Grant Agreement 297292

EUROPEANA INSIDE

Export Evaluation Report

Deliverable number	*D4.3 (v2)*
Dissemination level	*Public*
Delivery date	*August 2014*
Status	*Final*
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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
v0.1	2014-08-19	Nathalie Poot	KMKG	Draft
v0.2	2014-08-20	Antoine Isaac	Europeana	Review
v0.3	2014-08-21	Inés Matres	SPK	Review
v1.0	2014-08-27	Nathalie Poot	KMKG	Final version – review all partners

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This deliverable contains original unpublished work except where clearly indicated otherwise.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.

Contents

1 Introduction

1.1 Background and role of the deliverable in the project

This report is part of Work Package 4 (WP4). This Work Package is dedicated to the **coordination of content** to Europeana: more than 960,000 records will be contributed to Europeana using the Europeana Connection Kit (ECK). In the delivery process, the **robustness of the prototype ECK** will be evaluated.

This deliverable reports on the outcome of *Task 4.2 Full Content Export*. This task implements an export from the content provider systems with new ECK functionalities of the content to be contributed to Europeana.

It is the second of two deliverables:

- *D4.3 (v1) Export Evaluation Report* (M26 – May 2014) presented the results of testing the **third prototype release of the ECK (iteration 3)**. This iteration was released in M24 (March 2014), testing and feedback took place in M25 (April 2014).
- *D4.3 (v2) Export Evaluation Report* (M29 – August 2014) is an update of *D4.3 (v1) Export Evaluation Report.* It presents the results of **testing the production version of the ECK (iteration 4).** This final iteration was released in M27 (June 2014), testing and feedback took place in M28 (July 2014).

In the previous two deliverables iteration 1 and iteration 2 ECK was tested:

- *D4.1 (v1) Control Export Evaluation Report* (M16 - July 2013) presented the results of the **first prototype release of the ECK (iteration 1).** This iteration was released in M13 (April 2013), testing and feedback took place in M14 (May 2013).
- *D4.1 (v2) Control Export Evaluation Report* (M20 – November 2013): presented the results of the **second prototype release of the ECK (iteration 2)**. This iteration was released in M18 (September 2013), testing and feedback took place in M19 (October 2013).

The two versions of *D4.1 Control Export Evaluation Report* (*v1* in M16 and *v2* in M20) and the two versions of *D4.3 Export Evaluation Report (v1* in M26 and *v2* in M29) are part of the **iterative development plan**[1]. According to the Description of Work (DoW), WP4 was to start in M15 (June 2013) and end in M21 (December 2013). However it quickly became clear that the development schedule of the ECK as proposed in the DoW was unrealistic and changes were required to be able to follow a more agile approach as is commonly used in software development. A new development schedule has been drafted and takes into account four iterations of the ECK. For WP4, content partners test and report on each of these iterations after their release.

This deliverable represents the point of view from the content partners (CPs). It gives an insight into their experiences with the software the technical partners (TPs) developed and released for iteration 4 - production. It should be seen in close relation to *D4.6 Technical Specification* presented by K-INT in M25 (April 2014).

WP4 is further dependent on the **outputs of WP2, WP3 and WP5** for its deliverables. Iteration 3 and Iteration 4 ECK production were developed and released under WP5 (production). The previous iterations (iteration 1 and iteration 2) were developed and released as part of WP3 (development). The deliverables for WP4 also build on the previous reports within the work package itself.

[1] *D4.6 (v5) Technical Specification* (K-INT): appendix 1.

The development of the ECK and the evaluation of iteration 4 are based on:

- *D2.1 Requirement Analysis*: explanation of all ECK requirements, based on a survey among the project partners.
- *D2.2 Use Cases:* three use case scenarios.
- *D2.3 Recommendations for Technical Standards:* research on best practice and quality instruments already in place within the Europeana project family.
- *D2.4 Functional Requirement:* there are three kind of requirements: high level requirements, workflow requirements and non-functional requirements. The workflow requirements are identified as: manage, select, prepare, validate, supply, data acceptance and enrich and return.
- *D2.5 Technical Specification:* describes the overall architecture of the ECK.
- *D3.5 Technical Integration Report:* progress report on the development of the ECK.
- *D4.2 Content Export Schedule:* presents the schedule for content delivery. It specifies the order in which participating institutions carry out the export of their data using the ECK.
- *D4.1(v1) Control Export Evaluation Report:* report on the test results from iteration 1 ECK prototype.
- *D4.1(v2) Control Export Evaluation Report:* report on the test results from iteration 2 ECK prototype.
- *D4.6 (v5) Technical Specification*: report on the technical specifications of the ECK.
- *D4.4 Content Re-ingestion Report:* report on the test results of content re-ingestion as part of iteration 3 ECK prototype.
- *D4.5 (v1) Summative Evaluation Report:* a summative evaluation of the content delivery process to Europeana using the ECK.
- *D4.3 (v1) Export Evaluation Report* evaluates the various tools that have been developed as part of ECK iteration 3.

D4.3 (v2) Export Evaluation Report is an update of *D4.3 (v1) Export Evaluation Report.* It reports on the results of testing iteration 4 ECK, the production version.

The results presented will be used for:

- *D4.5 (v2) Summative Evaluation Report*: an update of *D4.5 (v1) Summative Evaluation Report* a summative evaluation of the content delivery process to Europeana using the ECK.
- *D5.4 Forward plan:* a detailed plan setting out how the Europeana Inside consortium will take the ECK forward following the end of the development project.
- WP5: their object is to use the lessons learned in WP2, WP3 and WP4 to develop and launch a full production version of the ECK with accompanying support and documentation materials.

1.2 Approach

In preparation of **testing of iteration 4 ECK** content partners were informed on the test process via Basecamp. A **test plan** and **three evaluation forms** were provided to all partners in M27 (June 2014).

Three evaluation forms:

- Acceptance and usability test form iteration 4
- Content Providers Survey iteration 4
- Content Providers Survey iteration 4 on content re-ingestion

As testing iteration 4 in July 2014 (M28) followed very closely on the evaluation of iteration 3 in April 2014 (M25), no additional meetings in small groups were held with TPs and CPs from the testing

groups on Basecamp. TPs were however informed on the results of the test process of iteration 3 at the Technical Partner Meeting in Toulouse in July 2014 (M28).

1.3 Structure of the deliverable

This deliverable reports on the **outcome of testing iteration 4 ECK prototype.** The deliverable is structured in the following way:

- Development of the ECK in 4 iterative phases
- Test results
- Conclusions
- APPENDIX I: Acceptance and Usability Test Forms iteration 4
- APPENDIX II: Content Providers Survey iteration 4
- APPENDIX III: Content Providers Survey iteration 4 – content re-ingestion

2 Development of the ECK in 4 iterative phases

The ECK is released in 4 iterative phases. Each of the 4 iterations include specific functionalities as described in *D2.4 Functional requirement* and *D4.6 (v5) Technical Specification.*

This **iterative approach** replaces the more traditional waterfall approach that was originally described in the DoW. One of the main advantages is that new functionality can be given to users sooner, allowing them to find flaws while there is still time to correct them in later iterations.

While the technical partners develop and implement the ECK, feedback is needed on the functionalities, bugs, usability and recommendations can be given for improvements. It is the responsibility of the content partners **to test and provide feedback on these different ECK releases.**

Iteration 1 ECK prototype considered all requirements from *D2.4: Functional Requirements* that have been designated as 'Must' haves with the exception of the actual data push and harvest interfaces onto Europeana and other aggregators. This iteration was mainly concerned with **selecting** and **preparing data**. Some other requirements (functional requirements marked as 'Should' or 'Could', High Level Requirements and non-functional requirements) have also been taken into account.

- The results of testing iteration 1 ECK are part of *D4.1(v1) Control Export Evaluation Report* (M16 - July 2013).

Iteration 2 ECK prototype focused on **management overview of status** and **data publication**. The testing was on the functional requirements that have been designated as 'Must' haves and that belong to all workflow steps. This iteration also included requirements that were planned, but not yet operational in iteration 1.

- The results of testing iteration 2 ECK are part of *D4.1(v2) Control Export Evaluation Report* (M20 – November 2013).

For **Iteration 3 ECK prototype** functionalities tested in the previous iterations were refined and two new functionalities: **push or pull** and the **enrich and the return process** from the Europeana portal to the system of the CPs were added (content re-ingestion). The development of the content re-ingestion process was completed in time by the technical partners, but content re-ingestion could not be tested, since a change on Europeana's API was needed. Without those changes the enrichment return process did not work. Consequently, testing content re-ingestion was moved to iteration 4 production.

- The results of testing iteration 3 ECK are part of *D4.3(v1) Export Evaluation Report* (M26 – May 2014)
- *D4.4 Content Re-Ingestion Report* (M26 – May 2014) focusses on the preparatory steps taken to test content re-ingestion and on the evaluation the enriched metadata on the Europeana portal by the CPs.

Iteration 4 ECK production includes a further refinement of the previously released functionalities and content re-ingestion.

- This report focusses on the results of testing iteration 4 ECK.

3 Test results

According to the iterative development plan iteration 4 production was to be released in M28 (July 2014), while testing, evaluation and reporting were to take place in M29 (August 2014). However, the final iteration was released one month early – in M27 (June 2014) - to give CPs one month time to test the iteration (similar to the previous iterations). This was agreed upon by all TPs at the Technical Partner Meeting in Maribor in M21 (December 2013)[2]. Testing and evaluation took place in M28 (July 2014), reporting was due in M29 (August 2014).

The test process for testing iteration 4 was similar to testing iterations 1, 2 and 3. An **overall test plan** was provided to all partners via Basecamp in M27 (June 2014). It was stressed that **good communication** and **co-operation** were crucial to make the testing and evaluation process run smoothly.

To gather as much feedback as possible, CPs and TPs were responsible for completing the **Acceptance and Usability test form i4**, the **Content Providers Survey i4** and the **Content Providers Survey i4 on content re-ingestion**. The deadline for completing all forms was the 31th of July 2014 (M28). This gave all partners one month to test and report on the developed functionalities.

The evaluation forms were slightly adapted in comparison to testing iteration 1 and 2, but similar to iteration 3:

- Since iteration 4 involves the actual testing of content re-ingestion, there is survey on content re-ingestion: **Content Providers Survey i4 content re-ingestion**.
- Attention is paid on **usability**: in the acceptance test form, CPs can rate the functional requirement (very easy, easy, difficult, very difficult) and why.
- Since iteration 4 is the production version, the **Content Providers Survey i4** focusses on the overall evaluation of the ECK: CPs are asked to identify the strengths and weaknesses of the ECK in each step of the workflow.

There are five commercial vendors of collection management systems in the consortium without a direct CP in the project (KE Software, System Simulation (SSL), Adlib, Semantica and SKINsoft). They needed to find an associate partner to test with. For iterations 1, 2 and 3 the National Liberation Museum Maribor (MNOM) and Galerija Božidar Jakac (GBJ) tested with Semantica, for iterations 1, 2 and 4 Bristol Museums, Galleries and Archives tested with KE Software and London Transport Museum (LTM) tested with System Simulation (SSL) and for iteration 4 Hôtel Dieu des Hospices de Beaune tested for SKINsoft. No evaluation forms were provided from Adlib.

3.1 Acceptance and Usability Test Form i4

The purpose of the form is to evaluate whether the functional requirements are present and work. CPs indicated whether the requirements were accepted (A), not accepted (NA) or not tested (NT) and they rated them: how easy is it to understand and perform the functionality (very easy, easy, difficult or very difficult) and why (Appendix I)? The form included all functional requirements that needed to be developed following *D4.6(v5) Technical Specification*.

<u>Who completed the evaluation form?</u>

- The evaluation form was completed by: Petofi Irodalmi Muzeum PIM (HU), Magyar Nemzeti Muzeum MNM/HNM (HU), Szepmuveszeti Muzeum FAB (HU), Municipio do Seixal SEI (PT), Benaki Museum (BEN) (GR), National Gallery-Alexandros Soutzos Museum (NAG), Royal

[2] *D1.7 Minutes of the 3rd Technical Partners Meeting* (December 2013, Maribor)

Museums of Art and History (KMKG) (BE), Institut Royal des Sciences Naturelles de Belgique RBINS (BE), KADOC - KU Leuven (BE) and Stiftelsen Länsmuseet Västernorrland SLV (SE).

- Xantys Limited / House of Images - HIM (UK) and Stiftung Preussischer Kulturbesitz (SPK) (DE) did not complete the form. SPK didn't fill out the test form since there weren't any changes in comparison to iteration 3, since their CMS cannot call on web services.
- KE Software presented the results from their testing partner Bristol Museums, Galleries and Archives.
- System Simulation (SSL) presented the results from their testing partner the London Transport Museum (LTM).
- SKINsoft presented the results from their testing partner Hôtel Dieu des Hospices de Beaune.

Testing content re-ingestion

For content re-ingestion CPs tested the **enrich and return functionalities** that made it possible for enrichments made by Europeana to flow back into their system. There are four sets of fields enriched on the Europeana portal for which Europeana uses different vocabularies.

Enriched fields	**Used vocabulary by Europeana**
Agents (persons) (Creator, Contributor) (dc:creator and dc:contributor)	DBpedia
Places (Geographic data, Coverage) (dcterms:spatial and dc:coverage)	Geonames
Time periods (date, date of creation, time period) Edm_timespan (dc:date, dc:coverage, dc:temporal, edm:year)	Semium Time
Concepts (topics) (Subject) (SKOS_concept (dc:subject and dc:type)	GEMET and DBpedia

Table 1: Overview enriched fields and used vocabularies by Europeana

It was required that the content re-ingestion pilot involved at least 5 content providers and 2 aggregators (DoW). The two aggregators that make content re-ingestion process possible are the **Inside Dark Aggregator (DA)** and **Culture Grid (CG)**. The aggregator retrieves the published records from Europeana and generates an enrichment record that can be requested by the CMS[3].

Following the iterative development plan, testing content re-ingestion was part of iteration 3 ECK prototype (release in M24 – March 2014, testing in M25 – April 2014). Content re-ingestion could at that time not be tested, since a change on Europeana's API was needed. CPs that had already published content on Europeana within the EUInside project did however evaluate the quality of the enrichments on the **Europeana portal** and completed the **content partners survey on content re-ingestion**. This gave them a chance to learn more about the enrichments before they would flow back into their CMS in iteration 4[4].

The actual testing of the enrich and return functionalities took place as part of iteration 4 (release in M27 – June 2014, testing in M28 – July 2014). The new functionalities could only be tested if the content was published on Europeana via the DA or CG. All CPs therefore delivered their data to Europeana in June 2014 at the latest, so it would be published mid-July 2014, in time to test content re-ingestion.
However, Europeana was delayed with the July publication. Instead of mid-July, content was published in the first week of August. For those CPs the deadline to send in the evaluation forms – the

[3] *D4.6 (v5) Technical Specification* (M25 – April 2014): p. 33.
[4] The results were reported on in *D4.4 Content re-ingestion*.

31th of July – was postponed until mid-August. Nevertheless, there was not enough time left for them to implement, fully comprehend and test the new functionalities.

CPs that did not participate in testing content re-ingestion:

- Stiftung Preussischer Kulturbesitz - SPK (DE) and Municipio do Seixal - SEI (PT): due to technical restrictions. For iteration 3 SEI evaluated the quality of the enriched metadata on the Europeana portal and completed the Content Providers Survey i3 content re-ingestion. SPK did the same for iteration 4.
- Due to the delay in publication on the Europeana portal, there was not sufficient time to implement and test the re-ingestion process for KADOC KU Leuven (BE) and Institut Royal des Sciences Naturelles de Belgique - RBINS (BE). The EDM enrichments where downloaded by their TP (LIBIS KU Leuven) in CSV and made available for quality control in a spreadsheet. This was used by CP to evaluate the enrichments and complete Content Providers Survey i4 on content re-ingestion.
- Szepmuveszeti Muzeum - FAB (HU): their associate technical partner Gallery Systems (TMS) did not implement enrich and return functionalities.

Results

In the left column are the functional requirements (FRs) tested for iteration 4 ECK. Some FRs are combined in one field since most or all CPs indicated that all the FRs were either accepted (A), not accepted (NA) or not tested (NT). The right column is gives an indication of how many CPs said A, NA or NT and how they rated the usability. 'Accepted by most CPs' signifies that the requirement is accepted by more than half of the CPs.

Functional requirements (FRs)	**Comments**
MANAGE	
WFR.01.02 - Revision history and *WFR.01.04 - PID management*	Acceptance: Accepted by most CPs. A few CPs indicated that they were not able to test it. Usability: Rated 'very easy' and 'easy'
WFR.01.01 - Export management	Acceptance: Accepted by most CPs. A few CPs indicated that they were not able to test it. Usability: Mostly rated 'very easy' or 'easy'
WFR.01.05 - Enriched data management:	Acceptance: CPs are divided: accepted, not tested and not accepted. Usability: Mostly rated 'very easy'.
SELECT	
WFR.02.01 - Selecting multiple records, WFR.02.02 - Selecting a single record, WFR.02.03 - Selecting records based on values, WFR.02.04 - Boolean operators, WFR.02.05 - Indication of selected fields, WFR.02.07 - Reuse saved queries	Acceptance: Accepted by all CPs. Some CPs added that they were standard CMS functionality. Usability: Mostly rated 'easy'
PREPARE	
WFR.03.01 - Automatic EDM mapping	Acceptance: CPs are divided: accepted and not tested. CPs that indicated not tested explained that the CMS exports only LIDO. The conversion from LIDO to EDM is done in the DA.

	Usability: Rated ‘easy’ and ‘difficult’
WFR.03.02 - Preview mapping	Acceptance: Accepted by most CPs. Usability: Mostly rated ‘easy’
WFR.03.03 - Editable mapping	Acceptance: Accepted by most CPs. Usability: Mostly rated ‘difficult’ to ‘very difficult’. CPs argue that updating a mapping is not possible without technical assistance.
WFR.03.04 - Mapping feedback, WFR.03.05 - Saving mapping	Acceptance: Accepted by most CPs. Usability: ‘Mostly rated ‘very easy’ or ‘easy’
WFR.03.06 - Field explanations, WFR.03.07 - Automatic value insertion	Acceptance: Accepted by most CPs. Usability: Rated ‘very difficult’, ‘difficult’ and ‘easy’.
WFR.03.08 - Check digital asset availability	Acceptance: Accepted by most CPs. Usability: Mostly rated ‘very easy’ or ‘easy’
WFR.03.09 - Thumbnail selection	Acceptance: Accepted by most CPs. Usability: Mostly rated ‘very easy’ or ‘easy’
WFR.03.10 - Multiple assets, WFR.03.11 - Defining media types, WFR.03.12 - Metadata field on IPR digital object, WFR.03.13 - Metadata field on IPR metadata, WFR.03.14 - Metadata field on IPR preview	Acceptance: Accepted by most CPs. Usability: Mostly rated ‘easy’.
WFR.03.15 - Mark mandatory fields	Acceptance: Accepted by most CPs. Usability: Mostly rated ‘very easy’ and ‘easy’.
WFR.03.16 - Choosing a default mapping	Acceptance: Accepted by most CPs. Usability: Mostly rated ‘very easy’.
WFR.03.17 - Automatic data suggestion	Acceptance: Not tested by most CPs.
WFR.03.18 - Target format selection	Acceptance: CPs are divided: accepted and not tested. Usability: Mostly rated ‘very easy’ or ‘easy’.
WFR.03.19 - Semantic data enrichment	Acceptance: CPs are divided: accepted (6) and not tested (7). Usability: Mostly rated ‘very easy’
WFR.03.20 - Conditional mapping, WFR.03.21 - Nested or grouped mapping, WFR.03.24 - Apply PID, WFR.03.25 - Conditional field conversion	Acceptance: Accepted by most CPs. Usability: Mostly rated ‘difficult’ and ‘very difficult’. CPs argue that good technical knowledge or technical assistance is needed.
WFR.03.22 - Intermediate format mapping	Acceptance: Accepted by most CPs Usability: Mostly rated ‘easy’ and ‘very difficult’.
WFR.03.23 - Support for conditional truncation	Acceptance: Accepted by most CPs. A few indicated not tested. Usability: Mostly rated ‘difficult’ and ‘very difficult’: CPs argue that good technical knowledge or technical assistance is needed.

VALIDATE	
WFR.04.01 – Validation, WFR.04.02 - Feedback on validation	Acceptance: Accepted by most CPs. A few CPs indicated not tested. Usability: Mostly rated 'difficult' and 'very difficult'. It is not easy to understand the logfiles without technical knowledge or assistance.
WFR.04.03 - Edit invalidated fields, WFR.04.04 - Automatic license validation	Acceptance: CPs are divided: accepted, not accepted and not tested. Usability: Mostly rated 'easy' and 'very easy'
WFR.04.05 - Test ingestion	Acceptance: CPs are divided: accepted and not tested. Usability: Mostly rated 'easy' and 'very easy'
WFR.04.06 - Align validation	Acceptance: Not tested by most CPs. A few CPs accepted the FR. Usability: Rated 'very easy' by the ones that accepted the FR.
SUPPLY	
WFR.05.01 - Automatic supply	Acceptance: Accepted by most CPs. Usability: Mostly rated 'easy' and 'very easy'
WFR.05.02 - Re-supply functionality for failed records	Acceptance: CPs are divided between accepted, not accepted and not tested. Usability: Mostly rated 'easy' and 'very easy'
WFR.05.03 - Schedule data supply	Acceptance: Not tested by most CPs.
WFR.05.04 - Tools for third-party collaboration	Acceptance: Not tested by most CPs. A few CPs accepted the FR. Usability: Rated 'very easy' and 'difficult' by the few that accepted the FR.
DATA ACCEPTANCE	
WFR.06.01 - Preview presentation Europeana	Acceptance: Accepted by most CPs. Usability: Rated 'very easy' and 'easy'.
WFR.06.02 - Withdraw records	Acceptance: Not tested by all CPs. Europeana does not support incremental harvesting.
WFR.06.03 - Update published records	Acceptance: Accepted by all CPs in relation to updating records in the DA or CG. Europeana however does not support incremental harvesting. It is not possible to update records directly on Europeana.
WFR.06.04 - Publication indication	Acceptance: Not tested by all CPs.
WFR.06.05 - Automatic publication alert	Acceptance: CPs are informed when the data is supplied to the DA or CG. They are however not informed on the publication of the data on Europeana.
ENRICH AND RETURN	
WFR.07.01 - Available enriched content alert	Acceptance: CPs are divided: accepted, not tested and not accepted. Usability: Mostly rated 'very easy'

WFR.07.02 - Acceptance or declining of enrichments on record level, WFR.07.03 - Automatic ingest of enriched data, WFR.07.04 - Separate enriched data	Acceptance: CPs are divided: accepted and not tested. Usability: Mostly rated 'very easy' and easy.
WFR.07.05 - Enriched IPR identification	Acceptance: CPs are divided: not accepted and not tested.
WFR.07.06 - Choose target ingest, WFR.07.07 - Acceptance or declining of enrichments on field level, WFR.07.08 - Persistent ID's enrichment, WFR.07.09 - Pull option, WFR.07.10 - Enriched data management	Acceptance: CPs are divided: accepted and not tested. Usability: Mostly rated 'very easy' and easy.

Conclusions

Usability
Overall CPs indicated that they understand the FRs and are able execute it easily. CPs experience most difficulties with the mapping (editing of the mapping, interpreting the logfiles,..). Some of them stated that without technical knowledge or assistance they are not able to execute the functionality.
For CPs that were able to test the enrich and return functionalities, most of them rated them 'very easy' or 'easy'.

Validation and preview
In iteration 3 both services only recognizes LIDO as input format. Iteration 4 included validation and preview of EDM.

Data acceptance
WFR.06.03 - Update published records is accepted by all CPs in regard to updating records in the DA or CG. It is however not possible for CPs to update or withdraw records from Europeana. CPs are notified when their content is supplied to the DA or CG, but they are not informed on the publication of their data on Europeana, nor on the processing steps and scheduling in Europeana. Those FRs are depended on Europeana services.

Enrich and return
CPs that tested the enrich and return functionalities accepted most of the FRs. However, even though the enrichments found their way back to the system of the CPs, not all CPs are satisfied with the way the enrichments are presented in their system (e.g. when all enrichments are placed together in a single list).

3.2 Content Providers Survey i4

The goal of the Content Providers Survey i4 was to gain insight into how CPs evaluated the ECK after testing four iterations (Appendix II).

The questions asked were:

1) Did you receive sufficient assistance and documentation by the technical partner?
2) Did you discuss the problems that occurred during the testing in the Basecamp-groups? Why not?
3) How is your overall evaluation of the ECK?

4) STRENGHTS: what do you feel is the **main advantage** of the ECK for each step of the workflow (manage, select, prepare, validate, supply, data acceptance, enrich and return)?
5) WEAKNESSES: What do you feel is the **main barrier** of the ECK for each step of the workflow (manage, select, prepare, validate, supply, data acceptance, enrich and return)?

Who completed the evaluation form?

- The survey was completed by: Petofi Irodalmi Muzeum PIM (HU), Szepmuveszeti Muzeum FAB (HU), Municipio do Seixal SEI (PT), Benaki Museum (BEN) (GR), National Gallery-Alexandros Soutzos Museum (NAG), Stiftung Preussischer Kulturbesitz (SPK) (DE), Royal Museums of Art and History (KMKG) (BE), Institut Royal des Sciences Naturelles de Belgique RBINS (BE), KADOC - KU Leuven (BE) and Stiftelsen Länsmuseet Västernorrland SLV (SE).
- Xantys Limited / House of Images - HIM (UK) and Magyar Nemzeti Muzeum MNM/HNM (HU) did not complete the survey.
- KE Software presented the results from their testing partner Bristol Museums, Galleries and Archives.
- System Simulation (SSL) presented the results from their testing partner the London Transport Museum (LTM).

Summary of the answers

With the exception of one, all CPs were **satisfied with the technical assistance** their received from their technical partner. The one that wasn't, tested with an associate TP that didn't complete the development of iteration 4.

There were no discussions in Basecamp. **All CPs communicated directly with their technical partner** (phone/Skype/in person).

CPs gave ECK iteration 4 overall a **good evaluation**, although some functionalities remain difficult to comprehend.

Overview of most mentioned strengths and weaknesses

Workflow step	STRENGHTS	WEAKNESSES
Manage	The possibility to trace the records: which records were exported and when.	It is not possible to see when the records were published on Europeana.
Select	Special record flags were developed in order to mark records which are intended to supply to Europeana.	Most functionalities were already part of the CMS
Prepare	The mapping can be saved for repeated use.	It is not easy to understand and perform functionalities on the mapping without technical assistance.
Validate	LIDO and EDM export are both a great leap forward. The system reports on irregularities of the mapping results The system reports on broken links and	The report on the irregularities is not always easy to understand. A successful validation doesn't always mean that the data is successfully validated by Europeana as well.

	invalid data	
Supply	The system makes it possible to automatically supply data (by push or pull) to the aggregator. No manual upload is needed.	Europeana doesn't say when the ingested records are published on the portal. In case of an error, the entire process needs to be re-started. It is not possible to just select the failed records.
Data Acceptance	The records can be previewed before they are published on Europeana.	It is not possible to see all records in preview at once. Only record per record. The CP is not informed on publication of the data on Europeana. CPs cannot withdraw or update records on Europeana.
Enrich and Return	The enrichments are kept separate from the original data. Enriched data is ingested automatically in the CPs system after approval by the CP.	The CP is not automatically informed when enrichments are available. It is not possible to create a list of the enriched records after automatic data enrichment yet.

Table 2: Overview strengths and weaknesses

3.3 Content Providers Survey i4 – Content Re-Ingestion

The goal of the CPs survey on content re-ingestion is to **evaluate the quality of the metadata**. In collaboration with Europeana a survey was made to evaluate the enrichments (which fields are enriched, are CPs satisfied with the enrichments, what are the main advantages of the enrichments and how do CPs plan to re-use the enrichments). The survey does not assess whether the enrich and return functionalities are present in the CMS of the CPs. That is to be evaluated in the Acceptance and Usability form.

Who completed the evaluation form?

- The survey was completed by: National Gallery-Alexandros Soutzos Museum - NAG (GR), Benaki Museum – BEN (GR), Royal Museums of Art and History (KMKG) (BE), Stiftung Preussischer Kulturbesitz (SPK) (DE), Stiftelsen Lansmuseet Vasternorrland - SLV (SE), KADOC – KU Leuven (BE), Institut Royal des Sciences Naturelles de Belgique - RBINS (BE) and Petofi Irodalmi Muzeum - PIM (HU). Not all CPs were able to evaluate the enrichments in their CMS. Some assessed the quality of the enrichments on the Europeana portal or in a spreadsheet provided by their TP.
- For CPs assessing enrichments on the Europeana portal, there is a margin of error to be considered: on the Europeana portal it is not possible to see which fields were enriched by Europeana and which fields were enriched by CPs themselves (e.g. enrichments from SPK on agent – by the vocabulary GND (German National Library) – are contributed by SPK themselves in LIDO and were not enriched on the portal http://bit.ly/1q9X8KN).

- KE software (Bristol Museums, Galleries and Archives) completed the survey as well, even though there weren't any enrichments available. They provided more general feedback on the re-use and the advantage of enrichments.

Overview of enrichments on content delivered for EUInside
(between brackets is the amount of records specified that was enriched with the specific field)

Enriched fields	**Used vocabulary**	**NAG** (9064 published records)	**BEN** (13017 published records)	**KMKG** (21763 published records)	**SPK** (10764 published records)
Agent	**DBpedia**	Yes (5)	No	Yes (97)	Yes (2368 – not DBpedia[5])
Places	**Geonames**	No	No	No	Yes (8193)
Time periods	**Semium Time**	No	No	No	Yes (812)
Concepts	**GEMET and DBpedia**	No	Yes (482)	Yes (3275)	Yes (3,751[6])

Table 1: Overview enriched fields NAG, BEN, KMKG and SPK

Enriched fields	**Used vocabulary**	**SLV**[7] (157486 published records)	**KADOC** (6476 published records)	**RBINS** (3082 published records)	**PIM** (10000 published records)[8]
Agent	**DBpedia**	No	Yes (4)	No	Yes (13)
Places	**Geonames**	No	No	Yes (33)	Yes (6835)
Time periods	**Semium Time**	Yes (3697)	No	No	No
Concepts	**GEMET and DBpedia**	Yes (123109)	Yes (299)	Yes (2296)	Yes (9079)

Table 2: Overview enriched fields SLV, KADOC, RBINS and PIM

Successes and failures (Appendix III)

Both tables illustrate that not all fields were equally enriched: **Concepts (GEMET and DBpedia)** was most often enriched, **Time periods (Semium time)** the least.

There are two possible explanations:

1) For content to be enriched, the metadata needs to be provided. When for example the fields geographic reference, date or date of creation are not provided by the CP, they cannot be enriched (e.g. BEN where only 'type' is enriched http://bit.ly/1rb31Ok).
2) It is possible that there aren't (many) enrichments, because of the way the CP supplied the content. For example:
   - Time Periods: time ranges are not enriched (e.g. KMKG date of creation *500-100*: http://bit.ly/1BsGsHp).

[5] From the agent enrichments evaluated by SPK on the Europeana portal, all enrichments were with GND (German National Library) used. Those enrichments were added in LIDO by SPK. There were no enrichments by Europeana with DBpedia.
[6] From the concept enrichments evaluated by SPK on the Europeana portal, all enrichments were with GEMET, none with DBpedia.
[7] The amount of records was added by WP4 lead.
[8] The amount of records was added by WP4 lead.

- Places: enrichments by GeoNames are not possible when the content is provided as a string (e.g. KMKG Geographic Coverage: *Europe > Europe centrale > Allemagne > Bade-Wurtemberg (état fédéré) > Stuttgart (district)* http://bit.ly/1p52yus). Europeana's enrichment tool cannot create a link to Geonames from this, because no GeoNames place has this as a label.

CPs were **overall positive** about the enrichments of **Agents (DBpedia)**. They did however remark that:

- The enrichments are not always correct. Moreover, CPs don't always know whether the enrichment is the right one and it takes a lot of work to verify.
- The enrichments seem to be limited to one person. When there is more than one creator, only one is enriched with DBpedia (e.g: KMKG Creator: *van Schoor, Louis; Achtschellinck, Lucas; de Vos, Judocus; Lucas Achtschellinck*. Only Lucas Achtschellinck is enriched with DBpedia http://bit.ly/1ohLPik).

Three CPs evaluated enrichments of **Places (GeoNames)** and where satisfied when correctly enriched (e.g. RBINS Subject *China* http://bit.ly/1w0erqi). They did stumble upon two restrictions:

- Some enrichments were incorrect (e.g. SPK, geographic coverage: *Colombia, Republic of Colombia, San Agustin, Río de Tablón W.* http://bit.ly/1q9X8KN. The object was found in Columbia, in San Agustín, Río de Tablón. In GeoNames the geo-coordinates of San Augustin and Province of Teruel are however referring to a place and region in Spain, Europe instead of South America).
- For non-European regions, Europeana only takes countries as the target for enrichment. Consequently, in some cases, only the country is enriched and not regions and towns (e.g. SPK geographic coverage: *Indonesia, Republic of Indonesia; Sumatra; Toba Batak*: Indonesia is enriched, not the island of Sumatra and the city where the object was found http://bit.ly/1oTTOCi).

In the few cases where **Time periods (Semium time)** were enriched, CPs could not evaluate the actual enrichment since Semium.org seems to be expired: *The webhosting subscription for this domain: semium.org has expired and is pending renewal or deletion.* Secondly, the list generated in 'auto-generated tags' is considered not to be very useful (e.g. SPK http://bit.ly/1uM53Fb).

The enrichments in **Concepts (GEMET and DBpedia)** gave mixed results. For several records, when DBpedia was used, the enrichment was correct (e.g KMKG type 'Tapestry' was correctly enriched. http://bit.ly/1qj2uDK). Enrichments by GEMET were not always accurate (e.g KMKG type 'Architectural plan' was wrongly enriched by GEMET with "A scheme of action, a method of proceeding thought out in advance" http://bit.ly/1pxpnGL).

Places (GeoNames) and **Concepts (GEMET and DBpedia)** were overall considered as the **most valuable enrichments,** especially to facilitate **multilingual and cross-domain search**.
Two critical remarks:

- GeoNames enrichments are found to be often accurate, but GEMET subjects aren't.
- Not all correct enrichments by GEMET were found equally relevant by all CPs (e.g. SPK http://bit.ly/1sFMu4J where the type *photography* is enriched with three concept terms. These terms however expand on the material of the object (photography), but what is interesting about it (what the photography contains) is not covered. In this case, however, the 'real' Europeana enrichment is only 'photograph' (http://www.eionet.europa.eu/gemet/concept/6205). The two others are broader concepts of this first one, which are brought in the index for 'semantic' search - but it's a different step).

Form October 2013 until March 2014 an **Europeana Tech Task Force** was set up on **Multilingual and Semantic Enrichment Strategy.** The task force analysed controlled vocabularies, collections, and metadata fields on the Europeana portal in order "for the metadata enrichments to enfold their whole potential and act as facilitators of multilingual access" [9]. Some of the comments given by CPs on the quality of the enrichments correspond with the findings of the task force (only places in Europe are enriched, incorrect enrichments by GEMET, limited list or resources to link to for agent and issues with date ranges).

When asked about the added **value of the enrichments**, several CPs responded the main advantage to be the **multilingual search** for users. However, since not all records were enriched, the advantage remains minimal.

While CPs find the enrichments promising, they haven't, at this point a clear vision on how to **re-use** the enriched data. Most partners replied that the possibilities of re-using data is something that needs to be examined further. If the quality of the metadata enrichments could be evaluated on a larger scale for a longer period, the possibilities of re-using enrichments might be broader.

Carefully formulated suggestions for re-use:

- The enriched content will be ingested and then handled together with the record, so they will be supplied during a future aggregation process (PIM).
- The exploration of the re-use of (a set of?) concepts in our own catalogue (accessible for the public): how time consuming will it be to check the accuracy of the translations? Would we make a blacklist of incorrect concepts (KADOC – KU Leuven)?
- GeoNames and Concepts datasets have high potential and can be implemented in the front desk search portal for users (RBINS).

<u>Suggestions from CPs to improve enrichments for possible re-use</u>

- It would be useful if CPs had **more insight in the enrichment rules**, **how** and **what fields enrichment takes place**. This would not only help them in the evaluation process of the enrichments, but it would also help CPs to improve/re-structure their metadata in such a way to increase enrichment success.
- The procedure to **report on bad enrichments** is not transparent. When CPs notice for example that dc:creator or dc:contributor is consequently been enriched with the wrong person in DBpedia, it is not entirely clear where they can report it and whether Europeana will correct or remove the enrichment.
- If Europeana were to enrich records based on **the values of other records contained within Europeana**, and the **feedback of these enrichments by partners**, this would provide the potential for an industry wide commonly agreed vocabulary.
- The **europeanaCompleteness** seems to measure the data quality by giving a number from 1 to 10. There is however no documentation on the used scale. It is difficult to improve the metadata, when it is not clearly defined what is good quality metadata for Europeana.
- CPs would like to have the possibility to **refuse enrichments** to take place. Especially when they notice that the enrichments haven't been really successful. They want to be able to decide whether to show them or not.

[9] The final report was published the 7th of April 2014: http://pro.europeana.eu/documents/468623/8b75b054-712e-432b-a0f7-761898e6f60e.

Conclusions

Testing iteration 4 production ECK was considered a success. CPs in the consortium tested the final iteration and provided feedback on the developed functionalities and on the test process. Most of the commercial vendors of collection management systems in the consortium without a direct CP in the project found an associate content partner to test with. This made it possible for the ECK services to be evaluated in their systems as well.

Iteration 4 ECK was **positively evaluated.** Among the most mentioned **strengths** of the ECK are: the possibility to export in LIDO and EDM, the validation and preview of LIDO and EDM and finally the direct supply to the aggregator (Dark Aggregator and Culture Grid) via OAI-PMH or SWORD. Among the most mentioned **weaker points** are the mapping. CPs have difficulties in comprehending some of the functional requirements that deal with mapping (e.g. interpreting the logfiles…). Clear guidelines or a practical manual would be helpful for most of the CPs. Secondly, CPs are not able to withdraw or update any records on Europeana, nor are they informed when the data is actually published on the portal. Those FRs are depended on Europeana services.

Most of CPs also participated in testing the **enrich and return functionalities** and/or evaluated the quality of the enriched content on the Europeana portal. They were satisfied that the enriched content that is pulled back into their system is kept separate from their original data. On the quality of the enrichments are CPs mostly pleased with **Places (GeoNames)** and **Concepts (GEMET and DBpedia)** and they see advantage in **multilingual and cross-domain search.** The re-use of enrichments is something that needs to be explored further.

Appendix I: Acceptance and usability test form i4

The purpose of the first part of the form is to evaluate whether the all functional requirements that needed to be developed were present and worked. Content partners indicated in the Acceptance Test Forms whether the requirements were **accepted (A)**, **not accepted (NA)** or **not tested (NT).** Added for iterations 3 and 4 are the columns on usability. Content partners are asked to rate the FRs: how easy was it to perform the functionality (very easy, easy, difficult, very difficult) and explain why. (see appendix I).(= maybe add this as introduction of the Appendix)

Included are all required functionalities (*D4.6 Technical specification*)

Technical partners: Describe where the functionality is implemented.

Content partners: Indicate whether the functionality is present and working (accepted (A), not accepted (NA) or not tested (NT) and add remarks.

INSTRUCTIONS - READ FIRST	
(1)	List of all functional requirements (D2.4)
(2)	The description of the functional requirements (D2.4)
(3)	(To be completed by the CP) Indicate whether the functional requirement is present: A: accepted, NA: Not accepted, NT: not able to test
(4)	(To be completed by the TP) Describe where the functionality is implemented (in CMS module or ECK) and how
(5)	(To be completed by the CP) Describe bugs, issues and/or recommendations that you might have. Explain why the FR is not excepted.
(6)	(To be completed by the CP) Rate the FR: Indicate how easy or difficult it was to perform the functionality?

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		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**	1			Available in the Europeana → browse uploaded records log menu	The status of the exported records can be viewed by browsing and on record level. I miss the search facility.		1				
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1			Standard CMS functionality		1					
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1			Supported by the mapping.	XSLT skills are required in order to change the default settings.	1					
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**	1			Enrichments become part of the standard record once approved.		1					
Select												
WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1			Standard CMS functionality		1					

WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1			Standard CMS functionality		1						
WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1			Standard CMS functionality		1						
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1			Standard CMS functionality		1						
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1			Standard CMS functionality		1						
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1			Available through the standard CMS search form, saves the current search criteria. These can later be reloaded for a new search.		1						
Prepare													
WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**	1			CMS exports records to LIDO, the DA converts to EDM. Native EDM support is under development		1						
WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including**	1			Record preview is enabled in the CMS and the DA.		1						

	the thumbnail.											
WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1			Mapping editing has been improved with macroing capability on standard metadata fields for improved customizability	XSLT skills are still required in order to customize the mapping.			1			
WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**	1			Any errors are presented to the user directly or saved in the exchange log.			1				
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1			Available in the Europeana -> browse format mappings menu		1					
WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**	1			Partial support, needs final profile	Validation reports if EDM required fields missing or the required field's content is not appropriate	1					
WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**	1			Standard CMS functionality, extended support in the mapping.	The local database can be managed with the help of the technical partner. On the mapping level XSLT skills are required in order to change the default settings.	1					
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**	1			Supported by ECK Validation		1					
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**	1			The system chooses the first image for the thumbnail, ordering can be changed in the CMS.	The procedure has been changed. The mapping chooses all the images which can be published on the web (it is based on file format restrictions). The publishable image	1					

						formats will be included in the export.						
WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**	1			Standard CMS functionality		1					
WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**	1			Standard CMS functionality		1					
WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**	1			Previously implemented	Supported by the mapping. XSLT skills are required in order to change the default settings.	1					
WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**	1			Previously implemented	Supported by the mapping. XSLT skills are required in order to change the default settings	1					
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**	1			Previously implemented	Supported by the mapping. XSLT skills are required in order to change the default settings	1					
WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**	1			Standard CMS functionality		1					
WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1			Default mapping is „LIDO" unless configured otherwise,			1				
WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**			1							1	

WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**	1			Currently handled by the DA		1					
WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**	1			Manual conversion is supported by CMS, automatic available through content enrichment.		1					
WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**	1			Supported by the mapping, extensively used with selective mappings in different collections	XSLT skills are required in order to change the default settings	1					
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1			Supported by the mapping.	XSLT skills are required in order to change the default settings	1					
WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**	1			Available in the Europeana -> Browse format definitions menu		1					
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**	1			Supported but not needed yet.	Supported by the mapping. XSLT skills are required in order to change the default settings	1					
WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**	1			PID is applied during data export	Supported by mapping.	1					

WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**	1			Supported by mapping.	XSLT skills are required in order to change the default settings	1					
Validate												
WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**	1			Supported by ECK Validation		1					
WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**	1			Supported by ECK Validation		1					
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**	1			Supported by ECK Validation and CMS		1					
WFR.04.04 - Automatic license validation	**License information is validated automatically.**	1			Supported by ECK Validation		1					
WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**	1			Ingestion target depends on configuration, thus it is possible to configure test targets.	Technical support is needed in order to change the ingestion target configuration.	1					
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**	1			EDM profile conforms to Europeana, LIDO improvement in progress.		1					
Supply												
WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**	1			OAI-PMH and SWORD v1 are supported		1					

WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**	1			Supported either by manual restart or scheduled re-upload of failed records.		1					
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**	1			Scheduled upload is available through Admin → Scheduled tasks menu		1					
WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**	1			Any platform that accepts LIDO or EDM is supported	Technical support is required	1					
Data acceptance												
WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**	1			Supported by ECK Preview		1					
WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**			1	Partial support by CMS, to be completed in it4. Flag removal revokes records from Europeana						1	
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**	1			Every flagged record pushes updates (or is flagged for harvesting) when the record is updated		1					
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**		1		Only supported until ingestion in the aggregator	No remarks from Europeana after they've got the records. Only the outcome can be viewed on the portal sometime.					1	
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**		1		Needs support from Europeana	Once we just realized the records are published but we haven't got any					1	

						notification before.						
Enrich and Return												
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**	1			Available enrichments are shown in the Europeana → Available enrichments menu		1					
WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**	1			Supported by the CMS		1					
WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**	1			Supported by the CMS		1					
WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**	1			Enriched content is separated by default.		1					
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**			1	User-generated content not supported, the original record licence is applied to enriched data	The enriched data is in the public domain. This is our default use case scenario.					1	
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**	1			Supported by the CMS+ECK	Ingestion in the local CMS can be performed easily. The mapping needs to be developed in order to export the reused data, but then the enriched data will be included in the export and it will be ready to be ingested in another system.	1					

WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**	1			Supported by the CMS	After the whole set of enriched data was accepted, it could be cleaned on filed level if needed.	1					
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**	1			Supported by the CMS		1					
WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**	1			Immediate pull is supported.		1					
WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**			1	Supported by standard CMS record history.						1	

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		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**	1			Available in the Europeana → browse uploaded records log menu	The status of the exported records can be viewed by browsing and on record level. I miss the search facility.		1				
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1			Standard CMS functionality		1					
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1			Supported by the mapping.	XSLT skills are required in order to change the default settings.	1					
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**			1	Enrichments become part of the standard record once approved.						1	
Select												
WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1			Standard CMS functionality		1					
WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1			Standard CMS functionality		1					

WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1			Standard CMS functionality		1					
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1			Standard CMS functionality		1					
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1			Standard CMS functionality		1					
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1			Available through the standard CMS search form, saves the current search criteria. These can later be reloaded for a new search.		1					
Prepare												
WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**	1			CMS exports records to LIDO, the DA converts to EDM. Native EDM support is under development		1					
WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including the thumbnail.**	1			Record preview is enabled in the CMS and the DA.		1					
WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1			Mapping editing has been improved with macroing capability on standard metadata fields for improved customizability	XSLT skills are still required in order to customize the mapping.			1			

WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**	1			Any errors are presented to the user directly or saved in the exchange log.			1				
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1			Available in the Europeana -> browse format mappings menu		1					
WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**	1			Partial support, needs final profile	Validation reports if EDM required fields missing or the required field's content is not appropriate	1					
WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**	1			Standard CMS functionality, extended support in the mapping.	The local database can be managed with the help of the technical partner. On the mapping level XSLT skills are required in order to change the default settings.	1					
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**	1			Supported by ECK Validation		1					
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**	1			The system chooses the first image for the thumbnail, ordering can be changed in the CMS.	The procedure has been changed. The mapping chooses all the images which can be published on the web (it is based on file format restrictions). The publishable image formats will be included in the export.	1					
WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**	1			Standard CMS functionality		1					
WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level**	1			Standard CMS functionality		1					

	or per batch.											
WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**	1			Previously implemented	Supported by the mapping. XSLT skills are required in order to change the default settings.	1					
WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**	1			Previously implemented	Supported by the mapping. XSLT skills are required in order to change the default settings	1					
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**	1			Previously implemented	Supported by the mapping. XSLT skills are required in order to change the default settings	1					
WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**	1			Standard CMS functionality		1					
WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1			Default mapping is „LIDO" unless configured otherwise,			1				
WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**			1							1	
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**	1			Currently handled by the DA		1					
WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**	1			Manual conversion is supported by CMS, automatic available through content enrichment.		1					

WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**	1			Supported by the mapping, extensively used with selective mappings in different collections	XSLT skills are required in order to change the default settings	1					
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1			Supported by the mapping.	XSLT skills are required in order to change the default settings	1					
WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**	1			Available in the Europeana -> Browse format definitions menu	LIDO mapping is available. EDM mapping is not yet available in CMS, but it would be applicable if a mapping XSLT would be present.	1					
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**	1			Supported but not needed yet.	Supported by the mapping. XSLT skills are required in order to change the default settings	1					
WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**	1			PID is applied during data export	Supported by mapping.	1					
WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**	1			Supported by mapping.	XSLT skills are required in order to change the default settings	1					
Validate												
WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**	1			Supported by ECK Validation		1					

WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**	1			Supported by ECK Validation		1					
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**	1			Supported by ECK Validation and CMS			1				
WFR.04.04 - Automatic license validation	**License information is validated automatically.**	1			Supported by ECK Validation		1					
WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**	1			Ingestion target depends on configuration, thus it is possible to configure test targets.	Technical support is needed in order to change the ingestion target configuration.	1					
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**	1			EDM profile conforms to Europeana, LIDO improvement in progress.		1					
Supply												
WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**	1			OAI-PMH and SWORD v1 are supported		1					
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**	1			Supported either by manual restart or scheduled re-upload of failed records.		1					
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**	1			Scheduled upload is available through Admin → Scheduled tasks menu		1					
WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**	1			Any platform that accepts LIDO or EDM is supported	Technical support is required	1					

Data acceptance												
WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**	1			Supported by ECK Preview		1					
WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**			1	Partial support by CMS, to be completed in it4. Flag removal revokes records from Europeana						1	
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**	1			Every flagged record pushes updates (or is flagged for harvesting) when the record is updated		1					
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**		1		Only supported until ingestion in the aggregator	No remarks from Europeana after they've got the records. Only the outcome can be viewed on the portal sometime.					1	
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**		1		Needs support from Europeana	Once we just realized the records are published but we haven't got any notification before.					1	
Enrich and Return												
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**	1			Available enrichments are shown in the Europeana → Available enrichments menu		1					
WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**	1			Supported by the CMS		1					
WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**	1			Supported by the CMS		1					

WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**	1			Enriched content is separated by default.		1					
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**			1	User-generated content not supported, the original record licence is applied to enriched data	The enriched data is in the public domain. This is our default use case scenario.					1	
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**	1			Supported by the CMS+ECK	Ingestion in the local CMS can be performed easily. The mapping needs to be developed in order to export the reused data, but then the enriched data will be included in the export and it will be ready to be ingested in another system.	1					
WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**	1			Supported by the CMS	After the whole set of enriched data was accepted, it could be cleaned on filed level if needed.	1					
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**	1			Supported by the CMS		1					
WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**	1			Immediate pull is supported.		1					
WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**			1	Supported by standard CMS record history.						1	

Szepmuveszeti Muzeum FAB (HU) - TMS Gallery systems (associate partner)

		Acceptance					Usability					
WFR	**Acceptance criteria**	**Accepted?**			**Development notes vendor**	**Remarks**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (7)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**		1		Would be implemented in CMS; not finalised, but ideally via a mechanism that allows simple querying by date to fined exported records	Exported records can only be identified based on previous saved selection, without time indication of export.						
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1			CMS: at record level last date modified and user login is recorded.							
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1			Concatenation of Institution, Object Type and ObjectID: in ECK Module. Need to check against export file.							
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**			1								
Select												
WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1			CMS: via standard search tools; a saved query can be							

					constructed							
WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1			CMS: via standard search tools							
WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1			CMS: via standard search tools							
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1										
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**		1		CMS: check understanding of requirement; but dataview could be written to show fields per record included in a selection	The system is only able to show records that are or will be included in a selection, not fields.						
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1			CMS: see above							
Prepare												
WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**			1	ECK: CSM maps to LiDO; ECK to EDM?	The system maps to LiDO not EDM						
WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the**			1	ECK							

	converted metadata including the thumbnail.											
WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1			should there be a GUI to adjust mapping from TMS to LIDO?	Mapping is editable in XSL format.						
WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**			1	i.e. feedback on mandatory elements of LIDO not present etc. Consider in light of the above.							
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1			Only to extent that editable in Views; need GUI to modify mapping							
WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**			1	No - currently no GUI: see above re 03.04. Published LIDO standard incorporated into TMS.							
WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**	1			Check: handle as part of the automatically generated XML via Configuration etc settings?	Automatic value insertion is available in XSL format.						
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**			1								
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**	1										

WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**	1			Yes, but see 03.09							
WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**	1										
WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**			1	There is a Copyright field on MediaMaster table i.e. per image. But, no functionality for batch update, unless through 'copy and replace' functionality. Could be handled through a trigger.							
WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**			1	As for 03.12							
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**			1	We don't have separate IPR information related to thumbnail, as opposed to linked image. Is this required? Check Requirement.							
WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**			1	No current GUI to handle mapping, there not available.							
WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**			1	No; but check. Could currently be included in the Plugin i.e. when setting the plugin up, specify the mapping.							

WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**			1								
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**			1								
WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**			1								
WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**			1								
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1										
WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**			1	Not sure about this: all performed by CMS? Thought that CMS would have profile to LIDO, with ECK handling mapping from LIDO to EDM. But, could be done.							
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**			1								

WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**			1	Yes, the export should produce the PID. Needs to be done.							
WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**			1								
Validate												
WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**			1	ECK	The system validates mapping results against LIDO target schema only						
WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**			1	ECK							
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**			1	ECK							
WFR.04.04 - Automatic license validation	**License information is validated automatically.**			1	ECK							
WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**			1	ECK							
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**			1	ECK							
Supply												

WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**	1										
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**	1										
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**	1										
WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**			1								
Data acceptance												
WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**	1										
WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP**	1										
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**	1										
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**	1										

WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**	1										
Enrich and Return												
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**			1								
WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**			1								
WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**			1								
WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**			1								
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**			1								
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**			1								
WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**			1								
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**			1								

WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**			1									
WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**			1									

Municipio do Seixal SEI (PT) - Mobydoc MOB (FR)

		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**	1			Implemented in the OPAC Web Generator (OWG) Module of the CMS. Refer to Documentation "manuel_opacweb" in French	System log existe en V6, via archivage en V7 ?, harmoniser les besoins d'exports (OW, EU-I, Joconde)	1					
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1			Implemented in the OPAC Web Generator (OWG) Module of the CMS. Refer to Documentation "manuel_opacweb" in French	Existe en V7 via archivage. Exploitable tel quel ? MAJ géré en V7	1					
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1			Implemented in the OPAC Web Generator (OWG) Module of the CMS. Refer to Documentation "manuel_opacweb" in French	PID généré via l'ECK, à récupérer et stocker dans l'enregistrement		1				
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**		1			Cible : récupérer dans un entrepôt de l'application exploitable					1	Not possible to test on this version of the CMS in use (V6)

Select													
WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1			Implemented in the OPAC Web Generator (OWG) Module of the CMS. Refer to Documentation "manuel_opacweb" in French	OK V7 (Générateur et serveur)	1						
WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1			Implemented in the OPAC Web Generator (OWG) Module of the CMS. Refer to Documentation "manuel_opacweb" in French	OK V7 (Générateur et serveur)	1						
WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1			Implemented in the OPAC Web Generator (OWG) Module of the CMS. Refer to Documentation "manuel_opacweb" in French	OK V7 (Générateur et serveur via facettes prédéfinies)	1						
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1			Implemented in the OPAC Web Generator (OWG) Module of the CMS. Refer to Documentation "manuel_opacweb" in French	OK V7 (Générateur)	1						
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1			Implemented in the OPAC Web Generator (OWG) Module of the CMS. Refer to Documentation "manuel_opacweb" in French	OK V7 (Générateur)	1						
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1			Implemented in the OPAC Web Generator (OWG) Module of the CMS. Refer to Documentation "manuel_opacweb" in French	OK V7 (Générateur)	1						
Prepare													

WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**			1	MOB + Aggregator; IT2: to be tested with Aggregator	AWS (WFR.07.02 et WFR.07.04)							
WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including the thumbnail.**			1	Aggregator; IT2: to be tested with Aggregator	AWS (WFR.07.06). ATTENTION, indiqué MOB ! Possibilité de l'avoir à 2 niveaux/							
WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**			1	Aggregator; IT2: to be tested with Aggregator	OK V7 (Générateur), via générateur de profil, idem pour Joconde V7							
WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**			1	Aggregator; IT2: to be tested with Aggregator	?							
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**			1	MOB + Aggregator; IT2: to be tested with Aggregator	OK V7 (Générateur)							
WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**			1		?							

WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**			1	MOB + Aggregator; IT2: to be tested with Aggregator	?						
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**	1				OK V7 (Générateur)		1				
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**	1				AWS à décrire		1				
WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**	1				OK V7 (Générateur)		1				
WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**	1				?		1				
WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**	1				OK V7 (Générateur) ?		1				

WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**	1				OK V7 (Générateur) ?		1				
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**	1				OK V7 (Générateur) ?		1				
WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**	1				OK V7 (Générateur)		1				
WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1				OK V7 (Générateur)		1				
WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**			1		?						
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**			1		?						

WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**			1		OK V7 (Générateur)						
WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**			1		?						
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**			1		?						
WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**			1		OK V7 (Générateur)						
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**	1				?	1					
WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of**			1		?						

	the relevant CP.												
WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**			1		?							
Validate													
WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**			1	Aggregator	AWS pas de WFR							
WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**			1	Aggregator	AWS pas de WFR							
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**			1	Aggregator	OK V7							
WFR.04.04 - Automatic license validation	**License information is validated automatically.**			1	Aggregator	?							
WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**			1	Aggregator	AWS pas de WFR							

WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**			1	Aggregator	AWS pas de WFR							
Supply													
WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**			1	MOB	AWS WFR.07.04 ?							
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**			1	MOB+AGGREGATOR	AWS WFR.07.04 ?							
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**			1		AWS WFR.07.04 ?							
WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**			1		AWS WFR.07.02 ?							
Data acceptance													
WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**			1		AWS (WFR.07.06). ATTENTION, indiqué MOB ! Possibilité de l'avoir à 2 niveaux/							

WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**			1		AWS pas de WFR						
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**			1	MOB+AGGREGATOR	AWS pas de WFR						
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**		1			?						
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**			1	AGGREGATOR	?						
Enrich and Return												
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**		1			AWS WFR.07.11						
WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**		1			AWS WFR.07.11						
WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**		1			?						

WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**		1			?						
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**		1			?						
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**		1			?						
WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**		1			?						
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**		1			?						
WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**		1			?						

WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**		1			?							

Benaki Museum (BEN) (GR) - PostScriptum PS (GR)

		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**	1						1				
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1						1				
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1						1				
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**			1							1	
Select												

WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1					1						
WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1					1						
WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1					1						
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1					1						
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1					1						
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1					1						
Prepare													
WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**	1							1				The creation or updating of a mapping is not possible by CPs with no technical assistance

WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including the thumbnail.**	1					1					
WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1								1		The creation or updating of a mapping is not possible by CPs with no technical assistance
WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**	1						1				
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1					1					
WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**	1						1				
WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**	1								1		The creation or updating of a mapping is not possible by CPs with no technical assistance
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**	1						1				

WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**			1		Not applicable to our data					1	
WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**			1		Not applicable to our data					1	
WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**			1							1	
WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**	1								1		The creation or updating of a mapping is not possible by CPs with no technical assistance
WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**	1								1		The creation or updating of a mapping is not possible by CPs with no technical assistance
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**	1								1		The creation or updating of a mapping is not possible by CPs with no technical assistance
WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**	1					1					

WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1					1						
WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**		1							1			The creation or updating of a mapping is not possible by CPs with no technical assistance
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**			1								1	
WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**			1								1	
WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**	1									1		The creation or updating of a mapping is not possible by CPs with no technical assistance
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1									1		The creation or updating of a mapping is not possible by CPs with no technical assistance

WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**	1						1					The creation or updating of a mapping is not possible by CPs with no technical assistance
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**			1								1	
WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**	1								1			The creation or updating of a mapping is not possible by CPs with no technical assistance
WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**			1		Not applicable to our data						1	The creation or updating of a mapping is not possible by CPs with no technical assistance
Validate													
WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**	1						1					
WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**	1								1			The creation or updating of a mapping is not possible by CPs with no technical assistance
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather**	1						1					

	than the whole set.												
WFR.04.04 - Automatic license validation	**License information is validated automatically.**	1						1					
WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**	1											
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**	1				The CPs are not automatically informed by the ECK.							
Supply													
WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**	1						1					
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**			1								1	
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**			1								1	

WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**	1							1				The creation or updating of a mapping is not possible by CPs with no technical assistance
Data acceptance													
WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**	1						1					
WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**			1								1	
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**	1						1					
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**		1									1	
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**	1		1		Accepted for aggregator, Not tested for Europeana as our records are not on Europeana yet						1	
Enrich and Return													

WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**	1						1					
WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**			1		Not applicable to our data as we had no returned enriched content						1	
WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**			1		Not applicable to our data as we had no returned enriched content						1	
WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**			1		Not applicable to our data as we had no returned enriched content						1	
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**			1		Not applicable to our data as we had no returned enriched content						1	
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**		1			Not applicable to our data as we had no returned enriched content						1	
WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**			1		Not applicable to our data as we had no returned enriched content						1	
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**	1						1					

WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**	1						1					
WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**			1								1	

National Gallery-Alexandros Soutzos Museum (NAG) - PostScriptum PS (GR)

		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**	1					1					
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1				The information about who and when altered a record is directly visible and searchable in M+.	1					
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1					1					
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**	1					1					

Select													
WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1					1						
WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1					1						
WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1					1						
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1					1						
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1					1						
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1					1						
Prepare													

WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**		1		It was decided in the technical meetings that the conversion from LIDO to EDM will take place on the dark aggregator through the developed by LIBIS service.	We didn't find any function in the MCK that converts from Lido to EDM.							
WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including the thumbnail.**	1				Not full preview, of the mapped fields from local schema to Lido, is available, we could only preview the four Lido mandatory fields plus provider name (Title, Work Type, Inventory No, Date, Provider: Europeana Inside).	1						
WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1						1					
WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**	1				After exporting an object group from M+, a logfile is opened automatically where every information about warnings and errors in the mapping are displayed.		1					
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1					1						

WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**	1						1				
WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**	1				MCK's Preferences tab.		1				
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**	1				MPITS component was developed to implement this specific FR, these days it will be installed into M+ Server. At the moment can only be run by a technical expertise, because it's designed to operate as an OS Scheduled Task.			1			
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**	1				The same as above.			1			
WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**	1				The same as above.			1			

WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**	1				This is set in the mapping (refers to a special Europeana field inside of classification wrap).		1				
WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**	1			This is done directly in the mapping itself.			1				
WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**	1			This is done directly in the mapping itself.			1				
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**		1			This is possible through MCK's mapping editing service.					1	
WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**	1						1				
WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1						1				

WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**		1								1	
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**	1						1				
WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**			1	This could be done via the mapping, too. For example, it is possible to link to Getty AAT keywords or to the (yet unofficial) lido terminology for example in the event types or in the material values. Example for a link that could be inserted into a LIDO xml file for a material by the URI http://vocab.getty.edu/aat/300311452.	We didn't test this FR, not in our testing needs yet.					1	
WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**	1				This is inherent and feasible in the mapping itself.		1				

WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1						1				
WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**		1		It was decided in the technical meetings that the conversion from LIDO to EDM will take place on the dark aggregator through the developed by LIBIS service.	MCK facilitates only mapping between local schema and Lido. The mapping from Lido to EDM is done in the DA.					1	
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**	1				Through mapping configuration.		1				
WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**	1										
WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**			1	This is possible in the MCK, for example in a mapping it could be defined, that the artists that are related to an object are grouped into the corresponding event type by help of the artists' function . That is for example it could be defined that all the artists that have a function like "painter" are exported into the event "Creation", and all the artists that have a function like "producer" are exported into the event "Production" and so on.	We didn't test this FR, not in our testing needs yet.					1	
Validate												

WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**	1				Built-in validation for LIDO.	1					
WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**	1				Built-in validation for LIDO.	1					
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**		1			We didn't find this function in the MCK. Every time we had invalidated records we had to delete them from DA and re-upload them whether through the whole object group that they belonged or whether by configuring a new object group in M+ with them.					1	
WFR.04.04 - Automatic license validation	**License information is validated automatically.**		1			There is no such a service into MCK.					1	
WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**		1			We didn't find this function in the MCK.	1					
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**		1			The system warrants only the transformation from local schema to Lido and not the validation by Europeana at ingestion as well.					1	
Supply												

WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**	1					1					
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**		1			We didn't find this function in the MCK. In case of an error there isn't an automatic function of re-supply for failed records, we do it manually by re-supplying the whole object group that the failed records belong to, or by configuring a new object group in M+ with them and supply this group to the system.					1	
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**		1			There is no such a service into MCK.					1	
WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**		1			There is no such a service into MCK.					1	
Data acceptance												
WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**	1					1					

WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**		1			This can only be done into the DA.					1	
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**	1					1					
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**		1			There is no such a service into MCK.					1	
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**		1			There is no such a service into MCK.					1	
Enrich and Return												
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**		1			In order to see if there are any enrichments for some already uploaded data, you have to export the related object groups first and then select these object groups in MCK's Enrichments tab to check if there are any enrichments available.		1				

WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**	1						1					
WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**	1						1					
WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**		1									1	
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**	1						1					
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**	1						1					
WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**	1						1					
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**	1						1					

WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**		1									1	
WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**	1						1					

Royal Museums of Art and History (KMKG) (BE) - ZETCOM (DE)

		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**	1				Added search field in the CMS	1					
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1					1					
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1					1					
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**		1			The system is able to return enriched data from the DA, but the enrichments are not merged nor managed in the CMS.	1					
Select												

WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1				CMS	1						
WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1				CMS	1						
WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1				CMS	1						
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1				CMS	1						
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1				It can be seen in the mapping rules: which fields will be exported and in M+: the selection of object groups. There is however no general overview in which is stated which fields from one record are included.	1						
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1				CMS	1						
Prepare													

WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**	1				The MCK makes it possible to export a valid LIDO xml that can be uploaded to the DA. The transformation LIDO-EDM is performed in the DA.	1					
WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including the thumbnail.**	1				MCK	1					
WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1				MCK				1		It is not easy to adjust the mapping without technical knowledge or assistance.
WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**	1				MCK			1			Without technical knowledge it is not easy to understand the logfile and to correct the mapping.
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1				MCK	1					
WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**	1				MCK		1				

WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**	1				MCK			1				It is not easy to adjust the mapping without technical knowledge or assistance.
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**	1				MCK	1						
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**	1				MCK			1				It is not easy to adjust the mapping without technical knowledge or assistance.
WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**	1				When several images are added in the CMS, they can be exported in the LIDO xml.			1				It is not easy to adjust the mapping without technical knowledge or assistance.
WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**			1								1	
WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**			1								1	

WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**			1								1	
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**			1								1	
WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**	1				MCK	1						
WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1				MCK	1						
WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**			1		MCK						1	
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**	1				MCK	1						

WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**			1		MCK, it is possible, but not operational. The controlled vocabularies are not linked in the mapping.					1	
WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**	1				MCK				1		It is not easy to adjust the mapping without technical knowledge or assistance.
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1				MCK				1		It is not easy to adjust the mapping without technical knowledge or assistance.
WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**		1		Currently only the LIDO2EDM transformation web service can be used via the MCK, so the user does not have the possibility to control or change the mapping rules from LIDO to EDM.	Only mapping to LIDO is possible					1	
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**	1				MCK				1		It is not easy to adjust the mapping without technical knowledge or assistance.

WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**	1				MCK				1		It is not easy to adjust the mapping without technical knowledge or assistance.
WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**	1				MCK				1		It is not easy to adjust the mapping without technical knowledge or assistance.
Validate												
WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**	1				MCK, validation against LIDO xml (not EDM)	1					
WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**	1				MCK, logfiles				1		It is not easy understand the logfiles without technical knowledge or assistance.
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**		1		It is possible to reprocess only the corrected records but a new object group needs to be configured in MuseumPlus to do so.	The entire set is re-processed.			1			
WFR.04.04 - Automatic license validation	**License information is validated automatically.**			1							1	

WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**	1				MCK	1					
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**	1				MCK and DA. A successful validation in the DA doesn't always guarantee validation by Europeana.	1					
Supply												
WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**	1				MCK (push to the DA). However, all records are pushed in the DA, also the invalid ones. If some records are invalid, it will be shown in the logfile, but they are pushed in the DA anyway.	1					
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**		1		This is possible via generating a new object group in MuseumPlus for the failed records only	In case of an error, the system is able to re-start the supply process, but not only for the invalid records. Re-push of all records.					1	
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**		1			The records are being pushed to the DA from the moment you give the instructions to push them.	1					
WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**			1		It is not tested whether the data can be pushed directly to another platform then the DA.					1	
Data acceptance												

WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**	1					1						
WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**			1								1	
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**	1				The (dark) aggregator supports incremental harvesting. Records that are adjusted can be re-supplied.						1	
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**			1		Depends on Europeana services						1	
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**			1		Depends on Europeana services						1	
Enrich and Return													
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**	1				When object groups are selected in the MCK, the MCK searches for enrichments in the dark aggregator.	1						

WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**	1				It is possible to choose via the MCK which enrichments you want to flow back into the system.	1					
WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**	1					1					
WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**	1				All enriched data is shown separately. The enrichments aren't included in the actual record.	1					
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**			1							1	
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**	1				This has to be done manually (record by record)	1					
WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**		1			All enrichments of one record are shown together. There is no separation on field level.					1	
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**	1					1					

WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**			1							1	
WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**	1				An overview is given on which records are when enriched.	1					

Stiftung Preussischer Kulturbesitz (SPK) (DE) - ZETCOM (DE)

SPK did not test iteration 4 since there would be no changes in comparison to iteration 3. The results below are from testing iteration 3.

		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
yellow= NA or NT in iteration2		**A**	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**			1	Also this feature was deactivated in the MCK of the SPK due to security reasons. In all other installations of the MCK this is possible via a new search field in the MDS where the date of the last export etc. can be searched.	Record sets are saved in the MCK, but this information is not written in the MDS.						
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**			1		Changes are in the MDS						
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**			1	PID generation can be used in the MCK but only via a web service.	The Object ID are PIDs combined with ISIL, this information is part of the LIDO-Export (mapping performed in the MCK).						
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**			1	Only available via the MCK if web services can be used.	SPK will not participate in return scenario						
Select												

WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1				MDS and MCK can select multiple object groups.							
WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1				In MDS							
WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1				In MDS							
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1				In MDS							
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1			Just one small remark here: In principle, it's not only possible to select object groups in the MCK but also whole collections can be selected for export. As this is normally not feasible for the content partner to allow whole collections to be exported and published in a portal, this option is not used very often.	In MDS the user can search and select, but not once the object-group is built. MCK can only manage object-groups as a whole. The field selection is easily managable through the mapping, which will transform only the fields mapped. Once the mapping is specified, it will apply to all records in the object-group.							
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1			Mappings for the LIDO export are stored according to the MCK user preferences.	Queries are stored in MDS							
Prepare													

WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**	1			LIDO to EDM transformation is done via the central LIDO2EDM service integrated into the Europeana Inside Administration and Management Portal (Dark Aggregator)	MCK transforms to LIDO, currently the records are sent to the DA in LIDO-format. EDM mapping could be defined and applied to our MCK implementation, but this has to be defined by the working group.						
WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including the thumbnail.**			1	Preview only available when web services can be used or via the Europeana Inside Data Administration and Management Portal.	The preview is deactivated in the MCK, probably due to the fact that our MCK does not transform to EDM. Attachment: "SPK-MCK-interface.jpg" Preview is only possible in the Dark Aggregator.						
WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1										
WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**			1	Due to security reasons at the SPK the validation service had to be deactivated. This WFR is fully available in the MCK but only if the validation service is used!	When the MCK applies the mapping it runs with no incidents. The dataset contained some records (36) with empty mandatory fields, We found the errors analysing the log file. Attachments: "20140509-MCK-Logfiletest.txt" and "SMB-LIDO_export-615790_REQFIELD.xml"						
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1										
WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**	1										

WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**	A											
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**			1	Also this WFR is ensured via the use of the validation service which was explicitly deactivated for use in the SPK by request of the SPK due to security reasons	MDS is using e-Museumplus for presentation. The images are generated on this platform. MCK exports three views generated from the "Standard Bild" from the MDS. See attachment: "WFR-03-08.jpg" MCK does not check during transformation (some records without images were exported and transformed) Currently the SPK thumbnail dimension is 110x110 px. This gets blown up to the container in Europeana. But this is not an MCK issue.						
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**			1	The export of multiple digital assets is possible and configurable via the mapping.	We automatically export only one digital asset per record. This is chosen by the collection manager							

WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**			1	By digital asset here it is meant that a URL to a digital image is exported to LIDO. If several digital assets (image files) are reachable these can be exported - if desired by the CP - to LIDO as well.	_If by "digital asset" the preview image is meant, we automatically export only one digital asset per record. This is selected by the collection manager. This is due to pre-configuration of our export system in MDS, because in our online database only one digital asset (type:image) is displayed with each record. _If by "digital asset" related works are meant, the system exports the url and PIDs of related works in one single metadata record, but this does not mean that these related works are present within the records in the object-group.						
WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**	1			Media types are not defined on record level but on image level in the multimedia popup in the MDS! The problem with the audiovisual files is not caused by the MCK.	Media types are defined in the MDS on record level at the moment. MCK handles this per batch in the transformation. We have noticed a problem with audiovisual files. The url "is located at" leads to an html containing the file information, not the file itself. This should be further discussed.						

WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**	1			Partially Accepted. See vendor's comment to WFR 03.04. Missing information can only be checked by validation and this is done via the validation service. As this service is not used in the SPK on request of the SPK itself the MCK cannot provide double functionalities here! The system cannot insert information about the rights holders by itself, of course	Part of the mapping definition. This adds licenses automatically to each record and to each digital asset within a record, but not RIGHTS HOLDERS. Missing information in MDS on this field is reported as an error ("missing appellation value required", for this see example provided in WFR.03.04.)						
WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**				This can be done via mapping rules.	Same as above?							
WFR.03.13 - Metadata field on IPR metadata	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**	1			This can be done via mapping rules.	All three digital assets within one record (the master, preview and thumbnail) have the same IPR note. This licence is handled in batch.							
WFR.03.14 - Metadata field on IPR preview	**The system indicates which fields are mandatory for a chosen mapping or output data.**	1			Partially Accepted. Mandatory fields are marked and highlighted in the mapping view in the MCK. If the validation service is activated (as it should be generally) missing mandatory fields are reported and the file is marked as invalid, of course. MDS fields can't be predefined in the mapping as the MDS allows every CP to configure and use their MDS along their individual needs.	No mandatory fields are pre-defined in the mapping. If you map a "parent" field, MCK automatically warns you what child-fields have to be mapped						
WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1											

WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**			1									
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**	1			By target format LIDO or EDM is meant here.	_If by target format LIDO is meant, the CP only has to indicate the target format (defined in mapping). _If the format of the digital asset is meant, the mapping "reads" the suffix of the file in the MDS							
WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**	1				Vocabularies that are locally installed in MDS are exported. See attachment: "WFR-03-19.jpg"							
WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**	1											
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1											
WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**	1				Theoretically possible. One same object group can be transformed in 2 formats, but this are two different transformations, not necessarily sequential.							

WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**	1											
WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**	1			The specific ID that is generated for SPK records is only due to the fact that the PID service can not be used in the SPK due to security reasons	The object IDs are unique for all 16 museums from which we export data. The "inventory number" is not unique; therefore we combine the MDS record number with the ISIL as ID in the LIDO record.							
WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**	1											
Validate													
WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**			1	This feature is of course implemented but deactivated on request of the SPK.	Not implemented (due to IT restrictions)							
WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**			1	The validation service, which is integrated into the MCK, does handle this and gives valuable feedback about any irregularities	Not missing images							
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**			1	It is correct that if records in the MDS are changed these records have to be re-exported. This can be done either via a new object group or via the existing object group that was used for the first export. Normally it is not necessary to change the mapping.	Corrections have to be made in MDS and then these records have to be re-exported as a new object-group and defined in the mapping.							
WFR.04.04 - Automatic license validation	**License information is validated automatically.**			1		Licenses are applied per batch for a whole object-group during mapping.							

WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**			1									
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**			1									
Supply													
WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**			1	Push results in a local export of all selected record, each record is exported in a separate file. This behaviour for the PUSH option was explicitly requested by the SPK.	IT restrictions prevented from connection to the DA. The "PUSH" resulted in a local export of the record batch. See attachment: "SPK-MCK-push.jpg"							
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**			1	See WFR 05.01								
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**			1	See WFR 05.01								
WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**			1	See WFR 05.01								
Data acceptance													
WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**			1	No, this is not only possible in the Dark Aggregator normally. But as all web services had to be deactivated in the MCK at the request of the SPK due to security reasons, these features are not available in the MCK at the SPK only.	This is only possible in the Dark Aggregator. No validation feedback is reported neither to the MCK nor to the MDS.							

WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**			1	See WFR 06.01								
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**			1	See WFR 06.01								
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**			1	See WFR 06.01								
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**			1	See WFR 06.01								
Enrich and Return													
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**					SPK will not participate in this scenario. MDS is not prepared to ingest enrichments.							
WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**												
WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**												
WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**												
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**												

WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**											
WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**											
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**											
WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**											
WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**											

Institut Royal des Sciences Naturelles de Belgique RBNIS (BE) - LIBIS KU Leuven (BE)

		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**	1			CMS: Logfiles + ECK: Data push service overview list		1					
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1			CMS: Logfiles + ECK: Records are identified by their PIDs. When pushed to the Dark aggregator, records will be updated based on this unique identifier. The PID is stored for reference in the CMS.		1					
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1			ECK: PID service. The PID is stored for reference in the CMS.		1					

WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**			1	ECK + CMS. There was a delay on the July data publication on the Europeana portal. Europeana has only recently published the CP data on the portal. There was not sufficient time to implement and test the re-ingestion. The EDM enrichments where downloaded by LIBIS on 7/8 in CSV and made available for quality control in a spreadsheet. This was used by CP to evaluate the enrichments and complete the Test survey report.						1	
Select												
WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1			CMS: Sets		1					Via advanced search / set toggle
WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1			CMS: Sets - through search results, on record level, or set level		1					
WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1			CMS: Advanced search, add results to set		1					
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1			CMS: Basic search		1					
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1			CMS: Search results, toggle selection		1					

WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1			CMS: Save search query option		1					Easy via saved searches
Prepare													
WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**	1			ECK: Default mapping between MARC and EDM available						1		
WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including the thumbnail.**		1		ECK: Preview service	preview mapping is ok but no additional information concerning the quality of the converted metadata is provided (2nd part of the requirement is not implemented, so not accepted)							
WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1			ECK: Mapping service: Currently only a default mapping from the CP datamodel to MARC and from MARC to EDM is provided. CP however have the option to make their own mapping extensions using the mapping tool.			1					via CA dashboard mapping tool
WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**	1			ECK: Validation service			1					

WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1			CMS: mapping is created on the local system of the provider (csv file) and is then uploaded and saved on the server	local re-use is possible					1	
WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**	1			ECK: Validation service	not easy to understand the technical validation messages received from the validation service					1	
WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**	1			ECK: Mapping service: accessible through the CollectiveAccess Dashboard + CMS: using the batch editing functionalities			1				Ok, default mapping is possible
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**	1			ECK: Validation service				1			
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**	1			CMS: can be managed by the CP by adding a sequence value. The first in the sequence is used to create a thumbnail.			1				
WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**	1			CMS + ECK: included in the MARC2EDM mapping		1					

WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**	1			ECK: included in the MARC2EDM mapping (default value set in consultation with the CP) + CMS: batch editing functionality or manually		1					
WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**	1			ECK: included in the MARC2EDM mapping (default value set in consultation with the CP) + CMS: batch editing functionality or manually		1					
WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**	1			ECK: included in the MARC2EDM mapping (default value set in consultation with the CP) + CMS: batch editing functionality or manually		1					
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**	1			ECK: included in the MARC2EDM mapping (default value set in consultation with the CP) + CMS: batch editing functionality or manually		1					
WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**	1			CMS: mandatory fields marked + ECK: Validation service		1					
WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1			ECK: transformation service		1					

WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**	1			ECK: Validation service					1		
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**	1			ECK: transformation service		1					
WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**	1			CMS: list and vocabularies manager, GeoNames reference, information service		1					ok via Aleph
WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**	1			ECK: Mapping service		1					
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1			ECK: Mapping service					1		

WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**	1			ECK: transformation service: select source format, select target format			1					
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**	1			ECK: Mapping service		1						
WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**	1			ECK: PID service		1						
WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**	1			ECK: Mapping service				1				
Validate													
WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**	1			ECK: Validation service	validation report is difficult to understand				1			
WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**	1			ECK: Validation service	validation report is difficult to understand				1			

WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**	1			CMS: correct manually or using batch edit functionality and add to new set. Records are identified by their PIDs. When pushed to the Dark aggregator, records will be updated based on this unique identifier.			1				
WFR.04.04 - Automatic license validation	**License information is validated automatically.**	1			ECK: Validation service				1			
WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**	1			ECK: Preview service			1				
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**			1	ECK: validation service validates the records according to the validation rules implemented in the service. These are then send to the dark aggregator who is responsible for handling data transmission to Europeana. Validation rules should be up to date to ensure data acceptance by Europeana. Europeana can still refuse the dataset.						1	
Supply												
WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**	1			ECK: data push implemented		1					
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**	1			CMS: correct manually or using batch edit functionality and add to new set. Records are identified by their PIDs. When pushed to the Dark aggregator, records will be updated based on this unique identifier.			1				
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**		1		ECK: Querying server implemented at LIBIS						1	

WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**			1	ECK: if system settings are changed this is possible						1	
Data acceptance												
WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**	1			ECK: Preview service		1					
WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**			1	Europeana doesn't supports incremental harvesting.						1	
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**			1	Europeana doesn't support incremental harvesting. Of course a partner can ask Europeana (or the aggregator) to update a certain collection. Automatic updates of the records in the dark aggregator repository are already possible						1	
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**			1	Not implemented because this implies Europeana gives back information on this. European is not going to support this, so perhaps this requirement should be removed or adapted.						1	
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**			1	ECK: Implemented for the dark aggregator. The CP is notified when the data is uploaded on the DA repository/ Though the DA does not have a website and Europeana is not going to support this. Perhaps this requirement should be removed or adapted.						1	

Enrich and Return												
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**			1	ECK + CMS. Not implemented						1	
WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**			1	ECK: Not implemented						1	
WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**			1	ECK: Not implemented						1	
WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**			1	Idem as above, but also not relevant since Europeana at the moment only has machine enrichments and this is separated in the EDM record from the original metadata						1	
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**			1	Idem as above, but also not relevant since Europeana at the moment only has machine enrichments and this is separated in the EDM record from the original metadata						1	
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**			1	ECK: Not implemented						1	

WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**			1	ECK: Not implemented						1	
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**	1			CMS & ECK: PID service, PID is stored in CMS		1					
WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**			1	ECK: Not implemented, push option is implemented						1	
WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**			1	ECK: Not implemented						1	

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		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**	1			CMS: Logfiles + ECK: Data push service overview list			1				visible next to the record would be easier
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1			CMS: Logfiles + ECK: Records are identified by their PIDs. When pushed to the Dark aggregator, records will be updated based on this unique identifier. The PID is stored for reference in the CMS.		1					
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1			ECK: PID service. The PID is stored for reference in the CMS.		1					
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**			1	ECK + CMS. There was a delay on the July data publication on the Europeana portal. Europeana has only recently published the CP data on the portal. There was not sufficient time to implement and test the re-ingestion. The EDM enrichments						1	

					where downloaded by LIBIS on 7/8 in CSV and made available for quality control in a spreadsheet. This was used by CP to evaluate the enrichments and complete the Test survey report.								
Select													
WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1			CMS: Sets		1						selection via advanced search and set toggle
WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1			CMS: Sets - through search results, on record level, or set level		1						toggle
WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1			CMS: Advanced search, add results to set		1						selection via advanced search
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1			CMS: Basic search		1						
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1			CMS: Search results, toggle selection		1						
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1			CMS: Save search query option			1					set function and saved searches
Prepare													
WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**	1			ECK: Default mapping between MARC and EDM available		1						

WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including the thumbnail.**		1		ECK: Preview service	Preview is ok, but the second part of the requirement "indicates the quality of the converted metadata including the thumbnail" not indicated (other Europeana Inside TP responsible / part of preview service). Therefore FR not accepted.				1		
WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1			ECK: Mapping service: Currently only a default mapping from the CP datamodel to MARC and from MARC to EDM is provided. CP however have the option to make their own mapping extensions using the mapping tool.			1				in communication with technical partner it is possible
WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**	1			ECK: Validation service				1			Easy to use functionality, but difficult to read/understand the report.
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1			CMS: mapping is created on the local system of the provider (csv file) and is then uploaded and saved on the server		1					
WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**	1			ECK: Validation service	Difficult to understand the technical validation details			1			

WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**	1			ECK: Mapping service: accessible through the CollectiveAccess Dashboard + CMS: using the batch editing functionalities				1			difficult to reproduce without manual
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**	1			ECK: Validation service				1			
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**	1			CMS: can be managed by the CP by adding a sequence value. The first in the sequence is used to create a thumbnail.			1				
WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**	1			CMS + ECK: included in the MARC2EDM mapping		1					in communication with technical partner it is possible
WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**	1			ECK: included in the MARC2EDM mapping (default value set in consultation with the CP) + CMS: batch editing functionality or manually		1					in communication with technical partner it is possible
WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**	1			ECK: included in the MARC2EDM mapping (default value set in consultation with the CP) + CMS: batch editing functionality or manually		1					in communication with technical partner it is possible
WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**	1			ECK: included in the MARC2EDM mapping (default value set in consultation with the CP) + CMS: batch editing functionality or manually		1					in communication with technical partner it is possible
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**	1			ECK: included in the MARC2EDM mapping (default value set in consultation with the CP) + CMS: batch editing functionality or manually		1					in communication with technical partner it is possible

WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**	1			CMS: mandatory fields marked + ECK: Validation service		1					
WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1			ECK: transformation service		1					
WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**	1			ECK: Validation service	Validation report is difficult to understand.			1			
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**	1			ECK: transformation service		1					
WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**	1			CMS: list and vocabularies manager, GeoNames reference, information service		1					source systems are already vocabulary controlled
WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**	1			ECK: Mapping service		1					
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1			ECK: Mapping service				1			

WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**	1			ECK: transformation service: select source format, select target format			1					
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**	1			ECK: Mapping service		1						
WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**	1			ECK: PID service		1						
WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**	1			ECK: Mapping service				1				you need a manual
Validate													
WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**	1			ECK: Validation service					1			
WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**	1			ECK: Validation service	Report is difficult to understand.			1				
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**	1			CMS: correct manually or using batch edit functionality and add to new set. Records are identified by their PIDs. When pushed to the Dark aggregator, records will be updated based on this unique identifier.			1					
WFR.04.04 - Automatic license validation	**License information is validated automatically.**	1			ECK: Validation service				1				

WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**	1			ECK: Preview service		1					
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**			1	ECK: validation service validates the records according to the validation rules implemented in the service. These are then send to the dark aggregator who is responsible for handling data transmission to Europeana. Validation rules should be up to date to ensure data acceptance by Europeana. Europeana can still refuse the dataset.						1	
Supply												
WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**	1			ECK: data push implemented			1				
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**	1			CMS: correct manually or using batch edit functionality and add to new set. Records are identified by their PIDs. When pushed to the Dark aggregator, records will be updated based on this unique identifier.			1				
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**		1		ECK: not implemented. In time LIBIS will install a queuing server						1	
WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**			1	ECK: if system settings are changed this is possible						1	
Data acceptance												

WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**	1			ECK: Preview service		1					
WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**			1	Europeana doesn't supports incremental harvesting.					1		
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**			1	Europeana doesn't support incremental harvesting. Of course a partner can ask Europeana (or the aggregator) to update a certain collection. Automatic updates of the records in the dark aggregator repository are already possible						1	
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**			1	Not implemented because this implies Europeana gives back information on this. European is not going to support this, so perhaps this requirement should be removed or adapted.						1	
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**			1	ECK: Implemented for the dark aggregator. The CP is notified when the data is uploaded on the DA repository/ Though the DA does not have a website and Europeana is not going to support this. Perhaps this requirement should be removed or adapted.						1	
Enrich and Return												
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**			1	ECK + CMS. Not implemented						1	
WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**			1	ECK: Not implemented						1	

WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**			1	ECK: Not implemented						1	
WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**			1	Idem as above, but also not relevant since Europeana at the moment only has machine enrichments and this is separated in the EDM record from the original metadata						1	
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**			1	Idem as above, but also not relevant since Europeana at the moment only has machine enrichments and this is separated in the EDM record from the original metadata						1	
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**			1	ECK: Not implemented						1	
WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**			1	ECK: Not implemented						1	
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**	1			CMS & ECK: PID service, PID is stored in CMS		1					
WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**			1	ECK: Not implemented, push option is implemented						1	
WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**			1	ECK: Not implemented						1	

Stiftelsen Länsmuseet Västernorrland SLV (SE) – CollectiveAccess

		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**	1						1				
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1					1					
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1					1					
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**	1						1				
Select												
WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1					1					
WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1					1					

WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1					1						
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1						1					
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1					1						
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1					1						
Prepare													
WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**	1					1						
WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including the thumbnail.**	1						1					
WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1							1				
WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**	1						1					
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1					1						

WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**			1							1	
WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**	1					1					
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**	1					1					
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**	1					1					
WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**	1					1					
WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**	1					1					
WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**	1					1					
WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**	1					1					
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**	1					1					
WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**	1					1					

WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1					1					
WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**			1							1	
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**			1							1	
WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**	1					1					
WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**	1							1			
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1					1					
WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**	1					1					
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**	1						1				
WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**	1					1					

WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**	1						1				
Validate												
WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**	1			With the ECK			1				
WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**	1			With the ECK			1				
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**			1	With the ECK			1				
WFR.04.04 - Automatic license validation	**License information is validated automatically.**	1			With the ECK			1				
WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**	1			With the ECK			1				
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**	1			With the ECK			1				
Supply												
WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**	1					1					
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**	1						1				
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**	1					1					

WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**	1						1				
Data acceptance												
WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**	1			With the ECK			1				
WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**	1					1					
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**	1					1					
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**			1							1	
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**			1							1	
Enrich and Return												
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**	1					1					
WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**	1					1					
WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**			1							1	

WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**	1			Only original and enrichment		1					
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**			1							1	
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**	1						1				
WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**	1						1				
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**			1	Already have PID's in the system						1	
WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**	1							1			
WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**			1							1	

Bristol Museums, Galleries and Archives (associate partner KE Software)

		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**	1					1					
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1			The system does show which records are altered when and by whom, but updated records that validate are automatically pushed to Europeana						1	This happens without user intervention – updated records are always exported to Europeana
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1					1					
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**			1		Not able to test as records have not yet been returned by Europeana?					1	
Select												
WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1			This is standard EMu functionality		1					All of these are just functions of the collections management system

WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1			This is standard EMu functionality		1						
WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1			This is standard EMu functionality		1						
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1			This is standard EMu functionality		1						
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1			This is standard EMu functionality		1						
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1			This is standard EMu functionality		1						
Prepare													
WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**	1					1						
WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including the thumbnail.**	1				Quality is not explicitly indicated		1					
WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1						1					Mapping is via XSLT, so provided you know XSLT this is easy

WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**	1			This is part of the validation workflow, below			1				Problems are reported as part of the validation process
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1					1					
WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**	1					1					
WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**	1					1					
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**	1			Only records with a published image are able to be selected for export		1					
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**	1			The order of images in EMu can be rearranged as required. The first image in a list of multiple images is always used for export		1					
WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**	1			This is standard EMu functionality		1					
WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**	1			This is standard EMu functionality		1					
WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**	1						1				This is achieved individually or in batch

WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**	1					1					
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**	1			This is performed as part of the same action as WFR.03.12, above, and is not a distinct operation		1					
WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**	1				This is available through configuration			1			The system must be configured by an admin to enable this
WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1					1					
WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**	1			This is delivered as part of the included validation module			1				This is part of the validation module.
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**			1	This is not implemented. Target format is always to LIDO for delivery to aggregator	Not tested					1	Not tested
WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**	1			This is standard EMu functionality			1				This operation is easy, but selection of correct vocabulary at an institution level is not always simple.
WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of**	1						1				

	attributes and/or elements.												
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1						1					
WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**			1		Not tested as data is delivered to aggregator and conversion performed then						1	Not tested
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**	1						1					Possible through XSLT
WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**	1					1						
WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**	1					1						This is standard EMu functionality
Validate													
WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**	1					1						Validation messages are clear

WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**	1					1						
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**	1			This happens by default.		1						
WFR.04.04 - Automatic license validation	**License information is validated automatically.**	1					1						
WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**	1				Is this what we have been testing in iterations 1, 2 and 3?			1				Not clear how to achieve this
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**	1					1						
Supply													
WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**	1			We supply to aggregator, which in turn supplies to Europeana		1						
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**	1				Assume this means validation error		1					
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**			1	This is manual only							1	Not tested
WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**	1			This is standard EMu functionality		1						

Data acceptance													
WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**	1					1						
WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**	1					1						
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**	1					1						
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**	1				The system informs us when accepted by aggregator		1					
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**	1					1						
Enrich and Return													
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**			1		We did not see any enriched content as part of this test						1	
WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**			1	This is not implemented. Because the target format is a transformation of data it is not simply a case of re-accepting an entire record, decisions must be made on a field by field basis.						1		We don't see that this is possible. Our fields are mapped to LIDO through a many-to-one relationship, and automatic re-ingestion into the source catalogue data is not possible?

WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**			1	This is not implemented. Because the target format is a transformation of data it is not simply a case of re-accepting an entire record, decisions must be made on a field by field basis.						1	
WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**			1							1	
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**			1							1	
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**			1						1		
WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**			1						1		We don't see that this is possible. Our fields are mapped to LIDO through a many-to-one relationship, and automatic re-ingestion into the source catalogue data is not possible?
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**			1							1	
WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider:** **- Immediate, delayed or according to a preset schedule;** **- Full or filtered: e.g. related to a specific object or group of objects.**			1							1	

WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**			1							1		

London Transport Museum (LTM) (associate partner System Simulation)

		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**	1						1				
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1						1				
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1			Internal PID Generation used with the addition of a configurable domain for the ECK			1				
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**			1	Unable to provide content to Europeana in time owing to problems during development before the Toulouse demo. Sample test content was provided and shown as a result	Not seen					1	
Select												
WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1						1				

WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1						1					
WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1			Search functionality			1					
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1						1					
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1						1					
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1						1					
Prepare													
WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**	1			EDM is hidden from the end user so success is assumed if a LIDO based validation is successful – see 03.02				1				The mapping can be quite complex where filtering is needed such as on Actor roles, The exact capture of the result of the mapping is hidden from the user
WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including the thumbnail.**	1					1						

WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1							1				The mapping can be quite complex.
WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**	1					1						
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1					1						
WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**	1			Inline documentation taken from the Profile module				1				The mapping is quite complex and lengthy
WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**	1			System is provided to the CP with a default mapping that can be altered. An automated build of the mapping from the profile module uses the example text.				1				The mapping is quite complex
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**	1			Problems here surround there being no online repository of images to use, thus while the URL for an image resource can be provided, it isn't checked during mapping. Validation takes care of this step			1					Preview/Validation tests
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**	1			This is a feature of the nature of the mapping to LIDO. The default is the first image but the solution allows anything from picking from a list to providing a string constant holding an image outside the system				1				The mapping can be quite complex.
WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**	1			The source CMS system does, the LIDO didn't appear to do this.							1	Multiple images not seen in preview

WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**	1						1				
WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**			1	In the end problems with the validation module not validating according to the specifications of the profile module led to the rights statement being moved from the mapping into core code. This works but is less than ideal.						1	IPR is recordable in the system but does not appear in the preview
WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**			1	See 03.12							IPR is recordable in the system but does not appear in the preview
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**			1	See 03.12							IPR is recordable in the system but does not appear in the preview
WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**	1							1			The mapping can be quite complex.
WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1			Unlimited number of mappings configurable and form part of the help for the CP – a mapping that can be previewed that shows the mapping field names as values, for example.		1					
WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**	1			The supplied mapping contains these as string constants which can be altered in batch or on a per record basis			1				The mapping is simple for default values
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**			1	Source is always Index+, target is always LIDO effectively though EDM actually via the Set						1	Not in control of this

					Manager.							
WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**	1			This is a feature of the Index+ system			1				
WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**	1			The value side of the assignment in the mapping for LIDO takes the form of the Index+ expression language allowing a fully featured conditional and transformational approach to the data					1		Very complex mapping activity
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1								1		Very complex mapping activity
WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**	1			Index+ handles the mapping to LIDO and relies on an external Set Manager to transform this to EDM						1	Not seen
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**	1			See 03.20					1		
WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**	1						1				
WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**	1			See 03.20				1			
Validate												

WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**	1					1					
WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**	1			return values from the validation module are as yet not 100% complete since external implementations were relied on which returned data in different forms.			1				
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**	1					1					
WFR.04.04 - Automatic license validation	**License information is validated automatically.**	1					1					
WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**	1			Ships to the validation module		1					
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**			1	Not sure if this is the case. The system relies on the Set Manager to do validation but no steps are taken to ensure Europeana validates the data as far as I can see.						1	
					Supply							
WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**	1			Data is pushed to the Set Manager, the aggregator uses the live set as the OAI repository			1				
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**	1						1				

WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**			1							1	Everything happens behind the scenes, the user doesn't need to be involved.
WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**			1							1	
Data acceptance												
WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**			1	This functionality is unavailable. The data can be previewed in the Preview module which is external to Europeana			1				There is a preview. It's not in Europeana
WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**	1			Set Manager live set is the OAI repository			1				
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**	1						1				
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**	1						1				
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**	1			informed of status in the live set – effectively the aggregator OAI repository			1				
Enrich and Return												
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**			1	Only a test set of data was provided owing to having no content from an actual Europeana enrichment. The field is visible						1	Not seen

WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**			1	Enriched data is always checked and stored if available.						1	Not seen
WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**	1			Enriched data is ingested automatically but is stored in a single field.						1	Only the enriched data field can be seen, no actual enriched data seen in it
WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**	1						1				
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**			1							1	
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**			1							1	
WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**			1	The enriched data is all stored in a single field and not mapped to a set of fields.						1	
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**			1	Actual enrichment not yet seen. Internal PID module means that URI/PID combinations may cause problems. Enriched data is not automatically mapped						1	

WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**			1							1	
WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**	1			Records can be returned on the basis of having enriched data as a search context						1	Can search for data in the enriched data field but no real data to search for,

Hôtel Dieu des Hospices de Beaune (associate partner SKINsoft)

		Acceptance					Usability					
WFR (1)	**Acceptance criteria (2)**	**Accepted? (3)**			**Development notes vendor (4)**	**Remarks (5)**	**Rate the FR: Indicate how easy or difficult it was to perform the functionality? (6)**					**Explain why**
		A	**NA**	**NT**			**very easy**	**easy**	**difficult**	**very difficult**	**not applicable (if the FR is not present)**	
Manage												
WFR.01.01 - Export management	**The system is able to tell which records have been exported when to Europeana.**	1			For each record, export date to Europeana is stored.	A better accessibility of information would be appreciated			1			Information is a little bit hidden
WFR.01.02 - Revision history	**The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records.**	1			Export to Europeana is incremental.	Incremental export OK. Useful for repetitive exports.		1				
WFR.01.04 - PID management	**The system manages PIDs for objects that can be used for identification when data is sent to Europeana.**	1			Each object has an identification number.			1				
WFR.01.05 - Enriched data management	**The system is able to merge and manage returned enriched data once ingested in the system of the CP.**			1		We were not able to test this functionality					1	
Select												
WFR.02.01 - Selecting multiple records	**The system can make a selection of multiple records.**	1			Object selection can be made manually, within selections, or automatically with requests.	Selection by set of objects is very easy.	1					

WFR.02.02 - Selecting a single record	**The system supports making a manual selection of multiple records or a single record.**	1					1						
WFR.02.03 - Selecting records based on values	**The system is able to select records based on specific values in a variety of fields: e.g. by location, by object category, by theme, by section, or by (part of) inventory number.**	1						1					
WFR.02.04 - Boolean operators	**The system is able to combine filters with clear Boolean operators.**	1				Requests with Boolean operator is a little bit difficult to understand. Need improvement.			1				
WFR.02.05 - Indication of selected fields	**The system shows whether certain records or fields are or will be included in a selection.**	1			Field selection is entirely configurable.			1					
WFR.02.07 - Reuse saved queries	**The system is able to repeat a certain selection, e.g. for updates, so filters or queries must be storable and re-usable.**	1			Filter and queries are stored for each export configuration.			1					
Prepare													
WFR.03.01 - Automatic EDM mapping	**The system converts metadata automatically from a predefined input format to EDM by (a set of) default mappings that is selected during configuration of the system.**	1			Default mapping could be defined for each field, for a selection or for the entire export.			1					
WFR.03.02 - Preview mapping	**The ECK shows a preview of the converted metadata and associated thumbnails that are the result of applying a specific mapping. It also indicates the quality of the converted metadata including the thumbnail.**	1			Thumbnails are visible in any format, including format used for Europeana export. However, the preview of the data through the mapping is not yet implemented.	OK	1						

WFR.03.03 - Editable mapping	**The mapping can be edited to correct/improve the metadata conversion from source to target data model.**	1			Mapping is editable through the « mapping editor ».	Mapping editor tested.		1				
WFR.03.04 - Mapping feedback	**The system reports on problems with applying the mapping.**			1							1	
WFR.03.05 - Saving mapping	**The system saves the mapping for repeated use.**	1			Mappings are store apart and could be use from all export configurations.			1				
WFR.03.06 - Field explanations	**The system informs on the expected input required for the concerned fields in the mapping.**			1							1	
WFR.03.07 - Automatic value insertion	**The system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.**		1		In development						1	
WFR.03.08 - Check digital asset availability	**The system ensures that an image is made available for access by Europeana or other targets to generate a thumbnail.**	1			Possibility to use the main image of an object, all images, or a specific one. Possibility to define a default image if none is present.			1				
WFR.03.09 - Thumbnail selection	**If more than one digital asset is linked to a metadata record the system can choose which image will be used to produce a thumbnail based on input of the user manually or in batch.**	1						1				
WFR.03.10 - Multiple assets	**The system supports the use of more than one digital asset with one single metadata record.**	1						1				
WFR.03.11 - Defining media types	**The metadata and media types are defined automatically on record level or per batch.**			1	Defined per batch						1	

WFR.03.12 - Metadata field on IPR digital object	**The system adds missing or corrected information on the IPR of the digital object based on input of the user manually or in batch.**	1			IPR of digital object is retrieved and stored into the database. IPR information's can also be modified by the user.	IPR retrieved during media synchronization.		1				
WFR.03.13 - Metadata field on IPR metadata	**The system adds missing/corrected information on the IPR of the metadata based on input of the user manually or in batch.**	1						1				
WFR.03.14 - Metadata field on IPR preview	**The system adds missing or corrected information on the IPR of the preview (thumbnail) based on input of the user manually or in batch.**	1						1				
WFR.03.15 - Mark mandatory fields	**The system indicates which fields are mandatory for a chosen mapping or output data.**		1		In development						1	
WFR.03.16 - Choosing a default mapping	**The system supports choosing a default mapping based on user input or system configuration.**	1			Default mapping used if needed.			1				
WFR.03.17 - Automatic data suggestion	**The system suggests necessary data enhancements on data set (like apply license, apply source institution) and gives the possibility to approve or decline them).**		1		In development						1	
WFR.03.18 - Target format selection	**The content provider points out what source format the data is in and chooses a target format.**	1			Mapping is always related to the source format.			1				
WFR.03.19 - Semantic data enrichment	**The system can be used to make data more explicitly semantic by linking or converting data to controlled vocabularies and thesaurus concepts.**	1			Fields could be linked with thesaurus (e.g. Joconde thesaurus) or controlled vocabularies.		1					

WFR.03.20 - Conditional mapping	**The system supports conditional mappings. The decision about which target field for some content may depend on the value in an attribute or in another element or in a combination of attributes and/or elements.**	1			Filters are available to apply or not a mapping			1					
WFR.03.21 - Nested or grouped mapping	**The system can perform mappings that consider the structure of nested or grouped elements.**	1			Mapping is applicable on simple element and complex elements (with nested or grouped elements). Each sub element can also have a mapping.			1					
WFR.03.22 - Intermediate format mapping	**The system can support sequential application of various mappings, e.g. native data model into LIDO into EDM.**		1		Not yet implemented							1	
WFR.03.23 - Support for conditional truncation	**The system can truncate the content of certain fields based on predefined conditions (cases).**		1		Not yet implemented							1	
WFR.03.24 - Apply PID	**The system must check local identifiers in source data and enhance them automatically for global use based on configurations of the relevant CP.**	1			Identifiers management is automatic and takes care of CP data configuration.					1			No possibility to defined configurable pattern of numerotation.
WFR.03.25 - Conditional field conversion	**The system can automatically convert certain data values based on predefined conditions. E.g. when [type] = "production place" THEN [eventType] = "Production").**			1								1	
Validate													
WFR.04.01 - Validation	**The system validates mapping results against chosen target schema, e.g. EDM.**		1									1	

WFR.04.02 - Feedback on validation	**The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).**			1								1	
WFR.04.03 - Edit invalidated fields	**If corrections are made then it should be possible to only reprocess these rather than the whole set.**	1			Export could be incremental if the structure is unchanged.			1					OK
WFR.04.04 - Automatic license validation	**License information is validated automatically.**		1		In development							1	
WFR.04.05 - Test ingestion	**The system is able to do a test ingestion for metadata prepared for ingestion by Europeana.**		1		Not yet implemented							1	
WFR.04.06 - Align validation	**The system ensures that successful validation warrants validation by Europeana at ingestion as well.**			1	This functionality needs improvement							1	
Supply													
WFR.05.01 - Automatic supply	**The system supplies prepared and validated data to Europeana by push or pull.**	1			The system supplies prepared data to Europeana by push.			1					
WFR.05.02 - Re-supply functionality for failed records	**In case of an error the system is able to start the supply process again only for the failed records.**		1		In validation							1	
WFR.05.03 - Schedule data supply	**The system can be scheduled to supply data at a predefined date/time.**	1			Data export is accessible through a separate job which can be scheduled as needed.				1				

WFR.05.04 - Tools for third-party collaboration	**The system facilitates the supply of data to platforms other than Europeana as well and provides the necessary tools (e.g. licensing filters and query APIs).**		1								1	
Data acceptance												
WFR.06.01 - Preview presentation Europeana	**The system is able to preview the data representation in Europeana before it's being published.**		1		In development						1	
WFR.06.02 - Withdraw records	**The system can withdraw earlier delivered records instantly from the aggregator [Europeana] by instructions of the involved CP.**		1		In development						1	
WFR.06.03 - Update published records	**The system can keep the data that are already in the aggregator [Europeana] -up-to-date.**	1			In incremental mode, published records are updated only if needed.			1				
WFR.06.04 - Publication indication	**The system gives an indication about the processing steps and scheduling in Europeana.**			1	Information in log files for the moment.						1	
WFR.06.05 - Automatic publication alert	**The CP is informed on publication of the data on the target website (Europeana or aggregator).**		1		In development						1	
Enrich and Return												
WFR.07.01 - Available enriched content alert	**The system reports on available enriched content.**		1								1	
WFR.07.02 - Acceptance or declining of enrichments on record level	**The system allows CP to accept or decline the enriched data (entire records).**	1			Each record could be tagged as authorized or not for the export			1				
WFR.07.03 - Automatic ingest of enriched data	**Enriched data is ingested automatically in the CP's system after approval by the CP.**		1								1	

WFR.07.04 - Separate enriched data	**The system allows separation based on the origin of the metadata (original and machine enrichment).**		1								1	
WFR.07.05 - Enriched IPR identification	**The system provides insight in the additional IPR and, for user-generated content, privacy issues regarding the data from external origin.**		1								1	
WFR.07.06 - Choose target ingest	**The system allows return data to be ingested in the system of choice by the CP.**		1								1	
WFR.07.07 - Acceptance or declining of enrichments on field level	**The CP can either accept or decline the enriched data (on field level).**		1								1	
WFR.07.08 - Persistent ID's enrichment	**The URIs or PIDs enhanced by the system are sent back to the content provider (ref.: WFR.03.26. Apply PIDs).**			1	Not yet implemented						1	
WFR.07.09 - Pull option	**The ECK contains a pull option, at the request of the data provider: - Immediate, delayed or according to a preset schedule; - Full or filtered: e.g. related to a specific object or group of objects.**		1								1	
WFR.07.10 - Enriched data management	**The system provides management information on which returned enriched data sets are ingested in the CP's system.**		1								1	

Appendix II: Content Providers Survey i4

Content Provider	Sufficient assistance and documentation by TP	Communication Basecamp	Overall evaluation
Benaki Museum (BEN) (GR)	Yes	No. Our TPs solved our problems through exchanging a few e-mail messages	Good. We find updating the mapping fairly difficult.
National Gallery-Alexandros Soutzos Museum (NAG)	Yes	The person from Zetcom that is mainly involved with the development of MCK, Jette Klein-Berning, had to be in contacted directly as well as the other members of the supporting TPs, because the issues were not broad but rather specific to our installation.	Very Good: Supply, Data Acceptance and Enrich/Return features are working very good, although that some ECK services are not fully developed. See our evaluation form for details.
Stiftung Preussischer Kulturbesitz (SPK) (DE)	Yes	No, the fact that the ECK that SPK is testing would show no improvement since iteration 3 was discussed with Zetcom via email and personally during the last TP meeting.	The ECK provided by Zetcom to SPK would be able to call all web services, if the SPK IT would allow access to those services. Since access to web services was not, possible all WFRs relying on these services could not be tested (most of WFR on Management, and all in validation, supply, enrichment and data acceptance).
Royal Museums of Art and History (KMKG) (BE)	Yes, Zetcom provided documentation prior to the installation of the new functionalities. Assistance was given by email/phone/ISL. Detailed instructions were given to test the new functionalities and questions were answered quickly and efficiently.	No, there was no time to communicate via Basecamp. All questions went directly to Zetcom.	Good, most of the required functionalities are present and working. Not all functionalities are however user friendly.
KADOC – KU Leuven (BE)	Yes	No	Good, a lot of functionalities available but you need training to work with the ECK.
Institut Royal des Sciences Naturelles de Belgique RBNIS (BE)	Yes, testing instructions were well documented, adequate assistance	No, issues were addressed directly to TP and other CPs during the testing event (August 11, 2014)	Good
Petofi Irodalmi Muzeum - PIM (HU)	Yes	Not in the Basecamp-group but directly with our technical partner via Skype.	Good because it is working properly. Honestly say I miss graphical mapping.
Szepmuveszeti Muzeum - FAB (HU)	No. Wasn't able to test i4	No	Overall good
Stiftelsen Länsmuseet Västernorrland – SLV (SE)	Yes	No	Good

Municipio do Seixal – SEI (PT)	Regarding the CMS we have regular assistance (mainly through remote access or e-mail) and available documentation.	No	Not applicable for all functionalities. We have the V6 in use. The developments are made under the new CMS V7 of Mobydoc, for the time being. Some of the functionalities were tested directly by the TP, but the overall experience is positive.
Bristol Museums, Galleries and Archives (associate partner testing partner KE Software)	Bristol received phone guidance with some written documentation	Felt more comfortable raising issues directly with KE. Bristol have not been to any group meetings (as they are an associate partner they have no funding to attend).	Good. They like the way that records can be automatically maintained as current in the ECK. They like the preview.
London Transport Museum (LTM) (associate testing partner System Simulation)	Yes. The core functionality is fairly simple, records can be submitted to the ECK by checking a check-box and errors are visible alongside other fields.	No, this was left to the technical partner. Work was constantly in progress.	Once the system is configured it is easy to submit records although the end result is not yet in place. Initial configuration is complex but needs to be done only once and then needs no interaction.

Impressions of the ECK iteration 4 production – Strengths

What do you feel is the main advantage of the ECK for each step of the workflow?

	Benaki Museum (BEN) (GR)	National Gallery-Alexandros Soutzos Museum (NAG)	Royal Museums of Art and History (KMKG) (BE)	Stiftung Preussischer Kulturbesitz (SPK) (DE) -	KADOC – KU Leuven (BE)	Institut Royal des Sciences Naturelles de Belgique RBNIS (BE)
Manage	The possibility to see which records were published on Europeana	That the system is able to tell which records have been exported when to Europeana.	The new functionalities make it possible to see for which records a PID was created and were thus exported.	We feel we cannot participate in the overall evaluation of strengths and weaknesses of the ECK, as we did not test a production version of the ECK developed by Zetcom.	It can provide a base for updating exported records.	ECK offers the CP the possibility to see which records were published on Europeana
Select	None. Select procedure is managed by our own CMS, so ECK is only a little involved	None, there aren't any advantages of the ECK in the workflow step select.	None, most functionalities were already part of the CMS.		The archivist can make only a selection of records available. We could also make a query in our own catalogue (Aleph/Alma), but the visibility is better in the ECK.	The workflow step select makes it very easy to select collections
Prepare	I have the possibility to save all previous mappings for repeated use.	That the system is able to insert constant values automatically for metadata not included in the collection database as defined by the user, e.g. language of record, content provider name.	The system informs on the expected input required for the concerned fields in the mapping.		We can re-use the mapping.	The system reports on problems with applying the mapping
Validate	The system reports on the irregularities of the mapping results through preview	The system reports on the irregularities of the mapping results (e.g. missing fields, missing thumbnails).	The system checks whether the data is exported into a valid LIDO xml. Irregularities are reported on in the logfile. This makes it possible to correct the data before it is supplied to the aggregator.		The preview makes the work done visible for the archivist or librarian.	The system provides additional information to facilitate the validation process.

Supply	Easy to push records directly to the dark aggregator or either export and upload them	That the system supplies prepared and validated data to Europeana by push or pull.	I'm able to push records directly to the dark aggregator instead of exporting them first and then manually uploading them.		The push makes it possible to ingest when you want.	The possibility to push records directly to the dark aggregator
Data Acceptance	I can preview the data before it its published on Europeana.	That the system is able to preview the data representation in Europeana before it's being published.	It is possible to preview the record before it is published on Europeana.		None	Preview of the data before it its published on Europeana is very useful
Enrich and return	I'm able to be informed on the enriched fields separately from the original data in the CMS.	That the system allows CP to accept or decline the enriched data (entire records).	The enrichments are kept separate from the original data in the CMS.		The data provider gets extra information in return to re-use.	Enrichment of Place fields is useful

Impressions of the ECK iteration 4 production – Strengths

What do you feel is the main advantage of the ECK for each step of the workflow?

	Petofi Irodalmi Muzeum - PIM (HU)	**Szepmuveszeti Muzeum - FAB (HU)**	**Stiftelsen Länsmuseet Västernorrland – SLV (SE)**	**Municipio do Seixal – SEI (PT)**	**Bristol Museums, Galleries and Archives (associate partner testing partner KE Software)**	**London Transport Museum (LTM) (associate testing partner System Simulation)**
Manage	Top three of best FRs: 1) The system is able to tell which records have been exported when to Europeana, 2) The system is able to show which records are altered when and by whom, so it can provide a base for updating exported records and 3) The system manages PIDs for objects that can be used for identification when data is sent to Europeana.	The possibility to see which records were published on Europeana.	We use CollectiveAcces to manage our records.	The functions related with WFR.01.01 regarding the export management and information about which records have been exported.	Easy to see which records were exported into Europeana and when. Easy to see current status of exported records and records which have failed validation. Records can be corrected and edited in bulk.	A quick and easy search is all that's needed to determine which records are involved in Europeana.
Select	Special record flags were developed in order to mark records which are intended to supply to Europeana.	None	We use CollectiveAccess to select which records that can be harvested from Europeana.	All the functionalities regarding this step are made by the CMS.	The ECK doesn't provide any section tools beyond those already present in EMu.	That it uses existing functionality within the system – no need for extra training or documentation. It's easy to select targets that will make good Preview and Validation test candidates.
Prepare	LIDO and EDM export are both a great leap forward.	The possibility to save the mapping for repeated use.	In CollectiveAccess we can map to both LIDO and EDM.	The functions related with WFR.03.02 regarding the preview of the converted metadata and associated thumbnails.	As Bristol export all valid records from their collection they do not prepare individual groups of records.	Preview: easy and useful. A mapping to project the names of the required fields (instead of data) onto the Preview was very useful.

Validate	The system ensures that successful validation warrants validation by Europeana at ingestion as well.	The system reports on broken links and invalid data.	The validation is one of the key functions in ECK. We use it to validate records from our OAI-PMH service. It's necessary to see to that the records is in valid LIDO format.	The functions related with WFR.04.02 regarding the feedback given by the system about irregularities on the mapping result.	The system clearly reports on which validation rules have failed. It is easy to search for records that have failed validation. Records that happen to pass validation in the future are automatically uploaded in the background. Validation errors can be corrected on a record-by-record basis.	Only ever used as a quick step to double check mappings before submission of many records.
Supply	"Europeana data upload" button in the CMS rules!		We have our own repository.	The functions related with WFR.05.01 regarding the automatic supply we believe that can be the main advantage although not tested directly by the CP.	Supply is automatic and requires no user intervention.	That it largely happens invisibly and doesn't require interaction.
Data Acceptance	Europeana preview in the CMS is a great novelty!	Preview is definitely an advantage.	It's always good to be able to see how the record will look at the Europeana portal.	The functions related with WFR.06.01 regarding preview presentation of data before publishing in Europeana and also the possibility of withdraw records (functions related with WFR.06.02).	Preview of individual records is available directly from EMu.	Removing a record can be done by altering a single field and can be done as a batch operation on multiple records. The system keeps records up to date automatically with no human interaction

Enrich and return	Enriched data is ingested automatically in the CP's system after approval by the CP.	N/A	To be able to separate the original record and the enrichment made by Europeana is a great feature	N/A	We are able to distinguish between enriched and non-enriched data.	N/A – see spreadsheet

Impressions of the ECK iteration 4 production - Weaknesses

What do you feel is the main barrier of the ECK for each step of the workflow?

	Benaki Museum (BEN) (GR)	National Gallery-Alexandros Soutzos Museum (NAG)	Stiftung Preussischer Kulturbesitz (SPK) (DE)	Royal Museums of Art and History (KMKG) (BE)	KADOC – KU Leuven (BE)	Institut Royal des Sciences Naturelles de Belgique RBNIS (BE)
Manage	I'm not able to see when specific records have been exported	None	We feel we cannot participate in the overall evaluation of strengths and weaknesses of the ECK, as we did not test a production version of the ECK developed by Zetcom.	It is possible to see which records were exported, but not whether or not they are published on Europeana.	None	None
Select	None. Select procedure is managed by our own CMS, so ECK is only a little involved	None		Most functionalities were already part of the CMS.	The application is not straightforward, you need some training.	None
Prepare	I'm not able to make small adjustments in the mapping (add or remove a field) without technical assistance.	The fact that the system cannot support sequential application of various mappings, e.g. native data model into LIDO into EDM.	We would like to give feedback about the preview module provided by the Dark Aggregator in the last iteration. It is important to stress that the preview does not display the information in the same way as it will be displayed in Europeana. As recognised in the last iteration, it is considered an advantage for Museums to preview data before publication. On the other hand a difference between the preview in the ECK and the display in Europeana may irritate the data provider and can result in them not providing content to Europeana.	It is not easy to fully understand and perform the functionalities on the mapping without technical assistance.	It is not straightforward, you need some training.	Some aspects of the mapping service were not tested because we used the default marc to edm mapping, only a small mapping test was done.
Validate	The system reporting on missing information through the log or the xml files is not very clear.	The system does not ensure that successful validation warrants validation by Europeana at ingestion as well.		If some of the records in LIDO xml need to be corrected, I have to reprocess the entire set instead of just the invalid ones.	Who is going to update this service when changes are made in EDM? The report is difficult to understand for an archivist or librarian.	Technical assistance is necessary to understand the system validation reports, validation service should provide human readable responses.

Supply	The push function collapses due to a lot of data and we have no information on what has been uploaded/updated and what has not.	The fact that in case of an error the system is not able to start the supply process again only for the failed records.		In case of an error, the entire process needs to be re-started. It is not possible to just select the failed records.	Europeana doesn't say when the ingested records are published on the portal.	None
Data Acceptance	I cannot preview the data in groups of records before it its published on Europeana. When you upload many thousands of records you cannot check them one by one.	The CP is not informed on publication of the data on the target website (Europeana or aggregator).	We would like to remark that the Dark Aggregator does not provide at the moment any information about statistics or enriched records. This was announced in the technical partners call from June 5th, but our account (http://euinside.k-int.com/dpp/sources/SPK) showed not possibility to view any of this.	I can only preview the records one by one. Not the entire dataset as a whole (no preview in batch). No indication in the system is given as to when the records will be published on Europeana.	Europeana doesn't gives an indication about the processing steps and scheduling.	The system does not inform me when the data is published on the Europeana portal, only DA provides this information.
Enrich and return	I cannot be automatically informed (by e-mail and without constantly running ECK) on the existence of enrichments, so that I can run ECK and harvest them from Europeana.	That the system does not report on available enriched content.		The system does not report on available enriched content. I have to check manually.	You always have to monitor the quality if you want to re-use. You cannot delete incorrect enriched information on Europeana. The enrichment rules are not documented/transparent.	Not implemented

Impressions of the ECK iteration 4 production - Weaknesses

What do you feel is the main barrier of the ECK for each step of the workflow?

	Petofi Irodalmi Muzeum - PIM (HU)	**Szepmuveszeti Muzeum - FAB (HU)**	**Stiftelsen Länsmuseet Västernorrland – SLV (SE)**	**Municipio do Seixal – SEI (PT)**	**Bristol Museums, Galleries and Archives (associate partner testing partner KE Software)**	**London Transport Museum (LTM) (associate testing partner System Simulation)**
Manage	I am not able to search which records were altered by automatic data enrichment.	I can't see when the record was last uploaded to Europeana.	None	We don't have anything to highlight regarding this step.	None	Returned data not yet seen
Select	No known barrier		None	We don't have anything to highlight regarding this step.	None	None
Prepare	It is not easy to adjust the mapping without a technical background. I miss graphical mapping.	I'm not able to include every fields from the CMS in the mapping process.	None	The functions related with WFR.03.03 regarding the mapping edition and the functions related with WFR.03.09 regarding thumbnail selection. For the first one we have to have technical assistance to make adjustments and for the second one, some records were made available with more than one digital asset and it appears that is not possible to select just one of the thumbnail available.	None	Mapping: This is quite difficult to configure in some cases. Where possible the interface hides the complexity from the user so in all probability you would want to re-use a supplied, default mapping and you can do this. A cataloguer cannot be expected to know about XML formats and mappings to internal system fields and the language required to do mappings that are complex because of structures developed for general, non-Europeana, use. Fortunately the mapping can be re-used and a set of good defaults was supplied so this step only ever needs doing once, if at all

Validate	In case of an error it is not possible to fix the problems without some technical background. (For example the error messages are in English…)		If corrections are needed then I have to reprocess the entire set instead of just the invalid ones.	The functions related with WFR.04.05 regarding the test ingestion because it was not possible to do, directly by the CP, a test of the metadata ingested before it goes to Europeana.	None	The situation was not seen but could be potentially problematic if different things were wrong in different records, especially if there were thousands of records. A summary of errors on a selected set is needed
Supply	Only the Dark Aggregator shows how the process goes after the supply button was pushed in the CMS.	Push process is still only available through the DA website.	None	We don't have anything to highlight regarding this step.	None	None. Some interruptions due to development.
Data Acceptance	The system does not inform me when the data is published on Europeana!		None	The functions related with WFR.06.04 and WFR.06.05 regarding information about the processing steps and related scheduling and also the automatic publication alert. On the first that we have data published on Europeana we didn't received any automatic information about it.	None	Preview isn't on the Europeana website but comes as a single page.
Enrich and return	It is not possible to create a list of the enriched records after automatic data enrichment yet.	N/A	None	N/A	It is very hard to automatically map the enriched data back to our collection. It requires user intervention on a record-by-record basis. As we have >35k record presently in the system this would be a full-time job.	N/A – see spreadsheet. Wary of automatically merging returned data into existing fields even if available.

Appendix III: Content Providers Survey i4 – content re-ingestion

Noteworthy successes									
Enriched fields	**Used vocabulary**	**NAG**	**BEN**	**KMKG**	**SLV**	**SPK**	**KADOC**	**RBINS**	**PIM**
Agent	**DBpedia**	The specific enrichments are accurate.	N/A	The enrichments seem to be correct.	N/A	The agents that were evaluated were all enriched by SPK with GND (authority list of the German national library). There is a link to the person's name on the website of German National Library (e.g. http://bit.ly/1q9X8KN). There weren't any enrichments by DBpedia.	The agent André François is hard to check, but could be correct (http://bit.ly/1zaRQ6D). The agent Alfred Ost is ok (http://bit.ly/VKjxGb)	N/A	None
Places	**Geonames**	N/A	N/A	N/A	N/A	The enrichments of the countries were accurate (e.g. http://bit.ly/1sFMu4J). GeoNames is provided is several languages.	N/A	Quality OK. Most of the enrichments seem correct	Looks accurate everywhere
Time periods	**Semium Time**	N/A	N/A	N/A	Map your date to a standardized time period.		N/A	N/A	none
Concepts	**GEMET and DBpedia**	N/A	None	Most enrichments are accurate.	It's nice to have subjects in other languages.	Most enrichments are accurate.	All accurate after check.	Quality OK. Most of the enrichments seem accurate	Looks accurate everywhere
Noteworthy failures									
Enriched fields	**Used vocabulary**	**NAG**	**BEN**	**KMKG**	**SLV**	**SPK**	**KADOC**	**RBINS**	**PIM**
Agent	**DBpedia**	None	N/A	When there's more than one creator, only one is enriched with	N/A	Some of the fields were enriched by SPK and not by Europeana. The difference in the origin of the enrichments is not made clear on the portal.	The agent Richard Friese is probably incorrect, because the image seems to be made after his dead (http://bit.ly/1trCcm	N/A	None

				DBpedia (for example: http://bit.ly/1sC3jO3)			F) .		
Places	**Geonames**	N/A	N/A		N/A	- Only one item is enriched: when a city and/or a town as well as a country is mentioned, only the country is enriched. - Some enrichments outside of Europe are incorrect According to the metadata the object was found in Columbia, in San Agustín, Río de Tablón. The geo-coordinates of San Augustin and Province of Teruel are referring to a place and region in Spain, Europe.	N/A	None	-
Time periods	**Semium Time**	N/A	N/A		None	- The link to semium.org has expired. - The series of time expressions under 'under generated-tags' are not considered useful.	N/A	N/A	None
Concepts	**GEMET and DBpedia**	N/A	None	There are wrong enrichments from GEMET (e.g. 'plan' is enriched with 'a scheme of action' in http://bit.ly/1l2MXMa)	None	The enrichments aren't relevant (e.g. http://bit.ly/1sFMu4J: Photography is enriched with 3 concept terms, however: none of them very relevant. These keywords expand on the material of the object (photography), but what is interesting about it (what the photography contains) is not covered.	None	None	-