SPA – Coordinated Metadata Catalogue

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Content

1. Introduction

The Single Point of Access is an intermediary digital platform and it is part of 3 Delegated Regulations following priority actions B,C and E of the EU ITS Directive 2010/40/EU. One of the main functions is providing information about existing traffic relevant data to every interested person or company. A detailed and standardized dataset description – the so-called metadata - is needed to create a searchable, easy manageable and high quality register.

There is more than one approach to find a practical way for an interoperable compatible minimum data description method. The SPA-Working group composed by representatives from the Netherlands, Germany and Austria decided to limit its work to the definition of the attribute names and data field definitions. This approach has several benefits for the potential user seeking for information via a Single Point of access (SPA). In case an international user accesses single access points (SPAs) of several EU Member States, there should be no difference in wording and their meaning between the metadata provided at the SPAs of different countries and in different languages. Thus, the considerations laid down in this document aim to support easy data exchange and to prevent data errors when exchanging data between databases, it is necessary to define data fields and data field definitions which we call metadata catalogue.

2. Purpose

Regarding to EU Regulations every EU Member State has to implement a Single Access Point for its country. However these regulations do not define the types of data and the data formats. For reasons of data exchange, compatibility and interoperability the responsible partners of Austria, the Netherlands and Germany started a working group to develop a common minimum metadata set which describes all data covered by the EU directive and the respective specifications. This minimum metadata set describes the most important data elements, a technical description of the data elements and contains all necessary information in order to be able to fulfil the duties of a SPA and a national body.

The objectives of this paper are:

- Definition of data elements which are necessary to describe a dataset in a minimal but adequately way
- Definition of wordings and semantics
- Definition of predefined categorisations
- Definition of data field name
- Definition of data value type
- Recommendations of data field length

The definition of data elements, wordings and predefined categorisations form the core element for data exchange and interoperability. For a technical information exchange and later database operations technical parts like field name, value type and length need to be harmonised.

The common minimum dataset should be compatible with the INSPIRE regulation, where appropriate, and take into account the DCAT - AP (Application profile for data profiles in Europe) specification. Every national implementation is free to add more metadata elements then described in this document. However it should adhere to the minimum metadata set as specified here.

This paper focuses only on content and the technical aspects of the minimum metadata set. It does not cover recommendations about the user interface, front end, data presentation or any other web part including all national laws (e.g. privacy).

3. Definition

Certain terms and definitions need to be specified to achieve a common understanding.

Publication

A publication is an abstract information element that covers the (recurring) data set(s) of a distinct content provided in a specific data format based on a specific communication method.

So a publication is the combination of a data set and the way the data is published (made accessible). The same data set (e.g. static parking information for truck drivers) can be provided in different ways e.g. as downloadable zip file or as XML using a SOAP web service. These are two publications based on one data set.

Metadata set

Metadata contain information about a publication facilitating discovery services.

Metadata set is the collection of all metadata elements.

Data set

A data set contains the road and traffic data which are provided by the data owner.

Publisher

A Publisher is the entity (company, authority or person) who publishes a dataset. He holds up the data access and defines data routines.

Contact Point

A Contact Point is the entity (company, authority or person) who registered the dataset at the SPA and is liable for the correctness of the metadata. In most case this will be the data owner.

Data Owner

A Data owner is the entity (company or authority) which owns or produces data. It is liable for processing, aggregation, quantity and quality of the data.

4. Minimum Metadata Elements - Description

In case of data exchanges between two databases concerning metadata, the element name, field type and recommend field size have to be the same and type equal. To enhance the usability the name should also be the same. In this chapter data fields will be described, but without any order or categorisation.

This paper does not cover with the exchange format and the communication protocol that shall be used for automatic (meta)data exchange[1]. In a further step these formats and protocols should also be specified to facilitate automated search functionalities.

[1] A possible specification would be a XML-schema for the metadata (like INSPIRE do) and the definition of a SOAP web service for communication.

4.1. Overview

Name of Metadata element	Mandatory for Nation	Field name	Type of value	Field length (recommended)	Technical description	Example
Date of Metadata	True	modification_date	DateTime	-	dd.MM.yyyy hh:mm and Timezone; NOT NULL	02.09.2015 T1 12:00
Metadata language	True	md_language	Predefined Text	100	Predefined EU24 Language set ISO 639-2 conform; multiple choice; NOT NULL	ger; eng;
Contact point for metadata	False	cp_name	Free text	50	Text; utf8; NULL	Hans Maier
	True	cp_comp_name	Free text	50	Text; utf8; NOT NULL	Data GmbH
	True	cp_address	Free text	50	Text; utf8; NULL	Data street 1, Vienna
	True	cp_email	Free text	50	Text; utf8; NOT NULL	hans@data.at
	False	cp_website	Free text	50	Text; utf8; NULL	http://data.at
	False	cp_tel	Free text	50	Text; utf8; NULL	-
Name of publication	True	p_name	Free text	100	Text; utf8; NOT NULL	Highway network Austria
Description of publication	True	p_description	Free text	1000	Text; utf8; NOT NULL	Contains static high priority network of Austria, Link information: Name, Lane number, Direction
Dataset type category	True	data_agr_type	Predefined Text	1000	Predefined 15 data categories; Lookup Table; multiple choice; NOT NULL	
Dataset detailed type	True for self-validation	data_org_type	Predefined Text	1000	Predefined 50 data types; Lookup Table; multiple choice; NULL	
Dataset language	True	ds_language	Predefined Text	3	Predefined EU24 Language	ger;

					set; single choice; NOT NULL	
Start date of publication	True	p_start_date	Date	-	dd.MM.yyy; NOT NULL	02.09.2015 00:00
End date of publication	False	p_end_date	Date	-	dd.MM.yyyy; NULL	02.09.2016 00:00
Area covered by publication	True	val_area	Predefined Text	1000	Predefined NUTS 0 – 3 Codes; UTF8; multiple choice; NOT NULL	AUT11; AUT12;AUT13;
Network coverage	True	net_category	Predefined Text	50	Predefined; UTF8; multiple choice; NOT NULL	Motorway
Network coverage description	False	net_description	Free text	200	Text; utf8; NULL	structural separated bidirectional lanes, 2 to 4 lanes, minimum speed 80
Publisher	True	p_name	Free text	50	Text; utf8; NOT NULL	Hans Maier
	True	p_comp_name	Free text	50	Text; utf8; NOT NULL	Data GmbH
	True	p_address	Free text	50	Text; utf8; NOT NULL	Data street 1, Vienna
	True	p_email	Free text	50	Text; utf8; NOT NULL	hans@data.at
	False	p_website	Free text	50	Text; utf8; NULL	http://data.at
	True	p_tel	Free text	50	Text; utf8; NOT NULL	-
Data owner	False	do_name	Free text	50	Text; utf8; NULL	Hans Maier
	True	do_comp_name	Free text	50	Text; utf8; NOT NULL	Data GmbH
	False	do_address	Free text	50	Text; utf8; NULL	Data street 1, Vienna
	True	do_email	Free text	50	Text; utf8; NOT NULL	hans@data.at
	False	do_website	Free text	50	Text; utf8; NULL	http://data.at
	True	do_tel	Free text	50	Text; utf8; NOT NULL	-
Contract or licence	True	con_lic	Free text	50	Predefined; UTF8; single choice; NOT NULL	Licence
Condition for use	True if con_lic is used	con_url	Free text	100	Text; utf8; NULL	http://data.at/terms.pdf
Structure of data set	True	tech_structure	Free text	20	Predefined; single choice; utf8; NOT NULL	Datex2;

Access interface	True	interface	Free text	200	Predefined; single choice; utf8; NOT NULL	SOAP;
Communication method	True	com_method	Free text	50	Predefined; Multiple choice; utf8; NOT NULL	push;
Access URL	True	access_url	Free text	100	Text; utf8; NOT NULL	http://data.at/access.csv
Update frequency	True	update_freq	Free text	50	Predefined; Single choice; utf8; NOT NULL	yearly
Quality Indicator	True	qm_indicator	Free text	200	Text/URL; UTF8;Not NULL	According to the EIP+ quality measures 4Stars
National Body validation date	False	validation_date	Date	-	dd.MM.yyyy; NULL	02.09.2015

4.2. Metadata elements for minimum metadata set

4.2.1. Metadata information

4.2.1.1. Date of Metadata

Description and References

The element “Date of metadata” is the date stamp (date and time) when the current version of the metadata set was created or last modified. It will be generated by the system. Therefore it’s mandatory.

Reference to:
DCAT-AP: catalogue-record: modified (mandatory)
INSPIRE: Metadata date (mandatory)

Database features

Fieldname: modification_date

Type: DateTime

Recommended length: -

Description: dd.MM.yyyy T hh:mm (02.09.2015 T1 12:00); NOT NULL

4.2.1.2. Metadata language

Description and References

This element indicates the language in which the metadata is described. Next to the national operators and publishers there are international operators which use their own language for descriptions. According to the ISO 639 standard part 2, there is a 3 letter code for 24 EU languages, which should be used. In the minimum data set at least one language has to be set. According to the international character of each SPA and in consideration of MS having multiple official languages it should be possible to select more than one language. It is preferred to have a predefined selection of languages.

The list of codes for the 24 official EU languages is:

Bulgarian – **bul**	Irish – **gle**
Croatian – **hrv**	Italian – **ita**
Czech – **cze**	Latvian – **lav**
Danish – **dan**	Lithuanian – **lit**
Dutch – **dut**	Maltese – **mlt**
English – **eng**	Polish – **pol**
Estonian – **est**	Portuguese – **por**
Finnish – **fin**	Romanian – **rum**

French – **fre** Slovak – **slo**
German – **ger** Slovenian – **slv**
Greek – **gre** Spanish – **spa**
Hungarian – **hun** Swedish – **swe**

The list of all the codes is defined at
http://www.loc.gov/standards/iso639-2/
Regional languages also are included in this list.

Reference to:
DCAT-AP: catalogue-record: language (mandatory)
INSPIRE: Metadata language (mandatory)

Database features

Fieldname: md_language

Type: Predefined text

Recommended length: 100

Description: Predefined; UTF8; NOT NULL

4.2.1.3. Contact point for metadata

Description and References

The contact point describes an organisation, if applicable a person, which is responsible for creation and maintenance of the metadata. This person or company is the direct contact for the single access point and data searching users. This information is mandatory but each user can decide if the information is shown in the SPA-Interface.

For the data fields the common vCard-format is used. The vCard standard defines up to 40 fields, which could be filled in. To simplify metadata input, only a selection of fields are part of the minimum meta data set and might be shown in the user interface.

Reference to:
DCAT-AP: n/a
INSPIRE: Metadata point of contact (mandatory)

Title	DB_Name	DB_Type	DB_ Field_length	DB_description
Name	cp_name	Free text	50	Text, utf8, NULL
Company Name	cp_comp_name	Free text	50	Text, utf8, NOT NULL
Address	cp_address	Free text	50	Text, utf8, NULL

E-Mail	cp_email	Free text	50	Text, utf8, NOT NULL
Website	cp_website	Free text	50	Text, utf8, NULL
Telephone number	cp_tel	Free text	50	Text, utf8, NULL

4.2.2. Content Information

4.2.2.1. Name of publication

Description and References

The field “Name of publication” is a free text entry. It describes the data set in a generic term or short description. The author is encouraged to write a meaningful description. This field is only for a brief overview, because free text fields are unsuitable for searches, due to spelling mistakes, different wordings and other aspects. The categorisation of the data sets is done within other fields.

Reference to:
DCAT-AP: dataset: title, free text with opt. further language versions (mandatory)
INSPIRE: Resource title, free text (mandatory)

Database features

Fieldname: p_name

Type: Free text

Recommended length: 100

Description: Free Text (e.g. Highway Network); utf8; NOT NULL

4.2.2.2. Description of Publication

Description and References

To give the user more information about content of the publication a brief description is mandatory. It’s a free text field. The used language for the description should be the language from the field “metadata language”. If more than one language is marked at “metadata language”, for each language there should be another description.

Reference to
DCAT-AP: dataset: description, free text with opt. further language versions (mandatory)
INSPIRE: Resource abstract, free text (mandatory)

Database features

Fieldname: p_description

Type: Free text

Recommended length: 1000

Description: Free Text (Contains static high priority network of Austria: Road Name, Lane number, Direction); NOT NULL

4.2.2.3. Dataset type

Description and References

The “Data Set Type” is the main classification of the publication content. It contains an aggregated dataset and detailed dataset. According to the EU-Regulations there are predefined categorisations for Data Sets of priority b/c/e. For the reason of usability it is not feasible to show all 50 categories in the user interface. But in case that these categories are needed for validation by the national body they have to be mentioned in the SPA data system. A proposed assembling method can be found as ANNEX 1

Reference to:
DCAT-AP: dataset: theme (definable categories,recommended)
INSPIRE: Keyword: free text (may originate from a controlled vocabulary, mandatory)

Database features

Dataset type category

Fieldname: data_agr_type

Type: Free text

Recommended length: 1000

Description: lookup Table

Dataset detailed type

Fieldname: data_org_type

Recommended length: Free text

Length: 1000

Description: lookup Table

4.2.2.4. Dataset language

Description and References

This element indicates the language of the data itself (text fields, addresses etc.). Depending on the data source the language will be different. Selection of one language is mandatory. According to the ISO 639 standard part 2, a 3 letter code for 24 EU languages is available. For implementation of this item in the metadata registry, it is recommended to have a predefined selection of languages.

The list of codes for the 24 official EU languages is:

Bulgarian – **bul**	Irish – **gle**
Croatian – **hrv**	Italian – **ita**
Czech – **cze**	Latvian – **lav**
Danish – **dan**	Lithuanian – **lit**

Dutch – **dut**
English – **eng**
Estonian – **est**
Finnish – **fin**
French – **fre**
German – **ger**
Greek – **gre**
Hungarian – **hun**
Maltese – **mlt**
Polish – **pol**
Portuguese – **por**
Romanian – **rum**
Slovak – **slo**
Slovenian – **slv**
Spanish – **spa**
Swedish – **swe**

The list of all the codes is defined at
http://www.loc.gov/standards/iso639-2/
Regional languages also are included in this list.

Reference to:
DCAT-AP: dataset: language (worldwide), multiple languages possible (optional)
INSPIRE: Resource language (European subset) (mandatory)

Database features

Fieldname: ds_language

Type: Predefined Text

Recommended length: 3

Description: Predefined; UTF8; NOT NULL

4.2.3. Temporal information

4.2.3.1. Start date of publication

Description and References

This field describes from which date on the data delivery is applicable. In the metadata registry, this field can be set optional for the user input but for the data base it is mandatory. If there is no entry it means that the publication gets valid immediately and the timestamp is the same as the metadata timestamp.

Reference to:
DCAT-AP: n/a (validity of data set: dataset: temporal coverage – start date)
INSPIRE: n/a (validity of data set: temporal extent – starting date)

Database features

Fieldname: p_start_date

Type: Date

Recommended length: -

Description: dd.MM.yyyy (02.09.2015); NOT NULL

4.2.3.2. End date of publication

Description and References

This field describes the date when data delivery to this publication terminates. This field is optional, if there is no entry it means that the publication does not expire.

Reference to:
DCAT-AP: n/a (validity of data set: dataset: temporal coverage – end date)
INSPIRE: n/a (validity of data set: temporal extent – end date)

Database features

Fieldname: p_end_date

Type: Date

Recommended length: -

Description: dd.MM.yyyy (02.09.2015); NULL

4.2.4. Geographical coverage

4.2.4.1. Area covered by publication

Description and References

This attribute describes the geographic area that is covered by datasets of the publication. Datasets can be valid for more than one region, for that reason a multiple choice selection should be applied. A dataset without an area is not valid, therefore this field is mandatory.

NUTS (Nomenclature des unités territoriales statistiques) provide a clearly clarification of regional levels. The "NUTS Level" defines a possible selection of area level (city, district, and region).

http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=NUTS_22&StrLanguageCode=DE&IntPcKey=&StrLayoutCode=HIERARCHIC&IntCurrentPage=1

The standard selection is "Nuts 0". It is the country level and tells that the data are valid in one or more countries. The Nuts-Level is another categorisation field.

Reference to:
DCAT-AP: dataset: spatial/geographical coverage – A spatial region or named place (free text, optional)
INSPIRE: Geographic bounding box (westbound and eastbound longitudes, and southbound and northbound latitudes in decimal degrees, mandatory)

Database features

Fieldname: val_area

Type: Predefined text

Recommended length: 1000

Description: Predefined NUTS 0-3; UTF8; Multiple choice; NOT NULL

4.2.4.2. Network coverage

Description and References

The field "Network coverage: main category" describes the part of the transport network (functional road classes) that is covered by datasets of the publication in a general way. The idea is to provide more detailed information about the data coverage. Since it should be searchable and compatible to other SPA's, the categorisation has to be harmonized.

A categorisation could be:

- Motorways
- arterial_road_network (in the meaning of state roads or federal roads)
- Regional roads
- Urban and local roads
- undefined

Reference to:
DCAT-AP: n/a
INSPIRE: n/a

Database features

Fieldname: net_category

Type: Predefined text

Recommended length: 50

Description: Predefined; multiple choice; NOT NULL

4.2.4.3. Network coverage description

Description and References

The field “Network coverage: Description” describes details of transport network (functional road classes) on a national basis. This is necessary due to different meanings and understanding of different terms in each country. This field is optional and free text, so each country can describe the parts of the road network covered by the data set.

Reference to:
DCAT-AP: n/a
INSPIRE: n/a

Database features

Fieldname: net_description

Type: Free text

Recommended length: 1000

Description: Free Text (e.g. structural separated bidirectional lanes, 2 to 4 lanes, minimum speed 80); NULL

4.2.5. Responsibilities / contact information

4.2.5.1. Publisher

Description and References

The “publisher” describes an entity (company and person) that publishes datasets of a publication. He is responsible for the given information and concludes a contract if applicable. The contact information has to be as complete as possible to establish a direct contact to the publisher. The publisher contact information is mandatory.

For the data fields the common vCard is used. But there are up to 40 fields available. For efficiency reasons, only a selection of fields of the possible 40 data fields of the vCard standard is used. For privacy reasons only non-person datafields (e.g. organisation name, organisation address etc.) might be displayed in the user interface.

Reference to:
DCAT-AP: dataset: publisher – only organisation name is given (free text);
dataset: contact point (contact details for feedback); recommended
INSPIRE: Responsible party, role: publisher – organisation name and e-mail address; mandatory

Title	DB_Name	DB_Type	DB_ Field_length	DB_description
Name	p_name	Free text	50	Text, utf8, NOT NULL
Company Name	p_comp_name	Free text	50	Text, utf8, NOT NULL
Address	p_address	Free text	50	Text, utf8, NOT NULL
E-Mail	p_email	Free text	50	Text, utf8, NOT NULL
Website	p_website	Free text	50	Text, utf8, NULL
Telephone number	p_tel	Free text	50	Text, utf8, NOT NULL

4.2.5.2. Data Owner

Description and References

The Data Owner defines the company that owns the dataset of a publication and is responsible for content and quality of the dataset. In case that the publisher is also the data owner the contact data will be copied from the publisher entry.

Reference to:
DCAT-AP: dataset: creator – authority under whose responsibility the dataset is made available (free text; optional)
INSPIRE: responsible party, role: owner (organisation name, e-mail address; mandatory if applicable)

Title	DB_Name	DB_Type	DB_ Field_length	DB_description
Name	do_name	Free text	50	Text, utf8, NULL

Company Name	do_comp_name	Free text	50	Text, utf8, NOT NULL
Address	do_address	Free text	50	Text, utf8, NULL
E-Mail	do_email	Free text	50	Text, utf8, NOT NULL
Website	do_website	Free text	50	Text, utf8, NULL
Telephone number	do_tel	Free text	50	Text, utf8, NOT NULL

4.2.6. Condition for use

4.2.6.1. Contract or licence

Description and References

The field “Contract or licence” indicates the condition of use: whether a free and unrestricted use is possible, a contract has to be concluded or a licence has to be agreed on to use a dataset. Therefore there are predefined tags where only one can be selected. “No licence – No contract” is preselect, for this mandatory field.

Predefined tags:

- No licence – No contract
- Licence and Free of charge
- Licence and Fee
- Contract and Free of charge
- Contract and Fee

Reference to:
DCAT-AP: n/a (indirectly if licence and/or right statement is provided)
INSPIRE: conditions for access and use (free text with predefined suggestions); mandatory

Database features

Fieldname: con_lic

Type: Predefined

Recommended length: 50

Description: Predefined values; UTF8; NOT NULL

4.2.6.2. Condition for use

Description and References

If licence or contract in field “contract or licence” is selected the condition of use has to be clarified. Here a sample contract or the terms of use need shall be provided as part of the meta data set, in order to allow potential data consumers to check and prove terms and conditions before getting in touch with the publisher. This field contains an URL to a PDF document, which contains all important information. The operator of SPA can decide to store that document on the SPA server to ensure that the document is accessible.

Reference to:
DCAT-AP: catalogue record: licence / dataset: access rights (complex structure); optional
INSPIRE: conditions for access and use (free text with predefined suggestions); mandatory

Database features

Fieldname: con_url

Type: Free text

Recommended length: 100

Description: URL (http://nap.austriatech.at/documents /asf_conditions.pdf); NULL

4.2.7. Access information

4.2.7.1. Structure of data set

Description and References

The “structure of data set” describes the technical format of the data set. There are predefined tags of the common data formats.

The options describes the common data formats like

- DATEX II XML
- tpegML
- RSS
- KML
- JSON
- XML
- Mpeg4
- MDM_Container
- Other

Reference to:
DCAT-AP: distribution: format (media type / extent: ods, csv, xls, xlsx, rdf, ttl, xml); recommended
INSPIRE: n/a

Database features

Fieldname: tech_structure

Type: Predefined text

Recommended length: 200

Description: Predefined Text (DATEX2;); NOT NULL

4.2.7.2. Access interface – Application layer protocol

Description and References

The access interface describes the IT protocol of the data interface that will be used to transfer data. For error minimising there are predefined tags. It is mandatory and the minimum selection is “other”.

Tags are:

- SOAP
- OTS2
- HTTP/HTTPS
- FTP
- RSS
- Other

Reference to:
DCAT-AP: n/a
INSPIRE: n/a

Database features

Fieldname: interface

Type: Predefined text

Recommended length: 200

Description: Predefined Values; UTF8; NOT NULL

4.2.7.3. Communication method

Description and References

The communication method describes the transmitting procedure from data provider to data receiver. It differs between push, pull and regular. This mandatory field gives the service provider the opportunity to check the common data procedure on compatibility. If the data could be received by more than one method, a multiple choice selection could be done.

Reference to:
DCAT-AP: n/a
INSPIRE: n/a

Database features

Fieldname: com_method

Type: Predefined text

Recommended length: 50

Description: Predefined values (Push;); NOT NULL

4.2.7.4. Access URL

Description and References

The Access URL provides a link for access to the current dataset of a publication. It is mandatory if applicable (e.g. not applicable for publications providing datasets in push mode only). Furthermore, an access URL can be unique for each single relation between data owner and data receiver, as it is realised by the MDM [2](Mobilitäts Daten Marktplatz). In this case, the access URL is no metadata for a publication but linked to a subscription that enables the access to the publication.

Reference to:
DCAT-AP: distribution: Access URL; mandatory
INSPIRE: resource locator; optional

[2] http://www.mdm-portal.de/

Database features

Fieldname: access_url

Type: Free text

Recommended length: 100

Description: URL (http://nap.austriatech.at/sampledata/asf.html); NOT NULL

4.2.8. Quality information

4.2.8.1. Update frequency

Description and References

The update frequency describes the update rate of the data set. If there is a specific time interval or data only provided on occurrence precise information should be given. It is mandatory to select one update category.

Pre definitions:

- On occurrence
- 1min
- 5min
- 10 min
- 15 min
- 30 min
- 1h
- 2h
- 3h
- 12h
- 24h
- Weekly
- Monthly
- every 3month
- every 6month
- yearly
- other

Reference to:
DCAT-AP: Dataset: Frequency (minutely, daily ..., half yearly, annual) optional
INSPIRE: n/a

Database features

Fieldname: update_freq

Type: Predefined text

Recommended length: 50

Description: Predefined (yearly); NOT NULL

4.2.8.2. Quality Indicator

Description and References

The quality indicator describes means and results of a quality assessment. This information shall assist data consumers in determining the value of data for their own services. Furthermore, it can be helpful for the validation process by a national body, where necessary. In accordance to INSPIRE and because of the ongoing quality analysis, it is proposed to describe of the Quality indicator by free text and link by an additional URL to further quality information.

Reference to:
DCAT-AP: n/a
INSPIRE: lineage (free text; “Where appropriate it may include a statement whether the data set has been validated or quality assured, whether it is the official version (if multiple versions exist), and whether it has legal validity.”) rec. if appropriate

Database features

Fieldname: qm_indicator

Type: Free text

Recommended length: 200

Description: Text/URL (Quality Indicators); NOT NULL

4.2.8.3. National Body Validation Date

Description and References

For the future validation process by the national body an indicator field is necessary. It indicates if a dataset is validated by national body or not. If the dataset is validated the date of the validating process is mentioned in the data storage. It’s optional and only needed for the validation process.

Database features

Fieldname: validation_date

Type: Date

Recommended length: -

Description: dd.MM.yyyy (02.09.2015); NULL

ANNEX I - Proposal for clustering Dataset Types

Aggregated Description	Original Description	Action
Static road data (data on permanent road infrastructure characteristics, including fixed traffic signs or their regulatory attributes);	Road network links and their physical attributes: - Geometry - Road width - Number of lanes - Gradients - Junctions- Road classification	Action B: Real Time Traffic Information (RTTI)
	Traffic signs expressing traffic regulations and identifying dangers: - Access conditions for tunnels - Access conditions for bridges - Speed limits - Permanents access restrictions and other traffic regulations	
	Traffic circulation plans	
	Location of tolling stations	
	Identification of tolled roads and applicable static road user charges	
	Location of parking places and service areas	
	Location of charging points for electric vehicles and the conditions for their use	
	Location of public transport stops and interchange points	
Dynamic road data (data on short-term road infrastructure characteristics)	Road closures	Action B: RTTI
	Lane closures	
	Overtaking bans on heavy goods vehicles	
	Road works: - Short-term road works (temporary road works… which are indicated only by minimum signing) - Long-term road works (road works which foreseen duration exceed the duration of short-term road works)	
	Accidents and incidents	
	Bridge opening hours	
	Direction of travel on reversible lanes	
	Poor pavement conditions	
	Temporary traffic management measures	
	Variable road user charges	
	Availability of parking places	
	Cost of parking	
	Availability of charging points for electric vehicles	
	Weather conditions affecting road surface and visibility	
	Dynamic traffic signs expressing traffic regulations, namely: - Dynamic access conditions for tunnels - Dynamic access conditions for bridges - Dynamic Speed limits	

	- Dynamic access restrictions and other traffic regulations	
Traffic management plans (pre-defined allocation of a set of temporary measures to a specific traffic situation)		Action B: RTTI
Traffic management data (data on the content and activation status of traffic management plans)		Action B: RTTI
Real-time traffic data (data on road traffic characteristics)	Estimated travel times	Action B: RTTI
	Traffic volume	
	Speed	
	Travel times	
	Que- ends	
	Traffic data at border crossings to third countries	
	Expected delays	
Real-time traffic information (any combination of extracted, aggregated and processed static road data, dynamic road data, traffic management data and real-time traffic data)		Action B: RTTI
Adverse weather conditions (unusual, severe or unseasonal weather conditions which might affect safe driving)		Action B: RTTI
Recommended routes (routes that are recommended to drivers for traffic management purposes)		Action B: RTTI
Accident black spots (locations identified as particulary dangerous from a road safety point of view on the basis of road accident statistics		Action B: RTTI
Activation of a traffic management plan (the procedures by which the temporary measures included in a traffic management plan are put in place)		Action B: RTTI
Safety Related Traffic Information	Tempory slippery road	Action C: Safety Related Traffic Information
	Animal, people, obstacle, debris on the road	
	Unprotected accident area	
	Short term road works	
	Reduced visibility	
	Wrong-way driver	
	Unmaged blockage of a road	
	Exceptional weather conditions	
Static data relating to truck parking area's	Identification information of parking area:	Action E: Truck parking

	- Name of the truck parking area - Address of the truck parking area	information
	Location information of the truck parking area - Location information of the entry point of the parking area - Primary road identifier(s) and direction - Indication of the exit to be taken from primary road - Distance from primary road	
	Total number of available parking places for trucks	
	Price and currency of parking places for trucks	
Information on safety and equipment of truck parking area's	Information on safety, security and equipment of truck parking area's	Action E: Truck parking information
	Information on service equipment of truck parking area's	
	(Inter)National classification of truck parking area's	
	Information on parking places for refrigerated goods vehicles on truck parking area's	
	Information on specific equipment or services for specific goods vehicles on truck parking area's	
Contact information of truck parking area operators	Name and surname	Action E: Truck parking information
	Telephone number	
	E-mail address	
	Consent of the operator to make his contact information public	
Dynamic data on availability of parking places on truck parking area's		Action E: Truck parking information