

# FROM MMTIS 2017/1926/EU TO A NAP MISSION STATEMENT IN SWITZERLAND

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System Tasks for Customer Information (SKI) – Team SKI+ – SBB

<https://pt-info.ch>

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## Document information

Description	This is an analysis of data categories defined in the MMTIS regulation of the EU (2017/1926) of 2017, including the updates of the recent amendment (2024/490). MMTIS defines only high-level categories, which must be matched and mapped on concrete standards (CEN Transmodel and others), profiles and realisation guides, and ultimately, on concrete datasets and APIs. This is relevant for the Swiss National Access Point in our ambition to provide interoperable data and APIs for Swiss and international mobility solutions.
Target audience	Anyone involved in IT systems for mobility solutions in Switzerland and Europe.
Electronic documentation	<a href="https://www.xn--v-info-vxa.ch/de/datenmanagement/ski/standards-der-ski">https://www.xn--v-info-vxa.ch/de/datenmanagement/ski/standards-der-ski</a>

## Change History

Version	Status	Changes	Authors	Date
0.8	Draft	Initial version	M. Meier	2024-03-19
0.9	Proposal	Fixed comments by M. Günter	M. Meier	2024-05-10

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# 1 What is it all about?

The MMTIS regulation (2017/1926/EU) of 2017 defines the legal foundation for the mission of the National Access Points (NAP) for data exchange and services in the mobility sector. EU member states are mandated to set up NAPs which provide data sets and API services for a range of data categories, including timetables, travel fares and tariffs, locations and availabilities, delays and cancellations, and more. Most EU countries have in the meantime launched their NAPs and started to provide these services on dedicated NAP websites.

In late 2023/early 2024, the EU decided and published an MMTIS amendment (2024/490/EU) which slightly extends and clarifies the original regulation. The amendment contains an updated annex with 70+ data categories that NAPs should provide.

MMTIS (regulation and amendment) defines data categories and APIs on a high-level, providing brief summaries in keywords, e.g. “scheduled transport / rail / timetables”. Partially, hints about the standards to use (e.g. NeTEx) and additional regulations are provided as well.

However, MMTIS does not define the data formats in more detail, and the profiles and realisation guides to use. This leaves a gap and plenty of room for discussion and interpretation for the practical adoption and implementation by the NAPs and standardisation bodies. It has incited debates in standardisation work-teams, and equally in the EU NAPCORE organisation aiming at coordination and harmonisation of NAPs in Europe, and in teams tasked to set up and run the actual NAPs in the given countries.

With this document, we want to contribute to bridging this gap, with a focus on the situation and adoption in Switzerland. We start with a short analysis of data categories and services defined by the MMTIS regulation, followed by important changes in the MMTIS amendment. We then provide a mapping table, based on the amendments’ annex, analysing to what extent and by which actor/data source we fulfil the regulation in Switzerland at present or soon. This analysis will help us discern our gaps and necessary future enhancement steps, and it may also help to define a mission statement for our Swiss NAP, or any NAP in Europe.

## 1.1 MMTIS Regulation

The MMTIS regulation is a supplement to the ITS directive of 2010, which defines at a very high, abstract level the ambition to build IT-Systems for optimized and safer road transport and mobility in general. The MMTIS regulation defines a specific area of application, “multimodal travel information”, and provides some clarity and details on its implementation.

After lengthy opening remarks, mainly the following sections are of relevance:

- Article 3 states that “each member state shall set up a national access point”, providing travel and traffic data.
- Articles 4 and 5 defines at a high level some of the standards to be used or other regulations to follow.
- Articles 6 and 8 define some non-functional requirements, including that the data and services be accurate, up to date, and available as free, open data or licensed under moderate terms, bias-free and non-discriminatory.
- Article 7 defines some high-level rules about providing routing (travel planning).
- The ANNEX DATA CATEGORIES finally defines a structure (hierarchy) of transport modes (scheduled, on-demand, personal), types (static or dynamic) and service levels (1, 2, 3), and

within this structure, a list of 70+ items (data sets or services) that NAPs should provide, like a shopping list.

In this way, MMTIS lays the foundation for the mission statement of a NAP. Based on the articles and annex mentioned above, NAPs may define the scope and rules of implementation for all their data sets and services.

## 2 MMTIS Amendment

The MMTIS amendment of November 2023/February 2024 is a verbose, 20-page long document which adjusts the original document in some points. Sadly, the document does not provide a simple overview of (substantial) changes, but rather adds a lot of new text and substitutes partially or fully many of the MMTIS regulation content, thus requiring lengthy and meticulous study to discern the changes.

In a detailed analysis and text comparison exercise, we have observed the following noteworthy changes, mainly items **added** or **removed**, but leaving aside details of “hair-splitting” nature.

### 2.1 Changes in the Main Sections

- “whereas” section: instead of (or in addition to) the 27 points of the regulation, the amendment provides 18 points. Of these, point 4 **adds** the parking and **removes** refuelling and charging stations from the list. Point 7 **adds** “historic” data and information on delays. Point 10 **adds** “multimodal dynamic data” and point 14 **adds** some hints about DCAT metadata.
- “historic and observed”: in various places, “static data” became “static, **historic and observed** data”.
- “travel and traffic”: in various places, “travel” became “travel **and traffic**”.
- “proven to be fully compatible and interoperable”: in several places, the requirement was **added** that other data formats may only be used if “proven” to be “fully compatible and interoperable” ... “including for example through automatic converters and validators”.
- Article 2 “Definitions”: **added** “access node”, “data holder”, “data user”, “observed data”. Removed “infrastructure manager”, “traveller transport service” and “user”.
- Article 3: **Added** “proxy” (“third-party database or aggregator”) as an option for NAPs to provide the data.
- Article 4: **Added** some new deadlines end of 2025. **Added** requirement to exclude “personal data”.
- Article 5: **Added** the “TEN-T network” (Trans-European Transport Network) regarding “dynamic travel and traffic data”, plus a timetable (deadlines) for implementation.
- Article 6: **Added** new requirement that travel information services must be based on “most recent accessible” data, data holders must update accordingly.
- Article 8: **Added** requirement that the member states reach an agreement on “minimum data quality requirements”.

### 2.2 Changes in the ANNEX DATA CATEGORIES

- “On demand” new at eye level with “scheduled”: in various places, “on demand where relevant” was added, making it a first-class citizen besides scheduled transport.

- Renamed “demand-responsive” to “transport on-demand”
- **+Added/-deleted** some modes (scheduled: +cableways, +inland waterways; on-demand: +dial-a-ride services, +ride-sharing, +bike-rental, +e-scooter sharing; personal: –cycle, +bicycle, +scooter, +walking.
- 1.1. d ix: regarding vehicle information for trip planning: some more details, emphasizes accessibility (low floor, wheelchair access, etc.).
- 1.1. e: **adds** details about bicycle tracks and bus lanes.
- 1.2. a: location search:
  - o **added** “(i) location of parking places (on and off-street), including accessible parking places for persons with disabilities and persons with reduced mobility”;
  - o **added** “(iii) Park & Drive stops”;
  - o **added** “(vii) scooter parking zones”;
  - o **removed** “(iv) Publicly accessible refuelling stations for petrol, diesel, CNG/LNG, hydrogen powered vehicles, charging stations for electric vehicles” (also 2.2 a).
- 1.2 b and c: texts are organized slightly differently; the main net difference is the **added** point “capacity and access conditions for bicycles”.
- 1.3 b changed text order; generalised to "for transport on demand", specific modes are no longer listed; charging/refuelling is no longer mentioned.
- 1.4 “level of service 4” **added** a completely **new section** on (a) historic travel and traffic data on delays, (b) observed data on delays and passing time (c) observed data on cancellations.
- 2.1 i “disruptions”: **added** details: “such as network closures and/or diversions, and when possible, the reason”.
- 2.1 ii “real-time status information”: **added** “estimated departure and arrival times of services”.
- 2.2 a: the whole point “Passing times, trip plans and auxiliary information (all modes)” has been **removed**.
- 2.2 a: **added** “information service on parking tariffs”, **removed** same as 1.2. a bullet 4.
- 2.2 b: “availability check” became “availability check **and location**”; **added** new modes “scooter-sharing” and “other vehicle-sharing”; **removed** “parking tariffs, road toll tariffs”.
- 2.3: **removed**: Trip plans: Future predicted road link travel times. **added**: Occupancy information of the vehicle – for scheduled transport and transport on demand where relevant.

In summary, the amendment does not make big changes, but it does slightly shift the focus away from cars (refuelling stations) and more towards on-demand, sharing and micro-mobility modes. Furthermore, it adds emphasis on historic and observed data, including data relevant to passenger rights in case of delays or cancellations.

### 3 Mapping on Standards, Profiles and APIs / Datasets

In this section, we provide a mapping table in which we map the given items of the new MMTIS annex (from MMTIS amendment) onto services (data sets or APIs), including details about data formats, standard, profiles and/or realisation guides.

The table may serve for checking the state of implementation, for gap analysis, and as part of a mission statement of the Swiss NAP, currently run by SKI+, mandated by the FOT.

The table is structured as follows:

- “#”: an unofficial numbering of the items, for convenience.
- “Code”: the official numbering of the items used by the MMTIS amendment:
  - o The first decimal digit means: 1: TYPES OF THE STATIC, HISTORIC AND OBSERVED TRAVEL AND TRAFFIC DATA, 2: TYPES OF THE DYNAMIC TRAVEL AND TRAFFIC DATA.
  - o The second decimal digit (1, 2, 3, 4) means the “Level of service”.
  - o Roman letters (a, b, ...) and roman numerals (i, ii, ...) add two extra levels of hierarchy.
- “MMTIS item”: strictly following the Annex in the MMTIS amendment.
- “Current CH Coverage”: our estimate of the current state in Switzerland, meaning quantitative coverage and feature-completeness, whereby the percentage ranges in brackets are provided to clarify what we mean by these terms:
  - o “full” (95..100 %),
  - o “mostly” (70..95 %),
  - o “partial” (20..70 %),
  - o “fragmentary” (1..19 %), and
  - o “not available” (0 %),
  - o “not planned” (0%) and we don’t intend to do those
- “Discussion”: notes, remarks, hints, links, etc. Gap criticality is indicated (and used to set the background colour of the cell to red, orange, yellow or none).

Note: Some of the “items” (usually those ending with a colon “:”) have the meaning of a title for the subsequent items; the corresponding rows in the table have light-gray background colour.

#	Code	MMTIS item	Current CH Coverage	Discussion
1	1.1. a	location search (origin/destination):		
2	1.1. a i	addresses (building number, street name, postcode);	full	FSO, Federal Register of Buildings and Dwellings
3	1.1. a ii	topographic places (city, town, village, suburb, administrative unit);	partial	ROKAS; semi-open API access through OJP LocationInformationRequest, or FSO (t.b.d.) Gap criticality is low.
4	1.1. a iii	points of interest (related to transport information) to which people may wish to travel;	mostly	ROKAS; semi-open API access through OJP LocationInformationRequest. Gap criticality is medium.
5	1.1. b	trip plans: operational calendar, mapping day types to calendar dates;	Full	This information is within the AvailabilityConditions. It can be mapped to calendar and day types.
6	1.1. c	location search (access nodes) – for scheduled transport and transport on demand where relevant:		
7	1.1. c i	identified access nodes;	full	Data set “service points” on ODMCH (source: ATLAS).
8	1.1. c ii	geometry/map layout structure of access nodes;	partial	OSM; not fully modelled. But we rely on those. Gap criticality is medium.
9	1.1. d	trip plan computation – for scheduled transport and transport on demand where relevant:		
10	1.1. d i	connection where interchanges may be made;	mostly	Part of the NeTEx and HRDF files on ODMCH.

11	1.1. d ii	default transfer times at interchanges;	mostly	SKI, as far as defined (details to be added here later).
12	1.1. d iii	network topology and routes/lines (topology);	mostly	OSM. Gap is medium critical.
13	1.1. d iv	transport operators;	full	ODMCH, data set “business organisations”.
14	1.1. d v	timetables;	full	SKI, published on ODMCH.
15	1.1. d vi	planned interchanges between guaranteed scheduled services;	partial	Part of HRDF and NeTex Gap criticality is high.
16	1.1. d vii	hours of operation;	full	SKI (details to be added here later).
17	1.1. d viii	facilities of access nodes (including platform information, help desk/information points, ticket booths, lifts/stairs, entrances and exit locations);	not available	Gap criticality is high.
18	1.1. d ix	vehicles, including their accessibility (such as low floor, wheelchair accessible, pram accessible) and accessibility of on-board services (such as toilets);	not available	Gap criticality is high.
19	1.1. d x	accessibility of access nodes, and paths within an interchange (such as existence of lifts, escalators);	fragmentary	ODMCH, dataset “Inventory DDA” (Disability Discrimination Act). Gap criticality is medium.
20	1.1. d xi	existence of assistance services (such as existence of on-site assistance);	fragmentary	ODMCH, dataset “Inventory DDA” (Disability Discrimination Act). Gap criticality is medium.
21	1.1. e	trip plan computation:		
22	1.1. e i	road network (including segregated lanes for bus/taxi);	mostly	OSM.
23	1.1. e ii	cycle network (cycle tracks, cycle lanes, bus-and-cycle lanes, on-road shared with vehicles, on-path shared with pedestrians);	mostly	OSM
24	1.1. e iii	pedestrian network and accessibility facilities.	mostly	OSM
25	1.2. a	location search – for transport on demand and personal transport:		
26	1.2. a i	location of parking places (on and off-street), including accessible parking places for persons with disabilities and persons with reduced mobility;	partial	ODMCH, dataset “Inventory DDA” (Disability Discrimination Act) and “Park & Rail - parking facilities”. Gap criticality is low.
27	1.2. a ii	Park & Ride stops;	partial	ODMCH, dataset “Park & Rail - parking facilities”). Gap criticality is low.
28	1.2. a iii	Park & Drive stops;	partial	What is the precise definition of this category? To be awaited. Gap criticality is low.
29	1.2. a iv	bike-sharing stations;	full	SFOE, “Shared Mobility services”.
30	1.2. a v	car-sharing stations;	full	SFOE, “Shared Mobility services”.
31	1.2. a vi	secure bike parking (such as locked bike garage);	partial	ODMCH, dataset “Bike Parkings”. Gap criticality is medium.

32	1.2. a vii	scooter parking zones;	partial	ODMCH, dataset “Bike Parkings”. Gap criticality is medium.
33	1.2. b	information service:		
34	1.2. b i	where and how to buy tickets for scheduled transport, including retail channels, fulfilment methods, payment methods;	mostly	Ticket sale in Swiss public transport (scheduled modes) is fully integrated in a centralized distribution system called NOVA. Access is restricted, however.
35	1.2. b ii	where and how to pay for parking, including retail channels, fulfilment methods, payment methods;	not available	Gap is of low criticality.
36	1.2. c	auxiliary information – for scheduled transport and transport on demand where relevant:		
37	1.2. c i	basic common standard fares:		
38	1.2. c i–	fare network data (fare zones/stops and fare stages),	not planned	Gap is of medium criticality.
39	1.2. c i–	standard fare structures (point to point including daily and weekly fares, zonal fares, flat fares);	not planned	Gap is of medium criticality.
40	1.2. c ii	vehicle facilities, including classes of carriage, on-board Wi-Fi, capacity and access conditions for bicycles.	mostly	SKI, HRDF timetables, as far as HRDF can provide this information.
41	1.3. a	detailed common standard and special fare query – for scheduled transport and transport on demand where relevant:		
42	1.3. a i	passenger classes (classes of passenger such as adult, child, senior, student, military/veteran, passenger with disability and passenger with reduced mobility, and qualifying conditions, and classes of travel);	not available	Gap is of medium criticality.
43	1.3. a ii	common fare products (access rights such as zone/point-to-point including daily and weekly tickets/single/return, eligibility of access, basic usage conditions such as validity period/operator/time of travel/interchanging, standard point-to-point fares prices for different point-to-point pairs including daily and weekly fares/zonal fare prices/flat fare prices);	not planned	Ticket sale in Swiss public transport (scheduled modes) is fully integrated in a centralized distribution system called NOVA. Access is restricted, however, to transport operators. As of autumn 2023, ODMCH provides an experimental service “OJP Fare” with partial coverage. Gap criticality is high.
44	1.3. a iii	special fare products (offers with additional special conditions such as promotional fares, group fares, season passes, aggregated products combining different products, and add-on products such as parking and travel, minimum stay);	not planned	Same as 1.3. a ii.
45	1.3. a iv	basic commercial conditions such as refunding, replacing, exchanging or transferring;	not planned	Same as 1.3. a ii.



46	1.3. a v	basic booking conditions such as purchase windows, validity periods, routing restrictions zonal sequence fares, minimum stay;	not planned	Same as 1.3. a ii.
47	1.3. b	information service – for transport on demand: how to book demand-responsive transport services, including retail channels, fulfilment methods, payment methods;	not available	FOT has stopped plans by SKI+ to build a prototypical platform/broker system for booking/purchase of both scheduled and on-demand modes (as an enabler for an open MaaS ecosystem). Gap criticality is high.
48	1.3. c	trip plans:		
49	1.3. c i	detailed cycle network attributes (surface quality, side-by-side cycling, shared surface, on/off road, scenic route, “walk only”, turn or access restrictions, e.g. against flow of traffic);	mostly	OSM covers many, though maybe not all aspects.
50	1.3. c ii	parameters needed to calculate an environmental factor such as greenhouse gas emissions per vehicle type or passenger mile or per distance walked;	mostly	SFOE, although only in a very simple way.
51	1.3. c iii	parameters needed to calculate fuel consumption of conventional and alternative fuels;	not available	Gap criticality is low.
52	1.3. d	trip plan computation: estimated travel times by day type and time-band by transport mode/combo of transport modes.	full	OJP.
53	1.4. a	historic travel and traffic data on delays – for scheduled transport and transport on demand where relevant;	fragmentary	People would need to copy timetables. We have IST files from how public transport operated yesterday.
54	1.4. b	observed data on delays and passing time – for scheduled transport:		
55	1.4. b i	length of, and when possible, the reason for, delays of at least 60 minutes for rail passenger services (in accordance with Article 19 of Regulation (EU) 2021/782);	not planned	Is done in a separate service by SBB and on different legal ground.
56	1.4. b ii	length of, and when possible, the reason for, delays in departure of more than 90 minutes for sea and inland waterways passenger services (in accordance with Article 18 of Regulation (EU) No 1177/2010);	not planned	Is done in a separate service by SBB and on different legal ground.
57	1.4. b iii	length of, and when possible, the reason for, delays in departure from a terminal of more than 120 minutes for regular bus and coach passenger services with a scheduled distance of 250 km or more (in accordance with Article 19 of Regulation (EU) No 181/2011);	not planned	Is done in a separate service by SBB and on different legal ground.

58	1.4. b iv	length of, and when possible, the reason for, flight delays at departure of at least 120 minutes; and flight delays at arrival of at least 180 minutes (in accordance with Articles 5 and 6 of Regulation (EC) No 261/2004);		Is done in a separate service by SBB and on different legal ground.
59	1.4. c	observed data on cancellations – for scheduled transport:		
60	1.4. c i	cancellations, and when possible, the reason, of rail passenger services;	mostly	In realtime prognosis and timetable.
61	1.4. c ii	cancellations, and when possible, the reason, of sea and inland waterways passenger services;	mostly	In realtime prognosis and timetable.
62	1.4. c iii	cancellations, and when possible, the reason, of regular bus and coach services with a scheduled distance of 250 km or more;	mostly	In realtime prognosis and timetable.
63	1.4. c iv	cancellations, and when possible, the reason, of flights;	not available	Data from BAZL not available. Gap criticality is medium.
64	1.4. d	information on parking tariffs.	not available	Gap criticality is low.
65	2.1. .	Passing times, trip plans and auxiliary information:		
66	2.1. . i	disruptions, such as network closures and/or diversions, and when possible, the reason;	full	In NeTEx, HRDF and GTFS. However, we currently use the Swiss NeTEx profile. Gap criticality is low.
67	2.1. . ii	real-time status information, such as estimated departure and arrival times of services, delays, cancellations, guaranteed connections monitoring;	mostly	ODMCH, API “GTFS Realtime (GTFS-RT)” and SIRI ET / PT. Some operators don’t deliver real-time. Gap criticality is low.
68	2.1. . iii	status of access node features (including dynamic platform information, operational lifts/escalators, closed entrances and exit locations) – for scheduled transport.	fragmentary	As of spring 2023, not yet available. Work on a SIRI-FM profile and integration of data sources underway. Gap criticality is very high.
69	2.2. a	information service on parking tariffs – for transport on demand and personal transport;	not available	Gap criticality is very high.
70	2.2. b	availability check and location – for transport on demand and personal transport where relevant:		
71	2.2. b i	car-sharing availability and location, bike-sharing availability and location, scooter-sharing availability and location, and other vehicle-sharing availability and location;	mostly	SFOE, “Shared Mobility services”.
72	2.2. b ii	car parking spaces available (on and off-street).	fragmentary	ODMCH, dataset “Park & Rail - parking facilities”. Gap criticality is medium.
73	2.3. .	Occupancy information of the vehicle – for scheduled transport	partial	ODMCH, dataset “occupancy forecasts” of some train operators

		and transport on demand where relevant.		(forecasts, not measured or historical data) Gap criticality is medium
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## 4 Abbreviations and Links

Abbreviation	Description	Link
ATLAS	“Atlas” application with a registry of train stations, bus stops and more. Some data sets published on ODMCH.	<a href="https://atlas.app.sbb.ch">https://atlas.app.sbb.ch</a>
CEN-SIRI	CEN SIRI Website	<a href="https://www.transmodel-cen.eu/siri-standard">https://www.transmodel-cen.eu/siri-standard</a>
CH	Switzerland	<a href="https://en.wikipedia.org/wiki/Switzerland">https://en.wikipedia.org/wiki/Switzerland</a>
FOT	(Swiss) Federal office of Transport	<a href="https://www.bav.admin.ch/bav/en/home.html">https://www.bav.admin.ch/bav/en/home.html</a>
FSO	(Swiss) Federal Statistical Office	<a href="https://www.bfs.admin.ch/bfs/en/home.html">https://www.bfs.admin.ch/bfs/en/home.html</a>
ITS Directive, aka 2010/40/EU	Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport Text with EEA relevance	<a href="https://eur-lex.europa.eu/eli/dir/2010/40/oj">https://eur-lex.europa.eu/eli/dir/2010/40/oj</a>
MMTIS Regulation, aka 2017/1926/EU	COMMISSION DELEGATED REGULATION (EU) 2017/1926 of 31 May 2017 supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of EU-wide multimodal travel information services, 31.05.2017. Available in all EU languages.	<a href="https://eur-lex.europa.eu/eli/reg_del/2017/1926/oj">https://eur-lex.europa.eu/eli/reg_del/2017/1926/oj</a>
MMTIS Amendment, aka 2024/490/EU	COMMISSION DELEGATED REGULATION (EU) 2024/490 of 29 November 2023 amending Delegated Regulation (EU) 2017/1926 supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of EU-wide multimodal travel information services (Text with EEA relevance), published 14.02.2023.	<a href="https://eur-lex.europa.eu/eli/reg_del/2024/490">https://eur-lex.europa.eu/eli/reg_del/2024/490</a>
ODMCH	Open data platform mobility Switzerland, the current Swiss NAP, operated by SKI+, mandated by FOT.	<a href="https://opentransportdata.swiss">https://opentransportdata.swiss</a>
OJP	Open Journey Planner, an open Swiss trip planner funded by FOT	<a href="https://opentransportdata.swiss/en/cookbook/open-journey-planner-ojp">https://opentransportdata.swiss/en/cookbook/open-journey-planner-ojp</a>
OSM	OpenStreetMap	<a href="https://www.openstreetmap.org">https://www.openstreetmap.org</a>
ROKAS	ROKAS Routing & Karten Services, Journey Maps	<a href="https://developer.sbb.ch/apis/journey-maps-apikey/information">https://developer.sbb.ch/apis/journey-maps-apikey/information</a>
SKI	SKI agency / Transport Data Management Standards	<a href="https://transportdatamanagement.ch/de/standards">https://transportdatamanagement.ch/de/standards</a>

SKI+	SKI sub-team, supporting FOT in the setup of a Swiss National Access Point.	<a href="https://opentransportdata.swiss/en/">https://opentransportdata.swiss/en/</a>
SFOE	Swiss Federal Office of Energy	<a href="https://www.bfe.admin.ch/bfe/en/home.html">https://www.bfe.admin.ch/bfe/en/home.html</a>