:57.739Z</PublicationTimestamp>
4    <ParticipantRef>DB</ParticipantRef>
5    <dataObjects>
6      <SiteFrame version="any" id="33076ac1-d94b-484a-9a43-e09a3ebb953c">
7        <stopPlaces>
8          <StopPlace version="any" id="de:11000:900120004">
9            <Name lang="de">Warschauer Straße</Name>
10           <!-- ... -->
11           <Locale>
12             <TimeZone>Europe/Berlin</TimeZone>
13             <DefaultLanguage>de-DE</DefaultLanguage>
14           </Locale>
15           <OperatorRef ref="68bf1a02-be07-3965-8bad-45e9c522ce5c"></OperatorRef>
16           <quays>
17             <Quay id="de:11000:900120004:1">
18               <!-- ... -->
19             </Quay>
20             <!-- ... -->
21           </quays>
22           <accessSpaces>
23             <AccessSpace id="296d0c5c-adab-4872-86f3-4f540eb9687a">
24               <!-- ... -->
25             </AccessSpace>
26           </accessSpaces>
27           </StopPlace>
28         </stopPlaces>
29       </SiteFrame>
30       <ResourceFrame version="any" id="b6507dfb-2d08-4ca9-9cb7-58c740c01258">
31         <organisations>
32           <Operator version="any" id="68bf1a02-be07-3965-8bad-45e9c522ce5c">
33             <Name>DB InfraGO AG</Name>
34             <ShortName>DB InfraGO AG</ShortName>
35           </Operator>
36         </organisations>
37       </ResourceFrame>
38     </dataObjects>
39   </PublicationDelivery>
```

Our new API: NeTEx

```
1 <Quay id="de:11000:900120004:2">
2   <keyList>
3     <KeyValue>
4       <Key>URI</Key>
5       <Value>https://daten.bahnhof.de/resource/de:11000:900120004:2</Value>
6     </KeyValue>
7     <KeyValue>
8       <Key>EQ-ID</Key>
9       <Value>10499069</Value>
10    </KeyValue>
11   </keyList>
12   <Name lang="de">S-Bahnsteig Gl.3/4 -&gt; West</Name>
13   <PrivateCode>06550-01-SB2</PrivateCode>
14   <PublicUse>all</PublicUse>
15   <Covered>outdoors</Covered>
16   <Gated>openArea</Gated>
17   <Lighting>wellLit</Lighting>
18   <SiteRef ref="de:11000:900120004"></SiteRef>
19   <TransportMode>rail</TransportMode>
20   <BoardingUse>true</BoardingUse>
21   <AlightingUse>true</AlightingUse>
22   <Length>157.00</Length>
23   <Width>9.01</Width>
24   <QuayType>railIslandPlatform</QuayType>
25   <PlatformHeight>0.96</PlatformHeight>
26 </Quay>
27 <Quay id="DE:11000:900120004:2:53">
28   <keyList>
29     <KeyValue>
30       <Key>URI</Key>
31       <Value>https://daten.bahnhof.de/resource/DE:11000:900120004:2:53</Value>
32     </KeyValue>
33   </keyList>
34   <Name lang="de">4</Name>
35   <Length>157.00</Length>
36   <QuayType>railPlatform</QuayType>
37   <PlatformHeight>1.03</PlatformHeight>
38   <ParentQuayRef ref="de:11000:900120004:2"></ParentQuayRef>
39 </Quay>
```

```
1 <LiftEquipment id="DUMMY-fda5f8ab-02ef-4d61-a9c7-22bb7d35d36d">
2   <keyList>
3     <KeyValue>
4       <Key>URI</Key>
5       <Value>https://daten.bahnhof.de/resource/DUMMY-fda5f8ab-02ef-4d61-a9c7-22bb7d35d36d</Value>
6     </KeyValue>
7   </keyList>
8   <Name lang="de">AZ Gl. 3/4 / Fabrik-Nr:10997117</Name>
9   <PrivateCode>10499258</PrivateCode>
10  <infoLinks>
11    <InfoLink>https://www.bahnhof.de/id/6550/aufzuege</InfoLink>
12  </infoLinks>
13  <Width>1.10</Width>
14  <DirectionOfUse>both</DirectionOfUse>
15  <SafeForGuideDog>true</SafeForGuideDog>
16  <Depth>2.10</Depth>
17  <MaximumLoad>1000.00</MaximumLoad>
18  <WheelchairPassable>true</WheelchairPassable>
19  <WheelchairTurningCircle>1.10</WheelchairTurningCircle>
20  <InternalWidth>1.10</InternalWidth>
21  <InternalHeight>2.20</InternalHeight>
22  <ThroughLoader>true</ThroughLoader>
23  <Attendant>false</Attendant>
24  <AlarmButton>true</AlarmButton>
25 </LiftEquipment>
26 <StaircaseEquipment id="DUMMY-00772212-061f-4d26-a0f6-acd500914d42">
27   <keyList>
28     <KeyValue>
29       <Key>URI</Key>
30       <Value>https://daten.bahnhof.de/resource/DUMMY-00772212-061f-4d26-a0f6-acd500914d42</Value>
31     </KeyValue>
32   </keyList>
33   <Name lang="de">Treppe 2 Bstg B Ost</Name>
34   <PrivateCode>10499342</PrivateCode>
35   <SafeForGuideDog>true</SafeForGuideDog>
36   <StepColourContrast>true</StepColourContrast>
37   <StepCondition>even</StepCondition>
38   <HandrailTactileSign>true</HandrailTactileSign>
39   <TopEnd></TopEnd>
40   <BottomEnd></BottomEnd>
41 </StaircaseEquipment>
```



```
1 <FacilityCondition>
2   <FacilityRef>diid:02b2be0f-c1da-1eef-a490-adbba6a917ad</FacilityRef>
3   <FacilityStatus>
4     <Status>notAvailable</Status>
5     <Description xml:lang="en">under maintenance</Description>
6   </FacilityStatus>
7 </FacilityCondition>
8 <FacilityCondition>
9   <FacilityRef>diid:02b2be0f-c1da-1eef-a490-d394f84557ae</FacilityRef>
10  <FacilityStatus>
11    <Status>available</Status>
12    <Description xml:lang="en">available</Description>
13  </FacilityStatus>
14 </FacilityCondition>
```

mobil|thek

Full dataset
for productive use



API Marketplace

API for exploration
with additional filters

Allgemein Dateien oder Inhalte **Nutzungsbedingungen** Erklärungen Datenqualität

Art der Nutzungsbedingungen Lizenz, freie Nutzung/Open Data

Standard-Lizenz Creative Commons CC Zero License (cc-zero)

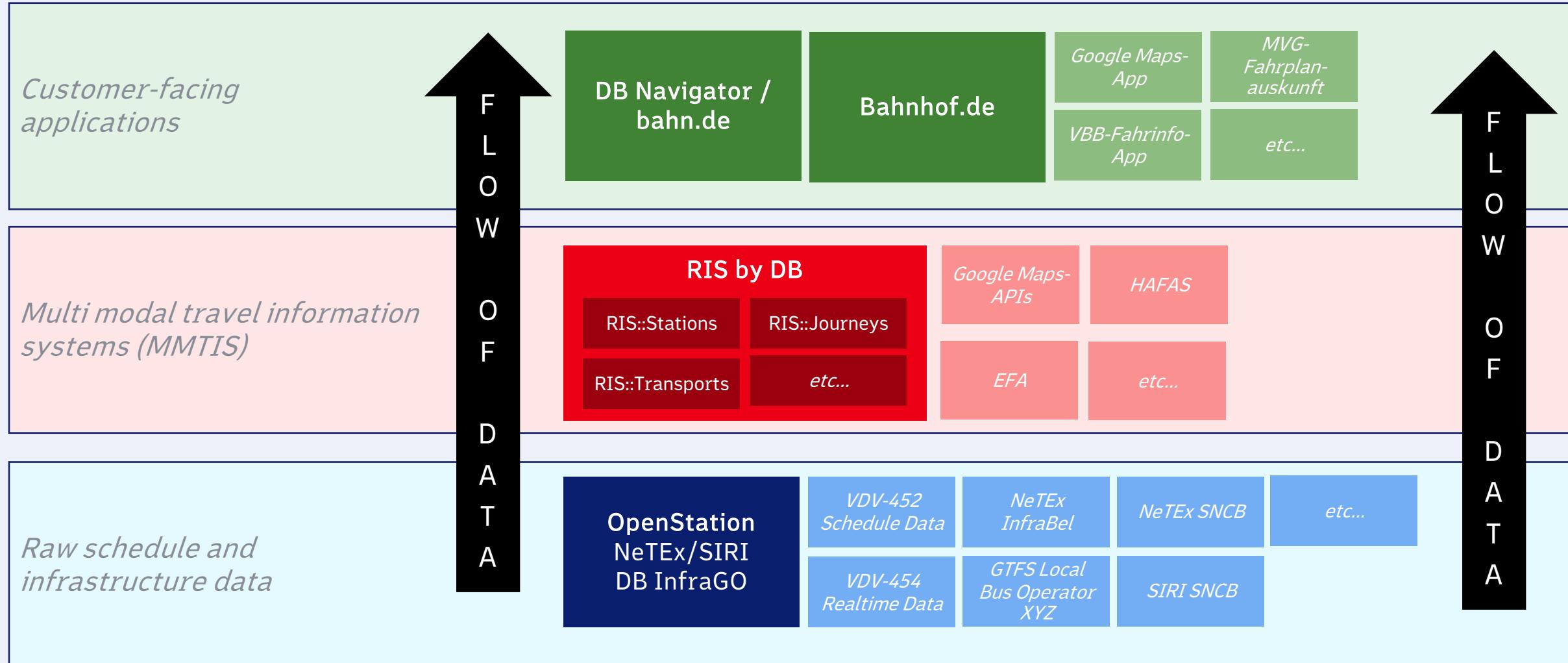
Datenzugriff über die API Nein
erst nach Freigabe des
Abonnements erlaubt

**Einzeldatenzugriff über
das Portal für anonyme
Nutzer erlaubt** Ja



<https://github.com/dbinfrago/openstation-docs>

OpenStation within DB's API ecosystem



Next steps

2026

Data quality and completeness

NeTEx-JSON (?)

2027

Additional entities
(e.g. shops and local services)

Thank you!



Documentation



Extended Version of this Talk