

OPEN DATA GUIDELINES
(version 2.3)

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I. GENERAL PROVISIONS

1. This document has been drawn up pursuant to Executive Order of the President of the Russian Federation dated May 7, 2012 No. 601 On Main Directions of Developing the System of Public Administration. According to Subclause (d) Clause 2 of the Order, the Government of the Russian Federation has been instructed to provide Internet access to open data contained in the information systems of government bodies and local-self government bodies of the Russian Federation by July 15, 2013.

2. Terms and definitions shall be used in these Guidelines as follows:

Open Data – information published on the Internet for multiple free and non-charge use in the form of organized data arranged in the format which ensures its automatic processing without prior amendment by human operators;

Open Government (Municipal) Data – open data containing information related to the activities of government bodies or local self-government bodies (the terms Open Data and Open Government (Municipal) Data shall be hereinafter used as equivalents due to the fact that these Guidelines are applied for regulating open data publication by government bodies or local self-government bodies);

Open Dataset (Dataset) – an organized collection of same-type data in the open data format which consists of individual elements described by a set of attributes and which permits automated systems to identify, interpret and process such elements without human involvement;

Dataset Passport – a collection of dataset characteristics which enables to unambiguously identify the dataset and automatically obtain the dataset key parameters;

Dataset Register – an organized list of datasets which enables to automatically search datasets and obtain dataset key parameters, including the hyperlinks which are required for accessing datasets;

Dataset Register of Government Body or Local Self-Government Body – a dataset register containing information on datasets published by the government body or local self-government body;

Global Dataset Register – the dataset register maintained by the authorized government body of the Russian Federation which contains information on all dataset registers of government bodies and local self-government bodies of the Russian Federation, as well as information on other sought-for dataset registers, passports and datasets;

Publication – posting of information on the Internet for ensuring general public access thereto.

3. The information containing national security data and confidential data, including personal data, as well as other data with access restricted by the applicable laws of the Russian Federation, shall not be published as open data.

II. LISTS OF OPEN DATASETS AND THEIR PUBLICATION PRIORITY

4. Data containing information on the activities of government bodies and local-self government bodies which is posted on the Internet pursuant to Federal Act of the Russian Federation dated February 09, 2009 No. 8-FZ On Providing Access to Information on the Activities of Government Bodies and Local Self-Government Bodies, as well as data containing information which is collected, stored, processed and published by government bodies and local self-government bodies in the course of exercising their authorities shall be published as open data.

Due to the significant amount of open data it shall be published on a phased basis taking into account the following considerations:

a) demand for open datasets by potential data consumers which shall be evaluated in compliance with the guidelines for evaluation of open data demand and priority;

b) readiness for publication which is defined by availability of digital copies of the required data in structured formats, as well as by availability of managerial, technical, technological and other tools required for open datasets publication;

c) costs and expenditures (finance, time, labor) required for dataset publication and updating.

Top priority for publication by government bodies and local self-government bodies shall be given to the data in high demand with maximum readiness for publication and minimum publication costs.

In order to increase open data readiness for publication, government bodies and local self-government bodies are recommended to introduce requirements regulating automated system design, construction and development which prescribe the use of machine-readable open formats for data collecting, processing, storage and publication.

The following principles shall be taken into account during generation of datasets and dataset registers:

a) primary (non-aggregated) data shall be published with full details;

b) a responsible person shall be designated for each dataset to be in charge of dataset content, correctness, completeness and relevance;

c) update frequency shall be specified for each dataset consistently with the needs of information users.

The generated dataset register shall be approved by a government body or local self-government body and published on the Internet at the official website of the above body.

III. TECHNOLOGICAL INFRASTRUCTURE

5. Datasets subject to publication or references to such datasets shall be posted at official websites of government bodies or bodies of local self-government which own the above datasets. The websites shall be arranged as follows:

a) a special page shall be created at the website for open data publication in machine-readable formats (hereinafter referred to as the open data page);

b) the main page of the website shall contain a visually recognizable hyperlink to the open data page captioned Open Data;

c) the open data page shall contain an open data register composed of links to dedicated pages of dataset passports (hereinafter referred to as the dataset page);

d) each dataset passport posted at the website of a government body or local self-government body shall be provided with a link to the dataset;

e) a link to metadata catalog shall be posted in order to make open data accessible to web crawlers: permission in robots.txt, reference in sitemap.xml.

IV DATASET PUBLICATION TECHNICAL SPECIFICATIONS

Dataset name and identifier requirements

6. The dataset name to be used in dataset passports shall be chosen as follows:

- a) the dataset name shall represent the dataset content;
- b) the dataset name shall not include the information contained in the dataset identifier (code).

7. The dataset identifier (code) shall be generated as follows:

- a) identifier format: <entity code>-<passport name>;
- b) entity code is the taxpayer identification number (TIN) corresponding to the government body, local self-government body or any other entity which publishes the dataset;
- c) passport name is the abbreviated single-word English name of the dataset.

Open data page requirements

8. The Internet address of an open data page (URL) shall be generated according to the following pattern: "<website address>/opendata/" or "<website address>/открытыеданные/" if addresses in Cyrillic characters are used within the website.

The open data page shall be headed Open Data and it shall provide website users with the following:

- 1) dataset register and links to web pages dedicated to datasets (hereinafter referred to as the dataset passport pages);
- 2) statistical information on the datasets opened by a government body or local self-government body (number of datasets, dataset formats, etc.);
- 3) open data search tools. In case a government body or local self-government body opens 20 or less datasets, search tools are not necessary to provide;
- 4) open data terms of use (if they are not set forth on dataset pages);
- 5) file presentation of open dataset list (register).

Dataset register publication requirements

9. A dataset register shall be represented in HTML or RDFa formats (Resource Description Framework in Attributes metadata description model, according to W3C recommendations (<http://www.w3.org/TR/xhtml-rdfa-primer/>)). In case of HTML visual presentation, the dataset register file shall be provided in CSV (Comma Separated Values text format for presentation of table data, according to specification at <http://www.rfc-editor.org/rfc/rfc4180.txt>, hereinafter referred to as the CSV format) or in XML (Extensible Markup Language, according to W3C specification (<http://www.w3.org/TR/xml11/>)), hereinafter referred to as the XML format).

1) Dataset register file in RDFa or HTML formats shall be located at page <web-site address>/opendata/ and contain the following information for each dataset:

- order number of the dataset;
- name of the dataset;
- link to the dataset passport page.

2) Dataset register file in CSV format shall be located at "<website address>/opendata/opendatalist.csv" or "<website address>/открытыеданные/реестроткрытыхданных.csv". The register shall contain an updated list of all dataset passports (names of dataset passport pages and links to such pages). Entries on each dataset shall be separated with the "line feed" symbol. The dataset details within one entry shall be separated with the ";" (semicolon) symbol. Both ";" (semicolon) and "line feed" symbols are not allowed within each data field.

3) Dataset register file in XML format shall be located at <website address>/opendata/opendatalist.xml" or "<website address>/открытыеданные/реестроткрытыхданных.xml".

Dataset passport page requirements

10. The header of the dataset passport page shall correspond to the dataset name. The dataset passport page shall provide website users with the following:

- 1) dataset description which is necessary and sufficient for using the dataset (dataset passport) – in visual interface and as a downloadable file;
- 2) dataset terms of use (if they are not provided on the open data page);
- 3) possibility to download data from the dataset immediately without additional authorization, entering a Captcha code or other restrictions;
- 4) feedback (online comment forms or links to such forms) which enables website users to leave comments or report any issues related to open government data, including errors detected in datasets and dataset passports. The feedback provided on the dataset page shall associate the information entered by users to the relevant datasets.

The dataset passport page address shall be generated according to the following pattern: "<website address>/opendata/<entity code>-<passport name>" or "<website address>/открытыеданные/<entity code>-<passport name>" if addresses in Cyrillic characters are used within the website.

The dataset passport shall contain the data specified in Appendix 1 hereto.

The dataset passport shall be in HTML or RDFa formats.

In case of HTML visual presentation, the dataset file shall be presented in CSV or XML formats. The name and location of the passport file shall comply with one of the following patterns:

- 1) <website address>/opendata/<entity code>-<passport name>.csv
- 2) <website address>/opendata/<entity code>-<passport name>.xml

The RDFa format is recommended for presenting the dataset passport in visual interface according to the requirements specified in Appendix 4 hereto.

Datasets presentation requirements

11. Requirements for datasets subject to publication:

a) open data shall be published in CSV or XML formats. The CSV format is recommended for publication of plain table data, while the "line advance" symbol is not allowed in the entry content. The XML formats are recommended for publishing complex hierarchical data;

b) in case of large amounts of data, frequent updates or unique retrieval queries, access to open data may be provided via application programming interface with an open standard specification. The application programming interface shall ensure fully automatic access to all data of the dataset without human involvement;

c) each dataset version file shall have a permanent hyperlink generated according to the following pattern¹: "<website address>/opendata/<entity code>-<passport name>/data-<dataset version number>-structure-<dataset structure version number>.csv" or "<website address>/opendata/<entity code>-<passport name>/data-<dataset version number>-structure-<dataset structure version number>.xml";

d) the number of stored dataset versions shall be specified on the basis of storage capacity consistently with the needs of dataset users;

e) if the dataset size exceeds 10 megabytes, it is recommended to archive the dataset using an archiving algorithm with an open standard specification;

f) the data published in the XML format shall be accompanied by format structure description files in the form of an XSD schema (XML Schema Definition language, according to W3C recommendations at <http://www.w3.org/TR/xmlschema-0/>, hereinafter referred to as the XSD schema);

g) the data published in the CSV format shall be accompanied by format structure description files in the form of a text file (txt, csv) with an open standard specification;

h) if access to the dataset is provided via application programming interface, the dataset page shall contain a full description of the application programming interface (protocols specifications, data formats, service access primary parameters, etc.). The above description shall be sufficient for a developer-level specialist to set up fully automatic access to the dataset;

i) the open and documented standard data markup formats (schema.org, YMapsML, XAL, etc.) shall be used to present datasets containing information from various domains;

j) open data format change should be avoided because it affects automatic data processing. In case of format change, users shall be notified thereof, e.g. through setting the parameter value Last update content as Data structure change in the dataset passport;

¹ See example of pattern use in Appendix 1 hereto.

k) the attributes of every dataset shall be briefly presented in English (as English names or brief transliterated text).

12. Requirements for dataset structure subject to publication:

- a) Dataset structure shall provide a description of each information field of a dataset.
- b) Dataset structure files for datasets presented in the XML format shall be in the XSD format.
- c) Dataset structure files for datasets presented in the CSV format shall be in text formats (txt, csv).
- d) In case of dataset structure change, structure version control and conformity of current version with consequent datasets shall be provided.
- e) The number of stored dataset structure versions shall be specified on the basis of storage capacity consistently with the needs of dataset users.
- f) Each dataset structure version shall have a permanent hyperlink generated according to the following pattern: "<website address>/opendata/<entity code>-<passport name>/structure-<dataset structure version number>-<dataset structure version date>.xsd" or "<website address>/opendata/<entity code>-<passport name>/structure-<dataset structure version number>-<dataset structure version date>.txt".
- g) The attributes of every dataset structure shall be briefly presented in English (as English names or brief transliterated text).
- h) Dataset structure description shall include description of all directories and classifiers used for dataset generation (including links to such directories and classifiers).
- i) If access to the dataset is provided via application programming interface, a link to the file containing description and terms of use of such interface shall be provided.

V. OPEN DATA TERMS OF USE

13. When datasets are published, the dataset register page shall mandatorily contain data terms of use or a reference to data terms of use.

14. The terms of use shall not require that the users sign a contract with the government body or local self-government body.

15. The terms of use shall not restrict the use of data by users for noncommercial or commercial purposes.

16. The terms of use shall be held to imply that open data is provided free-of-charge.

17. The terms of use shall contain a requirement that a reference to dataset publication sources should be provided in projects which use the data of a specific dataset.

18. Data publication is recommended under Creative Commons or Open Data Commons licenses.

19. The terms of use shall not contain website login and authorization requirements for using open data.

VI. DATASET PUBLICATION PROCEDURE

20. Open data shall be published according to the following procedure:

- a) the government body or local self-government body shall convert a dataset into the format used for publication of this dataset;
- b) the government body or local self-government body shall publish a dataset passport, add the relevant information to the open data page at its website (the dataset register) and provide a link to the relevant dataset passport page;
- c) the government body or local self-government body shall verify the published dataset accessibility for website users;
- d) the government body or local self-government body shall extract a record on the published dataset from the dataset register and submit it as a CSV or XML file to the federal task group which is responsible for maintaining a global data register;
- e) the federal task group shall update the global data register. The federal task group shall also update the designated webpage on the Internet containing consolidated information on open data provided by government bodies or local self-government bodies in machine-readable formats.

Appendix 1.

Dataset passport specification

No.	Characteristic	Description	Example
1.	Current dataset identifier (code)	Unique identifier of the dataset, including the latest dataset version and the latest dataset structure version	7710349494-mfclist
2.	Dataset name	Brief name of the dataset	List of MFCs
3.	Dataset description	Extended description of the dataset reflecting its content and distinctive features that may be of importance for potential users	List of multifunctional centers providing public services (with contact data and list of services)
4.	Dataset owner	Entity which owns and publishes the dataset and is responsible for its maintenance	Ministry of Economic Development of the Russian Federation
5.	Responsible person	Official in charge of dataset publication (the official's last name, given name and patronymic separated by spaces, followed by the official's title separated by a comma)	Ivanov Ivan Ivanovich, Deputy Head of Department
6.	Phone number of the responsible person	Phone number of the responsible official	+7(495)344-45-56
7.	E-mail of the responsible person	E-mail of the responsible official	ivanov@economy.gov.ru
8.	Dataset hyperlink (URL)	Internet address of the dataset	http://www.economy.gov.ru/opendata/7710349494-mfclist/data-25-structure-2.xml
9.	Data format	File format of the dataset	XML

No.	Characteristic	Description	Example
10.	Dataset structure description	<p>Hyperlink to the file containing dataset structure description.</p> <p>Dataset structure description file shall include description of each information field of the dataset.</p> <p>XSD schema is required for datasets in the XML format. Text file containing names and descriptions of each field is required for datasets in CSV format.</p> <p>If access to dataset is provided via application programming interface, a hyperlink to the text file containing description of such interface shall be posted.</p> <p>The name of dataset structure description file shall mandatorily include, among other data, the order number of the dataset where the above dataset structure was first implemented.</p>	http://www.economy.gov.ru/opendata/7710349494-mfclist/structure-2-2013-03-11.xsd
11.	Dataset initial publication date	Initial publication date of the dataset (in DD.MM.YYYY format)	01.12.2012
12.	Last update date	Last update date of the dataset (in DD.MM.YYYY format)	01.04.2012
13.	Last update content	<p>Description of changes in the current version of the dataset compared to the previous version. The following list values are available:</p> <p>Data structure change;</p> <p>Error correction;</p> <p>Dataset update;</p> <p>Dataset passport change.</p>	Data structure change

No.	Characteristic	Description	Example
14.	Dataset update frequency	<p>Frequency of dataset updates required to maintain its current status. The following list values are available:</p> <p>Periodic update (annually, quarterly, monthly, daily);</p> <p>Update by calendar date;</p> <p>Update following data changes (specifying data change event and update term).</p>	Daily
15.	Keywords corresponding to dataset content	Keywords corresponding to dataset content which can be used for website and register search by users.	multifunctional center, address, contact person, opening hours
16.	Dataset versions hyperlinks (URL)	<p>Internet links to all previous dataset versions, if available. The links shall be represented visually as a list of versions. If the current dataset version is initial, "null" text value shall be entered.</p>	http://www.economy.gov.ru/opendata/7710349494-mfclist/data-24-structure-2.xml http://www.economy.gov.ru/opendata/7710349494-mfclist/data-23-structure-2.xml http://www.economy.gov.ru/opendata/7710349494-mfclist/data-22-structure-2.xml http://www.economy.gov.ru/opendata/7710349494-mfclist/data-21-structure-2.xml http://www.economy.gov.ru/opendata/7710349494-mfclist/data-9-structure-1.xml
17.	Dataset structure versions hyperlinks (URL)	Internet links to all previous dataset structure versions, if available. The links shall be represented visually as a list of versions.	http://www.economy.gov.ru/opendata/7710349494-mfclist/structure-1-data-1-2013-01-10.xsd

Appendix 2.

Example of dataset structure

Information on dataset fields

No.	Field name in English	Field name (in Russian)	Description	Field type	Unique	Required	Length	Decimal places	Reference to another table (table name and reference field)
	Full name of the territorial agency	Full name of the territorial agency within a federal executive agency	Official name of the territorial agency within a federal executive agency	Text	Yes	Yes	150 characters		
	Abbreviated name of the territorial agency	Abbreviated name of the territorial agency within a federal executive agency	Abbreviated name of the territorial agency within a federal executive agency	Text	Yes	Yes	40 characters		
	Surname, first name, patronymic and title of the head of the territorial agency	Surname, first name, patronymic and title of the head of the territorial agency	Surname(s), first name(s), patronymic(s), title(s) of the head(s) according to the pattern: <Surname><First name> <Patronymic>;<Phone number>	Text	No	Yes	512 characters		
	Surname, first name, patronymic and title of deputy head of the territorial agency	Surname, first name, patronymic and title of deputy head of the territorial agency	Surname(s), first name(s), patronymic(s), title(s) of the head(s) according to the pattern: <Surname><First name> <Patronymic>;<Phone number>	Text	No	Yes	512 characters		

	Description of functions of the territorial agency	Description of tasks and functions of the territorial agency	Text description of tasks and functions of territorial agencies	Text	No	No	65,536 characters		
	Postal address	Postal addresses of territorial agencies: Name of address of the of territorial agency	Postal code, Constituent unit of the Russian Federation, District, City/Town, Street No., Building	Formatted text	Yes	Yes	256 characters		
	Code according to All-Russian Classifier of Addresses (KLADR)	Postal addresses of territorial agencies: Code of the territorial agency address according to All-Russian Classifier of Addresses (KLADR)		Symbol	Yes	No	19 characters		
	E-mail	E-mails of the territorial agency	Hyperlink to the e-mail addresses according to the established pattern. Latin and Cyrillic vocabulary may be used	Hyperlink	Yes	No	256 characters		
	Fax	Fax	Fax numbers separated by commas	Symbol	Yes	No	150 characters		
	Call center phone numbers	Phone numbers of call centers of the territorial agency	Phone numbers according to the established pattern. Extension numbers separated from main numbers by #. Call center phone numbers separated by commas	Symbol	Yes	Yes	256 characters		
	Other phone numbers	Other phone numbers	<Service name><Phone number>; <Service name><Phone number>...	Symbol	Yes	Yes	256 characters		
	URL	Addresses of websites of the territorial agency (or Internet URL)	Address of the website of the territorial agency or URL of its page at the website of a federal executive agency according to the established pattern	Hyperlink	Yes	Yes	256 characters		

Information on dataset formats

Dataset storage format: Comma Separated Values (CSV), RFC 4180 (<http://tools.ietf.org/html/rfc4180/>)

Appendix 3.

Example of dataset description according to structure suggested in Appendix 2

Полное наименование территориального органа федерального органа исполнительной власти	Сокращенное наименование территориального органа федерального органа исполнительной власти	Фамилия, имя, отчество, должность руководителя территориального органа	Фамилия, имя, отчество, должность заместителя руководителя территориального органа	Описание задач и функций территориального органа	Почтовый адрес территориальных органов: Наименование адреса территориального органа	Почтовый адрес территориальных органов: Код КЛАДР адреса территориального органа	Адреса электронной почты территориального органа	Факс	Номера телефонов справочных служб территориального органа	Другие номера телефонов	Адреса сайтов территориального органа (или url-ссылка в Интернете)
Full name of the territorial agency	Abbreviated name of the territorial agency	Surname, first name, patronymic and title of the head of the territorial agency	Surname, first name, patronymic and title of deputy head of the territorial agency	Description of functions of the territorial agency	Postal address	Code according to All-Russian Classifier of Addresses (KLADR)	E-mail	Fax	Call center phone numbers	Other phone numbers	URL
Directorate of the Federal Migration Service of Russia in the Republic of Karelia	DFMS of Russia in the Republic of Karelia	Zhurakhovskaya Tatyana Vladimirovna; Head of Directorate	Yermakov Aleksandr Konstantinovich; Deputy Head of Directorate	Development and implementation of state policy in the sphere of migration, regulation in the sphere of migration	185005, Petrozavodsk, A.Nevskogo Ave., 17	1000000100000 86401000000	migracia@onego.ru	+7 (8142) 73-41-73; +7 (8142) 73-41-74; +7 (8142) 73-41-75	+7 (8142) 73-41-72	HR Department: +7 (8142) 73-41-71; Secretariat: +7 (8142) 73-41-71;	http://ufms.karelia.ru/
Directorate of the Federal Migration Service of Russia in Voronezh	DFMS of Russia in Voronezh region	Polukazakov Nikolay Ivanovich; Head of Directorate	Lushpayev Andrey Nikolayevich; Deputy Head of Directorate	Development and implementation of state policy in the sphere of	394030, Voronezh, 9 Yanvaryia St.,54	3600000100000 20401000000	http://www.fmsvrn.ru/admission/	8 (473) 277-68-22	8 (473) 277-68-22; 8 (473) 276-66-98	HR Department: 8 (473) 277-68-22; Secretariat: 8 (473) 276-	http://www.fmsvrn.ru

region				migration, regulation in the sphere of migration						66-98	
Directorate of the Federal Migration Service of Russia in Saint Petersburg city and Leningrad region	DFMS of Russia in Saint Petersburg city and Leningrad region	Dunayeva Yelena Vladimirovna; Head of Directorate	Silina Svetlana Viktorovna; Deputy Head of Directorate	Development and implementatio n of state policy in the sphere of migration, regulation in the sphere of migration	191028, Saint Petersburg, Kirochnaya St., 4	780000000000 0 400000000000	ufmsspblo@fms .peter.uvd.gov.s pb.ru	8 (812) 579- 47-92; 8 (812) 273-90-03	8 (812) 273- 22-46;		http://www.ufms.spb.ru

Appendix 4.

Requirements for dataset passport presentation using the RDFa format

General information

RDF (Resource Description Framework) is a data model specification – especially for machine-processable metadata – designed by the World Wide Web Consortium (W3C).

RDFa (Resource Description Framework in Attributes) is a data model for data presentation in the RDF format in attributes of HTML, XHTML and XML environments.

These requirements for dataset passport presentation are based on the following standards:

- a) W3C Recommendation: RDFa Core 1.1 – W3C recommendation for the use of RDFa;
- b) RFC2413 – universally accepted Internet standard Encoding Dublin Core Metadata in HTML;
- c) GOST R 7.0.10-2010 – Russian Standard Dublin Core Metadata Element Set;
- d) W3C Recommendation: XML Schema Part 2: Datatypes – W3C recommendation for the use of datatypes.

The following RDFa vocabularies shall be used for dataset passports presentation:

- a) foaf (Friend of a Friend) – "<http://xmlns.com/foaf/0.1/>" – for defining the class of an object;
- b) dc (Dublin Core) – "<http://purl.org/dc/terms/>" – for defining the properties of an object (Qualified Dublin Core edition containing an extended list of properties is used).

Requirements

Every dataset register page shall contain an RDFa object subject to the following mandatory requirements:

- 1) the RDFa object should be an element of the current passport page;
- 2) the object should have the "Collection" class from the "dc" vocabulary.

Compliance with these requirements allows unambiguous association of the RDFa object with the current dataset register page and defines the RDFa object as machine-readable format of dataset register.

The RDFa object of the dataset register contains the following values:

Property	RDFa property	Value format	Value
Dataset	"hasPart" from the "dc" vocabulary	xsd:anyURI	Reference to RDFa object of the dataset passport
Previous page	"prev"	xsd:anyURI	Reference to RDFa object of the dataset register of the previous page
Next page	"next"	xsd:anyURI	Reference to RDFa object of the dataset register of the next page

The "Dataset" property of the RDFa object of the dataset register shall be repeated as many times, as many published datasets there are.

The "Previous page" and "Next page" properties of the RDFa object of the dataset register shall mandatorily be specified if such values are available.

Every dataset passport page shall contain an RDFa object subject to the following mandatory requirements:

- 1) the RDFa object should be a subject of the current passport page;
- 2) the object should have the "Document" class from the "foaf" vocabulary.

Compliance with these requirements allows unambiguous association of the RDFa object with the current dataset passport page and defines this RDFa object as machine-readable format of the current dataset passport.

The RDFa object of the dataset register contains the following values:

Property	RDFa property	Value format	Value
Dataset identifier (code)	"identifier" from the "dc" vocabulary	xsd:string	User value of dataset identifier (code)
Dataset name	"title" from the "dc" vocabulary	xsd:string	User value of dataset name
Dataset description	"description" from the "dc" vocabulary	xsd:string	User value of dataset description
Dataset owner	"creator" from the "dc" vocabulary	xsd:string	User value of dataset owner
Responsible person	"publisher" from the "dc" vocabulary	xsd:anyURI	Reference to RDFa object of the person in charge for the dataset

Dataset initial publication date	"created" from the "dc" vocabulary	xsd:dateTime	User value of dataset initial publication date
Last update date	"modified" from the "dc" vocabulary	xsd:dateTime	User value of last update date
Dataset update frequency	"valid" from the "dc" vocabulary	xsd:string	User value of dataset update frequency
Keywords corresponding to dataset content	"subject" from the "dc" vocabulary	xsd:string	User value of dataset keywords
List of all dataset versions	"source" from the "dc" vocabulary	xsd:anyURI	Reference to RDFa object of the collection of all dataset versions

The "Responsible person" property of the RDFa object dataset passport refers to the RDFa object of the person in charge for the dataset. The RDFa object of the person in charge for the dataset shall comply with the following mandatory requirements:

- 1) the object should have the "Person" class from the "foaf" vocabulary.

The RDFa object of the person in charge for the dataset shall contain the following values:

Property	RDFa property	Value format	Value
Full name of the responsible person	"name" from the "foaf" vocabulary	xsd:string	User value of dataset identifier (code)
Phone number of the responsible person	"phone" from the "foaf" vocabulary	xsd:string	User value of the phone number of the responsible person
E-mail of the responsible person	"mbox" from the "foaf" vocabulary	xsd:string	User value of the e-mail of the responsible person

The "List of all dataset versions" property of the dataset passport RDFa object refers to the RDFa object of the collection of all dataset versions. The RDFa object of the collection of all dataset versions shall comply with the following mandatory requirements:

- 1) the object should have the "Collection" class from the "dc" vocabulary.

The RDFa object of the collection of all dataset versions shall contain the following values:

Property	RDFa property	Value format	Value
Dataset version	"hasPart" from the "dc" vocabulary	xsd:anyURI	Reference to RDFa object of the dataset

The "Dataset version" property of the RDFa object of the collection of all dataset versions shall be repeated as many times, as many published versions of the current dataset there are.

The "Dataset version" property of the RDFa object of the collection of all dataset versions refers to the RDFa object of the dataset. The RDFa object of the dataset shall comply with the following mandatory requirements:

- 1) the object should have the "Document" class from the "foaf" vocabulary.

The RDFa object of the dataset shall contain the following values:

Property	RDFa property	Value format	Value
Dataset version hyperlink (URL)	"source" from the "dc" vocabulary	xsd:anyURI	Reference to the dataset file
Dataset creation date	"created" from the "dc" vocabulary	xsd:dateTime	User value of the dataset creation date
Last update content	"provenance" from the "dc" vocabulary	xsd:string	User value of the dataset last update content
Dataset structure	"conformsTo" from the "dc" vocabulary	xsd:anyURI	Reference to the RDFa object of the dataset structure

The "Dataset structure" property of the RDFa object of the dataset refers to the RDFa object of the dataset structure. The RDFa object of the dataset structure shall comply with the following mandatory requirements:

- 1) the object should have the "Document" class from the "foaf" vocabulary.

The RDFa object of the dataset structure shall contain the following values:

Property	RDFa property	Value format	Value
Dataset structure hyperlink (URL)	"source" from the "dc" vocabulary	xsd:anyURI	Reference to the dataset structure file

Dataset structure creation date	"created" from the "dc" vocabulary	xsd:dateTime	User value of dataset structure creation date
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