



Grant Agreement 297384

Partage Plus

Metadata production and delivery plan, and report on aggregation set up

Deliverable number	<i>D2.2</i>
Dissemination level	<i>PU</i>
Delivery date	<i>May 2012</i>
Status	<i>Final</i>
Author(s)	<i>Nikolaos Simou (NTUA), Katie Smith (CT) and Gordon McKenna (CT)</i>



This project is funded under the
ICT Policy Support Programme part of the
Competitiveness and Innovation Framework Programme.

Revision History

Revision	Date	Author	Organisation	Description
0.1	18/06/2012	Nikolaos Simou	NTUA	First Draft
0.2	25/06/2012	Nikolaos Simou	NTUA	Updated with the survey results
0.3	04/07/2012	Nikolaos Simou	NTUA	Updated Draft
0.4	18/07/2012	Gordon McKenna	CT	First Review
0.5	09/10/2012	Nikolaos Simou	NTUA	Updated Draft
1.0	15/10/2012	Katie Smith	CT	Final Version

Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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1 Executive summary

The main objective of this deliverable is to define the metadata production and delivery plan for the Partage Plus project. Partage Plus intends to create an access point to information and digital content, through Europeana, on the European cultural heritage of the Art Nouveau period. The metadata that will be produced within Partage Plus will conform to the Lightweight Information Describing Objects (LIDO) schema that is able to represent rich information. For that purpose, and also for delivering content to Europeana, the content providers may have to modify their internal information technology (IT) systems and working practices (e.g. transforming their in-house metadata to LIDO).

In this deliverable all the possible scenarios and difficulties that may arise during the production and delivery of metadata to Europeana are presented together with the practices and solutions that best fit to each provider needs. In addition the metadata production and delivery plan is presented for providers according to their current status and to special in-house requirements.

2 Introduction

The main objective of this deliverable is to define the metadata production and delivery plan for the Partage Plus project. The metadata that will be produced within Partage Plus will conform to the Lightweight Information Describing Objects (LIDO) schema [1] that is able to represent rich information. LIDO was developed during the ATHENA project¹, was used there, and also by other Europeana Group projects. Therefore it has been tested in the context of Europeana, and it can be guaranteed that it will be compliant with the metadata standards used by Europeana – ESE (Europeana Semantic Elements) [2] and EDM (Europeana Data Model) [3, 4].

However for conformity with LIDO and also for delivering material to Europeana, Partage Plus content providers may have to modify their internal information technology (IT) systems and working practices (e.g. transforming their in-house metadata to LIDO). In addition, they will also have to plan and make arrangements with their designated aggregator for supplying material to them, and then on to Europeana. During this process the content providers will be assisted by the use of the *Partage Plus Metadata Test System*². By using this tool they will be able to create mappings of their own metadata to LIDO. It is very important to mention at this point that although this system can act as a 'dark aggregator' it is not the intention to Partage Plus to use this system for that purpose, since its aim is to deliver material to Europeana through existing aggregators.

Another very important requirement set for the Partage Plus project is the creation of rich metadata that will be enriched by the use of vocabularies. In detail the main objective of Work Package (WP) 3 is the creation of Art Nouveau vocabularies and authorities. These vocabularies will be included in the metadata through the use of the metadata test platform or directly by the providers' IT systems and in that way consistency of Art Nouveau nomenclature within a multilingual environment, such as the Europeana portal, will be ensured.

For the definition of a metadata production and delivery plan according to the content providers' needs we first carefully examined the practices they use. This is a very challenging task due to the diversity of systems and metadata caused by the content providers' number and therefore for doing this examination we have created a survey. The rest of the document is organised as follows:

- The survey;
- The metadata production and delivery plan;
- Conclusions.

¹ <http://www.athenaeurope.org/> ATHENA (ECP-2007-DILI-517005), Access to cultural heritage networks across Europe

² For more information about this see deliverable D2.1 – *Partage Plus metadata test system*.

3 Metadata survey

The survey was created by using our experience from other Europeana feeder projects, which we were involved in, and having in mind the diversity of systems and metadata that we have to deal with. We aimed at the creation of a simple, in terms of the background knowledge required for filling it, but rich, in terms of information collected, questionnaire. It consisted of:

- **Metadata details** – The amount and the type of metadata.
- **Controlled vocabularies** – The type of vocabularies, if any, used in the metadata.
- **Delivery of metadata and content** – The formats that the content providers' metadata can be exported
- **Aggregation platforms and their requirements** – The aggregation platforms that the providers will use for delivering their metadata to Europeana together with their requirements.

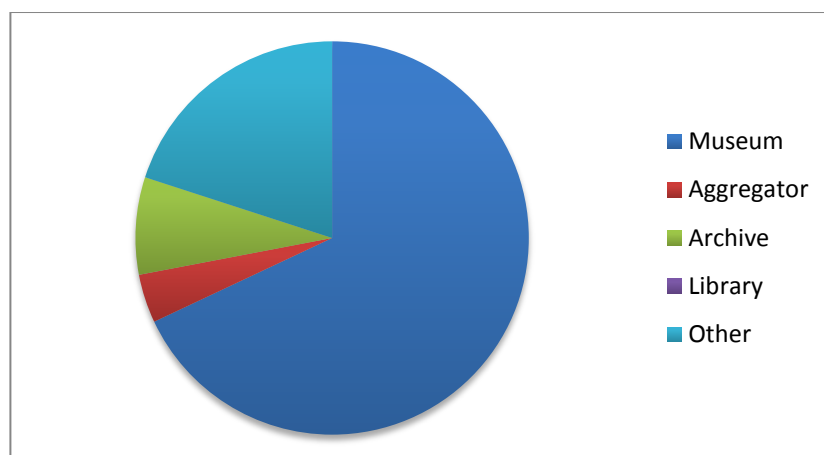
The following table illustrates the content providers that have filled the questionnaire together with the type of their institution:

Table 1: The content providers and their institution type

Name of Partner	Short Name	Institution Type
Mak - Osterreichisches Museum Fur Angewandte Kunst / Gegenwartskunst	MAK	Museum
Philipps Universitaet Marburg - NN	UNIMAR – NN	Other - not yet fixed
Philipps Universitaet Marburg - Broehan-Museum Berlin	UNIMAR -BMB	Museum
Philipps Universitaet Marburg - Institut Mathildenhöhe Darmstadt	UNIMAR - IMD	Museum
Istituto Centrale Per Il Catalogo Unico Delle Biblioteche Italiane E Per Le Informazioni Bibliografiche - Galleria Nazionale d'Arte Moderna / Museo Andersen	ICCU - MA	Museum
Istituto Centrale Per Il Catalogo Unico Delle Biblioteche Italiane E Per Le Informazioni Bibliografiche - Archivio delle arti applicate del XX secolo	ICCU - ADAADS	Archive
Philipps Universitaet Marburg - Bildarchiv Foto Marburg	UNIMAR - BFM	Archive
Museu Nacional D'art De Catalunya	MNAC	Museum
Koninklijke Musea Voor Kunst En Geschiedenis	KMKG	Museum
Koninklijk Instituut Voor Het Kunstpatrimonium	KIK	Other - Art Institute with Photographic Inventory
Rörstrand Museum	RorM	Museum
Museovirasto*National Board Of Antiquities	NBA	Museum
Muzej Za Umjetnost I Obrt	MUO	Museum
Goteborgs Kommun	GC	Museum
Umeleckoprumslove Museum V Praze	UPM	Museum
Muzeum Narodowe W Warszawie	MNW	Museum

Muzeum Wojciecha Weissa Fundacja	WWMF	Other - foundation
Stichting Drents Museum	DM	Museum
Stad Gent	DmG	Museum
Iparművészeti Múzeum	IMM	Museum
Collection Trust LGB	CT	Aggregator
Stiftelsen Kulturkvaralet	KK	Museum
Camara Municipal De Aveiro	MCA	Other - Municipality - manages the Aveiro City Museum
Urbanisticni Institut Republike Slovenije	UIRS	Other - Research institute
University of East Anglia	SCVA	Museum

Figure 1: Pie chart of institution types participating in Partage Plus



3.1 Metadata details

In this section we present the questions along with the providers' answers for the first part of the survey that is related to the providers' metadata. It includes questions about the size, type of metadata, and the standards the providers use.

3.1.1 Approximately how many digital metadata records do you have?

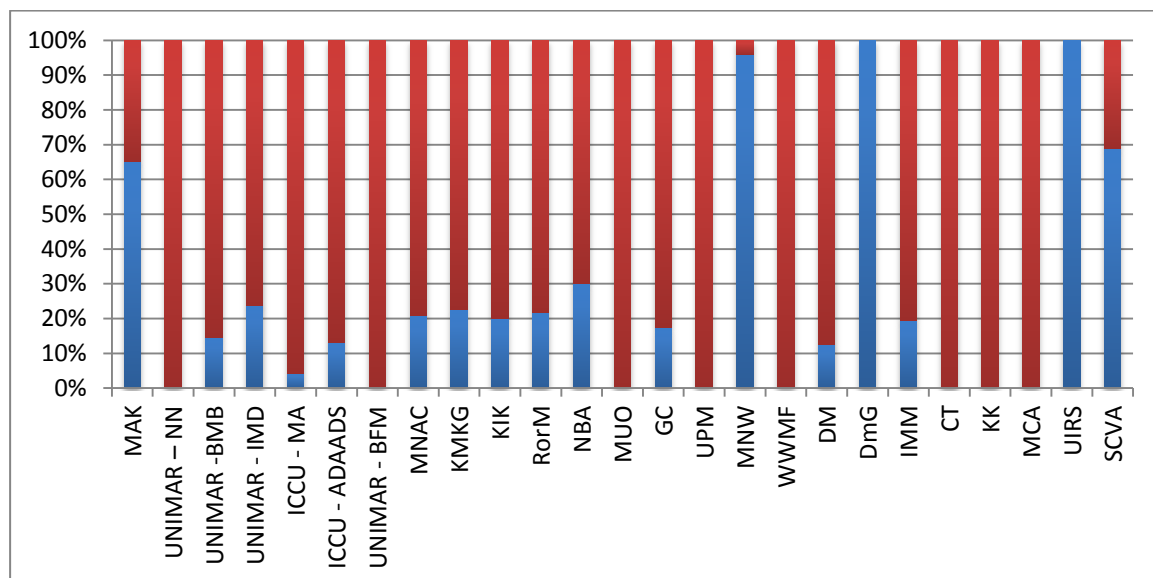
Table 2: Existing metadata records

Short Name	Number of existing metadata records	Number of records to be submitted to Europeana
MAK	3000	4600
UNIMAR – NN	0	3000
UNIMAR -BMB	220	1500
UNIMAR - IMD	750	3150
ICCU - MA	150	3500
ICCU - ADAADS	850	6500
UNIMAR - BFM	0	4500

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MNAC	420	2020
KMKG	1200	5300
KIK	300	1500
RorM	109	500
NBA	150	500
MUO	0	5025
GC	70	400
UPM	0	1000
MNW	4800	5000
WWMF	0	380
DM	250	2000
DmG	540	540
IMM	1200	6200
CT	0	5000
KK	0	3060
MCA	0	2930
UIRS	2000	2000
SCVA	200	290

Figure 2: Stacked chart of existing metadata and metadata that have to be created per provider

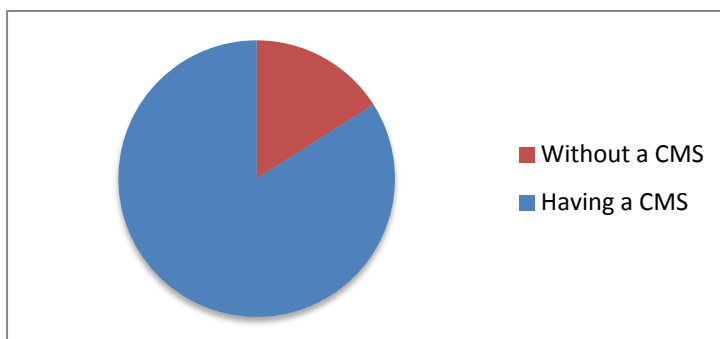


3.1.2 Are your metadata in a collection management system?

Table 3: Metadata management systems

Short Name	Management System
MAK	Adlib
UNIMAR – NN	No
UNIMAR -BMB	Yes
UNIMAR - IMD	MuseumPlus
ICCU - MA	Museo & Web
ICCU - ADAADS	Museo & Web
UNIMAR - BFM	APS Desktop
MNAC	Yes
KMKG	Museum Plus
KIK	Adlib
RorM	Carlotta 3.2
NBA	webMusketti
MUO	ArhivX
GC	Museum Plus
UPM	No
MNW	Yes
WWMF	Musnet Bialy
DM	Adlib
DmG	Adlib
IMM	Art-Lista
CT	No
KK	Primus
MCA	No
UIRS	No
SCVA	Adlib

Figure 3: Pie chart of the providers using a collection management system

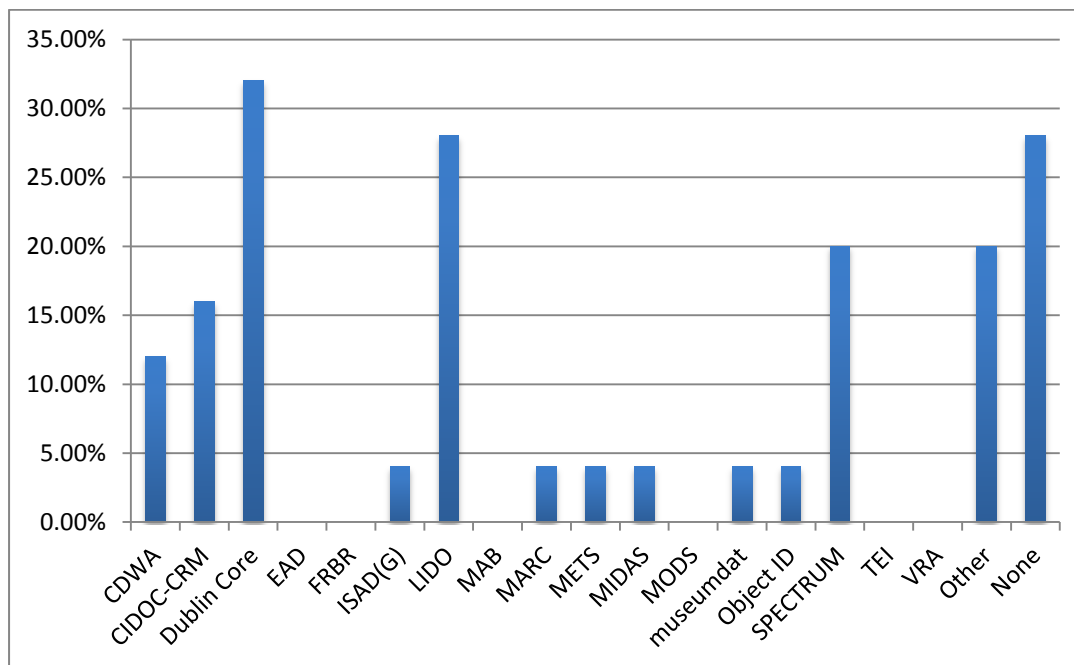


3.1.3 What standard metadata schema do you apply?

Table 4: Metadata standards used by providers

Short Name	Metadata Schema used
MAK	CIDOC-CRM,Dublin Core,LIDO,museumdat
UNIMAR – NN	None
UNIMAR -BMB	None
UNIMAR - IMD	None
ICCU - MA	National standard
ICCU - ADAADS	ISAD(G),METS,ISAAR(CPF) and in-house
UNIMAR - BFM	LIDO,MIDAS
MNAC	None
KMKG	CDWA.CIDOC-CRM,Dublin Core,LIDO,SPECTRUM
KIK	in-house
RorM	None
NBA	LIDO
MUO	CIDOC-CRM,Dublin Core,LIDO,MARC
GC	CDWA.CIDOC-CRM,Dublin Core,LIDO,SPECTRUM
UPM	access 97
MNW	None
WWMF	None
DM	Dublin Core, SPECTRUM
DmG	CIDOC-CRM, SPECTRUM
IMM	Dublin Core, LIDO, Object ID
CT	PND CAP
KK	Dublin Core
MCA	CDWA
UIRS	Dublin Core
SCVA	SPECTRUM, In house

Figure 4: Bar chart of metadata standards used in providers' collections



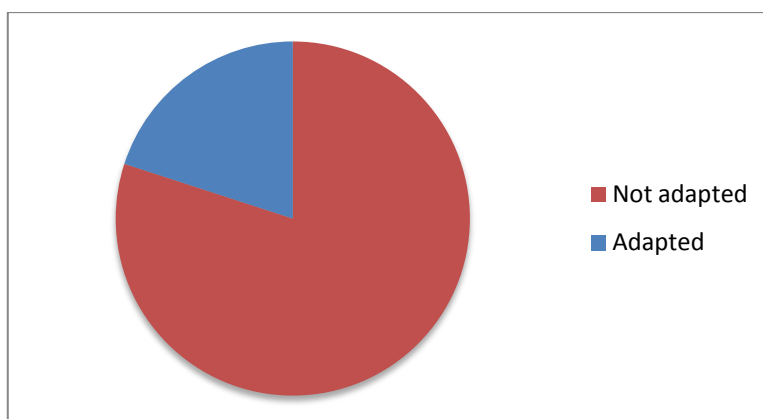
3.1.4 Did you adapt the standard?

Table 5: Adapted metadata standards

Short Name	Adapted metadata standard
MAK	Yes
UNIMAR – NN	No
UNIMAR -BMB	No
UNIMAR - IMD	No
ICCU - MA	Yes/Simplified
ICCU - ADAADS	Yes/Addition of new fields
UNIMAR - BFM	No
MNAC	No
KMKG	Yes/mash up
KIK	No
RorM	No
NBA	No
MUO	Yes/ArhivX collection management system has embedded standards.
GC	No
UPM	No
MNW	No
WWMF	No

DM	No
DmG	No
IMM	No
CT	No
KK	No
MCA	No
UIRS	No
SCVA	No

Figure 5: Pie chart of the providers that have adapted the metadata standard they use



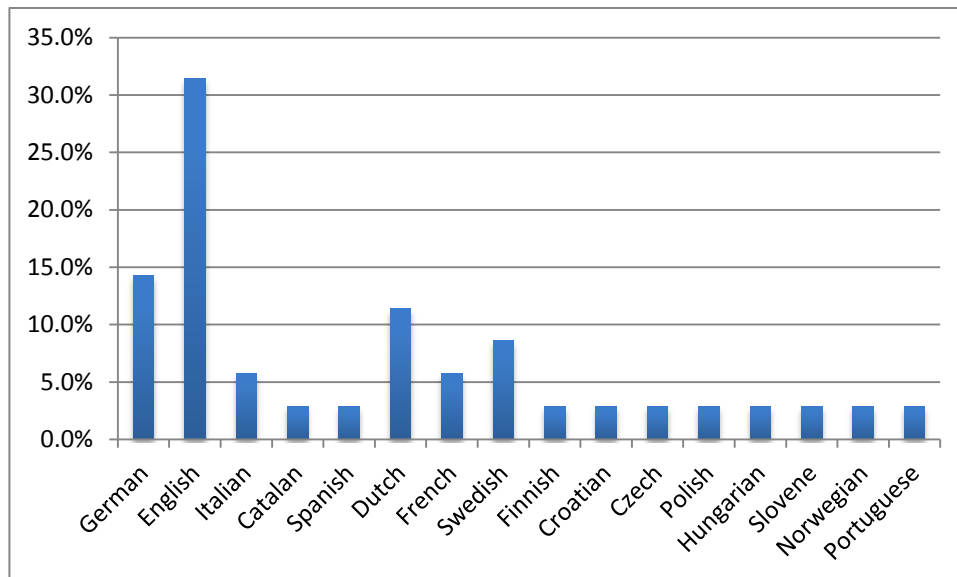
3.1.5 What language(s) are your metadata available in?

Table 6: Languages used in metadata

Short Name	What language(s) is your metadata available in?
MAK	German/English
UNIMAR – NN	German
UNIMAR -BMB	German
UNIMAR - IMD	German
ICCU - MA	Italian
ICCU - ADAADS	Italian
UNIMAR - BFM	German
MNAC	English, Catalan, Spanish
KMKG	French, Dutch, English
KIK	Dutch & French (but not 100% for the moment)
RorM	Swedish
NBA	Finnish, partly Swedish and English, minor parts also in other languages
MUO	Croatian, English

GC	Swedish and English
UPM	Czech
MNW	Polish
WWMF	English
DM	Dutch
DmG	Dutch
IMM	Hungarian; English (in progress)
CT	English
KK	Norwegian
MCA	Portuguese; English
UIRS	Slovene
SCVA	English

Figure 6: Bar chart of languages used in metadata



3.2 Controlled vocabularies

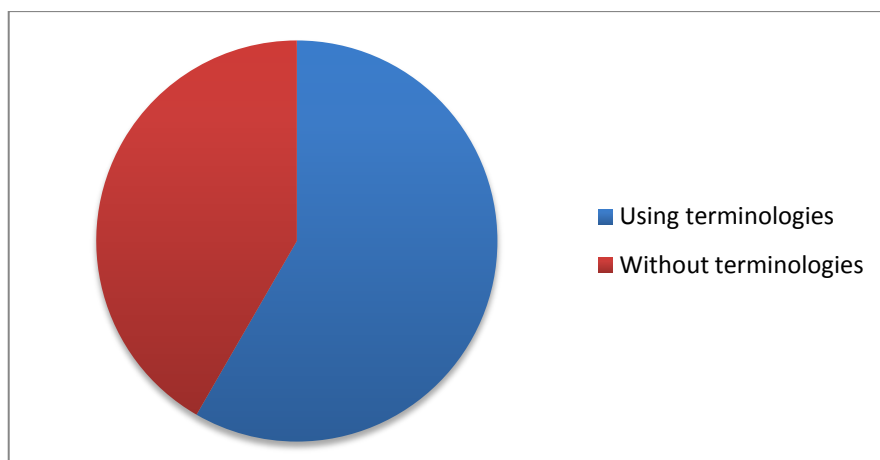
This section presents the second part of the survey that is related to the vocabularies, if any, used by the providers to control their metadata. This information is very important for the metadata creation and delivery plan because one important requirement of the project is the production of quality metadata. This will be achieved by the use of the vocabularies that will be implemented by WP3 and integrated in the providers' metadata through *Partage Plus Metadata Test System*, making in that way metadata easily accessible from the Europeana portal.

3.2.1 Do you use terminologies to control your data?

Table 7: Terminology usage for controlling collections

Short Name	Use of terminology
MAK	No
UNIMAR – NN	No
UNIMAR -BMB	No
UNIMAR - IMD	Yes
ICCU - MA	No
ICCU - ADAADS	No
UNIMAR - BFM	Yes
MNAC	Yes
KMKG	Yes
KIK	Yes
RorM	Yes
NBA	Yes
MUO	Yes
GC	Yes
UPM	No
MNW	No
WWMF	No
DM	Yes
DmG	Yes
IMM	Yes
CT	No
KK	No
MCA	Yes
UIRS	No
SCVA	Yes

Figure 7: Pie chart of providers that use terminologies for controlling their datasets



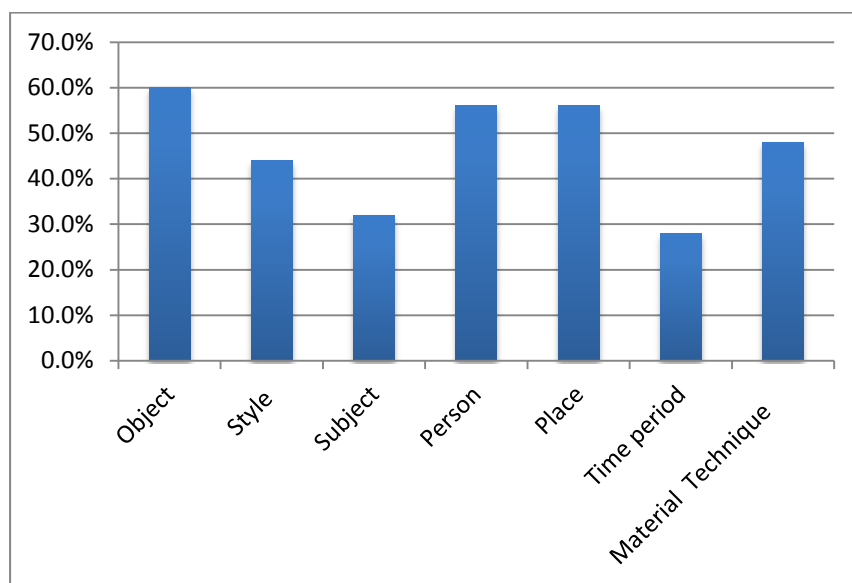
3.2.2 Do you use terminologies for Object, Style, Subject, Person, Place, Time, and Material?

Table 8: Usage of terminologies in specific metadata fields

Short Name	Object	Style (Artistic or Cultural)	Subject	Person	Place	Time period	Material Technique
MAK	No	No	No	No	No	No	No
UNIMAR – NN	No	No	No	No	No	No	No
UNIMAR -BMB	No	No	No	No	No	No	No
UNIMAR - IMD	Yes	Yes	Yes	Yes	Yes	No	Yes
ICCU - MA	Yes	No	No	Yes	Yes	No	Yes
ICCU - ADAADS	Yes	No	No	Yes	Yes	No	No
UNIMAR - BFM	Yes	No	Yes	Yes	Yes	No	Yes
MNAC	Yes	No	Yes	Yes	Yes	Yes	No
KMKG	Yes	No	No	No	Yes	No	Yes
KIK	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RorM	Yes	Yes	Yes	Yes	No	No	Yes
NBA	No	Yes	Yes	Yes	Yes	No	Yes
MUO	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GC	Yes	Yes	No	No	Yes	No	No
UPM	No	No	No	No	No	No	No
MNW	No	No	No	No	No	No	No
WWMF	No	No	No	No	No	No	No
DM	Yes	Yes	No	Yes	No	Yes	No
DmG	Yes	Yes	No	Yes	Yes	Yes	Yes
IMM	Yes	Yes	No	Yes	Yes	Yes	Yes
CT	No	No	No	No	No	No	No

KK	No	No	No	No	No	No	No
MCA	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NGCI	No	No	No	No	No	No	No
SCVA	Yes	Yes	No	Yes	Yes	No	Yes

Figure 8: Bar chart of terminology usage in specific metadata fields



3.3 Delivery of metadata and content

This section presents the third part of the survey that is related to the delivery of metadata and content to Europeana. In this part of the survey the existing online metadata and Digital Cultural Heritage Objects (DCHOs) are examined that are very important for the delivery of content to Europeana. In addition the supported metadata standards in which the providers can export their metadata together with the delivery protocols are examined.

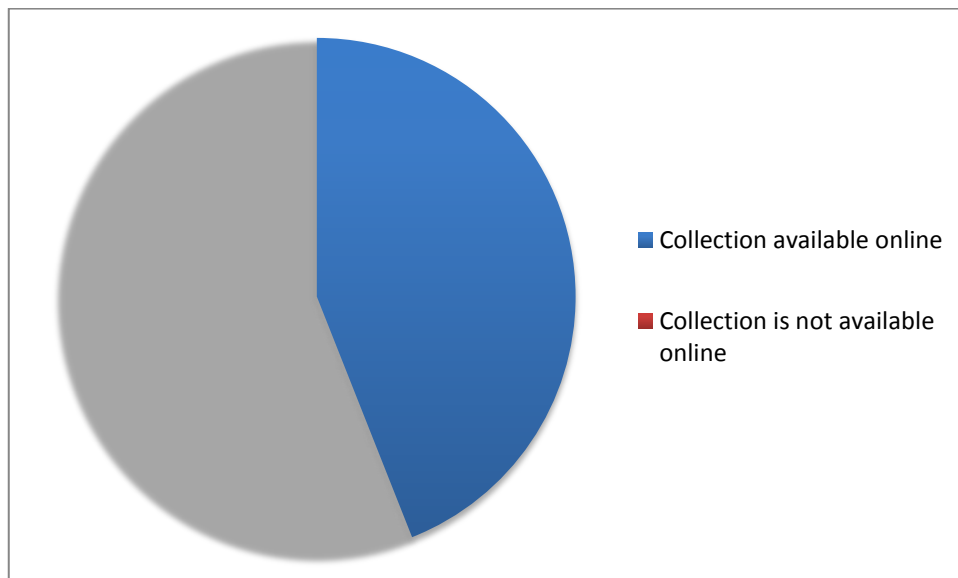
3.3.1 Is your collection currently available online?

Table 9: Collections available online

Short Name	Collection available online
MAK	Yes
UNIMAR – NN	No
UNIMAR -BMB	No
UNIMAR - IMD	No
ICCU - MA	Yes
ICCU - ADAADS	Yes
UNIMAR - BFM	No

MNAC	Yes
KMKG	Yes
KIK	Yes
RorM	No
NBA	No
MUO	No
GC	No
UPM	No
MNW	Yes
WWMF	No
DM	Yes
DmG	Yes
IMM	Yes
CT	No
KK	No
MCA	No
UIRS	No
SCVA	Yes

Figure 9: Pie chart of providers having their collections available online

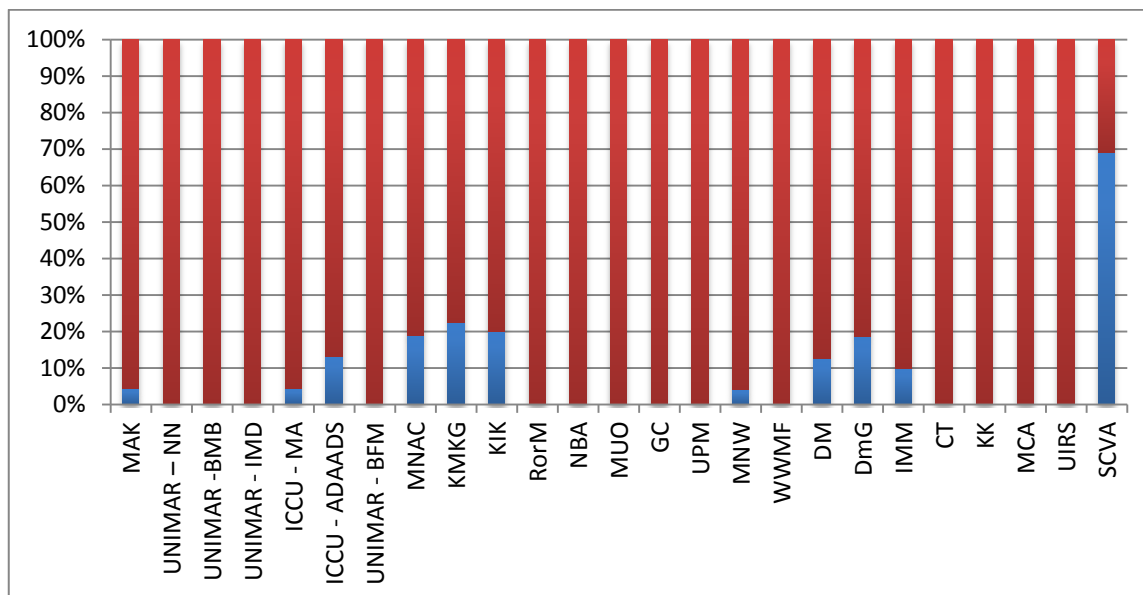


3.3.2 How many records are currently available online?

Table 10: Records currently available online

Short Name	How many records are currently available online?	Number of records to be submitted to Europeana
MAK	200	4600
UNIMAR – NN	0	3000
UNIMAR -BMB	0	1500
UNIMAR - IMD	0	3150
ICCU - MA	150	3500
ICCU - ADAADS	850	6500
UNIMAR - BFM	0	4500
MNAC	383	2020
KMKG	1195	5300
KIK	300	1500
RorM	0	500
NBA	0	500
MUO	0	5025
GC	0	400
UPM	0	1000
MNW	200	5000
WWMF	0	380
DM	250	2000
DmG	100	540
IMM	618	6200
CT	0	5000
KK	0	3060
MCA	0	2930
UIRS	0	2000
SCVA	200	290

Figure 10: Stacked chart of metadata currently available online per provider



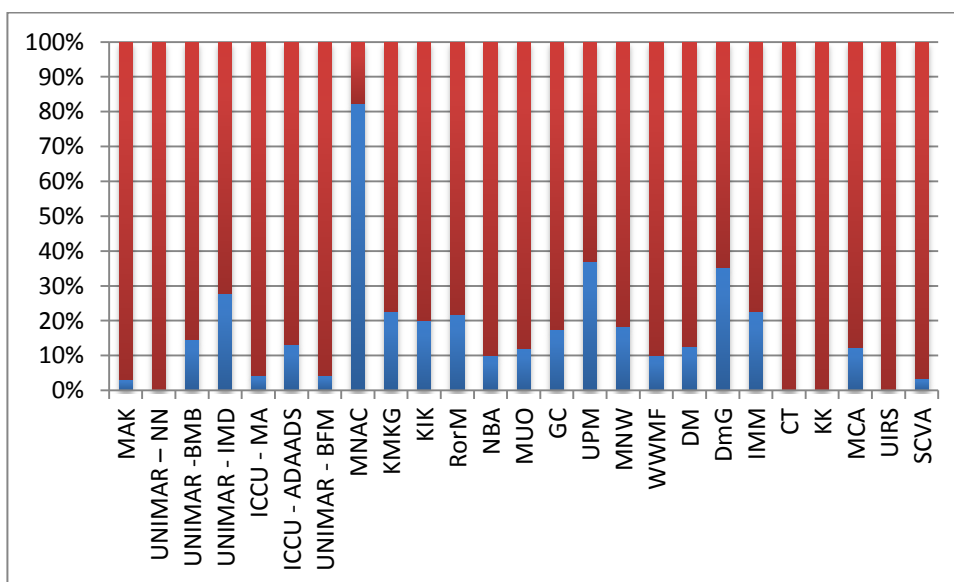
3.3.3 For how much of the content you have a digital representation?

Table 11: Existing Digital Cultural Heritage Objects

Short Name	Amount of existing digital cultural objects	Number of records to be submitted to Europeana
MAK	150	4600
UNIMAR – NN	0	3000
UNIMAR -BMB	220	1500
UNIMAR - IMD	880	3150
ICCU - MA	150	3500
ICCU - ADAADS	850	6500
UNIMAR - BFM	200	4500
MNAC	1664	2020
KMKG	1200	5300
KIK	300	1500
RorM	109	500
NBA	50	500
MUO	600	5025
GC	70	400
UPM	370	1000
MNW	913	5000
WWMF	38	380
DM	250	2000
DmG	190	540
IMM	1400	6200

CT	0	5000
KK	0	3060
MCA	363	2930
UIRS	0	2000
SCVA	10	290

Figure 11: Stacked chart of existing DCHOs per provider



3.3.4 How many of the Digital Cultural Heritage Objects are available online?

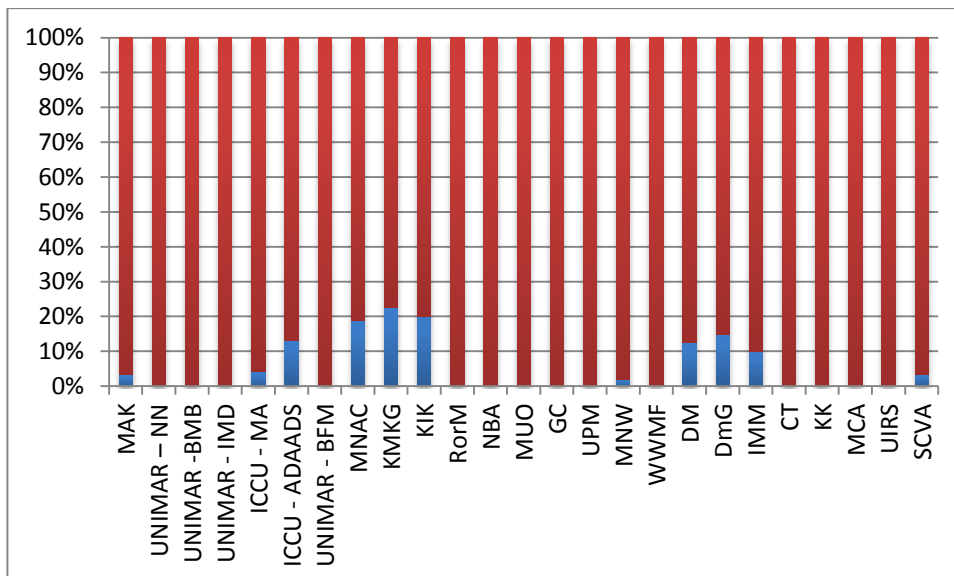
Table 12: Digital Cultural Heritage Objects available online

Short Name	Amount of existing digital cultural objects	Number of records to be submitted to Europeana
MAK	150	4600
UNIMAR – NN	0	3000
UNIMAR -BMB	0	1500
UNIMAR - IMD	0	3150
ICCU - MA	150	3500
ICCU - ADAADS	850	6500
UNIMAR - BFM	0	4500
MNAC	383	2020
KMKG	1195	5300
KIK	300	1500
RorM	0	500
NBA	0	500
MUO	0	5025
GC	0	400

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UPM	0	1000
MNW	100	5000
WWMF	0	380
DM	250	2000
DmG	80	540
IMM	618	6200
CT	0	5000
KK	0	3060
MCA	0	2930
UIRS	0	2000
SCVA	10	290

Figure 12: Stacked chart of DCHOs available online per provider

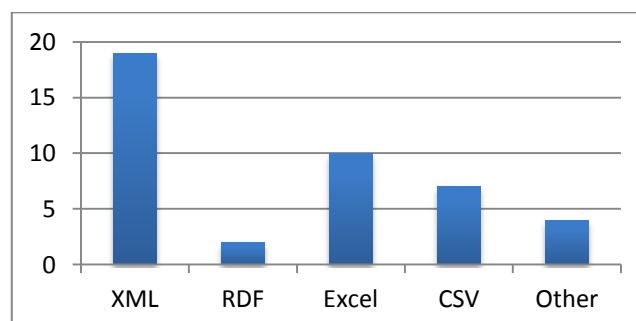


3.3.5 In what format(s) can you deliver your metadata?

Table 13: Formats that the metadata can be delivered

Short Name	Metadata Formats
MAK	XML, Excel, CSV
UNIMAR - NN	XML
UNIMAR -BMB	XML
UNIMAR - IMD	XML
ICCU - MA	XML, Excel
ICCU - ADAADS	XML
UNIMAR - BFM	XML
MNAC	Excel, CSV
KMKG	XML
KIK	XML, CSV
RorM	Other
NBA	XML
MUO	XML, RDF, Excel, CSV
GC	XML, RDF, Excel
UPM	Excel, Other
MNW	Other
WWMF	XML
DM	XML, Excel, CSV
DmG	XML, CSV
IMM	Excel
CT	XML
KK	XML
MCA	Excel
UIRS	XML
SCVA	XML, Excel, CSV

Figure 13: Bar chart of formats used by providers for the delivery of their metadata

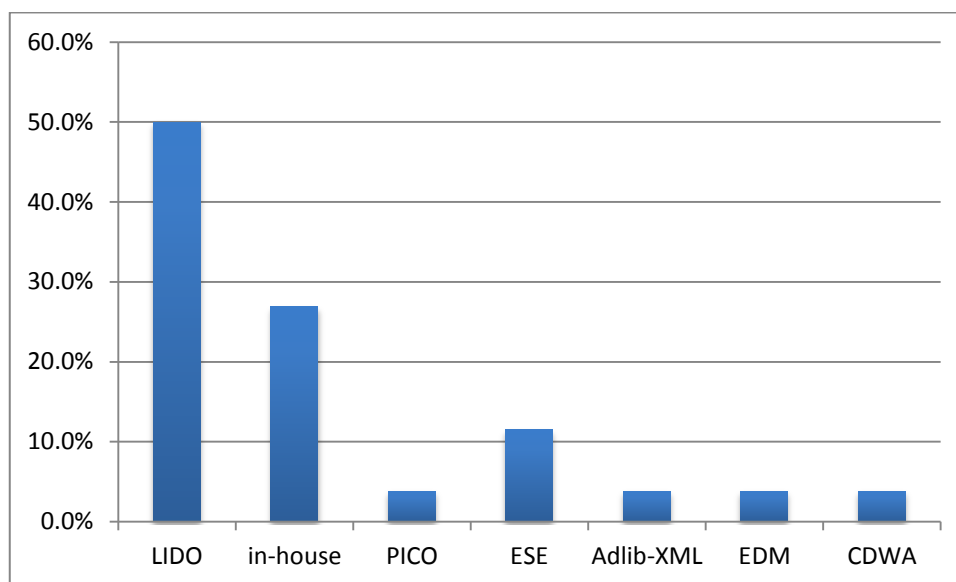


3.3.6 In what metadata standard structure can you deliver your metadata?

Table 14: Metadata standards used for the delivery of metadata

Short Name	Metadata Standards
MAK	LIDO, In-house
UNIMAR – NN	LIDO
UNIMAR -BMB	LIDO
UNIMAR - IMD	LIDO
ICCU - MA	LIDO through Mint / PICO through CulturalItalia
ICCU - ADAADS	PICO
UNIMAR - BFM	LIDO
MNAC	In-house
KMKG	LIDO
KIK	LIDO, ESE, Adlib-XML
RorM	EDM
NBA	LIDO
MUO	LIDO
GC	ESE, EDM, Lido
UPM	in-house
MNW	in-house
WWMF	in-house
DM	I think we can try to deliver our data in whatever structure preferred by Partage Plus.
DmG	in-house
IMM	LIDO
CT	PNDCAP
KK	ESE
MCA	CDWA
UIRS	LIDO
SCVA	In House

Figure 14: Bar chart of metadata standards in which providers can deliver metadata



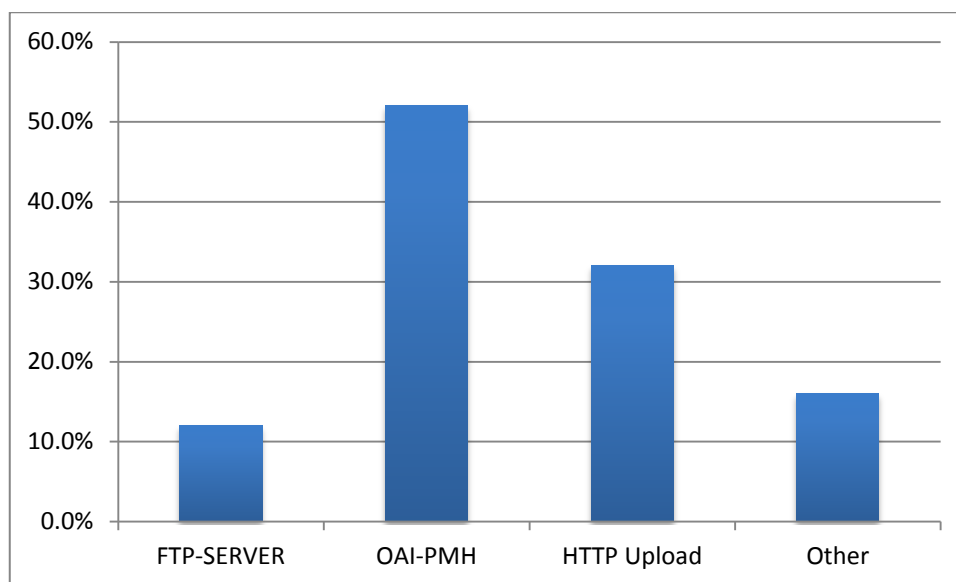
3.3.7 In what way you can deliver your metadata?

Table 15: Metadata delivery protocols per provider

Short Name	Metadata Delivery Protocol
MAK	FTP-SERVER
UNIMAR – NN	OAI-PMH
UNIMAR -BMB	OAI-PMH
UNIMAR - IMD	OAI-PMH
ICCU - MA	OAI-PMH
ICCU - ADAADS	OAI-PMH; HTTP Upload
UNIMAR - BFM	OAI-PMH
MNAC	Other; Unknown right now, but HTTP probably
KMKG	OAI-PMH
KIK	HTTP Upload
RorM	OAI-PMH
NBA	OAI-PMH
MUO	FTP-SERVER; OAI-PMH; HTTP Upload
GC	HTTP Upload
UPM	HTTP Upload
MNW	Other
WWMF	Other
DM	Other

DmG	HTTP Upload
IMM	OAI-PMH
CT	OAI-PMH
KK	OAI-PMH
MCA	HTTP Upload
UIRS	HTTP Upload
SCVA	FTP-SERVER

Figure 15: Bar chart of protocols in which providers can deliver metadata



3.4 Aggregation Platforms and their requirements

This section presents the last part of the survey that is related to the Europeana aggregation platforms and their requirements. The objective of this part is the examination of the technical specifications of providers' national aggregators for ensuring that the content can be delivered to Europeana without any technical difficulties.

3.4.1 Do you know your national aggregator?

Table 16: National aggregators

Short Name	National Aggregator
MAK	CSC Austria
UNIMAR – NN	Deutsche Digitale Bibliothek
UNIMAR -BMB	Deutsche Digitale Bibliothek
UNIMAR - IMD	Deutsche Digitale Bibliothek
ICCU - MA	Culturalitalia
ICCU - ADAADS	Culturalitalia
UNIMAR - BFM	Deutsche Digitale Bibliothek

MNAC	HISPANA (ignoring us) / We'll check CALAIX or MDC (Catalan aggregators)
KMKG	Unknown - Initially it was KMKG
KIK	We deliver our items directly to Europeana (signed agreement)
RorM	Riksantikvarieämbetet (www.raa.se) Swedish national heritage board
NBA	The National Library of Finland
MUO	www.kultura.hr
GC	SOCH, Swedish Open Cultural Heritage
UPM	Athena
MNW	Poznańskie Centrum Superkomputerowo-Sieciowe (PCSS)
WWMF	Poznan Supercomputing and Networking Center
DM	We are negotiating with Rijksdienst voor het Cultureel Erfgoed
DmG	Unknown - Initially it was KMKG
IMM	National Digital Data Archive (Nemzeti Digitalis Adattár)
CT	Culture Grid
KK	Norsk kulturråd
MCA	Unknown
UIRS	NUK
SCVA	Culture Grid

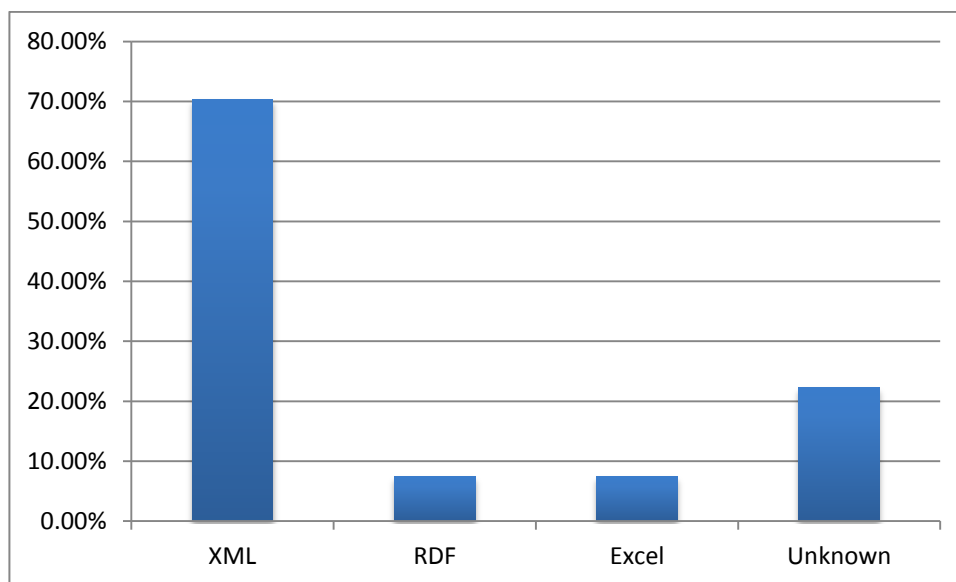
3.4.2 In what format your national aggregator accepts metadata?

Table 17: Aggregators' accepted metadata formats per provider

Short Name	Aggregator Accepted Metadata Formats
MAK	XML
UNIMAR – NN	XML
UNIMAR -BMB	XML
UNIMAR - IMD	XML
ICCU - MA	XML
ICCU - ADAADS	XML
UNIMAR - BFM	XML
MNAC	XML, Excel
KMKG	Unknown
KIK	XML
RorM	XML

NBA	XML
MUO	XML, RDF
GC	XML, RDF, Excel
UPM	XML
MNW	XML
WWMF	XML
DM	Unknown
DmG	Unknown
IMM	Unknown
CT	XML
KK	XML
MCA	Unknown
UIRS	Unknown
SCVA	XML

Figure 16: Bar chart of aggregators' accepted formats



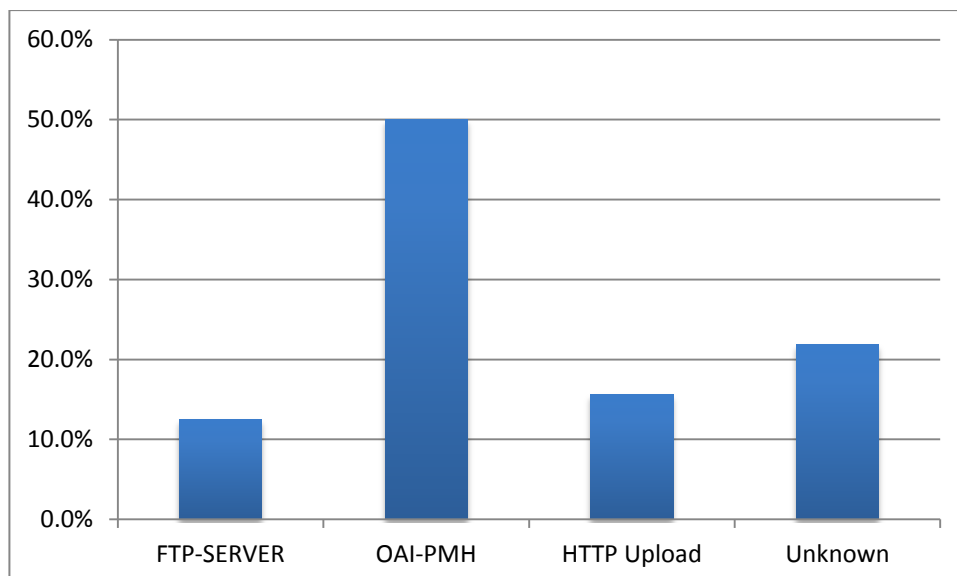
3.4.3 What metadata protocol does your national aggregator support?

Table 18: Aggregators' protocols for accepting metadata per provider

Short Name	Aggregator's Supported Protocols
MAK	OAI-PMH
UNIMAR – NN	FTP-SERVER, OAI-PMH
UNIMAR -BMB	FTP-SERVER, OAI-PMH
UNIMAR - IMD	FTP-SERVER, OAI-PMH
ICCU - MA	OAI-PMH

ICCU - ADAADS	OAI-PMH
UNIMAR - BFM	FTP-SERVER, OAI-PMH
MNAC	Unknown
KMKG	Unknown
KIK	HTTP Upload
RorM	OAI-PMH
NBA	OAI-PMH
MUO	OAI-PMH
GC	HTTP Upload
UPM	HTTP Upload, OAI-PMH
MNW	OAI-PMH
WWMF	OAI-PMH
DM	Unknown
DmG	Unknown
IMM	Unknown
CT	HTTP Upload, OAI-PMH
KK	OAI-PMH
MCA	Unknown
UIRS	Unknown
SCVA	HTTP Upload, OAI-PMH

Figure 17: Bar chart of aggregators' protocols for accepting metadata

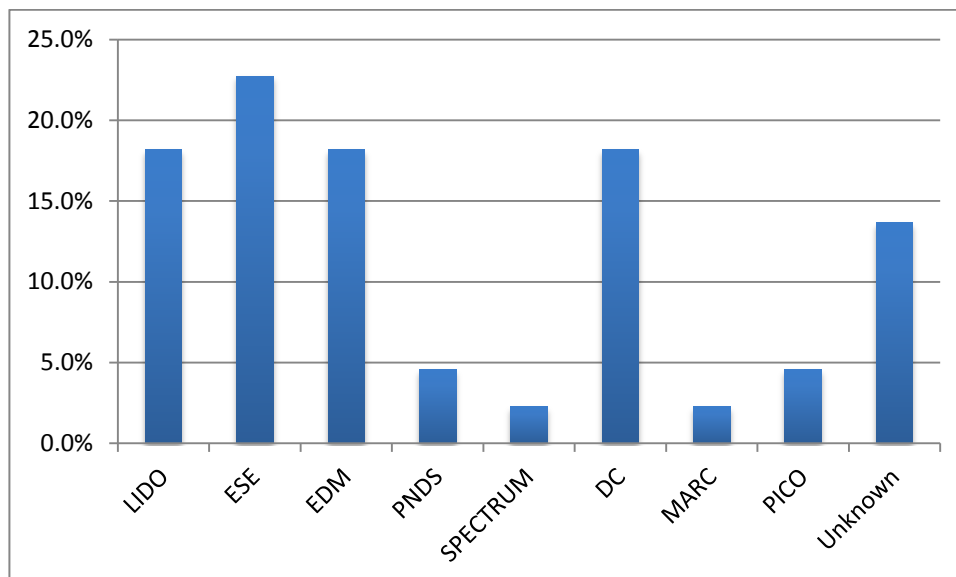


3.4.4 What metadata standards are supported by your national aggregator?

Table 19: Aggregators' supported standards per provider

Short Name	Supported metadata standard
MAK	Dublin Core, MARC and many others. LIDO not yet, but our aggregator is interested in supporting it.
UNIMAR – NN	LIDO, ESE, EDM
UNIMAR -BMB	LIDO, ESE, EDM
UNIMAR - IMD	LIDO, ESE, EDM
ICCU - MA	DC,PICO
ICCU - ADAADS	DC,PICO
UNIMAR - BFM	LIDO, ESE, EDM
MNAC	LIDO
KMKG	Unknown
KIK	ESE,EDM
RorM	ESE
NBA	LIDO
MUO	LIDO, ESE, EDM, DC
GC	LIDO , SPECTRUM, DUBLIN CORE
UPM	ESE
MNW	ESE, EDM, DC
WWMF	ESE, EDM, DC
DM	Unknown
DmG	Unknown
IMM	Unknown
CT	PNDS
KK	DC
MCA	Unknown
UIRS	Unknown
SCVA	PNDS

Figure 18: Bar chart of aggregators' supported standards



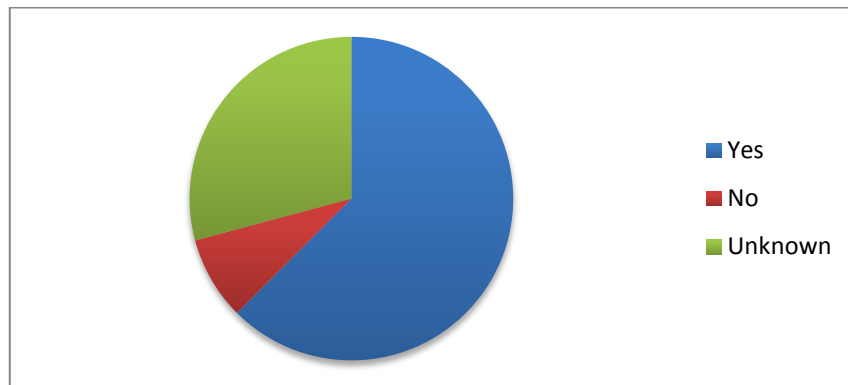
3.4.5 Does your aggregator support mappings from existing metadata standards?

Table 20: Aggregators' support for mappings

Short Name	Mappings Support
MAK	Yes
UNIMAR - NN	Yes
UNIMAR -BMB	Yes
UNIMAR - IMD	Yes
ICCU - MA	Yes
ICCU - ADAADS	Yes
UNIMAR - BFM	Yes
MNAC	Unknown
KMKG	Unknown
KIK	No
RorM	No
NBA	Yes
MUO	Yes
GC	Yes
UPM	Yes
MNW	Yes
WWMF	Yes
DM	Unknown
DmG	Unknown
IMM	Unknown

CT	Yes
KK	Yes
MCA	Unknown
UIRS	Unknown
SCVA	Yes

Figure 19: Pie chart of aggregators' support for mappings to metadata standards



4 Metadata production and delivery plan

In this section the metadata production and delivery to Europeana plan is presented. More specifically different variations are proposed each of them fitting the needs of each content provider.

4.1 Amount of metadata

A very important requirement of the Partage Plus project includes the delivery of a specific amount of content by each provider. This amount is shown in *Table 2* together with the amount of metadata that each content provider currently holds, while the following bar chart illustrates the content contribution by each provider in the project.

Figure 20: Content contribution per provider in Partage Plus

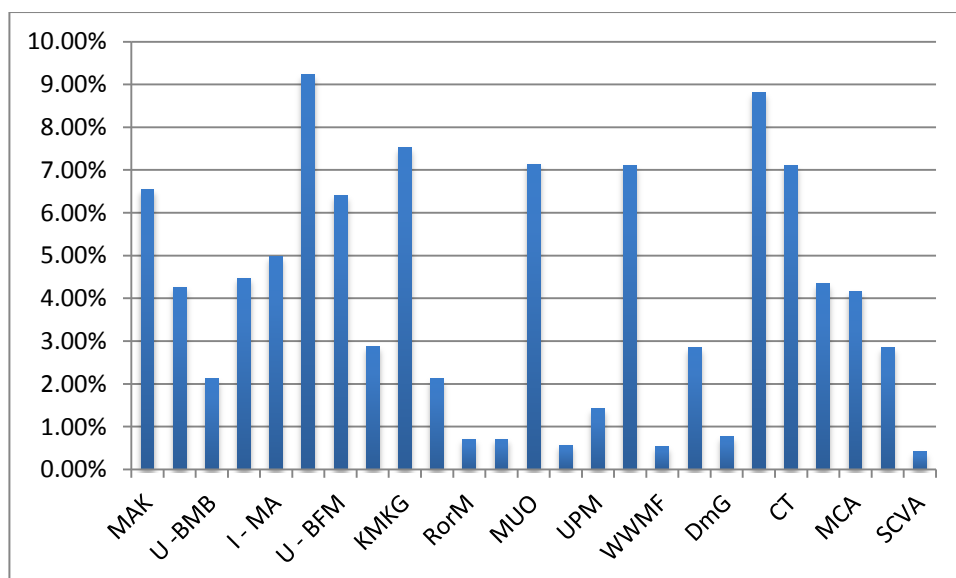


Figure 20 identifies the importance of each provider while from Figure 2 the following cases occur:

- The provider has the amount of metadata that has been agreed.
- The provider does not currently have the amount of the metadata that has been agreed.

Only few of the Partage Plus content providers fall short in the first case (UIRS, MNW) and no further action is required for the creation of metadata. On the other hand the majority of the providers need to create metadata for part of or all their records. For this process we suggest to the providers the use of their management system or if this does not support metadata creation then the use of a metadata annotator³ is proposed.

4.2 Metadata management systems, export formats and delivery protocols

Most of the content providers use a metadata management system for their metadata (Table 3, Figure 3). The use of a management system for storing the metadata is not mandatory since this task can be also performed by a database. What is important though is the various export formats supported by the management system or the database. This information is illustrated in Table 13 and also in Figure 13. The import formats supported by the Partage Plus Metadata Test Platform are XML files, CSV files and compressed zip files that include XML. Most the providers can support these files either directly or by exporting their Excel files to CSV.

Some of the providers (RorM, MNW) that use an internal export format will have to transform their metadata to one of the aforementioned formats. In that way they will be able to import their metadata to the Metadata Test Platform for transforming them to LIDO and enriching them with the developed vocabularies.

Another very important constraint for the use of the Metadata Test Platform is the delivery protocols that are illustrated in Table 15 and Figure 15. Metadata Test platform supports the OAI-PMH, FTP, and HTTP upload that are the cases for the majority of the content providers. The providers that have selected other will have to export their metadata via a hard disk using the protocol supported and then to import them to the Metadata Test Platform for transformation and enrichment by using HTTP upload.

4.3 Metadata standards

The metadata transformation process from the providers' in house metadata to the Partage Plus Schema (i.e. LIDO) is very important for the creation of rich and meaningful metadata. Due to the diversity of content types and of metadata schemas used to annotate the content, interoperability plays a key role that has been identified and treated as a key issue during the last five years.

The main approach to interoperability of cultural content metadata has been the usage of well-known standards in the specific museum, archive and library sectors (Dublin Core, CIDOC CRM [5,6], LIDO [1], EAD [7], METS [8]) and their mapping to a common data model used - at the Europeana level: European Semantic Element (ESE) [2], European Data Model (EDM) [3,4]- to provide unified access to the centrally accessed, distributed all over Europe, cultural content. However, the above procedure is not trivial, since the heterogeneity and uniqueness of the cultural content has led to metadata descriptions that differ a lot from a syntactic (based on technologies used for the representation) as well as a semantic (based on the meaning of the information provided) point of view.

The survey we made has shown that the majority of the Partage Plus content providers use at least one metadata schema for their collections (Table 4,

³ <http://www.metadataetc.org/metadatabasics/creation.htm>

Figure 4). In addition some of them have also adapted the schemas they use in order to better fit their needs (Table 5,

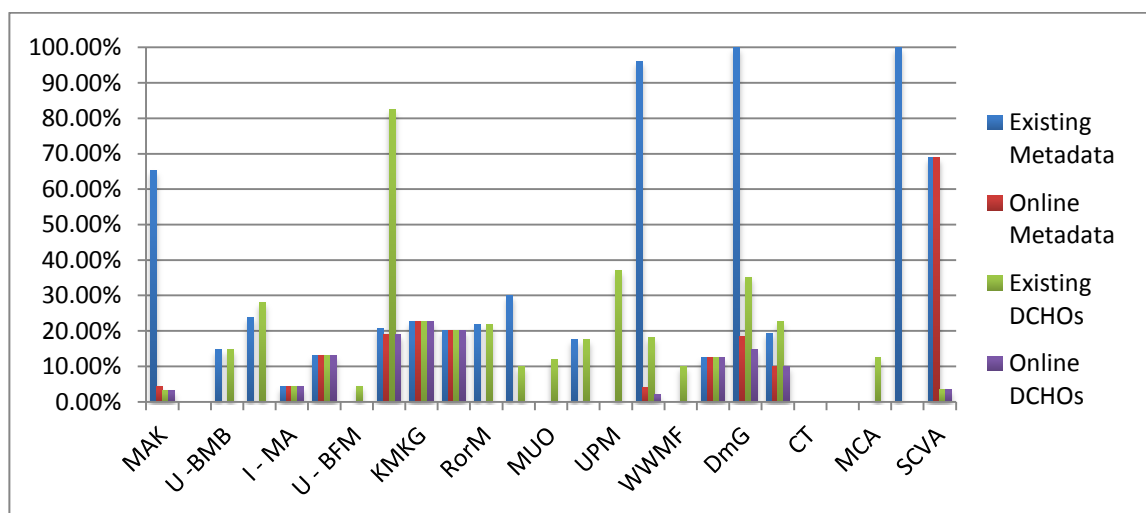
Figure 5). In order to ensure a correct transformation in terms of semantic and syntactic interoperability providers are encouraged to use the guidelines that will be published by the leaders of the WP3 and WP5 that have been involved in the creation of LIDO. Furthermore the WP2 leader in cooperation with WP3 and WP5 will organize training sessions that will guide the providers during the mapping process according to the Partage Plus requirements. We must note at this point that our recommendation for the providers that use LIDO for their metadata in their in house systems is to also use the Partage Plus Metadata Test Platform for integrating the vocabularies developed in WP3.

4.4 Collections available online

The online availability of providers' metadata and DCHOs is necessary since it is among the main requirements of Europeana. More specifically, for each item that appears in the Europeana portal a digital representation is illustrated and also a link to the providers' portal is given. In that way it is possible for someone exploring items in Europeana not only to view the fields required by ESE or EDM standards that are illustrated at Europeana's portal, but also to visit the provider's website for a complete reference – in terms of description and metadata - of the specific item.

The following figure illustrates the percentage of existing metadata and DCHOs, as well as their online availability per provider.

Figure 21: Bar chart of existing metadata and DCHOs along with their online availability



As it can be observed, most of the providers have to work on the online publication of metadata and DCHOs since the progress of this process have to be in parallel with the metadata creation (WP2) and digitization (WP1). During this stage, the providers are advised to consult the MINERVA quality principles⁴ for cultural websites as well as the MINERVA technical guidelines⁵. In addition, the assignment of persistent URIs to both DCHOs and metadata is highly recommended.

⁴ <http://www.minervaeurope.org/gau/qualityprinciples.htm>

4.5 Metadata vocabularies

The use of vocabularies in the metadata is very important since it makes their management much easier and it also increases their searchability. The majority of the content providers currently use in house vocabularies for the annotation and indexing of specific fields of their metadata as it can be observed in *Table 7*, *Figure 7*, *Table 8* and

Figure 8. Furthermore due to the large number of providers coming from different countries many different languages are used in the metadata (see *Table 6* and *Figure 6*).

For that purpose WP3, led by UNIMAR, will create Art Nouveau vocabularies and authorities. This will also ensure consistency of Art Nouveau nomenclature within a multilingual environment such as the Europeana portal. The aim is to strictly limit the scope of the resources created in size, but to increase their interoperability and usefulness to Europeana by having them available in all the languages of the content providers in project: Catalan; Croatian; Czech; Dutch; English; Finnish; French; Hungarian; Italian; Norwegian; Polish; Portuguese; Slovenian; Spanish; and Swedish (16 in total).

It is very important to note at this point that all the providers will have to use the developed vocabularies in their metadata and for doing so they can either use the Metadata Test Platform that will support them or to directly include them by using their in-house metadata management systems.

4.6 Aggregation platforms and their requirements & delivery to Europeana

The main objective of the Partage Plus project is the creation of an access point to information and digital content through Europeana on the European cultural heritage of the Art Nouveau period. For the achievement of this objective each provider has agreed to submit a specific amount of records to Europeana (shown in *Table 2*). Partage Plus is not acting as a project aggregator but it intends to build a relationship between its providers and the existing national aggregators in partners' countries.

The main requirements that have to be fulfilled for allowing a provider to deliver content to Europeana through its national aggregators are the following:

- The national aggregator must support the XML metadata format;
- The national aggregator must support one of LIDO, ESE or ED;M
- The provider must support the delivery protocol of its national aggregator.

The first two requirements come from the use of LIDO in Partage Plus. More specifically the first one is necessary since LIDO is an XSD schema and metadata in LIDO are serialized in XML. As illustrated in *Figure 16* all the national aggregators support the XML format. In addition LIDO also indicates the metadata standard that the national aggregator has to support. LIDO was selected for the Partage Plus project because it is a rich – in terms of the information that can represent – metadata standard also permitting the use of terminologies. Therefore the metadata of the providers will be transformed to LIDO either directly (i.e. in the in house systems) or by using the metadata test platform, and for that purpose LIDO has to be supported by the aggregators. ESE and EDM, on the other hand are the metadata standards developed and supported by Europeana but because LIDO is a widely used schema in the cultural heritage domain the mapping to ESE already exists and the mapping to EDM will be implemented -whenever Europeana switches to EDM. Thereby transformation of LIDO to ESE and EDM can be also supported.

The format and the metadata standards supported by provider's aggregators are illustrated in *Table 17*, *Table 19*, *Figure 16* and *Figure 18*. Finally the fulfilment of the last requirement that is related to the metadata transfer protocols supported by the provider and the aggregator is summarized in the following table.

⁵ <http://www.minervaeurope.org/interoperability/technicalguidelines.htm>

Table 21: Protocols supported by providers and their aggregators

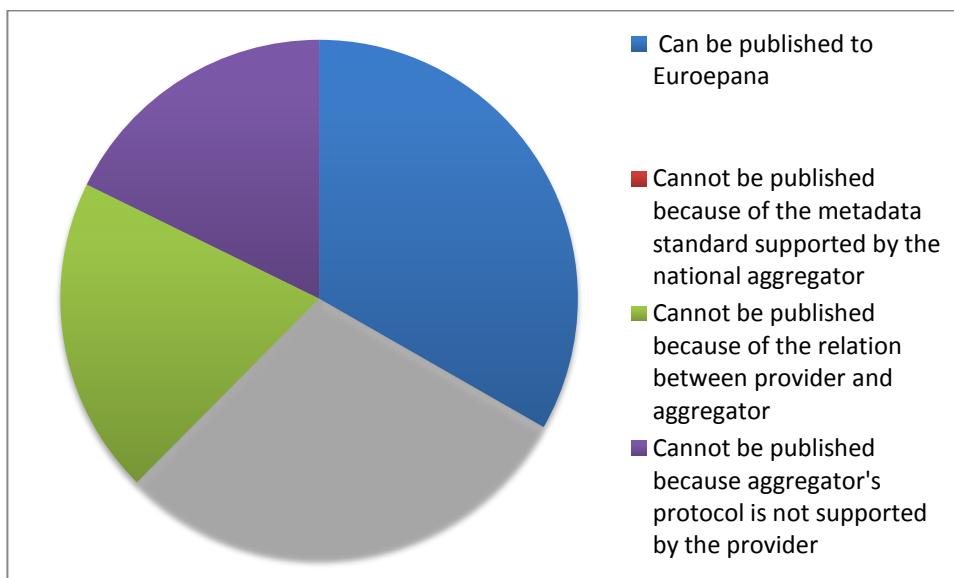
Short Name	Protocol supported by Aggregator	Protocol supported by provider
MAK	OAI-PMH	FTP-SERVER
UNIMAR – NN	FTP-SERVER, OAI-PMH	OAI-PMH
UNIMAR -BMB	FTP-SERVER, OAI-PMH	OAI-PMH
UNIMAR - IMD	FTP-SERVER, OAI-PMH	OAI-PMH
ICCU - MA	OAI-PMH	OAI-PMH
ICCU - ADAADS	OAI-PMH	OAI-PMH; HTTP Upload
UNIMAR - BFM	FTP-SERVER, OAI-PMH	OAI-PMH
MNAC	Unknown	HTTP Upload
KMKG	Unknown	OAI-PMH
KIK	HTTP Upload	HTTP Upload
RorM	OAI-PMH	OAI-PMH
NBA	OAI-PMH	OAI-PMH
MUO	OAI-PMH	FTP-SERVER; OAI-PMH; HTTP Upload
GC	HTTP Upload	HTTP Upload
UPM	HTTP Upload, OAI-PMH	HTTP Upload
MNW	OAI-PMH	HTTP Upload
WWMF	OAI-PMH	HTTP Upload
DM	Unknown	HTTP Upload
DmG	Unknown	HTTP Upload
IMM	Unknown	OAI-PMH
CT	HTTP Upload, OAI-PMH	OAI-PMH
KK	OAI-PMH	OAI-PMH
MCA	Unknown	HTTP Upload
UIRS	Unknown	HTTP Upload
SCVA	HTTP Upload, OAI-PMH	FTP-SERVER

As it can be observed in most of the cases the requirements are fulfilled and the production of metadata and their delivery to Europeana can be performed without problems. There are however some cases where the providers cannot proceed directly to the publication of their content to Europeana due to one of the following reasons

- The provider's aggregator is unknown (KMKG, DM, DmG, IMM, MCA, UIRS). The reason why this situation occurred is in most cases because the status of the aggregator changed, or because a communication of the provider and the aggregator cannot be established.
- The provider's aggregator does not support LIDO, ESE or EDM. (MAK, ICCU-MA, ICCU-ADAADS, CT, KK, SCVA) In this case the project coordinator together with the content provider will write a letter for the national aggregator asking for LIDO support.
- The protocol for delivering metadata supported by the aggregator is different that the one that the provider can support (bold in *Table 21*).

The following figure demonstrates the content that cannot be delivered, under the current situation, to Europeana.

Figure 22: Pie chart of content that can and can't be delivered to Europeana



As mentioned before the main objective of Partage Plus is the creation of a strong relation between the content providers and their national aggregators and not to act as a project aggregator. This has great benefits since the delivery of metadata to Europeana sustains and does not end with Partage Plus. However for ensuring that the agreed amount of content will be delivered to Europeana by the end of the project and for overcoming the current issues due to the Europeana's and aggregators' transition phase the Metadata Test Platform will be used as a 'dark' aggregator by some providers.

The following figure (*Figure 23*) illustrates the Partage Plus aggregation model that includes 3 different paths for a provider to follow for the delivery of his or her content to Europeana:

1. Metadata from a Partage Plus provider are delivered to the national aggregator and harvested by Europeana from that aggregator; (indicated in light green)
2. Metadata from a Partage Plus provider are imported to Metadata Test Platform for their transformation to LIDO and their enrichment with the use of WP3 vocabularies. After that the first path can be followed. (indicated in dark green)
3. Metadata from a Partage Plus provider are imported to Metadata Test Platform for their transformation to LIDO and their enrichment with the use of WP3 vocabularies and then they are delivered to Europeana. (indicated in orange)

Figure 23: The aggregation workflow

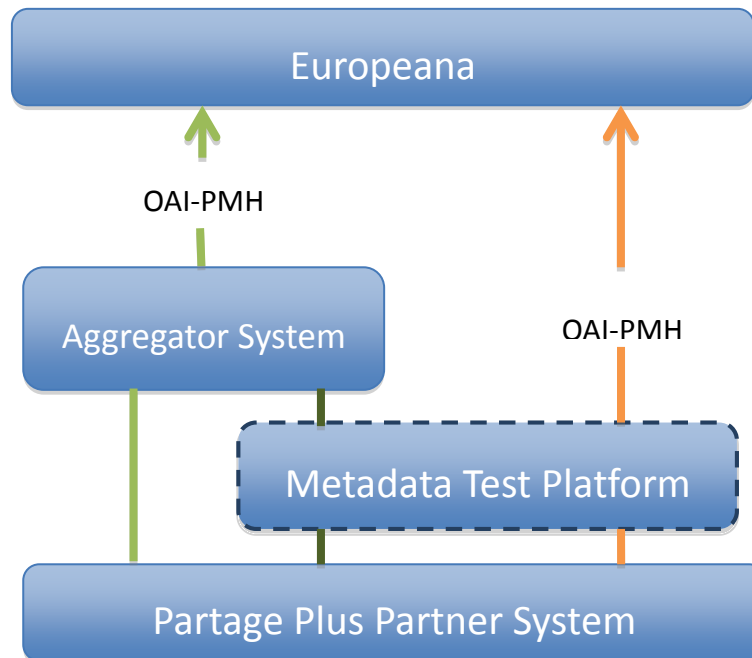


Table 22 in Appendix I illustrates in detail the amount of metadata that have to be created and submitted to Europeana per 6 months for each provider. The providers that are highlighted in green are those that can follow one of the first two paths while those indicated in orange are those that have to submit their content by using *Partage Plus Metadata Test System* under the existing situation. Finally, the providers will have to monitor the amount of metadata they deliver to Europeana by using the table in Appendix III. This report has to be sent to the WP5 and WP2 leaders every 6 months in order to author the production and delivery reports.

5 Conclusion

The main objective of this deliverable was the definition the metadata production and delivery plan for the Partage Plus project. Partage Plus intends to create an access point to information and digital content, through Europeana, on the European cultural heritage of the Art Nouveau period. For the definition of a metadata production and delivery plan according to the content providers' needs we first carefully examined the practices they use. This was a very challenging task due to the diversity of systems and metadata caused by the content providers' number and therefore for doing this examination we were required to create a survey.

In this deliverable the survey together with the answers given by the content providers are presented and analysed. More specifically all the possible scenarios and difficulties that may arise during the production and delivery of metadata to Europeana were examined. According to the providers' answers, the best practice for each of them was proposed and also a detailed plan for the metadata production and delivery to Europeana was presented.

6 References

- [1] Coburn E., Light R., et al.: LIDO - Lightweight Information Describing Objects v.1.0, 2010.
- [2] Europeana Semantic Elements Specification Available: <http://pro.europeana.eu/documents/900548/dc80802e-6efb-4127-a98e-c27c95396d57>
- [3] Isaac, A. "Europeana Data Model Primer". Available: <http://pro.europeana.eu/documents/900548/770bdb58-c60e-4beb-a687-874639312ba5>, 2010
- [4] Europeana 2012. Definition of the Europeana Data Model elements, v5.2.3 [electronic version], <http://pro.europeana.eu/edm-documentation>, 23/05/2012.
- [5] Doerr, M.: The CIDOC CRM – An Ontological Approach to Semantic Interoperability of Metadata. AI Magazine, 24(2003)3, 75-92.
- [6] Crofts N., Doerr M., et al.: Definition of the CIDOC Conceptual Reference Model v. 5.0.2., 2010
- [7] Encoded Archival Description, <http://www.loc.gov/ead/>
- [8] Metadata Encoding and Transmission Standard, <http://www.loc.gov/standards/mets/>

Appendix I: Metadata production and delivery to Europeana**Table 22: Metadata production and delivery to Europeana**

Short Name		M06	M12	M18	M24	Total
MAK	CM ⁶	0	1800	1800	1000	4600
	MDTE ⁷	0	1800	1800	1000	4600
UNIMAR – NN	CM	0	1000	800	1200	3000
	MDTE	0	1000	0	2000	3000
UNIMAR -BMB	CM	110	485	455	450	1500
	MDTE	0	443	0	1057	1500
UNIMAR - IMD	CM	500	900	900	850	3150
	MDTE	0	1400	900	850	3150
ICCU - MA	CM	0	1335	1085	1080	3500
	MDTE	0	1335	1085	1080	3500
ICCU - ADAADS	CM	100	2600	2000	1800	6500
	MDTE	0	2650	2050	1800	6500
UNIMAR - BFM	CM	0	1500	1500	1500	4500
	MDTE	0	1500	1500	1500	4500
MNAC	CM	400	600	505	505	2020
	MDTE	0	1000	505	505	2020
KMKG	CM	1000	1500	1500	1300	5300
	MDTE	0	1800	1800	1700	5300
KIK	CM	150	850	500	0	1500
	MDTE	0	1000	500	0	1500
RorM	CM	0	500	0	0	500
	MDTE	0	0	500	0	500
NBA	CM	0	500	0	0	500
	MDTE	0	300	200	0	500
MUO	CM	0	1500	2025	1500	5025
	MDTE	0	1100	2225	1700	5025
GC	CM	50	100	100	50	400
	MDTE	0	150	150	100	400
UPM	CM	0	500	1000	500	1000
	MDTE	0	500	1000	500	1000
MNW	CM	200	1000	2000	1800	5000
	MDTE	0	1200	2000	1800	5000
WWMF	CM	0	380	0	0	380

⁶ Created Metadata⁷ Metadata Delivered to Europeana

D2.2 – Metadata production and delivery plan, and report on aggregation set up

	MDTE	0	380	0	0	380
DM	CM	200	500	650	650	2000
	MDTE	0	700	650	650	2000
DmG	CM	230	200	110	0	540
	MDTE		430	110	0	540
IMM	CM	1000	1600	1800	1800	6200
	MDTE	0	2600	1800	1800	6200
CT	CM	0	1500	1800	1700	5000
	MDTE	0	900	1800	2300	5000
KK	CM	250	1000	1000	810	3060
	MDTE	0	1250	1000	810	3060
MCA	CM	0	1000	1000	930	2930
	MDTE	0	1000	1000	930	2930
UIRS	CM	0	800	800	400	2000
	MDTE	0	800	800	400	2000
SCVA	CM	0	100	190	0	290
	MDTE	0	100	190	0	290

Appendix II: Definitions of terms and abbreviations

CM	Created Metadata
CMS	Collection Management System
CSV	Comma Separated Values
DC	Dublin Core
DCHO	Digital Cultural Heritage Object
EAD	Encoded Archival Description
EDM	Europeana Data Model
ESE	Europeana Semantic Elements
IT	Information Technology
LIDO	Lightweight Information Describing Objects
MDTO	Metadata Delivered to Europeana
METS	Metadata Encoding and Transmission Standard
WP	Work Package
XML	Extensible Markup Language
XSD	XML Schema

Appendix III: Metadata Production and Delivery Table

PARTAGE PLUS planning WP 2 – [Organisation Name]

Month/Year	03/12	04/12	05/12	06/12	07/12	08/12	09/12	10/12	11/12	12/12	01/13	02/13	03/13	4/13	05/13	06/13	07/13	08/13	09/13	10/13	11/13	12/13	01/14	02/14
Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Metadata Produced																								
Metadata Published to Europeana																								