

PASCAL-NICOLAS BECKER¹, ROLAND BERTELMANN²,
KLAUS CEYNOWA³, JÜRGEN CHRISTOF¹, THOMAS
DIERKES⁴, JULIA ALEXANDRA GOLTZ⁴, MATTHIAS
GROSS⁵, REGINA HEIDRICH⁶, TOBIAS HÖHNOW²,
MICHAEL KASSUBE³, THORSTEN KOCH⁴, MONIKA
KUBERER¹, LILIAN LANDES³, HEINZ PAMPEL², MARKUS
PUTNINGS⁶, BEATE RUSCH⁴, HILDEGARD SCHÄFFLER³,
DAGMAR SCHOBERT¹, OLIVER SCHWAB⁶, JENS
SCHWIDDER⁴, KONSTANZE SÖLLNER⁶, TONKA
STOYANOVA⁶, PAUL VIERKANT²

**DeepGreen – Metadata Schema for the
exchange of publications between
publishers and open access repositories.
Version 1.1. June 2016**

¹Technische Universität Berlin

²Helmholtz-Zentrum Potsdam – Deutsches GeoForschungsZentrum

³Bayerische Staatsbibliothek

⁴Zuse-Institut Berlin / Kooperativer Bibliotheksverbund Berlin-Brandenburg

⁵Bayerische Staatsbibliothek / Bibliotheksverbund Bayern

⁶Friedrich-Alexander-Universität Erlangen-Nürnberg

Zuse Institute Berlin
Takustr. 7
D-14195 Berlin

Telefon: +49 30-84185-0
Telefax: +49 30-84185-125

e-mail: bibliothek@zib.de
URL: <http://www.zib.de>

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DeepGreen Metadata Schema

for the exchange of publications between publishers and open access repositories

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DeepGreen Project Consortium:

Institutions:

Kooperativer Bibliotheksverbund
Berlin-Brandenburg (KOBV)

Technische Universität Berlin (TUB),
Universitätsbibliothek

Bayerische Staatsbibliothek (BSB),
Bibliotheksverbund Bayern (BVB)

Friedrich-Alexander-Universität
Erlangen-Nürnberg (FAU),
Universitätsbibliothek

Helmholtz Open Science
Koordinationsbüro am Deutschen
GeoForschungs-Zentrum (GFZ)

Members:

Prof. Dr. Thorsten Koch, KOBV

Beate Rusch, KOBV

Julia Alexandra Goltz, KOBV

Dr. Thomas Dierkes, KOBV

Jens Schwidder, KOBV

Jürgen Christof, UB/TUB

Monika Kuberek, UB/TUB

Dagmar Schobert, UB/TUB

Pascal Becker, UB/TUB

Dr. Klaus Ceynowa, BSB

Dr. Hildegard Schäffler, BSB

Dr. Lilian Landes, BSB

Michael Kassube, BSB

Matthias Groß, BSB/BVB

Konstanze Söllner, UB/FAU

Markus Putnings, UB/FAU

Oliver Schwab, UB/FAU

Tonka Stoyanova, UB/FAU

Regina Heidrich, UB/FAU

Roland Bertelmann, GFZ

Heinz Pampel, GFZ

Paul Vierkant, GFZ

Tobias Höhnow, GFZ

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1.0	18 March 2016	https://deepgreen.kobv.de/veroeffentlichung-metadatenschema/ . Initial document.

Table of Contents

Introduction.....	5
Synoptic Tables.....	6
List of References	7
Explanation of Table Components	9
Metadata Elements	10
1 Title.....	10
1.1 Title-Alternative.....	10
2 Appearance	11
2.1 Appearance-Abbrev. Journal Name	11
2.2 Appearance-Journal Name	12
2.3 Appearance-Volume.....	12
2.4 Appearance-Issue	13
2.5 Appearance-First Page.....	13
2.6 Appearance-Last Page	14
2.7 Appearance-Location-ID.....	14
3 Creator.....	15
3.1 Creator-Affiliation.....	16
4 Contributor	17
4.1 Contributor-Affiliation.....	18
5 Funder	19
6 Description	20
6.1 Description-Abstract.....	21
6.2 Description-Subject	21
6.3 Description-Table Of Contents	22
7 Publisher	22
8 Identifier	23
9 Language	24
10 Rights	24
10.1 Rights-Access Rights	25
10.2 Rights-Metadata Rights	25
10.3 Rights-License	26
10.4 Rights-Rights Holder	27
11 Type	27
11.1 Type-Version.....	28

12	Format	29
12.1	Format-Extent.....	29
12.2	Format-Medium	30
13	Date	30
13.1	Date-Accepted	31
13.2	Date-Available	31
13.3	Date-Copyrighted	32
13.4	Date-Created	32
13.5	Date-Issued.....	33
13.6	Date-Modified	33
13.7	Date-Submitted	33
13.8	Date-Valid	34
14	Relation.....	34
14.1	Relation-Has Part.....	35
14.2	Relation-Is Part Of	35
14.3	Relation-Replaces	36
14.4	Relation-Is Replaced By	36
15	Source	37
15.1	Source-Accrual Method.....	37
15.2	Source-Accrual Periodicity.....	38
15.3	Source-Accrual Policy	38

DeepGreen Metadata Schema

The metadata schema is aligned to the OCLC repository best practices (“Best Practices for CONTENTdm and other OAI-PMH compliant repositories: creating sharable metadata”, URL: <http://www.oclc.org/content/dam/support/wcdigitalcollectiongateway/MetadataBestPractices.pdf>). The current version of the schema is subject to changes as the functional requirements and workflow practices are evolving during the project experiences and prototype production.

Please direct correspondence to: Markus Putnings, markus.putnings@fau.de; Thomas Dierkes, dierkes@zib.de.

Introduction

In 2011, important priorities were set to realize green publications in the open access movement in Germany. With financial support from the German Research Foundation (DFG), libraries negotiated Alliance licenses with publishers that guarantee extensive open access rights. Authors of institutions, that have therewith access to licensed journals, can freely publish their articles immediately or after a short embargo period in a repository of their choice.¹

However, authors hesitantly use these open access rights. Also libraries – as managers of institutional and subject based repositories and thus legitimated representatives for the authors – only rarely make use of these rights. The aim of DeepGreen is to make the majority of those publications available online. Together with publishers of the Alliance licenses, the project consortium wants to develop a nearly fully automated workflow that covers both the delivery of data, including the full texts, of the publishers, as well as the data transformation to the necessary import formats and the loading process into the repositories. An intermediate “publication router” will serve as a distribution platform.

The DeepGreen metadata schema contains metadata properties describing a wide range of deliverable bibliographic metadata from the Alliance license publishers (most common standards are JATS and CrossRef XML) as well as its compliance with technical, quality and metadata standards of the repositories. The schema includes required metadata elements and optional properties providing additional information. While it should be clear, we state that we expect all values to be utf-8 encoded.

Key to the DeepGreen service is the concept of a clear assignability of articles to an institution. With this in mind, the element ‘Creator-Affiliation’ and its content is crucial. A standardized way of indicating affiliations² and the usage of unique identifiers (e. g. ORCID) are two ways in which the problem may be approached. For the benefits of an unambiguous assignability to be realized, the research community needs to work together with publishers.

Future developments of the schema will rely on the feedback of the publishing houses and a broad repository community. DeepGreen appreciates your feedback and invites you to share ideas for future developments.

¹ See <http://www.nationallizenzen.de/open-access/open-access-rechte.xls/view>.

² See for example Nunius, S.; Putnings, M.: Recommendations for the standardized indication of affiliation in publications in English and German. August 2014. URL: https://www.fau.de/files/2013/09/FAU-K-P_Affiliation_English.pdf.

Synoptic Tables

Table 1: DeepGreen Mandatory Metadata Elements

ID	Element Name	Obligation ³
1	Title (with recommended sub-element Title-Alternative)	M
2	Appearance (with recommended sub-elements such as Abbrev. Journal Name, Volume, Issue, etc.)	M
3	Creator (with mandatory sub-element Creator-Affiliation)	M
8	Identifier	M
13	Date (with recommended sub-elements such as Date-Submitted, Accepted, Available, etc.)	M

Table 2: DeepGreen Recommended and Optional Metadata Elements

ID	Element Name	Obligation ³
4	Contributor (with recommended sub-element Contributor-Affiliation)	R
5	Funder	R
6	Description (with optional sub-elements such as Abstract, Subject and Table of Contents)	O
7	Publisher	R
9	Language	O
10	Rights (with recommended sub-elements such as Access Rights, License and Rights Holder)	R
11	Type (with recommended sub-element Version)	R
12	Format (with optional sub-elements such as Format-Extent and Medium)	O
14	Relation (with optional sub-elements such as Has Part, Is Part Of, Replaces and Is Replaced By)	O
15	Source (with optional sub-elements such as Accrual Method, Accrual Periodicity and Accrual Policy)	R

³ M = Mandatory, R = Recommended, O = Optional.

List of References

Table 3: Referenced Technical Documentations and (Metadata) Standards

Name	Reference or link
Bibliographic Ontology Specification	http://bibliontology.com/ . The classes and properties can be found at http://purl.org/ontology/bibo/ .
DCMI Citation Standards	http://www.dublincore.org/groups/citation/citstds.html .
DCMI Metadata Terms	http://dublincore.org/documents/dcmi-terms/ .
DCMI Type Vocabulary	http://dublincore.org/documents/dcmi-type-vocabulary/#H7 .
DINI Certificate 2013 for Open Access Repositories and Publication services	http://edoc.hu-berlin.de/series/dini-schriften/2013-3-en/PDF/dini-zertifikat-2013-en.pdf .
info:eu-repo and COAR Controlled Vocabularies	https://wiki.surfnet.nl/display/standards/info-eu-repo . The newer COAR Controlled Vocabularies can be found at https://www.coar-repositories.org/activities/repository-interoperability/ig-controlled-vocabularies-for-repository-assets/coar-vocabularies/ .
ISO 639 Codes for the representation of names of languages	http://www.iso.org/iso/language_codes . A free ISO 639-2 Language Code List can be found at https://www.loc.gov/standards/iso639-2/php/code_list.php .
ISO 8601 Data elements and interchange formats	http://www.iso.org/iso/home/standards/iso8601.htm . A free description can be found at http://www.w3.org/TR/NOTE-datetime .
MARC Code List for Relators	http://id.loc.gov/vocabulary/relators .
MARC Standards	https://www.loc.gov/marc/ .
Network Working Group Tags for the Identification of Languages	https://www.ietf.org/rfc/rfc1766 . https://www.ietf.org/rfc/rfc3066 . https://www.ietf.org/rfc/rfc4646
NISO Access and License Indicators (ALI)	http://www.niso.org/workrooms/ali/ .
NISO Journal Article Tag Suite (JATS)	http://jats.niso.org/ .
NISO Journal Article Versions (JAV)	http://www.niso.org/publications/rp/RP-8-2008.pdf .
ONIX Standards	http://www.editeur.org/8/ONIX/ .
OpenAIRE Guidelines for Literature Repositories	https://guidelines.readthedocs.org/en/latest/literature/index.html .
OPUS 4 Documentation	http://www.kobv.de/entwicklung/software/opus-4/dokumentation/ .
PRISM Metadata Initiative	http://www.idealliance.org/specifications/prism-metadata-initiative .
RIOXX Application Profile Version 2.0 Final	http://www.riox.net/profiles/v2-0-final/ .
Schema.org	http://schema.org/docs/schemas.html .
Zetoc Data Technical Documentation	http://zetoc.jisc.ac.uk/technical/ .

Table 4: Referenced (Bibliographic) Identifiers

Name	Reference or link
Digital Object Identifier System (DOI)	https://www.doi.org/ .
Fundref identifier	http://www.crossref.org/fundref/ .
International Standard Book Number (ISBN)	https://www.isbn-international.org/content/isbn-standard .
International Standard Name Identifier (ISNI)	http://www.isni.org/ .
International Standard Serial Number (ISSN)	http://www.issn.org/ .
ORCID	http://orcid.org/ .
Persistent Uniform Resource Locator (PURL)	http://purl.org .
ResearcherID	http://www.researcherid.com/ .
Ringgold Identifier	http://www.ringgold.com/ringgold-identifier .
Scopus affiliation identifier	http://help.elsevier.com/app/answers/detail/a_id/2825/p/8150/incidents.c\$portal_account_name/32322 .
Scopus author identifier	https://www.elsevier.com/solutions/scopus/support/authorprofile .
Uniform Resource Name (URN)	http://www.persistent-identifier.de/ .

Table 5: Referenced Library Vocabularies, Authorities and Classification Systems

Name	Reference or link
Dewey Decimal Classification (DDC)	https://www.oclc.org/dewey/ . A free German description can be found at http://www.ddc-deutsch.de .
DOAJ subjects	https://doaj.org/subjects .
Getty Vocabularies (e. g. Union List of Artist Names (ULAN), The Art & Architecture Thesaurus (AAT), The Getty Thesaurus of Geographic Names (TGN), etc.)	http://www.getty.edu/research/tools/vocabularies/index.html .
Integrated Authority File (in German "Gemeinsame Normdatei" (GND))	http://www.dnb.de/DE/Standardisierung/GND/gnd_node.html .
Library of Congress Authorities (e. g. Library of Congress Name Authority File (LCNAF), Library of Congress Subject Headings (LCSH), etc.)	http://authorities.loc.gov/ .
Library of Congress Classification (LCC)	https://www.loc.gov/catdir/cpsolcc.html .
Medical Subject Headings (MeSH) Vocabulary	https://www.nlm.nih.gov/mesh/ .
Regensburg Library Classification Scheme (in German „Regensburger Verbundklassifikation“ (RVK))	http://rvk.uni-regensburg.de/ .
Universal Decimal Classification (UDC)	http://www.udcc.org/ .
Virtual International Authority File (VIAF)	http://www.viaf.org/ .

Table 6: Referenced Open Licenses

Name	Reference or link
Creative Commons Licenses	https://creativecommons.org/licenses/ .
Digital Peer Publishing License (DiPP)	http://www.dipp.nrw.de/lizenzen/dppl/ .
GNU General Public License (GPL) and GPL-Compatible Free Software Licenses	http://www.gnu.org/licenses/license-list.html#SoftwareLicenses .
Open Data Commons Licenses	http://opendatacommons.org/licenses/ .

Explanation of Table Components

Explanation of Table Components

Element Name	The unique name used in DeepGreen Metadata Schema.
Definition	Definition of the element, e.g. as stated in the DCMI Metadata Terms http://dublincore.org/documents/dcmi-terms/ or other DC sources such as Usage Guide http://dublincore.org/documents/usageguide/ .
Selection Options	This field represents a control function for selecting descriptive options from a predefined list of options. The field complies with attributes, role types, subfield codes or further control and adjustment capabilities in various metadata standards.
Required	<ul style="list-style-type: none"> • <i>Mandatory</i>: the main fields to be used to describe a resource, important for sharing outside of local context. • <i>Recommended, as appropriate</i>: the secondary fields which are very helpful if available. To use or not depends on the circumstances and the collection manager. • <i>Optional</i>: optional fields can be used to provide richer description.
Controlled Vocabulary	Recommended for data quality and consistency.
Syntax Scheme	Recommended syntax scheme used to structure the data contained in a given field.
Persistent Identifier	Recommended for data quality and attributability.
DC Element Map⁴	Corresponding Dublin Core element.
MARC Map	Corresponding MARC field.
ONIX Map	Corresponding ONIX field. ⁵
JATS Map	Corresponding NISO JATS field. ⁶
OPUS Import-XML Map	Corresponding OPUS Import-XML Map. ⁷
Repeatable	<ul style="list-style-type: none"> • Yes: a field may appear multiple times in a single record. • Not preferred: a field should occur only once in a single record.
Best Practices	Comments and other recommendations.

⁴ Can be also used e. g. for DSpace Simple Archive Format metadata fields belonging to the dc schema.

⁵ See <http://www.editeur.org/96/onix-and-marc21/> and referring documents as well as <http://www.loc.gov/marc/onix2marc.html> for mapping between ONIX to MARC.

⁶ See <http://jats.niso.org/> and referring documents as well as http://jatswiki.org/wiki/JATS-to-MARC_mapping for mapping between JATS and MARC.

⁷ See http://www.kobv.de/wp-content/uploads/2015/03/kobv_opus_dokumentation_version-4.4.4_de.pdf, chapter 12.

Metadata Elements

1 Title

Element Name	Title
Definition	A name given to the resource.
Selection Options	
Required	Mandatory
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Title (dc:title)
MARC Map	245
ONIX Map	TitleText (Title type code 01 "Distinctive title" necessary)
JATS Map	article-meta/title-group/article-title
OPUS Import-XML Map	titlesMain/titleMain
Repeatable	Not preferred
Best Practices	<ul style="list-style-type: none"> • Prefer literal and non-numeric description of resource, excluding material-type information if possible. • Prefer non-use of explanatory or qualifying symbols (e.g., brackets to indicate cataloger-supplied title). • If the resource has multiple titles (e.g., translated titles, etc.), prefer to use Title-Alternative element.

1.1 Title-Alternative

Element Name	Title-Alternative
Definition	An alternative name for the resource.
Selection Options	<ul style="list-style-type: none"> - Subtitle - Translated title - Translated subtitle
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	dc.title.alternative or dc.title.subtitle or dc.title.translated or dc.title.translatedsubtitle
MARC Map	246
ONIX Map	TitleText (Title type code 06 "Title in other language" necessary)
JATS Map	<ul style="list-style-type: none"> - article-meta/title-group/subtitle - article-meta/title-group/trans-title-group/trans-title - article-meta/title-group/trans-title-group/trans-subtitle
OPUS Import-XML Map	titles/title (type and language attribute necessary, e. g. type="sub" language="eng" -> ISO 639-3)
Repeatable	Yes
Best Practices	<ul style="list-style-type: none"> • Secondary titles should be also used in Title-Alternative (if addressed separately).

2 Appearance

Element Name	Appearance
Definition	Series information such as journal name, volume, issue, first page, last page.
Selection Options	<ul style="list-style-type: none"> - pISSN - eISSN - - see also subelements -
Required	Mandatory
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Bibliographic Citation (dcterms:bibliographicCitation) or Identifier (dc:identifier.issn, dc.identifier.eissn)
MARC Map	022 \$a - see also subelements -
ONIX Map	SeriesIdentifier (Series identifier type code 02 "ISSN" necessary) - see also subelements -
JATS Map	journal-meta/issn - see also subelements -
OPUS Import-XML Map	identifiers/identifier (type attribute type="issn" necessary) - see also subelements -
Repeatable	Yes
Best Practices	

2.1 Appearance-Abbrev. Journal Name

Element Name	Appearance-Abbrev. Journal Name
Definition	The abbreviated name of the journal in which the article appeared.
Selection Options	<ul style="list-style-type: none"> - Abbreviated journal name - Title acronym or initialism
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	- part of Bibliographic Citation (dcterms:bibliographicCitation) or alternatively, zetoc DC (dctype:journalAbbreviatedTitle), Bibliographic Ontology Specification (http://purl.org/ontology/bibo/shortTitle), schema.org or similar, depending on disseminator and recipient -
MARC Map	210 \$a
ONIX Map	Title detail composite (Title type code 05 "Abbreviated title" necessary)
JATS Map	journal-meta/journal-title-group/journal-title/abbrev-journal-title
OPUS Import-XML Map	titles/title (type attribute necessary, e. g.

	type="additional")
Repeatable	Not preferred
Best Practices	

2.2 Appearance-Journal Name

Element Name	Appearance-Journal Name
Definition	The name of the journal in which the article appeared.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	- part of Bibliographic Citation (<i>dcterms:bibliographicCitation.journaltitle</i>) or alternatively, <i>zetoc DC (dccite:journalTitleFull)</i> , <i>Bibliographic Ontology Specification</i> (http://purl.org/ontology/bibo/Journal), <i>schema.org</i> or similar, depending on disseminator and recipient -
MARC Map	740 \$a
ONIX Map	Title detail composite (Title type code 01 "Cover title (serial)" necessary)
JATS Map	journal-meta/journal-title-group/journal-title
OPUS Import-XML Map	<ul style="list-style-type: none"> - titles/title (type attribute type="parent" necessary) or - series/seriesItem (<i>requires a corresponding entry in the specific OPUS 4 instance</i>) or - enrichments/enrichment (key attribute necessary, e. g. key="Testseries", <i>requires a corresponding entry in the specific OPUS 4 instance</i>)
Repeatable	Not preferred
Best Practices	

2.3 Appearance-Volume

Element Name	Appearance-Volume
Definition	The volume of the journal in which the article appeared.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	- part of Bibliographic Citation (<i>dcterms:bibliographicCitation.volume</i>) or alternatively, <i>zetoc DC (dccite:journalVolume)</i> , <i>Bibliographic Ontology Specification</i> (http://purl.org/ontology/bibo/volume), <i>PRISM</i>

	<i>(prism:volume), schema.org or similar, depending on disseminator and recipient -</i>
MARC Map	one component of 773 \$a
ONIX Map	Title detail composite (use PartNumber)
JATS Map	article-meta/volume
OPUS Import-XML Map	opusDocument (volume attribute necessary)
Repeatable	Not preferred
Best Practices	

2.4 Appearance-Issue

Element Name	Appearance-Issue
Definition	The issue of the journal in which the article appeared.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	<i>- part of Bibliographic Citation (dcterms:bibliographicCitation.issue) or alternatively, zetoc DC (dccite:journalIssueNumber), Bibliographic Ontology Specification (http://purl.org/ontology/bibo/Issue), PRISM (prism:number), schema.org or similar, depending on disseminator and recipient -</i>
MARC Map	one component of 773 \$a
ONIX Map	Title detail composite (use PartNumber)
JATS Map	article-meta/issue
OPUS Import-XML Map	opusDocument (issue attribute necessary)
Repeatable	Not preferred
Best Practices	

2.5 Appearance-First Page

Element Name	Appearance-First Page
Definition	The first page of the article.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	<i>- part of Bibliographic Citation (dcterms:bibliographicCitation.pagestart) or alternatively, zetoc DC (zetoc:ppf), PRISM (prism:startingPage), schema.org or similar, depending on disseminator and recipient -</i>
MARC Map	one component of 773 \$a
ONIX Map	Page run composite (use FirstPageNumber)

JATS Map	article-meta/fpage
OPUS Import-XML Map	opusDocument (pageFirst attribute necessary)
Repeatable	Not preferred
Best Practices	
<ul style="list-style-type: none"> • In case the journal use article ids instead of page numbers, please don't add any values to this field. 	

2.6 Appearance-Last Page

Element Name	Appearance-Last Page
Definition	The last page of the article.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	- part of Bibliographic Citation (dcterms:bibliographicCitation.pageend) or alternatively, zetoc DC (zetoc:ppl), PRISM (prism:endingPage), schema.org or similar, depending on disseminator and recipient -
MARC Map	one component of 773 \$a
ONIX Map	Page run composite (use LastPageNumber)
JATS Map	article-meta/lpage
OPUS Import-XML Map	opusDocument (pageLast attribute necessary)
Repeatable	Not preferred
Best Practices	
<ul style="list-style-type: none"> • In case the journal use article ids instead of page numbers, please don't add any values to this field. 	

2.7 Appearance-Location-ID

Element Name	Appearance-Location-ID
Definition	Location ID if the journal uses such instead of page numbers.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	- part of Bibliographic Citation (dcterms:bibliographicCitation.ELocationId) -
MARC Map	one component of 773 \$a
ONIX Map	Page run composite (use FirstPageNumber)
JATS Map	article-meta/elocation-id
OPUS Import-XML Map	opusDocument (pageFirst attribute necessary)
Repeatable	Not preferred
Best Practices	
<ul style="list-style-type: none"> • Some publications have article location IDs and no page numbers. In case of MARC, ONIX and OPUS XML, use the article location ID in place of the first page number. 	

3 Creator

Element Name	Creator
Definition	An entity primarily responsible for making the resource.
Selection Options	<ul style="list-style-type: none"> - Name* <ul style="list-style-type: none"> o Academic title o First name o First name initial o Last name - Name order - Persistent Identifier <ul style="list-style-type: none"> o ORCID o ISNI o ResearcherID o Scopus Author ID o LCNAF ID o ULAN ID o GND ID o VIAF ID - Contact details <ul style="list-style-type: none"> o E-mail address o - <i>for affiliation see Creator-Affiliation</i> - - Type <ul style="list-style-type: none"> o Corresponding author and/or o Submitting author
Required	*Mandatory. Name order, persistent identifier(s), e-mail address and author type information are recommended.
Controlled Vocabulary	LCNAF, ULAN , GND, VIAF
Syntax Scheme	
Persistent Identifier	ISNI, ORCID, ResearcherID, Scopus Author ID, LCNAF ID, ULAN ID, GND ID, VIAF ID
DC Element Map	Creator (dc:creator) or Contributor (dc.contributor.author)
MARC Map	720
ONIX Map	Contributor (Contributor role code necessary, e. g. A01 "By author")
JATS Map	<ul style="list-style-type: none"> - contrib (attributes necessary, e. g. @contrib-type="author", @corresp="yes", @id, @rid, etc.) - contrib/name/ - contrib-id (contributor identifier type necessary, e. g. contrib-id-type="orcid")
OPUS Import-XML Map	<p>persons/person (role attribute necessary, e. g. "author")</p> <p>- <i>entries are attributes, e. g. <persons><person role="author" firstName="John" lastName="Doe" academicTitle="Dr." etc. /> </persons></i> -</p>
Repeatable	Yes
Best Practices	<ul style="list-style-type: none"> • Examples of a Creator include a person.

- Prefer to use Creator-Affiliation or Contributor-Affiliation for organizations.
- Prefer use of Persistent Identifiers for correct attributability beyond the written name form.
- Prefer non-use of 'junk value' (e.g., "Unknown,").
- WorldCat.org display mapping: dc:creator maps to MARC 720 by default. To enhance precision in fielded searching, map dc:creator to MARC 100 (for Personal Name) or 110 (For Corporate Name).

“Where the [creator] is a person, the RECOMMENDED format is to add text in the form Last Name, First Name(s), and to include an ORCID ID, if known, in its HTTP URI form [...]. Where the [creator] is an organisation, the RECOMMENDED format is to add the official name of the organisation, and to include an ISNI ID, if known, in its HTTP URI form [...].” – [RCUK RIOXX Application Profile Version 2.0 Final](#)

3.1 Creator-Affiliation

Element Name	Creator-Affiliation
Definition	The authors' institutions; the affiliation for a journal article or conference paper pertains to the resource.
Selection Options	<ul style="list-style-type: none"> - Affiliation name* - Affiliation name alternative(s) - Affiliation initialism - Persistent Identifier <ul style="list-style-type: none"> o Ringgold Identifier o ISNI o Scopus Affiliation ID o GND ID o LCNAF ID o ULAN ID o VIAF ID - Affiliation contact details <ul style="list-style-type: none"> o Faculty o Department o Institute o Clinic o Chair o Professorship o Address o Domain name o Email host name - Affiliation history (former or later institution(s) and length of service in the institution)
Required	*Mandatory. Affiliation name alternative(s), initialism, identifier, contact details and affiliation history information are recommended.
Controlled Vocabulary	LCNAF, ULAN, GND, VIAF
Syntax Scheme	
Persistent Identifier	ISNI, Ringgold Identifier, Scopus Affiliation ID, GND ID, LCNAF ID, ULAN ID, VIAF ID
DC Element Map	Contributor (dc:contributor.grantor or dc.contributor.organisation)
MARC Map	373
ONIX Map	Affiliation
JATS Map	<ul style="list-style-type: none"> - aff-alternatives/aff/institution/ - aff/institution

	<ul style="list-style-type: none"> - author-notes/corresp
OPUS Import-XML Map	<ul style="list-style-type: none"> - dnbInstitutions/dnbInstitution (role attribute necessary, e. g. "grantor") - opusDocument (contributingCorporation or creatingCorporation attribute necessary)
Repeatable	Yes
<p>Best Practices</p> <ul style="list-style-type: none"> • Examples of an Affiliation include a university, society (such as Max Planck Society), etc. • Prefer use of Name (personal or corporate) Authority Source to be used consistently throughout description of a resource and from one resource to another. • Prefer use of Persistent Identifiers for correct attributability beyond the written name form. • Prefer non-use of 'junk value' (e.g., "Unknown,"). <p><i>"For a bibliographic resource, in particular a journal article, an author's affiliation is a significant item of information, for resource discovery (e.g. 'find all articles about magnesium published by members of The University of Manchester') as well as for resource description. The affiliation for a journal article or conference paper pertains to the resource. It is the author's affiliation when they created the resource, and will persist even if the author moves to a different institution. Thus it is a property of the resource rather than of the author. It is suggested that this affiliation be captured as the value of a dc:contributor property, recognising that the author's institution will have contributed to the creation of the resource. Because affiliation is a property of the resource, rather than a creator, the fact that there is no way to correlate particular authors with their affiliations (when there are multiple authors) is not an issue."</i> – Dublin Core Recommendation 6. Capture authors' affiliations using dc:contributor</p>	

4 Contributor

Element Name	Contributor
Definition	An entity responsible for making contributions to the resource.
Selection Options	<ul style="list-style-type: none"> - Name <ul style="list-style-type: none"> o Academic title o First name o First name initial o Last name - Name order - Persistent Identifier <ul style="list-style-type: none"> o ORCID o ISNI o ResearcherID o Scopus Author ID o LCNAF ID o ULAN ID o GND ID o VIAF ID - Contact details <ul style="list-style-type: none"> o E-mail address o - for affiliation see Contributor-Affiliation- - Type of contribution <ul style="list-style-type: none"> o Edited by o Translated by o Supplement by o Experiments by

	○ - for funded by see Funder -
Required	Recommended, as appropriate
Controlled Vocabulary	LCNAF, ULAN, GND, VIAF
Syntax Scheme	
Persistent Identifier	ISNI, ORCID, ResearcherID, Scopus Author ID, LCNAF ID, ULAN ID, GND ID, VIAF ID
DC Element Map	Contributor (e. g. dc.contributor.editor or dc.contributor.advisor or dc.contributor.referee or dc.contributor.illustrator or dc.contributor.submitter)
MARC Map	<ul style="list-style-type: none"> - 720 - MARC Code List for Relators (http://id.loc.gov/vocabulary/relators), e. g. Translator (http://id.loc.gov/vocabulary/relators/trl)
ONIX Map	Contributor (Contributor role code necessary, e. g. B06 "Translated by")
JATS Map	<ul style="list-style-type: none"> - contrib (attributes necessary, e. g. @contrib-type=" translator", @corresp="no", @id, @rid, etc.) - contrib/name/ - contrib-id (contributor identifier type necessary, e. g. contrib-id-type="orcid")
OPUS Import-XML Map	<p>persons/person (role attribute necessary, e. g. "contributor" or "translator")</p> <p>- entries are attributes, e. g. <persons><person role="translator" firstName="John" lastName="Doe" academicTitle="Dr." etc. /> </persons> -</p>
Repeatable	Yes
Best Practices <ul style="list-style-type: none"> • Examples of a Contributor include a person (e.g., additional writer, illustrator, editor, finding aid author, etc.), an organization, etc. • Contributors are named so because their responsibility for the creation of a work is not equal to that named as Creator. • Prefer use of Name (personal or corporate) Authority Source to be used consistently throughout description of a resource and from one resource to another. • Prefer use of Persistent Identifiers for correct attributability beyond the written name form. • Prefer non-use of 'junk value' (e.g., "Unknown,"). 	

4.1 Contributor-Affiliation

Element Name	Contributor-Affiliation
Definition	The contributors' institutions; the affiliation for a journal article or conference paper pertains to the resource.
Selection Options	<ul style="list-style-type: none"> - Affiliation name - Affiliation name alternative(s) - Affiliation initialism - Persistent Identifier <ul style="list-style-type: none"> ○ Ringgold Identifier ○ ISNI ○ Scopus Affiliation ID

	<ul style="list-style-type: none"> ○ GND ID ○ LCNAF ID ○ ULAN ID ○ VIAF ID - Affiliation contact details <ul style="list-style-type: none"> ○ Faculty ○ Department ○ Institute ○ Clinic ○ Chair ○ Professorship ○ Address ○ Domain name ○ Email host name - Affiliation history (former or later institution(s) and length of service in the institution)
Required	Recommended, as appropriate
Controlled Vocabulary	LCNAF, ULAN, GND, VIAF
Syntax Scheme	
Persistent Identifier	ISNI, Ringgold Identifier, Scopus Affiliation ID, GND ID, LCNAF ID, ULAN ID, VIAF ID
DC Element Map	Contributor (dc:contributor.grantor or dc.contributor.organisation)
MARC Map	373
ONIX Map	Affiliation
JATS Map	<ul style="list-style-type: none"> - aff-alternatives/aff/institution/ - aff/institution - author-notes/corresp
OPUS Import-XML Map	<ul style="list-style-type: none"> - dnbInstitutions/dnbInstitution (role attribute necessary, e. g. “publisher” or “grantor”) - opusDocument (contributingCorporation or creatingCorporation attribute necessary)
Repeatable	Yes
Best Practices	
<ul style="list-style-type: none"> • Examples of an Affiliation include a university, society (such as Max Planck Society), etc. • Prefer use of Name (personal or corporate) Authority Source to be used consistently throughout description of a resource and from one resource to another. • Prefer use of Persistent Identifiers for correct attributability beyond the written name form. • Prefer non-use of ‘junk value’ (e.g., “Unknown,”). 	

5 Funder

Element Name	Funder
Definition	Enable identification of the research funder and other funding information such as project code.
Selection Options	<ul style="list-style-type: none"> - Funder name - Funder name alternative(s) - Funder initialism - Persistent Identifier <ul style="list-style-type: none"> ○ FundRef Identifier

	<ul style="list-style-type: none"> ○ ISNI ○ LCNAF ID ○ ULAN ID ○ GND ID ○ VIAF ID - Funder contact details <ul style="list-style-type: none"> ○ Responsible project officer ○ Address - Funder or project relations <ul style="list-style-type: none"> ○ Funding area ○ Funding programme ○ Funding programme identifier ○ Acknowledgement set by funder ○ Grant number
Required	Recommended, as appropriate
Controlled Vocabulary	LCNAF, ULAN, GND, VIAF
Syntax Scheme	
Persistent Identifier	ISNI, FundRef Identifier, LCNAF ID, ULAN ID, GND ID, VIAF ID
DC Element Map	Description (dc.description.sponsorship)
MARC Map	<ul style="list-style-type: none"> - 536 - MARC Code List for Relator Funder (http://id.loc.gov/vocabulary/relators/fnd)
ONIX Map	PublisherName (Publishing role code necessary, e. g. 16 "Funding body")
JATS Map	funding-group/.../funding-source
OPUS Import-XML Map	
Repeatable	Yes
Best Practices	
<ul style="list-style-type: none"> • Examples of a Funder include a research funding organization, ministry, university, society (such as Max Planck Society), etc. • Prefer use of Name (personal or corporate) Authority Source to be used consistently throughout description of a resource and from one resource to another. • Prefer use of Persistent Identifiers for correct attributability beyond the written name form. • Prefer non-use of 'junk value' (e.g., "Unknown,"). 	

6 Description

Element Name	Description
Definition	An account of the resource.
Selection Options	
Required	Optional
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Description (dc:description)
MARC Map	520 [8]
ONIX Map	OtherText (Other text type code necessary, e. g. 01 "Main description")
JATS Map	<ul style="list-style-type: none"> - long-desc - article-meta/...

OPUS Import-XML Map	- see subelements -
Repeatable	Yes
Best Practices	
<ul style="list-style-type: none"> • Description may include but is not limited to: an abstract, a table of contents, a graphical representation, or a free-text account of the resource. 	

6.1 Description-Abstract

Element Name	Description-Abstract
Definition	A summary of the resource.
Selection Options	<ul style="list-style-type: none"> - Abstract - Translated abstract - Review - Summary
Required	Optional
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Abstract (dcterms:abstract or dc.description.abstract)
MARC Map	520 [3]
ONIX Map	OtherText (Other text type code necessary, e. g. 01 "Main description")
JATS Map	<ul style="list-style-type: none"> - article-meta/abstract - article-meta/trans-abstract
OPUS Import-XML Map	abstracts/abstract
Repeatable	Not preferred
Best Practices	
<ul style="list-style-type: none"> • There is no controlled list of abstract types. Examples include scope, content advice, review. 	

6.2 Description-Subject

Element Name	Description-Subject
Definition	The topic of the resource.
Selection Options	<ul style="list-style-type: none"> - Subject heading <ul style="list-style-type: none"> o MeSH o LCSH o LCNAF o AAT o TGN o GND o DOAJ Subject - Free keyword - Classification codes <ul style="list-style-type: none"> o DDC o LCC o UDC o RVK
Required	Optional
Controlled Vocabulary	DDC, LCC, LCSH, MeSH, UDC, LCNAF, AAT, TGN, RVK, GND, DOAJ Subject
Syntax Scheme	

Persistent Identifier	if available (e. g. LCCN Permalink, GND ID)
DC Element Map	Subject (dc:subject.classification or dc:subject.ddc or dc:subject.lcc or dc:subject.lcsh or dc:subject.mesh or dc:subject.other or dc:subject)
MARC Map	MARC 650 (controlled) / MARC 653 (uncontrolled)
ONIX Map	SubjectHeadingText (controlled: Subject scheme identifier code necessary, e. g. 01 “Dewey”)
JATS Map	<ul style="list-style-type: none"> - article-categories/subj-group/subject - article-categories/subj-group/compound-subject/compound-subject-part/... - kwd-group/kwd - kwd-group/compound-kwd/compound-kwd-part/...
OPUS Import-XML Map	keywords/keyword (language and type attribute necessary, e. g. “swd” or “uncontrolled”)
Repeatable	Yes
Best Practices	<ul style="list-style-type: none"> • Typically, the subject will be represented using keywords, key phrases, or classification codes. Recommended best practice is to use a controlled vocabulary.

6.3 Description-Table Of Contents

Element Name	Description-Table Of Contents
Definition	A list of subunits of the resource.
Selection Options	<ul style="list-style-type: none"> - Table of Contents - Translated Table of Contents
Required	Optional
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Table Of Contents (dcterms:tableOfContents)
MARC Map	505 [8]
ONIX Map	OtherText (Other text type code 04 “Table of contents” necessary)
JATS Map	<ul style="list-style-type: none"> - article-meta/abstract (@abstract type=”toc” necessary) - article-meta/trans-abstract (@abstract type=”toc” necessary)
OPUS Import-XML Map	
Repeatable	Not preferred
Best Practices	

7 Publisher

Element Name	Publisher
Definition	An entity responsible for making the resource available.
Selection Options	<ul style="list-style-type: none"> - Publisher name - Publisher name alternative(s) - Publisher initialism (e. g. PLOS) - Persistent Identifier

	<ul style="list-style-type: none"> ○ ISNI ○ LCNAF ID ○ GND ID ○ VIAF ID - Publisher contact details <ul style="list-style-type: none"> ○ Homepage ○ E-mail address ○ Address
Required	Recommended, as appropriate
Controlled Vocabulary	LCNAF, GND, VIAF
Syntax Scheme	
Persistent Identifier	ISNI, LCNAF ID, GND ID, VIAF ID
DC Element Map	Publisher (dc:publisher or dc:publisher.name or dc:publisher.place)
MARC Map	260 \$b
ONIX Map	PublisherName (Publishing role code 01 "Publisher" necessary)
JATS Map	journal-meta/publisher
OPUS Import-XML Map	opusDocument (publisherName attribute necessary)
Repeatable	Not preferred
Best Practices	
<ul style="list-style-type: none"> • Examples of a Publisher include a person, an organization, etc. • Prefer use of Name (personal or corporate) Authority Source to be used consistently throughout description of a resource and from one resource to another. • Prefer use of Persistent Identifiers for correct attributability beyond the written name form. • Prefer non-use of 'junk value' (e.g., "Unknown"). 	

8 Identifier

Element Name	Identifier
Definition	An unambiguous reference to the resource within a given context.
Selection Options	<ul style="list-style-type: none"> - Article URL* - Publisher ID* - Persistent Identifier* <ul style="list-style-type: none"> ○ URN ○ DOI ○ PURL ○ PMID
Required	*At least one of these specifications is mandatory
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	URN, DOI, PURL
DC Element Map	Identifier (dc:identifier or dc:identifier.urn or dc:identifier.doi or dc:identifier.uri or dc:identifier.pmid)
MARC Map	856 \$u (URL), 024 (non-URL), 035 \$a (System Control Number)
ONIX Map	IDValue (Product identifier type code necessary, e. g. 06 "DOI", 22 "URN")
JATS Map	article-id (type of publication identifier necessary, e.

	g. pub-id-type="doi")
OPUS Import-XML Map	<ul style="list-style-type: none"> - identifiers/identifier (type attribute necessary, e. g. type="doi") - opusDocument (oldId attribute necessary)
Repeatable	Not preferred
Best Practices	

9 Language

Element Name	Language
Definition	A language of the resource.
Selection Options	
Required	Optional
Controlled Vocabulary	
Syntax Scheme	ISO 639-3, RFC 1766, RFC 3066, RFC 4646
Persistent Identifier	
DC Element Map	Language (dc:language)
MARC Map	546
ONIX Map	Language code
JATS Map	<ul style="list-style-type: none"> - body+xml:lang - article+xml:lang
OPUS Import-XML Map	opusDocument (language attribute necessary, e. g. language="deu" -> ISO 639-3)
Repeatable	Yes
Best Practices	
<ul style="list-style-type: none"> • Multiple values are often used when a resource contains more than one language. Separate terms by semi-colon (;) and a space. 	

10 Rights

Element Name	Rights
Definition	Information about rights held in and over the resource.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Rights (dc:rights)
MARC Map	540
ONIX Map	- see subelements -
JATS Map	- see subelements -
OPUS Import-XML Map	- see subelements -
Repeatable	Yes
Best Practices	
<ul style="list-style-type: none"> • Prefer free text statement of rights to a 'lonely' URL. • Rights information includes a statement about various property rights associated with the resource, including intellectual property rights. • Rights statements should provide references or contact information. Additional clarification can be indicated via linking to an institutional policy statement or other web resource. 	



- If possible use URIs defined by RightsStatements.org.

10.1 Rights-Access Rights



Element Name	Rights-Access Rights
Definition	Information about who can access the resource or an indication of its security status.
Selection Options	<ul style="list-style-type: none"> - Access license name - Access license type (e. g. national license) - Access license content (cf. NISO Access and License Indicators) <ul style="list-style-type: none"> o ali:free_to_read o accessible version (e. g. preprint, postprint, publishers' version) - <i>must match Type-Version</i> - - Access license Holder - Access rights URI (e. g. info:eu-repo/semantics/openAccess)
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Access Rights (dcterms:accessRights, dc.rights.other)
MARC Map	(506##\$a enhancement recommended)
ONIX Map	PublishingDate composite (Publishing date role 02 "Embargo date") - <i>more available in ONIX-PL</i> -
JATS Map	- <i>cf. NISO Access License and Indicators (ALI)</i> -
OPUS Import-XML Map	
Repeatable	Yes
Best Practices	<ul style="list-style-type: none"> • Access Rights may include information regarding access or restrictions based on privacy, security, or other policies. <p><i>"[The free_to_read] element does not take a value - the semantics of ali:free_to_read are conveyed by its presence or absence. This element may be modified by two optional attributes</i></p> <ul style="list-style-type: none"> • start_date • end_date <p><i>Each of these attributes, if present, takes a date value which MUST be encoded using ISO 8601 [...]."</i> – RCUK RIOXX Application Profile Version 2.0 Final</p>

10.2 Rights-Metadata Rights

Element Name	Rights-Metadata Rights
Definition	Information about copyright and related rights to the delivered <i>metadata</i> (bibliographic and rights metadata) of the resource, e. g. to share it in library catalogues online.
Selection Options	<ul style="list-style-type: none"> - License name - License type (e. g. Open Data Commons Attribution License)

	<ul style="list-style-type: none"> - License URI - License content <ul style="list-style-type: none"> o Text o Symbol (e. g.  
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	
MARC Map	
ONIX Map	
JATS Map	
OPUS Import-XML Map	
Repeatable	Yes
Best Practices	

10.3 Rights-License

Element Name	Rights-License
Definition	A legal document giving official permission to do something with the resource.
Selection Options	<ul style="list-style-type: none"> - License name - License type <ul style="list-style-type: none"> o Creative Commons o DiPP o GNU General Public License (GPL) - License URI, may be also expressed via NISO Access and License Indicators <ul style="list-style-type: none"> o ali:license_ref - License content <ul style="list-style-type: none"> o Text o Symbol (e. g.  
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	License (dcterms:license) or Rights (dc.rights.other or dc.rights.uri)
MARC Map	(540##\$a enhancement recommended)
ONIX Map	EpubLicense composite (new in ONIX 3.0.2) (with EpubLicenseName, EpubLicenseExpressionLink, etc.)
JATS Map	<ul style="list-style-type: none"> - permissions/... - permissions/license (type of license may be necessary, e.g. license-type="open-access") - permissions/license/license-p
OPUS Import-XML Map	licences/licence (<i>requires a corresponding entry in the specific OPUS 4 instance</i>)
Repeatable	Yes
Best Practices	
<i>"[The license_ref] element MUST take an HTTP URI for its value. This HTTP URI MUST point to a resource</i>	

which expresses the license terms specifying how the resource may be used. This element **MUST** include the attribute:

- `start_date`

This attribute takes a date value which **MUST** be encoded using ISO 8601 [...]. Where several such elements are included, the one with the `start_date` attribute indicating the most recent date takes precedence.” – [RCUK RIOXX Application Profile Version 2.0 Final](#)

10.4 Rights-Rights Holder

Element Name	Rights-Rights Holder
Definition	A person or organization owning or managing rights over the resource.
Selection Options	<ul style="list-style-type: none"> - Copyright holder name - Copyright holder identifier <ul style="list-style-type: none"> o ISNI o LCNAF ID o GND ID o VIAF ID - Copyright holder contact details - Copyright Statement
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Rights Holder (dc.rights holder)
MARC Map	
ONIX Map	CopyrightStatement composite (with CopyrightOwner, CopyrightOwnerIdentifier composite, etc.)
JATS Map	<ul style="list-style-type: none"> - permissions/copyright-statement - permissions/copyright-holder
OPUS Import-XML Map	
Repeatable	Yes
Best Practices	<ul style="list-style-type: none"> • Prefer to include the name of the copyright holder and the contact information.

11 Type

Element Name	Type
Definition	The nature or genre of the resource.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	DCMI
Syntax Scheme	
Persistent Identifier	if available (e. g. DCMI Type Vocabulary PURLs)
DC Element Map	Type (dc:type)
MARC Map	655
ONIX Map	ProductContent type
JATS Map	<ul style="list-style-type: none"> - attribute @product-type - attribute @publication-type

	- attribute @article-type
OPUS Import-XML Map	opusDocument (type attribute necessary, e. g. type="MovingImage")
Repeatable	Yes
Best Practices <ul style="list-style-type: none"> • Moving images, three-dimensional objects and sound recordings are all examples of Resource Types. • Prefer COAR Resource Type Vocabulary, DCMI Type Vocabulary and/or DINI Document and Publication Type Set for controlled list of authorized terms: http://vocabularies.coar-repositories.org/documentation/resource_types, http://dublincore.org/documents/dcmi-type-vocabulary/#H7, http://edoc.hu-berlin.de/series/dini-schriften/2013-3-en/PDF/dini-zertifikat-2013-en.pdf (section A.2.3) • To describe the file format, physical medium, or dimensions of the resource, use the Format element. 	

11.1 Type-Version

Element Name	Type-Version
Definition	The version (e. g. preprint, postprint) of the resource.
Selection Options	<ul style="list-style-type: none"> - AO = Author's Original / Preprint / Submitted Version - SMUR = Submitted Manuscript Under Review - AM = Accepted Manuscript / Postprint / Accepted Version - P = Proof - VoR = Version of Record - CVoR = Corrected Version of Record - EVoR = Enhanced Version of Record - NA = Not Applicable (or Unknown)
Required	Recommended, as appropriate
Controlled Vocabulary	DCMI
Syntax Scheme	
Persistent Identifier	if available (e. g. URN, DOI, PURL)
DC Element Map	Type (dc:type.version)
MARC Map	775 \$b
ONIX Map	- only available in ONIX for Serials (element "ContentItemStatus") -
JATS Map	pub-date (type of publication attribute necessary, e. g. pub-type="epreprint")
OPUS Import-XML Map	opusDocument (type attribute necessary, e. g. type="preprint")
Repeatable	Yes
Best Practices <ul style="list-style-type: none"> • Prefer Journal Article Versions (JAV): Recommendations of the NISO/ALPSP JAV Technical Working Group: http://www.niso.org/publications/rp/RP-8-2008.pdf <p><i>"Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. The DC element relation can be used to indicate different kinds of relations between several metadata records. If relations between metadata records are made visible by using metadata the following holds for the distinction between versions (author version and publisher version, preprint, postprint, etc.): [...]"</i></p>	

The value of `dc:relation` is the identifier of the other document.

Linking two documents:

```

1 <!-- Document A -->
2 <dc:type>info:eu-repo/semantics/submittedVersion</dc:type>
3 <dc:identifier> http://hdl.handle.net/10</dc:identifier>
4 <dc:relation>http://hdl.handle.net/20</dc:relation>

```

```

1 <!-- Document B -->
2 <dc:type>info:eu-repo/semantics/acceptedVersion</dc:type>
3 <dc:identifier> http://hdl.handle.net/20</dc:identifier>
4 <dc:relation>http://hdl.handle.net/10</dc:relation>

```

” – [OpenAIRE Guidelines](#)

[for Literature Repositories](#)

12 Format

Element Name	Format
Definition	The file format, physical medium, or dimensions of the resource.
Selection Options	
Required	Optional
Controlled Vocabulary	MIME, AAT
Syntax Scheme	
Persistent Identifier	
DC Element Map	Format (dc:format)
MARC Map	500 (General Note)
ONIX Map	<ul style="list-style-type: none"> - Text format code, - Epublication type code, - Epublication format code - <i>- for format medium see “Format-Medium” ONIX Map, for extent see “Format-Extent” ONIX Map -</i>
JATS Map	<ul style="list-style-type: none"> - attribute @publication-format - attribute @mimetype - attribute @mime-subtype
OPUS Import-XML Map	
Repeatable	Yes
Best Practices	<ul style="list-style-type: none"> • Examples of dimensions include size and duration. • Prefer use of Internet Media Types [MIME] or two-part (type/subtype) identifier in a single string: http://www.iana.org/assignments/media-types/. E.g., audio/mp3; image/jpg; application/pdf; text/html.

12.1 Format-Extent

Element Name	Format-Extent
Definition	The size or duration of the resource.
Selection Options	<ul style="list-style-type: none"> - Number of pages - Page range (from ... till ...) - Number of tables - Number of references

Required	Optional
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Format (dc.format.extent)
MARC Map	300
ONIX Map	Extent composite (with ExtentType code, ExtentValue, etc.)
JATS Map	<ul style="list-style-type: none"> - article-meta/counts/page-count - article-meta/product/page-range - size
OPUS Import-XML Map	opusDocument (pageNumber attribute necessary)
Repeatable	Yes
Best Practices <ul style="list-style-type: none"> • Examples include a number of pages, a specification of length, width, and breadth, or a period in hours, minutes, and seconds. E.g., 109,568 bytes; 00:16 minutes. 	

12.2 Format-Medium

Element Name	Format-Medium
Definition	The material or physical carrier of the resource.
Selection Options	
Required	Optional
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Format (dc.format.medium)
MARC Map	300, 340
ONIX Map	<ul style="list-style-type: none"> - ProductForm, - ProductFormDetail
JATS Map	attribute @publication-format (- <i>partly problematic</i> , cf. http://www.ncbi.nlm.nih.gov/books/NBK100491/ "Publication types and formats" and overlap above -)
OPUS Import-XML Map	
Repeatable	Yes
Best Practices <ul style="list-style-type: none"> • Used for Physical Resource only • Examples include paper, canvas, or DVD. 	

13 Date

Element Name	Date
Definition	A point or period of time associated with an event in the lifecycle of the resource.
Selection Options	
Required	Date-Issued is mandatory. Other dates, especially Date-Accepted (-> Preprint), Date-Accepted (-> Postprint) and Date-Available (-> end of embargo period), are recommended.
Controlled Vocabulary	

Syntax Scheme	W3CDTF
Persistent Identifier	
DC Element Map	Date (dc:date)
MARC Map	260 \$c
ONIX Map	- <i>see subelements</i> -
JATS Map	- date - pub-date
OPUS Import-XML Map	dates/date (type attribute necessary, <i>see subelements</i>)
Repeatable	Not preferred
Best Practices	
<ul style="list-style-type: none"> • Date may be used to express temporal information at any level of granularity. Recommended best practice is to use an encoding scheme, such as the W3CDTF profile of ISO 8601 [W3CDTF]. See Appendix B: Dates • Prefer non-use of 'junk value' (e.g., "Unknown"). • If more than one date is going to be used to describe the resource, it is recommended to use the sub-elements of Date to clarify the type of date, such as Date-Accepted, Date-Issued, etc. 	

13.1 Date-Accepted

Element Name	Date-Accepted
Definition	Date of acceptance of the resource.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	W3CDTF
Persistent Identifier	
DC Element Map	Date (dc.date.accepted)
MARC Map	(502##\$a enhancement recommended)
ONIX Map	ThesisYear
JATS Map	- date (@date-type="accepted" necessary) - pub-date (@date-type="accepted" necessary)
OPUS Import-XML Map	dates/date (type attribute necessary, e. g. type="thesisAccepted")
Repeatable	Not preferred
Best Practices	
<ul style="list-style-type: none"> • Examples of resources to which a Date Accepted may be relevant are a thesis (accepted by a university department) or an article (accepted by a journal). 	

13.2 Date-Available

Element Name	Date-Available
Definition	Date (often a range) that the resource became or will become available.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	W3CDTF
Persistent Identifier	

DC Element Map	Date (dc.date.available)
MARC Map	307 8#
ONIX Map	<ul style="list-style-type: none"> - PublishingDate composite (Publishing date role necessary, e. g. 01 "Publication date", 02 "Embargo date") - ContentDate composite (Content date role necessary, e. g. 01 "Publication date", 14 "From date", 15 "Until date", 27 "Available from", 28 "Available until")
JATS Map	<ul style="list-style-type: none"> - date (@date-type="pub" necessary) - pub-date (@date-type="pub" necessary)
OPUS Import-XML Map	dates/date (type attribute necessary, e. g. type="published")
Repeatable	Not preferred
Best Practices	

13.3 Date-Copyrighted

Element Name	Date-Copyrighted
Definition	Date of copyright.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	W3CDTF
Persistent Identifier	
DC Element Map	Date (dc.date.copyright)
MARC Map	260 \$c
ONIX Map	CopyrightYear
JATS Map	permissions/copyright-year
OPUS Import-XML Map	
Repeatable	Not preferred
Best Practices	
<ul style="list-style-type: none"> • Both dcterms:dateCopyrighted and dcterms:issued are mapped to MARC 260 \$c by default. 	

13.4 Date-Created

Element Name	Date-Created
Definition	Date of creation of the resource.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	W3CDTF
Persistent Identifier	
DC Element Map	Date (dc.date.created)
MARC Map	046 \$k
ONIX Map	
JATS Map	
OPUS Import-XML Map	dates/date (type attribute necessary, e. g. type="completed")

Repeatable	Not preferred
Best Practices	

13.5 Date-Issued

Element Name	Date-Issued
Definition	Date of formal issuance (e.g., publication) of the resource.
Selection Options	
Required	Mandatory
Controlled Vocabulary	
Syntax Scheme	W3CDTF
Persistent Identifier	
DC Element Map	Date (dc.date.issued)
MARC Map	260 \$c
ONIX Map	CopyrightYear
JATS Map	permissions/copyright-year
OPUS Import-XML Map	
Repeatable	Not preferred
Best Practices	
<ul style="list-style-type: none"> Both dcterms:dateCopyrighted and dcterms:issued are mapped to MARC 260 \$c by default. 	

13.6 Date-Modified

Element Name	Date-Modified
Definition	Date on which the resource was changed.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	W3CDTF
Persistent Identifier	
DC Element Map	Date (dc.date.modified)
MARC Map	046 \$j
ONIX Map	<ul style="list-style-type: none"> PublishingDate composite (Publishing date role 16 "Last reissue date" necessary) ContentDate composite (Content date role 17 "Last updated" necessary)
JATS Map	<ul style="list-style-type: none"> date (type of date attribute necessary, e. g. @date-type="rev-recd" or "corrected") pub-date (type of date attribute necessary, e. g. @date-type="rev-recd" or "corrected")
OPUS Import-XML Map	
Repeatable	Not preferred
Best Practices	

13.7 Date-Submitted

Element Name	Date-Submitted
Definition	Date of submission of the resource.

Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	W3CDTF
Persistent Identifier	
DC Element Map	Date (dc.date.submitted)
MARC Map	(502##\$a enhancement recommended)
ONIX Map	
JATS Map	<ul style="list-style-type: none"> - date (@date-type="received" necessary) - pub-date (@date-type="received" necessary)
OPUS Import-XML Map	
Repeatable	Not preferred
Best Practices	
<ul style="list-style-type: none"> • Examples of resources to which a Date Submitted may be relevant are a thesis (submitted to a university department) or an article (submitted to a journal). 	

13.8 Date-Valid

Element Name	Date-Valid
Definition	Date (often a range) of validity of a resource.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	W3CDTF
Persistent Identifier	
DC Element Map	Date Valid (dcterms:valid)
MARC Map	046 \$m
ONIX Map	ContentDate composite (Content date role 24 "From... until date" necessary)
JATS Map	
OPUS Import-XML Map	
Repeatable	Not preferred
Best Practices	

14 Relation

Element Name	Relation
Definition	A related resource.
Selection Options	
Required	Optional
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	if available (e. g. URN, DOI, PURL, ISBN, ISSN)
DC Element Map	Relation (dc:relation, dc:relation.uri)
MARC Map	787
ONIX Map	RelatedProduct composite (Product relation code 00 "Unspecified" necessary)
JATS Map	- unclear; maybe usage of type of link attribute for a related object (@link-type) or type of related article

	<i>attribute (@related-article-type), depending on disseminator and recipient -</i>
OPUS Import-XML Map	
Repeatable	Yes
Best Practices	
<ul style="list-style-type: none"> • Include sufficient information in the Relation element to enable users to identify, cite, and either locate or link to the related resource. • When applicable, use the more specific sub-elements 	

14.1 Relation-Has Part

Element Name	Relation-Has Part
Definition	A related resource that is included either physically or logically in the described resource.
Selection Options	
Required	Optional
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	if available (e. g. URN, DOI, PURL, ISBN, ISSN)
DC Element Map	Relation (dc.relation.haspart)
MARC Map	774 08 \$n
ONIX Map	RelatedProduct composite (Product relation code 01 “Includes” necessary)
JATS Map	<i>- unclear; maybe usage of type of link attribute for a related object (@link-type) or type of related article attribute (@related-article-type), depending on disseminator and recipient -</i>
OPUS Import-XML Map	
Repeatable	Yes
Best Practices	

14.2 Relation-Is Part Of

Element Name	Relation-Is Part Of
Definition	A related resource in which the described resource is physically or logically included.
Selection Options	
Required	Optional
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	if available (e. g. URN, DOI, PURL, ISBN, ISSN)
DC Element Map	Relation (dc.relation.ispartof)
MARC Map	773 0# \$t
ONIX Map	RelatedProduct composite (Product relation code 02 “Is part of” necessary)
JATS Map	<i>- unclear; maybe usage of type of link attribute for a related object (@link-type) or type of related article attribute (@related-article-type), depending on</i>

	<i>disseminator and recipient -</i>
OPUS Import-XML Map	
Repeatable	Not preferred
Best Practices	
<ul style="list-style-type: none"> • Used to state the collection to which this resource belongs. E.g., for Articles, this element indicates the host item (e.g., journal, series, etc.). 	

14.3 Relation-Replaces

Element Name	Relation-Replaces
Definition	A related resource that is supplanted, displaced, or superseded by the described resource.
Selection Options	
Required	Optional
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	if available (e. g. URN, DOI, PURL, ISBN, ISSN)
DC Element Map	Relation (dc.relation.replaces)
MARC Map	780 00 \$n
ONIX Map	RelatedProduct composite (Product relation code 03 “Replaces” necessary)
JATS Map	- <i>unclear; maybe usage of type of link attribute for a related object (@link-type) or type of related article attribute (@related-article-type), depending on disseminator and recipient -</i>
OPUS Import-XML Map	
Repeatable	Yes
Best Practices	

14.4 Relation-Is Replaced By

Element Name	Relation-Is Replaced By
Definition	A related resource that supplants, displaces, or supersedes the described resource.
Selection Options	
Required	Optional
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	if available (e. g. URN, DOI, PURL, ISBN, ISSN)
DC Element Map	Relation (dc.relation.isreplacedby)
MARC Map	785 00 \$n
ONIX Map	RelatedProduct composite (Product relation code 05 “Replaced by” necessary)
JATS Map	- <i>unclear; maybe usage of type of link attribute for a related object (@link-type) or type of related article attribute (@related-article-type), depending on disseminator and recipient -</i>
OPUS Import-XML Map	
Repeatable	Yes

Best Practices

15 Source

Element Name	Source
Definition	A related resource from which the described resource is derived.
Selection Options	<ul style="list-style-type: none"> - Collection name - Collection ID - Aggregator name (if source is not publisher, but an aggregator, e. g. Highwire) - Source interface/API <ul style="list-style-type: none"> o URL of the source o type of interface/API (e. g. FTP) o title of the source file(s)
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Source (dc:source, dc.source.uri)
MARC Map	786 [08]
ONIX Map	<ul style="list-style-type: none"> - TextSourceCorporate, - Collection composite (with SourceName, CollectionIdentifier, etc.)
JATS Map	article-id (type of publication identifier necessary, e. g. pub-id-type="art-access-id")
OPUS Import-XML Map	
Repeatable	Yes
Best Practices	<ul style="list-style-type: none"> • Prefer use of free text description incl., Collection Name, Accession Number, Physical Dimensions for graphic materials and Repository information. • Prefer “Original Format” or other text prefix to qualify value.

15.1 Source-Accrual Method

Element Name	Source-Accrual Method
Definition	The method by which items are added to a collection.
Selection Options	<ul style="list-style-type: none"> - Update type (e. g. incremental or full update) - Accrual type (e. g. downloadable file)
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Accrual Method (dcterms:accrualMethod)
MARC Map	(541##\$c enhancement recommended)
ONIX Map	<ul style="list-style-type: none"> - NotificationType (Notification or update type code necessary, e. g. 04 “Update (partial)”) - ResourceVersion composite (Resource form code necessary, e. g. 02 “Downloadable file”)
JATS Map	

OPUS Import-XML Map	
Repeatable	Yes
Best Practices	

15.2 Source-Accrual Periodicity

Element Name	Source-Accrual Periodicity
Definition	The frequency with which items are added to a collection. (Current Publication Frequency)
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Accrual Periodicity (dcterms:accrualPeriodicity)
MARC Map	(310##\$a enhancement recommended)
ONIX Map	
JATS Map	
OPUS Import-XML Map	
Repeatable	Yes
Best Practices	

15.3 Source-Accrual Policy

Element Name	Accrual Policy
Definition	The policy governing the addition of items to a collection.
Selection Options	
Required	Recommended, as appropriate
Controlled Vocabulary	
Syntax Scheme	
Persistent Identifier	
DC Element Map	Accrual Policy (dcterms:accrualPolicy)
MARC Map	
ONIX Map	
JATS Map	
OPUS Import-XML Map	
Repeatable	Yes
Best Practices	