ANNUAL PROGRESS REPORT
and Deliverable D.7.3 – Year 1

Grant Agreement number: 325099

Project acronym: LoCloud

Project title: Local Content in a Europeana Cloud

Project type: BPN

Periodic report: 1st

Period covered: from 1 March 2013 to 28 February 2014

Project coordinator name, title and organisation:

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DECLARATION BY THE PROJECT COORDINATOR

I, as coordinator of this project and in line with my obligations as stated in Article II.2 of the Grant Agreement declare that:

- The attached periodic report represents an accurate description of the work carried out in this project for this reporting period;

- The project (tick as appropriate):

    √   has fully achieved its objectives for the period;

- The public Website is up to date;

- *[this point only applies to projects with actual cost reimbursement]* To my best knowledge, the information contained in the financial statement(s) submitted as part of this report is in line with the actual work carried out and consistent with the reported resources and if applicable with the certificates on financial statements.

Name and position of Coordinator: Gunnar Urtegaard.

Date: …………/ …………/………….

Signature: ....

PUBLISHABLE SUMMARY

LoCloud aims to build on the achievements of CARARE in establishing a repository-based aggregator for Archaeological and Architectural heritage (and which will, by the end of 2015 have contributed some 3 million items to Europeana); and of Europeana Local in its work with local institutions and their regional and national aggregators, which resulted in the contribution to date of well over 5 million items. Together, content from these two projects constituted about 35% of the total content (25 million items) envisaged to be in Europeana by the end of 2012.

Its objectives are to:

1.   Continue to ease the task of enabling heritage organisations in making their contents accessible via Europeana, by using the cloud to provide services and tools which help to reduce technical, semantic and skills barriers.
2.   Make it easier for digital content emerging from small and medium cultural institutions, and also through collaborative crowdsourcing initiatives, to be made available to Europeana in order to increase the richness and representativeness of Europeana's record of local history.
3.   Improve the interoperability of relevant content from localities across Europe from institutional domains which in some countries act separately: namely the 'heritage' sector and the MLA (museums, libraries, archives) sectors, in order to provide a more coherent 'views' of the history and heritage of a given locality.
4.   Enable smaller institution types such as house museums, which currently fall outside most aggregation infrastructures, to contribute their content to Europeana.
5.   Explore the potential of cloud computing for aggregation, enrichment and re-use, with a special focus on geographic location.
6.   Explore and trial a cloud based architecture as a scalable platform for Europeana metadata aggregation and harvesting with higher efficiency and reduced maintenance costs.
7.   Develop a portal and support service to serve the needs of content providers.

In the first year LoCloud has focused chiefly on the planning and preparatory work required to accomplish these objectives, specifically:

- To review the state-of-the art and make a detailed assessment of aspects of the cloud relevant to the needs of the project and to small and medium sized institutions.

- To review existing infrastructures and attitudes towards adopting cloud or other aggregation solutions within the operational contexts of the content providing institutions participating in ICT-PSP and within Europeana.
- To assess the remaining barriers to cloud use and establish potential means of addressing them.
- To establish a plan of action for each content partner taking into account the varying national and regional contexts.
- To establish the infrastructural requirements of smaller/local institutions for aggregation and services necessary to interact with Europeana.
- To specify the cloud-based infrastructure necessary to meet these requirements.

The consortium has achieved all these goals and has established a strategic collaboration with European Cloud and other key projects critical to ensuring the future sustainability of Europeana. In its second year the ingestion of content through its infrastructural pipeline to Europeana will commence. The development of planned microservices will enable the enrichment of metadata in the LoCloud aggregation service. A Europeana-compatible, cloud-based Lightweight Digital library will be developed and made available to the many smaller institutions which currently experience problems in contributing to Europeana.

PROJECT PROGRESS

1. Project objectives for the period

LoCloud aims to build on the achievements of CARARE in establishing a repository-based aggregator for Archaeological and Architectural heritage and of Europeana Local in its work with local institutions and their regional and national aggregators, which together resulted in the contribution of well over 5 million items or approximately 20% of the total content (25 million items) in Europeana by the end of 2012.

LoCloud's overall objectives are to:

1. Continue to ease the task of enabling heritage organisations in making their contents accessible via Europeana, by using the cloud to provide services and tools which help to reduce technical, semantic and skills barriers.
2. Make it easier for digital content emerging from small and medium cultural institutions, and also through collaborative crowdsourcing initiatives, to be made available to Europeana in order to increase the richness and representativeness of Europeana's record of local history.
3. Improve the interoperability of relevant content from localities across Europe from institutional domains which in some countries act separately: namely the 'heritage' sector and the MLA (museums, libraries, archives) sectors, in order to provide a more coherent 'views' of the history and heritage of a given locality.
4. Enable smaller institution types such as house museums, which currently fall outside most aggregation infrastructures, to contribute their content to Europeana.
5. Explore the potential of cloud computing for aggregation, enrichment and re-use, with a special focus on geographic location.
6. Explore and trial a cloud based architecture as a scalable platform for Europeana metadata aggregation and harvesting with higher efficiency and reduced maintenance costs.
7. Develop a portal and support service to serve the needs of content providers.

In the first year LoCloud has focused chiefly on the planning and preparatory work required to accomplish these objectives, specifically:

- To review the state-of-the art and make a detailed assessment of aspects of the cloud relevant to the needs of the project and to small and medium sized institutions.
- To review existing infrastructures and attitudes towards adopting cloud or other aggregation solutions within the operational contexts of the content providing institutions participating in ICT-PSP and within Europeana.
- To assess the remaining barriers to cloud use and establish potential means of addressing them.
- To establish a plan of action for each content partner taking into account the varying national and regional contexts.
- To establish the infrastructural requirements of smaller/local institutions for aggregation and services necessary to interact with Europeana.
- To specify the cloud-based infrastructure necessary to meet these requirements.

2. Work progress and achievements during the period

Workpackage 1

Planning, preparation and requirements
Start month 1. End month 9
Lead beneficiary number: P1

Objectives

- To prepare and equip LoCloud participants for their roles in the work.
- To review the state-of-the art and make a detailed assessment of aspects of the cloud relevant to the needs of the project and to small and medium sized institutions.
- To review existing infrastructures and attitudes towards adopting cloud or other aggregation solutions within the operational contexts of the content providing institutions participating in ICT-PSP and within Europeana.
- To assess the remaining barriers to cloud use and establish potential means of addressing them.
- To establish a plan of action for each content partner taking into account the varying national and regional contexts.
- To establish the infrastructural requirements of smaller/local institutions for aggregation and services necessary to interact with Europeana.
- To specify the cloud-based infrastructure necessary to meet these requirements.

Significant results

Task	Work done and Achievements (edit tasks 1.1 to 1.3 and 1.5 into past tense)
1.1	A **kick off meeting** for all partners was organized by NRA in Norway during Month 1 to brief participants and to identify initially and discuss the position in each country and the potential of the cloud for content providers and aggregators. A preliminary action plan for each territory or region, identifying areas of special interest within the LoCloud service options was one of the outcomes of this meeting and was produced by content partners using an action planning template prepared by MDR.
1.2	**State of the art monitoring and situation analysis**. A working group led by KUAS and including RCE, MECD, NPD, UDE, VUFK and PrifUK KAEG conducted a review of the state-of-the-art in cloud-based content management and aggregation services relevant to the needs of the project and to small and medium sized institution. An analytic report (D1.1) was produced by the Working Group to inform action planning
1.3	**Action planning** 1.3.2 The LoCloud partner in each territory convened, or otherwise associated with, a planning group involving key players in the cultural sector by Month 4. 1.3.3 Action plans were prepared by the country partners to identify the steps needed in a territory to implement the IaaS or SaaS solutions for aggregation by Month 7.
1.4	**Content and metadata** Athena Research Center (DCU) in association with the content partners, evaluated and appraised content and metadata among collections participating in LoCloud with regard to fitness-for-purpose, completeness and quality.

1.4.1	An online questionnaire survey was designed, distributed and filled out by the content providers and other related third parties, and analyzed.
1.4.2	A metadata schema analysis was conducted based on the results of the workshops (1.5.1 below) and information provided in the questionnaires.
1.5	**Requirements analysis**
1.5.1	**Content provider workshops** Athena RC working with UOY/ADS, KUAS and MECD organized three workshops (in Copenhagen, York and Madrid) during August and September 2013 in order to allow content providers to share information about their collections, systems and gather information about user and technical requirements and to discuss the issues involved in implementing infrastructure and cloud services to support the provision of content to Europeana by small and medium institutions and to establish core user requirements in each case. This resulted in an adaptable template that can be used as a basis for requirement specification in each territory.
1.5.2	**User surveys** Athena RC, working with UOY/ADS ran user surveys on cloud-based services addressed to collections managers from content provider institutions end users respectively, taking into account small and medium sized institutions' participation, attitudes towards cloud solutions and barrier assessment
1.5.3	**User requirements specifications.** Athena RC working with UOY/ADS developed user requirements specifications on the basis of the content planning, metadata, workshops and user surveys and discussions at the London Plenary meeting.

Workpackage 2

Design and implementation of aggregation infrastructure
Start month 7. End month 24
Lead beneficiary number: P29

Objective
To specify, design and test the core LoCloud infrastructure based on IaaS in the cloud, including both centrally provided and locally deployed infrastructural services

Significant results

The necessary modifications of the two main infrastructural components for ingestion (the MINT mapping service and the MoRe repository) were specified.

Task	Work done and Achievements
2.1	The core infrastructure specifications were designed based on an evaluation of relevant technologies. Described in D.2.1.
2.2.1	A modification of the MINT system was specified in order to carry out original metadata harvesting, mapping and ingestion from LoCloud content providers. Described in D2.3.
2.2.2	Developments in the existing MoRe aggregation service were specified sufficient to enable ingestion, data management and continued delivery to Europeana. Described in D2.2. ,
2.3.1	Athena RC and PSNC performed an evaluation of the user requirements related to the Lightweight Digital Library (LDL) (that was carried out in the three workshops) and specified the functionalities and schema in order to build the LDL. A set of services that can ingest content from LDL have been designed and implemented by Athena RC.
2.3.2	NTUA has designed and made implemented a cloud enabled MINT2 prototype that allows the infrastructure (and other external systems) to utilise its powerful mapping engine through web services. This will be used to facilitate content ingestion by partners who can provide their content as XML.

<u>**Workpackage 3**</u>

Micro services for small and medium institutions
Start month 9. End month 21
Lead beneficiary number: P21

Objectives

- To establish a cloud-based collaborative testing environment for tools and services and to test the use of tools to improve data quality for Europeana, through both professional and crowdsourcing contributions.
- To develop cloud-based SaaS services and applications suitable for use by small and medium institutions which wish to contribute their local history and heritage collections to Europeana.
- Through this work, to provide the basis for a continuing process of participative testing and validation of each of the services and applications, enabling their use by content providing institutions for cataloguing and by this, aggregation services and by Europeana for enrichment.

Significant results

A strong start has been made on the establishment of a collaborative testing environment and on the specification of each of the micro-services, during the first three months of this workpackage.

Task	Work done and Achievements
3.1.1	**Collaborative test laboratory** The LoCloud test lab is a hardware infrastructure suitable for offering platform and software in a cloud based manner. It consists of two computer servers (Intel Core i7 with 32GB RAM), a NAS Storage device with a 12TB and a 6TB RAID5 volume and a cloud controller node. The software used to run the cloud is OpenNebula (version 4.2). It is a free open source software (apache licensed) with a mature web interface. OpenNebula is capable of managing KVM, XEN and VMWare hyper visors. The setup supports KVM and XEN as the most recent version of the free-of-charge edition of VMWare ESX Server (5.1) does not work with OpenNebula. The cloud test lab is accessible at <u>http://locloud.ait.co.at/</u> . The running platforms and software appliances are default accessible as http: lc0XX.ait.co.at or via ssh at locloud.ait.co.at:23XX where XX is a running number from 01 to 99. The OpenNebula Sunstone Webinterface also allows VNC access to the machines. There are several platforms currently available in the test lab: • Ubuntu Server 12.04 • CentOS 6.5 • SuSE • Ubuntu Server 12.04 with LAMP • TTY Linux The software appliances available in the test lab up till now are: • Sakai (Collaboration System) • Tematres (Vocabulary Manager)

Task	Work done and Achievements
	• Koha (Integrated library system) • Greenstone (Digital library) • WSO2 (Dataservice middleware) • Omeka (Digital library) • DreamFactory A virtual machine with the first prototype of the microservice by UPV EHU has already also been integrated in the LoCloud test lab. In order to coordinate collaboration within WP3 and in preparation to provide a common access point for all micro services during the test phase in the second project year a platform was set up using the SAKAI environment. This platform can be reached through the test lab address: http://lc004.ait.co.at:8080/portal/site/locloud The platform includes currently 3 work spaces: "My Workspace" > for personal data "LoCloud WP3" > visible and accessible just for WP3 partners "Micro services" > access point for all users and testers of the micro services To date access to the platform is restricted to WP3 partners. The Operation SaaS test lab is described in D3.1 "Operational SaaS Test lab"
3.1.2	**Identify test group** Partners indicated their preferences for participation in testing in a survey issued by WP1 (T1.4 – country action plans) in autumn 2013, as follows: • **Geolocation enrichment:** Provincie Limburg, PSRL, CUT, NPU, Future Library, DP, FRS, VUKF, RCE, NRA, FMNF, Zavad Jara, ABMR, HU, UoY ADS, AIT (total: 16 partners) • **Metadata enrichment:** Provincie Limburg, PSRL, CUT, Future Library, AHAI, FRS, RCE, NRA, Zavod Jara, ABMR, HU, UoY ADS, AIT (total: 13 partners) • **Vocabularies and languages:** Provincie Limburg, CUT, Future Library, AHAI, DP, FRS, VUKF, RCE, NRA, ABMR, HU, UoY ADS, AIT (total: 13 partners) • **Historic Placenames:** Provincie Limburg, CUT, Future Library, FRS, VUKF, RCE, NRA, BGB, PrifUK KAEG, ABMR, HU, AIT (total: 12 partners) • **Wikimedia and crowdsourcing:** CUT, KUAS, Future Library, AHAI, FRS, RCE, NRA, BGB, ABMR, HU, AIT (total: 11 partners) Based on this information creation of the final test groups for the test phase starting in April 2014 will be coordinated by AIT.
Task 3.2	**Geolocation enrichment services** Following presentations on "geospatial data in LoCLoud" at the Kick-off meeting in Oslo during March 2013, a working group collaborated to produce a report: report "Short survey on geospatial data of the LoCloud content. A presentation on prototyping "Geocoding / Geoparsing" was made in the working group on geospatial data organised at the London plenary meeting in December 2013, followed by

Task	Work done and Achievements
	development of the prototype of LoCloudGeo_1_0 API, supported by skype meetings to support planned collaboration in testing. Parts of an early prototype micro service for geocoding/geoparsing purposes are available in the context of WP 3.2 (and 3.5) http://locloudgeo.eculturelab.eu/tester_logeo_1_0/ enabling testing of the API and at http://locloud.avinet.no. These developments will in future be merged together to one comprehensive service.
Task 3.3	**Metadata enrichment services** The task comprises two micro-services: background link and vocabulary matching. The task started in Month 9 (December 2013). A number of telephone conferences and meetings were organized to discuss the various micro-services which produced the enrichment service specifications. • background link service: UPV EHU analysed a number of state-of-the-art systems for English and Spanish, whose aim is to link running text to external resources such as Wikipedia and DBpedia. They also evaluated the systems against standard datasets, measuring memory footprints and elapsed times. This analysis is intended to support the final decision on which platform to use as backbone for the background link service. An analysis report will be compiled and circulated. • vocabulary matching service A first prototype for vocabulary matching has also been designed. The prototype requires the complete list of vocabulary concepts and their lexicalizations. Using this resource, the service is able to match running text with the appropriate vocabulary terms. In addition, the first version of the virtual machine where all these services will be deployed has been defined. A description of the API for metadata enrichment services is available.
3.4	**Vocabulary services** AIT has investigated the software 'Tematres' for suitability as a Vocabulary service infrastructure for LoCloud. A test installation with the multilingual thesaurus "Dismarc Genres" was set up at http://test113.ait.co.at/tematres/vocab/. Tematres is also available as an appliance in the test lab. The software provides handling of vocabulary in accordance with standard thesaurus norms. It allows for import/export of data as simple text files or in SKOS format. For LoCloud an extension to the core SKOS format is required that allows the storage of geo coordinates and time periods. Work is currently progressing on extending tematres to allow metadata that exceeds SKOS-core to be stored in the vocabulary. This will allow implementing the webservices needed for data enrichment. Two scenarios will be developed for testing purposes: 1. The final tool will be available on a virtual machine in the LoCloud testlab and can be tested there 2. The collaborative vocabularies developed via the tool will be made available in a Test Application. The integration of the vocabularies via web services can be tested this way.

Task	Work done and Achievements
3.5	**Historic place name microservices** VUKF proposed a workplan and methodology for Historic Place Names microservice implementation, prepared a detailed specification describing the Historic Pace Names microservice and its functionalities and a task brief description for the Interim Status Report on Micro Services. These will be documented as parts of D3.5 and D3.7). A discussion between the partners working together on this micro-service took place at the London plenary meeting in December 2013 followed by four Skype discussions. Preparations are also underway for the technical implementation and development of this microservice. It is planned that it will be orientated to providers and aggregators, rather than end users. It will be developed on the basis of a SKOSified Thesaurus with regard to the CARARE metadata schema. Proposed microservices include those for: • interoperability: automatically connecting various forms of historic (including multilingual) place names in local systems with contemporary place names and GIS (connecting historic names with current names or/and administrative dependencies and connecting different variations of the same place name). • interoperability: automatically checking transferred data and linking local geonames with contemporary geonames during the metadata harvesting process (connecting names with coordinates). • historical map visualization showing historic place names on an interactive contemporary map. • allowing providers and aggregators to crowdsource and enrich their historic geodata. • allowing uploading of visual data (iconography of authentic place from Europeana, such as paintings, drawings, photos, etc.) connecting it with particular historic place name.
3.6	**Wikimedia application** Requirements were collected on the various technologies / services required to accomplish metadata enrichment. A wikimedia testbed environment was set up with a sample collection (for testing). A first draft prototype for a metadata enrichment service was designed. Several Skype discussions were organised and a workshop meeting took place alongside the LoCloud plenary in December 2013 regarding the Wikimedia service. The specifications of the Wikimedia service were then refined. Contact was established with other Europeana projects pursuing Wikimedia-related developments and a working group established to ensure harmonization and avoid duplication of effort between projects

Workpackage 4

Enabling and supporting small and medium institutions
Start month 14. End month 36
Lead beneficiary number: P4

Objectives

▪ To enable and support small and medium sized institutions involved in providing content to Europeana through training, documentation and a help desk service delivered through a service-rich support portal

▪ To develop a sustainable centre of expertise in the aggregation and enrichment of local heritage content.

Significant results

The main work of WP4 in the LoCloud project will start in M14 (April 2014) and will last until the end of the project. Therefore in the first year of the project, efforts were confined to initial preparation.

Task	Work done and Achievements
4.1.2	**Training video** Initial consideration regarding possible forms of video materials (screencasts vs recorded workshop lectures vs webinars)
4.1.3	**Online training course** Existing course which will be a basis for LoCloud courses was reviewed and updated in several general areas related to creation of digital libraries by small memory institutions.
4.2	**Documentation and help desk** Initial planning regarding helpdesk scope and support routes offered by the helpdesk service, considerations about helpdesk service level agreement, possibilities for direct on-line interaction with helpdesk staff
4.3	**Live support portal** Planning of the structure of live support portal, including both ticket system and Q&A service.

Workpackage 5

Evaluation and impact assessment

Start month 12. End month: 36
Lead beneficiary number: P20 (UDE)

Objectives

- Monitor the achievement of the objectives of LoCloud and their impact on the user communities.

- Monitor and evaluate the amount, types and quality of metadata and content being provided to Europeana by LoCloud partners.

Significant results

Effort on this workpackage commenced in M7, earlier than expected, in order to ensure through preparation. The following were the main results:

- WP5 GANTT developed by UDE for easy and transparent overview and monitoring (by UDE).
- WP5 strategy: WP5 planning activities and further steps for monitoring are developed and presented by UDE and approved at the consortium meeting in London in NOV 2013 and will be further defined in detail by all WP5 partners.
- 1st WP5 online meeting organized by UDE with clear decisions on particular WP5 tasks, to be done by WP5 partners. The meeting will be on a regular basis.
- Agreement with the WP5 partners to develop some evaluation instruments that can be used for different sub-tasks (interrelationship between WP5 tasks).

Task	Work done and Achievements
5.1	**Evaluation of IaaS & SaaS infrastructure** UDE has developed a list of potential monitoring quality assurance instruments and presented it to the consortium for discussions during the next consortium meeting. All partners agreed to share their preferences and suggesting on tools completing the survey. UDE aggregated the results of the survey and started new discussions only with WP5 partners. Concrete ideas about how to evaluate the operational outcome were collected and shared during the 1st WP5 online meeting in February 2014. Task 5.1 will focus mainly on evaluation and impact aspects for sustainability - assessment and measurement of impact indicators measured using different methodologies. The evaluation will be split into two parts in consideration of interrelationship between WP5 tasks and other project WPs: - Technical evaluation: technical measurement of infrastructure concerning scaling and other aspects (e.g. performance) - Evaluation of services: functional testing of services, also related to T5.3. Interrelationship with other WPs: WP5 will ask WP2 about integrated monitoring mechanisms in LoCloud micro-services.

5.2	**Content and metadata quality assessment reflects more technical monitoring.** A general reflection across all WPs: interrelationship between all WPs which also covered content workflow.
5.2.1	A modification of the Events Log system used in the Europeana Local project has be used as the central tool in monitoring the preparation and ingestion of metadata in its various phases in LoCloud. D5.1 will therefore feature a description of how this will work. Various documents and deliverables from that time of Currently Europeana Local have been identified to form a solid basis for D5.1. **D5.1 (Preparatory) report on content ingestion** due in M12, February 2014 (NRA); the first version of the document was completed on time.
5.3	**Impact on participating institutions and end users** According to the DoW every project partner has some PMs to contribute to WP5. WP5 partners will ask other project partners to support WP5 activities interviewing the participating content institutions (as required in sub-tasks 5.3.1-5.3.3).
5.3.1	Supporting RCE, UDE will develop at least 2 different instruments: 1. Online questionnaire: asking institutions and end users to provide an objective feedback (quantitative instruments) 2. Interviews with institutions and end users in all countries on-site, organised together with the project partners (quantitative instruments) The results of both studies will be used also for potential recommendations (sub-task T5.3.3). • UDE will coordinate the design of the interviews, all partners are expected to support in their countries to get as many answers (survey and interviews) as possible. • Project partners will receive a full package for the interview made by UDE.
5.3.2	Initial discussion between UDE, DP and Gironde about study of the benefits and costs (M30) during the 1st online meeting in February 2014. Partners will consider also additional costs for institutions, aggregators and Europeana itself next to main focus on small content providers
5.3.3	Initial discussion with UDE and Prov. Limburg about practice-oriented recommendations on future cloud services (M30) during the 1st online meeting in February 2014. Interrelationship within WP5 - The results of both studies (in sub-task 5.3.1, online questionnaire and interviews) will be used also for potential recommendations in sub-task 5.3.3 in the third project year.

Workpackage 6

Dissemination and exploitation
Start month 1. End month 36
Lead beneficiary number: P13

Objectives

- To organise a large scale effort to:
- increase Europeana's impact at the local level through a range of activities such as regional, national and international events, online networking and a competition;
- promote the availability of LoCloud's results and available services to small and medium sized institutions and to aggregators throughout Europe
- To plan and create a business model for a sustainable support service for small and medium sized institutions with limited or no access to the Europeana ecosystem.
- To plan with Europeana the way in which the services created by LoCloud can be applied to the whole Europeana corpus in order to create location-based views over its entire index

Significant results

The LoCloud website http://www.locloud.eu/, communications and dissemination mechanisms were designed and activated. A video introducing the project is available on the project website. Investigation are underway regarding participation in major events and the successful positioning of the LoCloud competition.

Task	Work done and Achievements
6.1	**Dissemination planning**.
6.1.1	MDR created the LoCloud website by Month 2, and continues its development and maintenance. Within the website, news and distribution facilities and a content management system have been established. A video introducing the project is available on the project website.
6.1.2	MDR created the project logo and prepared templates for project presentations, documents, briefing papers and other materials by Month 2. These included posters in a variety of partner languages, and a printed brochure.
6.1.3	MDR established a database and functionality on the project website, to enable stakeholders from the domain to register for newsletters and briefings by Month 3.
6.1.4	MDR produced the initial dissemination plan by Month 6 and continues to update the plan at regular intervals. **This work was reported in Deliverable 6.1**.
6.1.5	MDR continues to coordinate the dissemination of news and information about the project through Twitter, Linked-In and a LoCloud newsletter published in English twice a year; the newsletter is distributed to relevant contacts via the project's stakeholder database, and the partner networks. As stated in Deliverable 6.1 with regard to Facebook, currently our strategy is to follow the pages on Facebook of other projects (e.g. Europeana Cloud, and Carare) and not to have a Facebook group for LoCloud, which we may decide to create in the future, in case specific requirements arise in the course of the project. The newsletter includes a regular Guest Blog that is featured on the site, and we are continuing encouraging partners and external people to post similar articles on the web.
6.1.6	All partners continue to support the dissemination of news and information within their countries; where appropriate providing translations into their national languages.

6.2	**Conferences, events and other activities**
6.2.2	UoY/ADS began preparations for organising a LoCloud workshop at an international conference during year two, to promote the goals of the project. Discussion of the best potential venue for the workshop was a topic during one of the breakout sessions at the LoCloud plenary meeting in London, and will be decided shortly.
6.2.6	All partners continue to participate in Europeana network meetings, task forces and expert working groups as appropriate.
6.3	**LoCloud Competition**
6.3.1	National Archive of Norway working with MDR and in consultation with appropriate European bodies will organise a Europe-wide LoCloud competition during year three to stimulate best practice and innovation among individual regions and localities in creating a 'view' in Europeana of the history and heritage of their locality, with awards to be presented at the Final Event. Discussion of the nature of the competition and potential venues for the awards to be given was a topic during one of the breakout sessions at the LoCloud plenary meeting in London.

Workpackage 7

Management and coordination – see Section 4 below.

3. Deliverables and milestones tables

Deliverables (excluding the periodic and final reports)

TABLE 1. DELIVERABLES										
Del. no.	**Deliverable name**	**WP no.**	**Lead participant**	**Nature**	**Dissem-ination level**	**Due date from Annex I**	**Delivered Yes/No**	**Actual / Forecast delivery date**	**Comments**	
1.1	Report on the state-of-the art monitoring and situational analysis	1	6	R	PU	5	Y	5		
1.2	Definition of metadata schemas	1	10	R	PU	7	Y	7		
1.3	Content and metadata analysis	1	29	O	PU	7	Y	7		
1.4	Consolidated action plans	1	2	R	PU	9	Y	10		
1.5	Requirements analysis	1	29	R	PU	9	Y	9	Delivery date put back by one month in revised Grant Agreement	

TABLE 1. DELIVERABLES

Del. no.	Deliverable name	WP no.	Lead participant	Nature	Dissem-ination level	Due date from Annex I	Delivered Yes/No	Actual / Forecast delivery date	Comments
2.1	Core infrastructure specifications (including Business Process Models)	2	29	0	PU	11	Y	12	
2.2	Modified MINT prototype	2	3	P	PU	12	Y	12	
2.3	Modified MoRe (LoCloud) Aggregator prototype	2	29	P	PU	12	Y	13	
3.1	Operational SaaS Test lab	3	21	P	PU	12	Y	12	
5.1	Periodic reports on content ingestion	5	1	P	PU	12	Y	13	The periodic report for period 1 is a planning document: ingestion does not commence until year 2.
6.1	Initial dissemination plan	6	2	R	PU	6	Y	6	
D7.1	Consortium Agreement	7	2	O	RE	1	Y		

TABLE 1. DELIVERABLES									
Del. no.	**Deliverable name**	**WP no.**	**Lead participant**	**Natur e**	**Dissem- ination level**	**Due date from Annex I**	**Delivered Yes/No**	**Actual / Forecast delivery date**	**Comments**
D7.2	Periodic Progress report	7	2	R	RE	7	Y		
D7.3	Annual Progress report	7	2	R	RE	12	Y	M14	

Milestones

			TABLE 2. MILESTONES		
Milestone no.	**Milestone name**	**Due achievement date from Annex I**	**Achieved Yes/No**	**Actual / Forecast achievement date**	**Comments**
MS 1	Country planning completed	7	Y	9	Expressed in D1.4
MS 5	Content and metadata analysis tools available	12	Y	13	Tools defined in D5.1
MS 8	Plenary meeting	9	Y	9	Held in London

4. Project management

Project management and coordination forms WP7. Its objectives are as follows:

- Co-ordinate the work of LoCloud and monitor progress in order to maintain focus on successful delivery of the
- Expected results and on the accomplishment of the objectives, on time and to budget.
- Ensure effective operation of the Project and the delivery of all results to a high level of quality.
- Supervise the project's management and decision-making procedures
- Manage the contract and assure compliance with the Commission's reporting requirements.
- Provide efficient financial management and timely payment procedures

These activities have all been conducted effectively. The project uses Basecamp as its main communications mechanism with project partners. Project Management Board calls using Skype have been organised at approximately two-monthly intervals. Responsibility for intra-workpackage management and communication is devolved to WP leaders. Substantial numbers of skype calls have taken place between members of WP2, 3 and 5 in particular in addition to discussions and workshops organised at the two plenary meetings in Oslo and London

Project activities and deliverables are all on target or ahead of schedule.

The project kick-off meeting was organised by the coordinator (NRA) in Oslo during Month 1 March 2013. A plenary meeting for all partners was organised by MDR in Month 10 (December 2013).

The Latvian partner (LAB) withdrew from the project in July 2013 and was replaced the following September by the Public Library of Rijeka (GKR) in the following September. As a consequence, the project's training and dissemination work in South East Europe has been expanded.

LoCloud is an active participant in the cloud coordination group convened by Europeana and also involving the Europeana Cloud and Europeana Creative projects.

A number of corrections and relatively minor modifications to the Description of Work were submitted to NEF in one process at the end of Year 1. These included:

- Adjustments in the budget distribution and allocation of person months between partners to correct errors in the GA and to reflect agreed changes in responsibilities for work or additional work.
- Some minor rationalisations of the dates of deliverables.
- A few corrections and additions to workpackage descriptions to reflect the above and to describe additional work.
- Minor corrections to the performance monitoring table.

There is no major impact arising from these changes

USE OF RESOURCES

Overview Person-Month Status (cumulative)

Nr	Consortium short name	WP1 Actual	WP1 Planned	WP2 Actual	WP2 Planned	WP3 Actual	WP3 Planned	WP4 Actual	WP4 Planned	WP5 Actual	WP5 Planned	WP6 Actual	WP6 Planned	WP7 Actual	WP7 Planned	TOTAL Actual	TOTAL Planned
1	NRA	1.616	7	0.275	2	0.127	7		5	0.152	5	3.152	14	5.167	14	**10.489**	**54**
2	MDR	0.239	3						3		3	7.736	10	6.741	30	**14.716**	**49**
3	NTUA	3.004	3	1.938	12	1.935	3		8				3	0.233	2	**7.109**	**31**
4	PSNC	2.993	3	3.509	14		8		16		4		5		3	**6.502**	**53**
5	MECD	4.000	4		2		4	0.742	1		2	0.393	4	0.640	2	**5.775**	**19**
6	KUAS	6.269	5	0.872	2		2		1		2	0.715	4	0.279	2	**8.134**	**18**
7	BJC	1.813	2		2		2		1		2	0.747	4	0.320	2	**2.880**	**15**
8	RCE	1.524	4		2	0.023	2		1		6		4	0.152	2	**1.699**	**21**
9	NPU	4.011	4	1.533	2	0.132	2		1		2	0.925	4	0.747	2	**7.348**	**17**
10	UPV EHU	3.859	4			0.298	7		1			0.549	3	0.306	2	**5.011**	**17**
11	AVINET	0.617	4	1.953	8	5.609	7	1.758	12				3	0.500	2	**10.438**	**36**
12	VUKF	6.175	4		2	7.713	7		1		6	1.199	5	0.779	2	**15.866**	**27**
13	UoY ADS	4.015	4	0.982	2	0.164	4		3			3.407	8	0.665	2	**9.233**	**23**
14	IPCHS	1.268	2		2	2.979	7		1			1.275	3	0.345	2	**5.866**	**17**
15	Provincie Limburg	0.583	2	0.201	2	0.112	2		1	0.022	5	0.664	4	0.204	2	**1.785**	**18**
16	CG33	2.005	2		2		2		1	0.124	5	0.503	4	0.751	2	**3.382**	**18**
17	Zavod Jara	1.966	2	0.183	2	0.076	2		1		2	0.678	6	1.829	2	**4.731**	**17**
18	Future Library	2.004	2	0.503	2		2		1		2		4	0.495	2	**3.002**	**15**
19	FMNF	1.040	2		2	0.040	2		1		2	0.240	4	1.280	2	**2.600**	**15**
20	UDE		3		2		2		1		6		4		2		**20**
21	AIT	1.957	2	0.427	2	8.445	18		3		4	1.187	2	0.720	3	**12.736**	**34**
22	ABMR	2.000	2		2	0.080	2		1		2	0.867	4	0.160	2	**3.107**	**15**
23	PSRL	2.000	2		2		2		1		2	1.557	4	0.757	2	**4.314**	**15**
24	BGB	1.999	2	0.251	2		2		1		2		6	0.405	2	**2.655**	**17**
25	HU	1.995	2	0.716	2	0.344	2		1		2	1.376	4	0.784	2	**5.216**	**15**
26	CUT	2.006	2	0.928	2	0.557	2		1		2	0.307	4	0.643	2	**4.441**	**15**
27	LAB	withdrawn															
28	AHAI/MCI	1.445	2		2		2		1		2	0.204	4	0.340	2	**1.989**	**15**
29	Athena (ARC)	7.195	7	3.044	15	4.208	18		6		4	0.250	3	0.929	3	**15.626**	**56**
30	DP	1.949	2	0.250	2		2		1		5	0.220	4	0.646	2	**3.064**	**18**
31	prifUK KAEG	2.998	3		2		2		1		2	0.435	4	0.229	2	**3.662**	**16**
32	FRS	4.270	6	0.591	5		2		1		2	3.805	8		2	**8.666**	**26**
33	GKR	2.153	1		2		2		3		2	0.208	5	0.149	2	**2.510**	**17**
		80.966	**99**	**18.155**	**104**	**32.842**	**130**	**2.500**	**82**	**0.298**	**85**	**32.598**	**152**	**27.193**	**107**	**194.552**	**759**

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Actual = number of person months consumed from the beginning of the project to the end of this period

Planned = total effort planned for the project in the latest version of the description of work - annex I to the grant agreement.

Explanation of the use of the resources

The details for this section are now entered in the NEF, which generates a Use of Resources pdf file with details for all partners. Below is screen-shot of the 'Total' sheet from the workbook of spreadsheets used to monitor resource use, showing costs reported for Year One.

num	Short name	Institution	cntry	Personnel	Sub-contracting	Other Incl travel	TOTAL COSTS	Costs reported for 6 months Mar-Aug 2013	Budget per 12 months to Feb 2014	Costs reported for Year 1 to Feb 2014	under / over budget Year 1 to Feb 2014	% under / over budget
2	MDR	MDR Partners (Consulting) Limited	UK	441,000		20,500	461,500		€ 153,833	€ 97,392	-€ 56,441	-36.69%
3	NTUA	National Technical University of Athens	GR	139,500		10,500	150,000	€ 5,812	€ 50,000	€ 28,905	-€ 21,095	-42.19%
4	PSNC	Instytut Chemii Bioorganicznej Pan (Poznań	PL	249,100		80,500	329,600	€ 26,523	€ 109,867	€ 36,313	-€ 73,554	-66.95%
5	MECD	Ministerio de Educacion, Cultura y Deporte (Ministry of	ES	85,500		14,250	99,750	€ 12,865	€ 33,250	€ 22,656	-€ 10,594	-31.86%
6	KUAS	KUlturArvsStyrelsen (Danish Agency for Culture)	DK	128,700		14,250	142,950	€ 37,641	€ 47,650	€ 54,835	€ 7,185	15.08%
7	BJC	Biblioteca Judeţeană „O.Goga" Cluj (Octavian Goga Cluj	RO	12,000		11,750	23,750	€ 1,294	€ 7,917	€ 6,227	-€ 1,690	-21.35%
8	RCE	Ministerie van onderwijs, cultuur en wetenschap -	NL	105,000		11,750	116,750	€ 6,201	€ 38,917	€ 11,360	-€ 27,557	-70.81%
9	NPU	Narodni Pamatkovy Ustav (National Heritage Institute)	CZ	42,500		6,750	49,250	€ 7,922	€ 16,417	€ 16,621	€ 205	1.25%
10	UPV EHU	Universidad del Pais Vasco EHU UPV (University of the Basque	ES	68,000		6,750	74,750	€ 11,357	€ 24,917	€ 26,697	€ 1,780	7.14%
11	AVINET	Asplan Viak Internet	NO	306,000		10,500	316,500	€ 36,952	€ 105,500	€ 106,939	€ 1,439	1.36%
12	VUKF	Vilniaus Universitetas - Faculty of Communication	LT	55,620	2,000	6,750	64,370	€ 11,719	€ 21,457	€ 23,585	€ 2,129	9.92%
13	UoY ADS	University of York (Archaeology Data Service)	UK	126,500		20,500	147,000	€ 19,223	€ 49,000	€ 42,145	-€ 6,855	-13.99%
14	IPCHS	Javni Zavod Republike Slovenije Za Varstvo Kulturne	SI	71,400	15,000	6,750	93,150	€ 5,105	€ 31,050	€ 19,837	-€ 11,213	-36.11%
15	Provincie Limburg	(Erfgoed) Provincie Limburg	BE	115,074		6,750	121,824	€ 8,069	€ 40,608	€ 15,176	-€ 25,432	-62.63%
16	CG33	Departement De La Gironde	FR	65,232		11,750	76,982	€ 6,144	€ 25,661	€ 14,803	-€ 10,857	-42.31%
17	Zavod Jara	Jara. Zavod za razvoj knjižnic	SI	66,300		6,750	73,050	€ 7,017	€ 24,350	€ 17,119	-€ 7,231	-29.69%
18	Future Library	Future Library	GR	75,000		6,750	81,750	€ 6,187	€ 27,250	€ 18,159	-€ 9,091	-33.36%
19	FMNF	Fundacao Museu Nacional Ferroviario Armando	PT	45,000	15,000	6,750	66,750	€ 4,839	€ 22,250	€ 9,756	-€ 12,494	-56.15%
20	UDE	Universitaet Duisburg-Essen (University of Duisburg-	DE	120,000		9,000	129,000	€ 18,727	€ 43,000			
21	AIT	AIT Angewandte	AT	203,320		25,500	228,820	€ 29,364	€ 76,273	€ 89,201	€ 12,927	16.95%
22	ABMR	Stiftelsen Länsmuseet Västernorrland	SE	81,000		6,750	87,750	€ 14,882	€ 29,250	€ 21,244	-€ 8,006	-27.37%
23	PSRL	Pencho Slaveykov Regional Library	BG	43,500		6,750	50,250	€ 920	€ 16,750	€ 15,599	-€ 1,151	-6.87%
24	BGB	Biblioteka grada Beograda (Belgrade City Library)	RS	17,000		6,750	23,750	€ 4,301	€ 7,917	€ 9,056	€ 1,140	14.40%
25	HU	Hacettepe Universitesi	TR	45,000		6,750	51,750	€ 4,777	€ 17,250	€ 10,969	-€ 6,281	-36.41%
26	CUT	Cyprus University of Technology - Digital Heritage Lab.	CY	75,000		6,750	81,750		€ 27,250	€ 15,581	-€ 11,669	-42.82%
27	LAB	Latvijas Arheologu biedriba Withdrawn 02/07/13	LV									
28	AHAI/MCI	Fornleifavernd Rikisins (Archaeological Heritage Agency of	IS	70,920		6,750	77,670	€ 4,989	€ 25,890	€ 11,372	-€ 14,518	-56.07%
29	Athena(ARC	Athena Research and Innovation Center in Information Communication & Knowledge	GR	224,000		10,500	234,500	€ 16,887	€ 78,167	€ 69,634	-€ 8,533	-10.92%
30	DP	The Discovery Programme LBG	IE	108,000		7,500	115,500	€ 8,259	€ 38,500	€ 22,428	-€ 16,072	-41.74%
31	prifUK KAEG	Univerzita Komenskeho v Bratislave (Comenius U)	SK	32,000		6,750	38,750	€ 2,146	€ 12,917	€ 3,044	-€ 9,872	-76.43%
32	FRS	Fondazione Ranieri Di Sorbello	IT	75,000		6,750	81,750	€ 14,254	€ 27,250	€ 25,948	-€ 1,302	-4.78%
33	GKR	Gradska knjiznica Rijeka	HV	27,200		10,885	38,085		€ 12,695	€ 4,017	-€ 8,678	-68.35%
		Total		3,724,366	111,000	414,635	4,250,001	€ 334,375	€ 1,416,667	€ 991,493	-€ 425,174	-30.01%
		check		3724366	111000	414635	4250001	€ 334,375	1,416,667	€ 991,493	-382,174	

The under/over budget indicators are of very little significance at this stage.

1. The work of different partners takes place in different periods.

2. The first year resource usage for a 3-year project is not very indicative of the whole project period.

3. The project management team will review these figures in the light of what proportion of partners' work has actually been completed. Several partners are yet to make their most significant contribution to the work.

4. The figures will become more indicative after the 18-month and 2-year reports and analysis, and will be kept under review by the project management team.

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End of report