

item in the result list. Behind this frame a new tab with the original context of the provider website is opened.

Dlib.si also shows: well structured result lists with a thumbnail; basic information; and several buttons for further functionalities, like playing, viewing, link to the remote source, further information, social networks, print, and email. Moving with the cursor over the thumbnail gives a preview and leads to further metadata if you click on the thumbnail. Where possible sound and video can be activated.

The Letonica search leads from the thumbnails of the collections to a description of the collection and a link to “show all digitised objects” which directs to rows of thumbnails with minimal metadata. These thumbnails lead to a preview image with more metadata. It is very user-friendly for non-expert users who have no determined search objective. However, the whole search functionality and query results exist in Latvian only.

Search functionalities

Some portals present themselves as a search tool and place the search functions prominently on their page. The Polish DLF portal has taken the most radical approach: its homepage shows a search field in the centre of the page as its major feature. Their browse feature, however, shows their clear focus on scanned documents. Hispana gives a similar importance to the search field: beneath the aggregator logo in the centre of the homepage, a search field is present.

Some homepages follow closely the style and functionality of the search engine of Europeana.eu with tabs for different categories. This is obviously the case for EuropeanaLocal AT, but also for Dlib.si where the layout of the search with tabs gives a clear structure and also helps to browse.

Less prominent, but still well placed and easily detectable search engines can be found with, e.g., Kulturpool, DiMCoN, GAMA, and BAM. All homepages are heavy with text (e.g., portal description, and news sections), but the search field, with an option for extended search, is placed centrally above or to one side of the texts. Then, there are offers for browsing, such as ‘latest entries’, tags or examples. Their results all show well compiled and laid-out lists with easy navigation structures, thumbnails and further functions.

The search function on Letonica is not strongly advertised. In fact the site seems not to offer itself a search tool. One clicks on ‘collections’ that are represented with thumbnails, from there the user accesses the respective collection (mostly departments of the National Latvian Library) and their different search engines. Some of these collections and departments do not offer a search function at all. The portal has a main search function that searches the whole site, not specifically the digitised content.

The Kultura.hr portal explains the use of the subcategories or keywords, like ‘time period’ or ‘theme’ of the collection. A search field is not prominently placed on the homepage. One is more tempted to click on the subcategories and go from there. The special characteristic of this website is that the user does not search the content of collections, but the general information about the collections themselves. For instance, the user is looking for collections of maps. The result list is clearly structured with a thumbnail and basic information, then a link to further information about the collection or collecting institution. To view the items of a collection, another link opens a window/tab to the collection’s own website. From there it depends on what the collection offers in terms of search and online presentation.

Search on EuropeanaLocal AT is not prominently advertised. However once the search engine is

activated, it gives simple and advanced search, search by collection and browsing facilities.

English or multilingual versions

Another aspect in the context of a European project is of course the question of European international visibility. Since English is considered as the international language 'par excellence', this implies at least a representation and search of the platform in English. The amount of explanatory texts and further information in English varies considerably from platform to platform. Naturally a European thematic platform such as GAMA addresses its users in English, and most metadata exist in English and the native language of the respective archive.

A few portals are well equipped with English translation of both the general texts and the metadata, thus allowing for a search in English: Kultura.hr, Hispana and Kulturpool.

Others have only translated chosen text parts, but not the metadata. Hence no search in English is available: BAM, DLF and Dlib.si. The German and Austrian EuropeanaLocal sites have no translation at all and DiMCoN has not yet a translation which might be explained through the fact that they have very recently been established, namely in 2010.

Hispana offers in addition to Spanish and English a range of regional languages spoken in Spain (Catalan, Basque, Galician, Valencian). The BAM portal offers texts in French and Italian as well as the German and English versions. Within the Polish DLF many collections offer the choice of metadata in German and English in addition to Polish.

Accessibility and other features

Although accessibility³³ for visually impaired people and other people with disabilities may not be of primary concern to many institutions yet, it might prove an important feature in the near future with currently a growing number of initiatives calling for ensuring that visually and auditory impaired users can use the portals.

Of all portals only the following offer visual accessibility features: GAMA, DLF and Hispana.

Other features and services that can be found on most portals are links to, e.g., Facebook and Twitter, bookmarking, tags, and RSS. Some offer customised services like smartworks, tagging, blogs, user profile (Kulturpool), search history and basket/bookshelf (Kulturpool, BAM, Dlib.si), guided tours (GAMA).

³³ See Web Content Accessibility Guidelines (WCAG) 2.0 of the Web Accessibility Initiative WAI and their recommendations W3C, available on <http://www.w3.org/TR/WCAG20/>

Table 3: Overview of aggregator options per DCA content provider³⁴

Partner / Aggregator	BAM Europeana Local (DE)	GAMA	Europeana Local (AT) Kulturpool	Kultura.hr	Dlib.si	DiMCoN	Hispana	Letonica	DLF	Libver	Linked Heritage NTUA aggregator
Listasafn / RAM											X
MMSU				X							X
HfG	X										X
EMAF/ transmediale	X	X									X
MG					X						X
MMCA / Frissiras/ EPMAS										X	X
NIMk		X				X					X
WRO		X							X		X
MBVB						X					X
MRBAB / MAC/ Mu.ZEE										X	X
Serralves											X
argos		X									X
LCCA								X			X
FTapies							X				X
AE		X	X					X			X

³⁴ Please check Table 1: Overview of categories of assessed aggregators in this deliverable for more information about the characteristics of the aggregators listed in this Table 3.



7. Conclusion

In this deliverable the current European aggregator landscape was investigated in order to find out which aggregators are most suitable for the DCA partners to transmit their digital content to Europeana. In order to get a complete picture of each aggregator, the identified aggregators were assessed in terms of type and scope, technical requirements and non-technical requirements (such as licensing framework, cost and sustainability, services offered by the portal...). As a result of this investigation one or more aggregation option can now be presented to each DCA partner.

It is up to the DCA partners to choose their optimal aggregation solution, based their own contexts and expectations. For each aspect of the decision-making process, information on the identified aggregators is given. For some partners the aggregation platform provided by NTUA for the DCA project appears to be the only possible solution. Other partners do have a broader choice. The assessment that is carried out in this deliverable (and the subsequent support by the Technical Management Group) will help those partners to decide which aggregator to join.

The non-existence of a thematic portal for (contemporary) art aggregating for Europeana shows that the (contemporary) art institutions are still at the beginning of networking and forming a community to represent their online needs and requirements.

ANNEX I

OVERVIEW OF AGGREGATOR INFORMATION

BAM: German Portal zu Bibliotheken, Archiven und Museen

DiMCoN: Digitale Museale Collectie Nederland

DLF: Polish Digital Libraries Federation

Dlib.si: Slovenian Digital Library

EuropeanaLocal AT: EuropeanaLocal Austria

EuropeanaLocal DE: EuropeanaLocal Germany

GAMA: Gateway to Archives of Media Art

Hispana: Spanish cultural heritage aggregator

Kultura.hr: Croatian Cultural Heritage Portal

Kulturpool: portal for digital Austrian cultural heritage

Letonica: Latvian National Digital Library

Libver: Hellenic aggregator for Europeana

LH: Linked Heritage

NTUA aggregator: aggregation platform provided by NTUA for the DCA project

BAM - Portal zu Bibliotheken, Archiven und Museen

URL:	http://www.bam-portal.de/
Owned/Supported by:	Bibliotheksservice-Zentrum Baden-Württemberg (BSZ), Konstanz University
Contact:	Dr. Werner Schweibenz Museen und Archive Bibliotheksservice-Zentrum Baden-Wuerttemberg (BSZ) 78457 Konstanz / Germany phone: +49 7531/88 4279 e-mail: werner.schweibenz@bsz-bw.de
Year of launch:	2002
No. of content partners:	over 70 collecting institutions (amongst them many very important ones) of which the majority are museums
<hr/>	
Type:	(national) cross-domain aggregator with public portal website.
Partner focus:	repositories from German archives, libraries and museums.
Content focus:	metadata, images and text scans.
DCA Partner relevance:	HfG, transmediale, EMAF.
<hr/>	
Technical	the standard formats for delivering the metadata are museum.dat or LIDO for museums, EAD for archives and MAB or MARC for libraries.
<hr/>	
Sustainability:	although they are currently well supported, BAM is awaiting the development of a German national aggregator, the DDB – Deutsche Digitale Bibliothek. More information about the DDB initiative can be found on http://www.deutsche-digitale-bibliothek.de/projekt.htm . Sustainability is therefore unclear.
Cost and agreement:	no cost involved. Partners sign a formal cooperation agreement with BAM.
<hr/>	
Query result structure:	left: little tag for library/museum/archive/other – can be filtered by these categories; middle: minimum title and collection both with link to original context; right: optional with thumbnail linking to original context; search by 'digital object attached only' is possible.
Additional services:	search history, watch list/basket.
Remarks/other information:	BAM-search in Wikipedia has been implemented in 2007. Every Wikipedia editor can execute a direct BAM search via a template and thus create a direct link to digital objects from German cultural institutions. The template was used 1,024 times as of April 2009.

Dlib.si - Slovenian Digital Library

URL: <http://www.dlib.si>
Owned/Supported by: The National and University Library of Slovenia NUK (Ljubljana)

Contact: Mr Matjaž Kragelj
Head of Digital Library Infrastructure Services
Narodna in univerzitetna knjižnica
Turjaška 1, Ljubljana / Slovenia
phone: +386 1 5861-369
e-mail: matjaz.kragelj@nuk.uni-lj.si

Year of launch: 2005

No. of content partners: not specified

Type: national cross-domain aggregator with public portal website.

Partner focus: different collections of Slovenian cultural heritage: *“educational and research institutions, companies, publishers and users, such as the Slovenian Research Agency (ARRS), the National Education Institute, the Ljubljana University and many other libraries, institutes and societies.”*

Content focus: photographs and many scans (text, music score, postcards, maps) – art: mostly works on paper. Some audio (e.g., digitised vinyl records).

DCA Partner relevance: Moderna galerija (MG).

Technical to provide metadata of digital objects to Europeana, there are several ways, the easiest being construction of a single XML file and then to send the URL of this file. Dlib.si will then harvest and ingest the data in its aggregator and provide them to Europeana. XML restrictions apply according to Europeana schema.

Sustainability: NUK's sustainability is good. The Slovenian Ministry of Culture has appointed it as national aggregator for cultural and scientific digital content.

Cost and agreement: no cost involved if the institution is a public institution from the cultural and/or research field. No formal cooperation agreement is in place, but upon partners' request it is possible to write down both the obligations of both parties in a signed agreement.

Query result structure: left: thumbnail leading to further information;
right: title, contributor, provider linking to further information;
further information: larger preview image, basic “bibliographic” metadata. Either files for download or link to original context (remote source);
search by ‘digital object attached only’ is possible.

Additional services: different sets of icons e.g., for linking to remote source, location on a map, bookshelf, and to a whole range of social networks.

Remarks/other information: none.



DiMCoN - Digitale Museale Collectie Nederland

URL: <http://www.digitalecollectienederland.nl/>
Owned/Supported by: Rijksdienst voor het Cultureel Erfgoed (Cultural Heritage Agency), supported by the Dutch ministry for education, culture and science

Contact: Mr. H.C.J. (Hans) Schraven
Rijksdienst voor het Cultureel Erfgoed / Cultural Heritage Agency
Smallepad 5 | 3811 MG | Amersfoort | kamernummer 2.32
Postbus 1600 / P.O. Box 1600 | 3800 BP | Amersfoort | The Netherlands
phone: +31 33 421 72 57
e-mail: h.schraven@cultureelerfgoed.nl

Year of launch: 2010
No. of content partners: 21 museums

Type: national single-domain aggregator with public portal website.
Partner focus: different types of Dutch museums.
Content focus: exhibits / cultural objects / artworks.
DCA Partner relevance: MBVB, (NIMk is already a partner).

Technical: the only requirement is that partners need to have an OAI gate on which harvesting of the ESE fields can be performed. Perhaps additional fields can be harvested for research purposes. There is also a possibility to have exported xml (utf-8) imported.

Sustainability: solid support by the Dutch ministry of education, culture and science results in good sustainability.

Cost and agreement: at the moment there is no cost involved, but this might change in the future to paying a contribution in the costs for the hosting of the platform and the services. A formal agreement between a content provider and DiMCoN is still being constructed.

Query result structure: 2 rows each structure with:
left: thumbnail or "place holder icon" leading to further information;
right: min. title and provider linking to further information;
further information: larger preview image, basic "bibliographic" metadata + IPR info. Either files for download (registration necessary) or link to original context;
search by 'digital object attached only' is possible.

Additional services: at the bottom of the detailed result-page a row of thumbnails which link to related items is displayed.

Remarks/other information: no English translation available.

DLF - Polish Digital Libraries Federation

URL: <http://fbc.pionier.net.pl>

Owned/Supported by: The PIONIER Network Digital Libraries Federation, supported by the Poznań Supercomputing and Networking Center (PSNC), a public R&D institution

Contact: Marcin Werla
PSNC Digital Libraries Team Leader
Poznan Supercomputing and Networking Center Noskowskiego St.
12/14, 61-704 Poznań, POLAND
phone: +48 61 858 21 80
e-mail: mwerla@man.poznan.pl

No. of content partners: 84 (only 79 themselves with own website)

Year of launch: 2008

Type: national cross-domain aggregator with public portal website.

Partner focus: Polish cultural heritage institutions (currently mostly libraries and university/regional archives).

Content focus: scans of texts and documents (books, newspaper), less images of manuscripts and works on paper.

DCA Partner relevance: WRO.

Technical: OAI-PMH protocol is preferred, but they have had successful cooperation with content providers who provided only CSV file with metadata via the FTP server. HTML parsing is also supported. At the moment in production only Dublin Core metadata harvesting and ESE exposing for Europeana is supported. There is a novel agent-based harvesting engine which is able to harvest and store metadata in any format (not only XML-based). Requirements are identical as mandatory elements of the ESE schema. Mapping procedure has been applied previously but is always discussed with the content provider previously.

Sustainability: the DFL is indirectly supported by governmental funds and has a good sustainability.

Cost and agreement: no costs are involved and no strict agreement in place. Cooperation is agreed upon based on an e-mail agreement. In the advent of the DEA a more formal way of agreeing to cooperation will be created.

Query result structure: left: an icon for image or text;
middle: title and author, sometimes year;
right: logo of provider;
the icon and title lead to further information, mostly to the original content, with a large pop-up window to display the visual content or scanned material (e.g., browse through books).

Additional services: it provides accessibility for visually impaired people.

Remarks/other information: WRO would be a pioneer, since they do not seem to deal with video content. Unclear how that would work with the pop-up window mechanism on the portal website.



EuropeanaLocal AT – EuropeanaLocal Austria

URL: <http://www.europeana-local.at/>

Owned/Supported by: temporary project that was funded under the EU eContentPlus programme

Contact: Gerda Koch
Europeana Local Content Co-ordinator für Österreich
AIT - Angewandte Informationstechnik Forschungsgesellschaft mbH
Klosterwiesgasse 32/I; A-8010 Graz; Austria
phone: +43 316 835359-73

e-mail: kochg@europeana-local.at

No. of content partners: unknown

Year of launch: 2008

Type: cross-domain aggregator without public portal website (dark aggregator).

Partner focus: Austrian cultural heritage institutions.

Content focus: unknown.

DCA Partner relevance: Ars Electronica (AE).

Technical: metadata delivery is possible in different ways (e.g., OAI-PMH, FTP > XML, and text files). Mapping from standard formats, such as Dublin Core and MARC21, follows automatically. In case of custom metadata formats, support from DCA is required. Preview-possibility is offered in order to see how the data look in the Europeana lay-out before they're released for ingestion by Europeana. An additional service is the integration of a digital archive (e.g., Fedora) through which the data is delivered. Updates can be performed manually (FTP upload) or OAI is adopted through harvesting at regular intervals.

Sustainability: EuropeanaLocal AT started in June 2008 and ended in May 2011. They are currently looking for ways to keep the project running without the EU project funding. Sustainability is therefore unclear.

Cost and agreement: they plan to charge an annual fee that will be determined based on the amount of content the institution wishes to deliver as partner. It is not known how an agreement with a new partner would be worked out. The current partners were automatically contracted by the EuropeanaLocal DoW.

Query result structure: none (dark aggregator).

Additional services: none.

Remarks/other information: AE would be a pioneer, since EuropeanaLocal AT do not seem to have any noteworthy art content, not to speak of audio-visual art.

EuropeanaLocal DE – EuropeanaLocal Germany

URL:	http://www.europeana-local.de/
Owned/Supported by:	temporary project that was funded under the EU eContentPlus programme. Operational support was given by the Zentral- und Landesbibliothek Berlin.
Contact:	Angela Koch Zentral- und Landesbibliothek Berlin / Haus Amerika Gedenkbibliothek IT-Abteilung Bluecherplatz 1 D-10961 Berlin phone: +4930 90226-195/194 e-mail: koch@zlb.de
No. of content partners:	31
Year of launch:	2010
<hr/>	
Type:	cross-domain aggregator without public portal website.
Partner focus:	German libraries, educational archives.
Content focus:	text and audio-visual (educational) documentation.
DCA Partner relevance:	HfG, transmediale (TM), EMAF.
<hr/>	
Technical:	unknown.
<hr/>	
Sustainability:	EuropeanaLocal DE started in June 2008 and ended in May 2011. They find themselves now in a transitional phase in terms of staff and daily operations. Although the creation of the DDB as a national aggregator is still in the development phase, they await evolution in that field and currently do not take on new partners in the EuropeanaLocal DE aggregator. Sustainability is unclear.
Cost and agreement:	unknown.
<hr/>	
Query result structure:	(dark aggregator).
Additional services:	none.
Remarks/other information:	none.

GAMA - Gateway to Archives of Media Art

URL: <http://www.gama-gateway.eu/>

Owned/Supported by: GAMA e.V. (foundation)

Contact: Gaby Wijers
Chair of the Board / GAMA Foundation
c/o Hochschule Für Künste
Prof. J.-F. Guiton
Am Speicher XI Nr 8
28217 Bremen / Germany
phone: +49 421 95 95 1223
e-mail: gaby@nimk.nl

No. of content partners: 8 media art archives

Year of launch: 2009

Type: thematic cross-domain aggregator with public portal

Partner focus: media art archives.

Content focus: audio-visual material.

DCA Partner relevance: AE, argos, transmediale (TM), EMAF, NIMk, WRO. Regarding the profile of GAMA not only as an aggregator or portal but also as an association, it is especially relevant for DCA partners with a majority of audio-visual material in their collection.

Technical: ESE is the easiest to implement while LIDO requires definition of a full set of metadata with references. Only a minimal set of metadata is sent to Europeana due to the new contract. Thumbnail ingestion and automatic generation are supported but no guarantees are given on the latter. Specific mapping requirements depend on whether dark aggregator or portal is used. In the case of portal, GAMA vocabulary is a prerequisite, for dark aggregator it's a recommendation. HTTP and FTP are supported while mandatory fields according to GAMA XML schema exist.

Sustainability: GAMA e.V. is a foundation under German law and has 21 paying members. This ensures the basic maintenance and updating of the site and results in a good sustainability (self-supporting).

Cost and agreement: in GAMA, a membership fee is paid to support dissemination activities, the board meetings and the technical maintenance. For DCA partners who would want to join, the first year of joining the network no membership fee will be charged. The new partners will be considered as honorary members. If they wish to remain members of the foundation, they will then need to choose a form of membership and pay a respective fee. In GAMA, the foundation statutes rule the non-profit orientation of the site are agreed to by the partner when becoming a member of the foundation.

Query result structure: left: thumbnail if there is video (excerpt or full) leading to a video view pop-up window;
 middle: title, name, type, year, start of descriptive text leading to further information;
 right: short name of the provider with link to their website;
 further information: metadata, often descriptive text, if video available with embedded video frame, film strips (automatically extracted still from the video).

Additional services: the portal website is accessible for visually impaired people; guided tours, visual similarity search, keyword list, glossary.

Remarks/other information: can also operate as dark aggregator (important for ingesting thumbnails to Europeana for stills, which will not be ingested into GAMA, since a thumbnail in GAMA represents “moving image”).

Hispana – Spanish cultural heritage aggregator

URL: <http://hispana.mcu.es/>

Owned/Supported by: Spanish Ministry of Culture, specifically the Directorate General for Books, Archives and Libraries.

Contact: María Luisa Martínez-Conde
Jefe de Área de Proyectos
Subdirección General de Coordinación Bibliotecaria-Ministerio de Cultura
Plaza del Rey, 1 / 28004 Madrid / Spain
phone: +34 91 701 71 37
e-mail: martinez.conde@mcu.es

No. of content partners: 128 institutions (with 156 repositories)

Year of launch: unknown

Type: national cross-domain aggregator portal with public portal website.

Partner focus: Spanish cultural heritage collections.

Content focus: a balanced mix of all types including a lot of artworks.

DCA Partner relevance: FTapiès.

Technical: partners need to implement an OAI-PMH compliant repository (ESE from 2011, EDM from 2012) that is harvested by Hispana.

Sustainability: the direct funding by the Spanish ministry of culture provides good sustainability.

Cost and agreement: participation is free of charge and on a voluntary basis, except for projects and institutions funded by the Spanish ministry of culture. In that case it's mandatory to implement an OAI-PMH compliant repository (ESE from 2011, EDM from 2012) that must be harvested by Hispana – so you could speak of a technical prerequisite for free participation. Participation in Hispana is possible without signing any formal agreement.

Query result structure: a list of underlined lines of title, author, year leading to more metadata (like a library index card) with a link to the image on the partner website and a link to the thumbnail (opening a new window).

Additional services: the website is accessible for visually impaired people (W3C WAI).

Remarks/other information: to access as a museum the institution has to join CER.ES and share a unified documentation and management system for its collections (DOMUS)

Kultura.hr - Croatian Cultural Heritage portal

URL: <http://kultura.hr/>

Owned/Supported by: Croatian ministry of culture, museum documentation centre, state archives and the national library

Contact: Jelena Rubić
viša stručna savjetnica
Odjel za digitalizaciju knjižnične, arhivske i muzejske građe /
Ministarstvo kulture Republike Hrvatske
Runjaninova 2, 10 000 Zagreb / Croatia
phone: +385 1 4866 519
e-mail: jelena.rubic@min-kulture.hr

No. of content partners: 10 institutions (with 38 collections)

Year of launch: 2010

Type: national cross-domain aggregator with public portal website.

Partner focus: archives, libraries, but mainly museum collections.

Content focus: no content directly presented.

DCA Partner relevance: MMSU (are already listed, but as MMCA).

Technical: all digitised material need to be delivered based on ESE Specification and Metadata Mapping & Normalisation guidelines.

Sustainability: the direct funding by the Croatian ministry of culture provides good sustainability.

Cost and agreement: no costs are involved. Agreement is unknown.

Query result structure: basically they have pre-defined a lot of categories and subcategories. Unfortunately many are yet empty, only on the second search level they indicate whether the subcategory bears a result. Results are collections only, not single items.
Left: logo of institution or representative thumbnail.
Right: name, start of descriptive text leading to full text and a link to the collection.

Additional services: none.

Remarks/other information: the portal website represents Croatian digital heritage not on item (object) level, but on collection level.

Kulturpool - portal for digital Austrian cultural heritage

URL: <http://www.kulturpool.at>

Owned/Supported by: Federal Ministry of Education, Art and Culture, technically supported by IT-provider UMA

Contact: Marko Göls
project development
uma information technology GmbH
Zollergasse 9-11 / 1070 Vienna /Austria
phone: +43 1 526 29 67 - 501
e-mail: marko.goels@uma.at

No. of content partners: 11 (state and federal) institutions

Year of launch: 2008

Type: national cross-domain aggregator with public portal website.

Partner focus: well-balanced mix, strong focus on museums and art in the broad sense (e.g., theatre and music).

Content focus: images.

DCA Partner relevance: Ars Electronica (AE).

Technical: OAI-PMH, HTTP, FTP, mail and JDBC is supported for metadata delivery. XML, CSV and Excel-exports are supported and there is also flexibility for special metadata specification, which is aligned to Europeana ESE.

Sustainability: the direct funding by the government provides for good sustainability. Technical provider UMA has over 10 years working relationship with the government.

Cost and agreement: no costs are involved. There is a formal cooperation agreement in which also the transfer of data to Europeana is mentioned.

Query result structure: left: thumbnail;
right: title, author, provider;
both leading to further information: preview with a link to a larger picture (on their website!), logo of provider with link to their website and basic metadata.

Additional services: smartwork, tagging, related items.

Remarks/other information: content quality assurance: a board of experts is currently setting up a criteria catalogue.

Letonica - Latvian National Digital Library

URL:	http://www.lnb.lv/en/digital-library
Owned/Supported by:	Latvian National Library, V/A "Kultūras informācijas sistēmas" (http://www.kis.gov.lv/) and Microsoft Latvija
Contact:	Digitālās bibliotēkas nodaļa Latvijas Nacionālā bibliotēka K.Barona iela 14, Rīga Latvija, LV-1423 phone: +37167439944 e-mail: info@lndb.lv
No. of content partners:	unclear. 18 collections digitally available
Year of launch:	unknown
<hr/>	
Type:	national single-domain aggregator with public portal website.
Partner focus:	libraries, no museums so far.
Content focus:	print works and urban-cultural objects (maps, postcards, music scores).
DCA Partner relevance:	LCCA.
<hr/>	
Technical:	unknown.
<hr/>	
Sustainability:	the direct government funding provides for good sustainability.
Cost and agreement:	a partner needs to pay certain expenses that are related to handling and digitising the data, or training of employees that work on the project. There is a formal cooperation agreement, which declares, for example, the legal responsibility of the collaborator and the use of data. .
<hr/>	
Query result structure:	6 rows of thumbnails per page. Underneath thumbnail: title, year, author, type. both leading to further information, a preview and images in different sizes (a icon for JPEGs to open), also "more metadata" offered.
Additional services:	different social network affiliations.
Remarks/other information:	none.

Libver – Hellenic aggregator for Europeana

URL: <http://aggregator.libver.gr/>
Owned/Supported by: Veria Central Public Library (Northern Greece region)
Contact: Vangelis Banos
Veria Central Public Library
phone: +3023310-24494
e-mail: info@libver.gr or vbanos@gmail.com

No. of content partners: 14 partners

Year of launch: unknown

Type: national cross-domain aggregator without a portal website (dark aggregator).

Partner focus: libraries and archives, no museums.

Content focus: unknown.

DCA Partner relevance: EPMAS, Frissiras, MMCA.

Technical: OAI-PMH is the main data delivery protocol but also legacy libraries are incorporated via DEiXTo (<http://www.deixto.com>) web data extraction tool. The core of metadata harvesting, storage and communication with Europeana is implemented by Open Archives Engine, while specific data extraction tasks are handled by DEiXTo software. DC and ESE models are supported while arbitrary mapping between them are performed. HTML to ESE is also supported.

Sustainability: the supporting organisation behind Libver seems to be doing well. It is unclear however what priority the aggregator has in its long-term policy. Therefore sustainability is unclear at the moment.

Cost: unknown.

Query result structure: none since no portal website.

Additional services: none.

Remarks/other information: dark aggregator.

Linked Heritage

URL:	http://www.linkedheritage.org/
Owned/Supported by:	temporary EU project funded under the ICT Policy Support Programme (ICT PSP)
Contact:	Linked Heritage Project coordinator Ministero per i Beni e le Attività Culturali c/o ICCU Viale Castro Pretorio 105 00185 Roma, Italia phone: +39 06 49210427 e-mail: info@linkedheritage.org
No. of content partners:	at the time of writing +- 40, sometimes also acting as aggregator thus covering more single institutions
Year of launch:	project started in April 2011
<hr/>	
Type:	cross-domain aggregator without a portal website (dark aggregator).
Partner focus:	majority of museums, but also content from ministries and responsible government agencies, aggregators, leading research centres, publishers and SMEs.
Content focus:	not specific.
DCA Partner relevance:	all DCA content providers.
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Technical:	uses the MINT services (see below 'Aggregation').
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Sustainability:	the project started 1st of April 2011 and runs until September 2013. Possible future sustainability is under discussion in the project consortium.
Cost and agreement:	no costs are involved. Partners need to sign a formal cooperation if they are not already enlisted in the Linked Heritage DoW.
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Query result structure:	none since there is no portal website (dark aggregator).
Additional services:	none.
Remarks/other information:	none.

Aggregation platform provided by NTUA for DCA

URL: <http://mint.image.ece.ntua.gr>

Owned/Supported by: Image, Video and Multimedia Systems Laboratory, National Technical University of Athens

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No. of content partners: Numerous content providers used or are currently using the platform.
More details on <http://mint.image.ece.ntua.gr/redmine/projects/mint/wiki/Projects>

Year of launch: 2010

Technical: Registered organisations can upload (HTTP, FTP, OAI-PMH) their metadata records in XML or CSV serialisation in order to manage, aggregate and publish their collections. A reference metadata model serves as the aggregation schema to which the ingested (standard or proprietary) schemata are aligned to. Users can define their metadata crosswalks with the help of a visual mappings editor for the XSL language. Mapping is performed with simple drag-and-drop or input operations that are then translated to the corresponding code. The mappings editor visualizes both the input and target XSD, in an intuitive interface that provides access and navigation of the structure and data of the input schema, and the structure, documentation and restrictions of the target one. It supports string manipulation functions for input elements in order to perform 1-n and m-1 (with the option between concatenation and element repetition) mappings between the two models. Additionally, structural element mappings are allowed, as well as constant or controlled value (target schema enumerations) assignment, conditional mappings (with a complex condition editor) and value mappings between input and target value lists. Mappings can be applied to ingested records, edited, downloaded and shared as templates between users of the platform. Preview interfaces present to users the steps of the aggregation including the current input XML record, the XSLT of their mappings, the transformed record in the target schema, subsequent transformations from the target schema to other models of interest (e.g., Europeana's metadata schema), and available HTML renderings of each XML record. Users can transform their selected collections using complete and validated mappings in order to publish them in available target schemas for the required aggregation and remediation steps. The platform has been deployed for a variety of aggregation workflows corresponding to the whole or parts of the back-end services.

Type: cross-domain without a portal website (dark aggregator).
Partner focus: all DCA content partners.
Content focus: no own content.
DCA Partner relevance: NTUA is DCA technical partner dealing with aggregation of digitised content.

Sustainability: Project-based aggregators like Linked Heritage and DCA (both using MINT platform) are also free of charge, but there the sustainability of the service is related to the individual project strategy. Typically, the technical infrastructure, deployed and maintained at the National Technical University of Athens (NTUA) remain available for new content providers interested in joining the network; the harvesting scheme for the delivery of content to Europeana is kept updated by the NTUA, in order to be aligned with the new requirements and standards defined by Europeana.

Query result structure: only visible on Europeana.

Additional services: none.

Remarks/other information: MINT services compose a web-based platform that was designed and developed to facilitate aggregation initiatives for cultural heritage content and metadata in Europe. It is employed from the first steps of such workflows, corresponding to the ingestion, mapping and aggregation of metadata records, and proceeds to implement a variety of remediation approaches for the resulting repository. The platform offers a user and organization management system that allows the deployment and operation of different aggregation schemes (thematic or cross-domain, international, national or regional) and corresponding access rights.