Project

Project Acronym:	AthenaPlus
Grant Agreement number:	325098
Project Title:	Access to cultural heritage networks for Europeana

Deliverable

Deliverable name:	*Survey and description of existing mapping models to LIDO*
Deliverable number:	D2.2
Delivery date:	2015-06
Dissemination level:	Public
Status	Final (after external reviewers' comments)
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Revision History

Revision	Date	Author	Organisation	Description
V0.1	2014-10	Gordon McKenna	CT	Draft version
V1.0	2014-10	Gordon McKenna	CT	Final version after review
V1.0	2015-06	Gordon McKenna	CT	Final version after external reviewers' comments.

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1   EXECUTIVE SUMMARY

As originally envisaged this deliverable was to: collect all the existing 'mapping models' to LIDO realised in different frameworks and domains (including that one to EDM). However from the work on research into 'mapping models' to be found in *Section 4* it became obvious that there are virtually no such models, and certainly not enough to be of general use.

In addition the mapping from LIDO to EDM has already been published in deliverable D3.2: *Description of the LIDO to EDM mapping*, and is in use in projects with MINT instances and also the non-MINT Europeana-Inside project's 'dark aggregator'.

Therefore it was decided that the deliverable should concentrate on the second part of its description in the project's DOW: "*... recommendations to help AthenaPlus and future Content Providers find their way.*" To do this we have created a *LIDO implementation methodology* aimed at potential and new users of LIDO seeking to employ LIDO in general, however with information relevant for exporting data to Europeana also being included.

The basis for the method is advice about what an organisation should be doing to properly manage and catalogue their collection. The point being to make sure that a cultural heritage organisation has its own 'house in order' before looking to implement LIDO. In general terms the advice given follows accepted standards and practice for collections management already given in earlier advice, but repeated here.

The descriptive cataloguing of material is also already the subject of advice and tools. In the deliverable we use instances of mapping advice from the *MIMO*, *DCA*, and *Partage Plus* project, and combine it with much older advice on cataloguing. The latter was created for the cataloguing of a wide range of cultural heritage items developed by the Museum Documentation Association as part of its work on the standardisation of cataloguing from the late 1970s, but still relevant and used today.

The methodology is focused on helping the implementation of LIDO and covers:

1. XML basics in the context of LIDO;
2. Overview of LIDO (What it is and is not;   its design principles; and what is in it);
3. Before starting to use LIDO (Setting your own house in order; and LIDO and the target portal);
4. General LIDO issues (language(s) of the record and elements; display elements; repeating elements and their ordering; dates and periods);
5. The various parts of a LIDO record (what is mandatory, recommended and optional and how to implement it).

The methodology is summarised in the *Conclusions*.

Following the methodology, together with any linked resources mentioned, will allow the potential or new implementer of LIDO to successfully export it to their chosen target portals.

2   INTRODUCTION
2.1   The Purpose of Work Package 2

Work Package 2 (WP 2), led by ICCU supported by CT, of the AthenaPlus project is tasked with[1]:

- Managing the provision metadata to Europeana, giving access to cultural heritage content on the AthenaPlus partners' online public access catalogues (or other online access);
- Gathering feedback, from the AthenaPlus partners, in order to resolve their problems, and to improve and refine the flow of metadata to the project's dark aggregator based on the MINT ingestion platform;
- Providing support to the AthenaPlus partners for the mapping of their metadata formats to LIDO, and the use of the AthenaPlus ingestion platform.

It is this last task that this deliverable is designed to help meet.

2.2   Role of this deliverable in the project

As originally envisaged D2.2: *Survey and description of existing mapping models to LIDO* was to[2]:

   "*Describe the methodology, the targets and the results of the survey. It will include recommendations to help AthenaPlus and future Content Providers find their way. It will include an online section collecting all the existing mapping models to LIDO realised in different frameworks and domains (including that one to EDM).*"

We understand 'mapping model' to mean the process setting out the mapping of one set of metadata elements (*source*) to another set of metadata elements (*target*).

In the context of the deliverable the target is LIDO. The source could be a range of things. It could be the completely in-house developed set of elements, some elements based on a type of item, or a standard metadata set. Mappings based on in-house metadata sets would be only applicable for a very limited number of organisations. Therefore we have not attempted to survey them, and concentrated the other two.

However the results of the survey into what was available proved to be largely fruitless[3]. To be of use it was decided to change the content of the deliverable to be of more use to the LIDO implementer. This means that rather than providing 'mapping models to LIDO' it gives a methodology for the implementation of LIDO. It is in this form that the deliverable will be most useful.

2.3   Approach

This deliverable was created based on a process for creating similar deliverables that was developed, and successfully used, during the *ATHENA* project and earlier. Its steps were to:

1. ***Carry out research*** – Look at what already exists in the environment under discussion. Perhaps survey the project partners on what they are using and or their opinions;
2. ***Make an analysis of the research*** – Look for patterns and trends which can be explained;
3. ***Give simple advice*** – This should be practical and implementable by the partners in the project, and beyond;
4. ***Reuse or create tools*** – Tools should be: easy to use; relevant to the cultural sector audience; and be adaptable, with an open licence, which allows for derivatives to be created (e.g. multilingual versions);

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[1] Note that this wording is an adaption of what appears in the project's *Description of Work* (see p21 of 226), and hopefully clarifies the aims!
[2] Project's *Description of Work,* p24 of 226.
[3] See *Section 4* below.

5. ***Identify further needs*** – Leading to further work in the project, and later.

In addition the work undertaken in the ATHENA project has formed a part of the input for the project. The aim in this deliverable is "not reinvent the wheel".

In this deliverable we have decided to represent the parts of a LIDO XML document and records as:

<namespace:tag-name namespace:attribute="Value">[Element content]</namespace:tag-name>

This is similar to how XML appears in a web browser and should aid the reader.

2.4 Structure of the deliverable

Section 3 gives a brief overview of the development of LIDO itself

Section 4 gives the results of a survey into LIDO in operation, i.e. how it has been used in: Europeana Group projects, national digital libraries, regional or thematic applications, and research and other projects. It was compiled using online research and personal communications.

Section 5 analyses the actual problems with LIDO implementation as suggested by the independent reviewers, based on the helpdesk for such problems that has been run in three projects from 2012 to the present.

Section 6, the 'meat' of the deliverable, gives a methodology for the new implemeter, or those considering implementation, of LIDO. It gives basic information and advice about:

- XML in general in the context of LIDO;
- An overview of LIDO;
- What to do before implementing LIDO;
- Looks at general LIDO issues;
- All the parts of LIDO.

Section 7 is a conclusion summarising the advice given throughout the deliverable.

3   Developing LIDO

LIDO[4] (Lightweight Information Describing Objects) grew out of a need, articulated by the museum community, for a standard metadata schema which best represents the potentially complex and rich nature of the information which describes the items they hold. It was also a response to the deficiencies of Dublin Core when used to describe culture heritage and their digital surrogates.

The disquiet with Dublin Core based information systems, articulated by partners and others, led to the development of LIDO within the framework of the ATHENA project[5]. Here we give a brief overview.

LIDO, defined as an XML schema[6], was developed, starting in 2008, from a number of existing metadata standards, and is compliant with the relevant sector ontology. It is the result of the joint collaborative efforts of the international stakeholder communities which created those standards. The purpose of the

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[4] The 'LI' of LIDO is pronounced as the English word 'lee' and not as 'lie'.

[5] Described in: **Gordon McKenna** and **Chris De Loof** (2009) *Recommendations and best practice report regarding the application of standards, including recommendations for a harvesting format and fact sheets for dissemination*. ATHENA Project.

See: **http://www.athenaeurope.org/getFile.php?id=538**

And **Gordon McKenna** and **Chris De Loof** (2009) *Specification for conversion tools*. ATHENA Project.

See: **http://www.athenaeurope.org/getFile.php?id=539**

[6] See: *Section 3.3.1* [*CIDOC*] below for links to the relevant definitions and supporting documentation.

work was to create a common standard for contributing cultural heritage information and content to portals and other aggregation repositories.

The story of LIDO began, before the ATHENA project, with the J Paul Getty Trust and ARTstor who developed *CDWA Lite* schema (Categories for the Description of Art)[7] in the USA. The scope of this was extended by the Working Group Data Exchange of the German Museum Association's development of *museumdat*[8]. This generalised the schema to include being able to describe non-art objects, e.g. social history, natural science, and technology, and to include the need to support multilingual records.

It was agreed that rather than keep *CDWA Lite* and *museumdat* separate, to create a single schema. In addition input from the greater community of cultural heritage information and technology professionals was sought. Part of this effort was to secure compliance of the new schema with CIDOC CRM (ISO 21127)[9] as sector standard ontology. A working group was established for the development of what became LIDO.

Resulting from the report on existing standards applied in European museums (mentioned above), it was concluded by partners in the ATHENA project that any metadata format for ATHENA would also have to meet the needs of *SPECTRUM*[10]. As a result ATHENA decided to join the LIDO working group to further development that would integrate SPECTRUM requirements into what became the published LIDO schema.

The result of all this work: *LIDO – Lightweight Information Describing Objects Version 1.0*, was delivered to the sector during the CIDOC meeting at the ICOM triennial conference in November 2010 which took place in Shanghai, China.

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[7] See: **http://getty.art.museum/research/publications/electronic_publications/cdwa/cdwalite.htm**

[8] See: **http://www.museumdat.org/index.php?ln=en**

[9] See: **http://www.cidoc-crm.org**

[10] See: **http://www.collectionstrust.org.uk/spectrum**

4 LIDO in operation

Since its creation LIDO has been used in a wide range of projects, and other scenarios. This section surveys these uses with the aim to extract useful help and advice for the new and inexperienced LIDO implementer.

We begin with the main source of information about LIDO, on the CIDOC website, and then review the use of LIDO in various projects, and initiatives from the point of view of mappings. We finally analyse the results of the survey.

4.1 CIDOC

http://www.lido-schema.org

CIDOC is the ICOM international committee for documentation, and as such is the 'natural' home for the LIDO schema. By placing it under the 'wing' of CIDOC it means that LIDO is independent of any time-restricted EC-funded project. It allows partners from around the world to learn about it, and to take part in its development. With regard to the latter CIDOC also hosts the LIDO Working Group[11] (formerly the Data Harvesting and Interchange Working Group) which is the vehicle for that development

Use of LIDO:

The site provides all the basic standard information about LIDO:

Document (URL)	Description
LIDO - Lightweight Information Describing Objects: XML Schema for Contributing Content to Cultural Heritage Repositories, Version 1.0 http://www.lido-schema.org/schema/v1.0/lido-v1.0.xsd	The formal definition of the XML schema.
LIDO - Lightweight Information Describing Objects, Version 1.0 http://www.lido-schema.org/schema/v1.0/lido-v1.0-specification.pdf	A human-friendly description of the XML schema as a standalone document.
LIDO - Lightweight Information Describing Objects: XML Schema for Contributing Content to Cultural Heritage Repositories, Version 1.0 http://www.lido-schema.org/schema/v1.0/lido-v1.0-schema-listing.html	A human-friendly description of the XML schema as a webpage.
LIDO (Lightweight Information Describing Objects): Making it easier to deliver information to portals http://www.lido-schema.org/documents/LIDO-Handout.pdf	One page summary of the basic facts about LIDO.
Lightweight Information Describing Objects: Contributing Content to Cultural Heritage Repositories http://www.lido-schema.org/documents/LIDO-Introduction.pdf	PowerPoint introduction to LIDO.

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[11] See: **http://network.icom.museum/cidoc/working-groups/data-harvesting-and-interchange/** Note that this link is likely to change to reflect the new name.

LIDO has been used and documented in:

- ***Europeana group of projects*** –
    o ATHENA
    o MIMO
    o Digitising Contemporary Art
    o Judaica Europeana
    o Linked Heritage
    o Partage Plus
    o Europeana Inside
    o EuropeanaPhotography
    o LoCloud
    o Ambrosia: Europeana Food and Drink
- National digital libraries –
    o Kansallinen digitaalinen kirjasto
    o Deutsche Digitale Bibliothek (DDB)

- Regional or thematic applications –
    o BAM-Portal
    o Bildindex der Kunst und Architektur
    o digiCULT
    o eMuseum network
    o Yale Centre for British Art

- Research and other projects –
    o MINT - Metadata Interoperability Services
    o WissKI - Scientific Communication Infrastructure
    o Museum Data Exchange

We examine each of these, giving LIDO-relevant information.

4.2 ATHENA (2008/2011)

http://www.athenaeurope.org

The aims of ATHENA (Access to Cultural Heritage Network across Europe) were to bring together a wide range of European museums and other cultural institutions in order to:

- Evaluate and integrate tools;
- Agree a common set of standards and guidelines;
- Provide access to cultural heritage content.

There was a wide range of cultural heritage materials of different types and periods.

Use of LIDO:

It was within the framework of this project that LIDO and the MINT platform was developed and first used. Records were harvested by Europeana in the ESE (Europeana Semantic Elements) format.

Deliverable/document (URL)	Description
D3.2: *Recommendations and best practice report* http://www.athenaeurope.org/getFile.php?id=538	It looks at the creation of a new metadata harvesting XML schema, LIDO, together with an outline description of it.

Deliverable/document (URL)	Description
D3.3: *Specification for conversion tools* http://www.athenaeurope.org/getFile.php?id=539	It discusses how LIDO was created, how it was to work within the ATHENA system (MINT), and its relationship to Europeana. It showed how to map from SPECTRUM, to LIDO, and then on to ESE. Two annexes as separate documents were: • *The LIDO XML schema* • *A technical description of LIDO* (XSD). Please note that these have been superseded by documentation at: http://www.lido-schema.org (See above)
Lightweight Information Describing Object: LIDO http://www.athenaeurope.org/getFile.php?id=786	Gave a user-friendly introduction to LIDO, based on the deliverables, with additional content.

General mapping advice (*SPECTRUM* to *LIDO* to *ESE*) is given in D3.3 (pp13-34). Covered are:

- *Object identification* information (including: identifier; description; title);
- *Object production information* (including events: Production; Creation; Designing; Commissioning);
- *Object collection information* (including events: Finding; Excavation; Collecting);
- *Object description information* (including: content for visual items; dimensions; inscriptions);
- *Object history and association information* (including: culture);
- *Object rights information* (including: credit line);
- *Acquisition information* (event: acquisition);
- *Use of collections information* (including events: Exhibition; Use; Performance);
- *Reference information* (links to online resources);
- *Date information* (in events); Organisation information (in events);
- *Person information* (in events);
- *Place information* (in events).

4.3   MIMO (2009/2011)

http://www.mimo-project.eu

MIMO (Musical Instrument Museums Online) was, as its name implies, a project which digitised and aggregated musical instrument collections from throughout Europe.

Use of LIDO:

The project was an early adopter of LIDO and produced a deliverable for the use of LIDO in the context of the project.

Deliverable/document (URL)	Description
D2.1: *Specifications of the Common Data Model for the Description of Musical Instruments* http://www.mimo-international.com/documents/MIMO_Deliverable_%202.1_v1%202%20(2010-06-30).pdf	A full implementation of LIDO for describing musical instruments.

The implementation was created from a series of workshops for all MIMO content providers which tested the use of LIDO for musical instruments. The results of the workshops enabled the definition of a framework for the use of LIDO.

The framework defined:

- Applicable elements;
- Lists of terms (e.g. list of event types);
- Missing elements.

4.4   Digitising Contemporary Art (2011/2013)

http://www.dca-project.eu

Digitising Contemporary Art (DCA) aimed to digitise contemporary art objects, i.e. those created after 1945, from 12 European countries and make them accessible to the wider public through Europeana

Use of LIDO:

The choice of LIDO was influenced by the experiences of the ATHENA project. The project saw[12] the advantages of LIDO as:

- *Specially designed for exchanging cultural heritage information;*
- *Targeted for import in Europeana;*
- *Distinction between artwork, its representations and its relating documents.*

It also saw that the disadvantage of LIDO was that: *Application profiles* [are] *still in development.*

In addition LIDO was chosen[13] because it is:

- *Able to describe records from different domains, e.g., libraries, museums or archives;*
- *Easily used for ingestion into Europeana;*
- *Able to retain the different levels of a digital contemporary art resource.*

Deliverable/document (URL)	Description
D3.1: *Metadata Implementation Guidelines for Digitised Contemporary Artworks* http://www.dca-project.eu/images/uploads/ news_activities/DCA_D31_Metadata_ Implementation_Guidelines_20120120_V1_1.pdf	Includes an application profile (pp52-57) for LIDO and contemporary art. It maps *Gateway to Archives of Media Art* (http://www.gama-gateway.eu) (GAMA) to LIDO.

The application profile allows LIDO to be produced that is suitable for media artworks and their digital surrogates.

4.5   Judaica Europeana (2010/2012)

http://www.judaica-europeana.eu

Judaica Europeana aimed to provide access to material which documents the Jewish presence and heritage in Europe. Material comes from libraries, archives and museums.

Use of LIDO:

The project used the MINT tool developed for ATHENA to map their diverse metadata into LIDO. There were no specific LIDO documents.

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[12] See p40 of the deliverable referenced below.
[13] See p49 *Op Cit.*

4.6   Linked Heritage (2011/2013)

http://www.linkedheritage.eu

Linked Heritage aimed at:

- Contributing large quantities of new content to Europeana (public and private);
- Demonstrating the enhancement of quality of content (metadata richness, re-use potential and uniqueness);
- Demonstrating improved search, retrieval and use of Europeana content.

Use of LIDO:

LIDO continued to be used as the metadata schema for the descriptive metadata of the content being ingested by the project. MINT also continued to be used with a mapping to the Europeana Data Model (EDM) rather than ESE. Project partners used MINT to carry out mappings between their own metadata (as XML or CSV).

Deliverable/document (URL)	Description
D4.2: *Specification of the technologies chosen* http://www.linkedheritage.eu/getFile.php?id=394	Suggested enhancements to LIDO. The aim was to bring it into line with current commercial metadata best practice.

4.7   Partage Plus (2012/2014)

http://www.partage-plus.eu

Partage Plus was a project that digitised art nouveau (and related styles) items. Digitisation also included 3D models.

Use of LIDO:

The project used an instance of MINT, contemporary with Linked Heritage and later AthenaPlus, to map metadata to LIDO and deliver it in EDM.

Deliverable/document (URL)	Description
WP2 Production and delivery to Europeana - WP3 Metadata Enrichment: Core Cataloguing Elements http://www.partage-plus.eu/en/servefile?id=54	Gives the LIDO mandatory elements and a set of 'highly recommended' elements based on information that should be available in a description of an element.

The project also created a set of multilingual terminologies, which were integrated into MINT. Therefore these were used to create LIDO records, and so harvested by Europeana. It also used the Linked Heritage and AthenaPlus developed LIDO to EDM XSLT.

4.8   Europeana Inside (2012/2014)

http://www.europeana-inside.eu

The objective of the Europeana Inside was to achieve a lasting transformation in the quantity, scope and usability of the content available to Europeana, and to other aggregation scenarios. The process was part-automated by embedding it into the collections management systems commonly used by cultural heritage organisations, especially museums.

Use of LIDO:

During the project it was decided to use LIDO as the metadata schema for describing the items being aggregated. The aggregation was in the form, for most partners, of a 'dark aggregator' which allowed for the OAI-PMH harvesting of EDM by Europeana. The transformation was the same as that developed for the Linked Heritage and AthenaPlus projects.

There were no LIDO-specific documents or mappings produced during the project. However the LIDO being uploaded to dark aggregator was validated so that it complied with that need for a successful transformation to EDM, i.e. those already enabled directly in MINT.

4.9 EuropeanaPhotography (2012/2015)

http://www.europeana-photography.eu

EuropeanaPhotography is digitising c450 thousand items from the first 100 years of photography (1839-1939), including images from pioneers like Henry Fox Talbot and Louis Daguerre.

Use of LIDO:

The project is using an instance of MINT to map metadata to LIDO and deliver it Europeana in EDM. There are no special mapping documents.

4.10 LoCloud (2013/2016)

http://www.locloud.eu

LoCloud is its overall aim is to add over 4 million records to Europeana. As part of this the project is:

- Exploring the potential of cloud computing for storage and providing services;
- Focusing on the under-represented small and medium sized organisation wishing to have their collections accessible via Europeana.

Use of LIDO:

The project is using an instance of MINT to map metadata to LIDO, and then deliver it to Europeana in EDM. There are no special mapping documents.

4.11 Ambrosia: Europeana Food and Drink (2014/2016)

http://foodanddrinkeurope.eu

Ambrosia aims to support cultural heritage organisations and the creative industries in developing mutually beneficial partnerships, based around the theme of food and drink. It will produce a series of products such as exhibitions, apps and books.

Use of LIDO:

LIDO will be employed for the metadata describing the cultural heritage content being used during the project. It is not envisaged that there will be any specific mapping documents.

4.12 Kansallinen digitaalinen kirjasto

http://www.kdk.fi/en/

Kansallinen digitaalinen kirjasto [Finnish National Digital Library] aims to give easy access to the national heritage of Finland, both cultural and scientific, in digital format from museums, libraries and archives. It also aims to manage and preserve that heritage to a high standard.

Use of LIDO:

The project has implemented a set of instructions, the *Finnish LIDO Schema*. This was successfully tested with a range of collections management systems and metadata formats. This means that the Library is able to have a uniform interface and to more easily offer a set of services. This is not a set of mapping instructions.

4.13 Deutsche Digitale Bibliothek (DDB)

https://www.deutsche-digitale-bibliothek.de

The goal of the Deutsche Digitale Bibliothek (DDB) [German Digital Library] is similar to most national portals in that it aims to give access to national cultural heritage from libraries, museums and archives.

Use of LIDO:

LIDO is set as one of the standard input formats of the Library, particularly being applied to museums, photographic archives, and monument preservation offices. There are no LIDO-specific documents or mappings.

4.14 BAM portal

http://www.bam-portal.de

The BAM (Bibliotheken-Archive-Museen) portal aims to provide online access to cultural heritage items and information held in Germany. The portal has developed procedures to combine metadata from libraries, archives, and museums. However it will close down in the near future.

Use of LIDO:

The portal accepts data in the LIDO format, and can export LIDO on request. There are no LIDO-specific documents or mappings.

4.15 Bildindex der Kunst und Architektur

http://www.bildindex.de

The Bildindex der Kunst und Architektur [Image Index of Art and Architecture] is a digital library of over two million images from about 80 organisations.

Use of LIDO:

LIDO is used as a standard input format, in 2015 it will be implemented as the portal format. There are no LIDO-specific documents or mappings.

4.16 eMuseum network

http://www.emuseum.net

eMuseum is an online access point for information about the collections of member organisations (the *network*). It is hosted in the USA by the collections management system provider Gallery Systems.

Use of LIDO:

LIDO is an export format. There are no LIDO-specific documents or mappings.

4.17 digiCULT

http://www.digicult-verbund.de

digiCULT grew out of a project of the Schleswig-Holstein Museum Association for the digital recording and publication of the inventory of selected museums. Amongst its objectives are:

- Using a common technological solution for recording and distribution for the long-term safeguarding of a cultural heritage;
- Developing tools and vocabularies for knowledge management and data exchange;
- Enabling the transfer of metadata to portals such as BAM, DDB, and Europeana.

The software developed is made up of three modules:

- *digiCULT.DokBase* – for local extraction of metadata;
- *digiCULT.xTree* – for the management of vocabularies and data reconciliation
- *digiCULT.meta* – a central metadata database (in LIDO) as a container for all data to be published.

Use of LIDO:

LIDO is implemented in *digiCULT.meta* as aggregation format. There are no LIDO-specific documents or mappings.

4.18 Yale Center for British Art

http://britishart.yale.edu

The Yale Center for British Art holds the largest collection of British art outside the UK. It is a museum and carries out research into British art and culture. As part of its remit it gives access to its collections online.

Use of LIDO:

The Center has used the full potential of LIDO:

- As a data exchange standard – providing data to the Google Art Project;
- For a discovery tool – providing data to the internal Yale wide cross-collection discovery service;
- To support in depth cataloguing – allowing the publication of more scholarly information, e.g. exhibitions, curatorial comments, and bibliographic citations;
- To support the publication of linked open data (LOD) – by harvesting from LIDO XML data and converting it to CRM RDF triples.

The Center is working with others on the representation of prints in LIDO, however that is not yet complete. There are no LIDO-specific documents or mappings.

Document (URL)	Description
Collections - Using the Collections - Technology - In Depth http://britishart.yale.edu/collections/using-collections/technology/in-depth	Shows the architecture of their system, including how LIDO fits in.
LIDO at the Yale Center for British Art: From data exchange and scholarly cataloging to Linked Data *http://britishart.yale.edu/sites/default/files/ LIDO%20WG%202013.pptx*	PowerPoint presentation detailing the use of LIDO by the Center.

4.19 MINT - Metadata Interoperability Services

http://mint.image.ece.ntua.gr

MINT is a web-based platform which originated as tool developed during the ATHENA project the mapping to LIDO of partners metadata and its aggregation (acting as a 'dark aggregator'). It can also act as an OAI-PMH server for harvesting of metadata.

Since ATHENA it has been developed and used with other projects, especially those associated with Europeana, e.g. Linked Heritage and AthenaPlus.

Use of LIDO:

LIDO is the major target metadata schema for the mapping process that MINT enables. The tool makes sure that valid LIDO is created, and where needed checks for compliance with the requirements of Europeana and EDM. It can also enable the use of terminologies, e.g. language codes, and specialist requirements like those needed for the Partage Plus project on art nouveau. There are no LIDO-specific documents or mappings.

4.20 WissKI

http://wiss-ki.eu

WissKI is a virtual research environment focusing on the field of digital humanities. It uses the concept of the wiki "*to support trans-disciplinary collaboration between scientists and researchers from various domains, enabling them to learn about results of research and work together on research topics of common interest.*"[14]

Use of LIDO:

The system supports LIDO as exchange format. There are no LIDO-specific documents or mappings.

Document (URL)	Description
System Architecture http://wiss-ki.eu/node/20	Shows how LIDO fits into a WissKI system.

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[14] **http://wiss-ki.eu/node/14**

4.21 Deutsche Forschungsgemeinschaft

http://www.dfg.de

The Deutsche Forschungsgemeinschaft [German Research Foundation] "*funds knowledge-oriented research without stipulation of topics and utilises competition to select the best projects in terms of scientific quality*".[15]

Use of LIDO:

LIDO is mandatory[16] for DFG-funded digitisation projects for metadata describing the items. There are no LIDO-specific documents or mappings.

4.22 Museum Data Exchange Project

http://www.oclc.org/research/activities/museumdata.html?urlm=159688

This project created tools, for museums, that supported data sharing. One of those tools is *OAICatMuseum* which allows museums "*to disclose descriptions of collection items as well as pointers to digital surrogates. It can be used to efficiently share digital images with trusted partners who have requested access to museum content, or with the networked world at large.*"[17]

Use of LIDO:

The latest version (1.1) of the system supports LIDO as output format. There are no LIDO-specific documents or mappings.

4.23 Analysis

This review[18] of the use of LIDO, from the point of view of LIDO mapping publication, is disappointing. Only the projects: *MIMO*, for musical instruments; and *Digitising Contemporary Art* (DCA), created anything like a mapping document for their type of material.

There has been a reasonable amount of use of LIDO but most of it has been as an import and/or an output format. The assumption being that, in particular, the importer knows how to implement LIDO for their material, and can produce syntactically correct LIDO. Export of LIDO again only conforms to the syntax of the schema. In both scenarios there is a question as to whether the semantics of the LIDO is 'correct'.

In the MINT-using scenarios there is a lack of specific guidance on what should go into particular elements. This deliverable will give help and advice on this, which will be of use in other LIDO-creating situations.

One source of information about what information needs to be in a collections management system and hence possibly in a LIDO record can be gotten from the MDA cards[19] and their application in the MODES system[20]. These were the basis of the work to create the SPECTRUM collections management standard.

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[15] **http://www.dfg.de/en/dfg_profile/mission/index.html**

[16] See: **http://www.dfg.de/formulare/12_151/12_151_en.pdf**
[17] **http://www.oclc.org/research/activities/oaicatmuseum.html**

[18] The review was a result of a literature search, on the Web, and personal communications.

[19] Originally created by IRGMA (Information Retrieval Group of the Museums Association [UK]) in the mid to late 1970s

[20] Discussed in MDA (1987) 'Section 3: MDA application of MODES' in *Guide to MODES*. Museum Documentation Association, Cambridge.

This resource gives the complete implementation of the cards for a range of different types of cultural heritage and natural science material:

- Archaeology;
- Costume;
- Decorative art;
- Ethnography/Folk Life;
- Fine Art;
- Geology Specimen;
- History Artefact;
- Military Artefact;
- Mineral Specimen;
- Museum Object;
- Natural History;
- Numismatics;
- Photograph;
- Pictorial Representation;
- Scientific Instrument;
- Technology.

This, together with guidance given by the MIMO, DCA and other projects should be enough to allow us to give sufficient help and advice to potential and new implementers of LIDO.

Section 6 of the deliverable sets out that methodology, which also received input from the next section on practical implementation issues.

5 Actual Issues with LIDO Implementation

LIDO has been used 'in anger' in a number of different projects and initiatives as was detailed in the previous section. The outputs of these give some information which is useful for the new implementer of LIDO. However, on the advice of the external reviewers, this section gives an analysis of the actual experience of 'virgin' implementers. It uses as its primary source the helpdesk questions which were generated by those who took part in three projects, where LIDO was the main metadata schema being employed to describe items: ATHENA, Linked Heritage, and the present AthenaPlus.

These helpdesks, together with training events and web-based resources were developed by the projects to assist implementers in providing metadata to Europeana. In overview here is their activity:

- ATHENA (2010/2012): 799 e-mails;
- Linked Heritage (2011/2014): 461 e-mails;
- AthenaPlus (2013/2015): 417 e-mails.

In total there have c1600 e-mails over about five and a half years. Therefore taken together they represent a significant database on the practical use of LIDO, together with the problems encountered by 'non-experts'. An initial analysis of the e-mails identified 416 discussion threads, involving over 90 individuals asking questions, and under three broad types:

- MINT-related: 189 threads (45.43%);
- LIDO-related: 209 (50.24%);
- XML in general: 18 (4.33%).

The MINT-related questions concerned the operation of the MINT mapping tool, and will not be discussed further here. We continue with the other two types.

5.1 General XML issues

These issue were around a number of general XML issues:

- Entity references (e.g &);
- Not following schema rules;
- Illegal characters in URLs (particularly '&');
- Use of Unicode;
- URLs not working.

All of these issues were dealt with by giving the implementers additional general information about how XML worked

5.2   LIDO related issues

The issues that implementers asked questions to the helpdesks were:

Subject	Number	%
LIDO structure	50	23.92%
Europeana	38	18.18%
Multiliguality	17	8.13%
Links	16	7.66%
Rights	15	7.18%
Actors	14	6.70%
Dates	13	6.22%
Events	8	3.83%
Holding institution	8	3.83%
IDs	7	3.35%
Terminologies	7	3.35%
Multiple elements	6	2.87%
Mandatory elements	4	1.91%
Inscriptions	3	1.44%
Subject	3	1.44%

Looking at each issue:

LIDO structure

General questions about the structure of LIDO represented about a quarter of the total. This is not surprising given that the implementers did not have experience of the schema. Many issues came about because implementers wanted to export LIDO for importation into MINT. Here are examples of the subjects that caused issues:

- Child elements not allowed at this point in schema;
- General structural errors;
- Empty elements not allowed;
- Not following project requirements;
- What input element goes where in LIDO;
- Use of attributes (e.g. sortorder);
- Incomplete LIDO element structures;
- Details of LIDO schema.

The issues identified were solved by giving basic advice, and pointing to relevant resources on project websites.

Europeana

Here there were questions about how to get the best appearance of their records in the Europeana portal, and complaints about how the portal misrepresented their metadata. Such issues were difficult to deal with, or in some circumstances solve at all. Generally they were not LIDO issue but concerned mapping of LIDO to EDM and what happened at Europeana.

The other type of query was that dealing what was needed to successfully export to Europeana. How to represent in LIDO the Europeana elements:

- europeana:dataProvider;
- europeana:isShownAt;
- europeana:isShownBy;
- europeana:object;
- europeana:provider;
- europeana:rights;
- europeana:type

With all these elements the requirements were given to the implementer.

Multiliguality

How to implement multilingual records with LIDO was an important issue for some implementers. This was because either they wanted to, or were required to, give such records to Europeana. The possibilities that need to be put before implementers were:

- Separate records;
- Separate high level descriptions;
- Different language at element level.

The details of how to do these, and the use of the 'lang' attribute were discussed on the helpdesks.

The following issues were dealt with by pointing to the description of LIDO in its documentation for links, in addition to a personalised answering of the queries for information. Below is what was asked about

Links

The issues around links to surrogate resources were about how to implement:

- Multiple resources (especially images, for the same item;
- Where to put links to thumbnail images in LIDO (Europeana-related);
- The associated attributes (e.g. 'type');
- URLs as queries causing problems.

Rights

Here the information asked about was how to represent:

- Rights for the original item and its surrogates;
- Europeana rights requirements;
- The terms to use.

Actors

- How the different types of actor associated with an item are implemented in LIDO;
- The sub-elements of an actor;
- Attributes.

Dates

The details asked about were how to implement date ranges was the only topic.

Events

As with Actors implementers asked about:

- How the different types of events associated with an item are implemented in LIDO;
- The sub-elements of an event;
- Attributes, but especially the 'type'.

Holding institution

Especially the sub-elements were asked about, and how the data is displayed in the Europeana portal.

IDs

Which IDs are allowed, when or if to have multiple IDs. Europeana portal display was queried.

Terminologies

- Which LIDO elements allow information about terminology use;
- How to implement terminology information in LIDO;

Multiple elements

- What elements can be repeated;
- Which element level should repeating be;
- Why should there be multiple elements.

Mandatory elements

These issues were simply about which elements and attributes were mandatory in LIDO. There was also discussion about this in the context of the project and Europeana (see above).

Inscriptions

General advice was asked about how to implement inscriptions, for example artist's signatures and the difference between 'descriptions' and transcriptions of inscriptions.

Subject

How to deal with this area of LIDO.

The conclusion from this analysis is that it would be useful to 'pre-empt' these issues by producing an implementation guide which answers the majority of the questions being asked, and the issues that had arisen. However it is realised that there is still a role for a helpdesk supported by real experts.

6   Implementing LIDO

The purpose of this section is to create a methodology for implementing LIDO, and in doing so give help and advice to those who are about to, or are considering implementing it.

6.1   XML basics and LIDO

There are many simple guides to XML[21], therefore here we will focus on some aspects of LIDO XML[22].

Tag-names:

All tag-names for elements in LIDO XML are in lower case **except** for the first letter of the second or later parts of *concatenated* tag-name. So:

- lido:descriptiveMetadata is correct;
- lido:DescriptiveMetadata is incorrect;
- lido:descriptivemetadata is incorrect.

Attribute-names:

All attribute-names for elements in LIDO XML are **lower case**. So:

- xml:lang is correct;
- xml:Lang is incorrect.

Namespaces:

There are three namespaces used in LIDO schema:

- **lido**: for nearly all of elements and attributes;
- **xml**: for the xml:lang attribute;
- **gml**: for the parts of LIDO with geographical coordinates, etc

All tag-names and attribute names should be pre-fixed by a namespace in order to provide correct LIDO. So:

- <lido:descriptiveMetadata xml:lang="[code] "> is correct;
- <descriptiveMetadata lang="[code]"> is incorrect;
- <lido:descriptiveMetadata lang="[code]"> is incorrect.

Advice to implementers:

> The organisation implementing LIDO, and particularly those persons carrying out the implementation should familiarise themselves about the basics of XML, and how LIDO handles:
>
> - Tag-names;
> - Attribute-names;
> - Namespaces.

---

[21] Please read for general information on XML, for example: **http://www.w3schools.com/xml/xml_whatis.asp**; **http://en.wikipedia.org/wiki/XML**; and **http://www.xml.com/pub/a/98/10/guide0.html**

[22] For full information see the technical documentation at: **http://www.lido-schema.org**

6.2   Overview of LIDO
6.2.1   What LIDO is

LIDO is:

- **An XML schema** for contributing information about cultural heritage objects and other material, held by an organisation, to portals, aggregations and other similar repositories;
- **A metadata delivery mechanism** for use in a range of online scenarios including an organisation's own online collections database, and external portals aggregating information from many organisations (e.g. Deutsche Digitale Bibliothek and Europeana);
- **Intended to represent the full range of descriptive information about cultural heritage material** (e.g. art, history, technology and natural science).
- It supports **multilingual environments**.

6.2.2   What LIDO is not

LIDO is:

- **Not a fully developed data exchange format**, i.e. it should not be used for a point-to-point exchange of information between organisations and especially not for migrating from one collection management system to another;
- **Not a format designed for full cataloguing** (some aspects are not covered);
- **Not intended to be used as a basis for a collections management system** (e.g. supporting acquisition, movement control, conservation, rights management, and all the other procedures needed).

6.2.3   LIDO's design principles

The LIDO XML schema (and specification) was designed so that it can:

- Enable the **appropriate description** of cultural heritage material;
- Allow an organisation to **decide how rich, or how light**, the metadata records are that they provide to a particular portal (i.e. can be different in different scenarios);
- Allow the **delivery of metadata** about an organisation's item and **links to their related digital surrogates**;
- Include **links back to the records in their 'home' context** (i.e. on an organisation's website);
- Allow for delivery a metadata record containing **all the information for the correct display and retrieval** of an individual item;
- Enable the **identification of an entity provided** (i.e. who, what, when, and where), by providing the ability to **reference to controlled vocabularies and authority files**;
- Provide **metadata for retrieval and for display**, i.e. have display and indexing elements.
- Give full support for **multilingual records**, either at structural-element level, or at individual text-element level (or both);
- **Distinguish between the identifiers** of the physical item, the webpage with a description of it, and its online digital surrogates.

6.2.4   What's in LIDO?

A LIDO record is made up of a nested set of 'wrapper' and 'set' elements which structure metadata about an item in ways that are relevant to the expression of its cultural heritage significance. The aim being to allow a user to access information about the item based on these parameters.

At the highest level it is organised into seven information areas. Four of these hold 'descriptive' metadata while the other three hold 'administrative' metadata.

Descriptive Metadata:

Information area	Description
Object classification	Terms describing the item, especially its type (object name).
Object identification	Basic information about an item.
Event	Events that the item has taken part in.
Object relation	Subjects of visual or textual items, and other related items

Administrative Metadata:

Information area	Description
Rights work	Information about rights associated with the **physical (or born digital) item** required for its use. Right types may include copyright, other intellectual property rights (e.g. those applying to trademarks, designs, and performers' rights), moral rights, data protection, human rights, and personality rights. Do not confuse these rights with the rights associated with the surrogate (the *Resource*).
Record	Information about the catalogue record. This is usually held in a collections management system (CMS). Some of this information may be implicit (e.g. the organisation itself) and may not be stored as data in the CMS.
Resource	Information about digital resource(s) being supplied to the service environment, i.e. accessible via the target portal.

Looking at the second level of information organisation:

Object classification:

Information area	Note
Object work type **[mandatory]**	The type (or object name) of the item.
Classification	Other terms describing the item, e.g. style and form for cultural items; age, sex, and phase for natural science items. Do not confuse classification for the subject of a visual or textual item (see below).

Object identification:

Information area	Note
Title (or object type/name if no title) **[mandatory]**	Use object type (name) if an item has no title.
Inscriptions	A textual transcription and/or a description for non-textual marks on the item. Do not confuse with the subject of visual or textual items.
Repository	Information about the organisation holding the physical item (e.g. its name), and the identifier of the physical item.
Display and edition	Used especially for prints.
Description	Of the physical item.
Measurements	Including technical attributes, e.g. 78 rpm playing speed for a vinyl record.

Event:

Information area	Note
Event ID	For an event in an authority file of events.
Event type	Use a controlled vocabulary[23] of types.
Role in event	Of the item being described.
Event name	Given to the event, e.g. 'World War I'.
Event actor	Persons and organisations involved in the event.
Culture	Cultural group(s) involved in the event.
Event date	The single date or date range when the event took place. Use a standard for expressing dates.
Event period	The period when the event took place. Do not confuse periods with dates. i.e. 'late nineteenth century' is a **period**, '1880/1900' is a **date** (range).
Event place	Where the event took place.
Event method	E.g. acquisition by 'purchase'.
Event material/technique	E.g. material 'gold' and technique 'cast'.
Thing present	References to other items present at the event.
Related event	References to other event(s).
Event description	Further information not already covered by other elements.

Object relation:

Information area	Note
Subject	Of items depicting something (e.g. paintings, photographs, prints, and posters) or textual items (e.g. books, manuscripts, newspapers, and letters). Terms can be for: concepts, actors, events, dates, places, events, and objects.
Related items	References to other items directly related to the item being described in the record.

Rights work:

Information area	Note
Rights type	The type of right being recorded. Items can have more than copyright affecting their use (e.g. moral rights and privacy rights).
Rights date	The date (usually a range) when the right applies. Using just a latest date would indicate when the right is due to end.
Rights holder	The person or organisation that owns, or holds control over, the right.
Credit line	For physical items the right being credited (acknowledged) is often associated with the transfer of ownership, and is probably part of a contract.

---

[23] There is a published suggested set of term for event types See *Section 5.4.8* below.

Record:

Information area	Note
Record ID **[mandatory]**	A unique identifier in the local system.
Record type **[mandatory]**	Term saying that the record represents: an individual item; or a collection, series, or group of items.
Record source **[mandatory]**	Where the information in the record comes from. Usually it is the repository holding the physical item.
Record rights	Of the metadata being supplied.
Record metadata	The wrapper for information about:
Record info link	The link to the record about the item (not the item itself).

Resource:

Information area	Note
Resource ID	Identifier for the resource.
Resource representation	
Resource link	URL of the resource.
Resource type	The medium (e.g. x-ray, 3D model).
Resource relationship type	For example: conservation image, historical image, and reconstruction.
Resource perspective	Vantage point or perspective of the resource.
Resource description	A short description for of what is shown or depicted in the resource.
Resource date taken	When the resource was created
Resource source	If it is not the holding organisation.
Resource rights	The rights associated with the resource.

6.3   Before starting to implement LIDO
6.3.1   Setting your own house in order

Good LIDO begins with good collections management, and that is ensured by:

1.   Using a standards-based collections management system

Advice to implementers:

> It is vital that the organisation manages their collection to a standard sufficient for them to be confident that the metadata they export as LIDO is of the quality needed to meet their needs to provide access. One way to guarantee this, if properly implemented, is to base the system used on accepted standards, e.g. for museums *SPECTRUM or CDWA*.
>
> In-house developed systems should be able to map their metadata elements to the metadata elements of these standards. It should be to export from the rich metadata in the collections management system into LIDO. If the organisation's system is not as comprehensive as one of the recommended standards it might not be possible to submit fully rich metadata into LIDO.

2.   Correctly using a standards-based collections management system

Advice to implementers:

> As well as using a standards-based collections management system the organisation must also monitor its correct use of the system. There is a tendency for misuse to creep in, sometimes this is by accident, but sometimes it is deliberate.
>
> Over thirty years experience by the author in creating and working with data in collections management systems leads to the identification of the following issues with data in CMSs which may impact in creating LIDO records:
>
> | Issue | Minimised by |
> |---|---|
> | Data entry errors (e.g. spelling mistakes) | Review, correction, and use of terminologies |
> | Putting the wrong type of data in a field (e.g. confusing dates with periods) | Monitoring and correction |
> | Inconsistency in the use of terminology | Monitoring, correction, and the using automatic terminology control |
>
> The organisation must have in place policies and procedures to minimise these issues.

6.3.2 *LIDO and the target portal*

Not all portals are the same. Knowing how the target portal will handle the LIDO records it imports is important.

Advice to implementers:

Before providing metadata to a portal the organisation must get from the target portal's owner as much information as possible about how the portal will handle and display the LIDO being supplied.

This should include how the following is handled, and displayed:

- Multilingual metadata;
- Display elements and their corresponding indexing elements, and what happens if either is not present;
- Ordering of repeatable elements;
- References to controlled vocabularies and authority files;
- Links on resources (e.g. thumbnails and other previews);
- Multiple resources;
- Link to the online webpage.

The portal should also clearly inform about any requirements and restrictions for metadata and resources it has. These might include size restrictions for previews or a requirement for rights information.

Having considered this information the organisation should consider if they need to modify their LIDO mapping in order to take into account the target portal.

6.4 General LIDO issues

6.4.1 *Elements containing data*

Only a **subset** of the elements in a LIDO document can contain data. All others are *wrapper elements* which can only contain other elements. The wrapper elements structure the data in culturally significant ways. The content-containing elements are:

Terms:

Where the information given is potentially part of a controlled vocabulary, it is held in a LIDO record as a concept, with a <lido:term> element like this:

<lido:term>[Term]</lido:term>

It is best practice to reference the online-published identifier (URI) for this term in a LIDO record in a <lido:conceptID> element like this:

<lido:conceptID lido:type="URI">[Published URI for term]</lido:conceptID>

It is optional to give just the element <lido:term> or just the <lido:conceptID>, but both are preferred if available.

The *super-elements* define the type of relation between the concept and the related entity, e.g the item itself. The super-elements containing terms are:

- <lido:category>
- <lido:classification>
- <lido:culture>
- <lido:eventMethod>
- <lido:eventType>
- <lido:nationalityActor>
- <lido:objectWorkType>

- <lido:periodName>
- <lido:placeClassification>
- <lido:recordType>
- <lido:relatedEventRelType>
- < ido:relatedWorkRelType>
- <lido:resourcePerspective>
- <lido:resourceRelType>

- <lido:resourceType>
- <lido:rightsType>
- <lido:roleActor>
- <lido:roleInEvent>
- <lido:subjectConcept>
- <lido:termMaterialsTech>[24]

In addition there are elements that contain metadata that could be supported by terminology but do not use <lido:term>. These are:

- <lido:attributionQualifierActor>
- <lido:extentActor>
- <lido:extentMeasurements>
- <lido:extentSubject>

- <lido:formatMeasurements>
- <lido:genderActor>
- <lido:measurementType>
- <lido:measurementUnit>

- <lido:measurementValue>[25]
- <lido:qualifierMeasurements>
- <lido:scaleMeasurements>
- <lido:shapeMeasurements>

Free-text descriptions:

Where the metadata for an item is a free-text description it is held in a <lido:descriptiveNoteValue> element in a LIDO record like this:

<lido:descriptiveNoteValue>[Description]</lido:descriptiveNoteValue>

To identify the descriptions they have *super-elements* which define which part of the item's metadata is being described. The super-elements containing descriptive note values are:

- <lido:eventDescriptionSet >
- <lido:inscriptionDescription >
- <lido:objectDescriptionSet >

---

[24] In addition the <lido:termMaterialsTech> element **must** have a lido:type attribute to distinguish between materials (lido:type="material") and techniques (lido:type="technique").

[25] The metadata must be an integer.

In addition there are elements that are free text but do not use <lido:descriptiveNoteValue>. These are:

- <lido:creditLine>
- <lido:extentMaterialsTech>
- <lido:inscriptionTranscription>
- <lido:objectNote>
- <lido:resourceDescription>
- <lido:sourceAppellation>
- <lido:sourceDescriptiveNote>
- <lido:sourceMaterialsTech>
- <lido:sourceStateEdition>

Appellations:

Where the metadata for an item is an appellation (name) it is held in a <lido:appellationValue> element in a LIDO record like this:

<lido:appellationValue>[Appellation]</lido:appellationValue>

To identify the appellations they have *super-elements* which define which part of the item's metadata is being described. The super-elements containing terms are:

- <lido:eventName>
- <lido:legalBodyName>
- <lido:nameActorSet>
- <lido:namePlaceSet>
- <lido:titleSet>

Web links:

These are usually URLs:

LIDO Element	Linking to
<lido:legalBodyWeblink>	The website for a legal body (organisation or person).
<lido:linkResource>	Surrogate for the item on the Web.
<lido:recordInfoLink>	Webpage of the item on the organisation's website
<lido:objectWebResource>	Webpage of a related item on the Web, i.e. not the item being described in the record.

Identifiers for entities:

These are identifying entities within the LIDO record:

LIDO Element	Identifies
<lido:actorID>	An actor (person or organisation) taking part in an event associated with the item being described.
<lido:descriptiveNoteID>	An external resource describing the entity. May be any kind of document, but best practice is a URL or URI.
<lido:eventID>	An event associated with the item being described.
<lido:legalBodyID>	An organisation or person being referred to as a legal body.
<lido:lidoRecID>	A LIDO record. Best practice is to have it made up of an identifier for: • The organisation providing the record (e.g. an ISIL[26]); • The record in the organisation's local collections management system. Do not confuse this with the <lido:objectID>.
<lido:objectID>	The item being described.

---

[26] International Standard Identifier for Libraries and Related Organizations.

LIDO Element	Identifies
<lido:objectPublishedID>	Published identification of the item being described. It may: • A link to authority files maintained outside of the collections management system of the organisation holding the work; • An identifier for the object published by its repository, e.g. composed of an identifier for the repository and an inventory number of the object. Best practice is for it to be a URL.
<lido:placeID>	A place where an event associated with the item being described took place.
<lido:recordID>	The record describing the item in the organisations collections management system.
<lido:recordInfoID>	The record describing the item outside the organisation's collections management system, for example an externally-maintained persistent identifier.
<lido:resourceID>	The original, digital or analogue, surrogate for the item being described.
<lido:workID>	The physical item held by the organisation.

Display elements: See *Section 5.4.3* below.

Dates: See *Section 5.4.7* below.

Advice to implementers:

> The organisation implementing LIDO should have knowledge of which elements in a LIDO record hold data, and what kind of data each of these elements should hold. It should also know its own collections management system well enough to be able to map to these elements.

6.4.2 *Language(s) of the record and elements*

Advice to implementers:

> It is **mandatory** that the language of the metadata is set, in two places in a LIDO record, by using a standard ISO code for the language.
>
> The organisation implementing LIDO must have knowledge of the correct code for the language(s) they are intending to use in their LIDO records. They must also know where the codes are held in their collections management system, if at all, in order to facilitate the creation of LIDO records. If they do not have the code in their CMS then they must have a method placing it when they are creating the LIDO record.

In LIDO:

SPECTRUM unit[27]	Notes	LIDO elements path
[Record language] [Not a *SPECTRUM* Unit of information]	This is **not** the language of the content of a textual item.	`<lido:descriptiveMetadata xml:lang="[code]">`
		`<lido:administrativeMetadata xml:lang="[code]">`
	The [code] is the standard ISO code for the language and not the name, e.g. "en" **not** "English"	`<lido:administrativeMetadata xml:lang="[code]">`

There are two ways of having information in more than one language in LIDO record:

1. Setting 'global' xml:lang attributes and multiple language records

Here `<lido:descriptiveMetadata>` and `<lido:administrativeMetadata>` have a mandatory xml:lang attribute containing ISO standard codes for languages.

SPECTRUM unit	Notes	LIDO elements path
[Metadata language] [Not a *SPECTRUM* Unit of information]	This is **not** the language of the content of a textual item. The [code] is the standard ISO code for the language and not the name, e.g. "en" **not** "English"	`<lido:descriptiveMetadata xml:lang="[code]">`
		`<lido:administrativeMetadata xml:lang="[code]">`

All sub-elements 'inherit' this language without having to define the **xml:lang** attribute. The code will appear in the EDM record when it is transformed from LIDO, e.g.:

SPECTRUM unit	Notes	LIDO elements path

Title		`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:objectIdentificationWrap>`
		    `<lido:titleWrap>`
		      `<lido:titleSet>`
		        `<lido:appellationValue>[Title]</lido:appellationValue>`

In a purely monolingual record nothing further needs to be done.

For fully multilingual records, repeat the elements:

- `<lido:descriptiveMetadata>`
- `<lido:administrativeMetadata>`

---

[27] In the tables in the sections below show:
- **SPECTRUM Unit(s) of information**, where they exist: SPECTRUM is used to best represent the collections management system fields of the providing cultural heritage institution, especially if the system is formally SPECTRUM Compliant.);
- **Notes**: Giving more information about the information being mapped;
- **LIDO elements path**: Shows the elements path that a CMS should map data automatically to in LIDO, or that a user maps manually in a CMS. Where relevant XML attributes are included Note the path is not complete and in a real record **all** elements should have end tags.

Do this once for each language represented with the appropriate code in the xml:lang attribute.

2. *Setting xml:lang attributes for individual sub-elements*

If the record is mostly monolingual set the \<lido:descriptiveMetadata\> and \<lido:administrativeMetadata\> elements with xml:lang attribute of the main language. For the few sub-elements not in the main language (e.g. title, credit line) repeat the sub-elements specifying the xml:lang attribute at the sub-element level. For example a Title in two languages (German is the main language and English the additional language):

SPECTRUM unit	Notes	LIDO elements path

Title		\<lido:descriptiveMetadata xml:lang="de"\>
		  \<lido:objectIdentificationWrap\>
		    \<lido:titleWrap\>
		      \<lido:titleSet\>
		        \<lido:appellationValue\>[Title in German]
		        \</lido:appellationValue\>
		        \<lido:appellationValue xml:lang="en"\>[Title in English]
		        \</lido:appellationValue\>

The choice of which method to use should take into account a combination the following:

- Availability of multilingual metadata in the organisation's collections management system;
- Organisation's policy regarding multilingual records in general, which may be governed by legal requirements;
- Target portal's handling of multilingual LIDO.

The LIDO elements which are repeatable for language variants only, and **not for any other reason**, are:

LIDO Element	Records information about
\<lido:appellationValue\>	Appellations, e.g. titles, identifying phrases, or names given to an item, but also name of a person or corporation, also place name, etc.
\<lido:creditLine\>	Acknowledgement of the rights associated with the physical item and/or digital object as requested.
\<lido:descriptiveNoteValue\>	Usually a relatively brief essay-like text that describes the entity.
\<lido:displayActor\>	Display element for one actor, corresponding to the following \<lido:actor\> element.
\<lido:displayActorInRole\>	Display element for an actor coupled with its specific role, corresponding to the following \<lido:actor\> element.
\<lido:displayDate\>	Display element for a date specification, corresponding to the following \<lido:date\> element.
\<lido:displayEdition\>	A description of the edition of the item. Used primarily for prints and other multiples.
\<lido:displayEvent\>	Display element for an event, corresponding to the following \<lido:event\> element.
\<lido:displayMaterialsTech\>	Display element for materials/technique, corresponding to the following \<lido:materialsTech\> element.
\<lido:displayObject\>	A free-text description of the item, corresponding to the following \<lido:object\> element.

LIDO Element	Records information about
<lido:displayObjectMeasurements>	Display element for one item measurement, corresponding to the following <lido:objectMeasurement> element.
<lido:displayPlace>	Display element for a place specification, corresponding to the following <lido:place> element.
<lido:displayState>	A description of the state of the item. Used primarily for prints and other multiples.
<lido:displaySubject>	A free-text description of the subject matter represented by/in the item, corresponding to the following <lido:subject> element
<lido:extentSubject>	When there are multiple subjects, a term indicating the part of the item to which these subject terms apply.
<lido:genderActor>	The sex of the individual.
<lido:inscriptionTranscription>	Transcription of the inscription.
<lido:measurementType>	Indicates what kind of measurement is taken.
<lido:measurementUnit>	The unit of the measurement.

Advice to implementers:

> If the organisation wishes to have more than one language for their metadata in LIDO records they:
>
> - Should be aware of how multilingual records will be supported by the target portal;
>
> - Must be able to record multilingual metadata in their collections management system (in some way, e.g. by different field names or by parameter for a field), in order to facilitate the creation of the LIDO record.

6.4.3   *Display and indexing elements*

Some information in a LIDO record can be represented as both 'display elements' and/or 'indexing elements'. The purpose of giving a display element is to have control over how a record appears in a portal. This assumes the portal accepts the indication for display. The indexing elements allow the portal to create machine-understandable indexes for search and retrieval.

Another reason for using a display element may be that the system exporting LIDO is not granular enough to export the full range of indexing elements. Therefore the choice of which to use may be outside the control of the implementer.

The allowable display elements in LIDO records are:

Element tag-name	Notes
<lido:displayState>	A description of the state of the item. Used primarily for prints and other multiples. Formulated according to rules. For State, include state identification and known states, as appropriate.
<lido:displayEdition>	A description of the edition of the item. Used primarily for prints and other multiples. Formulated according to rules. For edition, include impression number, edition size, and edition number, or edition name, as appropriate.
<lido:displayObjectMeasurements>	Display element for one object measurement, corresponding to the following <lido:objectMeasurement> element.
<lido:displayEvent>	Display element for an event, corresponding to the following event element.
Element tag-name	Notes

<lido:displayActorInRole>	Display element for an actor coupled with its specific role, corresponding to the following actor element.
	May include name, brief biographical information of the named actor, presented in syntax suitable for display to the end-user. If there is no known actor, make a reference to the presumed culture or nationality of the unknown actor.
	May be concatenated from the respective Actor element. The name should be in natural order, if possible, although inverted order is acceptable. Include nationality and life dates. For unknown actors, use e.g.: "unknown," "unknown Chinese," "Chinese," or "unknown 15th century Chinese."
<lido:displayDate>	Display element for a date specification, corresponding to the following date element.
	It is a concise description of the date, presented in syntax suitable for display to the end-user and including any necessary indications of uncertainty, ambiguity, and nuance.
<lido:displayPlace>	Display element for a place specification, corresponding to the following place element.
<lido:displayMaterialsTech>	Display element for materials/technique, corresponding to the following <lido:materialsTech> element.
	It is presented in syntax suitable for display to the end-user and including any necessary indications of uncertainty, ambiguity, and nuance. Repeat this element only for language variants.
<lido:displayObject>	A free-text description of the object, corresponding to the following object element
<lido:displaySubject>	A free-text description of the subject matter represented by or in the item (object/work), corresponding to the following subject element
<lido:displayActor>	Display element for one actor, corresponding to the following actor element.
	May include name, brief biographical information of the named actor, presented in syntax suitable for display to the end-user. If there is no known actor, make a reference to the presumed culture or nationality of the unknown actor.
	May be concatenated from the respective Actor element. The name should be in natural order, if possible, although inverted order is acceptable. Include nationality and life dates. For unknown actors, use e.g.: "unknown," "unknown Chinese," "Chinese," or "unknown 15th century Chinese."

Advice to implementers:

If the organisation wishes to give display elements in their LIDO records they:

- Should be aware how display elements will be supported by the target portal, particularly together with the indexing elements;

- Must be able to record display information in their collections management system (in some way, e.g. by different field names or by flag for a field), in order to facilitate the creation of the LIDO record.

- May be compelled to give only display elements if their collections management is not of sufficient granularity to support indexing elements.

6.4.4   *Repeatable elements (not for language)*

The following LIDO elements are repeatable for reasons other than for language variants only:

Element	Reason for repeating
<lido:actorID>	More than one ID for an actor.
<lido:administrativeMetadata>	For fully multi-lingual resources, repeat this element once for each language represented. If only a few data fields (e.g. title, credit line) are provided in more than one language, the respective text elements may be repeated specifying the lang attribute on the text level.
<lido:attributionQualifierActor>	More than one qualifier for uncertain attribution (e.g. attributed to, studio of, workshop of, and manner of).
<lido:classification>	Item is assigned to more than one classification.
<lido:conceptID>	More than one ID for a term.
<lido:culture>	More than one culture associated with an item.
<lido:descriptiveMetadata>	For fully multi-lingual resources, repeat this element once for each language represented. If only a few data fields (e.g. title) are provided in more than one language, the respective text elements may be repeated specifying the xml:lang attribute on the text level.
<lido:descriptiveNoteID>	More than one ID description.
<lido:eventActor>	More than actors taking part in an event.
<lido:eventDescriptionSet>	More than one description for an event.
<lido:eventID>	More than one ID for an event.
<lido:eventMaterialsTech>	More than one material and/or technique associated with an event.
<lido:eventMethod>	More than one method for an event.
<lido:eventName>	More than one name for an event.
<lido:eventPlace>	An event took place in more than one place.
<lido:eventSet>	More than one event for an item.
<lido:extentActor>	An actor has more than one extent in their participation in an event (e.g. design, execution, and with additions by).
<lido:extentMaterialsTech>	A material or technique is used in more than one part of an item.
<lido:extentMeasurements>	More than one part of an item is measured or has technical attributes.
<lido:formatMeasurements>	More than one technical format is used to describe an item.
<lido:inscriptionDescription>	More than one inscription description.
<lido:inscriptions>	More than one inscription.
<lido:legalBodyID>	More than one ID for a legal body (person or organisation).
<lido:legalBodyName>	More than one name for a legal body (person or organisation).
<lido:legalBodyWeblink>	More than one link to a website with information about an item.
<lido:lido>	Many records in a LIDO document.
<lido:lidoRecID>	More than one ID for a LIDO record.
<lido:measurementsSet>	More than one measurement set.
<lido:nameActorSet>	More than one name for an actor.
<lido:namePlaceSet>	More than one name for the same place, e.g. today's and historical names.
<lido:nationalityActor>	Actor has more than one nationality.
<lido:objectDescriptionSet>	More than one descriptive note.
<lido:objectID>	More than one ID for an item related to the item being described in a LIDO record.
Element	**Reason for repeating**

Element	Reason for repeating
<lido:objectMeasurementsSet>	Multiple parts of the item are measured.
<lido:objectNote>	More than one note.
<lido:objectPublishedID>	More than one published ID for an item.
<lido:objectWebResource>	More than one web resource.
<lido:objectWorkType>	More than on object/work type for an item.
<lido:partOfPlace>	More than one part of a place.
<lido:periodName>	Only for indicating an earliest and latest period delimiting the event.
<lido:placeClassification>	A place is classified as more than one type of place
<lido:placeID>	More than one ID for a place.
<lido:qualifierMeasurements>	More than one qualifier for a measurement.
<lido:recordID>	More than one ID for a record describing an item.
<lido:recordInfoID>	More than one ID for a webpage for an item.
<lido:recordInfoLink>	More than one webpage for an item.
<lido:recordInfoSet>	More than one set of metadata for record of an item.
<lido:recordMetadataDate>	More than one date for the metadata record.
<lido:recordRights>	An item has more than one right governing its use.
<lido:recordSource>	More than one source for information in a LIDO record.
<lido:relatedEventSet>	More than event related to an event being described in a LIDO record.
<lido:relatedWorkSet>	More than one item related to the item being described in a LIDO record.
<lido:repositorySet>	More than one repository for the item.
<lido:resourceDescription>	More than one description for a resource.
<lido:resourceMeasurementsSet>	More than more measurement or technical attribute for a resource.
<lido:resourcePerspective>	More than more view shown in a resource.
<lido:resourceRelType>	More than one relationship between a resource and the item being described in a LIDO record.
<lido:resourceRepresentation>	For variants representing the same resource, e.g. different sizes of the same image, or a thumbnail representing an audio or video file and the digital audio or video file itself.
<lido:resourceSet>	More than one resource for the item being described in a LIDO record.
<lido:resourceSource>	More than one source for a resource for the item being described in a LIDO record.
<lido:rightsHolder>	More than one holder for a right controlling the use of the item, a surrogate, or the metadata record of item.
<lido:rightsResource>	More than one right controlling the use of a resource for the item being described in a LIDO record.
<lido:rightsType>	More than one type for a right controlling the use of the item, a surrogate, or the metadata record of item.
<lido:rightsWorkSet>	More than one right controlling the use of the item.
<lido:roleActor>	More than one role for an actor in an event.
<lido:roleInEvent>	More than role in an event for an entity in an event.
<lido:scaleMeasurements>	More than one ratio between the size of the representation of a thing and that thing (e.g., the size of the drawing on a building and building itself).
<lido:shapeMeasurements>	More than one shape being measured for an item being described in a LIDO record.
<lido:sourceAppellation>	More than one source for an appellation.
Element	**Reason for repeating**

<lido:sourceDescriptiveNote>	More than one source for a description.
<lido:sourceMaterialsTech>	More than one source for the information about a material or technique used in a event.
<lido:sourceStateEdition>	More than one source for a state or edition information.
<lido:subjectActor>	More than one actor (person or organisation) depicted in a visual item or as subject in a textual item.
<lido:subjectConcept>	More than one concept depicted in a visual item or as subject in a textual item.
<lido:subjectDate>	More than one date depicted in a visual item or as subject in a textual item.
<lido:subjectEvent>	More than one event depicted in a visual item or as subject in a textual item.
<lido:subjectObject>	More than one item depicted in a visual item or as subject in a textual item.
<lido:subjectPlace>	More than one place depicted in a visual item or as subject in a textual item.
<lido:subjectSet>	If an object / work has multiple parts or otherwise has separate, multiple subjects, repeat this element and use Extent Subject in the Subject element. This element may also be repeated to distinguish between subjects that reflect what an object / work is *of* (description and identification) from what it is *about* (interpretation).
<lido:term>	More than one term in the same part of a LIDO record.
<lido:termMaterialsTech>	More than one material or technique used in a event.
<lido:thingPresent>	More than one physical item present in an event, other than the item being described in a LIDO record.
<lido:titleSet>	More than one title for the item being described in a LIDO record.
<lido:workID>	More than one ID for an item being described.

Advice to implementers:

If the organisation wishes to repeat elements in their LIDO records they:

- Should be aware how repeated elements will be supported by the target portal, particularly their ordering;

- Must be able to record repeating fields in their collections management system (in some way, e.g. by different field names or by a parameter for a field), in order to facilitate the creation of the LIDO record.

6.4.5   *Ordering of repeatable elements*

It is optional to give an order, in a LIDO record, to some of the elements that are repeated, e.g. the order of more than one actor in a production event or more than one material.

This is enabled by adding a lido:sortorder attribute with appropriate data values:

- For the 1st element: lido:sortorder="1"
- For the 2nd element: lido:sortorder="2"
- For the 3rd element: lido:sortorder="3"
- [and so on] ...

The elements where the lido:sortorder attribute is allowed are:

- <classificationWrap>
- <culture>
- <eventActor>
- <eventDescriptionSet>
- <eventMaterialsTech>
- <eventMethod>
- <eventPlace>
- <eventWrap>
- <extentMeasurements>
- <formatMeasurements>
- <inscriptionDescription>
- <inscriptionsWrap>
- <lidoWrap>
- <measurementsSet>
- <nationalityActor>

- <objectDescriptionSet>
- <objectMeasurementsWrap>
- <objectWorkTypeWrap>
- <periodName>
- <qualifierMeasurements>
- <recordWrap>
- <relatedEventSet>
- <relatedWorksWrap>
- <repositorySet>
- <resourceDescription>
- <resourceSource>
- <resourceWrap>
- <rightsHolder>
- <rightsResource>
- <rightsWorkWrap>

- <roleActor>
- <scaleMeasurements>
- <shapeMeasurements>
- <subjectActor>
- <subjectConcept>
- <subjectDate>
- <subjectEvent>
- <subjectObject>
- <subjectPlace>
- <subjectWrap>
- <termMaterialsTech>
- <thingPresent>
- <titleWrap>
- <workID>

Advice to implementers:

> If the organisation wishes to give an order to some of their metadata in LIDO records they:
>
> - Should be aware if their order will be supported by the target portal;
>
> - Must be able to record that order in their collections management system (in some way, e.g. by different field names or by parameter for a field), in order to facilitate the creation of the LIDO record.

6.4.6   *Preference of repeatable elements*

It is optional to give preference, in a LIDO record, to some of the elements that are repeated. This is enabled by adding a lido:pref attribute with appropriate data values:

- For preferred elements: lido:pref="preferred"
- For non-preferred elements: lido:pref="alternative"

The elements where the lido:pref attribute is allowed are:

- <actorID>
- <appellationValue>
- <conceptID>
- <descriptiveNoteID>
- <eventID>
- <legalBodyID>

- <legalBodyWeblink>
- <lidoRecID>
- <objectID>
- <objectPublishedID>
- <objectWebResource>
- <placeID>

- <recordID>
- <recordInfoID>
- <recordInfoLink>
- <resourceID>
- <term>

Advice to implementers:

If the organisation wishes give preference to some of their metadata in LIDO records they:

- Should be aware if their preference will be supported by the target portal;

- Must be able to record that preference in their collections management system (in some way, e.g. by different field names or by flag for a field), in order to facilitate the creation of the LIDO record.

6.4.7   Events

The use of events is one of the most important aspects of LIDO. The concept of an event associated with the item being described enables the use of the same elements for describing a large part of the information associated with an item. It also aligns LIDO with the cultural heritage standard, the CIDOC CRM.

As part of the development of LIDO a terminology of standard events was created.

Event term[28] [alternative term(s)]	Definition	URI (<lido:conceptID>)
Acquisition	The establishment of legal ownership of items, by an organisation of items, e.g. by selection, ordering, purchase, gift, or exchange.	http://terminology.lido-schema.org/lido00001
Collecting [Collection Event; Field Collection; Collection]	Gathering objects in order to retain them.	http://terminology.lido-schema.org/lido00010
Commissioning [Order]	The authorisation to perform a task or duty, including the creation of new items.	http://terminology.lido-schema.org/lido00226
Creation [Conception; Create]	The creation of conceptual or non-material items, such as legends, poems, texts, music, images, movies, laws, and types. **Do not use for physical items** (use *Production* for these).	http://terminology.lido-schema.org/lido00012
Designing [Design]	The creation of conceptual schemes for the organisation or the appearance of items.	http://terminology.lido-schema.org/lido00224
Destruction	The end of existence of an item.	http://terminology.lido-schema.org/lido00026
Event	A general event, not covered by the other types.	http://terminology.lido-schema.org/lido00003
Excavation	The digging or other uncovering of evidence of past life, including artefacts, fossils, frozen remains, or other preserved evidence. Specifically, refers to the systematic digging and documentation of an archaeological site.	http://terminology.lido-schema.org/lido00033

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[28] The term given is in English, however the terminology is multilingual.

Event term [alternative term(s)]	Definition	URI (**<lido:conceptID>**)
Exhibition	The display of items, for a limited time, in a specific location.	http://terminology.lido-schema.org/lido00225
Finding [Find]	The discovery of an item that has been lost or forgotten for a period of time. Used for discovery such as: metal detector, a farmer on his land, and other forms of accidental discovery. Should also be used when the conditions of discovery are either unknown or uncertain.	http://terminology.lido-schema.org/lido00002
Loss	The removal of an item from a collection. Examples include: theft, destruction, or poor documentation. These methods of loss were not intended by the organisation holding the item,	http://terminology.lido-schema.org/lido00009
Modification	The change or transition of an item's physical state by an intentional intervention.	http://terminology.lido-schema.org/lido00006
Move	The change of physical location of an item.	http://terminology.lido-schema.org/lido00223
Part addition	The modification of a physical item by it being increased, enlarged, or augmented by the addition of a part.	http://terminology.lido-schema.org/lido00008
Part Removal	The modification of a physical item by it being decreased by the removal of a part.	http://terminology.lido-schema.org/lido00021
Performance	Activities that follow the directions of a performance plan.	http://terminology.lido-schema.org/lido00030
Planning	Determining objectives and outlining, or arranging, the procedures and resources for attaining them.	http://terminology.lido-schema.org/lido00032
Production	The creation of one or more physical items. **Do not use for conceptual and non-material items** (use *Creation* for these).	http://terminology.lido-schema.org/lido00007
Provenance	The history of the ownership and transmission of an item, including its previous locations.	http://terminology.lido-schema.org/lido00227
Publication	Documents distributed to the public by sale or other transfer of ownership, or by rental, lease, or lending.	http://terminology.lido-schema.org/lido00228
Restoration	The process of making changes to an item or its structure so that it will closely approximate its original state or a state at a specific time in its history.	http://terminology.lido-schema.org/lido00034
Transformation	The event that result in the simultaneous destruction of one or more items and the creation of one or more other items that preserves recognizable substance from original(s) but has fundamentally different nature and identity. Examples include: the repurposing of buildings, the taxidermy of natural science specimens, and the creation of a mummy from a human body.	http://terminology.lido-schema.org/lido00029
Type assignment	The act of classifying items, such as: objects, specimens, people, actions and concepts.	http://terminology.lido-schema.org/lido00023
Type creation	The act of adding a value to a classification of, for example, objects, specimens, people, actions and concepts.	http://terminology.lido-schema.org/lido00013

Event term [alternative term(s)]	Definition	URI (<lido:conceptID>)
Use	Employing, occupying, applying or exploiting the value of item.	http://terminology.lido-schema.org/lido00011

6.5 Object classification area

This area of a LIDO record includes all classifying information about an item. It is divided into two areas:

6.5.1 Object work type

Advice to implementers:

It is **mandatory** to provide an object/work type in a LIDO record.

Every LIDO record must have term in this element. It is recommended that the term comes from a controlled vocabulary. Include a URI if the term has been published online. It is possible to have more than one term for this element.

The organisation **must** ensure that it has this information in its collections management system, and should be aware where it is held in that system in order to facilitate the creation of the LIDO record.

In the LIDO record:

SPECTRUM Unit	Notes	LIDO elements path
Object name	Or object type. Optionally there can be <lido:conceptID> element containing a published URI for term.	<lido:descriptiveMetadata xml:lang="[code]"> <lido:objectClassificationWrap> <lido:objectWorkTypeWrap> <lido:objectWorkType> <lido:conceptID lido:type="URI">[Published URI for term] </lido:conceptID> <lido:term>[Item type]</lido:term>
	Without published URI for term.	<lido:descriptiveMetadata xml:lang="[code]"> <lido:objectClassificationWrap> <lido:objectWorkTypeWrap> <lido:objectWorkType> <lido:term>[Item type]</lido:term>

6.5.2 Classification

Advice to implementers:

An item can be classified in many ways (e.g. style, form, age, and phase), all of which can be represented in a LIDO record. It is also possible for multiple terms in the same classification (e.g. many colours).

It is **recommended** that the term in a LIDO *Classification* comes from a controlled vocabulary. Include a URI if the term has been published online. It is possible to have more than one term for this element.

The organisation should be aware where *Classification* information is held in its collections management system in order to facilitate the creation of the LIDO record.

The general form of the classification area of a LIDO record is:

SPECTRUM Unit	Notes	LIDO elements path

[see below]	Optionally there can be a <lido:conceptID> element containing a published URI for the term.	`<lido:descriptiveMetadata xml:lang="[code]">`
		` <lido:objectClassificationWrap>`
		`  <lido:classificationWrap>`
		`   <lido:classification lido:type="[Classification]">`
		`    <lido:conceptID lido:type="URI">[Published URI for the term]`
		`    </lido:conceptID>`
		`    <lido:term>[Term in classification]</lido:term>`
		`   </lido:classification>`

Below are suggested classifications based on the standard *MDA cards* and, where appropriate, from projects (e.g. MIMO and DCA) mentioned above:

Item type	Suggested classifications	SPECTRUM unit	Notes
Archaeology	Style	*Style*	
	Form	*Form*	
Costume	Style	*Style*	
	Form	*Form*	
	Sex	*Sex*	Gender of the wearer.
	Age	*Age*	In the human sense.
	Status	*Status*	A statement of the standing of an item in relation to others in existence, e.g.: copy and forgery.
Decorative art	Style	*Style*	
	Form	*Form*	
	Status	*Status*	A statement of the standing of an item in relation to others in existence, e.g.: copy and forgery.
Ethnography/Folk Life	Style	*Style*	
	Form	*Form*	
	[other]	[not applicable]	See other types for possible classifications based on the type of item (e.g. classifications of costume).
Fine Art	Style	*Style*	
	Form	*Form*	
	Status	*Status*	A statement of the standing of an item in relation to others in existence, e.g.: copy and forgery.
Geology Specimen	Form	*Form*	In the geological sense.
	Age	*Age*	In the geological sense.
	Complex	*Geological complex name*	

Item type	Suggested classifications	SPECTRUM unit	Notes
History Artefact	Style	*Style*	
	Form	*Form*	
	[other]	[not applicable]	See other types for possible classifications based on the type of item (e.g. costume).
Military Artefact	Style	*Style*	
	Form	*Form*	
	[other]	[not applicable]	See other types for possible classifications based on the type of item (e.g. costume).
Mineral Specimen	Form	*Form*	In the geological sense.
	Age	*Age*	In the geological sense.
	Complex	*Geological complex name*	
Museum Object	Style	*Style*	
	Form	*Form*	
	[other]	[not applicable]	See other types for possible classifications based on the type of item (e.g. costume).
Musical Instrument	Form	*Form*	
	[From MIMO]	[not applicable]	"*The contributor has to provide at least one of the MIMO's instrument keywords.*" From the examples: 'Arghul' and 'Accordion'. These seem to be object names.
Natural History	Form	*Form*	In a natural science sense
	Sex	*Sex*	
	Age	*Age*	
	Phase	*Phase*	Of development (e.g. larva)
	Status		A statement of the standing of a natural science specimen in relation to others in existence, e.g.: type, paratype, and holotype.
Numismatics	Form	*Form*	
Photograph	Form	*Form*	
Pictorial Representation	Form	*Form*	
Scientific Instrument	Form	*Form*	
Technology	Form	*Form*	

Item type	Suggested classifications	SPECTRUM unit	Notes
Texts	Language		Use standard language codes. **Do not just use for language of the record**. The [code] is the standard ISO code for the language and not the name, e.g. "en" **not** "English". Optionally there can be <lido:conceptID> element containing a published URI for term.
	Status	*Status*	A statement of the standing of an item in relation to others in existence, e.g.: copy and forgery.

Another possible classification is that based on how the holding organisation structures its collection, e.g.:

- Fine art;
- Decorative art;
- Prints and drawings;
- Natural science;
- Numismatics;
- Local history.

6.6   Object identification area
6.6.1   Title

Advice to implementers:

It is **mandatory** to provide a title in a LIDO record. A reason for this is that this metadata in a LIDO record is most often used to label the item in the target portal.

The organisation **must** ensure that it has *Title* information in its collections management system, where this exists, and should be aware where it is held that system in order to facilitate the creation of the LIDO record.

However not all types of item have a title, therefore in those cases it will be necessary to insert the data from the <lido:term> element within the, mandatory, <lido:objectWorkType> element.

It should also be aware of which items do not have *Title*s in order to the Object/work type information instead

In the LIDO record:

SPECTRUM unit	Notes	LIDO elements path
Title **[or]** *Object name*]	*Object name* should be mapped if there is no *Title*	<lido:descriptiveMetadata xml:lang="[code]"> <lido:objectIdentificationWrap> <lido:titleWrap> <lido:titleSet> <lido:appellationValue>[Title or Object name] </lido:appellationValue> </lido:titleSet> </lido:titleWrap>

The issue with using just *Object name* is that there is a danger that lots of records will have the same 'title' (e.g. coin, vase, or scraper). Implementers may consider creating a short description in their

collections management system which could be used in LIDO, or try to create one by concatenating a title from other fields in their database, fields chosen should help in identification.

There is no special advice for different types of item.

6.6.2 *Inscriptions*

Inscriptions are textual or non-textual marks inscribed on an item, e.g. signatures and maker's marks. Do not confuse inscriptions with textual and visual content which is dealt with under the Object relation area (see below).

Advice to implementers:

> An item can have many different inscriptions and marks.
>
> The organisation should be aware where *Inscriptions* information is held in its collections management system in order to facilitate the creation of the LIDO record.
>
> It is **recommended** that inscriptions are included in a LIDO record where they occur associated with the item.

In a LIDO record is:

SPECTRUM unit	Notes	LIDO elements path

Inscription description	A description of non-textual marks inscribed on an item.	\<lido:descriptiveMetadata xml:lang="[code]"\>
		  \<lido:objectIdentificationWrap\>\>
		    \<lido:inscriptionsWrap\>
		      \<lido:inscriptions\>
		        \<lido:inscriptionDescription\>
		          \<lido:descriptiveNoteValue\>[Inscription description]
		          \</lido:descriptiveNoteValue\>
		      \</lido:inscriptions\>

Inscription content	The text inscribed as part of the decoration or construction of an item recorded in the original language.	\<lido:descriptiveMetadata xml:lang="[code]"\>
		  \<lido:objectIdentificationWrap\>
		    \<lido:inscriptionsWrap\>
		      \<lido:inscriptions\>
		        \<lido:inscriptionTranscription\>
		          \<lido:descriptiveNoteValue\>[Inscription content]
		          \</lido:descriptiveNoteValue\>
		      \</lido:inscriptions\>

6.6.3 *Repository*

Advice to implementers:

> Information about the Repository holding the item is unlikely to be held in an organisation's collections management system. However it is possible that it is.
>
> Therefore the organisation should be aware if, or where, *Repository* information is held in its collections management system.
>
> If it is in the system then this will facilitate the creation of the LIDO record. If it is not the organisation should be able to add the information using their LIDO creation mechanism.
>
> It is **recommended** that at least *Repository name* appears in the LIDO. In an export to a portal the information may be required.

The name of the repository in a LIDO record is:

SPECTRUM unit	Notes	LIDO elements path

[Where the item is held]
 	
[Not a SPECTRUM Unit of information]
		`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:objectIdentificationWrap>`
		    `<lido:repositoryWrap>`
		      `<lido:repositorySet>`
		        `<lido:repositoryName>`
		          `<lido:legalBodyName>`
		            `<lido:appellationValue>`[Repository name]
		            `</lido:appellationValue>`

6.6.4 *Display and edition*

Advice to implementers:

Prints and other types of multiple can have **optional** *Display and edition* information.

The organisation should be aware where *Display and edition* information is held in its collections management system in order to facilitate the creation of the LIDO record.

It is recommended that it is exported in the types of item where it does occur.

In a LIDO record:

SPECTRUM unit	Notes	LIDO elements path

Edition number	A number assigned to a group of items produced at the same time by the maker.	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:objectIdentificationWrap>`
		    `<lido:displayStateEditionWrap>`
		      `<lido:displayEdition xml:label="Edition number">`[Edition number]
		      `</lido:displayEdition>`

Copy number	A number assigned to an item by the maker within a limited edition or special run.	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:objectIdentificationWrap>`
		    `<lido:displayStateEditionWrap>`
		      `<lido:displayEdition xml:label="Copy number">`[Copy number]
		      `</lido:displayEdition>`

6.6.5 *Description*

Advice to implementers:

An item can have many different types of description. These might concern different aspects of the item or be aimed at different audiences

The organisation should be aware where all the different types of *Description* information are held in its collections management system in order to facilitate the creation of the LIDO record.

It is **recommended** that at least a brief description should be in the LIDO record. However the description in the record should take into account, if possible, the requirements of the target portal, and its audience.

In a LIDO record:

SPECTRUM unit	Notes	LIDO elements path

Brief description	Should be detailed enough to properly describe the item.	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:objectIdentificationWrap>`
		    `<lido:objectDescriptionWrap>`
		      `<lido:objectDescriptionSet>`
		        `<lido:descriptiveNoteValue>`[Brief description]
		        `</lido:descriptiveNoteValue>`

There may be other descriptive texts associated with the item:

SPECTRUM unit	Notes	LIDO elements path
Comments	Any comments about the item, e.g. 'The identification was thought to be wrong by Dr H Jones who visited in 1992.'	<lido:descriptiveMetadata xml:lang="[code]"> <lido:objectIdentificationWrap> <lido:objectDescriptionWrap> <lido:objectDescriptionSet> <lido:descriptiveNoteValue lido:type="Comments">[Comments] </lido:descriptiveNoteValue>
Distinguishing features	Any distinguishing features of the item, e.g. 'Monogram on base, one handle replaced'.	<lido:descriptiveMetadata xml:lang="[code]"> <lido:objectIdentificationWrap> <lido:objectDescriptionWrap> <lido:objectDescriptionSet> <lido:descriptiveNoteValue lido:type="Distinguishing features">[Distinguishing features] </lido:descriptiveNoteValue>
Physical description	A physical description of the item	<lido:descriptiveMetadata xml:lang="[code]"> <lido:objectIdentificationWrap> <lido:objectDescriptionWrap> <lido:objectDescriptionSet> <lido:descriptiveNoteValue lido:type="Physical description">[Physical description] </lido:descriptiveNoteValue>

There is no special advice for different types of item.

6.6.6 *Measurements*

Advice to implementers:

An item and its parts, where relevant, can have many measurements and non-measured technical attributes. The exact types of them are dependent on the perceived collections management and research needs of the item. They also vary with different types of item.

The organisation should be aware where *Measurement and technical attribute* information are held in its collections management system in order to facilitate the creation of the LIDO record.

It is **recommended** that measurements and/or technical attributes (where present), should be in the LIDO record. However if and how they appear in the record should take into account, if possible, the requirements of the target portal, and its audience. With some items it may be necessary to give measurements for parts of the item.

In a LIDO record the simplest way to map the dimension and technical attribute of an item is to have them as a single string:

SPECTRUM unit	Notes	LIDO elements path
Dimensions [single string]	A simple string of all the dimensions, e.g. '3 cm x 2 cm x 10 cm'	<lido:descriptiveMetadata xml:lang="[code]"> <lido:objectIdentificationWrap> <lido:objectMeasurementsWrap> <lido:objectMeasurementsSet> <lido:displayObjectMeasurements>[Dimensions (as a single string)]</lido:displayObjectMeasurements>
Technical attributes [single string]		<lido:descriptiveMetadata xml:lang="[code]"> <lido:objectIdentificationWrap> <lido:objectMeasurementsWrap> <lido:objectMeasurementsSet> <lido:displayObjectMeasurements>[Technical attributes (as a single string)]</lido:displayObjectMeasurements>

In addition to mapping dimensions and technical attributes as a single string, in the <lido:displayObjectMeasurements> element, it is possible to map them separately as triples of:

- <lido:measurementType> for *Dimension* or *Technical attribute*;
- <lido:measurementValue> for *Dimension value* or *Technical attribute measurement*;
- <lido:measurementUnit> for *Dimension measurement unit* or *Technical attribute measurement unit*.

If this second method is used **all the three sub-elements must be present**.

For Dimensions:

SPECTRUM unit	Notes	LIDO elements path
Dimension	The aspect of a part being measured, e.g. height, width, depth, diameter, weight	<lido:descriptiveMetadata xml:lang="[code]"> <lido:objectIdentificationWrap> <lido:objectMeasurementsWrap> <lido:objectMeasurementsSet> <lido:objectMeasurements> <lido:measurementsSet> <lido:measurementType>[Dimension] </lido:measurementType> <lido:measurementValue>[Dimension value] </lido:measurementValue> <lido:measurementUnit>[Dimension measurement unit] </lido:measurementUnit> </lido:measurementsSet>
Dimension value	The numeric value of the measurement. Must be a number, e.g. 987, 0.234 or 0,234	
Dimension measurement unit	The unit of measurement being used, e.g. m, mm, inches, troy, grains	

For Technical attributes:

SPECTRUM unit	Notes	LIDO elements path
Technical attribute	The name of a technical attribute possessed by an item which can be described and quantified, e.g. magnetic tape type, record speed.	<lido:descriptiveMetadata xml:lang="[code]"> <lido:objectIdentificationWrap> <lido:objectMeasurementsWrap> <lido:objectMeasurementsSet> <lido:objectMeasurements> <lido:measurementsSet> <lido:measurementType>[Technical attribute] </lido:measurementType> <lido:measurementValue>[Technical attribute value] </lido:measurementValue> <lido:measurementUnit>[Technical attribute measurement unit]</lido:measurementUnit> </lido:measurementsSet>
Technical attribute measurement	The measurement of a named Technical attribute, e.g. 78.	
Technical attribute measurement unit	The unit of measurement used when measuring a Technical attribute, e.g. rpm	

Repeat the <lido:measurementsSet> element and its triple sub-elements for multiple dimensions and technical attributes for the item (as a whole)

The only suggested measurements, and technical attributes, based on the standard *MDA cards* and, where appropriate, from projects (e.g. MIMO and DCA) mentioned above are:

Item type	Suggested measurements and technical attributes	Notes
Numismatics	Weight	
	Die axis	The rotation of the reverse die, in relation to the obverse die. May be expressed in degrees or hours as on a clock face.

For part of the item (e.g. base, frame, mount)

SPECTRUM unit	Notes	LIDO elements path

Dimension measured part	The part of an item measured, e.g. base, frame, mount	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectIdentificationWrap>`
		`    <lido:objectMeasurementsWrap>`
		`      <lido:objectMeasurementsSet>`
		`        <lido:objectMeasurements>`
		`          <lido:extentMeasurements>[Dimension measured part]`
		`          </lido:extentMeasurements>`

Dimension value qualifier	E.g. approximate; to the nearest cm	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectIdentificationWrap>`
		`    <lido:objectMeasurementsWrap>`
		`      <lido:objectMeasurementsSet>`
		`        <lido:objectMeasurements>`
		`          <lido:qualifierMeasurements>[Dimension value qualifier]`
		`          </lido:qualifierMeasurements>`

Below are suggested parts of an item which should be measured, based on the standard *MDA cards* and, where appropriate, from projects (e.g. MIMO and DCA) mentioned above:

Item type	Suggested measures parts	Notes
Fine Art	Frame	
	Mount	
Pictorial Representation	Frame	
	Mount	

In addition the number of items, where there is more than one, is a relevant technical attribute in a collection of items being described together:

SPECTRUM unit	Notes	LIDO elements path

Number of objects	The number of items being described in the record. Suggest that only used when the number of items is more than one.	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectIdentificationWrap>`
		`    <lido:objectMeasurementsWrap>`
		`      <lido:objectMeasurementsSet>`
		`        <lido:objectMeasurments>`
		`          <lido:measurementsSet>`
		`            <lido:measurementType>Number of items`
		`            </lido:measurementType>`
		`            <lido:measurementUnit>items</lido:measurementUnit>`
		`            <lido:measurementValue>[Number]`
		`            </lido:measurementValue>`
		`          </lido:measurementsSet>`

6.7   Event area

Advice to implementers:

<div style="border:1px solid">

An item and its parts, where relevant, can be associated with many events, during:

- Its bringing into being;

- After that but before it became part of an organisation;

- After it became part of an organisation.

The exact types of event associated with an item are dependent on the item itself and its historical context. Some information may be partial or entirely missing.

The organisation should be aware where *Event* information is held in its collections management system in order to facilitate the creation of the LIDO record.

It is **recommended** that at least, where information is present and relevant, to give that information in the LIDO record in the following events:

- Production (all);
- Designing (designed items);
- Publication (published items);
- Collecting (those collected in some way);
- Excavation (those from archaeological excavations);
- Exhibition (those that have taken part in an exhibition).

Other events can be included if the organisation thinks they are relevant.

</div>

In the following sections we look at the major events that are likely to be found associated with an item:

6.7.1   *Production*

This may include information on other 'production-like' events, like creation, designing, and publication.

SPECTRUM unit	Notes	LIDO elements path

Indication of the production event
 	
[Not a SPECTRUM Unit of information]
	In order to transform from LIDO to EDM the **URI must be used**	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		    `<lido:eventSet>`
		      `<lido:event>`
		        `<lido:eventType>`
		          `<lido:conceptID lido:type="URI">http://terminology.lido-schema.org/lido00007</lido:conceptID>`
		          `<lido:term>Production</lido:term>`

Object production date [single string]	Recommended is a standard format, e.g. YYYY or YYYY/ZZZZ. Other forms will be difficult to interpret by computers. If Date - earliest/single and Date - latest are given they will be used.	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		    `<lido:eventSet>`
		      `<lido:event>`
		        `<lido:eventDate>`
		          `<lido:displayDate>[Object production date (as a single string)]`
		          `</lido:displayDate>`

SPECTRUM unit	Notes	LIDO elements path

Date - earliest/single	Recommended format is 'YYYY'. Will be displayed as 'YYYY/ZZZZ' in EDM and Europeana if *Date - latest* is given	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		   `<lido:eventSet>`
		    `<lido:event>`
		     `<lido:eventDate>`
		      `<lido:date>`
		       `<lido:earliestDate>`[Date - earliest/single]
		       `</lido:earliestDate>`
		      `</lido:date>`

Date – latest
 	
[best practice is to also have a earliest date]
	Recommended format is 'ZZZZ'. Will be displayed as 'YYYY/ZZZZ' in EDM and Europeana with *Date - earliest* is given	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		   `<lido:eventSet>`
		    `<lido:event>`
		     `<lido:eventDate>`
		      `<lido:date>`
		       `<lido:earliestDate>`[Date - earliest/single]
		       `</lido:earliestDate>`
		       `<lido:latestDate>`[Date - latest]`</lido:latestDate>`
		      `</lido:date>`

Object production person [single string]	Who made the object	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		   `<lido:eventSet>`
		    `<lido:event>`
		     `<lido:eventActor>`
		      `<lido:actor>`
		       `<lido:nameActorSet>`
		        `<lido:appellationValue>`[Object production person (as a single string)]`</lido:appellationValue>`

Person's association	Their role in the production event, e.g., manufacturer, artist, engraver, painter	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		   `<lido:eventSet>`
		    `<lido:event>`
		     `<lido:eventActor>`
		      `<lido:actorInRole>`
		       `<lido:roleActor>`
		        `<lido:conceptID lido:type="URI">`[Published URI for term]
		        `</lido:conceptID>`
		        `<lido:term>`[Person's association]`</lido:term>`

Object production organisation [single string]	Who made the object	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		   `<lido:eventSet>`
		    `<lido:event>`
		     `<lido:eventActor>`
		      `<lido:actor>`
		       `<lido:nameActorSet>`
		        `<lido:conceptID lido:type="URI">`[Published URI for term]
		        `</lido:conceptID>`
		        `<lido:appellationValue>`[Object production organisation (as a single string)]`</lido:appellationValue>`

Organisation's association	Their role in the production event, e.g., manufacturer, artist, engraver, painter	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		   `<lido:eventSet>`
		    `<lido:event>`
		     `<lido:eventActor>`
		      `<lido:actorInRole>`
		       `<lido:roleActor>`
		        `<lido:conceptID lido:type="URI">`[Published URI for term]
		        `</lido:conceptID>`
		        `<lido:term>`[Organisation's association]`</lido:term>`

SPECTRUM unit	Notes	LIDO elements path

Object production place [single string]	Where the item was created	\<lido:descriptiveMetadata xml:lang="[code]"\>
		  \<lido:eventWrap\>
		    \<lido:eventSet\>
		      \<lido:event\>
		        \<lido:eventPlace\>
		          \<lido:displayPlace\>[Object production place (as a single string)]

Material	What the item is made of	\<lido:descriptiveMetadata xml:lang="[code]"\>
		  \<lido:eventWrap\>
		    \<lido:eventSet\>
		      \<lido:event\>
		        \<lido:eventMaterialsTech\>
		          \<lido:materialsTech\>
		            \<lido:termMaterialsTech lido:type="material"\>
		              \<lido:conceptID lido:type="URI"\>[Published URI for term]
		              \</lido:conceptID\>
		              \<lido:term\>[Material]\</lido:term\>

Technique	How the item was created	\<lido:descriptiveMetadata xml:lang="[code]"\>
		  \<lido:eventWrap\>
		    \<lido:eventSet\>
		      \<lido:event\>
		        \<lido:eventMaterialsTech\>
		          \<lido:materialsTech\>
		            \<lido:termMaterialsTech lido:type="technique"\>
		              \<lido:conceptID lido:type="URI"\>[Published URI for term]
		              \</lido:conceptID\>
		              \<lido:term\>[Technique]\</lido:term\>

6.7.2 *Designing*

This event might be recorded as part of the production event and not separately. In this case use production event only.

SPECTRUM	Notes	LIDO elements path
Indication of the designing event [Not a SPECTRUM Unit of information]	In order to transform from LIDO to EDM the **URI must be used**	\<lido:descriptiveMetadata xml:lang="[code]"\> \<lido:eventWrap\> \<lido:eventSet\> \<lido:event\> \<lido:eventType\> \<lido:conceptID lido:type="URI"\>http://terminology.lido-schema.org/lido00224\</lido:conceptID\>

[Item designing date - single string]
 	
 [Not a SPECTRUM Unit of information]
	Recommended is a standard format, e.g. YYYY or YYYY/ZZZZ. Other forms will be difficult to interpret by computers. If Date - earliest/single and Date - latest are given they will be used.	\<lido:descriptiveMetadata xml:lang="[code]"\>
		  \<lido:eventWrap\>
		    \<lido:eventSet\>
		      \<lido:event\>
		        \<lido:eventDate\>
		          \<lido:displayDate\>[Item designing date (as a single string)]

SPECTRUM unit	Notes	LIDO elements path

Date - earliest/single	Recommended format is 'YYYY'. Will be displayed as 'YYYY/ZZZZ' in EDM and Europeana if *Date - latest* is given	`<lido:descriptiveMetadata xml:lang="[code]">`
		　`<lido:eventWrap>`
		　　`<lido:eventSet>`
		　　　`<lido:event>`
		　　　　`<lido:eventDate>`
		　　　　　`<lido:date>`
		　　　　　　`<lido:earliestDate>`[Date - earliest/single]

Date - latest	Recommended format is 'ZZZZ'. Will be displayed as 'YYYY/ZZZZ' in EDM and Europeana with *Date - earliest* is given	`<lido:descriptiveMetadata xml:lang="[code]">`
		　`<lido:eventWrap>`
		　　`<lido:eventSet>`
		　　　`<lido:event>`
		　　　　`<lido:eventDate>`
		　　　　　`<lido:date>`
		　　　　　　`<lido:latestDate>`[Date - latest]

[Item designing person - single string]
 	
[Not a SPECTRUM Unit of information]
	Who designed the object	`<lido:descriptiveMetadata xml:lang="[code]">`
		　`<lido:eventWrap>`
		　　`<lido:eventSet>`
		　　　`<lido:event>`
		　　　　`<lido:eventActor>`
		　　　　　`<lido:actor>`
		　　　　　`<lido:nameActorSet>`
		　　　　　　`<lido:appellationValue>`[Item designing person (as a single string)]

Person's association	Their role in the designing event. Usually 'designer'	`<lido:descriptiveMetadata xml:lang="[code]">`
		　`<lido:eventWrap>`
		　　`<lido:eventSet>`
		　　　`<lido:event>`
		　　　　`<lido:eventActor>`
		　　　　　`<lido:actorInRole>`
		　　　　　　`<lido:roleActor>`
		　　　　　　　`<lido:conceptID lido:type="URI">`[Published URI for term]
		　　　　　　　`</lido:conceptID>`
		　　　　　　`<lido:term>`[Person's association]`</lido:term>`

[Item designing organisation - single string]
 	
[Not a SPECTRUM Unit of information]
	Who designed the object	`<lido:descriptiveMetadata xml:lang="[code]">`
		　`<lido:eventWrap>`
		　　`<lido:eventSet>`
		　　　`<lido:event>`
		　　　　`<lido:eventActor>`
		　　　　　`<lido:actor>`
		　　　　　`<lido:nameActorSet>`
		　　　　　　`<lido:appellationValue>`[Item designing organisation (as a single string)]

Organisation's association	Their role in the designing event. Usually 'designer'	`<lido:descriptiveMetadata xml:lang="[code]">`
		　`<lido:eventWrap>`
		　　`<lido:eventSet>`
		　　　`<lido:event>`
		　　　　`<lido:eventActor>`
		　　　　　`<lido:actorInRole>`
		　　　　　　`<lido:roleActor>`
		　　　　　　　`<lido:conceptID lido:type="URI">`[Published URI for term]
		　　　　　　　`</lido:conceptID>`
		　　　　　　`<lido:term>`[Organisation's association]`</lido:term>`

[Item designing place - single string]
 	
[Not a SPECTRUM Unit of information]
	Where the item was designed	`<lido:descriptiveMetadata xml:lang="[code]">`
		　`<lido:eventWrap>`
		　　`<lido:eventSet>`
		　　　`<lido:event>`
		　　　　`<lido:eventPlace>`
		　　　　　`<lido:displayPlace>` [Item designing place (as a single string)]

6.7.3 *Publication*

This event might be recorded as part of the production event and not separately. In this case use production event only. However this will mean that the publisher will not appear in the correct place in EDM or in Europeana.

SPECTRUM	Notes	LIDO elements path

Indication of the publication event
 	
[Not a SPECTRUM Unit of information]
	In order to transform from LIDO to EDM the **URI must be used**	\<lido:descriptiveMetadata xml:lang="[code]">
		 \<lido:eventWrap>
		  \<lido:eventSet>
		   \<lido:event>
		    \<lido:eventType>
		     \<lido:conceptID lido:type="URI">http://terminology.lido-schema.org/lido00228\</lido:conceptID>
		     \<lido:term>Publication\</lido:term>

[Item publication date - single string]
 	
[Not a SPECTRUM Unit of information]
	Recommended is a standard format, e.g. YYYY or YYYY/ZZZZ. Other forms will be difficult to interpret by computers. If Date - earliest/single and Date - latest are given they will be used.	\<lido:descriptiveMetadata xml:lang="[code]">
		 \<lido:eventWrap>
		  \<lido:eventSet>
		   \<lido:event>
		    \<lido:eventDate>
		     \<lido:displayDate>[Item publication date (as a single string)]

Date – earliest/ single	Recommended format is 'YYYY'. Will be displayed as 'YYYY/ZZZZ' in EDM and Europeana if *Date - latest* is given	\<lido:descriptiveMetadata xml:lang="[code]">
		 \<lido:eventWrap>
		  \<lido:eventSet>
		   \<lido:event>
		    \<lido:eventDate>
		     \<lido:date>
		      \<lido:earliestDate>[Date - earliest/single]

Date - latest	Recommended format is 'ZZZZ'. Will be displayed as 'YYYY/ZZZZ' in EDM and Europeana with *Date - earliest* is given	\<lido:descriptiveMetadata xml:lang="[code]">
		 \<lido:eventWrap>
		  \<lido:eventSet>
		   \<lido:event>
		    \<lido:eventDate>
		     \<lido:date>
		      \<lido:latestDate>[Date - latest]\</lido:latestDate>
		     \</lido:date>

[Item publication organisation - single string]
 	
[Not a SPECTRUM Unit of information]
	Who published the item	\<lido:descriptiveMetadata xml:lang="[code]">
		 \<lido:eventWrap>
		  \<lido:eventSet>
		   \<lido:event>
		    \<lido:eventActor>
		     \<lido:actor>
		      \<lido:nameActorSet>
		       \<lido:appellationValue>[Item publication organisation (as a single string]
		       \</lido:appellationValue>

Organisation's association	Their role in the publication event. Usually 'publisher'	\<lido:descriptiveMetadata xml:lang="[code]">
		 \<lido:eventWrap>
		  \<lido:eventSet>
		   \<lido:event>
		    \<lido:eventActor>
		     \<lido:actorInRole>
		      \<lido:roleActor>
		       \<lido:conceptID lido:type="URI">[Published URI for term]
		       \</lido:conceptID>
		       \<lido:term>[Organisation's association]\</lido:term>

SPECTRUM unit	Notes	LIDO elements path

[Item publication place - single string]
 	
[Not a SPECTRUM Unit of information
	Where the item was published	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:eventWrap>`
		`    <lido:eventSet>`
		`      <lido:event>`
		`        <lido:eventPlace>`
		`          <lido:displayPlace>`[Item publication place (as a single string)]

6.7.4   *Collecting*

SPECTRUM	Notes	LIDO elements path

Indication of the collection event
 	
[Not a SPECTRUM Unit of information]
	In order to transform from LIDO to EDM the **URI must be used**	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:eventWrap>`
		`    <lido:eventSet>`
		`      <lido:event>`
		`        <lido:eventType>`
		`          <lido:conceptID lido:type="URI">`http://terminology.lido-schema.org/lido00010`</lido:conceptID>`
		`          <lido:term>`Collecting`</lido:term>`

Field collection date [single string]	Recommended is a standard format, e.g. YYYY or YYYY/ZZZZ. Other forms will be difficult to interpret by computers. If Date - earliest/single and Date - latest are given they will be used.	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:eventWrap>`
		`    <lido:eventSet>`
		`      <lido:event>`
		`        <lido:eventDate>`
		`          <lido:displayDate>`[Object field collection date (as a single string)]

Date – earliest/single
 	
[Together with]
	Recommended format is:
	
	'YYYY-MM-DD'
		`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:eventWrap>`
		`    <lido:eventSet>`
		`      <lido:event>`
		`        <lido:eventDate>`
		`          <lido:date>`
		`            <lido:earliestDate>`[Collecting begin date]`</lido:earliestDate>`
		`            <lido:latestDate>`[Collecting end date]`</lido:latestDate>`
		`          </lido:date>`
		`        </lido:eventDate>`

Date - latest	Recommended format is: 'ZZZZ-MM-DD'	

Field collection person [single string]	Who collected the item	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:eventWrap>`
		`    <lido:eventSet>`
		`      <lido:event>`
		`        <lido:eventActor>`
		`          <lido:actor>`
		`            <lido:nameActorSet>`
		`              <lido:appellationValue>`[Object field collection person (as a single string)]

Person's association	Their role in the collection event. Usually 'Collector'	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:eventWrap>`
		`    <lido:eventSet>`
		`      <lido:event>`
		`        <lido:eventActor>`
		`          <lido:actorInRole>`
		`            <lido:roleActor>`
		`              <lido:conceptID lido:type="URI">`[Published URI for term]
		`              </lido:conceptID>`
		`              <lido:term>`[Person's association]`</lido:term>`

Field collection organisation [single string]	Who collected the item	<lido:descriptiveMetadata xml:lang="[code]">
		  <lido:eventWrap>
		    <lido:eventSet>
		      <lido:event>
		        <lido:eventActor>
		          <lido:actor>
		            <lido:nameActorSet>
		              <lido:appellationValue>[Object field collection organisation (as a single string)]

Organisation's association	Their role in the collection event	<lido:descriptiveMetadata xml:lang="[code]">
		  <lido:eventWrap>
		    <lido:eventSet>
		      <lido:event>
		        <lido:eventActor>
		          <lido:actorInRole>
		            <lido:roleActor>
		              <lido:conceptID lido:type="URI">[Published URI for term]
		              </lido:conceptID>
		              <lido:term>[Organisation's association]</lido:term>

Field collection place [single string]	Where the item was collected	<lido:descriptiveMetadata xml:lang="[code]">
		  <lido:eventWrap>
		    <lido:eventSet>
		      <lido:event>
		        <lido:eventPlace>
		          <lido:displayPlace>[Object field collection place (as a single string)]

6.7.5 *Excavation*

SPECTRUM	Notes	LIDO elements path

Indication of the excavation event
 	
[Not a SPECTRUM Unit of information]
	In order to transform from LIDO to EDM the **URI must be used**	<lido:descriptiveMetadata xml:lang="[code]">
		  <lido:eventWrap>
		    <lido:eventSet>
		      <lido:event>
		        <lido:eventType>
		          <lido:conceptID lido:type="URI"> http://terminology.lido-schema.org/lido00033</lido:conceptID>
		          <lido:term>Excavation</lido:term>

Field collection date [single string]	Recommended is a standard format, e.g. YYYY or YYYY/ZZZZ. Other forms will be difficult to interpret by computers. If Date - earliest/single and Date - latest are given they will be used.	<lido:descriptiveMetadata xml:lang="[code]">
		  <lido:eventWrap>
		    <lido:eventSet>
		      <lido:event>
		        <lido:eventDate>
		          <lido:displayDate>[Object field collection date (as a single string)]

Date – earliest/single
 	
[Together with]
	Recommended format is:
	'YYYY-MM-DD'
		<lido:descriptiveMetadata xml:lang="[code]">
		  <lido:eventWrap>
		    <lido:eventSet>
		      <lido:event>
		        <lido:eventDate>
		          <lido:date>
		            <lido:earliestDate>[Exhibition begin date]</lido:earliestDate>
		            <lido:latestDate>[Exhibition end date]</lido:latestDate>
		          </lido:date>
		        </lido:eventDate>

Date - latest	Recommended format is: 'ZZZZ-MM-DD'	

Field collection person [single string]	Who excavated the item	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		    `<lido:eventSet>`
		      `<lido:event>`
		        `<lido:eventActor>`
		          `<lido:actor>`
		            `<lido:nameActorSet>`
		              `<lido:appellationValue>`[Object field collection person (as a single string)]

Person's association	Their role in the excavation event.	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		    `<lido:eventSet>`
		      `<lido:event>`
		        `<lido:eventActor>`
		          `<lido:actorInRole>`
		            `<lido:roleActor>`
		              `<lido:conceptID lido:type=`"URI"`>`[Published URI for term]
		              `</lido:conceptID>`
		              `<lido:term>`[Person's association]`</lido:term>`

Field collection organisation [single string]	Who excavated the item	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		    `<lido:eventSet>`
		      `<lido:event>`
		        `<lido:eventActor>`
		          `<lido:actor>`
		            `<lido:nameActorSet>`
		              `<lido:appellationValue>`[Object field collection organisation (as a single string)]

Organisation's association	Their role in the excavation event	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		    `<lido:eventSet>`
		      `<lido:event>`
		        `<lido:eventActor>`
		          `<lido:actorInRole>`
		             `<lido:roleActor>`
		               `<lido:conceptID lido:type=`"URI"`>`[Published URI for term]
		              `</lido:conceptID>`
		              `<lido:term>`[Organisation's association]`</lido:term>`

Field collection place [single string]	Where the item was excavated	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		    `<lido:eventSet>`
		      `<lido:event>`
		        `<lido:eventPlace>`
		          `<lido:displayPlace>`[Object field collection place (as a single string)]

6.7.6 *Exhibition*

SPECTRUM	Notes	LIDO elements path

Indication of the production event
 	
[Not a SPECTRUM Unit of information]
	In order to transform from LIDO to EDM the **URI must be used**	`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		    `<lido:eventSet>`
		      `<lido:event>`
		        `<lido:eventType>`
		          `<lido:conceptID lido:type="URI">http://terminology.lido-schema.org/lido00225</lido:conceptID>`
		          `<lido:term>Exhibition</lido:term>`

Exhibition title	The name of an exhibition, display or other type of event.	`<lido:descriptiveMetadata xml:lang="[code]" >`
		  `<lido:eventWrap>`
		    `<lido:eventSet>`
		      `<lido:event>`
		        `<lido:eventName>`
		          `<lido:appellationValue>[Exhibition title]</lido:appellationValue>`

Exhibition begin date
 	
[Together with]
	Recommended format is:
	
	'YYYY-MM-DD'
		`<lido:descriptiveMetadata xml:lang="[code]">`
		  `<lido:eventWrap>`
		    `<lido:eventSet>`
		      `<lido:event>`
		        `<lido:eventDate>`
		          `<lido:date>`
		            `<lido:earliestDate>[Exhibition begin date]</lido:earliestDate>`
		            `<lido:latestDate>[Exhibition end date]</lido:latestDate>`
		          `</lido:date>`
		        `</lido:eventDate>`
		      `</lido:event>`

Exhibition end date	Recommended format is: 'ZZZZ-MM-DD'	

6.8 Object relation area
6.8.1 Subject

Advice to implementers:

<div style="border: 1px solid">

For visual and textual works and objects it is possible to describe the *Subject*s of their content in this area of a LIDO record. The exact types of *Subject*s content are dependent on the item itself.

The organisation should be aware where this information is held in its collections management system in order to facilitate the creation of the LIDO record.

It is **recommended** that where the information is present and relevant, to give that information in the LIDO record. It can include information about or depicting:

- Activities;
- Concepts;
- Dates;
- Periods;
- Events;
- Objects;
- Organisation;
- People;
- Persons;
- Places.

In addition, if the organisation thinks they are relevant, a general description of content and where on the item the content is located can be included.

</div>

In LIDO:

SPECTRUM unit	Notes	LIDO elements path

Content - activity	The activity shown or discussed, e.g. tea drinking, swimming, praying	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:subject>`
		`          <lido:subjectConcept>`
		`            <lido:term xml:label="Activity">[Content - activity]</lido:term>`
		`          </lido:subjectConcept>`

Content - concept	The concept shown or discussed, e.g. love, peace	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:subject>`
		`          <lido:subjectConcept>`
		`            <lido:term xml:label="Concept">[Content - concept]</lido:term>`
		`          </lido:subjectConcept>`

Content - date [single string]	Recommended is a standard format, e.g. YYYY or YYYY/ZZZZ. Other forms will be difficult to interpret by computers. If Date - earliest/single and Date - latest are given they will be used.	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:subject>`
		`          <lido:subjectDate>`
		`            <lido:displayDate>[Content date (as a single string)]`
		`            </lido:displayDate>`

SPECTRUM unit	Notes	LIDO elements path

Content - date [earliest/single] **And** *Content - date* [latest]	Recommended format is 'YYYY-MM-DD'. Will be displayed with a '/' separator in EDM. If there is not a latest date only the earliest/single is displayed.	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:subject>`
		`          <lido:subjectDate>`
		`            <lido:date>`
		`              <lido:earliestDate>[Content date (earliest/single)]`
		`              </lido:earliestDate>`
		`              <lido:latestDate>[Content date (latest)]`
		`              </lido:latestDate>`
		`            </lido:date`

Content - [period]	A period shown or discussed	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:subject>`
		`          <lido:subjectDate>`
		`            <lido:date>`
		`              <lido:periodName>`
		`                <lido:conceptID lido:type="URI">[Published URI for term]`
		`                </lido:conceptID>`
		`                <lido:term>[Content - period]</lido:term>`

Content – description	A description of what is shown or discussed	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:displaySubject>[Content - description]`
		`        </lido:displaySubject>`

Content - event name	An event shown or discussed	`<lido:descriptiveMetadata xml:lang="[code]">`
		`<lido:objectRelationWrap>`
		`  <lido:subjectWrap>`
		`    <lido:subjectSet>`
		`      <lido:subject>`
		`        <lido:subjectEvent>`
		`          <lido:event>`
		`            <lido:eventName>`
		`              <lido:appellationValue>[Content - event name]`
		`              </lido:appellationValue>`

Content - note	A note about of what is shown or discussed	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:displaySubject xml:label="Note">[Content - note]`
		`        </lido:displaySubject>`

Content - object	An item shown or discussed	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:subject>`
		`          <lido:subjectObject>`
		`            <lido:object>`
		`              <lido:objectNote>[Content - object]</lido:objectNote>`

Content - organisation [single string]	The organisation shown or discussed	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:subject>`
		`          <lido:subjectActor>`
		`            <lido:displayActor>[Content - organisation (as a single string)]`
		`            </lido:displayActor>`

SPECTRUM unit	Notes	LIDO elements path

Content - other	A aspect about what is shown or discussed	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:displaySubject>[Content - other]</lido:displaySubject>`

Content - people	The cultural group shown or discussed	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:subject>`
		`          <lido:subjectConcept xml:label="Culture">`
		`            <lido:conceptID lido:type="URI">[Published URI for term]`
		`            </lido:conceptID>`
		`            <lido:term>[Content - people]</lido:term>`

Content - person [single string]	The person shown or discussed	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:subject>`
		`          <lido:subjectActor>`
		`            <lido:displayActor>[Content - person (as a single string)]`
		`            </lido:displayActor>`

Content - place [single string]	The place shown or discussed	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:subject>`
		`          <lido:subjectPlace>`
		`            <lido:displayPlace>[Content - place (as a single string)]`
		`            </lido:displayPlace>`

Content - position	The position of what shown or discussed on the item	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:subjectWrap>`
		`      <lido:subjectSet>`
		`        <lido:subject>`
		`          <lido:extentSubject>[Content - position]</lido:extentSubject>`

6.8.2   *Related items*

Advice to implementers:

It is **optional** to relate items to the item being described in the LIDO record. However it is **recommended** that where the information is present and relevant, to give that information in the LIDO record. It should include information the:

- Nature of the relationship;
- ID of the related work;
- Note describing the relationship.

The organisation should be aware where this information is held in its collections management system in order to facilitate the creation of the LIDO record.

In the LIDO record:

SPECTRUM unit	Notes	LIDO elements path

Related object number		`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectRelationWrap>`
		`    <lido:relatedWorksWrap>`
		`      <lido:relatedWorkSet>`
		`        <lido:relatedWorkRelType>`
		`          <lido:conceptID lido:type="URI">[Published URI for term]`
		`          </lido:conceptID>`
		`          <lido:term>[Relationship type]</lido:term>`
		`        <lido:relatedWork>`
		`          <lido:object>`
		`            <lido:objectID>[Related item's ID]</lido:objectID>`
		`            <lido:objectNote>[Note about related item]</lido:objectNote>`
		`          </lido:object>`
		`        </lido:relatedWork>`
		`      </lido:relatedWorkSet>`

Related object association		
Related object note		

6.9   Rights for work area

The rights information in this part of a LIDO record is that for the physical item (the 'work'). The rights for the surrogate(s) can be recorded as part of *Resource information*. The rights for the metadata record can be recorded as part of *Record information*.

It is very important that an organisation gives **all the relevant information about the rights** affecting the use of the physical item in order to benefit the organisation, and to respect the rights of others.

Therefore the organisation should identify the fields in their collections management system which holds that information, and place the relevant information about the rights affecting the use of the physical item in the LIDO record being exported.

Do not confuse the rights affecting the use of the physical item with those of its surrogates and the metadata record describing the item.

6.9.1   Rights type

The type of right associated with the physical item. In LIDO:

SPECTRUM unit	Notes	LIDO elements path
Right type	Best practice for the use of the <lido:conceptID> element is only applicable when the term is in a online published terminology	<lido:administrativeMetadata xml:lang="[code]"> <lido:rightsWorkWrap> <lido:rightsWorkSet> <lido:rightsType> <lido:conceptID lido:type="URI">[Published URI for term] </lido:conceptID> <lido:term>[Right type]</lido:term>

6.9.2   Rights date

The dates of when rights associated with the physical item are applicable:

| *Rights begin date* **And** *Rights end date* | Recommended format is 'YYYY'. The two dates will be displayed with a '/' separator in EDM.

For copyright the Rights end date may be used on its own.

There is not an option for a <lido:displayDate> element. | <lido:administrative xml:lang="[code]">
  <lido:rightsWorkWrap>
    <lido:rightsWorkSet>
        <lido:rightsDate>
          <lido:date>
            <lido:earliestDate>[Rights begin date]</lido:earliestDate>
            <lido:latestDate>[Rights end date]</lido:latestDate>
          </lido:date>
        </lido:rightsDate> |

6.9.3   *Rights holder*

The person or organisation that controls (e.g. moral rights) or owns (e.g. copyright) associated with the physical item:

SPECTRUM unit	Notes	LIDO elements path

Right holder [as a single string]	There is only the option to give the *Right holder* as a single string.	`<lido:administrativeMetadata xml:lang="[code]">`
		  `<lido:rightsWorkWrap>`
		    `<lido:rightsWorkSet>`
		      `<lido:rightsHolder>`
		        `<lido:legalBodyName>`
		          `<lido:appellationValue>`[Right holder]`</lido:appellationValue>`
		        `</lido:legalBodyName>`
		      `</lido:rightsHolder>`

6.9.4   *Credit line*

The right being credited (acknowledged) is often associated with the acquisition of the item, and is probably part of a contract, e.g.:

- Purchased with funds from the National Art Collection Fund;
- Donated by Ms B. Smith, Sydney, Australia in memory of her father John Smith.

In the former case the part of the contract which provided funds to purchase an item said that the organisation must acknowledge the funding every time the item is displayed. In the latter case the organisation agreed to make the statement every time the item is displayed.

A credit line about the copyright status of the physical item can also be given, e.g.:

- © The Artist.

In LIDO:

SPECTRUM unit	Notes	LIDO elements path

Credit line		`<lido:administrativeMetadata xml:lang="[code]">`
		  `<lido:rightsWorkWrap>`
		    `<lido:rightsWorkSet>`
		      `<lido:creditLine>`[Credit line]`</lido:creditLine>`

6.10 Record area
6.10.1 *Record ID*

Advice to implementers:

It is **mandatory** to provide an identifier for the metadata record unique in the organisation's collections management system in the LIDO record.

The organisation should be aware where this identifier is held in its collections management system in order to facilitate the creation of the LIDO record.

In the LIDO record

SPECTRUM unit	Notes	LIDO elements path
[Record ID in the organisation's system] [Not a *SPECTRUM* Unit of information]	Should be unique in the system	\<lido:administrativeMetadata xml:lang="[code]"\> \<lido:recordWrap\> \<lido:recordID lido:type="PID"\>[Internal system ID]\</lido:recordID\>

6.10.2 *Record type*

Advice to implementers:

It is **mandatory** to provide a type for the metadata record being described in the LIDO record.

The organisation should be aware where this record type is held in its collections management system in order to facilitate the creation of the LIDO record.

In the LIDO record

SPECTRUM unit	Notes	LIDO elements path
[Not a *SPECTRUM* Unit of information]	Usually '**item**', but possibly '**collection**', '**series**', '**group**', '**volume**', or '**fonds**'. This is not the Object name or Object type	\<lido:administrativeMetadata xml:lang="[code]"\> \<lido:recordWrap\> \<lido:recordType\> \<lido:conceptID lido:type="URI"\>[Published URI for term] \</lido:conceptID\> \<lido:term\>[Record type]\</lido:term\>

6.10.3 *Record source*

Advice to implementers:

It is **recommended** to provide some information about source for the metadata record being described in the LIDO record. This usually the organisation itself. This information must include one, or more, of the following:

- The name of the source;
- An identifier for the source;
- Link to the website of the source.

The organisation should be aware where this record source information is held in its collections management system in order to facilitate the creation of the LIDO record.

It is possible that it is not held in the CMS. In this case the organisation must have a method for getting the information into the LIDO record.

In the LIDO record

SPECTRUM unit	Notes	LIDO elements path

Source name [Not a SPECTRUM unit]
 	
Source's ID [Not a SPECTRUM unit]
 	
Source's website URL [Not a SPECTRUM unit]
	One or more of these.
	
	The source is usually the organisation holding the item.
		\<lido:administrativeMetadata xml:lang="[code]"\>
		  \<lido:recordWrap\>
		    \<lido:recordSource\>
		      \<lido:legalBodyID\>[Record source's ID]\</lido:legalBodyID\>
		      \<lido:legalBodyName\>
		        \<lido:appellationValue\>[Record source's name]
		        \</lido:appellationValue\>
		      \</lido:legalBodyName\>
		      \<lido:legalBodyWeblink\>[Record source's website URL]
		      \</lido:legalBodyWeblink\>

6.10.4 *Record rights*

The rights information in this part of a LIDO record is that for the metadata record describing the item.

Advice to implementers:

> It is very important that an organisation gives **all the relevant information about the rights** affecting the use of the metadata record describing the item in order to benefit the organisation, and to respect the rights of others.
>
> Therefore the organisation should identify the fields in their collections management system which holds that information, and place the relevant information about the rights affecting the use of the metadata record describing the item in the LIDO record being exported.
>
> **Do not confuse the rights affecting the use of the metadata record describing the item with those of the physical item and its surrogates.**

Rights type:

The type of right associated with the metadata record describing the item:

SPECTRUM unit	Notes	LIDO elements path

Right type	Best practice for the use of the \<lido:conceptID\> element is only applicable when the term is in a online published terminology	\<lido:administrativeMetadata xml:lang="[code]"\>
		  \<lido:recordWrap\>
		    \<lido:recordRights\>
		      \<lido:rightsType\>
		        \<lido:conceptID lido:type="URI"\>[Published URI for term]
		        \</lido:conceptID\>
		        \<lido:term\>[Right type]\</lido:term\>

Rights date:

The dates of when rights associated with the metadata record describing the item are applicable:

SPECTRUM unit	Notes	LIDO elements path

Rights begin date **And** *Rights end date*	Recommended format is 'YYYY'. The two dates will be displayed with a '/' separator in EDM.
	
	For copyright the Rights end date may be used on its own.
	
	There is not an option for a <lido:displayDate> element.
		<lido:administrativeMetadata xml:lang="[code]">
		  <lido:recordWrap>
		    <lido:recordRights>
		      <lido:rightsDate>
		        <lido:date>
		          <lido:earliestDate>[Rights begin date]</lido:earliestDate>
		          <lido:latestDate>[*Rights end date*]</lido:latestDate>
		        </lido:date>
		      </lido:rightsDate>

Rights holder:

The person or organisation that controls (e.g. moral rights) or owns (e.g. copyright) the rights associated with the metadata record describing the item:

SPECTRUM unit	Notes	LIDO elements path

Right holder *[as a single string]*	There is only the option to give the *Right holder* as a single string.	<lido:administrativeMetadata xml:lang="[code]">
		  <lido:recordWrap>
		    <lido:recordRights>
		      <lido:rightsHolder>
		        <lido:legalBodyName>
		          <lido:appellationValue>[Right holder]</lido:appellationValue>
		        </lido:legalBodyName>
		      </lido:rightsHolder>

Credit line:

A credit line about the copyright status of the metadata record describing the item.

In LIDO:

SPECTRUM unit	Notes	LIDO elements path

Credit line		<lido:administrativeMetadata xml:lang="[code]">
		  <lido:recordWrap>
		    <lido:recordRights>
		      <lido:creditLine>[Credit line]</lido:creditLine>

6.10.5 *Record metadata information*

Advice to implementers:

It is **recommended** to provide URL link to a metadata record for a physical item in a LIDO record.

The organisation should be aware where this identifier is held in its collections management system in order to facilitate the creation of the LIDO record.

In the LIDO record:

SPECTRUM unit	Notes	LIDO elements path

[URL of metadata record] [Not a SPECTRUM unit]		`<lido:administrativeMetadata xml:lang="[code]">`
		  `<lido:recordWrap>`
		    `<lido:recordInfoSet>`
		      `<lido:recordInfoLink>`[URL of metadata record]
		      `</lido:recordInfoLink>`

6.11 Resource area
6.11.1 Resource ID

Advice to implementers:

It is **optional** to provide an identifier for a surrogate for a physical item in a LIDO record.

If the organisation wishes to provide this information it should be aware where this identifier is held in its collections management system in order to facilitate the creation of the LIDO record.

In the LIDO record:

SPECTRUM unit	Notes	LIDO elements path
[Resource ID in the organisation's system] [Not a *SPECTRUM* Unit of information]	Should be unique in the system	<lido:administrativeMetadata xml:lang="[code]"> <lido:resourceWrap> <lido:resourceSet> <lido:resourceID>[Resource ID]</lido:resourceID>

6.11.2 Resource representation

Advice to implementers:

It is **recommended** to provide URL links to surrogates for a physical item in a LIDO record.

The organisation should be aware where these links is held in its collections management system in order to facilitate the creation of the LIDO record.

In the LIDO record:

SPECTRUM unit	Notes	LIDO elements path
[URL of surrogate in the organisation's system] [Not a *SPECTRUM* Unit of information]	A valid URL to a surrogate. Optional lido:type attribute giving information like 'thumbnail' and 'master'	<lido:administrativeMetadata xml:lang="[code]"> <lido:resourceWrap> <lido:resourceSet> <lido:resourceRepresentation lido:type="[type]"> <lido:linkResource>[URL of surrogate]</lido:linkResource>

6.11.3 Resource type

Advice to implementers:

It is **optional** to provide type information for a surrogate for a physical item in a LIDO record.

If the organisation wishes to provide this information it should be aware where this type information is held in its collections management system in order to facilitate the creation of the LIDO record.

In the LIDO record:

SPECTRUM unit	Notes	LIDO elements path

[Resource type in the organisation's system]
 	
[Not a *SPECTRUM* Unit of information]
	Best practice for the use of the <lido:conceptID> element is only applicable when the term is in a online published terminology	`<lido:administrativeMetadata xml:lang="[code]">`
		`  <lido:resourceWrap>`
		`    <lido:resourceSet>`
		`      <lido:resourceType>`
		`        <lido:conceptID lido:type="URI">[Published URI for term]`
		`        </lido:conceptID>`
		`        <lido:term>[Resource type]</lido:term>`

6.11.4 *Resource relationship type*

Advice to implementers:

> It is **optional** to provide the relationship between a surrogate and the physical item it relates to in a LIDO record.
>
> If the organisation wishes to provide this information it should be aware where this type information is held in its collections management system in order to facilitate the creation of the LIDO record.

In the LIDO record:

SPECTRUM unit	Notes	LIDO elements path

[Resource relationship type in the organisation's system]
 	
[Not a *SPECTRUM* Unit of information]
	Best practice for the use of the <lido:conceptID> element is only applicable when the term is in a online published terminology	`<lido:administrativeMetadata xml:lang="[code]">`
		`  <lido:resourceWrap>`
		`    <lido:resourceSet>`
		`      <lido:resourceRelType>`
		`        <lido:conceptID lido:type="URI">[Published URI for term]`
		`        </lido:conceptID>`
		`        <lido:term>[Resource relationship type]</lido:term>`

6.11.5 *Resource perspective*

Advice to implementers:

> It is **optional** to provide the perspective shown in a surrogate for the physical item in a LIDO record.
>
> If the organisation wishes to provide this information it should be aware where this type information is held in its collections management system in order to facilitate the creation of the LIDO record.

In the LIDO record:

SPECTRUM unit	Notes	LIDO elements path

[Resource perspective in the organisation's system]
 	
[Not a *SPECTRUM* Unit of information]
	Best practice for the use of the <lido:conceptID> element is only applicable when the term is in a online published terminology	`<lido:administrativeMetadata xml:lang="[code]">`
		`  <lido:resourceWrap>`
		`    <lido:resourceSet>`
		`      <lido:resourcePerspective>`
		`        <lido:conceptID lido:type="URI">[Published URI for term]`
		`        </lido:conceptID>`
		`        <lido:term>[Resource perspective]</lido:term>`

6.11.6 *Resource description*

Advice to implementers:

> It is **optional** to provide the description of a surrogate for the physical item in a LIDO record.
>
> If the organisation wishes to provide this information it should be aware where this type information is held in its collections management system in order to facilitate the creation of the LIDO record.

In the LIDO record:

SPECTRUM unit	Notes	LIDO elements path

[Resource description in the organisation's system]
 	
[Not a *SPECTRUM* Unit of information]
		`<lido:administrativeMetadata xml:lang="[code]">`
		  `<lido:resourceWrap>`
		    `<lido:resourceSet>`
		      `<lido:resourcePerspective>`
		        `<lido:resourceDescription>`[Resource description]
		        `<lido:resourceDescription>`

6.11.7 *Resource date taken*

Advice to implementers:

> It is **optional** to provide information about the date of creation of surrogate for the physical item in the LIDO record.
>
> If the organisation wishes to provide this information it should be aware where resource creation dates are held in its collections management system in order to facilitate the creation of the LIDO record.

In LIDO:

SPECTRUM unit	Notes	LIDO elements path

Resource creation date [single string]
 	
[Not a SPECTRUM unit]
	Recommended is a standard format, e.g. YYYY or YYYY/ZZZZ. Other forms will be difficult to interpret by computers.	`<lido:administrativeMetadata xml:lang="[code]">`
		  `<lido:resourceWrap>`
		    `<lido:resourceSet>`
		      `<lido:resourceDateTaken>`
		        `<lido:displayDate>`[Resource creation date (as a single string)]
		        `</lido:displayDate>`

Or/and		

Resource creation date - earliest
 	
[Not a SPECTRUM unit]
	Recommended format is 'YYYY-MM-DD'.	`<lido:administrativeMetadata xml:lang="[code]">`
		  `<lido:resourceWrap>`
		    `<lido:resourceSet>`
		      `<lido:resourceDateTaken>`
		        `<lido:date>`
		          `<lido:earliestDate>`[Resource creation date - earliest]
		          `</lido:earliestDate>`
		          `<lido:latestDate>`[Resource creation date – latest]
		          `</lido:latestDate>`
		        `</lido:date>`

Resource creation date – latest [Not a SPECTRUM unit]	Recommended format is 'YYYY-MM-DD'.	

6.11.8 *Resource source*

Advice to implementers:

> It is **optional** to provide information about the source of a surrogate for the physical item in the LIDO record. It is possibly the organisation itself, but might be an outside person or organisation. This information must include one, or more, of the following:
>
> - The name of the source;
> - An identifier for the source;
> - Link to the website of the source.
>
> If the organisation wishes to provide this information it should be aware where resource source information is held in its collections management system in order to facilitate the creation of the LIDO record.

In the LIDO record

SPECTRUM unit	Notes	LIDO elements path

Source name [Not a SPECTRUM unit]	One (mandatory) or more (optional) of these.	`<lido:administrativeMetadata xml:lang="[code]">`
		  `<lido:resourceWrap>`
		    `<lido:resourceSet>`

Source's ID [Not a SPECTRUM unit]	The source is usually the organisation holding the item.	`<lido:resourceSource>`
		        `<lido:legalBodyID>[Resource source's ID]</lido:legalBodyID>`
		        `<lido:legalBodyName>`

Source's website URL [Not a SPECTRUM unit]		`<lido:appellationValue>[Resource source's name]`
		          `</lido:appellationValue>`
		        `</lido:legalBodyName>`
		        `<lido:legalBodyWeblink>[Resource source's website URL]`
		        `</lido:legalBodyWeblink>`

6.11.9 *Resource rights*

The rights information in this part of a LIDO record is that for the surrogate(s) ('resource(s)') for the physical item.

> It is very important that an organisation gives **all the relevant information about the rights** affecting the use of the surrogate for the physical item in order to benefit the organisation, and to respect the rights of others.
>
> Therefore the organisation should identify the fields in their collections management system which holds that information, and place the relevant information about the rights affecting the use of the surrogate for the item in the LIDO record being exported.
>
> **Do not confuse the rights affecting the use of the surrogate for the item with those of the physical item and metadata record describing it.**

Rights type:

The type of right associated with the surrogate for the physical item:

SPECTRUM unit	Notes	LIDO elements path

Right type	Best practice for the use of the `<lido:conceptID>` element is only applicable when the term is in a online published terminology	`<lido:administrativeMetadata xml:lang="[code]">`
		  `<lido:resourceWrap>`
		    `<lido:resourceSet>`
		      `<lido:resourceRights>`
		        `<lido:rightsType>`
		          `<lido:conceptID lido:type="URI">[Published URI for term]`
		          `</lido:conceptID>`
		          `<lido:term>[Right type]</lido:term>`

Rights date:

The dates of when rights associated with the surrogate for the physical item are applicable:

| Rights begin date **And** Rights end date | Recommended format is 'YYYY'. The two dates will be displayed with a '/' separator in EDM.

For copyright the Rights end date may be used on its own.

There is not an option for a \<lido:displayDate\> element. | \<lido:administrativeMetadata xml:lang="[code]"\>
  \<lido:resourceWrap\>
    \<lido:resourceSet\>
      \<lido:resourceRights\>
        \<lido:rightsDate\>
          \<lido:date\>
            \<lido:earliestDate\>[Rights begin date]\</lido:earliestDate\>
            \<lido:latestDate\>[*Rights end date*]\</lido:latestDate\>
          \</lido:date\>
        \</lido:rightsDate\> |

Rights holder:

The person or organisation that controls (e.g. moral rights) or owns (e.g. copyright) the rights associated with surrogate for the physical item:

SPECTRUM unit	Notes	LIDO elements path

Right holder [as a single string]	There is only the option to give the *Right holder* as a single string.	\<lido:administrativeMetadata xml:lang="[code]"\>
		  \<lido:resourceWrap\>
		    \<lido:resourceSet\>
		      \<lido:resourceRights\>
		        \<lido:rightsHolder\>
		          \<lido:legalBodyName\>
		            \<lido:appellationValue\>[Right holder]\</lido:appellationValue\>
		          \</lido:legalBodyName\>
		        \</lido:rightsHolder\>

Credit line:

A credit line for surrogate for the physical item. Here, for example, it possible to acknowledge the creator of the photograph:

- Photographer: John Smith

In LIDO:

SPECTRUM unit	Notes	LIDO elements path

Credit line		\<lido:administrativeMetadata xml:lang="[code]"\>
		  \<lido:resourceWrap\>
		    \<lido:resourceSet\>
		      \<lido:resourceRights\>
		        \<lido:creditLine\>[Credit line]\</lido:creditLine\>

6.12 Information needed by Europeana

In order to successfully submit a record to Europeana some metadata is required:

SPECTRUM unit	Notes	LIDO elements path

europeana:dataProvider [Not a *SPECTRUM* Unit of information]	The name of the organisation, e.g. British Museum	`<lido:administrativeMetadata xml:lang="[code]">`
		`  <lido:recordWrap>`
		`    <lido:recordSource lido:type="europeana:dataProvider">`
		`      <lido:legalBodyName>`
		`        <lido:appellationValue>`[Data provider's name]
		`        </lido:appellationValue>`

europeana:isShownAt [Not a *SPECTRUM* Unit of information]	A valid URL to a webpage with on the content provider)	`<lido:administrativeMetadata xml:lang="[code]">`
		`  <lido:recordWrap>`
		`    <lido:recordInfoSet>`
		`      <lido:recordInfoLink>`[URL of webpage for item]
		`      </lido:recordInfoLink>`

AND/OR		

europeana:isShownBy [Not a *SPECTRUM* Unit of information]	A valid URL to a reasonable quality surrogate	`<lido:administrativeMetadata xml:lang="[code]">`
		`  <lido:resourceWrap>`
		`    <lido:resourceSet>`
		`      <lido:resourceRepresentation lido:type="image_master">`
		`        <lido:linkResource>`[URL of surrogate]`</lido:linkResource>`

europeana:object [Not a SPECTRUM Unit of information]	A valid URL to a thumbnail meeting Europeana's quality requirements	`<lido:adminstrativeMetadata xml:lang="[code]">`
		`  <lido:resourceWrap>`
		`    <lido:resourceSet>`
		`      <lido:resourceRepresentation lido:type="image_thumb">`
		`        <lido:linkResource>`[URL of preview of surrogate]
		`        </lido:linkResource>`

europeana:provider [Not a *SPECTRUM* Unit of information]	The name of the aggregator, e.g. AthenaPlus.	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectClassificationWrap>`
		`    <lido:classification lido:type="europeana:project">`
		`      <lido:term>`[Name of provider]`</lido:term>`

europeana:rights [Not a *SPECTRUM* Unit of information]	Must be one of a list of standard URI terms	`<lido:administrativeMetadata xml:lang="[code]">`
		`  <lido:resourceWrap>`
		`    <lido:rightsResource>`
		`      <lido:rightsType>`
		`        <lido:term>`[URI of rights]`</lido:term>`

europeana:type [Not a *SPECTRUM* Unit of information]	Must be one of: 'TEXT', 'IMAGE', 'SOUND', 'VIDEO' or '3D'	`<lido:descriptiveMetadata xml:lang="[code]">`
		`  <lido:objectClassificationWrap>`
		`    <lido:classification lido:type="europeana:type">`
		`      <lido:term>`[Europeana type]`</lido:term>`

7 Conclusions (Summary of LIDO implementation advice)

The potential or new implementer of LIDO needs to ensure these procedures are put in place and advice taken on board:

7.1 Before you start
7.1.1 A LIDO-enabled collections management system

The organisation should manage their collections in a system based on the recognised standards for their part of the cultural and scientific heritage domain, e.g. for museums *SPECTRUM* or CDWA.

Many commercially available systems conform to these standards, and thanks to the *Europeana Inside* project are able to export data in LIDO. In-house developed systems should be able to map their metadata elements to the metadata elements of these standards, and ideally be able to export metadata in LIDO.

Not having a LIDO-enabled collections management system (CMS) will make it much more difficult to submit fully rich metadata to target portals.

7.1.2 Using the collections management system

The organisation must monitor its correct use of their collections management system. There is a tendency for misuse to creep in, sometimes accidently, but sometimes deliberately.

Experience has shown issues can arise with data in CMSs which may impact in creating LIDO records:

Issue	Minimised by
Data entry errors (e.g. spelling mistakes)	Review and correction
Putting the wrong type of data in a field (e.g. confusing dates with periods)	Monitoring and correction
Inconsistency in the use of terminology	Monitoring, correction, and the using automatic terminology control

The organisation must have in place policies and procedures to minimise these issues, and any others of a similar nature.

7.2 Beginning to implement LIDO

When beginning to implement LIDO an organisation and particularly those carrying it out must have, or obtain, knowledge in three areas:

7.2.1 Knowledge of LIDO

The organisation should be familiar with:

- The basics of XML;
- LIDO itself and in particular how it handles tag-names, attribute-names and namespaces.

The former can be obtained from written material widely available online and in paper-based forms, and perhaps from attend training courses.

The latter can be obtained online from the LIDO website:

http://www.lido-schema.org

7.2.2   *Knowledge of the target portal*

Before providing metadata to a portal the organisation must get from its owner as much information as possible about how the portal will handle and display the LIDO being supplied.

This should include how the following is handled, and displayed:

- Multilingual metadata;
- Display elements (and their corresponding indexing elements if present);
- Ordering of repeatable elements;
- Links on resources (e.g. thumbnails and other previews);
- Multiple resources;
- Link to the online webpage.

The portal should also give any requirements and restrictions for metadata and resources it has. These might include size restrictions for previews or a requirement for rights information.

Having considered this information the organisation should plan the creation of LIDO records meeting these parameters.

7.2.3   *Knowledge of the relationship between the CMS and LIDO*

In order to facilitate the creation of LIDO records, for all the data, that it might export as LIDO the organisation should be aware of:

- Where that data is held in its collections management system;
- Where that data will appear in a LIDO record.

For the LIDO-enabled CMSs mentioned above this will automatically be available to the user of the system. For in-house developed and *ad hoc* solutions the implementer will have to carry out a mapping exercise. This can be partly automated by using a suitable tool like MINT, but can be begun by using a mapping grid taking in-house data to LIDO in a tabular document.

7.3   *Decisions on the general LIDO issues*

When creating LIDO records the implementer will have to make some decision of a general nature:

7.3.1   *Language(s) of the record and elements*

It is **mandatory** that the language is set, in two places in a LIDO record (xml:lang attribute of the <descriptiveMetadata> and <administrativeMetadata>), by using a standard ISO code for the language.

The organisation must have knowledge of the correct code for the language(s) they are intending to use in their LIDO records. They must also know where the codes are held in their collections management system, if at all, in order to facilitate the creation of LIDO records. If they do not have the code in their CMS then they must have a method placing it when they creating the LIDO record.

If the organisation wishes to have more than one language for their metadata in LIDO records they:

- Should be aware of how multilingual records will be supported by the target portal;

- Must be able to record multilingual metadata in their collections management system (in some way, e.g. by different field names or by parameter for a field), in order to facilitate the creation of the LIDO record.

They should also decide on which of the two ways of representing multilingual metadata they will implement:

- Setting 'global' xml:lang attributes only but having multiple <descriptiveMetadata> and <administrativeMetadata> elements for different fully multilingual records;

- Setting xml:lang attributes for individual sub-elements.

7.3.2   *Display and indexing elements*

If the organisation wishes to give display elements in their LIDO records they:

- Should be aware how display elements will be supported by the target portal, particularly together with the indexing elements;

- Must be able to record display information in their collections management system (in some way, e.g. by different field names or by flag for a field), in order to facilitate the creation of the LIDO record;

- May be compelled to give only display elements if their collections management is not of sufficient granularity to support indexing elements.

7.3.3   *Repeatable elements (not for language)*

If the organisation wishes to repeat elements in their LIDO records they:

- Should be aware how repeated elements will be supported by the target portal, particularly their ordering;

- Must be able to record repeating fields in their collections management system (in some way, e.g. by different field names or by a parameter for a field), in order to facilitate the creation of the LIDO record.

7.3.4   *Ordering of repeatable elements*

If the organisation wishes to give an order to some of their metadata in LIDO records they:
- Should be aware if their order will be supported by the target portal;

- Must be able to record that order in their collections management system (in some way, e.g. by different field names or by parameter for a field), in order to facilitate the creation of the LIDO record.

7.3.5   *Preference of repeatable elements*

If the organisation wishes to give preference to some of their metadata in LIDO records they:
- Should be aware if their preference will be supported by the target portal;

- Must be able to record that preference in their collections management system (in some way, e.g. by different field names or by flag for a field), in order to facilitate the creation of the LIDO record.

7.3.6   *Events*

An item and its parts, where relevant, can be associated with many events, during:

- Its bringing into being;
- After that but before it became part of an organisation;
- After it became part of an organisation.

The exact types of event associated with an item are dependent on the item itself and its historical context. Some information may be partial or entirely missing.

The organisation should be aware where *Event* information is held in its collections management system in order to facilitate the creation of the LIDO record.

7.4 Decisions on the richness of LIDO records

The richness of LIDO records can be at two levels:

7.4.1 Mandatory and recommended

Having mandatory elements only in a LIDO record will not be 'rich'. Therefore it is suggested that implementers also use, where possible, the recommended elements and information areas suggested by the *Partage Plus* and *AthenaPlus* projects. These elements and areas (with relevant sub-elements) are:

- Object work type [**mandatory**];
- Classification;
- Title [**mandatory**];
- Inscriptions;
- Repository;
- Description;
- Measurements;
- Event – Production and other relevant events;
- Subject;
- Related items;
- Record ID [**mandatory**];
- Record type [**mandatory**];
- Record source [**mandatory**];
- Record metadata – Links;
- Resource representation – Links;

7.4.2 Optional

In addition to the mandatory and recommended element above an implementer can choose to have other elements in their LIDO records. The reasons for choice can be:

- The nature of the items being described;
- The availability of data in the organisation's collections management system;
- The requirements of the target portal.